7 FORESHORE AND WATERWAY DEVELOPMENT

This section applies to the following development uses proposed within the W1 Waterway Zone, land adjacent to the W1 Waterway Zone, and land which is separated from the W1 Waterway Zone only by a public reserve, and contains Council's specific requirements for foreshore and waterway developments. Other requirements are contained in the relevant general development part (Parts 2 to 7) and/or Area Plans (Parts 10 to 12) of this DCP. Where a conflict exists between this section and the general development part of LM DCP 2014, this section prevails.

This section should be read in conjunction with the following documents;

- Foreshore and Waterway Development Guidelines
- Landscape Design Guidelines
- Lake Macquarie Waterway Flooding and Tidal Inundation Policy
- Flora and Fauna Guidelines
- Scenic Management Guidelines

Definitions:

Foreshore area – means the land between the foreshore building line and the mean high water mark of the nearest natural waterbody.

Foreshore development – means boat sheds, jetties, slipways, boat ramps, swimming pools, inclinators, landscaping, coastal protection works, wharves, waterway access stairs, cycleways, picnic facilities, recreation areas, pontoons, domestic landing platforms, fences or other similar structures within the *foreshore area* and below the mean high water mark (MHWM).

Mean High Water Mark (MHWM) – is the position where the plane of the mean high water level of all ordinary local high tides intersects the foreshore. The mean high water of Lake Macquarie has been determined as + 0.132 metres on the Australian Height Datum (AHD) and should be used for controls in this section. *Note: This definition is not to be used to calculate the Foreshore Building Line (FBL) under the LM LEP 2014.*

Objectives

a. To protect the scenic and visual character and natural landscape of Lake Macquarie, by limiting the type and scale of buildings and structures at the Lake foreshore.
b. To preserve and enhance the native terrestrial and aquatic vegetation and natural ecosystem processes.
c. To maintain foreshore stability and to protect against erosion, siltation and wave overtopping, considering lake levels and projected sea level rise.
d. To permit private development of foreshore land while maintaining public access to the foreshore.
e. To avoid pollution risk to waterways or the foreshore.

Controls

1 All buildings and structures that are not foreshore development must be set back in accordance with the adopted foreshore building line.
2 Where the subject land does not have a foreshore building line and the subject land adjoins a foreshore reserve, development that is not foreshore development must be set back 6m from the boundary fronting the Lake. The setback to any side boundary adjoining a foreshore reserve must comply with the side setback provisions of the relevant section of this DCP.
3 Non-compliance with the foreshore building line will only be considered where the proposed development will provide greater compliance with the foreshore building line than existing buildings and structures, and those buildings or structures will be removed as part of the

redevelopment. For public land, non-compliance with the foreshore building line will be considered where the development is in accordance with an adopted Plan of Management.

4 Foreshore development must be contained between the projected side boundaries of the land subject of the application, except jetties located on the prolongation of side boundaries.

5 A Visual Impact Statement must be prepared and submitted with all applications for foreshore development.

6 Domestic foreshore development is only supported in conjunction with an existing approved dwelling.

7 Foreshore development listed in Table 1 – Column 1 must not occur in the circumstances/ location identified by Table 1 – Column 2, except where the requirements of Table 1 – Column 3 are met.

8 The location and design of foreshore development must consider Council's Lake Macquarie Waterway Flooding and Tidal Inundation Policy.

9 For all developments below Mean High Water Mark (MHWM) an Aquatic Habitat Assessment is to be submitted with a development application which demonstrates that the proposed development, and ongoing use, will not adversely affect Lake ecology or wildlife. The Aquatic Habitat Assessment is to be prepared by a suitably qualified consultant in accordance with Council's Flora and Fauna Guidelines and NSW DPI Fisheries 'Policy and Guidelines for Fish Habitat Conservation and Management'.

