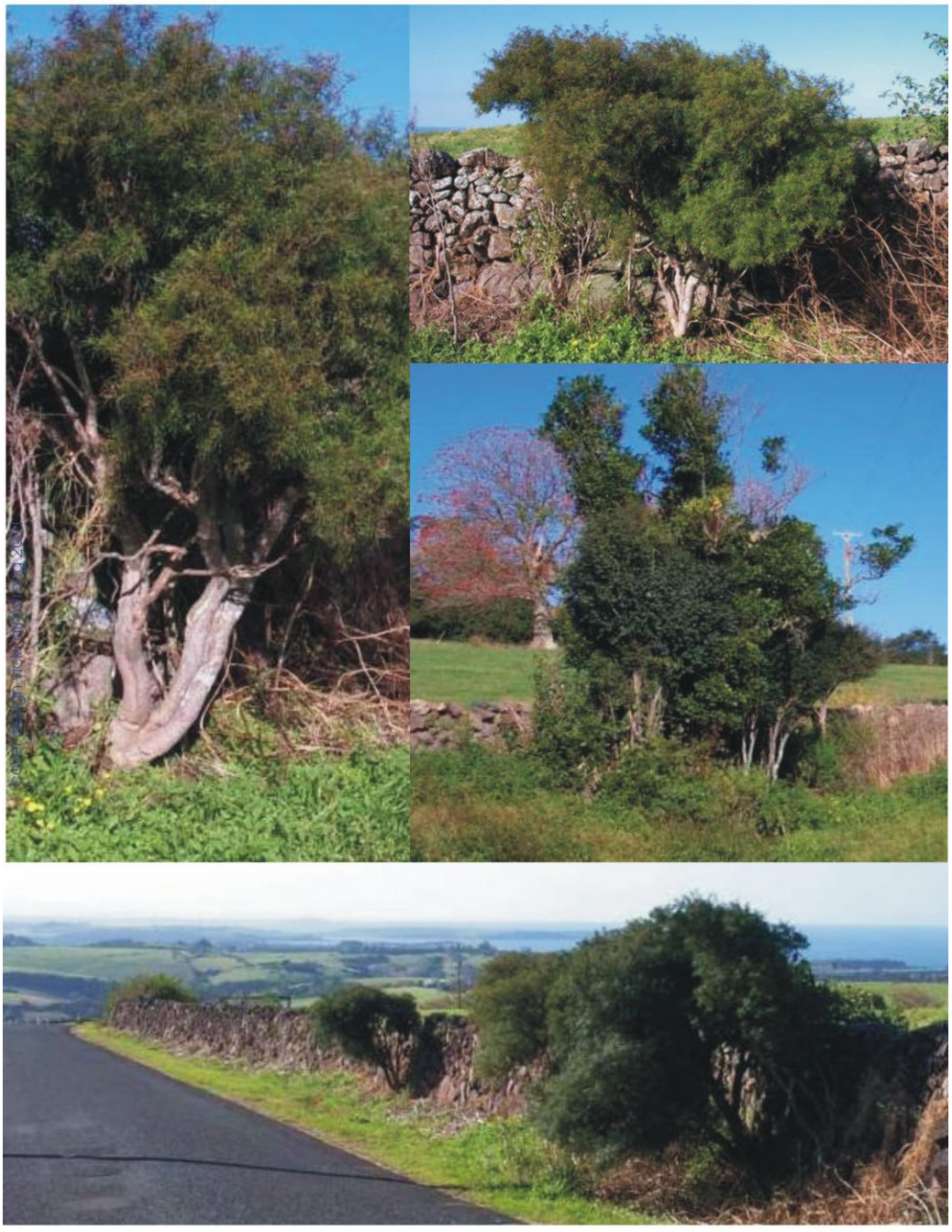
Management Plan for the

Conservation and Regeneration of Zieria granulata and Restoration of Dry Stone Walls

on Saddleback Mountain Road and Old Saddleback Road Kiama



Adopted September 2001

kiama municipal council

Plan of Management

Conservation and Regeneration of Zieria granulata and Restoration of Dry Stone Walls on Saddleback Mountain Road and Old Saddleback Mountain Road Kiama

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1.0 INTRODUCTION

1.1 Dry Stone Walls

In 1999 Council obtained a Federation Grant from the Federal Government to preserve and restore historic dry stone walls and thereby create a heritage drive along Old Saddleback Road and Saddleback Mountain Road. The works involve rebuilding the walls and removal of vegetation and weeds growing in front of, and in the walls. Volunteers assisted by Council have undertaken the work. One of the outcomes of the project was to depict various styles of walls and show off the walls to the public.

