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The Shoalhaven Foreshore Education Project: promoting good practices in dune management by foreshore residents

Neil Dufty

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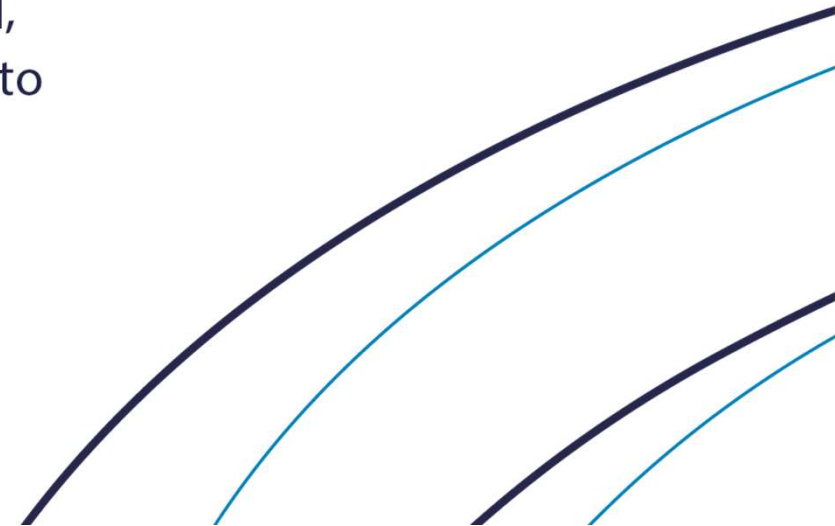
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Acknowledgement of Country



We would like to acknowledge the
Traditional Custodians of the land in which
we gather upon today. We acknowledge
their continuing connections to the land,
culture and community. We pay respect to
Elders past, present and future.