Table 1 - Foreshore Development

Column 1 Development Type	Column 2 Locations Where Not Favoured	Column 3 Except Where
Domestic jetties, boat ramps, slipways, boat sheds and pontoons	• Land adjoining land identified for acquisition as a proposed Foreshore Public Reserve. Shown hatched on the LEP Maps. • Land to which Coastal Wetlands (Resilience and Hazards SEPP) or Littoral Rainforest (Resilience and Hazards SEPP) applies. • Land that is identified as an aquatic reserve or supporting significant aquatic flora and fauna, which is likely to be harmed by the construction or use of the development. • Land forming part of a navigation channel. • Land within any tidal tributary. • Land in a prominent position, such as a headland, point or other promontory. • Land that has been marked 'red' on the Domestic Waterfront Structures Land Owner's Consent Strategy- Lake Macquarie estuary (NSW DPI) online map.	• In tidal tributaries –the overall dimension of the domestic landing platform and/or pontoon, does not exceed 2.4 metres x 2.4 metres.
Dredging	• Anywhere in the W1 Natural Waterways Zone.	Necessary to maintain navigation channels and is carried out in accordance with the Transport and Infrastructure SEPP.
Domestic coastal protection works including those below DHWM.		Council is satisfied that: • the development is necessary to control landslip, active erosion of the foreshore and persistent or continuing inundation. (*Refer to Foreshore and Waterway Development Guidelines*). • the treatment results in rehabilitation of native lake foreshore vegetation.
Domestic derricks, davits and boat hoists, floating air docks or dry docks.	• Anywhere in the W1 Natural Waterways Zone.	
Permanent, vessel and/or trolley parking and storage.	• Anywhere in the W1 Natural Waterways Zone or • within 3 metres landward of the DHWM.	
Signs	• Anywhere in the Natural Waterways Zone.	

7.1 DOMESTIC BOAT SHEDS

Objectives

a. To maintain the visual amenity and character of the Lake Macquarie foreshore.
b. To ensure that public access and safety is not adversely affected by the establishment of domestic boat sheds.
c. To respond responsibly and proactively to current and projected flooding and sea level rise hazards and risks.

Controls

1 The height of a boat shed must not be greater than 3 metres for a skillion roof or 3.5 metres with a gable or hip roof.
2 The use of boat shed roofs as sundecks, entertainment areas or patios is not supported.
3 The area of a boat shed must not be greater than 36 square metres (typically 4 x 9 metres).
4 The side of the boat shed fronting the Lake must not exceed 4 metres wide.
5 A boat shed must not include internal washing and/ or cooking facilities, habitable rooms, or entertaining areas/ facilities. The boat shed may include shower and toilet facilities.

7.2 JETTIES, PONTOONS AND LANDING PLATFORMS

Objectives

a. To facilitate waterway recreation through jetty access to boats, where reasonable depth of water can be obtained without dredging.
b. To maintain the visual character and natural landscape of Lake Macquarie by reducing the number of jetties within the Lake through the use of shared jetties where adjoining private residences are present.
c. To mitigate adverse impacts of jetties on ecological processes, aquatic habitat and marine life.
d. To ensure that jetties do not adversely affect the amenity of the Lake or its foreshore.
e. To respond responsibly and proactively to current and projected flooding and sea level rise hazards and risk.

Controls

1 To avoid the need to establish access rights on the properties Certificate of Title, private domestic jetties must be sited to enable the shared use from at least two adjoining properties i.e. positioned on the shared boundary. Jetties must be located on the prolongation of a property boundary to allow for a shared jetty.
2 Where a jetty cannot be located on the prolongation of the property boundary, documentation must be provided demonstrating how the jetty can allow for future sharing.
3 Where a jetty (unshared) exists on the common boundary of an adjoining property, written justification and evidence of an offer to share the jetty must be provided.
4 The design and siting of jetties must be undertaken to minimise impact on aquatic habitats, and ecological processes.
5 An Aquatic Habitat Assessment must be submitted with the development application, which demonstrates that the proposed development, and ongoing use, will not adversely affect Lake ecology or wildlife. The Aquatic Habitat Assessment is to be prepared by a suitably qualified consultant in accordance with Council's Flora and Fauna Guidelines and NSW DPI Fisheries 'Policy and Guidelines for Fish Habitat Conservation and Management'.
6 Jetties must be constructed of materials to maximise the passage of natural light through the structure to suit circumstances and orientation.
7 The length of a jetty must be the shortest of:
   i. The length necessary to achieve a water depth of -1.5 metres at the jetty end at all times; or
   ii. Thirty (30) metres into the Lake from the Mean High Water Mark.

