

COLLINGWOOD BEACH PRESERVATION GROUP DUNE VEGETATION MANAGEMENT PLAN FREQUENTLY ASKED QUESTIONS



Shoalhaven City Council (SCC) is in the process of developing a Dune Vegetation Management Plan (DVMP) for Collingwood Beach at Vincentia, New South Wales. It is anticipated that the proposed plan will be placed on public exhibition in August 2017. So that the community and the broader public can make informed comments on the proposed plan the Collingwood Beach Preservation Group (CBPG) has produced a series of Frequently Asked Questions (FAQs).

Background

In July 2014 SCC held a community forum to determine how issues regarding the poisoning and pruning of the vegetation on the Collingwood Beach dunes could be addressed. The forum was held at Huskisson with over 100 people in attendance.

A Dune Vegetation Reference Group was established by SCC to address the key issues that were put forward by the community at the forum. NGH Environmental (NGH) was engaged as a consultant by SCC to produce a number of alternatives for the Dune Vegetation Reference Group to consider.

The Dune Vegetation Reference Group provided feedback on six Scenarios that were initially developed by NGH. The six Scenarios were reduced to three Options that were to be considered for the draft DVMP in October 2015. The Dune Vegetation Reference Group provided feedback on the three Options and was then disbanded by SCC. SCC staff and NGH have been managing the process since that time.

Community engagement materials including Options and Fact Sheets were made available on the SCC website. Signs and banners were placed along the coastal walkway. In November 2015 a Kiosk event was held over two days to inform the community of the different vegetation zones and the various vegetation densities and heights that could be achieved.

SCC resolved to place the draft DVMP on public exhibition in May 2016 and as part of the exhibition to develop a 50 metre demonstration site where proposed works would be undertaken. In August 2016, due to the current political environment, a majority of Councillors voted not to proceed with the demonstration site.

At the same time, the CBPG believed that the draft DVMP developed by SCC staff and NGH did not address the primary objective that was outlined to the Dune Vegetation Reference Group and that was to come up with a proposal that would stop vandalism. The CBPG developed an amendment to the draft DVMP and Councillors voted for the amendment to go on display in conjunction with the public exhibition of the draft DVMP during October and November 2016.

When the draft DVMP was placed on exhibition, signage was erected along the coastal walkway to designate the appropriate zones and to explain the planting in each zone. Community submissions were analysed by SCC staff and presented to Councillors. After the close of the exhibition period two petitions were submitted to Councillors protesting against the removal of any vegetation.

In view of the submissions received objecting to the draft DVMP and the reviews by relevant Government agencies a majority of Councillors voted not to adopt the draft DVMP despite there being support in favour of adoption. Councillors voted for NGH to undertake a further review the draft DVMP. A Committee of all Councillors was formed and NGH was invited to a meeting to workshop the draft DVMP in November 2016. SCC staff also decided that the draft DVMP should be reviewed by a coastal hazard expert. Since that time SCC staff has been finalising a revised draft DVMP.

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Glossary

CBPG	Collingwood Beach Preservation Group
CZMP	Coastal Zone Management Plan
DVMP	Dune Vegetation Management Plan
DPI	Department of Primary Industries
FAQs	Frequently Asked Questions
NSW	New South Wales
OEH	Office of Environment and Heritage
SCC	Shoalhaven City Council

Frequently Asked Questions

1. What is the purpose of a coastal dune system?

The NSW Government *A Manual of Coastal Dune Management and Rehabilitation Techniques* (Coastal Dune Management Manual) states that coastal dunes represent the last line of defence against erosion by providing a reservoir of sand for waves to utilise during storms as well as acting as a barrier to oceanic inundation.

The Dune Restoration Trust of New Zealand Technical Article No. 2.2 states that the critical requirement is to have sufficient dune width between coastal development and the sea to absorb the dynamic shoreline fluctuations associated with storm erosion and recovery.

2. What are the elements of a coastal dune system?

It is stated in the Coastal Dune Management Manual that a conventional coastal dune system consists of three elements, namely an incipient dune, foredune (or frontal dune) and a hind dune. At Collingwood Beach the hind dunes were cleared of gum trees at the time of subdivision in the 1960s. This fact is included in one of the Beach Story information points erected by SCC along the coastal walkway.

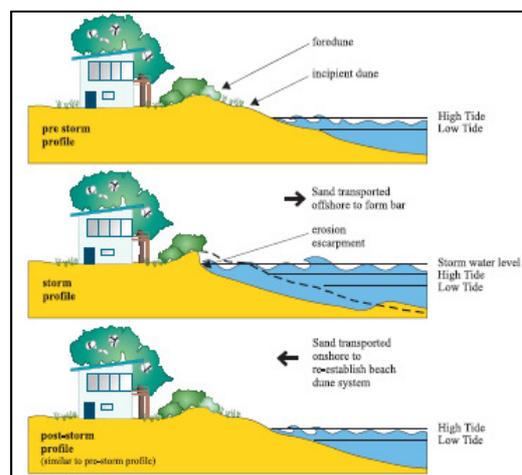
Coastal dunes are accumulations of wind-blown (or aeolian) sand located on the beach. Near the seaward margins aeolian deposits are intermixed with wave deposited beach sands. The nature and extent of dune development at any location is governed by a number of factors including the amount and size of sand currently being supplied to the beach itself, patterns of wind strength and direction, embayment (coastline recess) topography and orientation, and the type of beach.

