



Transport  
for NSW

Maritime Management Centre

# Transport for NSW Regional Boating Plan Port Stephens - Hunter Region

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# 1. Introduction

The Port Stephens –Hunter Regional Boating Plan has been developed as part of a major NSW Government initiative to boost the experience of recreational boating across the state. The Plan was developed by the Maritime Management Centre (MMC) in Transport for NSW working closely with the NSW Maritime Division of Roads and Maritime Services (Roads and Maritime) and with expert coastal infrastructure advice from consultants GHD.

The Plan identifies the boating safety, access and infrastructure actions across the region to be implemented over the next five years. A summary of the projects and initiatives to be delivered as part of the Plan are detailed in the Delivery Program in Chapter 8. A Progress Report on the Delivery Program will be published annually to provide an update on the delivery of key projects and actions.

Funding for infrastructure projects will be allocated out of the *NSW Boating Now* program announced by the Minister for Roads and Freight in August 2014 which will see \$14m per year made available for the delivery of boating infrastructure projects over the next five years.

The Plan is one of eleven Regional Boating Plans that have been developed across the major waterways in NSW as shown in Figure 1.

Each Regional Boating Plan was developed through a two-stage consultation process. The first stage involved workshops with local Councils and key stakeholder groups as well as an online survey open to all waterway users and members of the general public. Feedback received from the first stage was then used to inform the development a Consultation Draft which formed the basis of the second stage of consultation.

Public information sessions were held in Nelson Bay and Newcastle on 12 and 13 August 2014 to discuss and seek feedback on the key findings and actions identified in the Consultation Draft. Further meetings were also held with Councils to help determine the priority infrastructure projects identified in the final Plan.



Figure 1 – Map of regions



## 2. Physical character of the waterways

### 2.1 Background

The Port Stephens - Hunter region predominately consists of two major catchments, namely the Karuah and Hunter catchments. There are also a number of inland waterways within the region, including Glenbawn Dam, Lake St. Clair, Lostock Dam, Burrendong Dam, Windamere Dam, Dunns Swamp, Ben Chifley Dam, Lake Lyell, Lake Wallace, Carcoar Dam and Wyangala Dam.

Recreational boating is popular across the region, with users undertaking a wide variety of boating activities. Further details on waterway users are provided in Chapter 3.

The region's waterways are covered by 16 councils:

- Port Stephens Council (PSC);
- Great Lakes Council (GLC);
- Maitland City Council (MCC);
- Newcastle City Council (NCC);
- Cessnock City Council (CCC);
- Singleton Council (SC);
- Dungog Shire Council (DSC);
- Muswellbrook Shire Council (MSC);
- Upper Hunter Shire Council (UHSC);
- Wellington Council (WC);
- Mid-Western Regional Council (MWRC);
- Oberon Council (OC);
- Lithgow City Council (LCC);
- Blayney Shire Council (BISC);
- Boorowa Council (BC);
- Cowra Shire Council (CSC); and

- Bogan Shire Council (BoSC).

Most councils have plans in place to manage their waterways and associated estuaries. The main objectives of these plans have been to manage and coordinate waterfront development, improve public accessibility and to protect the visual character and natural landscape of the waterways.

The region incorporates the Port Stephens – Great Lakes Marine Park. Visitors and the local community undertake recreational and commercial activities in the marine parks. Popular recreational activities include swimming, surfing, fishing and diving. Commercial fishing vessels operating out of Port Stephens also access the marine park.

The Port Stephens – Great Lakes Marine Park, which covers an area of approximately 98,000 ha, encompasses the area between Cape Hawke Surf Life Saving Club near Forster south to Birubi Beach Life Saving Club at the northern end of Stockton Beach. However this is partially within the Taree – Great Lakes region, so the section relevant to the Port Stephens – Hunter region is from Sugarloaf Point at Seal Rocks south to the Birubi Beach Life Saving Club. The marine park includes estuaries to their tidal limit, foreshores to the mean high water mark and extends offshore to the 3 nautical mile State waters boundary.

The parks boast diverse marine life with some threatened species. The Port Stephens – Great Lakes Marine Park Zoning Plan contains measures to protect the marine biodiversity of the area whilst supporting a wide range of recreational and commercial activities. Many significant Indigenous cultural and spiritual sites are located within or adjacent to the marine park. Aboriginal association with the sea and land in the area dates back thousands of years and Indigenous people still gather food in traditional ways.

The sections below outline the physical characteristics of the waterways where boating mainly occurs rather than the entire catchment and tributaries.

## 2.2 Karuah catchment

The Karuah catchment is bordered by the Manning catchment in the north and the Hunter catchment in the south and west. It has a catchment area approximately 4,480 km<sup>2</sup> in size. However, part of this area is included in the Taree – Great Lakes region for the purposes of the Regional Boating Plan exercise. The waterways relevant to the Port Stephens – Hunter region are the Karuah and Myall Rivers.

The Karuah River has an estuary area of approximately 18 km<sup>2</sup> in size with an average depth of 2.2 m. The navigable waters are approximately 20 km long, from a point four kilometres upstream of Allworth to Port Stephens. The Karuah River has unregulated flows in that it has no major water storages.

Port Stephens has an estuary area of approximately 135 km<sup>2</sup> in size with an average depth of 14.1 m. It can be split into two sections: the Inner and Outer Port.

- Inner Port lies to the West of Soldiers Point and the water is often quite turbid due to fluvial deposits from the Karuah River.
- Outer Port extends East of Soldiers Point to the ocean and is dominated by tidal and wave action such that the waters are very clear.

Both Port Stephens and the Karuah River are spread across two local government areas: Port Stephens Council and Great Lakes Council.

The Myall River has an estuary area of approximately 115 km<sup>2</sup> in size and an average depth of 4.0 m. The lower Myall River connects Port Stephens to the Myall Lakes. Within the Myall Lakes there are three bodies of water. They are:



- Bombah Broadwater;
- Boolambayte Lake; and
- Myall Lake.

The lower Myall River has a number of locations such as Monkey Jacket, Durness and Pine Plantation where depth is reduced to 2 m due to siltation. This is the result of the constricted entrance channel where the Myall River meets Port Stephens at Corrie Island. The entrance is constricted to the extent that water levels in the lakes are higher than the ocean as it is linked to rainfall. The Myall River extends upstream from Bombah Broadwater to the tidal limit at Bulahdelah. The entire Myall River system lies with the boundaries of the Great Lakes LGA.

Broughton Island is located 14 km north-east of Port Stephens and is part of the Myall Lakes National Park. It is an offshore island exposed to ocean swells and winds.



Figure 2 - Karuah catchment

## 2.3 Hunter catchment

The Hunter is the largest coastal catchment in NSW and has an area of approximately 21,500 km<sup>2</sup> in size. It lies to the east of the Great Dividing Range and is bounded by the Manning and Karuah catchments in the north, and by the Lake Macquarie and Hawkesbury-Nepean catchments in the south. The major waterway in the catchment is the Hunter River.

The Hunter River has an estuary area of approximately 47.0 km<sup>2</sup> in size and an average depth of 3.3 m. The Hunter River begins in the Mount Royal Range on the western side of the Barrington Tops. It flows approximately 460 km to the city of Newcastle as is permanently open to the ocean due to twin training walls. The tidal limit of the Hunter River is near Oakhampton.

Major tributaries of the Hunter River include the Paterson and Williams Rivers which begin near Barrington Tops in the north-east of the catchment and flow south into the Hunter. The Paterson River joins the Hunter River at Hinton and is navigable to Gostwyck Bridge at Paterson. The Lower Williams River joins the Hunter River at Raymond Terrace and is navigable to Seaham Weir. The Upper Williams River is navigable from Seaham weir upstream to Clarence Town, after which the waters are deemed too shallow for most boating activities. It is important to note that boating is prohibited within a 2.4 km zone around Seaham Weir.

Boating restrictions apply to various sections of the Williams River and are outlined in more detail in Section 4.1. These include speed and wash restrictions, as well as restrictions on certain kinds of vessels, activities, particular times and locations, manoeuvres such as power turns, and the loading of additional ballast in certain areas. These actions aim to improve user behaviour, minimise possible environmental impacts and manage on water conflicts.

The navigable waters of the Hunter Estuary are spread over four LGAs: Newcastle City Council, Dungog Shire Council, Maitland City Council, and Port Stephens Council. However, Port Stephens Council is located primarily within the Karuah catchment. In addition, the Hunter Catchment also includes the Cessnock, Singleton, Muswellbrook and Upper Hunter LGAs.

Newcastle Harbour is Australia's oldest port. It currently handles over 40 different commodities with the port's trading valued at up to \$20 billion annually. As many as 24 commercial shipping movements can occur every day in the Harbour. Each movement can involve ships with displacements of up to 250 thousand tonnes, over 300 m in length and 50 m wide. These ships can be attended by up to four tug boats as well as pilot and transport vessels. Outside of accommodating these ships, there is limited room within the shipping channel.



Figure 3 – Hunter catchment

## 2.4 Inland waterways

Within the Hunter catchment are a number of inland waterways. These include Glenbawn Dam, Lostock Dam and Lake St. Clair.

- Glenbawn Dam is one of the major water storages in the region, and it augments the flow of the upper Hunter River. It has a surface area of approximately 26 km<sup>2</sup> and lies within the Upper Hunter LGA.
- Lostock Dam is a smaller storage that provides a regulated water supply to users along the Paterson River. It lies within the boundaries of Dungog Shire Council and is approximately 2.2 km<sup>2</sup> in size. The volume and pattern of flows in the Hunter River system have been significantly altered by the construction and operation of these and other storages.
- Lake St. Clair is another waterway in the Hunter catchment. It is located within the Singleton LGA.

The Macquarie – Bogan catchment is located in the central western region of NSW, and has an area of approximately 74,800 km<sup>2</sup>. The catchment has a number of inland waterways, including Burrendong Dam, Windamere Dam, Dunns Swamp, Ben Chifley Dam and the Bogan River.

- Burrendong Dam is located on the Macquarie River and has a storage capacity of 1,190,110 ML, covering an area of 89 km<sup>2</sup>. It provides storage for irrigation, town water, stock and domestic use, and is located the Wellington LGA.

- Windamere Dam is the other major dam in the catchment. It has a capacity of 353,000 ML and covers an area of approximately 20 km<sup>2</sup>. It provides town water and irrigation water, and lies within the boundaries of Mid-Western Regional Council.
- Dunns Swamp, also in the Mid-Western Regional Council, is fed by the Cudgegong River.
- Ben Chifley Dam is located within the Oberon LGA and has a capacity of 30,800 ML.
- The Bogan River originates in the Harvey Ranges near Peak Hill and flows north-west through Nyngan to Bourke where it joins the Darling River. Its flow is low and erratic, and therefore not relied upon for irrigation.

The Hawkesbury catchment contains a number of lakes on the Cox's river system that have been classified in the Port Stephens – Hunter region for the purposes of this exercise.

- Lake Lyell which is within the boundaries of the Lithgow City Council and has a capacity of 34,500 ML and a surface area of 2.4 km<sup>2</sup>.
- Lake Wallace, also within this LGA, has a capacity of 4300 ML and a surface area of 1.25 km<sup>2</sup>.

The Lachlan catchment contains Carcoar Dam and Wyangala Dam.

- Carcoar Dam is located within Blayney LGA. It covers an area of 3.9 km<sup>2</sup> and it is used for irrigation, town water, stock and domestic purposes.
- Wyangala Dam is spread across Boorowa Council and Cowra Shire Council. It has a surface area of approximately 54 km<sup>2</sup> and is on the Lachlan River.



Figure 4 – Inland waterways



### 3. Waterway users

Recreational boating is a popular pastime in the Port Stephens - Hunter regional waterways. The waterways are popular for recreational fishing, sailing, motor cruisers, water skiers, wake vessels, rowers, kayakers, yacht racing and other regattas. The waterways also accommodate a considerable amount of commercial boating activities. This includes Newcastle Port which is Australia's largest coal terminal and Port Stephens which is a popular location from which whale and dolphin watching, commercial fishing tours and other types of cruise ships depart.

#### **Karuah catchment**

The Karuah River is a relatively small waterway in terms of recreational boating; however it does provide for a number of activities including swimming, fishing and boating. The Karuah River is also an oyster farming estuary, which restricts the use of wash-generating craft.

Port Stephens is an extremely popular waterway for recreational boating. The majority of boaters use the waterways for fishing and significant proportions are sightseers who seek commercial operations for cruising and sightseeing. The most popular recreational boating areas are Nelson Bay, Salamander Bay and Shoal Bay. In addition, Port Stephens hosts a significant commercial fishing fleet.

The Myall River estuary caters to a diverse range of recreational uses including sailing, swimming, power boating, canoeing, houseboating and fishing. Recreational fishing occurs throughout the Myall River and Myall Lakes, while commercial prawning occurs mostly at Tamboy on the Myall River and mesh netting for fish takes place in the Lakes. There are also a number of licensed commercial hire and drive vessels based within the estuary system. The Myall Lakes National Park has more camping locations than any other coastal park in NSW catering for the large number of visitors during holiday periods.

Broughton Island is popular for water activities such as swimming, fishing, boating, snorkelling and scuba diving. Courtesy moorings are provided around the island along with campsites for visitors staying overnight.

#### **Hunter catchment**

There are many recreational activities undertaken within the Hunter catchment, including fishing, boating, water skiing and rowing. The majority of recreational activities are focused around the townships of Newcastle, Raymond Terrace, Morpeth and include:

- Rowing, which is predominantly carried out in the Swan Reach of the Hunter River near Duckenfield, and within Throsby Creek upstream of Cowper St Bridge in Newcastle.

- Rowing is conducted up and down stream of the Swan Reach of the Hunter River near Duckenfield. In Newcastle, rowing, dragon boats and outrigger operations centre on Throsby Creek up stream of Cowper St. Bridge and also regularly use Throsby Basin and Newcastle Harbour.
- Fishing, which is one of the most popular activities in the catchment. However, a number of areas have recreational fishing restrictions such as Throsby Creek and upstream of the Hunter and Williams Rivers. The lower reaches of the river are most popular for vessel-based fishing, while the northern breakwater is the most popular area for shore-based fishing. Fishing in the Williams River is infrequent; however commercial prawn trawling occurs around the North Arm.
- Water skiing and wakeboarding, which operate primarily in the Williams River. A number of restrictions apply to improve safety, reduce wash, and minimise user conflict, including 'No Skiing zones', 'No Wake Boarding zones', 'No Slow-tow zones', 'No Wash zones', speed restrictions (4 knot and 8 knot zones around Seaham, Sinclairs Point and Clarence Town), 'All or Power Boat prohibited areas', a PWC prohibited area, restrictions on making power turns and on the loading additional ballast or wake conducive devices.

For the inland waterways in the Hunter catchment:

- Glenbawn Dam is popular for fishing and waterskiing due to a large two lane boat ramp.
- Lake St Clair is a premium outdoor leisure facility for activities such as swimming, sailing, water skiing and fishing.
- Lostock Dam supports a range of recreational activities including fishing, boating, windsurfing, canoeing and swimming. There is an eight knot zone throughout, restricting power boating and towing activities.

### Other inland waterways

In the Macquarie-Bogan catchment:

- Burrendong Dam is a popular waterway for anglers and water sports enthusiasts. The latter use for the dam for waterskiing, wakeboarding and biscuiting.
- Windamere Dam is popular for fishing, especially cod and perch species. It is also available for all forms of boating except for the exclusion zone around the dam wall.
- Dunns Swamp is a 4 knot zone throughout and is thus suited to non powered activities such as fishing, swimming, sailing and canoeing. The Dunns Swamp area is a popular camp ground.
- Ben Chifley Dam is open for all water activities, although there are number of exclusion zones including the swimming only area.

In the Hawkesbury catchment:

- Lake Lyell is a popular and easily accessible waterway, especially for visitors from Sydney, for recreational activities including waterskiing, fishing, kayaking, canoeing and general boating.
- Lake Wallace is commonly used for sailing, canoeing, and fishing (power boats are prohibited). Both lakes are also used as a cooling water supply for the Wallerawang and Mt Piper power stations.

In the Lachlan catchment:

- Wyangala Dam is used for power boating, canoeing, sailing, swimming (including water slides) and fishing.

- Carcoar Dam is open to all boating activities including water skiing, swimming, fishing windsurfing and sailing.

### 3.1 Analysis of waterway users

#### 3.1.1 Licence data analysis

An analysis of the 2011 census (between 2006 and 2011) of the catchments in this region has revealed the following:

- Karuah Catchment – Port Stephens Council and the Great Lakes Council had a collective population of 99,237. The area experienced a population growth of 6.4%.
- Hunter Catchment – Newcastle City Council, Dungog Shire Council, Maitland City Council, Cessnock City Council, Singleton Council, Muswellbrook Shire Council and Upper Hunter Shire Council had a collective population of 327,050. The area experienced a population growth of 6.2%.
- Macquarie-Bogan Catchment – Wellington Council, Mid-Western Regional Council, Bogan Council and Oberon Council had a collective population of 38,751. The area experienced a population growth of 4.4% over the period.
- Hawkesbury Catchment – The City of Lithgow Council had a population of 20,160. The area experienced a population growth of 2.0%.
- Lachlan Catchment – Blayney Shire Council, Boorowa Council and Cowra Shire Council had a collective population of 21,531. The area experienced a population growth of - 0.8%.

The population growth of the above catchments is below the national average growth over the period of 8.32% and, with the exception of the Karuah and Hunter catchments, also the NSW average of 5.63%.

As of 12/03/2014 there were approximately 64,000 boat licence holders in the Port Stephens – Hunter region. This represents approximately 12% of all boat licence holders in NSW.

The majority of licence holders in the region carry a General Boat Licence. Approximately 9% are licensed to operate Personal Watercrafts (PWCs), a figure typical across the State.

#### 3.1.2 Registration data analysis

As of 12/03/2014 there were approximately 27,000 registered recreational vessels in the Port Stephens - Hunter region. This represents approximately 11% of all registered recreational vessels in NSW. The most common vessel hull types in this region are Open Runabouts followed by Punts and Cabin Runabouts.

A significant majority (87%) of all vessels are below 6 m in length and the average vessel length for the region is 4.8 m. Vessels less than 6 m in length are defined as trailerable. This has a significant influence on the boating access and storage requirements in the region with a strong demand on boat ramps and trailer parking.

#### 3.1.3 Other users

Whilst the data analysed above provides information on licence holders and vessels registered in the Port Stephens - Hunter region. It does not capture vessels from other regions utilising these waterways. External users include boaters from nearby regions including the Central Coast, Lake Macquarie and Sydney, which can add significantly to the local demand at certain times of the year.