8 In addition to Control 7, it must be demonstrated that a minimum water depth of -600mm over bare substratum and -900mm over seagrass habitat (present or previously recorded) will be maintained on three sides of the jetty end at all times. If this cannot be met, a jetty is not appropriate for the location.

9 The width of the jetty is to be 1.2 metres, with minor variations considered.

10 The length of a jetty (L) or (T) end must be at least 2.4 metres but not more than 4.2 metres. The width of a jetty (L) or (T) end must not exceed 1.8 metres.

11 Domestic jetties are not supported on land that adjoins a public reserve.

12 Decking materials must be laid in such a way as to avoid creating a hazard for people using a wheelchair.

13 The finished surface of a domestic jetty must be at least 600 mm but not more than 750 mm (AHD) above the mean high water mark.

14 To minimise visual impact, no component of the jetty should protrude more than 300mm above the finished surface of a jetty. Any necessary protrusions must be positioned to mitigate risk to users.

15 Jetties shall be designed to not impede upon pedestrian access along the lake foreshore.

16 Jetties must not include solid fill structures or groynes in whole, or in part.

17 Installation, replacement or relocation of mooring poles associated with jetties must not be located within, or result in shadowing of seagrass habitat.

18 Lighting is to be minimal and will only be permitted where it can be shown to be essential for the safe use of the structure. Lighting must not be red nor green.

19 Pontoons must not be located over seagrass.

20 Pontoons must not be greater in size than 2.4m x 2.4m and have a minimum clearance of -900mm between their base and substrata.

7.3 DOMESTIC BOAT LAUNCHING RAMPS

Objectives

a. To mitigate adverse impacts on ecological processes, aquatic habitat and marine life.

b. To maintain the visual amenity and character of the Lake Macquarie foreshore.

c. To ensure that public access and safety is not adversely affected by the establishment of domestic boat launching ramps.

d. To respond responsibly and proactively to current and projected flooding and sea level rise hazards and risks.

Controls

1 Domestic boat launching ramps must not be more than 5 metres long when measured from the mean high water mark into the waterway, and must not be more than 3 metres wide.

2 A boat ramp shall enter the waterway at the property boundary where it meets the mean high water mark.

3 Domestic boat launching ramps must achieve a depth of at least -600 mm.

4 Measures must be implemented to reduce the risk of slipping on the surface of a domestic boat launching ramp.

5 Domestic boat launching ramps must be unobtrusive and must minimise trip hazards and protruding components.

6 Domestic boat launching ramps should be designed to allow the movement of water and sand/sediment across, through and under the structure.

7 Domestic boat launching ramps should be positioned to minimise adverse impacts on ecological processes including mitigating the need to remove sea grasses.

8 An Aquatic Habitat Assessment must be submitted with the development application, which demonstrates that the proposed development, and ongoing use, will not adversely affect Lake ecology or wildlife. The Aquatic Habitat Assessment is to be prepared by a

suitably qualified consultant in accordance with Council's Flora and Fauna Guidelines and NSW DPI Fisheries 'Policy and Guidelines for Fish Habitat Conservation and Management'.

7.4 DOMESTIC SLIPWAYS

Objectives

a. To mitigate adverse impacts on ecological processes, aquatic habitat and marine life.
b. To maintain the visual amenity and character of the Lake Macquarie foreshore.
c. To ensure that public access and safety is not adversely affected by the establishment of a domestic slipway.