3. What type of beach is Collingwood Beach?

The Advisian Shoalhaven Coastal Hazard Mapping Review report produced for SCC in August 2016 describes Collingwood Beach as a semi-enclosed embayment. It is stated that the beach is subject to both ocean swell waves and wind waves, although the ocean swell wave climate at Collingwood Beach is much reduced compared with that which is typically experienced on open-coast beaches.

The report further states that the beach south of Moona Moona Creek and north of Church Street has been assessed to be stable or accreting over time since the start of photographic records in 1969, that is the beach volume has been increasing or has remained relatively stable on average.

Beach accretion is the process of coastal sediment returning to the visible portion of a beach following a storm event. A sustainable beach often goes through a cycle of erosion during rough weather then accretion during calmer periods. This process is shown diagrammatically in the Coastal Dune Management Manual (see adjacent extract).



Collingwood Beach is a sustainable accreting beach. The CBPG regularly carries out survey measurements of the dunes to monitor stability. This data is provided to the SCC. The survey measurements undertaken by the CBPG show that the edge of the dune vegetation is now 8m further seaward of what was the Mean High Water Mark on the original subdivision built in the 1960s. This confirms the accreting nature of Collingwood Beach.

Calculations based on historical records also show that between 1974 (1000 year storm event) and November 2016 some 93,165 cubic metres of sand has been deposited on the beach, and this is with the significant June 2016 east coast storm taking place in the intervening period. More recent measurements show that between 21 November 2016 and 29 January 2017 a total of 13,320 cubic metres of sand was deposited on the beach.

4. How is wind-blown sand captured on dunes?

Published expert opinion such as in the Coastal Dune Management Manual states that a layered vegetation profile needs to be established starting with grasses on the incipient dune and shrubs on the foredune for effective sand entrapment.

The Coastal Dune Management Manual states that primary zone species (grasses and creepers) colonise lower parts of the beach (incipient dune) and trap abrasive sand particles forming a “foundation”. It is further stated that the foredune represents an elevated “wall” that can be colonised by secondary zone species (mainly shrubs) to provide a wind deflecting “shutter” near the shoreline.

This is consistent with the advice provided in the literature such as the Tasmanian Department of Primary Industries, Parks, Water and Environment Coastal Works Manual (Tasmanian Works Manual) and the Dune Restoration Trust of New Zealand Technical Article No. 2.2. The Tasmanian Works Manual states that low-growing plants, such as grasses, are more effective at stabilising sand than trees or shrubs as 90% of wind-borne sand is transported in the 0.5 metres closest to the ground. It is also relevant to note that the Coastal Dune Management Manual recommends sand traps to be constructed at a height of 0.9 metres above the sand surface.

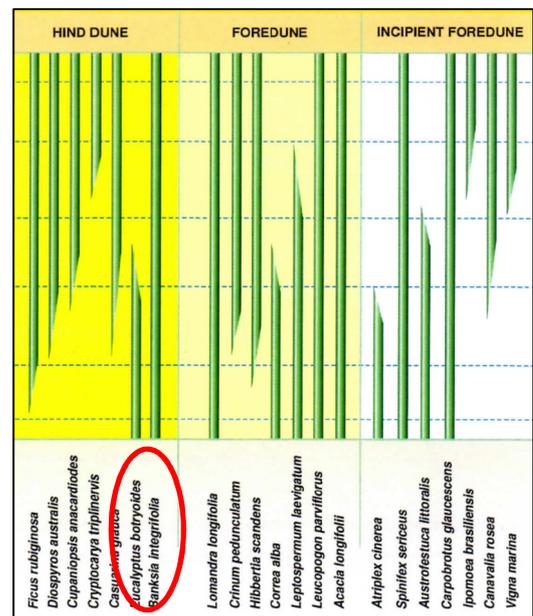
5. How effective are trees at stopping sand movement?

Sections along the foreshore dune at Collingwood Beach consist of some areas that have trees and other areas that do not have trees. There is however no difference between the two areas in relation to sand build-up demonstrating practically that trees do not contribute to an increase in sand volumes at the Collingwood Beach dunes. It should be noted that the primary purpose of trees is not for sand entrapment but to enable a wedge effect for efficient wind flow (see section 7).

6. Are there specific types of vegetation that should be planted in a dune system?

The correct functioning of a dune system depends on the correct vegetation planted in the correct zones. The Coastal Dune Management Manual documents specific types of vegetation for incipient dunes, foredunes and hind dunes (see adjacent extract). *Banksia Integrifolia*, the type of *Banksia* tree growing on Collingwood Beach, and *Eucalyptus gum* trees, for example *Eucalyptus Botryoides*, are noted as only being suitable for a hind dune, which does not exist within the Collingwood Beach dune formation.

There are also many other excellent publications that provide guidance on foredune vegetation, for example Professor Kristine French from the University of Wollongong has produced a guide to ecological restoration of coastal foredune scrub on the NSW South Coast titled *Coastal Foredune Scrub and Temporal Littoral Rain Forest South Coast of NSW*.



7. What function do trees serve in a dune system?

The Coastal Dune Management Manual states that primary zone species (grasses and creepers) should be planted to colonise incipient dunes and that secondary zone species (mainly shrubs) should be planted to colonise foredunes in order to provide a wind deflecting mechanism near the shoreline.

The Coastal Dune Management Manual goes on to state that finally a “roof” should be formed from the growth of tertiary species (taller shrubs and trees), further elevating the wind and providing increased shelter to vegetation further inland. This is referred to by some people as the ‘wedge’ effect.

