



Planning &
Environment

Marine-Based Industry Policy – Far North Coast & Mid North Coast NSW



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* Front cover photograph courtesy Matthew Wood 2010

1. Overview of the Marine-based Industry Policy

1.1 Introduction

The Marine-Based Industry Policy – Far North Coast & Mid North Coast NSW has been developed to facilitate job creation and economic growth by providing opportunities for marine-based industries, while protecting sensitive areas. The policy includes criteria to assist in identifying appropriate places on North Coast rivers and estuaries (outside of the current growth areas identified in the Far North Coast and Mid North Coast regional strategies) where boat building and associated industries which require access to navigable waterways can occur. Government and industry can use the policy to identify appropriate locations which can be investigated for rezoning under the existing planning framework.

The policy applies from the Queensland border in the North to Tea Gardens in the South. Its more navigable¹ waterways include: Tweed River, Richmond River, Clarence River, Coffs Harbour and Hastings River. Less navigable waterways include: Brunswick River, Evans River, Bellinger River, Nambucca River, Macleay River, Camden Haven River, Manning River, Wallis Lake, Port Stephens² and some of the major tributaries of the more navigable waterways.

A variety of industries such as working ports, wharves, commercial fishing and aquaculture, boating and berthing facilities and marine services are established along these waterways.

The estuaries have a range of environmental values including extensive seagrass, mangrove, saltmarsh, wetland and lowland swamp forest areas. These areas provide diverse habitats for aquatic and terrestrial flora and fauna including important migratory, wetland and waterbird species. Many of the waterways have national parks, marine parks, nature reserves, recreational reserves and other protected areas either adjoining their banks or within their catchment areas.

The estuaries also have high recreational usage, both active and passive. The recreational value of the estuaries depends largely upon their high water quality and aesthetics.

Some of the waterway surrounds have extensive archaeological deposits including registered Aboriginal sites. Non-Aboriginal heritage items or sites also occur in some areas.

Land areas adjoining estuaries, by their nature, are often subject to hazards such as the risk of flooding and sea level rise. There are also areas with a high incidence of potential acid sulfate soils.

¹ Waterways in the Marine-Based Industry Policy are classed as 'more' navigable and 'less' navigable.

² The Marine-Based Industry Policy only applies to the Far North Coast and Mid North Coast Regional Strategy (MNCRS) areas. The MNCRS area has its southern limit on the northern water's edge of Port Stephens.

Implementation of the Marine-Based Industry Policy will seek to ensure that:

- Greater certainty is provided for investment in marine-based industry within the region.
- Industry is appropriately located.
- Biodiversity, Aboriginal and non-Aboriginal cultural heritage, commercial fisheries and recreational fisheries are protected.
- Hazards associated with flooding, bank erosion, climate change and acid sulfate soils are taken into account.

1.2 Policy Aim

The aim of the Marine-Based Industry Policy – Far North Coast & Mid North Coast NSW is to facilitate the development and operation of marine-based industries in appropriate locations.

1.3 Where the Policy Applies

The policy applies to the waterways listed below in the local government areas of Tweed, Byron, Ballina, Richmond Valley, Clarence Valley, Coffs Harbour, Bellingen, Nambucca, Kempsey, Port Macquarie-Hastings, Greater Taree and Great Lakes.

- Navigable Waterways – Tweed River, Richmond River, Clarence River, Coffs Harbour and Hastings River.
- Less Navigable Waterways – Brunswick River, Evans River, Bellinger River, Nambucca River, Macleay River, Camden Haven River, Manning River, Wallis Lake and Port Stephens.

1.4 Defining Marine-based Industry

For the purpose of this policy, a marine-based industry is “an industry³ that depends upon access to a navigable waterway”. Without limiting the generality of this definition, it is considered that the Marine-Based Industry Policy – Far North Coast & Mid North Coast NSW will apply mainly to activities that include: boat building, refit and repair and other specialist industries.

Note: the Marine-Based Industry Policy does not preclude dwellings for purposes such as security or a manager’s quarters.

³ “Industry” has the same meaning as in the Standard Instrument LEP.

