

Diane Wiesner, PhD, M.Sc., MA

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



6 June 2017

REVEGETATION REPORT

Properties: 1150-1168 Pittwater Road, Collaroy, NSW 2097

Following completion of the proposed coastal protection works, vegetation planting is recommended to stabilise the sand and soil terrain within the boundaries (landward of the vertical wall) and improve the visual appearance for residents. Based on the historical extent of dune vegetation growth over the most seaward portion of the properties, vegetation is unlikely to be able to be established over the rock toe.

In re-vegetating the area landward of the vertical wall, 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.

Buffalo or Common couch (*Cynodon dactylon*) grass can rapidly take over new areas and will tolerate both drought and sandy soil conditions, and are therefore recommended lawn species. Buffalo has been used previously with success at the affected properties and will probably be more resistant to weed invasion than common couch.

If it is desired to encourage growth of vegetation descending over the face of the wall, yellow flowered Guinea Flower (*Hibbertia scandens*) and the mauve flowered Beach Morning Glory (*Ipomoea pes-caprae*) provide colour and are hardy species. Coastal Pigface (*Carpobrotus glaucescens*) and Beach Fan Flower (*Scaevola calendulacea*) also grow well in exposed sites like a wall.

For lawn alternatives, a variety of plants will assist in stabilising the area landward of the vertical wall. 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 sand by binding sand grains together.

Plants such as Coastal Pigface (*Carpobrotus glaucescens*), Coastal Pelargonium (*Pelargonium australe*), Coastal Correa (*Correa alba*) and Beach Fan Flower (*Scaevola calendulacea*) are typically used for stability and rapid growth despite the harsh conditions encountered. Native Rosemary (*Westringia fruticosa*) is an attractive low growing specimen which survives the conditions well. The preferred density is 4 plants per cubic metre.

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