1.2 Zieria granulata

The area is also the site of a scattered occurrence of *Zieria granulata*. This species is listed in Schedule 1 of the Threatened Species Conservation Act 1995. As such, any activities which occur in the vicinity of these plants, such as the reconstruction of the walls or road maintenance, must be assessed to determine the potential effects this may have on the local population of this species, its life cycle and habitat.

PHOTO 1
Zieria granulata growing in front of one of the restored drystone walls

1.3 Eight Part Test

The Act requires that an 8-part test be applied to determine whether the activity will have a significant effect on the threatened species. This test applies not only to the individual plants but also to the population, lifecycle and habitat.

1.3 Eight Part Test *(Cont.)*

If the test indicates that the activity will have a significant impact, then a Species Impact Statement must be prepared and the concurrence of the Director General of the National Parks and Wildlife Service is required for the activity to proceed. If the test indicates that the activity will not have a significant impact then the activity may proceed in accordance with appropriate conditions.

There is a potential conflict therefore, between the conservation and preservation of the walls and the plants unless the activities are properly managed.

2.0 POTENTIAL THREATENING PROCESSES

The survival of *Zieria granulata* is threatened by a range of activities including the reconstruction and maintenance of the drystone walls and road maintenance. These activities must be undertaken without having a significant impact on the plants.

3.0 MANAGEMENT OBJECTIVES AND ACTIONS

The following management objectives have been determined in order to minimise the impact of the activities and to ensure the conservation and regeneration of the Zieria granulata and to achieve the aims of the dry stone walls project.

3.1 Objective: Protect existing *Zieria granulata*

Issue:

The existing work practices, including construction on the walls and road maintenance, have involved working in close proximity to the plants. This has resulted in damage to and the loss of a number of plants. This has probably prevented the regeneration of other plants.

Actions:

- Survey the entire site and identify all *Zieria granulata* with suitable marking tape and suitable marks on the bitumen.
- Monitor the site and mark any emergent plants.
- Establish a buffer area of a minimum 2.5m radius around the plants within which no activity will occur except:
  - *Manual control of weeds*
  - *Maintenance, using a slasher, of a mown strip one metre wide from the edge of the bitumen for the safety of vehicles.*

PHOTO 2
Individual *Zieria granulata* surveyed and marked on Old Saddleback Road

3.2 **Objective: Conserve and regenerate the *Zieria granulata***

Issue:

Zieria granulata occurs as individual plants scatter along the road reserve and also in a number of clumps where it grows with other native plants. Regeneration around the individual plants can be encouraged by maintaining the recommended 2.5m buffer around the plants. Where there are groups of plants, these clumps can form the basis for regeneration areas. This will also reduce the need for maintenance along those sections of the walls.

PHOTO 3
Proposed regeneration area north of the intersection of Old Saddleback and Saddleback Mountain Road

Actions:

- Identify areas along the road where there are clumps of *Zieria granulata* or significant groups of remnant vegetation which would form the basis for regeneration areas. (*See Figure 1 attached*)

- Plant out these areas with *Zieria granulata* and other indigenous native species found in this area.

- Maintain these areas using manual methods for weed control sufficient to enable the plants to grow.

3.3 <u>Objective:</u> Provide safe driving conditions for road users

Issue:

The existing maintenance of the road reserve involves slashing and poisoning. Because of the condition of the shoulder and verge, a fairly wide strip of the shoulder of the reserve has had to be poisoned. This has resulted in the regrowth of weeds which have partially obscured the reconstructed walls. The area poisoned should be minimised and wherever possible the road reserve should be mown. This will necessitate tidying and reshaping the reserve in some places.

3.3 Objective: Provide safe driving conditions for road users *(Cont.)*

Actions

- Where necessary reshape the reserve to maximise the area able to be mown with a slasher.

- Reduce the width of the strip poisoned to a minimum.