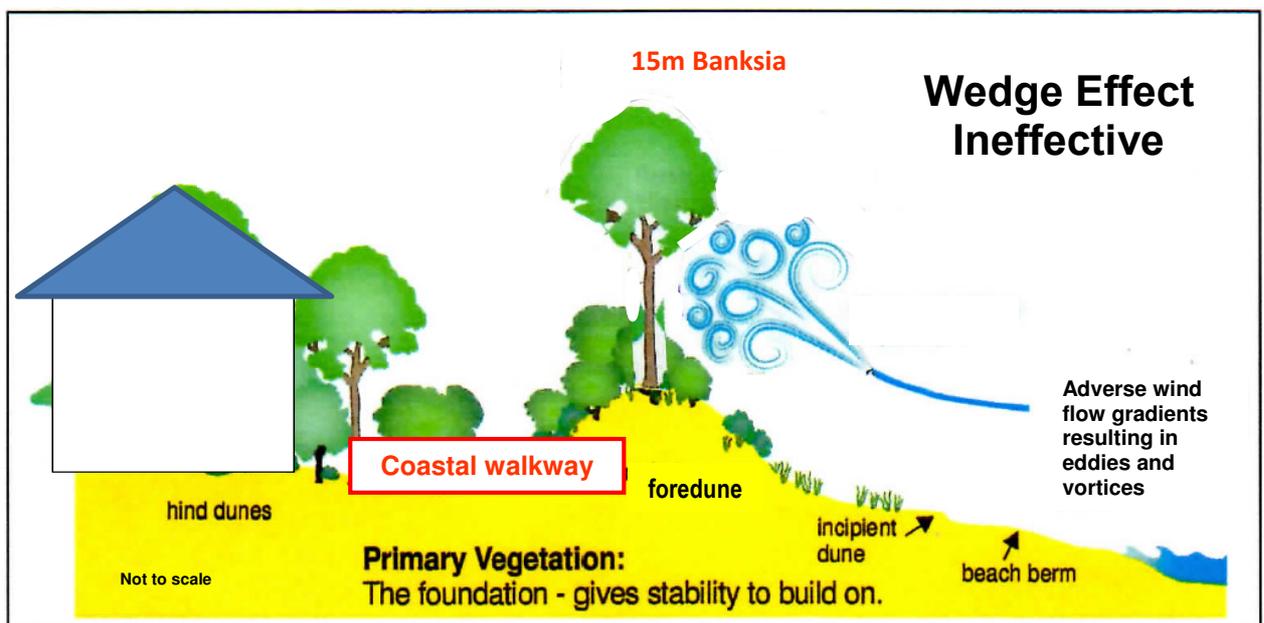
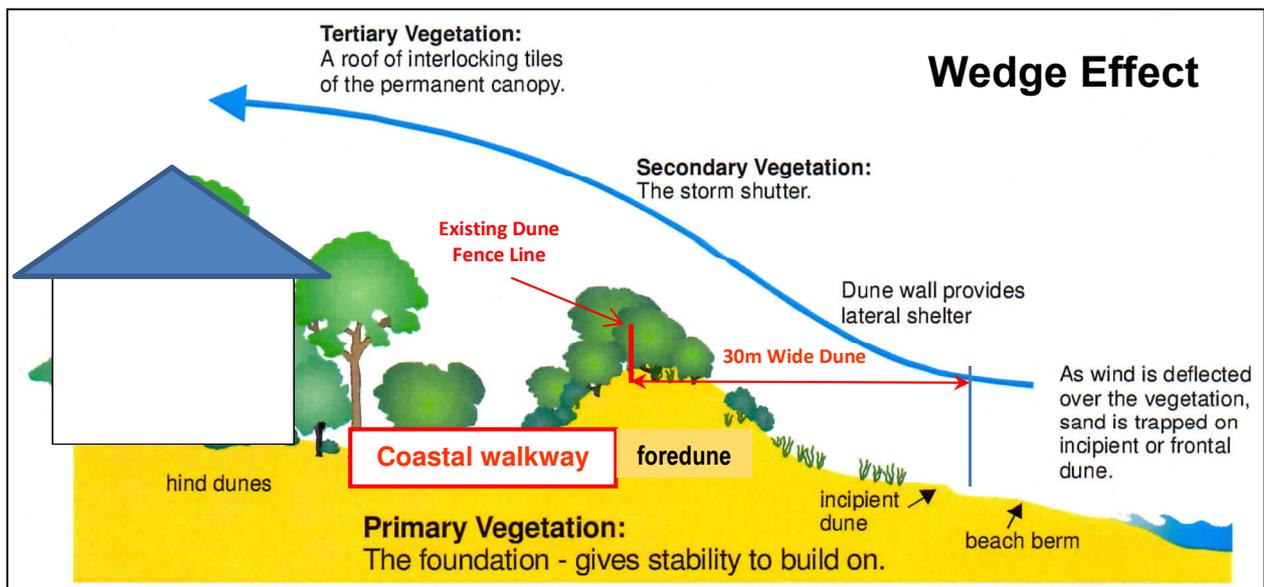
8. Can a 'wedge' effect be created at Collingwood Beach?

At Collingwood Beach the incipient dune and foredune are on average around thirty metres wide. At the request of the community the coastal walkway (within a 6m easement) was moved from Elizabeth Drive and constructed at the rear of the foredune so that the community could enjoy the scenic views of Jervis Bay. At the southern and central end of the beach a row of houses exists on the landward side of the easement. Further north a road separates the houses from the coastal walkway.