Controls

1 The length of a slipway must be the lesser of:
   i. The length of the jetty to be used in conjunction with the slipway, or
   ii. Where there is no jetty, the length of the slipway must not exceed 30 metres.
2 Slipways must achieve a minimum depth of at least -600 mm AHD.
3 Measures must be implemented to reduce the risk of slipping on the surface of a slipway and associated structures.
4 Slipways should be unobtrusive and must mitigate trip hazards and protruding components. This should be achieved through recessing the rails to ground level where possible, or where in conjunction with a boat ramp, recessed into the boat ramp.
5 Slipways should be positioned to minimise adverse impacts on ecological processes. Slipways should be constructed so that the end of the sliprails are not located within seagrass and/or there is adequate water depth at low tide to ensure no risk of propeller dredging of seagrass during their use.
6 An Aquatic Habitat Assessment must be submitted with the development application, which demonstrates that the proposed development, and ongoing use, will not adversely affect Lake ecology or wildlife. The Aquatic Habitat Assessment is to be prepared by a suitably qualified consultant in accordance with Council's Flora and Fauna Guidelines NSW DPI Fisheries 'Policy and Guidelines for Fish Habitat Conservation and Management'.
7 Permanent, vessel and/or trolley parking and storage is not permitted anywhere in the W1 Natural Waterways Zone or within 3 metres landward of the DHWM.

7.5 SWIMMING POOLS

Objectives

a. To mitigate the visual impact of swimming pools when viewed from the Lake.
b. To re-establish environmental integrity and foreshore vegetation, while also screening foreshore development.
c. To respond responsibly and proactively to emerging flooding and sea level rise hazards and risks.

Controls

1 Swimming pools must be in-ground and set back at least 1.2 metres from side boundaries.
2 Swimming pools must be set back at least 7.2 metres from the Deed High Water Mark or from the lot boundary fronting the Lake where a foreshore reserve is present.
3 The swimming pool or concourse must not exceed one metre above ground level (existing).
4 Pool safety fencing must be screened with low scale, native endemic foreshore vegetation to reduce its visual impact and to contribute towards re-establishing a native vegetated foreshore.
5 Screening or any landscaping must not provide climbing opportunities that may undermine the function of pool safety fencing in accordance with Australian Standard 1926. Refer to Council's Landscape Design Guidelines for a list of suitable species.
6 Pool fencing material must be visually permeable, use visually recessive colours and be made of non-reflective material.

7 Backwashing associated with cleaning the pool must be directed to the reticulated sewerage system or alternative disposal area as approved by Council.

7.6 FENCING

Objectives

a. To mitigate the visual impact of fencing on views from the lake through vegetation screening.
b. To re-establish environmental integrity and foreshore vegetation, while also screening of foreshore development.

Controls

1 Fencing must not occur within six metres of the Deed High Water Mark.
2 Fencing in the area between the foreshore building line and 6 metres from the Deed High Water Mark must:
   i. not exceed 1.5 metres in height above the existing ground level; and
   ii. must be visually permeable, use visually recessive colours and be made of non-reflective materials.
3 Fencing must be screened with native endemic foreshore vegetation to reduce its visual impact and to contribute towards re-establishing a native vegetated foreshore.

7.7 COASTAL PROTECTION WORKS

Objectives

a. To ensure coastal protection works are designed and constructed to minimise environmental and visual impacts.
b. To mitigate adverse impacts on ecological processes, aquatic habitat and marine life.
c. To re-establish the environmental integrity of the lake foreshore.
d. To respond responsibly and proactively to emerging flooding and sea level rise hazards and risks.