2. Criteria for Establishing a Marine-Based Industry

2.1 Regional Context

The Far North Coast and Mid North Coast regions contain many river systems which flow into the sea, some via large rivers and estuary systems; some via much smaller systems. Several of the rivers already support successful marine-based industry establishments, such as the Harwood Slipway on the Clarence River and Birdon Marine on the Hastings River. There is potential for more such industry.

The issues and attributes characterising each river will determine its suitability for potential marine-based industry, and the type or scale of such industry. For example, some of the smaller, more sensitive lower reaches of estuaries, by their nature may be less suitable for establishment of marine-based industry.

In planning for marine-based industry, each river/estuary needs to be reviewed for its individual potential for establishment of a marine industry enterprise, or a precinct for marine industry establishments. Some rivers/estuaries may be able to handle construction or re-fit of large vessels; others may be better suited to smaller vessels with shallow draughts.

Appendix 1 identifies a number of attributes of the main waterways of the Far North Coast and Mid North Coast regions⁴. The Appendix is a useful starting point for local strategic planning for marine-based industry. The locational criteria listed in Sections 2.2 and 2.3, in conjunction with the information in Appendix 1, will assist councils and industry to identify precinct(s) or site(s) suitable for marine-based industry.

2.2 Where Marine-based Industry should not occur

Marine-based industry should not occur in:

- Reserves (listed in section 30A of the *National Parks and Wildlife Act 1974* (NPW Act)) or on Lands acquired for future reservation (NP&W Act Part 11 Lands);
- Land accessed from areas of a Marine Park zoned 'Sanctuary' or 'Habitat Protection';
- SEPP 14 and other important wetlands;
- SEPP 26 littoral rainforests and other lowland rainforests;
- The habitats of threatened species, populations or ecological communities; or critical habitat listed under the *Threatened Species Conservation Act 1995* and/or the *Fisheries Management Act 1994*;
- Areas subject to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, such as habitat for migratory species, Ramsar-listed wetlands, threatened species, etc; and
- Seagrass, saltmarsh and mangrove areas.

⁴ Councils and proponents should be aware that the attributes listed in Appendix 1, especially the bars and upstream navigation, do not imply any 'level of service' or 'need' relating to dredging.

or on a site which:

- Contains (or there is a potential for an impact on) any Aboriginal site, place or value of significance to the Aboriginal community.
- Contains any heritage item identified in a local environmental plan and if present the proposed industry has the potential to affect the significance of the item.

2.3 Where Marine-Based Industry can occur

In order to meet the policy definition and intent, any proposed marine-based industry should meet the following criteria:

1. The industry is dependent on access to a navigable waterway.
2. The maximum draught of the vessel(s) or product(s) proposed to be built allows it/them to pass safely through the waterway and the waterway's entrance to the sea.
3. The size or bulk of the vessel(s) or product(s) proposed to be built requires transport by water.

Having satisfied the three criteria above, the proposed marine-based industry needs to be assessed against the following site criteria. The criteria can be taken as being met if the issue can be sustainably managed, ameliorated or off-set.

4. Any new dredging required for site access would not adversely affect estuarine habitats, marine vegetation, fishery resources and water quality.
5. The site is not located where its development would be likely to adversely affect water quality for other users or impact on water quality or tidal regimes for estuaries, wetlands, marine parks, aquatic reserves or other high conservation value habitats.
6. Development of the site would not have an adverse effect on oyster aquaculture development or Priority Oyster Aquaculture Areas (POAA) and/or commercial and recreational fishing activities.
7. The site is not located in a high flood risk precinct or high flood area.
8. Water-based access to the site would be practicable given river currents and tidal movements in the locality.
9. The site does not contain high-risk acid sulfate soils which could be disturbed, exposed or drained.
10. The main industrial complex (excluding the slipway/s), could be set back to avoid bank erosion issues.
11. Native vegetation (including riparian vegetation and other trees, shrubs, grasses, etc) would not be disturbed.
12. The proposed development of the site would not conflict with neighbouring land uses (such as residential and recreational/tourism pursuits).
13. Services and infrastructure could be practicably provided.

Appendix 2 lists other legislation and policies that may apply and/or that can be used to interpret points in the list above. For example, the level of flood risk can be determined following the process described in the NSW Floodplain Development Manual.