Banksia Integrifolia (the species planted at Collingwood Beach) will grow to around 15m and have a spread of around 6m. The adjacent photo shows a Banksia which has not reached full maturity growing adjacent to the coastal walkway.



Figure 2.16 from the Coastal Dune Management Manual has been marked up to demonstrate the wedge effect that exists at Collingwood Beach where there are no trees on the foredune and what happens when trees are planted on the foredune.

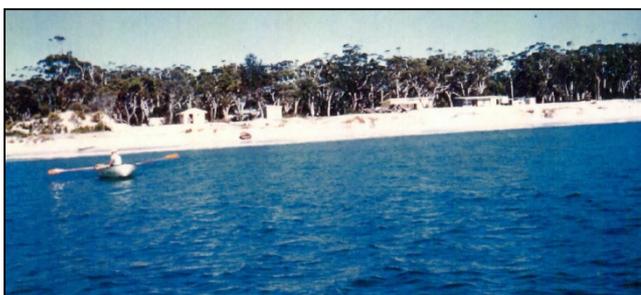


A wedge effect requires a gradual transition in vegetation height. The transition from low growth shrubs on the foredune to a line of trees is abrupt and thus inconsistent with the aerodynamic principles of a wedge. The result is adverse wind flow gradients resulting in eddies and vortices impacting the beach and leading to erosion due to turbulence and ill formed dunes. The situation would be exacerbated if the trees were 40m gum trees (for example Eucalyptus Botryoides) proposed by some organisations.

Further, the purpose of the trees (as the tertiary species) in providing increased shelter to vegetation further inland is not relevant in the context of Collingwood Beach as that area is occupied by houses.

9. Were Banksia trees always present at Collingwood Beach?

Banksia trees are native vegetation. There is however no evidence that Banksia trees were common on Collingwood Beach dunes. The photos below show the view along Collingwood Beach in the 1950s.



The historical evidence (confirmed by SCC records) is that the hind dune was populated by gum trees when a subdivision for properties was cleared in the early 1960s.

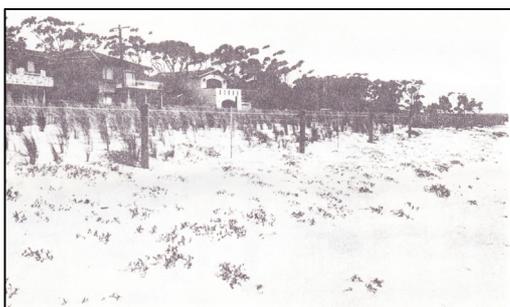
10. Were Banksia trees planted to prevent coastal erosion?

After the 1974 storms at the instigation of the local community a dune management plan was prepared by the Soil Conservation Service in 1978. The paper by P.T. Davies (Deputy Regional Director Soil Conservation Service Kempsey) and N.A Kesby (District Soil Conservationist Soil Conservation Service Nowra) titled *Coastal Protection "Hard" or "Soft"* describes the restoration programme.

The Soil Conservation Service proposal stated:

'Reshape eroded scarp to form an approximate seaward slope of 1:7 (vertical : horizontal) using a bulldozer. The reshaped area should then be planted to marram grass (Ammophila arenaria) and sand spinifex (Spinifex sericeus).'

The photos below from the paper by P.T. Davies titled *The Collingwood Beach Story – A Co-operative Effort* show the northern section of the beach (left) and the southern section of the beach (right) 6 months after restoration.



Although mention is made of trees being planted subsequently by some members of the community there was no evidence of trees on the dunes in the late 1980s (see adjacent photo).

The *Coastal Protection "Hard" or "Soft"* paper describes how the rehabilitated beach responded to the 1986 storm with wind gusts up to 63 knots over a three day period. It is stated that although the winds produced considerable sand drift from the beach berm prior to any wave erosion the vegetation along the dune crest was well established and this resulted in a lowering of wind velocity. The lower wind velocity resulted in most of the drift sand being dropped in front of the dunes demonstrating that the dunes can function without the presence of trees.

It is also stated that during the latter period of the storm the sea began to attack the beach. However, because of the massive build-up of sand along the beach since 1978 only a part of the incipient dune was affected by wave action. The beach responded in a similar manner to the significant June 2016 East Coast Low (see adjacent photo).

Around 1993 further planting of vegetation took place. The Department of Conservation and Land Management Nowra on behalf of Council developed a dune vegetation plan which it circulated to the community in an information pamphlet at the time.

The pamphlet (see adjacent extract) stated in part:

'The shrubs now being planted on the dunes and adjoining areas are low growing varieties which will not obstruct people's views.'

This is consistent with the philosophy outlined in the Coastal Dune Management Manual for foredune vegetation. Contrary to the commitment provided to the community SCC allowed rows of Banksia trees to be planted in front of properties.

As it became evident that trees were growing that would block views residents requested permission to trim the trees into hedges. SCC whilst acknowledging that Banksia trees were suitable for hedging refused permission on policy grounds thus exacerbating the problem that SCC initially produced and created a situation that has ultimately led to vandalism. It is relevant to note that one of the primary objectives of the DVMP nominated to the community Dune Vegetation Reference Group was to produce a plan that would stop the vandalism.

11. Are trees suitable for planting adjacent to the coastal walkway?

Roots from the Banksia trees that have been planted adjacent to the coastal walkway are lifting the concrete creating a trip hazard for users of the walkway. In November 2016 SCC crews cut off Banksia tree limbs, removed tree roots and replaced some 14.5m of walkway (see photos following page). The removal of significant limbs (after SCC environmental assessment) demonstrates the resilience of Banksia trees to pruning and disputes the notion that Banksia trees will not survive pruning.



