



Appendix 5.12

Public Domain and Landscape

READER ALERT!

Readers of the Appendices to this document are advised to be alert to information provided that addresses a Project larger than the wet berth marina expansion the subject of this Environmental Assessment.

Sub-consultant reports in this Environmental Assessment were completed in accordance with Director Generals Requirements issued 14 January 2008 that addressed the larger wet and dry land project described in the published Marmong Point Marina Preliminary Assessment. The dry land part of the original project included dry storage, marine maintenance, marine commercial, restaurant facilities on the Proponent's private lands.

However, about six months later when the sub-consultant's reports were complete, Lake Macquarie City Council advised that it was uncertain as to whether it was the owner of land it thought was dedicated as a public road and called Nanda Street.

This led to the project being redefined to comprise just that component of the larger project that related to the wet berths, a spill shed, requisite parking and public domain works comprising a boardwalk on the foreshore. Redefined DGRs were then issued on 22 January 2009.

While the information in the Appendices is useful and important in gaining a holistic perspective of broader plans, readers of this Environmental Assessment should understand that the subject proposal comprises the wet berth proposal and its ancillary works that include the spill shed, car parking, sewer pump-outs and public domain boardwalk only, and not the dry land components on private lands.

MARMONG POINT MARINA RE-DEVELOPMENT

PUBLIC DOMAIN AND LANDSCAPE REPORT

for Les Binkin and Samantha Suprain
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1. BACKGROUND

The Marmong Point Public Domain Plan proposes significant improvements to the public foreshore to be undertaken in conjunction with re-development of the Marmong Point Marina.

The Plan is based on the philosophy of reinforcing the network of green routes around the Lake Macquarie foreshore. The focus is on improvement of pedestrian access, public facilities, parking and the rehabilitation of a degraded landscape.

The overall scheme provides a visual and functional integration of the new facilities proposed within the Marina built form and the new recreational opportunities and facilities on the public foreshore.

2. EXISTING LANDSCAPE AND BUILT FORM CHARACTER

Lake Foreshore Setting

Marmong Point Marina is located at the western extent of Marmong Point. The Point is a low elevation spit of land located on the north west shore of Lake Macquarie. The area is occupied by a small residential subdivision developed with one and two storey detached houses and skirted by low lying foreshore. From distant points across the lake the foreshore, marina buildings and berths are viewed with forested slopes behind.

From Marmong Point visitors can enjoy expansive views north across the lake to Warners Bay or east to Eleebana.

Character of existing public realm

The foreshore land from the point west to the Marina is characterized by grassy expanses with scattered stands of mainly Swamp Oak at the waters edge. Other trees are generally of poor form and health or undesirable species including the Cocos Palms in the vicinity of the Marina site. Immediately west of the Marina the inlet is fringed by mangroves and Swamp Oak with forested land rising on the opposite shore.

Street frontage

Road access to the Point is via Nanda St. Spatially the street is poorly defined and it does not present as the main access route to the water. Residential lots are double fronted to reserve and street. Dwellings face east to the water views and are typically well set back from the street. As a result driveways and garages dominate the east side of Nanda St whilst the bulkier Marina buildings and extensive hardstand areas occupy the west side.

Public amenity and facilities

Public facilities include the playground, boat ramp, small carpark, two un-formalised dinghy storage areas, picnic tables and a fish scaling table. Whilst the public boat ramp is well used, the carparkng is relatively informal with poorly maintained pavement and bollards. There is no paved foreshore walk and facilities such as the fish cleaning table and picnic tables are visually unsympathetic in the setting.

3. PUBLIC DOMAIN PROPOSAL

The Public Domain proposal presents a sensitive and practical response to the lake foreshore setting. As detailed below, the Plan offers a number of environmental and recreational benefits to public users, the community and to Council as the land manager.

3.1 GENERAL ELEMENTS

Public access – Lake Foreshore

A continuous public footway is provided along the lake foreshore from the entry signage at Marmong Road to the playground at Marmong Point.

The compacted gravel walking trail along the inlet is sympathetic to the character of the foreshore edged with native community of Grey Mangrove and Swamp Oak. Immediately north of the marina facilities the pedestrian route would be upgraded to a boardwalk of at least 2m width. Following the waters edge the boardwalk connects to a generous width concrete path continuing east to the Marmong Point playground.