Roads and Maritime's licence and registration data does not capture non powered craft numbers such as kayaks, canoes, beach-launch sail craft which do not require registration. Based on the estimated total number of these vessel types in NSW, it is suggested that there may be many thousands of unregistered craft in the Port Stephens - Hunter region.

#### 3.1.4 Future demand

In 2010, the then NSW Maritime released a report titled *NSW Boat Ownership and Storage Growth Forecasts to 2026*. The report forecast a continuing growth trend in vessel ownership of 2.9% annually across NSW.

The Report used a different regional profile to that being used for the Regional Boating Plan. It identified the Hunter-Inland region (which incorporates the Port Stephens – Hunter region) as the 'powerhouse' for recreational boating in NSW with growth rates about the State average at between 3-5% per annum across all boat sizes.





## 4. Safety

### Key findings

- There are very high levels of satisfaction with current boating safety in the region.
- Concerns about waterway users not acting in accordance with regulations was the largest source of the safety dissatisfaction in the region.
- Safety in the region could also be improved through the updating and on-going scheduled review of navigation aids across all Port Stephens and elsewhere in the regions.
- Port Stephens has high waterway usage resulting in conflicting uses of the waterway. This occurs especially in the periods of peak tourism and at protected bays, popular beach locations and inland waterways.

### Actions

- a. Review strategies to improve user behaviour and safe boating practices across the region, particularly at Port Stephens and between different waterway user groups**
- b. Review placement and planning of navigation aids and signage and upgrade where appropriate**
- c. Review strategies to minimise conflict between different user groups**

### 4.1 Overview of existing safety activities

The MMC has led a campaign with Roads and Maritime to promote the wearing of lifejackets, especially in small vessels. The campaign is a response to the fact that 9 out of 10 people, who drown when boating, are not wearing a lifejacket.

The campaign has been the most comprehensive, targeted program on boating safety in NSW history. It included an extensive and targeted advertising campaign, an innovative mobile lifejacket promotional van which took the safety message to the boating public State-wide (including visits to the Port Stephens - Hunter region), a zero tolerance on-water compliance approach and a host of supporting activities.

Roads and Maritime is responsible for the operational delivery of marine safety in NSW, including the operational aspects of the regulation of recreational and commercial boating activity throughout the State. The enforcement role is chiefly performed by BSOs who conduct regular on-water patrols and inspections throughout the Port Stephens - Hunter waterways to

provide boating safety education and ensure compliance with safety requirements (such as lifejackets), speed, wash, distance off, aquatic licences, commercial operations and mooring requirements.

Roads and Maritime also operate a Mobile Safety Education and Compliance Team which is a team of specialist BSOs who can be deployed throughout NSW.

The BSOs work in close partnership with the local NSW Police Force (both general duties police and the local Marine Area Command), often conducting joint patrols, although police officers are solely responsible for conducting random breath testing on NSW navigable waters.

BSOs also work in partnership with officers of the Department of Primary Industries (Fisheries) and National Parks' rangers in relation to matters of common interest.

In addition to State-wide regulatory requirements and boating safety campaigns, specific boating safety restrictions that apply within the Port Stephens – Hunter region are shown on the maps included in Appendix A and online at <http://www.rms.nsw.gov.au/maritime/using-waterways/maps/boating-maps.html> . These are summarised as follows:

- Speed restrictions such as:
  - 4 knot zones, specifically at:
    - Sections of the Myall River including Tea Gardens and Tamboy;
    - Various sections of Port Stephens including Fame Cove, Fingal Bay, Nelson Bay, Lemon Tree Passage, Soldiers Point and in the vicinity of the Karuah Bridge;
    - Various sections of the Myall Lakes including Nerong, between Bombah Broadwater and Two Mile Lake, and Dollys Channel;
    - Throsby Creek;
    - Between Seaham and Clarence Town on the Williams River;
    - Beneath the Morpeth Bridge on the Hunter River;
    - Dunns Swamp; and
    - Lyell Dam.
  - 8 knot zones at Shoal Bay, Clarence Town, Lake Glenbawn, Lostock Dam, Lake St. Clair and Lake Wyangala.
- “no wash” zones;
- personal watercraft prohibited areas;
- all or power boats prohibited areas;
- no anchoring submarine cables;
- shallow waters;
- bar crossings;
- no wake board or wake board boats;
- shared zones; and
- no towing zones.

Further controls exist in the International Regulations for Preventing Collisions at Sea which are observed in NSW and include, but are not limited to, the following:

- The skipper (master of the vessel) is responsible for the safety of the vessel and all people on board;

- The skipper must always:
  - keep to a safe speed for the conditions (e.g., slower speeds at times of reduced visibility, rough water, congested waterway);
  - keep a proper lookout;
  - be prepared to take action to avoid a collision; and
  - display appropriate navigation lights at night.

In addition, there are also a number of general “distance off” restrictions which apply on all NSW waters – for example, vessels travelling at 10 knots or more must remain at least 60 m from people in the water and 30 m from structures, shorelines and other powered vessels. Where it is not possible to maintain the specified distances, a “safe distance” should be maintained. This is the distance which will ensure that a vessel will not endanger or injure people or damage property, having regard to relevant factors such as prevailing weather conditions, visibility, speed and any obstructions.

## 4.2 Safety Complaints

Analysis of the complaints received by Roads and Maritime during the 5 years leading up to 1 January 2014 reveals that the majority of complaints received relate to:

- irregular riding of personal watercraft (18%);
- vessels not observing correct distances off (13%); and
- wash (6%).

The most significant number of complaints received by the Roads and Maritime for the Port Stephens - Hunter region related to the highly popular Port Stephens area, specifically Nelson Bay, Shoal Bay, Tanilba Bay, Tea Gardens and Soldiers Point (over 31%). Other noticeable areas for which complaints were received included Newcastle, Bulahdelah and Raymond Terrace (over 25%).

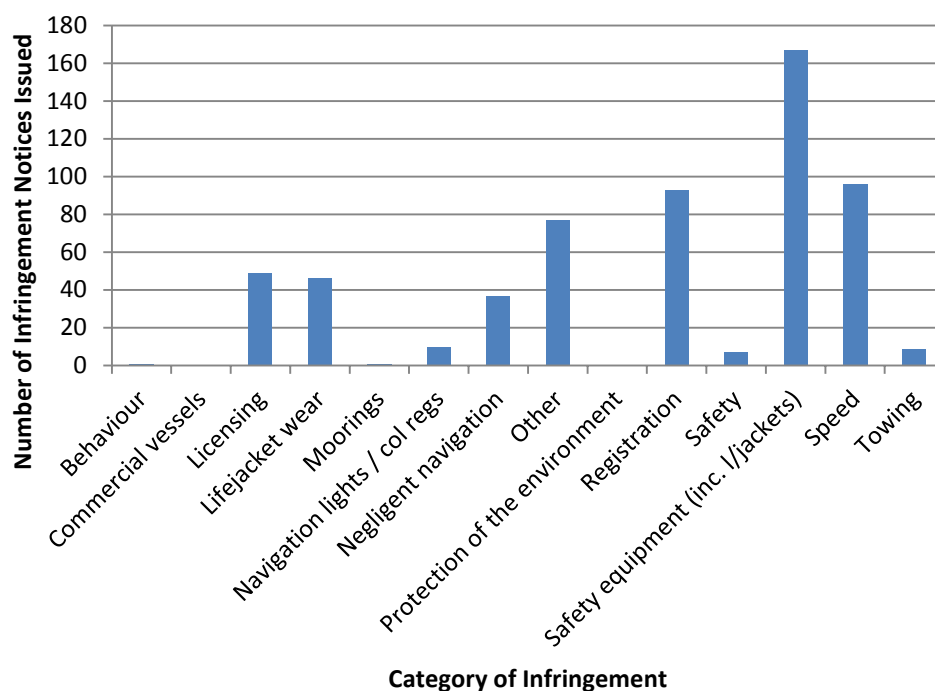
## 4.3 Infringements

Between 2009 and 2013, the number of penalty notices issued within the Port Stephens – Hunter region accounted for 12% of all infringement notices issued throughout NSW. Approximately 68% of penalties issued were by Roads and Maritime and the remainder were issued by NSW Police. In addition to these penalties, 1,067 formal warnings were also issued. The heavily utilised waters of Port Stephens accounted for more than a quarter of the region’s infringements.

As indicated in Figure 5, the infringements for which the most penalty notices were issued in the region were for:

- failure to carry the correct safety equipment (36%);
- excessive speed (17%); and
- inadequate registration (16%).

Figure 5 – Infringement analysis



#### 4.4 Incidents

In the period between 1 January 2009 and 31 December 2013, there were 155 vessel incidents reported to Roads and Maritime in the region. There were 54 incidents in Port Stephens, 24 on inland waterways, and another 39 incidents occurred offshore. Recreational vessels were involved in 115 incidents, four involved an interaction between a recreational and commercial vessel and 36 involved commercial vessels only. This breakdown of incidents among vessel categories is broadly consistent with State-wide observations.

##### 4.4.1 Incidents resulting in death or injury

There were ten fatal incidents in the region during this period which resulted in eleven fatalities. Four of these incidents occurred on inland waterways and another three were in Port Stephens. All of the incidents involved recreational vessels and took place in daylight hours. Four of these incidents involved small open runabouts while another two involved inflatables. Four of the incidents involved vessels capsizing and four involved the deceased falling overboard. In all but one of these incidents, the deceased were not wearing an appropriate lifejacket. These victims may have survived had they been wearing a lifejacket at the time of the incident.

There were 28 incidents which resulted in serious injury. A serious injury is classified as one requiring hospitalisation or outpatient treatment. Nearly half of these took place in the months of summer. Sixteen of the incidents involved small open runabouts. Common causes of incidents were inexperience and lack of judgment. An additional 23 incidents resulted in minor injury to 36 persons; no common trend was identified through the incident types and causes.

##### 4.4.2 Types of vessels

The main types of vessels involved in incidents, where known, were small powered craft (open runabouts 36%, cabin runabouts 9%), larger motor cruisers (15%) and sailing vessels (12%). Inflatables (5%), PWC (4%), fishing vessels (4%) and cat-power (4%) had smaller representations.

#### 4.4.3 Incident locations

Vessel incidents were concentrated in the following locations:

- 22 incidents occurred in central Port Stephens between Soldiers Point and Nelson Head.
- 17 incidents occurred in Port Stephens East, from the Entrance to Myall Point and Nelson Head.
- 11 incidents offshore near Broughton Island.
- 12 incidents occurred in Newcastle Harbour.

#### 4.4.4 Incident causes

Behavioural factors were identified as the primary cause of the majority of incidents. Twenty incidents were caused by a lack of judgement and another 13 were the result of a lack of proper lookout. Environmental and material factors also had a significant contribution. Twenty four incidents were the result of adverse weather conditions, while 23 incidents involved failure of a variety of equipment, machinery, electronics or hull failures.

#### 4.4.5 Incident type

The most common incident type in the region was grounding, accounting for 19 incidents. This is more than double the State-wide average (6%). Other common incident types were collision with another vessel (18), capsizing (18) and collision with a fixed object (14). These are consistent with State-wide averages.

#### 4.4.6 Incident operation

Vessel operation at the time of an incident provides some insight into the nature of incidents occurring. While 81 were the result of vessels underway, 18 vessels were moored and 21 were at anchor or berth, which is an unusually high proportion when compared to the rest of the State. Twelve of the grounding incidents noted above involved vessels that were moored, berthed or at anchor. Ten tow sport incidents were reported during the period, much greater than the State-wide average for waterways where towing occurs. It should be noted that all but one of these towing incidents resulted in a serious injury.

#### 4.4.7 Time of day, month and year

Where the time of the incident is known, 120 occurred during daylight; 42 in the morning and 78 in the afternoon. Thirty five incidents occurred at night, 18 occurring before midnight and the remainder after. December, January and February were the main months when incidents occurred, corresponding to the heaviest periods of boating activity, with a slight spike also occurring during September. Similarly, weekends were the most likely days for incidents to occur.

#### 4.4.8 Wind and weather

The open waters of Myall Lakes, Port Stephens, and the inland dams and lakes can be subject to changing weather conditions, including substantial winds and wave chop for those waterways in close proximity to the ocean. Of the incidents where the weather conditions are known, approximately 74% occurred on days with clear visibility and fine weather. Almost half of the incidents where water conditions are known were described as choppy, rough, very rough or in strong current.

#### 4.4.9 Bar crossings

There is only one bar crossing location in the Port Stephens – Hunter region between Tomaree Head, Yacaaba Head and Corrie Island in Port Stephens. In the past five years there has been one reported bar crossing incident resulting in a minor injury onboard a commercial vessel.

### 4.5 Key findings

The consultation feedback suggests that boaters in the Port Stephens – Hunter region generally have a very positive view about safety on the region’s waterways. Analysis of complaints, infringements and incidents data suggests that Roads and Maritime will need to continue to actively manage safety on the waterways through its compliance activities and education campaigns.

It is also clear that there are areas of dissatisfaction where action can be taken to improve the boating experience in the Region. Improving the behaviour of waterway users is a common theme across the different stakeholder groups and is particularly evident at Port Stephens and in areas where there are conflicting uses of the waterway. Concerns are most prevalent during periods of peak tourism and at specific protected bays and popular beach destinations. Some safety concerns were also raised about interactions between recreational boaters and commercial shipping in Newcastle harbour.

State-wide education campaigns are important in reducing the safety concerns associated with conflicting uses of the waterway and user behaviour. There are also actions that can be taken at the local level such as improving the visibility and clarity of signage, zoning of specified activity areas such as swimming areas or no towing or speed restricted areas and providing infrastructure to support different waterway user groups at distinct locations.

There are a numerous examples of faded and/or obscured safety signage, or safety signage that is “lost” among a cluster of signage from a range of other agencies with different purposes (for example, fishing, and overhead powerlines). Updating navigation aids has also been identified as an opportunity to deliver improvements for boaters in the area and Roads and Maritime will review and update its program for managing and replacing navigation aids, including increased marking of hazards and regular reviewing of the marking of sand banks and channels in accordance with their constantly shifting nature.



## 5. Access

### Key findings

- There are a relatively large number of waterway access points in the Port Stephens-Hunter region however more can be done to improve the condition of much of the infrastructure and to increase capacity at key locations to better manage peak demand. Increasing car/trailer parking capacity at key boat ramps was identified as a particular priority.
- Appropriate waterway access for small waterfront townships is important for regional tourism and recreational activities.
- Strategic placement of additional courtesy moorings will enhance the overall boating experience, encourage more visiting vessels to the region and reduce congestion at public jetties.
- There are inadequate fuelling and sewage pump-out facilities across the region.

### Actions

- d. Work with Councils and other partners to improve the condition of existing access facilities to improve safety and usability**
- e. Work with Councils and other partners to increase capacity of waterway access facilities and associated trailer parking capacity at strategic locations to better manage peak demand**
- f. Promote the region's waterways as a destination for boaters by investigating opportunities to provide additional access points and courtesy moorings and reviewing possible sites for the provision of sewage pump out and fuelling**
- g. Investigate the development of formal access facilities at smaller townships to encourage waterway usage**
- h. Continue support for the Rescuing Our Waterways dredging program**

## 5.1 Overview of existing access facilities

Vessel access to the waterways of the Port Stephens - Hunter region is available through several avenues including private and commercial moorings, marina berths, club or private landing facilities and boat ramps. Trailered vessels can be launched and retrieved at public boat ramps, some of which have public facilities available such as trailer parking, fish cleaning tables and toilets. Public wharves and jetties are also located on the region's waterways and provide alternate access to vessels that are on the water. Waterfront landowners can also gain direct access to the waterway through private landing facilities.

There is also informal access for smaller vessels such as dinghies, runabouts, and non powered craft from a number of public reserves and beaches.

Some boat ramps are in average condition, lacking amenities and access facilities.

### Boat ramps

There are currently approximately 54 boat ramps.

- Location:
  - 13 are located in Port Stephens or the Karuah River;
  - six are located in either the Myall River or Myall Lakes;
  - nine are located on the Hunter River;
  - three are located on the Williams River; and
  - 23 provide direct access to inland waterways, including three on the shores of Lake Burrendong.
- Material:
  - 41 are concrete ramps;
  - seven are composed of gravel, sand, earth or rock; and
  - the remaining six are unknown.
- Ownership:
  - 31 of the boat ramps are owned and maintained by councils.

### Public jetties, wharves and pontoons

In addition to ramps there are approximately 56 public access points in the region including wharves, jetties, pontoons and landings.

- Location:
  - 19 in Port Stephens (including the Karuah River);
  - 17 in either the Myall River or Myall Lakes;
  - 10 on the Hunter River;
  - seven on inland waterways; and
  - three on the Paterson River.

### Courtesy moorings

Current courtesy moorings include:

- Six in Dolly's Channel, Myall Lake;
- Five in Professors Cove, Two Mile Lake;
- Five in Blossom Point, Myall Lake;



- Four in Kataway Bay, Myall Lake;
- Five in Fame Cove, Port Stephens;
- Three in Nelson Bay, Port Stephens;
- Three in Shoal Bay, Port Stephens;
- Three in Legges Camp, Two Mile Lake;
- One in Salamander Bay, Port Stephens;
- One off Bagnalls Beach, Port Stephens;
- One in Tea Gardens;
- One in the Karuah River;
- One off Providence Beach, Broughton Island;
- One in Nerong; and
- Seventeen Marine Park courtesy moorings

Figure 6 – Example access facilities within the region



Boat ramp at Hawkes Nest



Morpeth boat ramp - Hunter River

Boat ramp at Lemon Tree Passage – Port Stephens

### 5.1.1 Better Boating Program grants

Through the Better Boating Program Roads and Maritime has provided 51 grants totalling over \$2.9 million for 46 projects in the Port Stephens - Hunter region between 2005 and 2014. A selection of these can be seen in Figure with all projects listed in Table below. It is important to note that the total cost of the projects is not depicted in this table. For total cost of the projects refer to <http://www.rms.nsw.gov.au/projects/key-build-program/better-boating-program/index.html> .