In 1978, Shoalhaven Council and the Soil Conservation Service commenced a dune restoration project along the beach. This project involved reforming the dunes, fencing, providing stable access tracks and planting marram and spinifex grasses. The local community assisted with the restoration and follow-up maintenance works, including planting over 2500 trees, replanting grasses and applying fertiliser.

The immediate benefit of the restoration works was that sand drift was controlled and the potential for further sand drift reduced (Figure 4B). The long term benefit was that the beach was restored to a condition where it could and would continue to withstand public usage and natural forces without substantial deterioration.

Protecting Our Beaches. We Must Care.

The cooperation of local residents and beach users is required to maintain stable dunes along Collingwood, Orion and Nelson Beaches. The destruction of the dunes and vegetation which occurred in the past should not be repeated.

There are many ways that you can help look after our beaches:

- Leave branches and plants on the dunes instead of cutting, poisoning and burning them. The shrubs now being planted on the dunes and adjoining areas are low growing varieties which will not obstruct people's view.
- Do not interfere with fencing and fenced areas and always use provided walkways and access tracks. This will protect vegetation cover in fenced and other areas.
- Take notice of all signs on and around beaches.
- Collect your rubbish and "Do the Right Thing" for Australia.
- Join a Dunecare or Landcare group or form your own group and take an active role in caring for our beaches and surrounding areas.
- Report any damage of the dunes and their vegetation to the Ranger.

This publication has been produced by the Collingwood Beach Dunecare Group, Vincentia Ratepayers and Residents Association Inc. and Department of Conservation and Land Management, Nowra.



Further, trees have been known to collapse without apparent cause onto the walkway (see adjacent photo). Such collapses could cause severe injury to the users of the walkway. It is prudent to remember that the NSW Supreme Court of Appeal unanimously held that SCC was liable for the death a resident who died instantly when a 25 metre spotted gum fell on a house in South Nowra during a windstorm in 1998.



At that time SCC staff had inspected the tree on two occasions and declared it to be safe. Gum trees are however notoriously unstable and hence the colloquial name of 'widow maker'. In recognition of this fact (and other unknown reasons) the Dune Vegetation Reference Group rejected the Scenario that proposed planting gum trees on the dunes.

Tree roots have also caused damage to infrastructure such as sewer pipes, as evidenced by repairs necessary to a 2m deep sewer at 1A Susan Street Vincentia.

The coastal walkway is located at the rear of the foredune. The Coastal Dune Management Manual states that foredunes are made up of siliceous sands which are essentially deposits of quartz sand. It is further stated that with the continual reworking of beach sands by wave action, there is no opportunity for profile differentiation that is for soil forming processes to work.

However, dune sands located further from the beach are likely to have been undisturbed for much longer and will support much more advanced plant communities, such as tertiary tree species. This is one of the reasons why the Coastal Dune Management Manual does not recommend the planting of trees on a foredune. Put simply, the soil profile is not suitable and in turn will result in greater instability as the trees grow.

12. Can tree roots resist wave action?

Trees cannot sustain attack by constant wave action. This is stated in publications such as the Queensland Government Environmental Protection Authority and Beach Protection Authority Coastal Technical Series 2. The publication states in part:

'While a good vegetation cover helps increase the volume of sand in the frontal dune and prevents wind erosion, the presence of the vegetation itself provides little resistance to wave erosion. The roots of plants and trees have virtually no capacity to reduce the loss of sand from the beach caused by wave attack. The role of dune vegetation is restricted to building the frontal dunes and preventing sand loss from the beach system by wind erosion.'

This was in fact confirmed to Councillors by the SCC Environmental Services Manager in December 2015. The photos taken at Collingwood Beach near Moona Moona Creek in November 2015 and July 2017 clearly demonstrate that tree roots do not provide any additional protection to dunes from erosion (see photos following page).

The photos also demonstrate the effect of incorrect vegetation in dune zones resulting in erosion and poor dune formation. It is also relevant to note that the roots are not extensive.



The Banksia trees planted at Collingwood Beach in the 1990s have propagated and are invading the seaward area of the foredune (see photo below). It is estimated that between the beach access way at Susan Street, and 50m north of the access way there are approximately 100 Banksia trees. The area is so heavily forested that one waterfront property has been declared to be in a bushfire zone.

Overseas experience demonstrates that planting trees on foreshore dunes has catastrophic consequences as evidenced at Culbin in the northeast of Scotland (see photo below).



Submissions to Council on the draft DVMP included an eyewitness account of how two Norfolk pines were swept away in the 1974 storm and used as battering rams to demolish the dunes. With the huge number of trees on the dunes today the beach will be decimated and it is likely that properties will be damaged by a storm of equal intensity.

13. Will pruning Banksia trees cause them to perish?

Along the coastal walkway there are examples of Banksia trees that have been pruned heavily with no apparent affect on the health of the trees. The photos below show healthy foliage on mature trees that have been heavily pruned. As such the only conclusion that can be drawn is that from a horticultural point of view Banksia trees can be pruned without perishing. Also as stated earlier, SCC staff has heavily pruned Banksia trees in order to undertake maintenance along the coastal walkway with no subsequent detriment to the health of the Banksia trees.



14. Is there a link between dune resilience and coastal hazard management?

The Coastal Dune Management Manual states that dunes are an integral part of the coastal environment and on sandy shorelines, coastal dunes represent the last line of defence against erosion by providing a reservoir of sand for waves to utilise during storms.

