

## **Wollongong Dune Management Strategy for the Patrolled Swimming Areas of 17 Beaches and Implementation Plan**

Frequently Asked Questions and Answers  
May 2015

### **Why has Council prepared the Wollongong Dune Management Strategy for the Patrolled Swimming Areas of 17 Beaches (hereafter referred to as the Dune Management Strategy)?**

During public consultation carried out for the preparation of the Draft Wollongong Coastal Zone Management Plan (CZMP), the community identified serious concerns about coastal dune management, with particular reference to excessive dune heights and scarping after storms, and the role of dune vegetation in these issues. The concerns focussed mainly on the deterioration of sightlines for lifeguard/lifesaving operations, and a reduction in recreational beach amenity due to increased scarping and the encroachment of dune vegetation. In response to this, Council endorsed the preparation of a Wollongong Dune Management Strategy.

### **Why does the Dune Management Strategy only consider the patrolled areas of the 17 beaches and not the whole length of all the beaches?**

With Council's current level of resources the best approach was to focus on the high use areas of the 17 patrolled swimming beaches, and to prepare a strategy whose actions are achievable and able to be implemented in the near future. Council encourages the public to use the patrolled areas between the flags for swimming; hence the strategy is focussed in this area to facilitate the work of the lifeguards/lifesavers. Some of the management options can be applied across the whole length of the beach area, while other options specifically relate to issues that occur in the patrolled areas at each of the 17 beaches.

### **How was the community consulted during the preparation of the Dune Management Strategy?**

Community consultation activities included an online community survey, targeted stakeholder meetings with Surf Life Saving Illawarra, Beach Care Illawarra and Council staff, presentations to Council's Estuary and Coastal Zone Management Committee and Aboriginal Reference Group and the review of comments and concerns raised during the public exhibition of the draft Dune Management Strategy.

### **Are there any existing guidelines for the management of dunes?**

The 'NSW Coastal Dune Management Manual' provides information for successful rehabilitation and protection of coastal dunes, including the techniques for stabilising, revegetating and maintaining dunes. Council follows these principles for the general management of the dunes. However, a separate strategy is required to address the issues that have arisen over time between the role of the dunes for coastal protection and their potential impact on the recreational use of the beaches.

### **How have the beach profiles changed over time?**

Historical beach records available to Council indicate that the beaches, as a whole, have eroded and accreted over time, in response to periods of stormy or calm weather conditions. In general, however, there has been an increase in the vegetated portion of the beach, and an increase in the volume of sand held within this section. Associated with this is a general increase in the height of the frontal dunes. These increases are more noticeable since the dune re-vegetation works were undertaken in the mid 1980's.

### **What works have been undertaken historically on Wollongong's beaches?**

In the first half of the 20th century, many of Wollongong's beaches were largely un-vegetated due to previous clearing of native vegetation. Sand mining also occurred at several beaches including Perkins, Corrimal and Stanwell Park beaches. As a result, ongoing problems occurred such as sand blowing across roads and onto properties behind the beaches. During a storm in the 1960's, infrastructure at City Beach was undermined. Several beaches were also heavily eroded during storms in the 1970s. Primarily in response to concerns about storm impacts on beaches and the infrastructure behind them and sand drift, extensive dune stabilisation works were undertaken during the mid-1980's. Ten beaches underwent substantial dune stabilisation and re-vegetation works which involved reshaping the existing un-vegetated foredune. At the completion of the engineering works, which also included installation of fencing and access tracks, the dunes were planted with appropriate vegetation, including species that are referred to by the community as Coastal Wattle. Ongoing maintenance of the dunes including weed control, fence and track maintenance is undertaken by Council's dune crew.

### **Is Coastal Wattle *Acacia longifolia* subsp. *sophorae* a weed?**

An in-depth assessment of the community concerns around the presence of Coastal Wattle in the dunes was undertaken to determine whether this species is a weed. Coastal Wattle *Acacia longifolia* subsp. *sophorae* is considered to be indigenous to the Wollongong coastline in dune vegetation. *Acacia longifolia* subsp. *sophorae* is listed in the NSW Coastal Dune Management Manual as a suitable species to plant in dunes. However, at some beaches, the wattle growth is inappropriate in terms of growth habitat and height, creating sightline issues. Monocultures have also formed at some locations.

*Acacia longifolia* in the management areas of the patrolled beaches will be managed to improve sight lines, reduce monocultures and increase biodiversity.