Table 1 – List of grants provided to Port Stephens - Hunter region through the BBP Projects

Recipient	Project	Final Grant
Bogan Shire Council	Bogan River Recreational Floating Pontoon, Nyngan	\$37,700*
Bourke Shire Council	Bourke Wharf Restoration, Bourke (Darling River)	\$30,000
Brewarina Shire Council	4 Mile Boat Ramp Upgrade, Brewarrina	\$78,000*
Cowra Shire Council	Lachlan River Precinct Upgrade - Passive Boat Ramp Access, Cowra	\$20,000*
Dubbo Shire Council	Macquarie River Pontoon Installation	\$33,413
Dubbo Shire Council	Wiradjuri Park Pontoon, Dubbo	\$30,500*
Grabine Lakeside State Park	Taylors Point Boat Ramp Extension	\$25,000
Lachlan Shire Council	Condobolin SRA Access Ramp Upgrade (Lachlan River)	\$12,100*
Lachlan Shire Council	Gum Bend Lake Reserve Boat Ramp Pontoon, Condobolin	\$29,900
Lake Liddell Recreation Area Trust	Boat Ramp Improvements at Lake Liddell	\$25,350
Oberon Council	Lake Oberon Access Improvements, Oberon	\$70,504*
Singleton Council	Lake St Clair Boat Ramp	\$19,285
Upper Hunter Shire Council	Curra Keith Bay Boat Ramp, Lake Glenbawn State Park	\$35,369
Upper Hunter Shire Council	Lake Glenbawn Boat Ramp - Car Park and Access Upgrade	\$68,495
Warren Shire Council	Bottom Weir Boat Ramp Upgrade, Warren	\$19,045
Wellington Council	John Oxley Park Boat Ramp Upgrade, Wellington	\$15,000*
Australian Volunteer Coastguard	Coastguard Public Jetty and Building Refurbishment	\$18,893
Australian Volunteer Coastguard (Marine Rescue NSW)	Pontoon installation at Lemon Tree Passage-Port Stephens	\$5,230
Dungog Shire Council	Clarence Town Jetties	\$21,130
Dungog Shire Council	Williams River Boating Facilities Requirement Study, Clarence Town	\$18,000
Great Lakes Council	Bulahdelah Myall River Camp Wharf, Bulahdelah - Myall River	\$25,000
Great Lakes Council	Marine Drive Eastern Wharf Upgrade, Tea Gardens - Myall River	\$6,500
Great Lakes Council	Tea Gardens Public Wharf 1 - New Pontoon	\$83,520
Great Lakes Council	Tea Gardens Wharf 2 Upgrade - Marine Drive, Tea Gardens	\$20,000
Maitland City Council	Morpeth Boat Ramp Boat Trailer Parking,	\$20,000

Recipient	Project	Final Grant
	Hunter River	
Maitland City Council	Queens Wharf Extension, Morpeth - Hunter River	\$16,421*
Myall Lakes Aquatic Club	Engel's Wharf Rebuild	\$10,729
Myall Lakes Aquatic Club	Violet Hill Wharf Replacement	\$35,210
Newcastle City Council	Carrington Boat Ramp	\$200,000
Newcastle City Council	Carrington Boat Ramp (Additional Funding)	\$107,906
Newcastle City Council	Carrington Boat Ramp Upgrade (Additional Funding)	\$120,000
Newcastle City Council	North Stockton Pontoon (Additional Funding 1)	\$175,000
Newcastle City Council	North Stockton Pontoon (Additional Funding 2)	\$82,263
North Arm Cove Residents Assoc.	North Arm Cove Waterfront Amenity Improvements	\$31,375*
Port Stephens Council	Hinton Pontoon Replacement	\$50,000*
Port Stephens Council	Investigation and Concept Design at Karuah Boat Ramp	\$15,000
Port Stephens Council	Karuah Boat Ramp Jetty Refurbishment - Port Stephens	\$9,678
Port Stephens Council	Karuah Regional Boat Ramp Upgrade (Stage 1 Additional Funding)	\$178,442
Port Stephens Council	Karuah Regional Boat Ramp Upgrade (Stage 1)	\$56,800
Port Stephens Council	Lemon Tree Passage Aquatic Infrastructure Upgrade-Port Stephens	\$40,000*
Port Stephens Council	Little Beach Boat Ramp Wave Attenuator and Sand Diverter, Nelson Bay	\$59,000*
Port Stephens Council	Nelson Bay Public Wharf	\$65,000
Port Stephens Council	Shoal Bay Boat Ramp Carpark Upgrade	\$182,500
Port Stephens Council	Shoal Bay Boat Ramp Upgrade (Port Stephens)	\$22,500
Port Stephens Council	Shoal Bay Boat Ramp Upgrade, Shoal Bay (Port Stephens)	\$164,637
Port Stephens Council	Soldiers Point Boat Ramp pontoons, Port Stephens	\$137,500
Port Stephens Council	Soldiers Point Boat Ramp pontoons, Port Stephens (Additional Funding)	\$72,500
Seaham Park & Wetlands Committee	Williams Rivers Boating Access at Seaham Study	\$12,500*
Walgett Shire Council	Walgett Boat Ramp Upgrade	\$246,075*
Walgett Shire Council	Collarenebri Boat Ramp Upgrade, Collarenebri (Barwon River)	\$81,571
<i>* denotes Active BBP project as of 11/11/2014</i>	<b>TOTAL</b>	<b>\$2,940,541</b>

Figure 7 – Completed BBP projects examples within the region



Soldiers Point Boat Ramp, Port Stephens



North Stockton Boatramp Pontoon



Morpeth Boat Ramp Upgrade –Queens Wharf



Stockton Boat Ramp Pontoon, Newcastle



Shoal Bay Boat Ramp



## 5.2 Key findings

The Port Stephens – Hunter region has a relatively large number of waterway access points, however some of the infrastructure is aged and offers a relatively basic level of amenity.

There are numerous opportunities to enhance the experience of a large number of boaters in the region through upgrading boat ramps and improving parking facilities and other amenities at the ramps. Access facilities at Hawks Nest, Lemon Tree Passage, Soldiers Point, Little Beach, Shoal Bay, Stockton North and Carrington boat ramp in Newcastle have been identified as strategic locations with car and trailer parking capacity concerns, although there is limited land available to expand parking at many sites.

Increasing the capacity of existing infrastructure can be achieved through the widening of ramps, installation of pontoons and improving understanding of boat ramp etiquette.

Opportunities also exist to improve and modernise public jetties and pontoons to enhance access opportunities and improve disability access. The provision of additional courtesy moorings will help to increase safe anchorage opportunities while also relieving the pressure from vessels tying up to public jetties and wharves for excessive periods of time to the exclusion of other users.

The Region is subject to significant increases in demand for boating infrastructure during peak tourism periods and there is a need to upgrade capacity at existing facilities and also consider

new for new access facilities to continue to encourage boaters into the region and meet demand.

The region boasts a range of remote locations that are popular as boating destinations. To encourage continued use of these waterway locations and to enable overnight or extended stays, on-water fuelling and sewage pump-out facilities are required.

The Port Stephens – Hunter region supports a number of smaller townships that are remotely located, but have significant cultural and recreational activities based around the waterway. Waterway access facilities would be greatly beneficial for these communities.

Improving these facilities will not only improve safety and usability of these existing access facilities, but will also assist in meeting current and future demand with waterway users encouraged to use a more extensive network of facilities.

Stakeholder feedback suggested locations where dredging works would be beneficial to the community including at the mouth and lower reaches of the Myall River including around Corrie Island and Corrie Creek.

The Rescuing Our Waterways dredging program, which is administered by NSW Department of Trade and Investment (Crown Lands), provides funding to dredging projects to aid navigation in public waterways by recreational and commercial vessels. Under this program applicants are required to contribute 50% of the total dredging costs. Applications for State 3 of the Rescuing Our Waterways Program opened on 18 November 2014.

Figure 8 – Examples of access issues



**Single lane boat ramp with no infrastructure for temporary boat tie up to assist in launching and retrieval**



**Winda Woppa boat ramp. Single lane does not meet demand. Poor surface conditions and no supporting facilities**



**Poor condition of jetty at Taylor's beach. Pontoon extension for low water levels and upgrade of structure required**



**Inadequate capacity at Lemon Tree Passage Jetty (adjacent to boat ramp).**



## 6. Storage

### Key findings

- The growth in boat storage capacity across the region will need to keep pace with the forecast growth in vessel numbers.
- The growth in medium to high density residences in Newcastle is leading to increased demand for dry-stack storage.
- Long waiting lists for private moorings in popular areas in Tea Gardens, Soldiers Point and Lemon Tree Passage are limiting access for boaters.
- There is insufficient storage for non powered craft (paddle and sailing dinghies) in the region.

### Actions

- i. Establish a regional boat storage strategy with a focus on Port Stephens and Newcastle**
- j. Optimise configurations of existing mooring fields to improve access and navigation and enable future growth in popular areas**
- k. Review the need and provide dinghy and paddle craft storage where appropriate**

## 6.1 Existing storage

### 6.1.1 Overview of existing storage types

Storage for vessels is generally provided on-land for smaller (< 6 m), e.g. trailerable power or sail, and on-water for larger vessels (> 6 m); however larger vessels can also be stored on-land, for example at dry-storage facilities for vessels up to approximately 10 m.

The main types of on-water storage in for the Port Stephens - Hunter region are principally:

- Private moorings;
- Commercial moorings;
- Commercial marina berths; and
- Domestic berths, moorings and other related storage.

On-water storage at commercial marinas, yacht / sailing clubs, or boating facilities, is provided through berths (floating or fixed), moorings (swing, fore and aft or other) and where space permits on-land, through dry storage such as a hard-stand or dry-stack. Examples are shown below.

Figure 9 – Examples of commercial marina storage in the region<sup>1</sup>



Entrance to the Anchorage Marina at Corlette

Commercial vessels at Nelson Bay



Cruising Yacht Club Newcastle

Soldiers Point Marina

Storage at private facilities can be adjacent to private property through domestic jetties, slipways, boatsheds, and berths or fore and aft moorings or through private swing moorings. Private swing moorings usually also require access to the water with a tender/dinghy and this vessel also requires its own form of storage on-land.

Vessels less than 6 m are most often stored on private property on trailers and access the water via boat ramps.

<sup>1</sup> Photo for Cruising Yacht Club obtained from <http://www.marinaguide.com.au/premium/nswnewcastlecyc.html>

Figure 10 – Examples of storage in North Arm Cove, private jetties in Tea Gardens, private and commercial moorings at Taylor’s beach and sailing club in Port Stephens



Private storage North Arm Cove



Private jetty Tea Gardens



Private and commercial moorings



Port Stephens Sailing & Aquatic Club

### 6.1.2 Overview of existing storage volume

There are approximately 1,700 vessels stored on-water or at associated land facilities in the region. Of these, over 690 are private moorings and 189 are commercial mooring licences issued by Roads and Maritime. However, there are also a number of licences administered by NSW Trade and Investment (Crown Lands).

As evidenced by the above figures, there are considerable numbers of on-water storage spaces in this region; however availability is becoming challenging given the projected growth (Section 3.1.4) and as discussed below in key findings. Registration and other data shown in Section 3.1.2 highlights that 13% of the region’s vessels are above 6 m, which is proportionally higher than other regions outside the greater Sydney area and this could be the reason for higher demand for on-water and related storage.

Whilst numbers provided for each category are in many cases approximate, they can be generally grouped as follows:

#### Commercial storage

- **Marinas/boatsheds in Port Stephens**
  - d’Albora Marina Nelson Bay – <200 berths;
  - The Anchorage Marina – 90 berths, 6 moorings and additional storage for a small number (<10 jet skis);
  - Soldier’s Point Marina – 90 berths, 7 moorings at Soldiers Point and 5 moorings managed by the Marina in other bays, and 17 dry storage spaces on-site;
  - Albatross Marina Lemon Tree Passage – 52 berths, 8 swing moorings and 1 swing mooring in Nelson Bay; and



- Tea Gardens Boatshed – <15 berths and piled moorings.
- **Other commercial storage facilities in Port Stephens**
  - Cove Marine – hardstand area for 70 vessels; and
  - Dry storage spaces for vessels and trailers (<30).

#### **Commercial Yacht Club in Newcastle**

- Newcastle Cruising Yacht Club: 180 berths.

#### **Commercial and private moorings**

The region has a relatively high number of commercial (189) and private (690) moorings. Only one commercial mooring is available on each of the Upper Hunter and Broughton Island with the remainder in Port Stephens. There are also some commercial moorings for houseboats and other large vessels on the Myall River at Bulahdelah. The total number of commercial moorings includes those moorings attached to land-based facilities, such as The Anchorage Marina.

#### **Private Moorings**

Data suggests that 43% of the private moorings in the region are licensed to store sail craft; this is significantly higher than other regions.

There are a number of areas with over 50 moorings including Shoal Bay, Tilligerry Creek, Wanda Beach and Little Salamander Bay which has over 100 moorings.

Waiting lists are generally low except for Tea Gardens, Lemon Tree Passage and Soldiers Point and these are discussed in key findings below.

#### **Domestic jetties, private berths:**

Private jetties, berths and moorings attached to properties are found at Port Stephens at North Arm Cove, Oyster Cove, Tanilba Bay, Soldiers Point, Tea Gardens and Bulahdelah as well as on the Williams and Hunter Rivers at intermittent properties, and in Newcastle, at Stockton.

#### **Sailing and other club storage**

There are a number of sailing clubs in the region such as Myall Lakes Aquatic Club, Sailability Port Stephens, Corlette Point Sailing Association, Port Stephens Sailing & Aquatic Club, Port Stephens Yacht Club, Tanilba Bay Sailing Club and in Newcastle, Port Hunter 16ft Sailing Skiff Club. Inland waters also have clubs including Wallerawang Sailing Club and Carcoar Dam Sailing Club.

Most are land-based and use access points such as beaches or similar to launch their craft. A few of the clubs such as Port Stephens Yacht Club have some direct access to water adjacent to their base. Similar to other regions, the vessels are small and stored on-land. Most small clubs offer members access to storage. Storage for these generally smaller vessels can be on-water or land-based, in an open hardstand area, or inside stacks in smaller sheds. Some of these vessels are not required to be registered and therefore do not appear on Roads and Maritime registrations statistics.

Rowing clubs in the region also rely on land-based storage and access to waterways, such as at Newcastle Rowing Club.

### **Dinghy and other small vessel storage**

There are some examples of formalised dinghy storage around Port Stephens however there is an overflow of dinghies at some of these locations. At other locations, there is no formalised storage at all with dinghies left on the foreshore or in waterside reserves.

Similar to other regions in NSW, the growth in non powered boating (paddle craft) has seen some growth in demand for storage and access in the Port Stephens – Hunter region with no known formalised storage for non powered craft. This is discussed in key findings below.

### **Storage for water-skiing and wake vessels on the Williams and Hunter Rivers**

As these vessels are primarily trailerable, long-term storage is available at the point of origin (home base) of most boaters. Private properties and some caravan parks along the two rivers generally offer short-term storage for these types of vessels and access is either through public ramps or directly through private ramps and beaches. This is in contrast to other popular water-skiing wake boating regions, such as the Tweed-Clarence Valley and Hawkesbury / Pittwater / Brisbane Water where clubs and holiday properties offer exclusive riverfront access and storage for these types of activity.

### **Other storage**

Informal on-water storage facilities currently exist in Stockton and on the Hunter River near Hexham.

## **6.2 Key findings**

The Port Stephens – Hunter region is one of the more popular boating areas in the State. The region is also attractive to visiting boaters from Sydney with its large population and cruising vessels due to its services (Newcastle and Port Stephens) and waterways tourism.

Consultation feedback highlighted a number of issues in relation to storage. In particular, dinghy and small craft (sailing and paddle craft), absence of moorings on the rivers, the need for dry and on-water storage in both Newcastle and Port Stephens, mooring waiting lists in a number of areas, long-term parking for trailers and a lack of on-water storage at Hawks Nest.

Anecdotal feedback also highlighted that occupancy rates at marinas in Port Stephens 15 to 20 years ago were about 65% whereas in recent years they have regularly exceeded 90%, with a number of marinas having waiting lists for berths.

Waiting lists for moorings in Tea Gardens, Lemon Tree Passage and Soldiers Point are also long. For example at Tea Gardens, there are 20 applicants on the waiting list for 27 moorings sites, with the last mooring allocated in March 2013.

This suggests that demand is continuing to grow in the region and there is a need to increase dry and on-water storage in key boating areas.

MMC will work with councils in the region to develop a boat storage strategy that seeks to identify the best mix of boat storage facilities, including potential dry storage options in Newcastle and Port Stephens, required to keep pace with demand in the region. Developing the strategy will require further consultation with boat owners, industry and the local community. Once finalised, funding assistance will be available to help councils and other potential delivery partners to implement new storage projects that support the growth targets.

### **Increasing storage capacity for private moorings and on-water storage berths**

Two areas in the region, Tea Gardens and Soldiers Point, have significant waiting lists in comparison to total moorings, with a slightly lower proportion (approximately one third) at Lemon Tree Passage.

There are a number of mooring areas with over 50 moorings. These occupy extensive on-water space and can impact on both access and navigation in popular areas. This is also the case in smaller areas with waiting lists. For example at Tea Gardens and on the Myall River, due to the width of the channel moorings are currently limited to certain areas which are quite a distance from the shore.

Berths are often the preferred method of storage for larger vessels, particularly where owners require direct access to services. Port Stephens and Newcastle are also attractive to larger cruising and visiting vessels and analysis indicates that there is a need for increasing on-water storage berths in these areas. While there is a clear demand for additional private mooring licences, any further increase to mooring numbers would require a balanced approach to optimise existing mooring configurations and identify areas where future growth could be accommodated with minimal impact.

The total increase in moorings required in popular areas will to an extent be influenced by the growth in other storage options. However, there may be opportunities to reduce waiting lists in popular areas through optimising existing mooring configurations and identifying areas where future growth could be accommodated with minimal impact.

In March 2014, MMC released the Moorings Review Issues Paper which highlighted the potential for increase mooring capacity through policy and regulatory changes and by using alternate mooring systems such as fore and aft or multi-point moorings. It is noted that alternate mooring systems are not suitable in all areas and may be subject to planning requirements.

Further consultation will take place in 2015 on policy and regulatory reforms arising from the Moorings Review. Funding has been set aside to support the implementation of these reforms as well as more direct measures to help reduce the number of “mooring minders” and reduce mooring waiting lists in popular areas.

Further information about the Moorings Review is available at:

<http://www.transport.nsw.gov.au/engagement/moorings-review-issues-paper>.

### **Dry Storage**

Compared to other regions, this region has a significant number of vessels between 8-10 m. Coupled with the continuing growth in visitors to Port Stephens with trailerable vessels, a growing population and urbanisation of the Hunter and increased medium to high density residential accommodation in Newcastle, there is a growing demand for dry storage to complement any growth in on-water storage in this region.

Streets around Corlette and Shoal Bay have been identified as seeing an increase in on-road trailer storage. Currently, there is some minimal dry storage for trailerable vessels in the Port Stephens area at Oyster Cove.