As well as limiting the landward intrusion of waves, wind and salt spray, dunes act as a barrier to oceanic inundation and they provide for an important morphological and ecological transition from marine to terrestrial environments.

15. Has a coastal hazard assessment been undertaken for Collingwood Beach?

SCC Councillors have unanimously adopted the Coastal Zone Management Plan (CZMP) for the Shoalhaven Coastline produced for SCC by Umwelt (Australia) Pty Ltd. The Action Plan included in the CZMP for Collingwood Beach states:

'Select and maintain coastal vegetation to protect coastal views, stabilise the dune surface, provide habitat for small birds and other species and provide shade at key locations for coastal pathway users.'

'After major storms scrape sand from the lower beach face of Collingwood Beach to reinforce the toe of the eroded dune scarp.'

The CZMP does not require the planting of trees to stabilise the dunes.

16. What is beach scraping and nourishment?

Beach scraping is recovering sand from the berm of the beach and placing it at the foot of the dunes. Beach nourishment is the process of importing sand from elsewhere onto an eroding shoreline to create a new beach or to widen an existing beach.

After the 1974 storms sand scraping and nourishment was undertaken at Collingwood Beach to reinstate the beach. Since the 1974 storm the beach has been able to cope with subsequent storms through the process of accretion.

17. Will Collingwood Beach require beach scraping and nourishment in the future?

At a community forum held in conjunction with the development of the Erosion Remediation Options for Collingwood Beach report produced by Royal Haskoning for SCC the author advised that when there is a repeat of the 1974 storm the Banksia trees will not prevent the loss of the dunes. One viable option mentioned was extra nourishment of sand.

By nourishing a beach it is possible to replenish sand eroded during a storm and at the same time widen a beach. This is what has been happening on the southern Gold Coast since 1976.

Fortuitously there are massive shelf sand bodies off the NSW coast with orders of magnitude larger than the beaches they could protect. The simple solution is to pump sand from the sand bodies onto affected beaches. This is also where the beach sand came from originally.

18. Have there been any independent expert assessments of the draft DVMP?

The only expert submission of which the CBPG is aware was made by Dr Howard Brady an eminent scientist who stated that trees planted on Collingwood Beach do not belong in that ecosystem and actually destabilise discrete areas. His submission further states that his preference would be to remove high trees completely and plant additional low lying dune vegetation to strengthen the dune system.

Separately SCC engaged a consultant to review the DVMP from a coastal hazard perspective. The conclusion in consultant's report states that maintaining a well vegetated dune system is important for coastal protection, primarily through the vegetation's role of trapping sediment to increase the volume of the dune system.

19. Have NSW Government agencies commented on the draft DVMP?

The SCC sought advice from three NSW Government agencies when three Options were developed for the initial DVMP, which at the time included a demonstration site at the eastern end of Susan Street.

Those agencies included:

- Department of Primary Industries - Lands;
- Department of Primary Industries – Jervis Bay Marine Park: and
- The Office of Environment and Heritage.

Advice from the NSW Government agencies was sought again when the DVMP was reworked into the current version.

The Department of Primary Industries (DPI) Lands review of the previous version supported the development of the demonstration site at Susan Street. Clearly, in the view of the DPI Lands culling and pruning the forest of Banksia trees at this location would not affect the resilience of the dunes.

Similarly, the DPI Jervis Bay Marine Park (JBMP) review of the current version does not object to the proposed felling of tall shrubs that occur underneath the canopy of under pruned trees, simply stating that a strategy needs to be put in place for maintaining appropriate dune vegetation at those locations. As would be expected the DPI JBMP review primarily focuses on issues that could arise in the event of beach scraping or nourishment.

The reviews undertaken by the Office of Environment and Heritage (OEH) states that the proposed dune clearing works are likely to set a precedent for similar works to be undertaken at other localities in the Shoalhaven. Given the overriding importance of correct dune vegetation to ensure dune resilience it is not known why the OEH does not consider this to be the primary consideration.

The OEH reviews also make reference to contravention of the Coastal Management Bill 2016. The Coastal Management Bill lists 12 general objectives one of which is stated as being:

*'To protect and enhance natural coastal processes and coastal environmental values including natural character, **scenic value**, biological diversity and ecosystem integrity and resilience'.*

The OEH reviews specifically state that the draft DVMP does not meet the coastal zone and management objectives without going into specifics. The proposition that can be drawn from the quoted objectives is that the draft DVMP does not mitigate current and future risk from coastal hazards by taking into account the effects of coastal processes and climate change. In that regard the OEH is correct as the draft DVMP does not fully comply with the Coastal Dune Management Manual and in particular the areas where trees have been planted illegally and are propagating on the dunes.

In contradiction, the OEH reviews further state that the proposed vegetation clearing works would not be in accordance with the Coastal Dune Management Manual. This is clearly incorrect as the manual states that trees must not be planted on foredunes and incipient dunes. Any clearing works would bring the dune system into closer alignment with the requirements documented in the manual.

There are other inconsistencies in the OEH reviews. It is stated that pruning of mature vegetation (presumably trees) is likely to result in the death of plants leading to dune instability and blowouts. However, the OEH reviews are silent on the benefit of the additional proposed planting of vegetation and the hazard of blowouts arising from sections of the dunes that have been removed by SCC to allow stormwater drainage discharge onto the beach, which of course has resulted in erosion of the dunes.