3. Implementation

The Marine-based Industry Policy will be implemented at both the regional and local levels.

3.1 Regional

The Far North Coast and Mid North Coast regional strategies currently allow for industry outside the town and village growth boundary (FNC) and growth area (MNC) in particular circumstances. The policy will assist in interpretation of the Mid North Coast and Far North Coast regional strategies by:

- guiding potential marine-based industry to the right waterways;
- guiding potential marine-based industry to the right precincts within waterways; and
- highlighting issues that need to be addressed in assessing any planning proposals for marine-based industry.

When the regional strategies are reviewed as part of the regional growth planning process, this policy will be considered in the review.

3.2 Local

Proponents of prospective marine-based industries that meet the criteria can approach the relevant local council seeking preparation of a planning proposal, with a view to permitting the industry.

Councils are encouraged to strategically plan for opportunities for marine-based industry. This work should use the locational criteria and apply them strategically to their respective waterways, with a view to identifying sites or precincts which are most suited to marine-based industry, and the type or scale of industry that the site and waterway could support.

Ideally if more than one enterprise is likely to be established, they should be clustered into a precinct rather than scattered along the waterway's edge, with a view to maximising efficiency of infrastructure and minimising environmental impacts. The outcome of this strategic work could be included as a component in the council's local growth management strategy. This would enable prospective proponents to target the right locations, providing greater certainty to the planning process. Once a proponent identifies a conforming site, it could approach the relevant council to initiate a planning proposal to permit development of the site.

A change of zoning to permit a marine-based industry should utilise the *Zone IN4 Working Waterfront* of the Standard Instrument LEP. Depending on the local circumstances it may also be necessary to zone the adjoining waterway(s) as *Zone W3 Working Waterway* to ensure that water-based activity associated with a marine-based industry is permissible.

To ensure that areas identified for marine-based industry are reserved for that purpose – not used for general industrial development which should be located in a general industrial area away from the waterway – three additional actions are recommended:

- (i) add a local objective in the IN4 Zone land use table, as follows: *“To ensure that any industry requires direct waterfront access or is associated with another industry that requires direct waterfront access”*;
- (ii) only include land uses as permissible in the Zone IN4 land use table if their presence would be consistent with the policy positions in this paper; and
- (iii) insert an additional clause in the LEP which specifically addresses marine-based industry. A recommended clause is as follows:

Marine-based industry

- (1) The objective of this clause is to conserve the limited amount of waterfront land that is available for marine-based industry for industries that require a location in close proximity to a waterfront.
- (2) This clause applies to land zoned IN4 Working Waterfront.
- (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development requires direct waterfront access or is associated with another industry that requires direct waterfront access.

Councils may also prepare development control plans to locally customise controls for marine-based industry to address such things as river access, boat sizes, co-location, servicing, environmental management, etc. This would allow specific detail about the form and nature of development associated with marine-based industry that recognises local conditions.