### **Are there guidelines on what is the appropriate width of a beach in front of a dune system?**

There are no specific guidelines on what distance the dune should be from the high tide mark or on the width of each beach zone. Beach width and height are highly dynamic and strongly influenced by wave and wind processes. During storms, foredunes including incipient foredunes are eroded, the vegetation growing on them is undermined and sand transported offshore. This can result in temporary loss of foredunes and periods of reduced beach width. During calm conditions, the foredunes and incipient foredunes rebuild. Hence, the widths of beaches and dune zones are variable over time. However, where beaches are used for recreational purposes, the seaward spread of dune vegetation, and a reduced beach width through erosion dominated periods, can create recreational amenity issues for the community.

### **Can dune vegetation interfere with coastal processes and increase the occurrence of scarps, steep beaches, deep gutters and/or rips along the beaches?**

Dune vegetation has an important role as natural protection from storm erosion through dune growth. The growth occurs by trapping and stabilising windblown sand which enhances natural dune development above the limit of direct wave attack. Vegetation on dunes will assist in the recovery after storms as it creates a reservoir of sand within the dunes that allow the beach to better withstand the next storm impact and potential erosion. This in turn provides a buffer of protection for infrastructure behind the dunes. Beaches are in a constant state of change and the profile can vary over time, with the major changes occurring after major storm events. The primary drivers for the formation and strength of features such as gutters and rips at the beach are changes in wave energy and direction, and not foredune vegetation. Dune vegetation can, however, change the beach profile and the nature and scale of the scarps formed after a storm. From a recreational standpoint, beach amenity can be compromised on some beaches.

**Why is dune re-shaping considered a more suitable option at some beaches and not at others?**

There can be an increase in the risk of impacts from coastal hazards with dune modification works associated with the following two management options: remove vegetation from the frontal zone (depending on extent of removal and re-profiling), and reduce dune height by re-profiling. This risk has been considered in prioritizing the management options.

As part of the Woonona Beach and Towradgi Beach dune reshaping projects, the consultant recalculated the coastal hazard lines based on the proposed post work dune profile. There was no significant change to the current coastal hazard lines or inundation extent.

**What approvals are necessary to implement the management options?**

Council has considered the approval pathway for all the management options outlined in the Dune Management Strategy. In many cases, assessment of the potential impacts of the management options will be carried out under Part 5 of the *Environmental Planning and Assessment Act 1979*, which requires Council to carry out a Review of Environmental Factors that assess the potential environmental impacts of the activities. Council will also need to obtain owner consent and/or authorisation for work on Crown Land, comply with relevant Community Land Plans of Management and the Wollongong Local Environmental Plan, and where relevant, consider cultural sites and comply with the conditions related to previous grant funded revegetation works.

**If proposed dune works are focussed in front of surf clubs, will this cause other safety or risk issues in those locations or elsewhere along the beaches?**

The implementation of dune works in localised areas, such as removal of vegetation from the frontal zone and reducing dune height by re-profiling, will be considered in the context of the whole beach, in terms of beach and dune morphodynamics and patterns of vegetation cover along each beach. This will ensure that an appropriate balance can be achieved to satisfy both beach amenity and safety concerns, and provide an adequate level of coastal protection. A monitoring program will be established prior to undertaking any works to track changes with time and take corrective action if necessary.

**Where can I view the Dune Management Strategy and Implementation Plan?**

The Dune Management Strategy and Implementation Plan are available on the Council website at: <http://www.wollongong.nsw.gov.au/development/coastalzonestudy/Pages/Dune-Management-Strategy.aspx>

**What is the timeframe for the Implementation Plan?**

Management actions have been identified for 2013-14, 2014-15, 2015-16 and 2016 onwards. Progress will be reported annually to Council and the Implementation Plan reviewed as part of the annual business planning project.

An update on the progress of the main management actions is available on Council's website at:- <http://www.wollongong.nsw.gov.au/development/coastalzonestudy/Pages/Dune-Management-Strategy.aspx>

**Will there be maintenance of the sites after the initial work is undertaken?**

Ongoing vegetation management work will be carried out by contractors and dune crew. Council is also developing a Dunecare volunteer program and will be working to establish sites where there are interested community members over the coming year.

**How will you monitor the success of the work?**

Council has established a Dune and Beach Monitoring Program. This project involves beach and dune profile surveys and photo point monitoring undertaken on a regular basis. Surveys are being conducted at beach stretches at Bulli, Woonona-Bellambi, Corrimal, Towradgi-Fairy Meadow and City-Coniston. Thirroul was included for July 2013 to December 2014 as a comparison with a beach with no back dune or vegetation. Photopoint monitoring is being conducted at all patrolled beaches considered to have management issues. This program will allow a better understanding of how Wollongong's beaches behave over time and will allow improved management in the future.