

COASTAL MANAGEMENT PROGRAM CASE STUDY

Merimbula Beach dune restoration

Bega Valley Shire Council has restored a large area of native dune vegetation at Merimbula Beach and helped protect the dune from further erosion by repairing and extending fencing (Figure 1).

The work was supported by the NSW Government's Coastal Management Program, contributing 50 percent of project costs.

Dune biodiversity is increasing and the area is now more resilient to coastal erosion.

Project need

Urbanisation, multiple access points and damaged dune vegetation had resulted in areas of exposed, unconsolidated sands which were highly vulnerable to erosion.

This project was part of a large scale program of dune protection and rehabilitation targeting the Bega Valley Shire's urban beaches: Bermagui (Camel Rock, Horseshoe Bay); Tathra Beach; and Eden (Aslings Beach). Merimbula Beach was identified as the next highest priority beach requiring rehabilitation.

Senior Natural Resource Officer (Coast and Estuaries) for the Office of Environment and Heritage, Gabrielle Pietrini, said that vegetation within the fenced areas along Merimbula Beach had become weed infested and fencing had become run down.

"As fenced and well vegetated dunes are an effective way to reduce the impact of coastal erosion and important for local biodiversity, Bega Valley Shire Council was granted funding to implement the works," she said.

Once the fencing and weed removal works were completed, these areas were revegetated with local native species.

Project steps

Restoration work followed the techniques outlined in the NSW Government Coastal Dune Management Manual (DLWC 2001).

Weed removal and native planting

More than 1200 native plants were reintroduced after extensive weed removal was carried out over 3.7 hectares of the dunes. Native plant species including Coastal Banksia, Lomandra, Coastal Wattle and Coastal Boobialla were used to replace dense infestations of Kikuyu, Lantana, Turkey Rhubarb and Madeira Vine.



Figure 1: The project rationalised access ways and rewired dune fencing.

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Gabrielle Pietrini, Senior Natural Resource Officer Coast and Estuaries, Office of Environment and Heritage

Where possible, the revegetation was extended landwards into the adjacent foreshore reserve to establish a more robust hind-dune community.

Reduction of beach access points and dune fencing

Existing walkways were assessed to determine their frequency of use and effectiveness in protecting dune vegetation from impacts such as wind funnelling. The number of beach access points through the dunes was then reduced. Dune fencing was also extended beyond the existing dune vegetation area at the northern end of Merimbula Beach (Figure 3). This was done to encourage further dune building and contribute to the long-term stabilisation of the Merimbula Lake entrance bar.

Council employed a project officer to carry out the work and to also engage with the local community including residents, business owners and tourists.

Benefits

Key benefits of the project include:

- Biodiversity – weed species have been reduced and an abundance of native vegetation is providing habitat for native animals, particularly birds and lizards.
- Community engagement – local residents, business owners and tourists have been engaged with the project, increasing the recognition of the importance of native dune vegetation. The partnership with a local business owner has helped ensure ongoing maintenance of the northern end of the revegetation.
- Enhanced recreational experience – access to the beach is now safer. Regenerating vegetation is more visually appealing and bird watching is on the increase due to more wildlife.
- Stabilisation of the sand dunes at the northern end of Merimbula Beach will assist in stabilising the Merimbula Lake entrance bar.

Lessons learnt

Have a dedicated project officer

Engaging a dedicated project officer within council to manage the project was vital. Having a project officer on-site throughout the project increased efficient project management and created many opportunities for interactions with local residents and tourists.

Factor in weed control until the natives are established

The scale of the weed infestation at the site was initially underestimated. Regular, brief visits to the site to carry out follow-up weeding have been undertaken since the project was completed. Ongoing maintenance visits ensure that weeds are controlled until the native vegetation becomes established. Then weeds are naturally suppressed.



Figure 2: Weeds were removed and native vegetation planted within the fenced dune areas.

“Not only does this project address the biodiversity, weed and physical issues confronting Merimbula Beach, it also helps council address our risk, public safety and asset management issues that were becoming problematic in this area.

For a relatively small funding injection, the project delivered important outcomes on a number of key areas for council, the local community and the many tourists who frequent Merimbula Beach.”

**Derek van Bracht,
Environmental Services
Coordinator, Bega Valley Shire
Council**

Where to from here?

- Council will continue the ongoing relationship with the business owner monitoring the spit, along with engagement of the broader community in dune management.
- The site will be monitored and weeds removed when necessary.
- Council will carry out similar projects on other high priority beaches within the Shire.

Quick facts

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| Council and location | Bega Valley Shire Council, Merimbula Beach |
| Key project facts and outcomes | <p>Dune restoration</p> <ul style="list-style-type: none">• 3.7 hectares of weed removal and planting endemic species• 1.5km of improved dune fencing. <p>Benefits</p> <ul style="list-style-type: none">• Stabilisation of dune sand• Enhanced recreational experience• Improved biodiversity. |
| Cost and time | <p>Total cost of the project was \$40,833 including the project officer salary</p> <p>Dune rehabilitation was completed over six months in 2012 (plus minimal ongoing maintenance)</p> |
| Funding and technical support | \$20,416 towards the total cost and technical advice on dune stabilisation from the NSW Government's Coastal Management Program |
| Approvals | None required |



Figure 3: Fencing was extended at the northern end for dune regeneration and rebuilding without pedestrian traffic.

Find out more

Phone the Office of Environment and Heritage on 131 555 or Gabrielle Pietrini (Senior Natural Resource Officer, Office of Environment and Heritage) on 4224 4159 about the project.

References

DLWC, 2001, *Coastal Dune Management: A manual of coastal dune management and rehabilitation techniques*, Department of Land and Water Conservation, Newcastle.

All photos are from Gabrielle Pietrini (OEH).

The NSW Government's Coastal, Floodplain and Estuary Management Programs provide technical and funding support for councils to assess and address coastal hazards, flood risks and estuary health.

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