Separately, the OEH reviews state that the clearing / pruning of vegetation works would likely increase the risk of coastal inundation. Inundation from wave run up is dependent on the height of the dunes. In this regard it is relevant to note that the Advisian Shoalhaven Coastal Hazard Mapping Review report produced for SCC did not see a need to consider vegetation when determining the extent of wave inundation at Collingwood Beach.

The OEH reviews go on to state that the risk of pruning vegetation to low heights was clearly acknowledged by the ecological consultants who prepared the original draft DVMP and who requested to be disassociated from the current draft DVMP. This statement is **factually incorrect**. The original draft DVMP included pruning to a height of the 1.5m. A proposed amendment to reduce the height of pruning to 1.0m was the only basis of the consultant's objection. It is of course relevant to note that the same consultant continues to work with SCC staff in the further development of the draft DVMP.

The current OEH review makes particular reference to the CBPG proposed amendments to the previous version of the DVMP. It is not known why this commentary has been provided as Councillors have voted not to adopt the proposed amendments.

For the purpose of completeness it is important to point out that the OEH has alleged that the CBPG has stated that the restoration works after the 1974 storms have not helped reduce erosion. This allegation is **false** and has no basis. Members of the CBPG actually participated in restoring the dunes after the 1974 storms however their efforts have never been acknowledged.

20. Has there been any guidance from the NSW Government?

The NSW Minister for Planning Rob Stokes (as he then was) in May 2016 visited Collingwood Beach to meet with the CBPG. The Minister stated in subsequent correspondence to the CBPG that Councils need to balance the environmental and stability benefits of vegetation on dunes against the visual amenity for adjacent landholders, in consultation with local communities.

In November 2016 the New South Wales Legislative Council **unanimously** passed a motion put forward by the Hon. Paul Green affirming the importance of maintaining native vegetation across coastal areas and supporting community engagement to protect the Collingwood Beach dunes with appropriate vegetation.

The motion acknowledged that the prime purpose of the draft DVMP currently under consideration by SCC was to secure views from the shared cycleway across the 1.5 kilometre beachfront between Susan Street and Moona Moona Creek.

In August 2017 the Hon. Paul Green and the NSW Minister for the Environment Gabrielle Upton visited Collingwood Beach to meet with the CBPG. The issues faced by the dune system due to incorrect vegetation being planted were explained and acknowledged.

The NSW Government publication *An introduction to the NSW Coastal Management Manual* shows the vision that is portrayed for Jervis Bay (see below).



21. Does the NSW Government have a policy of retreat from the coastline?

In March 2017 the Executive Director, Resources and Industry Policy (Policy and Strategy) Department of Planning and Environment wrote to the President of the Eurobodalla Community Forum on behalf of the Hon Anthony Roberts MP, Minister for Planning, Minister for Housing and Special Minister for State. The letter states in part:

'The NSW Government does not have a 'planned retreat' policy. The coastal reforms require councils to devise appropriate management solutions in consultation with their communities'.

22. Is there a legislative entitlement to views?

The Land and Environment Court recognises residents' rights to views. There is ample case law in this matter under the *Trees (Disputes Between Neighbours) Act 2006* to sustain a principle that SCC trim or remove rows of trees that obstruct views. For example, in *Johns v Breur* [2012] NSWLEC it was found that a hedge of cypress trees ranging in height from 6 metres to 11 metres blocking a view at Bellevue Hill in Sydney had to be removed as the trees could not be pruned. The decision was based on the principle that water views are critical to a property's amenity and value.

Another relevant Land and Environment Court decision that establishes the principle for maintaining views is *Tenacity Consulting v Warringah* [2004] NSWLEC. Although related to building developments the underlying principle is that where there is an alternative that affords views then that alternative needs to be given preference.

There is no reason why SCC should not follow the principles of law established by the Land and Environment Court.

Further, it is relevant to note that SCC planning laws require a viewing corridors between houses on the waterfront so that people driving along Elizabeth Drive can catch glimpses of Jervis Bay. The planning laws have become redundant in areas where Banksia trees have been allowed to grow and block out views.

23. Is there a legislative restriction to pruning or removing trees?

Native Vegetation Act 2003

In 2000 SCC constructed a coastal walkway along Collingwood Beach. The Vincentia Cycleway / Footpath Statement of Environmental Effects (SEE) was prepared for SCC by Maunsell McIntyre Pty Ltd. The SEE states that the location of the walkway targets tourists, the disabled and wheelchair users (among others).

The SEE also states that the walkway is expected to develop into a scenic path where people can view Jervis Bay to its greatest advantage. The SEE further states that is not expected that the walkway will be threatened by coastal hazards. In fact during the construction of coastal walkway up to 20 trees were removed.

Whilst the SEE was conducted with respect to the exclusion provisions of the *Native Vegetation Act 1997* those exclusion provisions have not been changed in the current *Native Vegetation Act 2003*. The SEE concluded that the area was excluded from the Act because it was classified as a 'village'. Schedule 1 Part 3 Urban Areas of the 2003 Act (14) includes the same provision and makes reference to land within a zone designated as 'village' being excluded from the Act. It follows that there is no legal obstacle under the Act to remove native trees from the dunes.

SCC staff has in recent times pruned and removed large Banksia trees from the dunes. It is not known why the selective pruning and removal was undertaken. The photos below show completed works at Illfracombe Avenue Vincentia in June 2015.