Similar to other growth regions, a significant number of vessels from 6-12 m could be stored at a dry storage facility if such facilities were made available. Development of a dry-stack facility in proximity to the foreshore in Newcastle in the medium term would help meet demand, particularly with the growing number of medium to high density residences and urbanisation.

Hard-stand or single level open storage can provide space for varying types of vessels, including any with masts and keels as well as the large percentage of smaller vessels in the region. For both Newcastle and Port Stephens, dry storage facilities similar to those already operating in Port Stephens for trailerable vessels and a dry-stack facility could also assist addressing any challenges associated with boat trailers being parked on residential streets.

### Dinghy and other small vessel storage

Dinghies in Port Stephens are mostly stored in formalised racks or horizontal storage systems; however some locations such as Shoal and Salamander Bays require attention. Other locations such as Stockton and North Arm Cove have active dinghy usage, but little or no formalised dinghy storage.

There is also a need to provide storage for the growing number of non powered boating (paddle craft and sail craft) across the region. There are little or no storage spaces for sailing dinghies in Newcastle. Similarly, kayak and canoe usage is growing along the rivers and lakes as well as the coastal waterways with minimal formalised storage.

The BBP has in the past provided grants to councils in other regions to provide dinghy storage racks. This region would benefit from the provision of dinghy storage racks in the areas with higher mooring density such as Salamander Bay.

There are opportunities to provide dinghy and non powered craft storage racks in areas with a high concentration of moorings, where there is an overflow of dinghies and areas becoming popular with non powered craft.

Figure 11 – Examples of storage issues identified during regional site visits



Use of public land for dinghy storage around Winda Woppa    Dinghy storage overflow near Salamander shores



## 7. Feedback on Consultation Draft

### 7.1 Feedback Summary

Feedback received from Councils, other stakeholder groups and the general public was generally supportive of the Key Findings and Actions contained in the Consultation Draft.

#### 7.1.1 Safety

Submissions were supportive of the proposed Safety actions in the Consultation Draft, particularly the need to improve user behaviour. The importance of educating boaters about safe behaviour and acting with courtesy towards other boaters, particularly in relation to generation of wash, was suggested as being of particular importance.

At the Public Information Sessions, suggestions were also made regarding particular locations where compliance issues had been observed, and there was a general emphasis on the importance of regularly relocating navigation aids to mark shifting channels and sand banks.

#### 7.1.2 Access

There was broad agreement that there are significant opportunities to improve and modernise boating infrastructure in the region. PSC, GLC, MCC, NCC, SC and DSC indicated their willingness to work with MMC and Roads and Maritime to improve boating facilities in the region. Comments received on the potential projects identified in the Consultation Draft, including Councils' views on priority projects have helped inform the list of projects identified in Chapter 8 which will receive priority funding as part of the NSW Boating Now program.

The need for navigation dredging at a number of locations in Port Stephens was repeatedly raised during consultation sessions, including around Corrie Island and at North Arm Cove.

There was broad support for increasing the number of courtesy moorings throughout the region, particularly around Port Stephens and at Broughton Island. A number of requests were also received for provision or upgrade of jetties to provide additional access for isolated communities.

#### 7.1.3 Storage

Stakeholders acknowledged the importance of additional boat storage around Port Stephens, with Councils indicating support to explore options to increase on water storage. Comments received about moorings will also be considered as part of the state-wide Moorings Review.

A number of submissions agreed that there are a number of locations which would benefit from provision of additional dinghy storage facilities, and there were also suggestions and requests for additional facilities to consider options to provide storage for canoes and kayaks near the water.

#### 7.1.4 Other Issues

In consulting with stakeholders and the general public on the development of the Regional Boating Plan a number of other issues were identified that do not fit neatly into the categories of safety, access or storage. Riverbank erosion was the most contentious of these issues, with different views between stakeholder groups on the contribution of boating activity to erosion. By far the largest number of submission received on the Consultation Draft related to boating activity and riverbank erosion in the Seaham Wier Pool in the Upper William River.

Similar issues arose in consultations on a number of other Regional Boating Plans, including in particular, Tweed-Clarence Valley Region. In response to the issue, the MMC in Transport for NSW is leading the development of a state wide policy framework to ensure a consistent approach to boating and riverbank management in areas that are subject to boating and erosion.

The policy will be implemented through pilot local management plans to be developed for the Tweed, Clarence and Upper Williams Rivers and will focus on delivering pragmatic solutions to improve these issues. The plans will be informed by scientific evidence and in consultation with boaters and the local community. Funding will be made available under NSW Boating Now to assist in the delivery of infrastructure solutions where appropriate.

Initial consultation on the policy framework has already been held in Raymond Terrace throughout October and November 2014. Further consultation will be undertaken in 2015 as draft management plans are developed following further scientific investigations.

Further information about this project is available online at <http://www.transport.nsw.gov.au/mmc/erosion>.



## 8. Delivery Program

### 8.1 Summary

Table 3 provides a summary of how the actions identified in the Regional Boating Plan will be delivered across the three categories of safety, access and storage. A progress report on the Delivery Program will be published annually.

### 8.2 NSW Boating Now Funding

\$3.68 million in NSW Boating Now funding has been allocated to support delivery of the following 22 infrastructure projects identified in Table 2 as being a priority for delivery over the next three years.

The total Regional allocation is based on estimated projects costs and the proposed financial contributions from Council and other delivery partners for individual projects. The total Regional allocation may be subject to variation following further negotiations with delivery partners to confirm project scope, design, timeframes, funding contributions and the most efficient project delivery method.

The projects are included as part of *NSW Boating Statement* which includes a total funding commitment of over \$33 million to support the delivery of Priority Regional Projects across NSW. The *NSW Boating Statement* can be downloaded at [www.transport.nsw.gov.au/mmc](http://www.transport.nsw.gov.au/mmc). It includes the full list of Priority Regional Projects for each Region and details on how the Priority Regional Projects were identified.

The *NSW Boating Statement* includes a summary of the categories of funding to be made available over the five years of the NSW Boating Now program, including at least \$10 million to be made available in 2017/18 and 2018/19 to support the delivery of a second round of infrastructure projects. Other funding categories include:

- \$10 million to support the delivery of Major Projects that provide benefits to boaters in more than one region including:
  - Measures to address concerns about the impact of boating on riverbanks
  - Boat storage strategies and pilot projects
  - Establishing slipway facilities in strategic locations
  - Measures to reduce the number of “mooring minders”.
- \$5 million to support the delivery of dedicated off-street boat trailer parking facilities
- \$5 million to be assist with emergency repairs to boating infrastructure, particularly after flood or storm events.

Table 2 – Priority Regional Projects

1. Support development of Tea Gardens/Hawks Nest Foreshore Redevelopment Master Plan
2. New public jetty at Ogden Street, Tea Gardens
3. Upgrade wharf and pontoon at Tea Gardens East
4. Dinghy storage and launch facility, Anzac Park, Tea Gardens
5. Upgrade parking and lighting at Allworth boat ramp (Stroud Street)
6. Investigate dinghy storage and launch facilities at Pindimar or Bundbah
7. Investigate options to upgrade facilities at Waterhen Park, Nerong
8. Investigate options for new wharf/jetty at Tahlee
9. Investigate options for boat ramp and jetty at North Arm Cove
10. Major upgrade of boat ramp and associated infrastructure at Lemon Tree Passage
11. Boat ramp improvements and parking upgrade at Karuah
12. Replace baffle boards and sewage pumpout at Longworth Park wharf, Karuah
13. Install pontoon and upgrade parking at Tomago boat ramp
14. Replace wharf at Taylors Beach
15. Upgrade boat ramp at Seaham
16. Replace baffle boards and lower landings at Salamander Bay wharf
17. Upgrade parking and toilets at Stockton North boat ramp
18. Investigate options for improving recreational access to the Hunter River
19. Improve canoe/kayak access from Bridge Reserve, Clarence Town
20. Install jetty and improve amenities at Bridge Reserve boat ramp, Clarence Town
21. Upgrade boat ramp, improve parking and install jetty at Wharf Reserve boat ramp, Clarence Town
22. Investigate options to improve parking and install pontoon at Carrington boat ramp



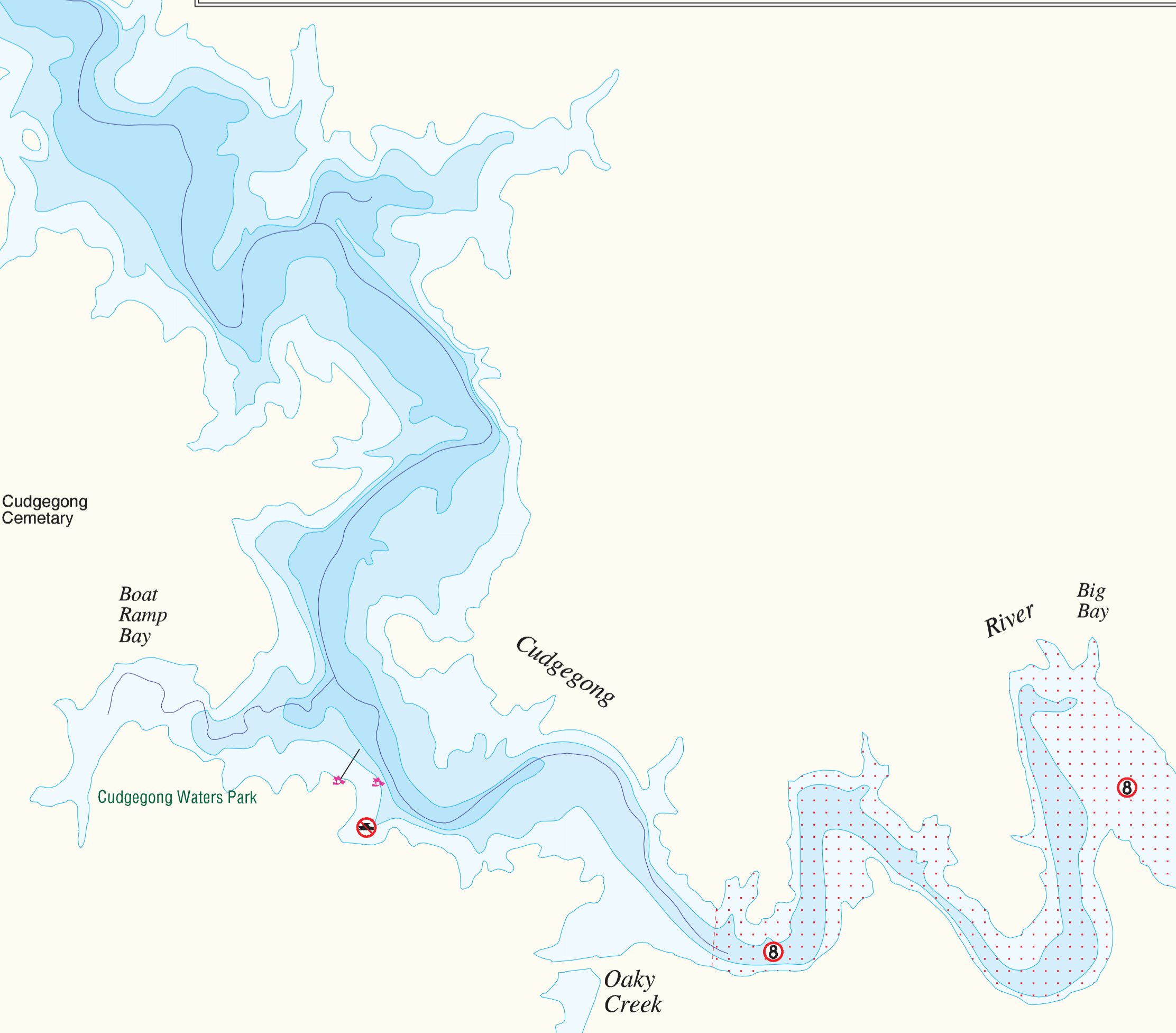
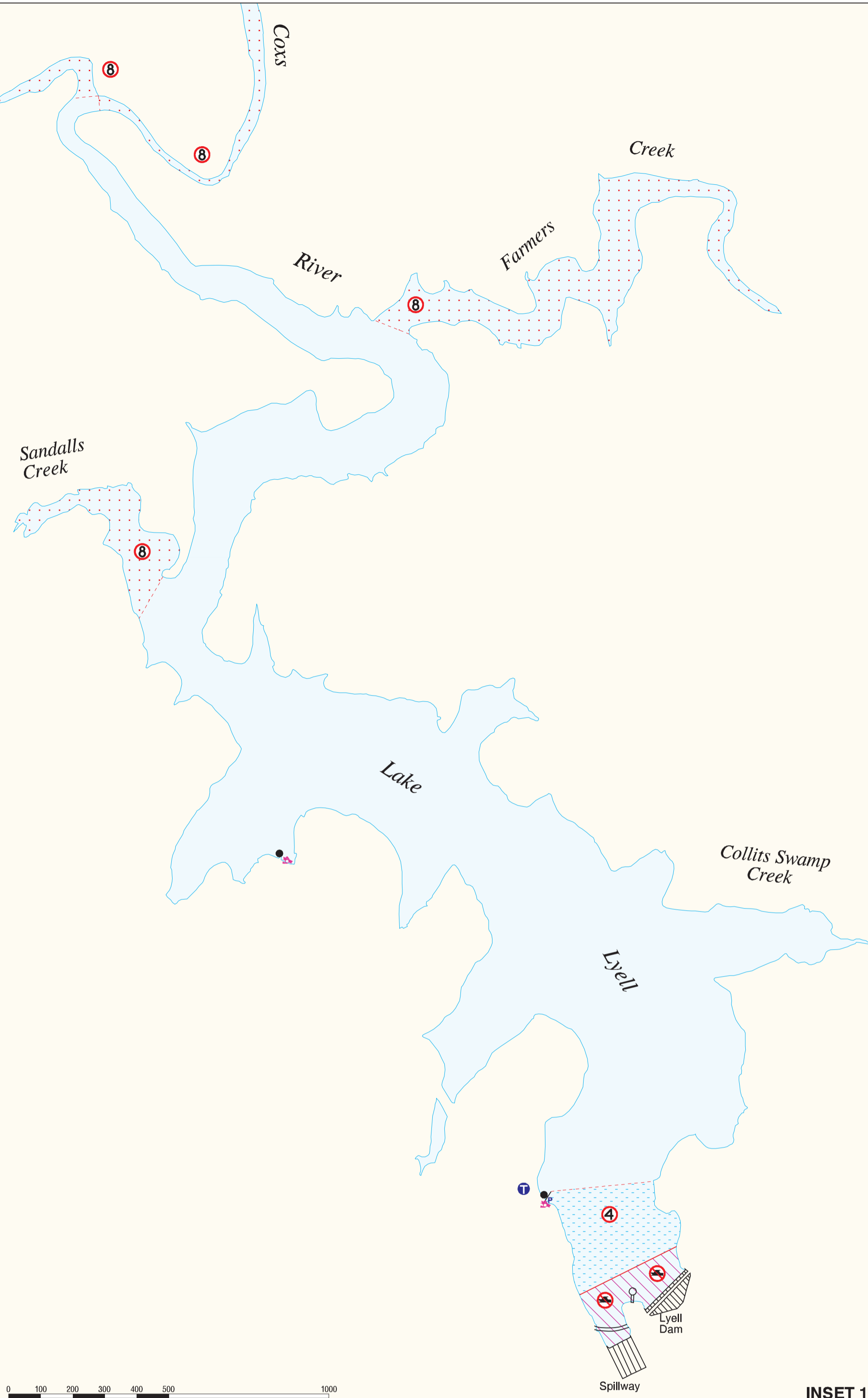
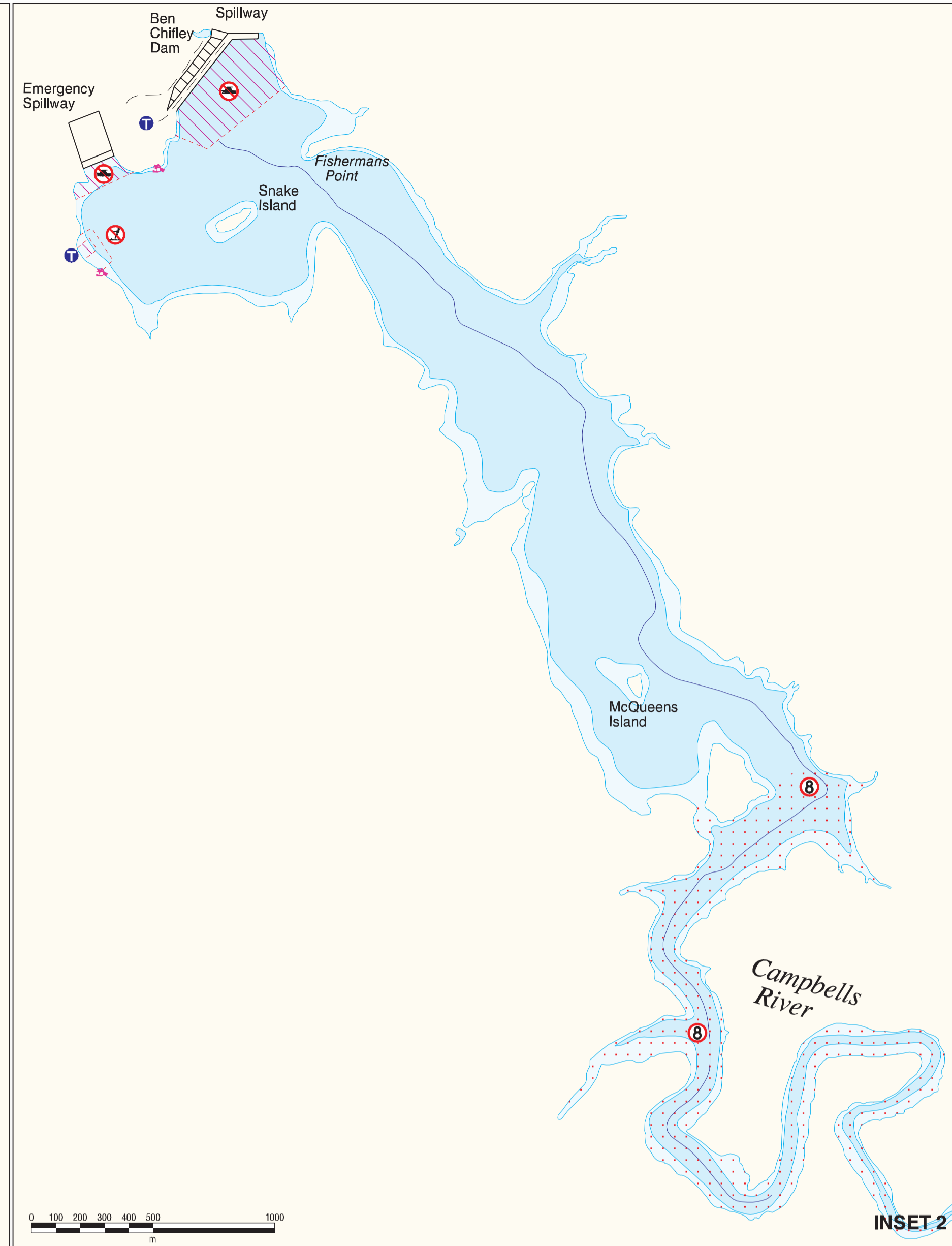
Table 3 – Implementation of Boating Safety, Access and Storage Actions

	Action	Delivery
<b>Safety</b>	<b>Review strategies to improve user behaviour and safe boating practices across the region, particularly at Port Stephens and between different waterway user groups</b>	Roads and Maritime will work with MMC to review the current approach to addressing the user behavior issues for the region including education and compliance campaigns within the region.
	<b>Review placement and planning of navigation aids and signage and upgrade where appropriate</b>	Roads and Maritime will review and upgrade as required existing navigation aids across the region.
	<b>Review strategies to minimise conflict between different user groups</b>	MMC and Roads and Maritime will review strategies such as shared usage zones, designated usage zones, usage restrictions (including speed and wash) or targeted signage at access points.
<b>Access</b>	<b>Improve the condition of existing access facilities to improve safety and usability</b>	\$3.68 million in NSW Boating Now funds have been allocated to support the delivery of the 22 Priority Regional Projects listed in Table 2.
	<b>Increase capacity of waterway access facilities and associated trailer parking capacity at strategic locations to better manage peak demand</b>	
	<b>Promote the region’s waterways as a destination for boaters by investigating opportunities to provide additional access points and courtesy moorings and reviewing possible sites for the provision of sewage pump out and fuelling</b>	Roads and Maritime will investigate the feasibility of installing courtesy moorings at the following locations that were identified during consultations: Winda Woppa; Fame Cove; Tea Gardens; Myall Lakes; Lemon Tree Passage; Soldiers Point; Wanda Beach; Salamander Shores; Little Salamander; Shoal Bay; Stockton and Broughton Island.
	<b>Investigate the development of formal access facilities at smaller townships to encourage waterway usage</b>	Investigation work will be undertaken into options for new wharf/jetty at Tahlee (Project 8) and a boat ramp and jetty at North Arm Cove (Project 9).