Controls

1 Domestic coastal protection works must only be used to control erosion or landslip, retain authorised reclamation fill and prevent inundation.
2 The design of coastal protection works must protect through natural absorption or dissipation of wave energy to reduce edge effects on adjoining properties.
3 Design of coastal protection works must be undertaken and/or reviewed by a qualified engineer (or suitable professional) to ensure structural and environmental outcomes are achieved.
4 Soft coastal protection treatments, such as revetments are the preferred option and suit most conditions in Lake Macquarie. It is unlikely structures such as sea walls, groynes or the like would be approved to address erosion issues associated with private properties.
5 The design and construction standards must comply with Council's *Foreshore and Waterway Development Guidelines.*
6 An Aquatic Habitat Assessment must be submitted with the development application, which demonstrates that the proposed development will not adversely affect lake ecology or wildlife. The Aquatic Habitat Assessment is to be prepared by a suitably qualified consultant in accordance with Council's Flora and Fauna Guidelines and NSW DPI Fisheries 'Policy and Guidelines for Fish Habitat Conservation and Management'.

7.8 LANDSCAPING

Objectives

a. To maintain the visual amenity and character of the Lake Macquarie foreshore
b. Retain and enhance endemic and non-endemic vegetation and provide landscaping that considers and complements the scenic amenity and natural foreshores of Lake Macquarie.

Controls

1 Natural features and vegetation along the foreshore must be retained.

2 Natural ground levels should be retained with minimal use of retaining walls. Where retaining walls are constructed, materials and colours must complement the natural character and lake setting.

3 Endemic native species are to be used in areas where native vegetation is present or has the potential to be regenerated. Refer to Council's Landscape Design Guidelines for a list of suitable species.

4 Exotic species that have the potential to spread into surrounding bushland must not be used.

7.9 INCLINATORS AND STAIRS

Objectives

a. To minimise the visual impact on the natural landform of the foreshore by integrating inclinators and stairs into the topography of the site.

b. To maintain the visual amenity and character of the Lake Macquarie foreshore.

Controls

1 Inclinators and stairs must be constructed as close as practical to natural ground level. Natural topographical and landscape elements along the foreshore are to be retained and the removal of natural rock, trees and other vegetation to enable the construction of an inclinator or stairs is not supported.

2 Stairs must be a maximum of 1.2m wide and constructed of timber, masonry, stone or metal. If metal is used, it must be galvanised. Materials and colours must naturally blend and recede into the natural environment of the foreshore.

3 The handrailing of any landing or pit for the inclinator must be fully screened by native vegetation when viewed from Lake Macquarie.

7.10 WASTE MANAGEMENT AT PUBLIC AND COMMERCIAL FACILITIES

Objectives

a. To maximise opportunity for waste from boats or foreshore users to be collected separately for maximum resource recovery.

b. To ensure that hazardous and liquid wastes are managed properly to avoid pollution risk to waterways or foreshore.

Controls

1. Waste management for Public and Commercial Facilities must comply with "Guidance to Meet Operational Controls - All Zones" in the Lake Macquarie Waste Management Guidelines, with the following modifications:
   i. Bin type, sizes, numbers and collection frequency
      a. Applications for boatshed, jetty, slipway, boat ramps and other developments that extend over the water that are for commercial or public use must provide a completed Demolition, Construction and Operational Waste Management Plan (WMP) of the development, in accordance with Lake Macquarie City Council Waste Management Guidelines. The Operational WMP must enable separate management of garbage, recyclables and problem waste (such as batteries, oils, paints and fishing line) generated by boats or foreshore users.
   ii. Waste Storage
      a. Where the development extends over the water at highest tide, the development must not include storage of hazardous or liquid wastes unless these are completely enclosed and bunded to prevent spills reaching the water.
      b. If boat maintenance is part of the activities to be carried out at the facility, then the plan must also provide for scrap metal recycling, boat engine oil, other boating liquid chemicals, empty chemical drums, batteries and any other special or recyclable wastes to be

separately collected and appropriately managed.

c. Recyclable and problem waste (such as batteries, oils, paints and fishing line) generated by boats or foreshore users, must be collected separately. This may include providing separate publicly accessible bins for garbage, recycling, food waste, soft plastics, fishing line and batteries, and back of house bins for oils and paints.

d. Waste storage areas should be designed to prevent access by rodents and insects with potential to be disease vectors.