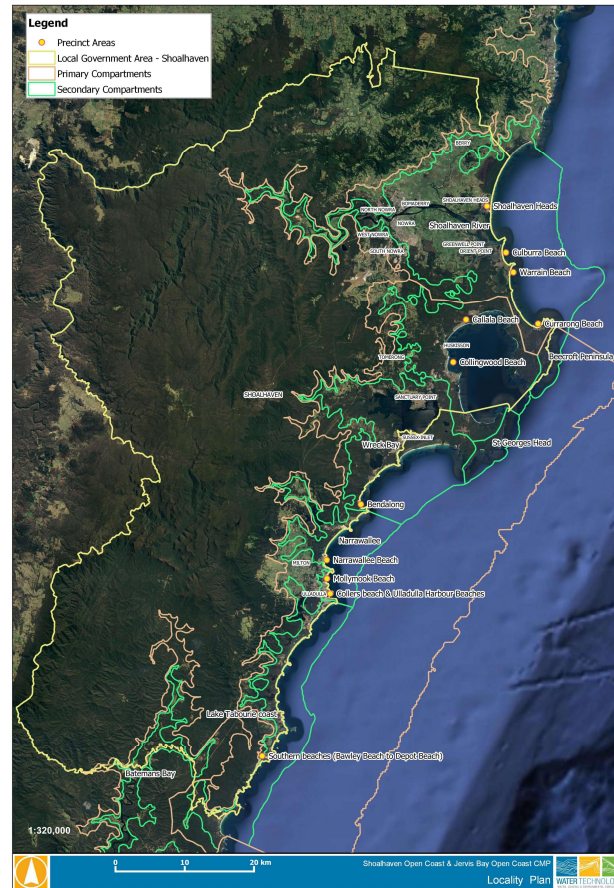
Coastal Country



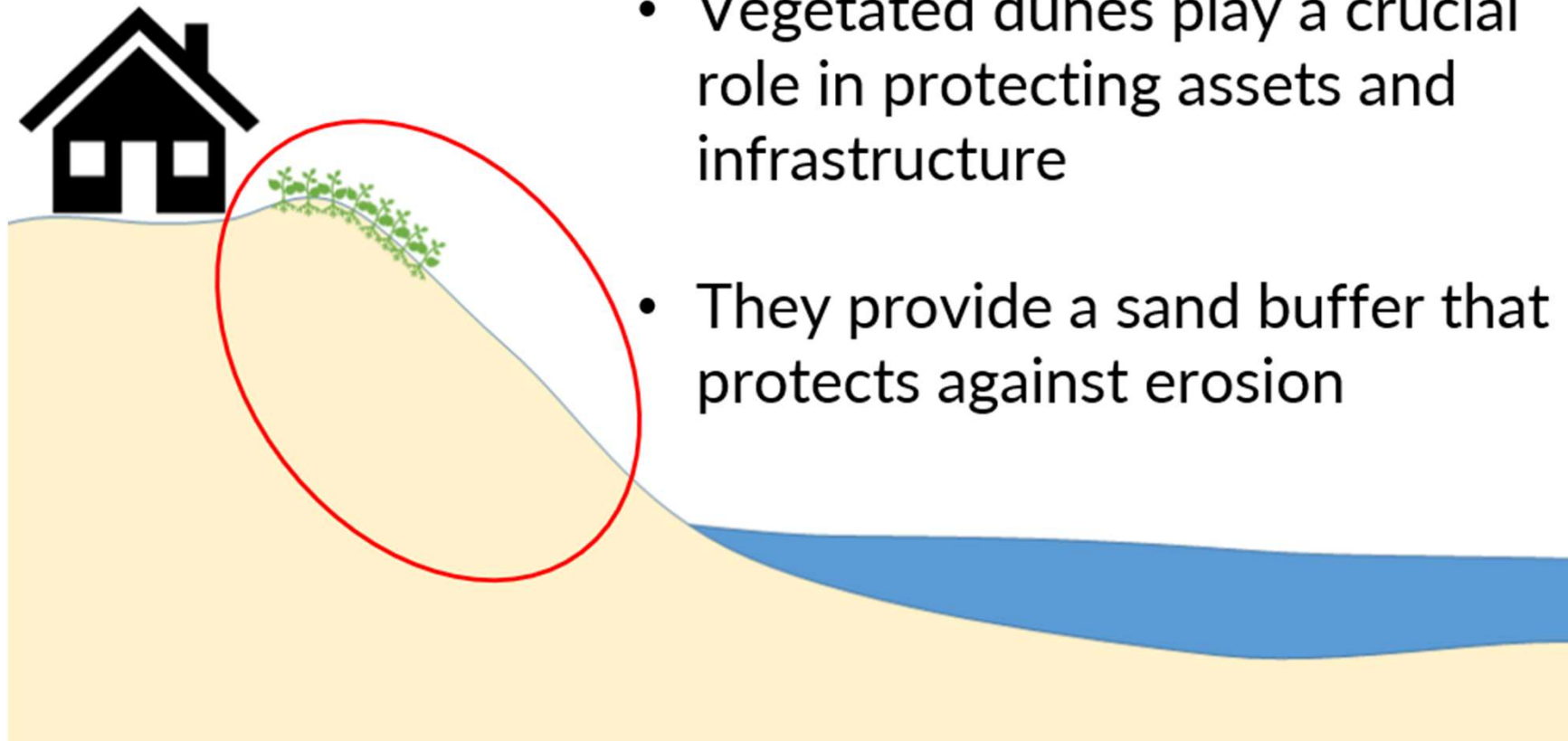
Environmental Education and Coasts



Shoalhaven coastline



Importance of dunes



- Vegetated dunes play a crucial role in protecting assets and infrastructure
- They provide a sand buffer that protects against erosion