	<b>Continue support for the Rescuing Our Waterways dredging program</b>	MMC and Roads and Maritime will continue to support the Rescuing Our Waterways dredging program and will work with Crown Lands on a longer term strategy for navigation dredging in NSW.
<b>Storage</b>	<b>Establish a regional boat storage strategy with a focus on Port Stephens and Newcastle</b>	MMC will work with relevant Councils to develop a Boat Storage Strategy for Port Stephens and Newcastle.
	<b>Optimise configurations of existing mooring fields to improve access and navigation and enable future growth in popular areas</b>	Funding will be made available from NSW Boating Now Major Projects allocation to trial alternate mooring systems at a number of pilot sites across the state. The Port Stephens and Newcastle Boat Storage Strategy will consider whether there are opportunities to pilot alternate mooring systems in the region.  Major Projects funding has also been set aside to support the implementation of measures to reduce the number of “mooring minders” across NSW waterways to help reduce waiting lists in popular areas.
	<b>Review the need and provide dinghy and paddle craft storage where appropriate</b>	Dinghy storage facilities have been identified at Tea Gardens (Project 4) and Pindamar (Project 6) for priority funding.
<b>Other Issues (Erosion)</b>	<b>Develop pilot local management plans focusing on the delivery of pragmatic solutions to address riverbank erosion.</b>	MMC is leading the development of a state wide policy to ensure a consistent approach to boating and riverbank management in areas that are subject to boating and erosion.  The policy will be implemented through pilot local management plans to be developed for the Tweed, Clarence and Upper Williams Rivers and will focus on delivering pragmatic solutions to improve these issues. The plans will be informed by scientific evidence and in consultation with boaters and the local community.  Further information about this project is available online at <a href="http://www.transport.nsw.gov.au/mmc/erosion">http://www.transport.nsw.gov.au/mmc/erosion</a> .

# Appendices

# Appendix A – Maps



MAP OF  
**Windamere and Ben Chifley Dams Area**  
**Lake Lyell and Dunns Swamp Areas**