- Maintain the buffer area around the *Zieria* as previously stated.

3.4 Objective: Minimise long-term maintenance of the road reserve and maintain visibility of the walls.

Issue:
Maintenance will be reduced in the revegetation areas in the medium term (3-5 years). However, outside these areas maintenance will continue ad-infinitum. It would be possible to reduce the need for regular maintenance by progressively establishing an avenue of suitable native trees along the walls which could be under-pruned and shaped so as not to obstruct or obscure the views of the walls. In the long term, a canopy would be formed which would reduce the weed growth and add to the beauty of the drive.

Action:
Progressively plant out the road reserve with suitable indigenous native trees to establish an avenue of trees in the areas outside the regeneration areas.

PHOTO 4
Mown Road Shoulder with minimum area poisoned and buffer area maintained around existing Zieria granulata

4.0 "EIGHT PART TEST" ASSESSMENT

The *Threatened Species Conservation Act 1995* requires that the factors set out in Section 5A of the Act be considered in determining whether a proposed action is likely to have a significant effect on threatened species, endangered populations, endangered ecological communities, or their habitats and hence, whether a Species Impact Statement is required. This process is commonly referred to as the "eight part test".

Below, the test has been applied to assess the potential impact of the proposed dry stone wall restoration works on *Zieria granulata*.

(a) In the case of threatened species, whether the life cycle of the species is likely to be disrupted such that a viable local population of the species is likely to be placed at risk of extinction

The proposal to restore the dry stone walls on Saddleback Mountain Road and Old Saddleback Road has the potential to place viable local populations of *Zieria granulata* at risk of extinction as many *Zieria granulata* plants grow in and beside the walls which have to be weeded, dismantled to some extent and then reconstructed.

To mitigate this potential impact however, Kiama Council has prepared a Plan of Management with provisions to protect the *Zieria granulata* plants. These provisions include:-

- identifying the plants and marking them with flagging tape prior to any work being undertaken,
- establishing buffer zones around scattered plants and groups of plants within which weeds will be removed only by hand, and
- encouraging native plants to regenerate to reduce the need for weed control in future. (See Section 3.0 Management Objectives and Actions).

If the Plan of Management is strictly adhered to, the proposed works should not adversely affect the species. On the contrary, the removal of weeds should encourage the species to flourish.

(b) In the case of an endangered population, whether the life cycle of the species that constitutes the endangered population is likely to be disrupted such that the viability of the population is likely to be significantly compromised

This item applies to endangered populations, not threatened plant species.

(c) In relation to the regional distribution of the habitat of a threatened species, population or ecological community, whether a significant area of known habitat is to be modified or removed

4.0 "EIGHT PART TEST" ASSESSMENT (Cont.)

The *Zieria granulata* habitat to be modified when the dry stone walls are restored is considered to be reasonably significant in a regional context. However, provided that the Plan of Management is strictly adhered to, the proposed works should not adversely affect the species; if undertaken as specified in the Plan of Management, the proposed works should actually be to the advantage of the species.

(d) Whether an area of known habitat is likely to become isolated from currently interconnecting or proximate areas of habitat for a threatened species, population or ecological community.

The proposed work will not cause any *Zieria granulata* habitat to become isolated.

(e) Whether critical habitat will be affected.

No critical habitat has been declared in the area.

(f) Whether a threatened species, population or ecological community, or their habitats, are adequately represented in conservation reserves (or similar protected areas) in the region.

Zieria granulata is not adequately reserved in the region. Most occurrences are on privately owned land and in road reserves.

(g) Whether the development or activity is of a class of development or activity that is recognised as a threatening process.

The restoration of dry stone walls has not been listed as a threatening process in Schedule 3 of the *Threatened Species Conservation Act 1995.*