Appendices

Appendix 1 – Waterways, Characteristics, Industries and Special Attributes

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Tweed River	<ul style="list-style-type: none"> River & Lake Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> More Navigable Predominant bar on the southern approach to the entrance Constriction inside the entrance with little manoeuvring room for larger craft, particularly dangerous as strong ebb tide currents reduce steerage for outbound craft River shoals significantly both in the Main Arm and Terranora Inlet 	<ul style="list-style-type: none"> Overhead services and submerged pipelines Low level bridges Terranora inlet Murwillumbah Weir 	<ul style="list-style-type: none"> Blackwatch boats near Murwillumbah Sailing vessels at Murwillumbah Industrial Estate Sleekline Marine Marinas at Boyds Bay and Terranora Inlet 	<ul style="list-style-type: none"> Adjacent Reserves: Ukerebagh NR, Tweed Estuary NR Ukerebagh Aboriginal Place and numerous ¹AHIMS records Approx. 24 ha of Priority Oyster Aquaculture Area² (POAA) in Terranora Broadwater SEPP26 littoral rainforests ³Estuary General Fishery ⁴Recreational Fishing Haven Numerous SEPP14 wetlands Major importance for migratory and threatened shorebirds #* Saltmarsh = 0.763km² #* Mangroves = 3.982 km² #* Seagrass = 0.806 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Brunswick River	<ul style="list-style-type: none"> • River • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • Less navigable • Narrow entrance with breaking waves across the entrance at low tide • Shallow water depths in the lower estuary. • Water depths less than 1.5metres at the boat harbour decreasing to 0 metres upstream of the highway bridge 	<ul style="list-style-type: none"> • Overhead Services • Low level Bridges • Mullumbimby Weir 	<ul style="list-style-type: none"> • Marina at Brunswick Boat Harbour 	<ul style="list-style-type: none"> • Adjacent Reserves: Brunswick Heads NR, Tyagarah NR • All river and tributaries are part of Cape Byron Marine Park • ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 9 ha of ²Priority Oyster Aquaculture Area (POAA) in Brunswick River, Marshalls Ck & Midgimbil Ck • ³Estuary General Fishery • Numerous SEPP14 wetlands • SEPP26 littoral rainforest EEC • Moderate importance for migratory and threatened shorebirds • #*Saltmarsh = 0.310 km² • #*Mangroves = 1.233 km² • #*Seagrass = 0.036 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Richmond River	<ul style="list-style-type: none"> • River • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • More Navigable • Two bars – one typical bar offshore of the entrance and another some 80-100 metres inside which can be quite hazardous with breaking waves in storm events. • River shallows adjacent to Ballina. North Creek very shallow at low tide 	<ul style="list-style-type: none"> • Rock shelf and weirs at Casino and upper Wilson River • Overhead services • Underwater cables and pipes • Ferry at Burns Point • Low level bridges at Wardell, Broadwater and Lismore 	<ul style="list-style-type: none"> • York Brothers Marine at Woodburn is a large boat building establishment • Riley's Hill Dry Dock Historical site • Emigrant Creek marine industries • Ballina Trawler Harbour • Martin Street Boat Harbour • Wharves at Ballina, Woodburn, Coraki, Lismore 	<ul style="list-style-type: none"> • Adjacent Reserves: Richmond River NR, Little Pimlico Island NR, Tuckean NR, Ballina NR • Numerous SEPP14 wetlands, SEPP 26 littoral rainforest • Major importance for migratory and threatened shorebirds • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 21 ha of ²Priority Oyster Aquaculture Area (POAA) in Richmond River and North Ck. • ³Estuary General Fishery • ⁴Recreational Fishing Haven • #* Saltmarsh = 0.599 km² • #* Mangroves = 6.025 km² • #* Seagrass = 0.320 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Evans River	<ul style="list-style-type: none"> • River • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • Less navigable • Entrance narrow and shallow with breaking waves across the entrance in high wave conditions • As typical with smaller northern rivers a deeper scour hole at the head of the north wall with crescent shaped bar emanating from the southern wall • Shallow throat shoals inside the entrance with low water depths approaching the boatharbour • Very shallow upstream of the road bridge 	<ul style="list-style-type: none"> • Over head and underwater services • Low level bridges • Tuckombil Canal Weir 	<ul style="list-style-type: none"> • Evans Head Slipway facilities • Evans Boat Harbour 	<ul style="list-style-type: none"> • Adjacent Reserves: Bundjalung NP • SEPP14 wetlands • Moderate importance for migratory and threatened shorebirds • ¹Aboriginal Heritage Information Management System (AHIMS) records • ³Estuary General Fishery • #*Saltmarsh = 0.358 km² • #*Mangroves = 0.409 km² • #*Seagrass = 0.006 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Clarence River	<ul style="list-style-type: none"> River Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> More Navigable Very strong tidal currents (1.8 – 2 m/sec peak at ebb tide) Rock reef inside the river entrance affects depth of draught River navigable to Grafton however a rock reef is evident upstream of Maclean. 	<ul style="list-style-type: none"> Low level bridges on tributaries Overhead and underwater services Ferry services at Ulmarra, Lawrence 	<ul style="list-style-type: none"> Yamba boat building in the industrial estate and some activities at the Yamba Marina Boatbuilding at Harwood slipway Goodwood Island Wharf used by ships to service the Pacific Islands and Norfolk Island Wharves at Maclean, Harwood, Illarwil, Ulmarra, Grafton Slipways at Yamba, Harwood and Iluka. 	<ul style="list-style-type: none"> Adjacent Reserves: Bundjalung NP, Clarence Estuary NR, Yuraygir NP, Munro Island NR, Susan Island NR Numerous SEPP14 wetlands Major importance for migratory and threatened shorebirds Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records Approx. 13 ha of ²Priority Oyster Aquaculture Area (POAA) in Yamba Bay ³Estuary General Fishery ⁴Recreational Fishing Haven ⁵Estuary Prawn Trawl Fishery #* Saltmarsh = 2.901 km² #* Mangroves = 7.653 km² #* Seagrass = 0.826 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Coffs Harbour	<ul style="list-style-type: none"> • Port • Eastern breakwater 	<ul style="list-style-type: none"> • More Navigable • Coffs Harbour provides an all-weather safe harbour entrance (except during severe storms and extreme weather events) 	<ul style="list-style-type: none"> • Congested inner harbour and slipway hardstand 	<ul style="list-style-type: none"> • Inner harbour slipway has boat refitting facilities • Port of Entry for overseas visiting vessels • Commercial fishing fleet • Landing facilities • Charter and tourism marine-based industries 	<ul style="list-style-type: none"> • Major importance for migratory and threatened shorebirds • Corambirra Point and Muttonbird Island have high Aboriginal significance • Muttonbird Island NR forms northern side of outer harbour, Corambirra Point (high Aboriginal significance) forms southern side of outer harbour • Solitary Island Marine Park adjacent (north) • ⁶Ocean Haul Fishery