**NSW** Transport  
**Roads & Maritime**  
**Services**

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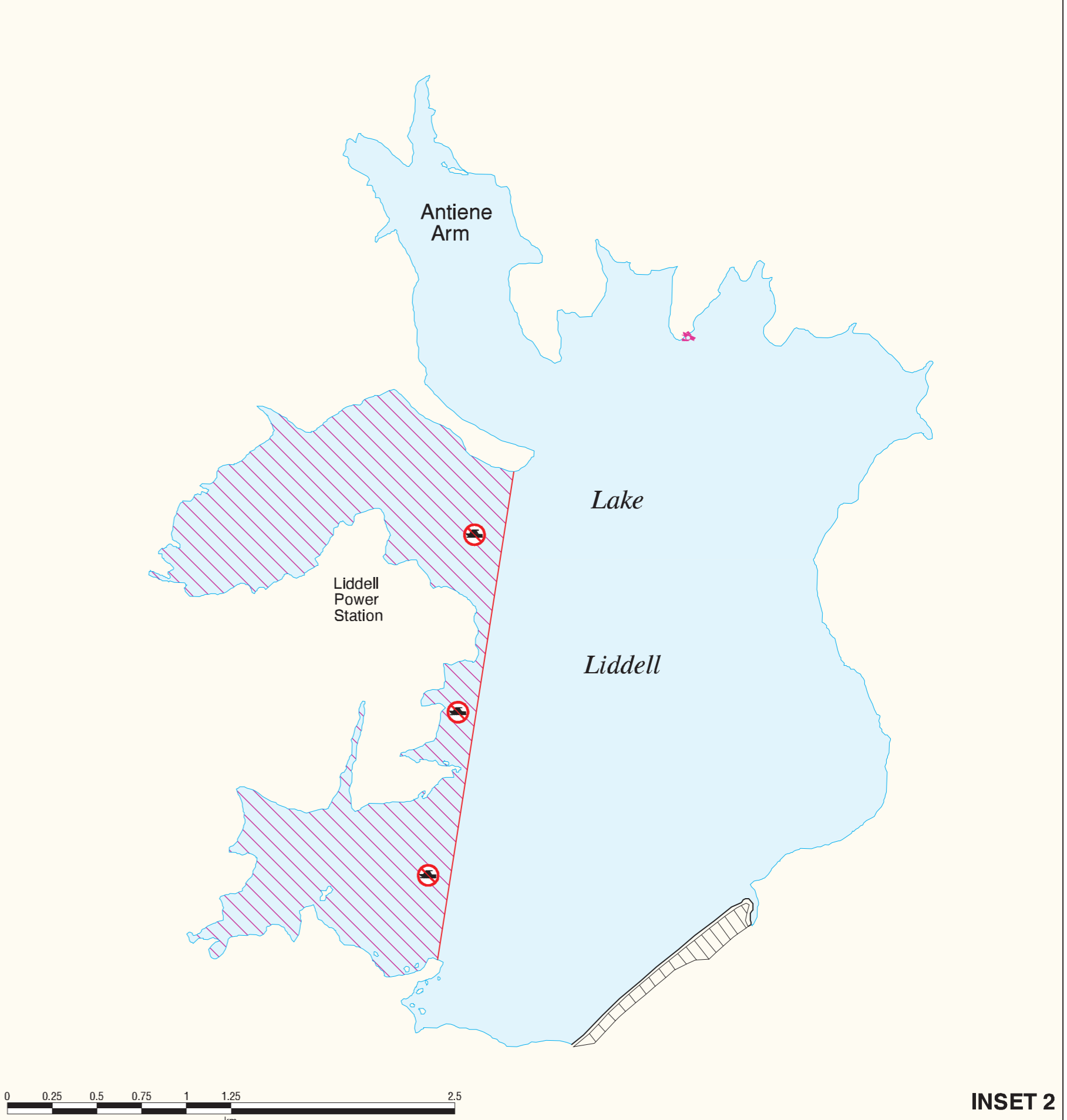
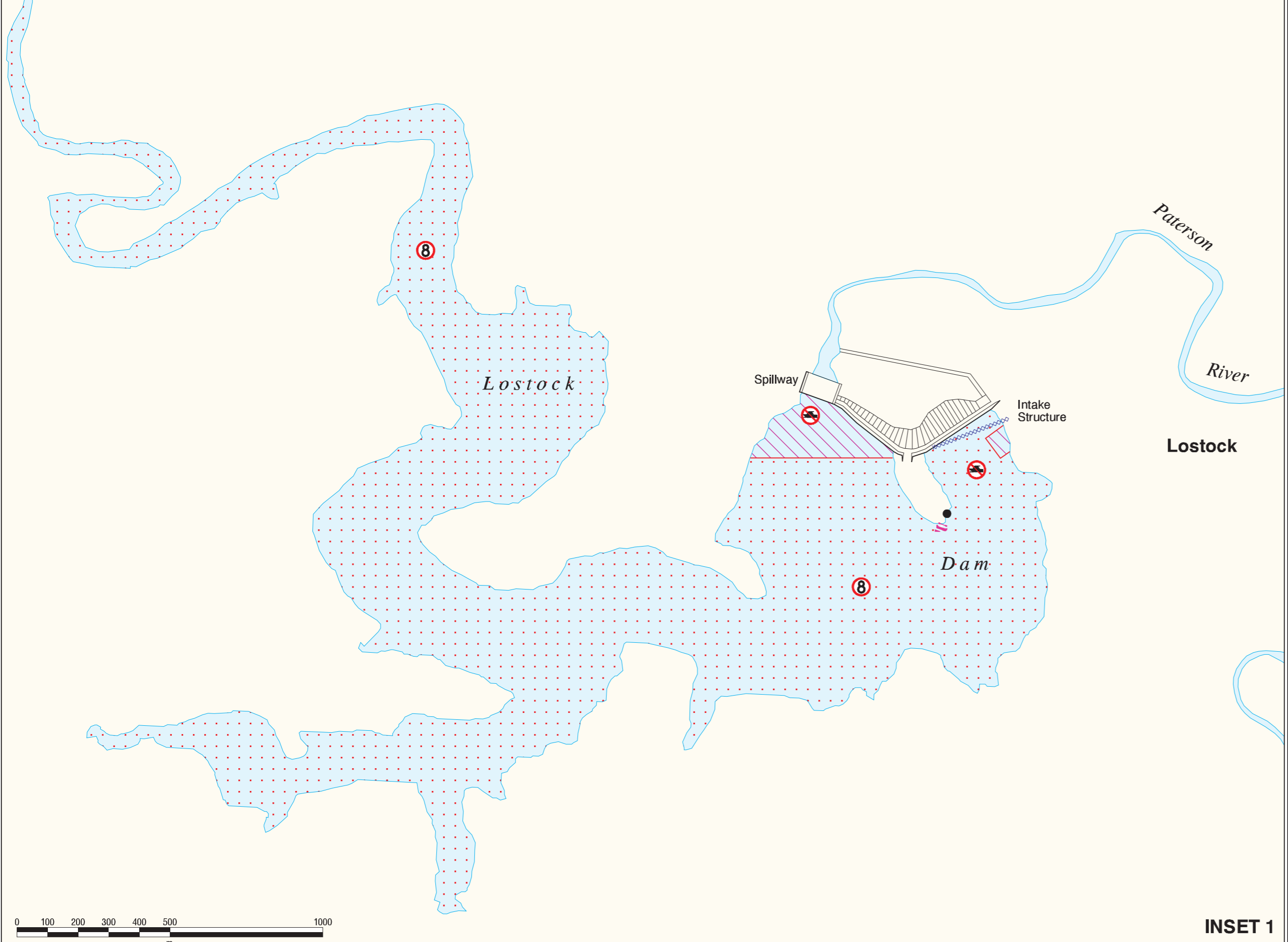
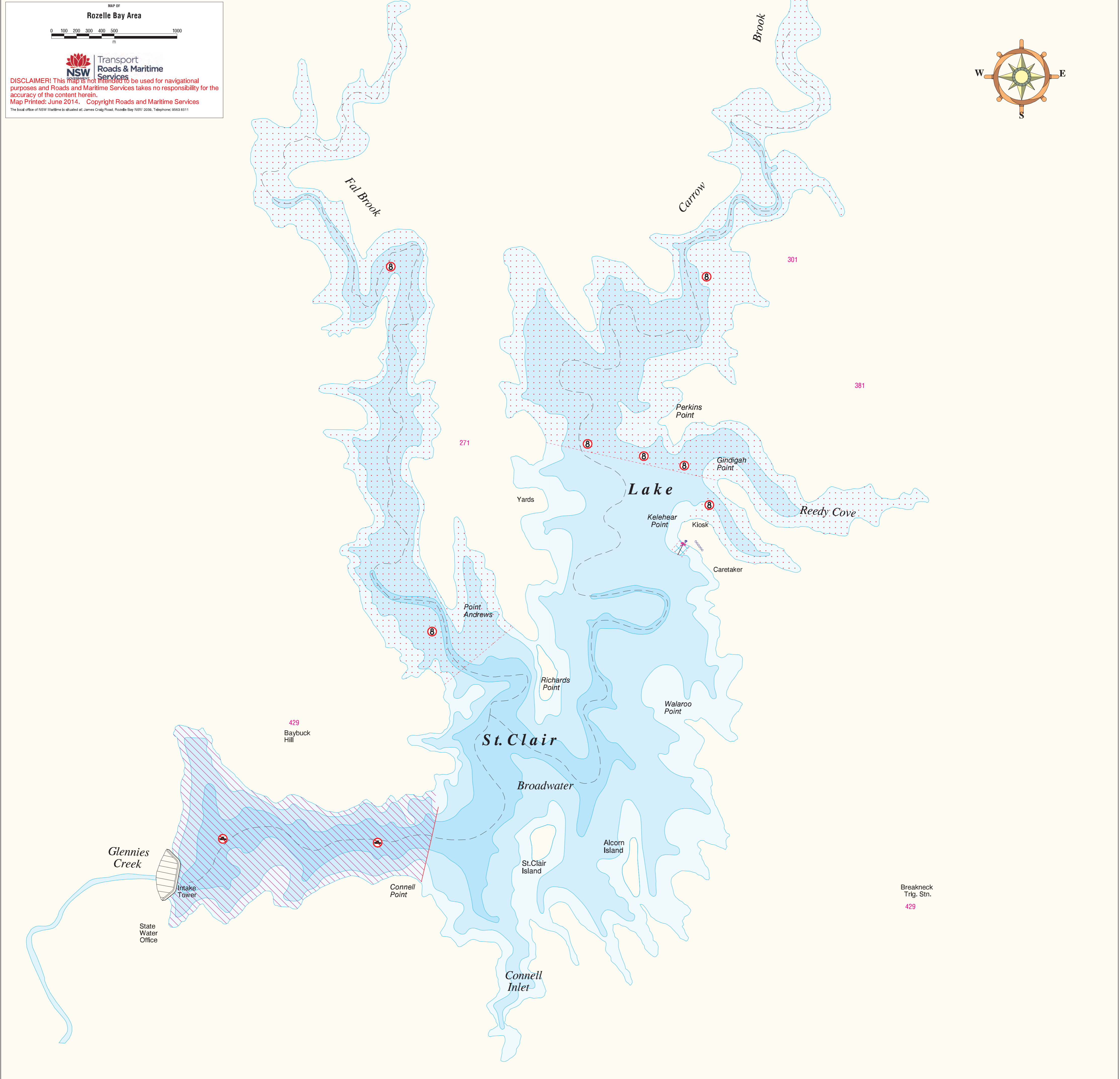
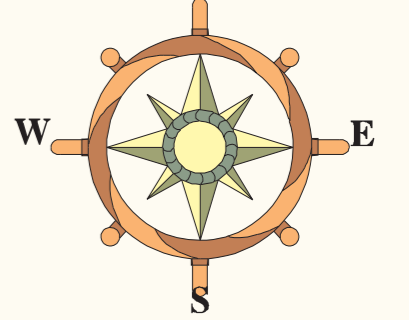
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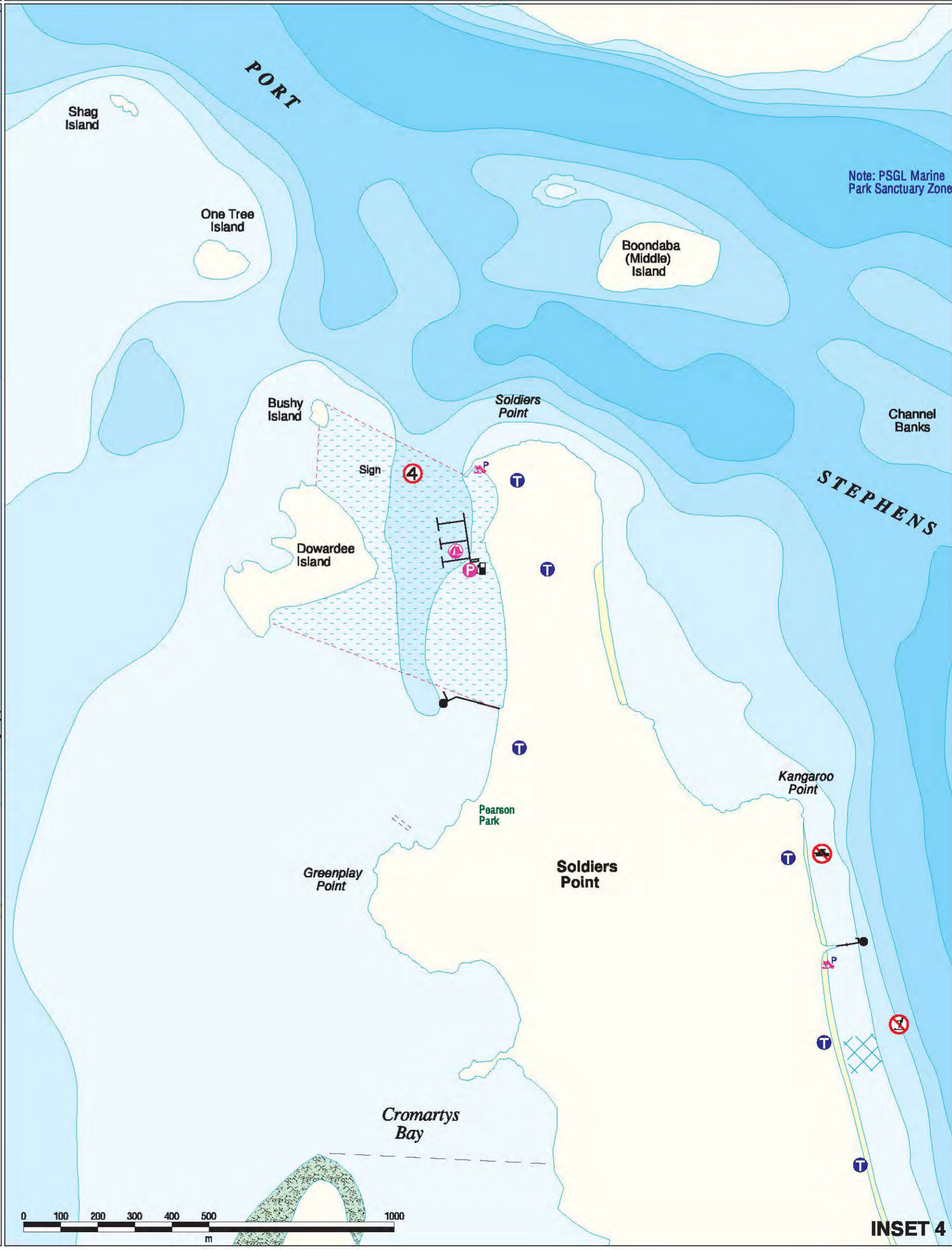
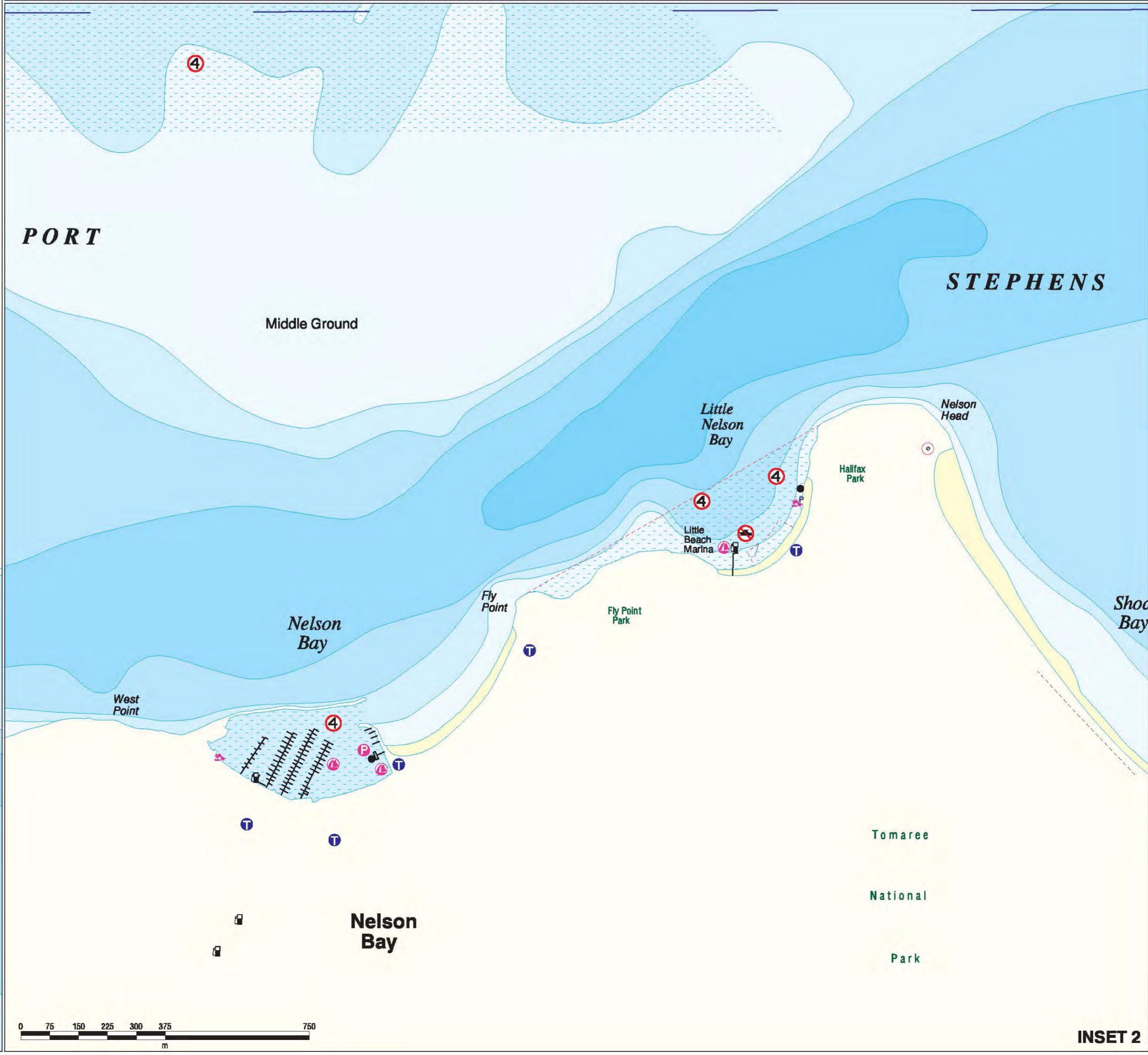
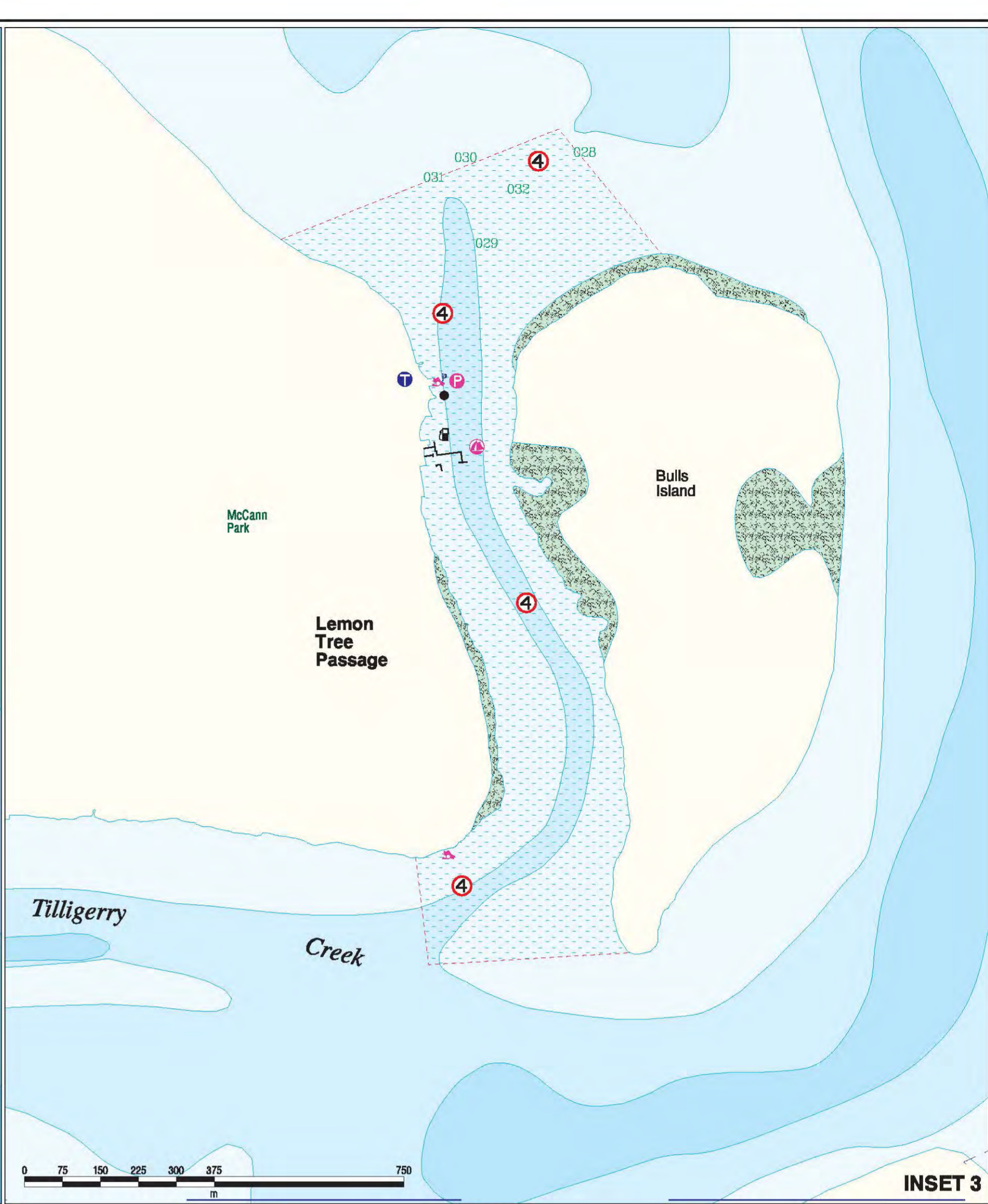
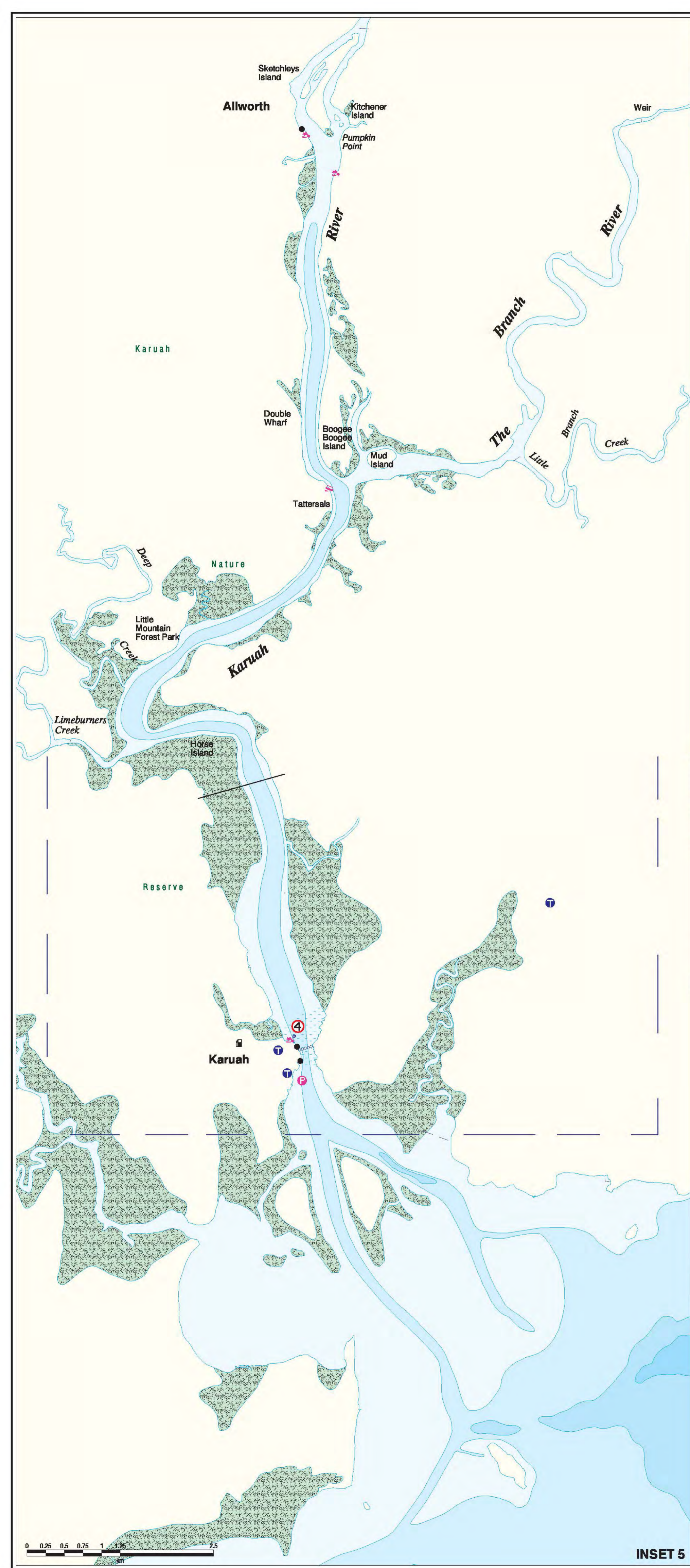
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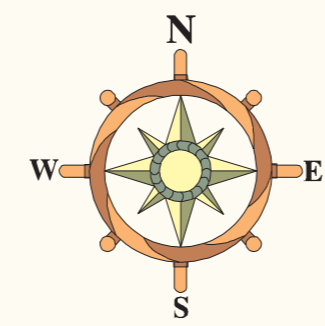
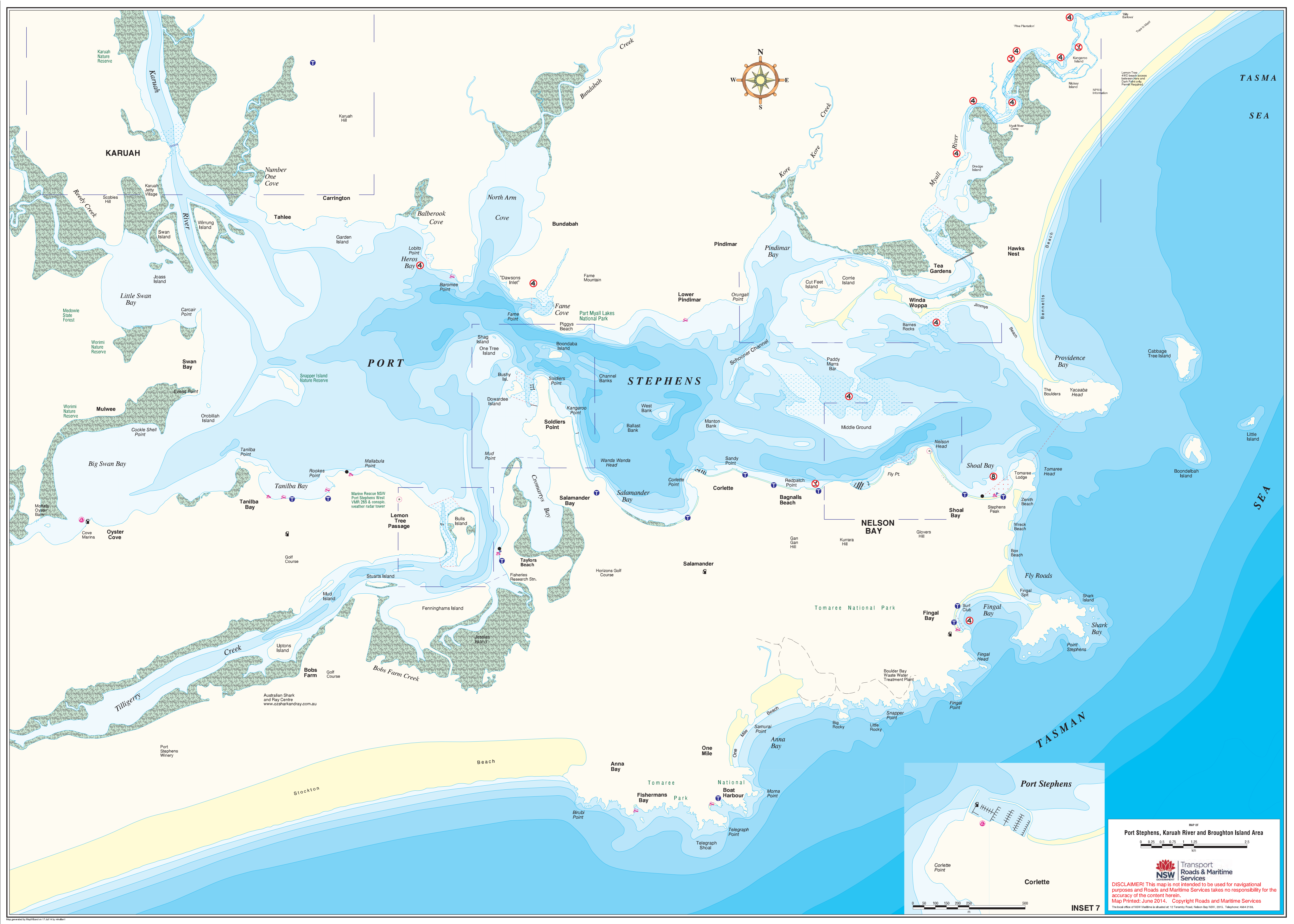
MAP OF  
**Rozelle Bay Area**

**NSW** Transport  
Roads & Maritime  
Services

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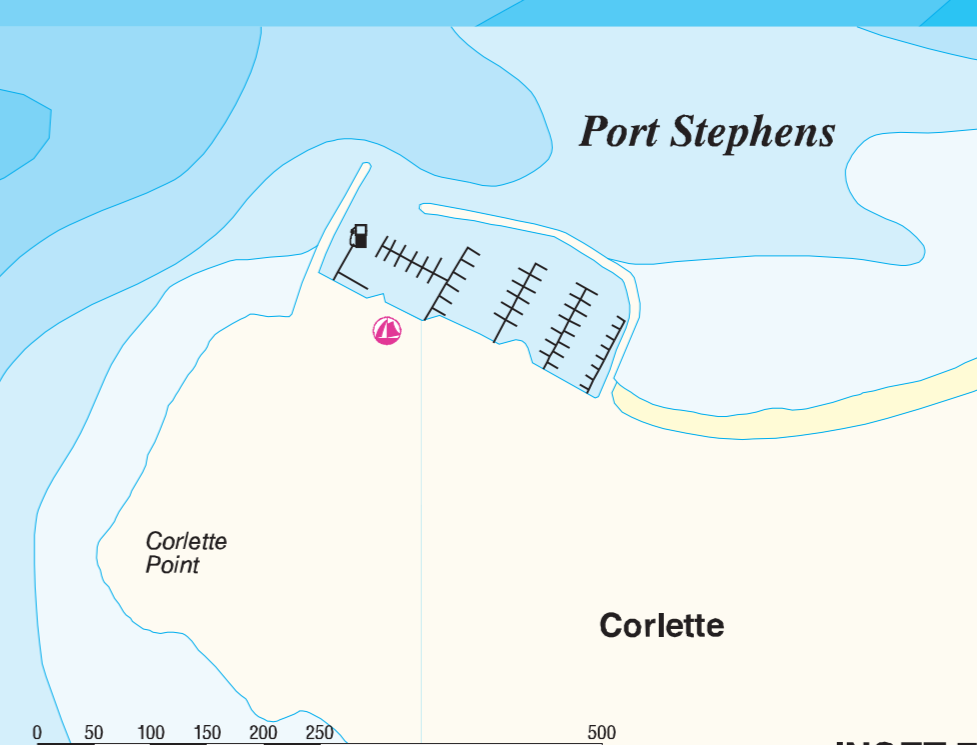