Public Access - Nanda Street to Marmong Point

Nanda St would be upgraded with a formal avenue planting of advanced clear trunked native evergreen trees to frame the vehicle entry to Marmong Point. A dual use path suitable for cyclists and pedestrians is proposed along the wide verge on the eastern side of Nanda St to avoid conflict between cyclists and movements of pedestrians and Marina patrons on the west side.

Planting Structure for Views and Screening

The proposed foreshore planting comprises clear trunk trees, with a high and broad canopy, combined with areas of low mass planting. This structure provides clear lines of site from the foreshore to the lake views beyond.

At the same time the use of larger native trees in informal clusters also provides a naturalistic canopy mass to filter or break up views from the lake to the built forms or pavement beyond.

Public Facilities

This proposal includes a significant improvement in public facilities for picnicking and informal recreation including:

- public toilet facilities on private land to be managed by the commercial operator of the cafe and open during trading hours
- seating and picnic platforms in high quality durable materials (hardwood and stainless steel)
- BBQ shelter, electric BBQ and seating
- 2 defined and mulched tie up areas for dinghy storage capable of Council formalisation
- Provision for future children's play sculpture

Relationship of Marina Buildings to Foreshore

The site planning and management of the interface between Marina buildings and the foreshore has been given close attention. In particular the treatment of level changes from the commercial area to deck areas and then to the ground plane has been designed in conjunction with planting masses and pathway alignment to ensure a comfortable relationship between restaurant/ café patrons and users of the public foreshore picnic area, the BBQ facility and sitting places.

Generous stair and ramp access has been provided directly from the foreshore to public toilets and commercial areas.

Providing Sunshine and Shade

Clustered shade trees on the foreshore would include advanced Forest Red Gums, Broad Leaved Paperbark, Swamp Mahogany and Swamp Oak cultivated with clear trunks and higher canopy in order to provide comfortable and shaded areas below. The location of formal seating, platform tables and informal grassed picnic areas would offer a range of opportunities for visitors to enjoy sunshine or shade.

Use of Local Native Species

The recommended planting list for foreshore areas uses native species that are locally occurring and that are supported by the Foreshore Stabilisation and Rehabilitation Guidelines (LMCC Jan 2006).

Signage

Both directional and interpretive signage would be a coordinated and designed to comply with Council specifications for a high amenity foreshore area.

Marina Operations and Safety

Several design elements have been included to minimise potential conflict between pedestrian movements and marina operation such as:

- contrast pavement and stencilled 'tyre tracks' to travelling hoist and forklift to alert pedestrians
- castellated kerb to restrict vehicle movement and allow overland stormwater flow

Stormwater Management

Stormwater flow from the public reserve to the lake is managed using a combination of soft and hard materials and devices including:

- infiltration trenches to intercept surface runoff from carpark pavement
- overland flow paths to water's edge stabilised with rock and gravel and low massed native plantings
- hardwood timber boardwalk built over flow lines
- grass and tree planting areas aerated prior to planting to encourage stormwater infiltration
- castellated kerb used to edge marina ramps and to prevent channelling of stormwater
- concrete aprons with battered rock armouring to stormwater drain outlets
- beach replenishment with appropriate grade gravel or sand as required
- provision for future winning entry in a local sculpture prize

3.2 ELEMENTS RELATED TO WET BERTH EXPANSION**Heritage and Archaeology**

The Public Domain Plan allows for conservation of heritage fabric. The Aboriginal midden site identified on the small beach is to be preserved. The slip rails running to the former boatshed are part of the local boating legacy and would be kept intact as part of the proposal. The continuation of a low boardwalk spanning over the slip rails and on an alignment that skirts the midden would ensure both elements remain undisturbed by site works and later pedestrian activity.

The inclusion of seating and interpretive signage in high quality durable materials hardwood and stainless steel is proposed.