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Bellinger River	<ul style="list-style-type: none"> • River • Open entrance with single training breakwater 	<ul style="list-style-type: none"> • Less navigable • Very shallow entrance • Upstream of the entrance river (Bellinger and Kalang) is navigable for smaller vessels 	<ul style="list-style-type: none"> • Overhead and submerged services • Dredging works at Raleigh • Low level bridges (Old Highway Bridge) • Gravel bars in the upper reaches of the estuary 	<ul style="list-style-type: none"> • Disused wharves near butter factory at Raleigh • Pontoon at Mylestom 	<ul style="list-style-type: none"> • Numerous SEPP14 wetlands • Moderate importance for migratory and threatened shorebirds • ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 24 ha of ²Priority Oyster Aquaculture Area (POAA) in Bellinger River and Kalang River • ⁴Recreational Fishing Haven • #* Saltmarsh = 0.143 km² • #* Mangroves = 1.172 km² • #* Seagrass = 0.133 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Nambucca River	<ul style="list-style-type: none"> • River • Open entrance with a single northern wall 	<ul style="list-style-type: none"> • Less navigable • Narrow entrance • Very strong tidal currents and dynamic entrance (shifting shoals) • River navigable beyond Macksville however small craft only in the upper reaches to Congarinni 	<ul style="list-style-type: none"> • Overhead services and submerged services • Low level bridges at and beyond Macksville 	<ul style="list-style-type: none"> • Wharves and pontoons at Nambucca Heads, Macksville 	<ul style="list-style-type: none"> • Adjacent Reserves: Gaagal Wanggaan NP • Numerous SEPP14 wetlands • Moderate importance for migratory and threatened shorebirds • Major breeding site for Little Terns (Endangered) • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 65 ha of ²Priority Oyster Aquaculture Area (POAA) in Nambucca River • ³Estuary General Fishery • #⁴Saltmarsh = 1.277 km² • #⁴Mangroves = 1.455 km² • #⁴Seagrass = 0.626 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Macleay River	<ul style="list-style-type: none"> • River • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • Less navigable • Entrance has a double outer bar • River is navigable up to and beyond Kempsey for small craft • Tributaries are shallow 	<ul style="list-style-type: none"> • Overhead and underwater services • Ferry crossings on tributaries • Low level bridges at Jerseyville and Smithtown 	<ul style="list-style-type: none"> • Marina at Maddy's Flat • Smaller wharves along river with larger public wharves at Smithtown, Gladstone, Frederickton and Kempsey 	<ul style="list-style-type: none"> • Adjacent Reserves Fishermans Bend NR, Yarrahapinni Wetlands NP, Clybucca Aboriginal Area, Clybucca Historic Site, Hat Head NP • Numerous SEPP14 wetlands • Moderate importance for migratory and threatened shorebirds • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 94 ha of ²Priority Oyster Aquaculture Area (POAA) in Macleay North Arm, Shark Island, Andersons Inlet, Clybucca Ck and Spencers Ck • ³Estuary General Fishery • #[*]Saltmarsh = 4.213 km² • #[*]Mangroves = 5.665 km² • #[*]Seagrass = 0.957 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Hastings River	<ul style="list-style-type: none"> • River • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • More Navigable • Estuary mouth shoals very shallow at low tide 	<ul style="list-style-type: none"> • Overhead and underwater services • Low bridge at Pacific Highway • Ferry crossings at Settlement Point and Hibbard 	<ul style="list-style-type: none"> • Marine industries/activities at Pacific Highway (Birdon Marine), Hibbard Slipway, Port Macquarie moorings and Port Macquarie Marina 	<ul style="list-style-type: none"> • Adjacent Reserves: Rawdon Ck NR, Limeburners Ck NR • Numerous SEPP14 wetlands, SEPP 26 littoral rainforest • Moderate importance migratory and threatened shorebirds • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 122 ha of ²Priority Oyster Aquaculture Area (POAA) in Hastings River, Pelican Ck, Limeburners Ck, Big Bay, Maria River and Munns Channel • #*Saltmarsh = 1.867 km² • #*Mangroves = 3.437 km² • #*Seagrass = 1.458 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Camden Haven River	<ul style="list-style-type: none"> • River & Lake • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • Less navigable • Shallow entrance • Off shore bar • Shoals (1.2 metres at low water) leading to the boat harbour moorings at Laurieton and Watson Taylor Lake 	<ul style="list-style-type: none"> • Overhead and underwater services • Low level bridges 	<ul style="list-style-type: none"> • Boat harbour at the Camden Haven Fishermen's Co-operative • Slipway at boat harbour • Wharves adjacent township and boat ramps 	<ul style="list-style-type: none"> • Adjacent Reserves: Queens Lake NR, Crowdy Bay NP • Numerous SEPP 14 wetlands • Moderate importance migratory and threatened shorebirds • ¹Aboriginal Heritage Information Management System (AHIMS) records (significant Aboriginal Places in vicinity) • Approx. 76 ha of ²Priority Oyster Aquaculture Area (POAA) in Camden Haven Inlet, Gogleys Lagoon, Watson Taylors Lake, Stingray Ck and Queens Lake • ³Estuary General Fishery • ⁴Recreational Fishing Haven • #*Saltmarsh = 0.768 km² • #*Mangroves = 1.408 km² • #*Seagrass = 10.250 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Manning River (Harrington entrance)	<ul style="list-style-type: none"> • River • Open entrance with a single training wall along the northern shoreline 	<ul style="list-style-type: none"> • Less navigable • Dynamic entrance with low water depths • Fallen rock armour near breakwater roundhead a navigation hazard • Old Bar entrance too shallow to cross • High tidal velocities (1.8 m/sec) • River *navigable to 200m upstream of the Wingham Brush launching facility where a number of rock platforms are just below the surface (approx. 0.5m). *The Manning River has a road bridge crossing at Taree with a safe clearance height of 6.5m. 	<ul style="list-style-type: none"> • Overhead and underwater services 	<ul style="list-style-type: none"> • Numerous wharves • Small marinas Harrington Waters, Manning Point, Taree • Stebercraft boat building in Taree 	<ul style="list-style-type: none"> • Adjacent Reserves: Coocumbac Island NR, Wingham Brush NR, Numerous SEPP14 wetlands, SEPP26 littoral rainforest • Moderate importance for migratory and threatened shorebirds • Major breeding area for Little Terns (Endangered) • Farquhar Aboriginal Place and numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 269 ha of ²Priority Oyster Aquaculture Area (POAA) in Manning River, South Channel, Harrington Gut, Pelican Bay, Cattai Ck, Landsdowne River, Scotts Ck, Warwiba Ck, Oyster Ck and Luthrie Ck • ³Estuary General Fishery • ⁴Recreational Fishing Haven • #* Saltmarsh = 2.447 km² • #* Mangroves = 3.905 km² • #* Seagrass = 1.654 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Wallis Lake	<ul style="list-style-type: none"> • Lake and river • Open entrance with twin training breakwaters 	<ul style="list-style-type: none"> • Less navigable • Navigation or anchoring seaward of road bridge can be dangerous during ebb (runout) tide 	<ul style="list-style-type: none"> • Forster-Tuncurry Bridge low clearance • Overhead and underwater services 	<ul style="list-style-type: none"> • Wharf at Forster Boat harbour 	<ul style="list-style-type: none"> • Adjacent Reserves: Minimbah NR, Bandicoot Is. NR, Regatta Is. NR, Mills Is. NR, Coolongolook NR, Wallis Is. NR, Flat Is. NR, Yahoo Is. NR, Booti Booti NP, Wallingat NP • Numerous SEPP14 wetlands • Moderate importance migratory and threatened shorebirds • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records • Approx. 360 hectares of ²Priority Oyster Aquaculture Area (POAA). Accounts for about one third of the state's total production of oysters • ³Estuary General Fishery • Port Stephens-Great Lakes Marine Park about 3km south of river mouth • #* Saltmarsh = 5.9 km² • #* Mangroves = 1.5 km² • #* Seagrass = 33.2 km²