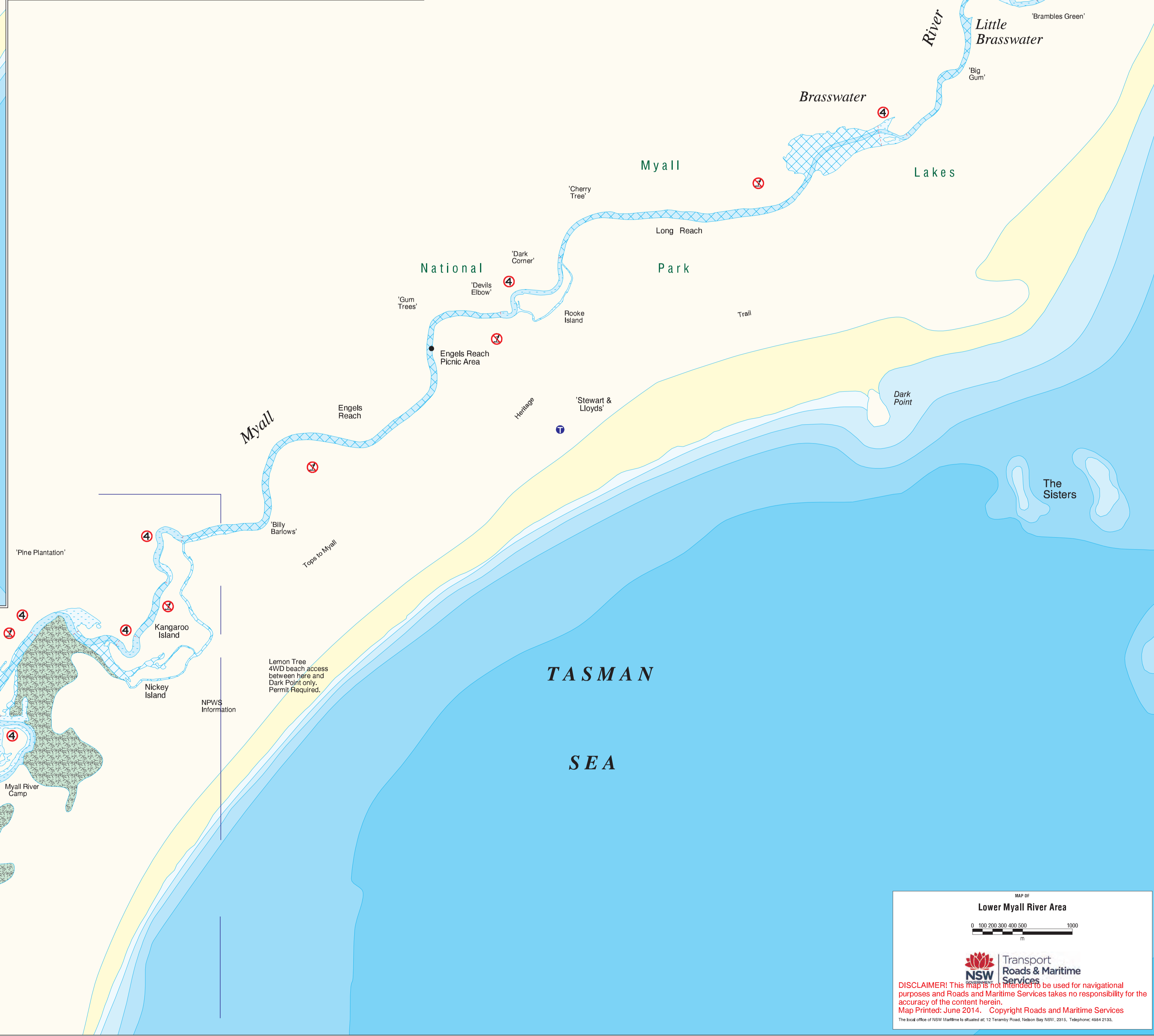
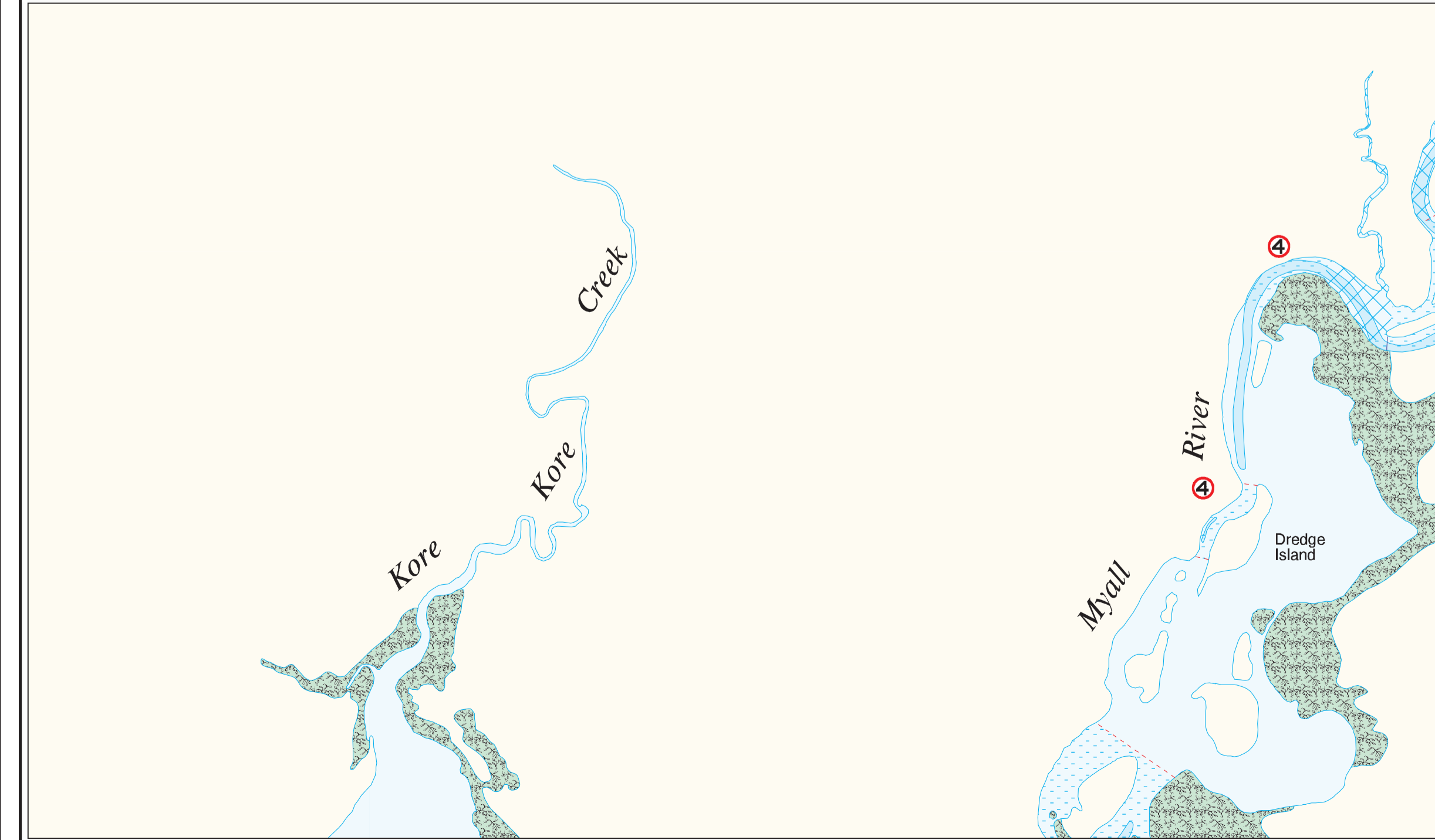
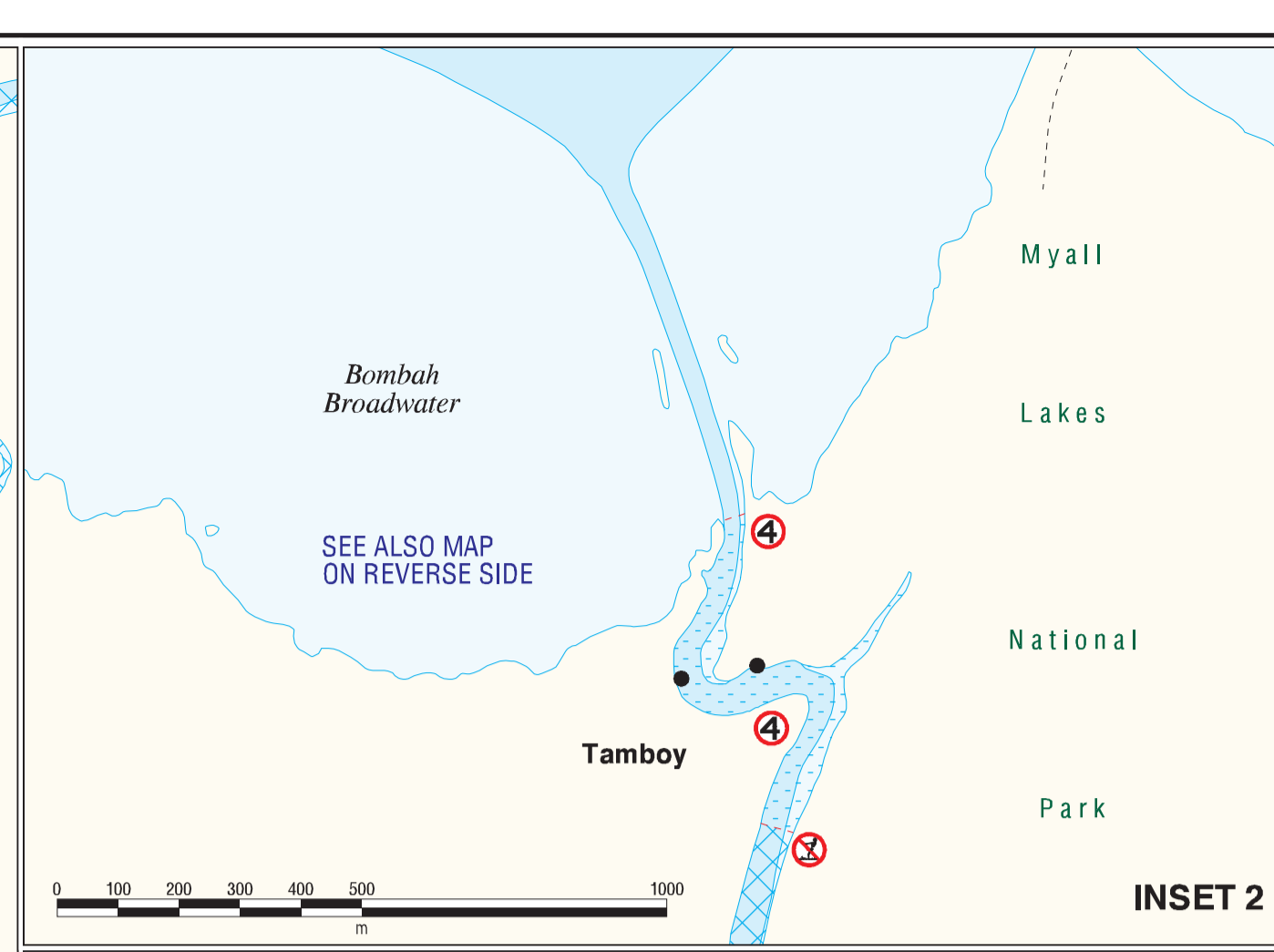
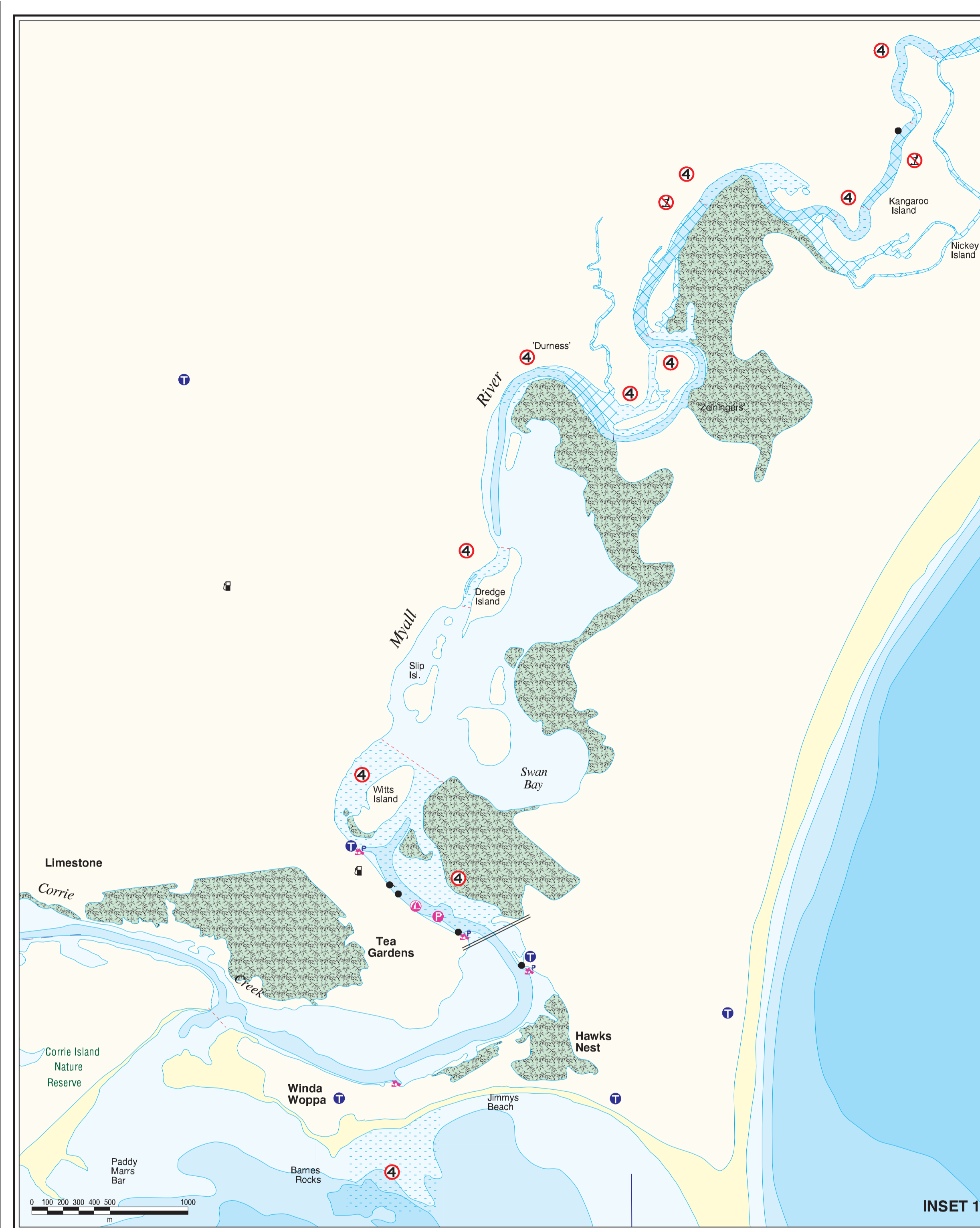
MAP OF  
**Port Stephens, Karuah River and Broughton Island Area**  
 0 0.25 0.5 0.75 1 1.25 1.5 2 2.5  
 km

**NSW** Government  
**Transport Roads & Maritime Services**  
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**INSET 7**