Foreshore Parking

The Public Domain proposal includes 30 formalised spaces at the foreshore that would be unrestricted for public access. It is expected that many visitors to the lake would also visit businesses operating at the Marina, including the café and restaurant

Foreshore Stabilisation

In accordance with the Foreshore Stabilisation and Rehabilitation Guidelines (LMCC Jan 2006) the Public Domain proposal includes a stone revetment edge in areas of low to moderate wave action close to the marina berths. Further east future beach fill and native stabilization planting is recommended to manage subsidence and erosion issues (see Diagram 3 LMCC Foreshore Stabilisation and Rehabilitation Guidelines)

Management of stormwater near the beach may include:

- infiltration trenches to intercept surface runoff from carpark pavement
- overland flow paths to water's edge stabilised with rock and gravel and low massed native plantings
- hardwood timber boardwalk built over flow lines
- grass and tree planting areas aerated prior to planting to encourage stormwater infiltration
- beach replenishment with appropriate grade gravel or sand as required

4. PRIORITY OF PUBLIC DOMAIN WORKS AT MARMONG POINT

The expansion of the Marmong Point Marina should be accompanied by public domain improvements in the following order of priority:

1. works associated with the wet berth expansion including boardwalk, heritage conservation works and interpretive signage, foreshore carpark and associated plantings, beach stabilisation, spill shed and dinghy racks
2. foreshore pathways, cycleway, public toilets, seating, picnic and BBQ facilities, rehabilitation plantings, more extensive tree and landscape plantings, Nanda St Avenue planting, public reserve signage, play sculpture.
3. resolution of vehicle turning and parking at Marmong Point near the playground, potential extension of the foreshore path, relocation of the playground and added shade tree planting

5. QUALITY OF LANDSCAPE WORKS**Tree Supply and Installation**

All advanced tree stock would be supplied to comply with NATSPEC: *Specifying Trees – A guide to assessment of tree quality* (R Clark 2003). Foreshore areas that are likely compacted or nutrient deficient would be aerated and remediated or replaced with imported soils to ensure good tree establishment and growth.

In areas where root space for trees is restricted by traffic movement or pavement, tree planting into a pit or vault would be specified. Vaults filled with gap graded soils ensure ample root volume and would support optimum growth.

General Landscape Notes

- all palms to be removed
- all mulching with eucalypt mulch or grey river gravel (avoid chip and bark mulch)
- all seating and table platforms in natural finish dressed hardwood with small section steel legs and fixings
- bins and screens in grit blasted marine grade aluminium sheet
- bollards along boardwalk minimum 300 diameter dressed hardwood logs

- bollards along carpark minimum 150mm diameter dressed rounds
- all tree stock to be supplied to comply with NATSPEC: *Specifying Trees – A guide to assessment of tree quality* (R Clark 2003).
- all foreshore planting sites subject to soil testing and soils to be remediated or replaced with imported soils as required
- all foreshore grassed areas to be cored to improve infiltration and aeration

Indicative Plant Selection

COMMON NAME	BOTANICAL NAME	NOTES
Marmong Rd Hedge		
Magenta Lilly Pilly	<i>Syzygium paniculatum</i> cv eg. Blaze, Aussie Compact, Lillyputt	Glossy evergreen shrub, 2-4m, suitable for hedging, brightly coloured new leaves
Nanda St Avenue - options		
Lilly Pilly	<i>Acmena smithii</i>	Glossy evergreen tree, 8-10m, white flowers,
Brush Cherry	<i>Syzygium australe</i>	Tree to 8m, white flowers, pink fruit
Broad Leaved Paperbark	<i>Melaleuca quinquinervia</i>	Tree to 12m, use red flowering form
Rose Apple	<i>Syzygium jambos</i>	
Kauri Pine	<i>Auracaria sp</i>	Tree to 20m, upright narrow canopy
Lake Foreshore Native Trees		
Broad Leaved Paperbark	<i>Melaleuca quinquinervia</i>	Tree 8-12m, distinctive white bark, broader
Swamp Oak	<i>Casuarina glauca</i>	Slender tree to 12m, tolerates brackish water
Forest Red Gum	<i>Eucalyptus teretacornis</i>	Clear trunked tree 20-25m, open crown
Swamp Mahogany	<i>Eucalyptus robusta</i>	Rough barked tree 15-20m, broader crown in
Lake Foreshore Low Planting-		
Spiny Mat Rush	<i>Lomandra longifolia</i>	Sedge-like clumper to 1m
Saw Sedge	<i>Ghania spp</i>	Dense clumps to 1.5m in damp sites
Swamp Lily	<i>Crinum pendunculatum</i>	Thick strappy leaves 1-1.5m large white flowers
Sea Rush	<i>Juncus krausii</i>	Dense clumps 1-2m tolerates saline water