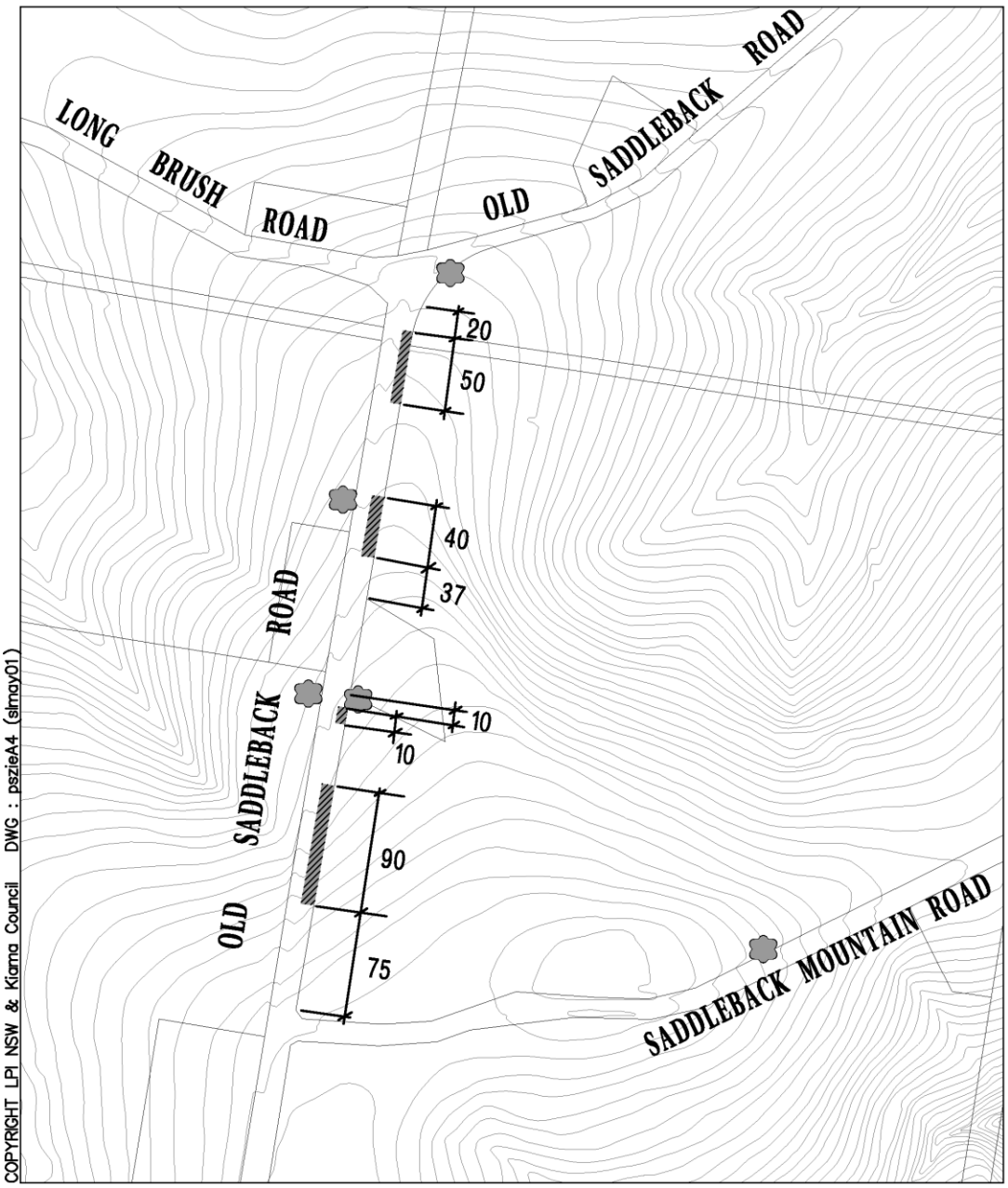
(h) Whether any threatened species, population or ecological community is at the limit of its known distribution.

Saddleback Mountain Road and Old Saddleback Road are not on the edge of *Zieria granulata*'s range. However, because the species has such a restricted distribution, most occurrences are not far from the limit of the species' distribution.

4.1 "Eight Part Test" Conclusion

The proposal to restore the dry stone walls along Saddleback Mountain Road and Old Saddleback Road is unlikely to have a significant effect on the *Zieria granulata* population growing along and beside the walls. Furthermore, a Species Impact Statement is not required, *provided that* the work is undertaken in accordance with this Management Plan.

MANAGEMENT PLAN
Zieria granulata
Old Saddleback Road, Kiama.



Isolated single occurrence of *Zieria granulata*

Proposed regeneration areas containing clumps of *Zieria granulata* and other remnant rainforest species.

N

Scale 1:4000