Dune formation – potential issues

Blowouts can either form naturally, or be instigated by poor dune management



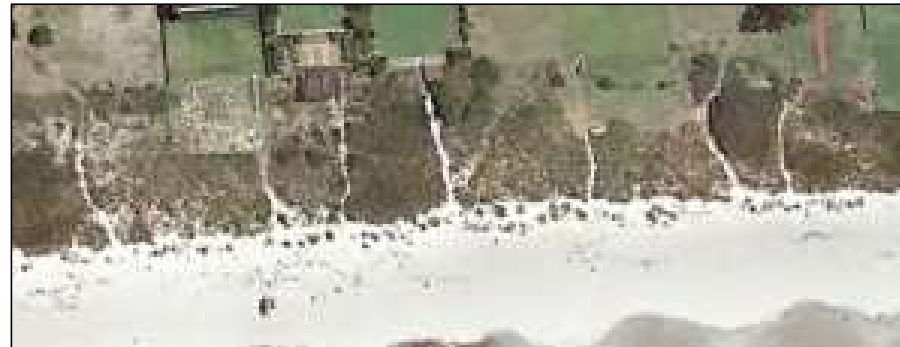
Dune formation – potential issues

Vegetation vandalism



Illegal access tracks...

“death by a thousand paper cuts”

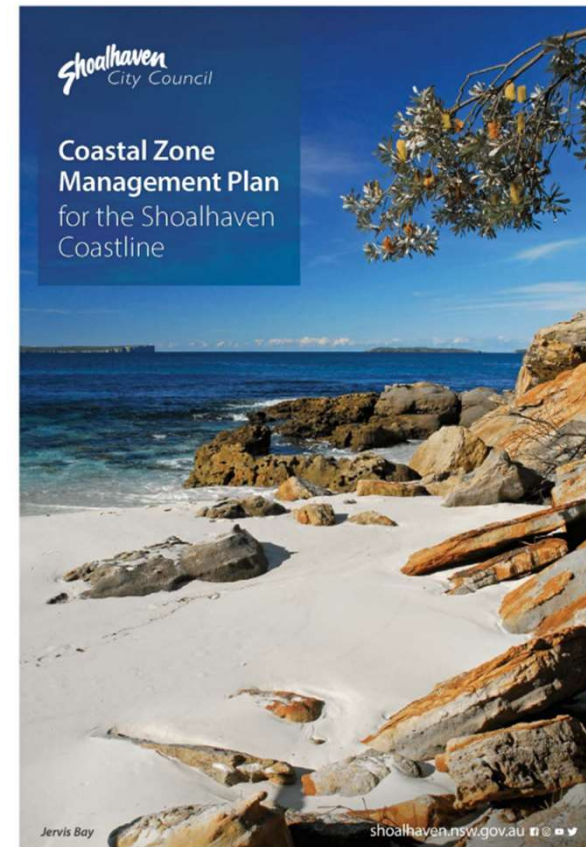


Weeds and invasive species



Shoalhaven Foreshore Education Project

- Acknowledging the importance of engaging with local communities to promote positive and collaborative coastal management, the Shoalhaven Coastal Zone Management Plan 2018 set out actions to engage with foreshore residents on the value of dune ecosystems.
- From this, Shoalhaven City Council obtained funding from the NSW Government to engage Water Technology Pty Ltd to assist in developing, implementing and evaluating the Foreshore Education Project.



Planned Activities

- Produce 11 educational fact sheets
- Facilitate three interactive and experiential workshops with foreshore residents at:
 - Mollymook Beach
 - Callala Beach
 - Culburra Beach
- Organise and conduct school excursions
- Educational video
- Community dune planting
- Evaluate the education program

Sand Dune Vegetation Fact sheet

Sand dune vegetation: The natural protection measure for our foreshores

The Shoalhaven coastline provides environmental, social, cultural and economic benefits for our community and visitors. Healthy and vegetated sand dunes are an important part of sustaining a resilient coastline and have many benefits such as:

- Providing natural protection for houses, walkways, roads, public parks, storm water outlets and sewage infrastructure by absorbing wave energy from storm waves and wind.
- Provide a natural protection barrier from damaging storms, waves, and winds.
- Provide habitat for an abundance of native fauna, and a diversity of native flora.
- Maintain the cultural significance to foster a connection to country.

