Diane Wiesner, PhD, M.Sc., MA

t/a Science Plus ABN50 074 272 535 10 Rosebridge Avenue, Castle Cove NSW 2069



REVEGETATION REPORT

Property: 1114 (Flight Deck) Pittwater Road, Collaroy, NSW 2097

Following completion of the rock revetment and placement of sand over it, vegetation planting is recommended to stabilise the sand and soil terrain within the boundaries and improve the visual appearance for residents and the public. In re-vegetating the area concerned, plant species need to be capable of surviving the harsh conditions, salty spray and sometimes driving winds. Plants indigenous to the sand dunes of south eastern Australia are best suited to meet these goals.

Recommendations: Buffalo or Common couch (Cynodon dactylon) lawn can rapidly take over new areas and will tolerate both drought and sandy soil conditions. Buffalo has been used previously with success in the affected area and will probably be more resistant to weed invasion than common couch. If the appearance of rocks or boundary walls is to be softened, Coastal Pigface (Carpobrotus glaucescens) and Beach Fan Flower (Scaevola calendulacea) grow well over rocky areas and provide colour when flowering.

A variety of plants will assist in stabilising the sand over the rock revetment, and in providing visual appeal to soften the outlook. Beach Spinifex (*Spinifex sericeus*) is the most successful native sand trapping plant along the east coast. It responds to accumulations of sand by growing long runners or stolons. Beach Spinifex consolidates sand because it has a rapidly growing root system covered with microscopic fungi. The filaments of these fungi may allow the uptake of nutrients otherwise unavailable to the plant. They may also stabilise the sand by binding sand grains together.

To assist in stabilising the sand on the site, native species which have relatively deep roots such as Coastal Wattle (*Acacia longifolia* var.*sophorea*) and Coastal Banksia (*Banksia integrifolia*) are recommended. The coastal winds are likely to limit their height and shape but the roots will be strengthened by the challenge. Other plants such as Coastal Pelargonium (*Pelargonium australe*), Coastal Correa (*Correa alba*) and Native Rosemary (*Westringia fruticosa*) are typically used for rapid growth despite the harsh conditions encountered. The preferred density for these species is 4 plants per cubic metre.

If planter boxes are used to provide a boundary, other native species such as Coastal Pelargonium (*Pelargonium australe*) and Flannel flower (*Actinotus helianthi*) are attractive though the latter needs special care. However, plants in planter boxes require constant attention, especially in areas where there are regular and quite vigorous winds. The wind dries out the soil very rapidly and without the depth of soil one experiences in ground planting, the roots suffer especially as the winds in the Collaroy area are salt bearing.

The use of pea or sugar cane mulch, and regular watering, is advised to assist in establishment of plants and subsequent growth. Northern Beaches Council can assist with plant supplies to local residents.

Diane Wiesner, PhD, M.Sc., MA

t/a Science Plus ABN50 074 272 535 10 Rosebridge Avenue, Castle Cove NSW 2069



References

Hardin G. (editor) (1991): Flora of New South Wales volume 1 and 2. University of New South Wales Press, Sydney

Roger Carolin and Peter Clarke (1991): *Beach Plants of Southeastern Australia*. Sainty & Associates, Potts Point, NSW

D.M.Wiesner

Consultant scientist

6 June 2017