Waterway	Waterway Characteristics			Existing Waterfront Activity	Special Attributes
	Bar / River Type	Navigability	Physical constraints		
* Tributaries of some listed waterways may also be navigable		* Boating maps (including navigability, bar depths and other information) is available on the NSW Maritime website		* Many of the waterways have various launching/boat ramps used for recreation fishing or boating. These are not listed in this table.	
Port Stephens⁷	<ul style="list-style-type: none"> • Drowned valley • Open and untrained entrance 	<ul style="list-style-type: none"> • More Navigable • entrance to the port is over 1 km wide • Navigating the entrance can be dangerous during runout tides • Shallow water and rocks beyond the public wharf at Soldiers Point • Lemon Tree Passage north is very shallow 	<ul style="list-style-type: none"> • Overhead and underwater services 	<ul style="list-style-type: none"> • Numerous large marinas located on the southern shore including D'Alboras Nelsons Bay, Anchorage Marina and Soldiers Point Marina 	<ul style="list-style-type: none"> • Adjacent Reserves: Myall Lakes NP, Corrie Is. NR, Gir-um-bit NP & SCA, Karuah NR, Medowie NR, Snapper Is. NR, One Tree Is. NR, Bushy Is. NR, Tilligerry NR & SCA, Tomaree NP • Numerous SEPP 14 wetlands. Part of the PSGLMP Ramsar listed as internationally significant. • Moderate importance to migratory and threatened shorebirds • Significant threatened aquatic fauna eg dugong, turtles as well as dolphin population (tourism) • Significant whale migration route in nearby open ocean, whales also enter Port Stephens • Entirely included within Port Stephens-Great Lakes (PSGLMP) Marine Park • Numerous ¹Aboriginal Heritage Information Management System (AHIMS) records and Goreengi Aboriginal Place in vicinity • Approx. 860 hectares of ²Priority Oyster Aquaculture Area (POAA) spread between 13 harvest areas • ³Estuary General Fishery • #* Saltmarsh = 11.5km² • #* Mangroves = 21.3 km² • #* Seagrass = 15.1km²