The Shoalhaven dune system also contains Bangalay Sand Forest of the [Sydney Basin and South East Corner bioregions](#), a listed threatened ecological community under the *Biodiversity Conservation Act 2016* (NSW). Thus, it is vitally important that degradation and fragmentation of dune system vegetation is minimised to ensure the conservation and continued functionality of such range restricted threatened ecological communities.



Example of Bangalay Sand Forest in good condition, Old Erowal Bay, November 2020 (Ecoplanning, 2022).

Parts of the dune system

The main parts of a healthy dune system include:

- Primary vegetation (grasses and creepers) – forms the incipient dune behind the beach berm. The vegetation traps sand like a net and reduces sand and salt spray travelling away from the beach.
- Secondary vegetation (shrubs and short trees) – stabilises the dunes and deflects wind over the foredune.
- Tertiary vegetation (larger, established trees) – located on the hind dune forms an important wind and wave buffer for the areas behind. These parts of the dune can vary and, in some areas, tall trees and shrubs naturally grow closer to the water line. The health of the endemic vegetation in these areas supports the most suitable parts of the dune system that they should be growing.

Remember: All parts of the dune system are important. Low species trap sand and salt spray near the water, whereas taller species with deep root systems stabilise the dunes and protect from large storm waves and wind.

Evaluation

- School excursions were unable to be organised due to the COVID pandemic, clashes with school activities (e.g. NAPLAN testing)
- Council has managed to deliver 4 school excursions since the end of the project - lesson plan produced in the project has been used as a basis for these excursions
- The workshops were received with varying degrees of success

“Pleasant, positive people, presenting clearly...try to tailor it even better to needs”.

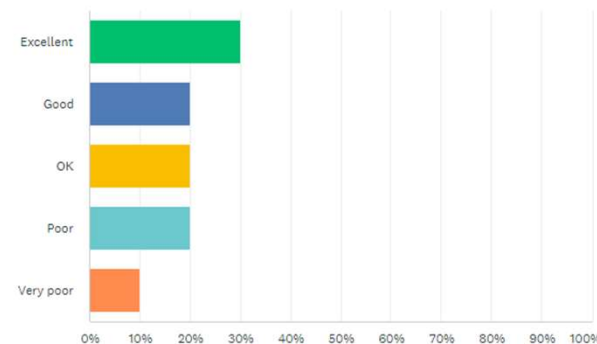
“Probably my misunderstanding but I thought the workshop would include updated information on the proposed actions e.g. beach access trails.”

Q1

Customize Save as

How would you rate the workshop as a learning experience?

Answered: 10 Skipped: 0



ANSWER CHOICES	RESPONSES
Excellent	30.00% 3
Good	20.00% 2
OK	20.00% 2
Poor	20.00% 2
Very poor	10.00% 1
TOTAL	10

Learnings

- Clearly explain the purpose of the education activities (and how they differ from other agenda/potential meetings)
- Survey residents' interests beforehand to try to better tailor workshops and integrate learning needs
- Provide free native plants at the workshop
- Consider using an outdoor-indoor hybrid program
- Better cater for people with reduced mobility/ ensure accessibility
- Ensure that there is indigenous input to the workshops preferably through co-design.



Other suggestions

- Continue to encourage residents to be involved in experiential, volunteer programs such as Dunecare, and citizen science activities such as CoastSnap.
- Extend the education program to target other stakeholders (e.g. tourist operators, real estate agents) and residents at other high risk beaches.
- Use the fact sheets developed to raise awareness at community events.



Video

***The project was supported with financial assistance from
the NSW Government's Coastal Management Program***

Thank you