Crown Lands Act 1989 No. 6

The dunes are Crown Land managed in trust by SCC under the *Crown Lands Act 1989*. Section 11 of the Act sets out the principles of management. Section 11(b) requires that:

*'the natural resources of Crown land (including water, soil, flora, fauna and **scenic quality**) be conserved wherever possible,'*

Section 11 (e) requires:

'that, where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity,'

There is nothing in the Act that precludes the removal of vegetation to increase the resilience of the dunes and conserve scenic quality.

24. Did the community previously have unobstructed views of Jervis Bay?

The photos on the following page from 1A Susan Street Vincentia show how the Banksia trees have grown to obstruct views from the coastal walkway.



2001



2015



2017

It is relevant to note that the SCC Foreshore Reserves Policy states:

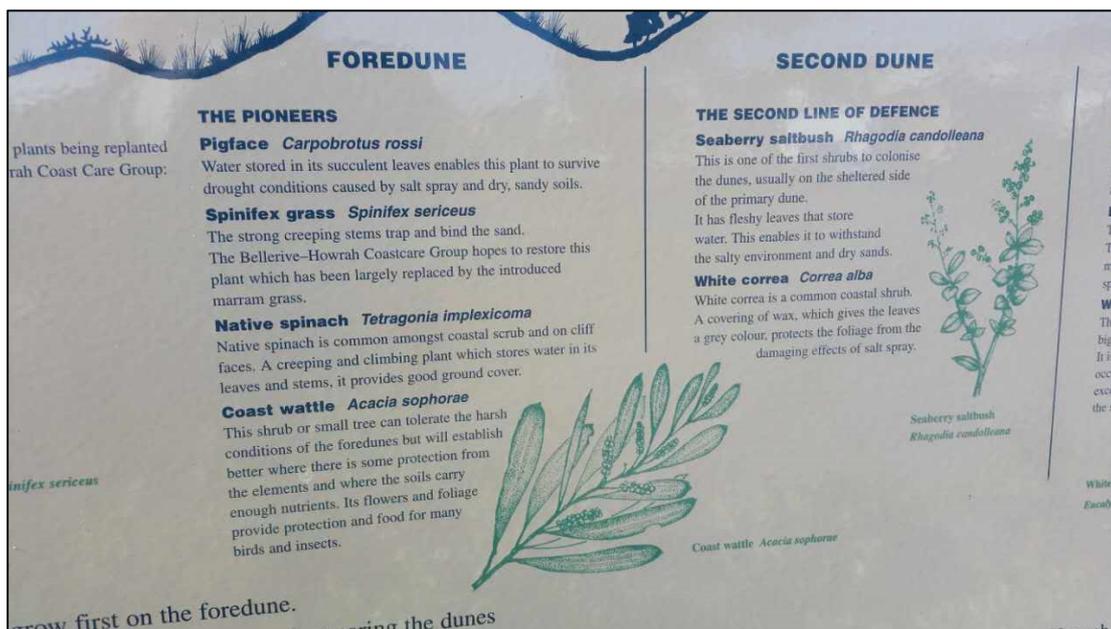
'Where Council is required to revegetate foreshore lands in response to erosion or other identified environmental threat, it shall revegetate with a mix of tall and low growing plants with a view to preservation of amenity for residents'

SCC has failed to comply with its own policy allowing the planting of Banksia trees along the coastal walkway that it knew or ought to have known would grow into thickets blocking views. It is not known why the situation at Collingwood Beach should be treated any differently to the SCC resolution on the planting of vegetation at Mollymook. That resolution requires consultation with residents and planting of species to minimise impacts on beach views and tracks.

25. Is there an example of best practice that could be followed at Collingwood Beach?

Bellerive Beach is in Tasmania. The beach is 1.2km long and is located in an embayment similar to Jervis Bay. The beach is managed by Clarence City Council.

Clarence City Council has implemented a dune management system that is consistent with the principles outlined in Coastal Dune Management Manual namely low growth vegetation to capture wind-blown sand (see photo).



26. How should the content of the draft DVMP be determined?

The content of the draft DVMP must be made on objective based evidence. Any decision driven by ideological philosophy will not result in the best outcome for the dunes.

References

- 1.0 Coastal Management Bill 2016.
- 2.0 Crown Lands Act 1989 No. 6.
- 3.0 Native Vegetation Act 2007.
- 4.0 New South Wales Government An introduction to the NSW Coastal Management Manual.
- 5.0 New South Wales Government A Manual of Coastal Dune Management and Rehabilitation Techniques.
- 6.0 University of Wollongong Coastal Foredune Scrub and Temporal Littoral Rain Forest South Coast of NSW.
- 7.0 Queensland Government Environmental Protection Authority and Beach Protection Authority Coastal Technical Series 2.
- 8.0 Tasmanian Department of Primary Industries, Parks, Water and Environment Coastal Works Manual.
- 9.0 Dune Restoration Trust of New Zealand Technical Article No. 2.2.
- 10.0 Umwelt (Australia) Pty Ltd Coastal Zone Management Plan for the Shoalhaven Coastline.
- 11.0 Advisian Shoalhaven Coastal Hazard Mapping Review.
- 12.0 Manly Hydraulics Laboratory Collingwood Beach Dune Vegetation Management Plan Review
- 13.0 Royal Haskoning Erosion Remediation Options for Collingwood Beach.
- 14.0 Maunsell McIntyre Pty Ltd Vincentia Cycleway / Footpath A Statement of Environmental Effects.
- 15.0 Coastal Protection “Hard” or “Soft” by P.T. Davies and N.A Kesby.
- 16.0 The Collingwood Beach Story – A Co-operative Effort by P.T. Davies
- 17.0 Shoalhaven City Council Foreshore Reserves Policy.