Notes

- * Bar and waterway navigability information is advisory only and may vary. Weather conditions and obstructions such as power lines, low bridges, water and sewerage pipes, communication cables, vehicle ferry cables, rocks, shoals and shoaling may affect bar accessibility and waterway navigability.
- # R.J. Williams, G. West, D. Morrison and R.G. Creese, 2006, *Estuarine Resources of New South Wales*, prepared for the Comprehensive Coastal Assessment (DoP) by the NSW Department of Primary Industries, Port Stephens.
- ^ Seagrass, saltmarsh and mangrove distribution mapping for the NSW North Coast can be viewed at <http://www.dpi.nsw.gov.au/fisheries/habitat/aquatic-habitats/estuarine>
- ¹ AHIMS = Aboriginal Heritage Information Management System. AHIMS contains details of Aboriginal objects, places and other heritage values across NSW.
- ² POAA = “Priority Oyster Aquaculture Area” means an area identified as a priority oyster aquaculture area on a map referred to in Chapter 5.3 of the *NSW Oyster Industry Sustainable Aquaculture Strategy* (OISAS). Please note that OISAS is subject to review and the total area of POAA may change.
- ³ Estuary General Fishery – The Estuary General Fishery is a diverse multi-species multi-method fishery. It is the most diverse commercial fishery in NSW. The Fishery includes all forms of commercial estuarine fishing (other than estuary prawn trawling). The most frequently used fishing methods are mesh and haul netting. Other methods used include trapping, hand-lining and hand-gathering. This fishery is a significant contributor to regional and state economies providing high quality seafood and bait to the community.
- ⁴ Recreational Fishing Havens – Recreational Fishing Havens are areas largely free of commercial fishing, created along the NSW coast to provide better angling opportunities for recreational fishers. Money raised from the NSW Recreational Fishing Fee enabled a \$20 million buyout to create the havens. These havens also promote tourism and create employment in the local area.
- ⁵ Estuary Prawn Trawl Fishery – The Estuary Prawn Trawl Fishery uses otter trawl nets to target school prawns and eastern king prawns in three estuaries in NSW, (the Clarence, Hunter and Hawkesbury Rivers). Overall, school prawns comprise a major part of the total fishery catch, with the proportion of non-target species contributing to the catch varying between estuaries.
- ⁶ Ocean Hauling Fishery – The Ocean Hauling Fishery targets approximately 20 finfish species using commercial hauling and purse seine nets from sea beaches and in ocean waters within 3 nautical miles of the NSW coast.
- ⁷ The Marine-based Policy only applies to the Far North Coast and Mid North Coast Regional Strategy areas. The MNCRS area has its southern limit on the northern water’s edge of Port Stephens.

Appendix 2 – Existing Legislation and Policies

The following instruments, State and Federal Government policies and directives may apply to the development of marine-based industries on the Far North Coast & Mid North Coast of NSW. The applicability of any of the policies in this list will vary depending on the scale, nature and location of the proposed development.

Legislation

- *Coastal Protection Act 1979*
- *Crown Lands Act 1989 – Plans of Management*
- *Environmental Planning and Assessment Act 1979*
- *Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
- *Fisheries Management Act 2004*
- *Heritage Act 1977*
- *Marine Parks Act 1997*
- *Marine Pollution Act 1987*
- *Maritime Safety Act 1998*
- *Native Vegetation Act 2003*
- *Protection of the Environment Operations Act 1997*
- *Threatened Species Conservation Act 1995*
- *Water Management Act 2000*

Policies

- Acid Sulfate Soils Manual 1998
- Northern Rivers Catchment Action Plan 2013-2023
- Estuary Management Plans eg. Clarence Estuary Management Plan 2003
- Far North Coast Regional Strategy (FNCRS) 2006
- International agreements eg. – RAMSAR (The Convention on Wetlands of International Importance), CAMBA (China-Australia Migratory Bird Agreement), JAMBA (Japan-Australia Migratory Bird Agreement)
- Mid North Coast Regional Strategy (MNCRS) 2009
- Northern Rivers Catchment Action Plan (CAP) 2004
- NSW Coastal Planning Guideline: Adapting to Sea Level Rise 2012
- NSW Coastal Policy 1997
- NSW Floodplain Development Manual: the management of flood liable land 2005
- Regional Conservation Plans eg. Far North Coast Regional Conservation Plan 2010
- State Rivers and Estuaries Policy 1993
- State Environmental Planning Policy (Infrastructure)
- State Environmental Planning Policy 14 – Coastal Wetlands
- State Environmental Planning Policy 26 – Littoral Rainforest
- State Environmental Planning Policy 62 – Sustainable Aquaculture

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**Marine-Based Industry Policy - Far North Coast
& Mid North Coast NSW**

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