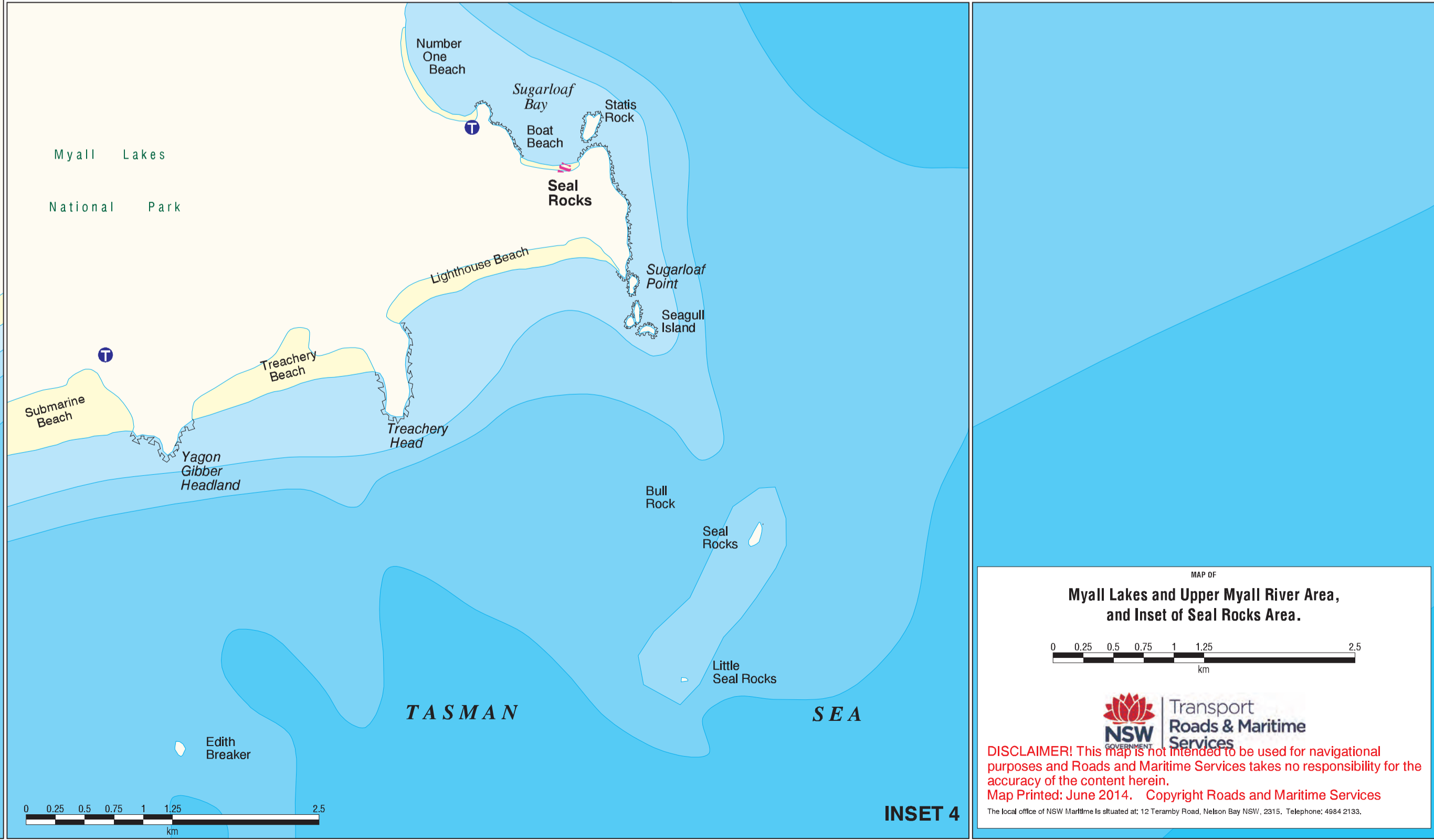
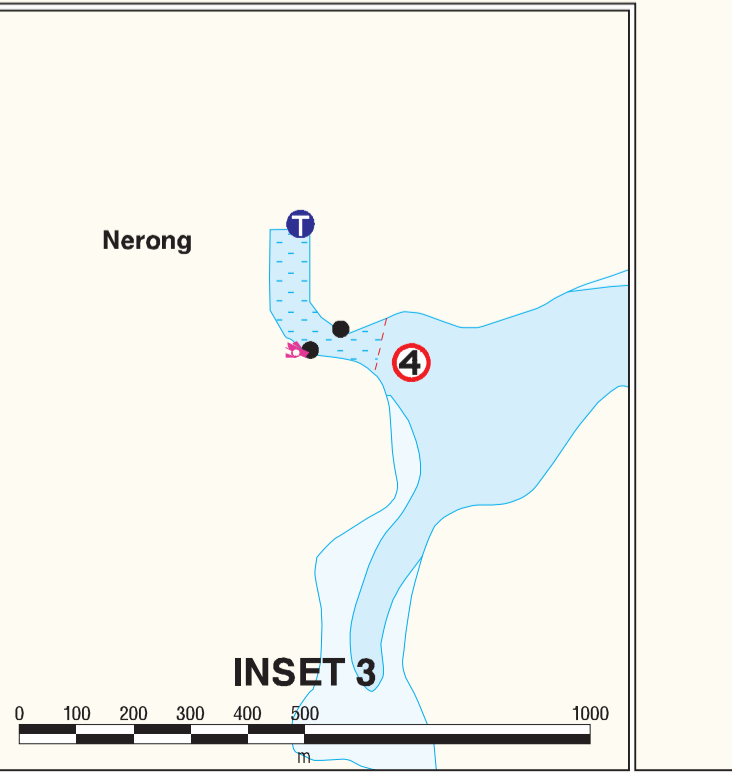
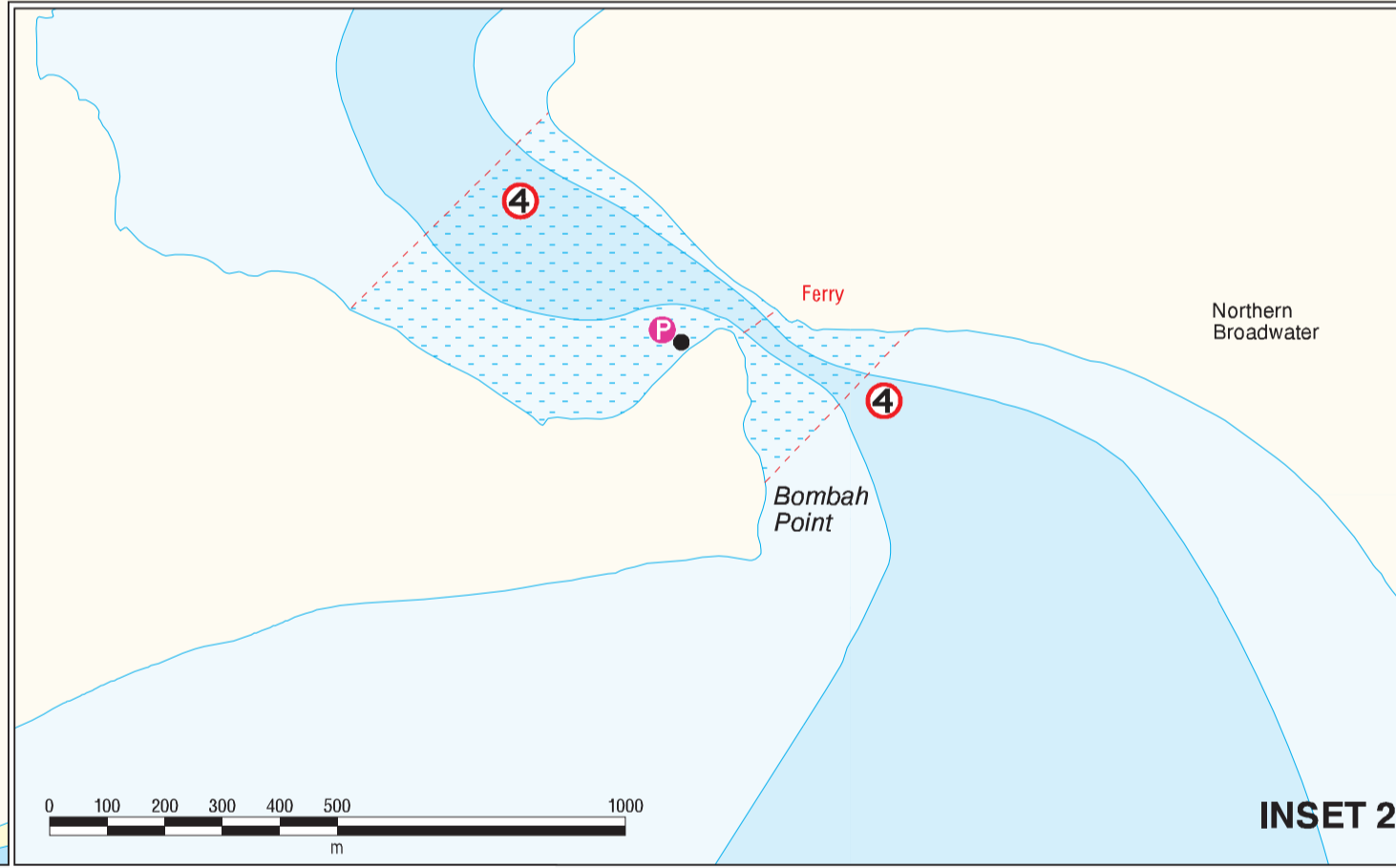
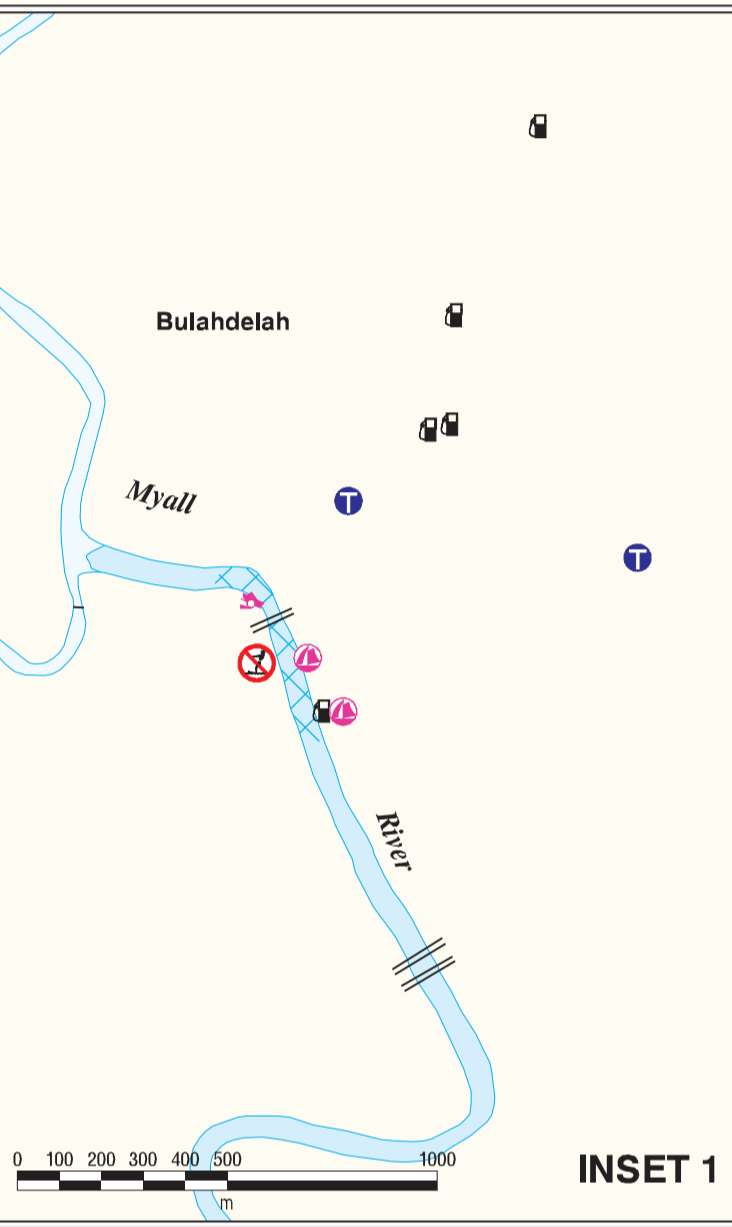
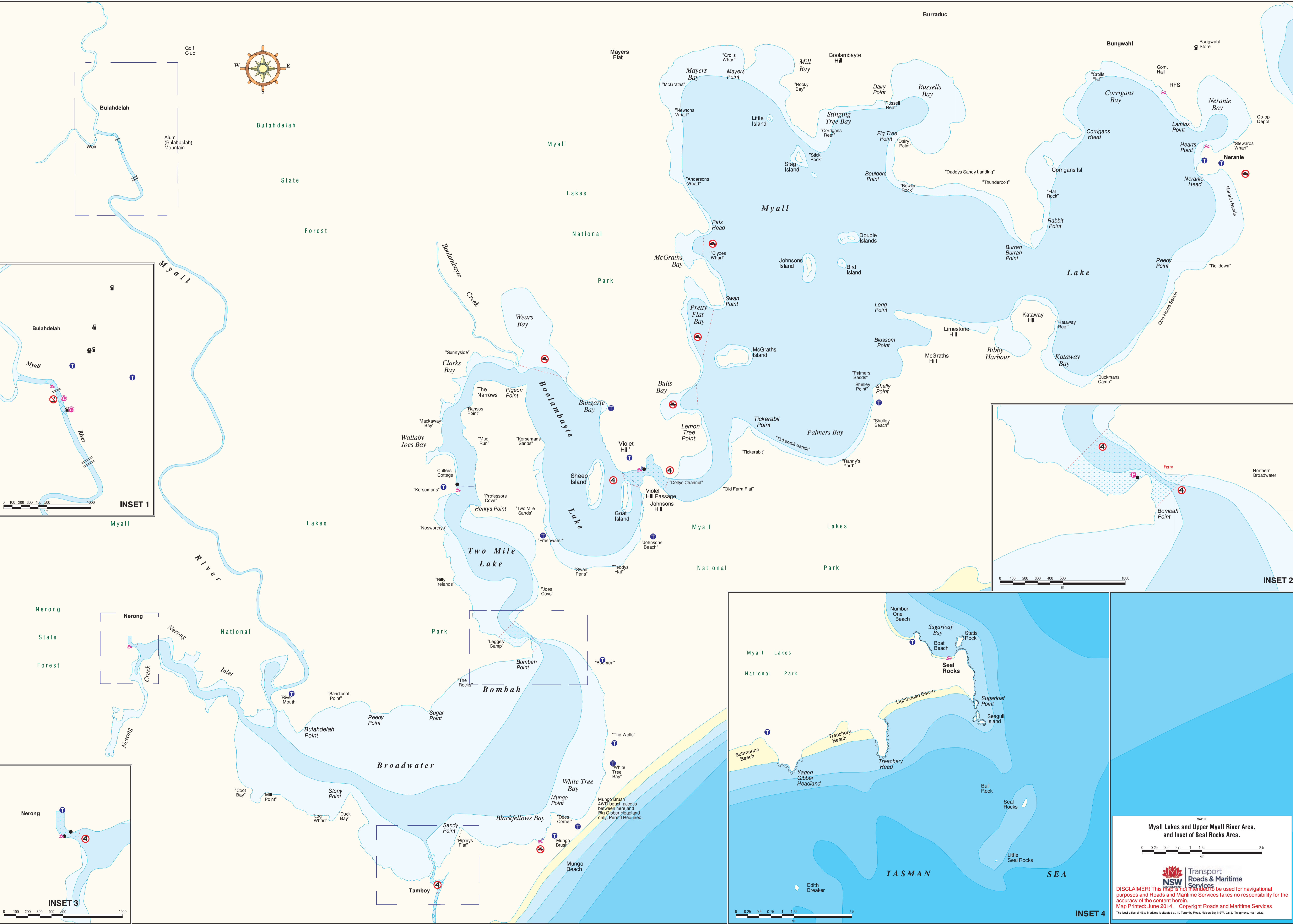
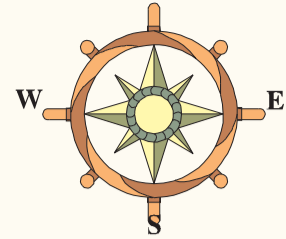




MAP 03  
**Lower Myall River Area**  
 0 100 200 300 400 500 1000  
 m

NSW Transport  
 Roads & Maritime  
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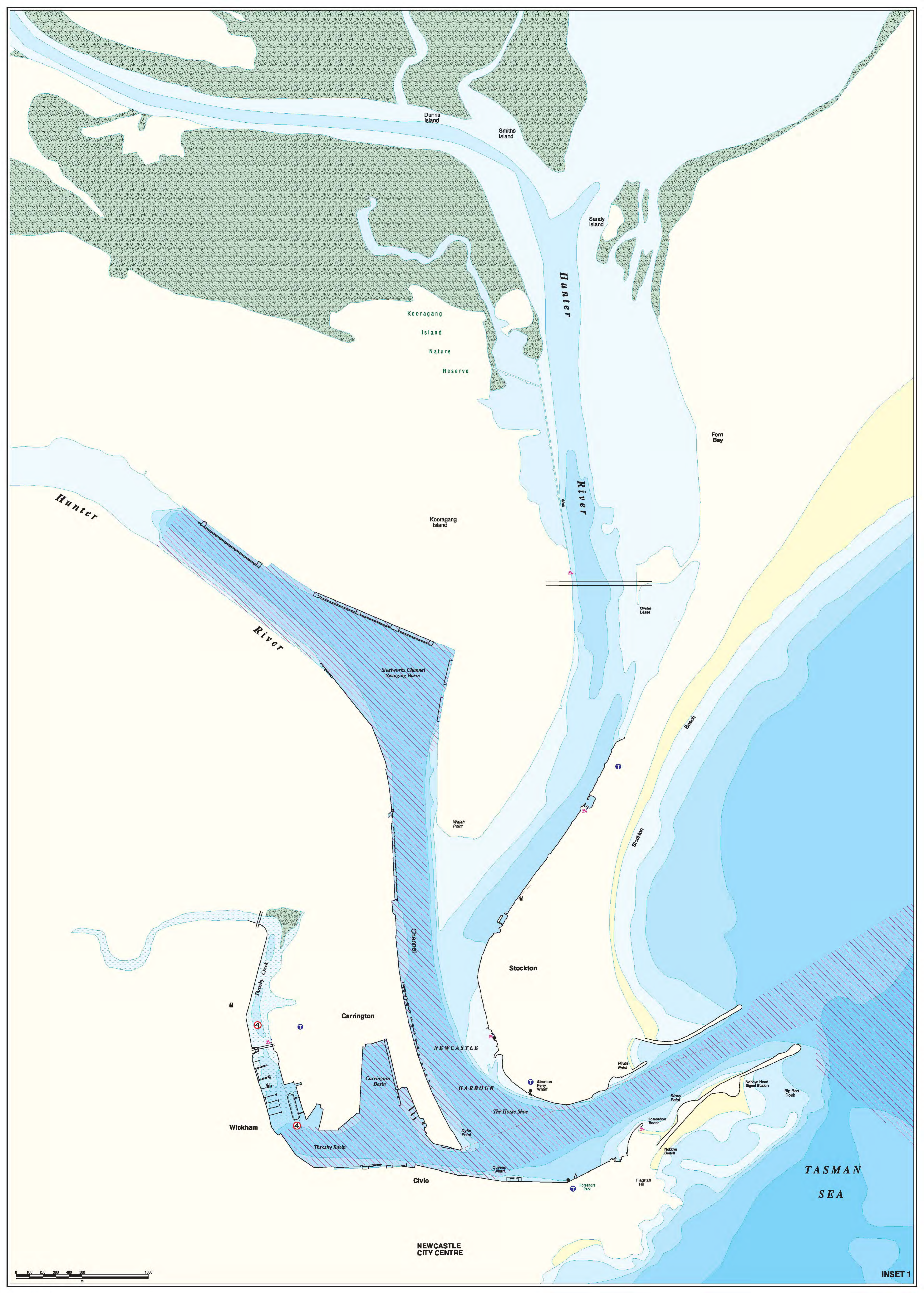


MAP 01  
**Myall Lakes and Upper Myall River Area, and Inset of Seal Rocks Area.**

0 0.25 0.5 0.75 1 1.25 2.5  
 km

Transport Roads & Maritime Services

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Dunns Island

Smiths Island

Sandy Island

Kooragang Island Nature Reserve

Fern Bay

Hunter River

River

Hunter River

River

Kooragang Island

Oyster Lease

Steelworks Channel Swinging Basin

Beach

Walsh Point

Stockton

Stockton

Carrington

NEWCASTLE

HARBOUR

Wickham

Throby Basin

Civic

Stockton Ferry Wharf

Pirate Point

Story Point

Nobbys Head Signal Station

Big Ben Rock

Dyke Point

Queen's Wharf

Foreshore Park

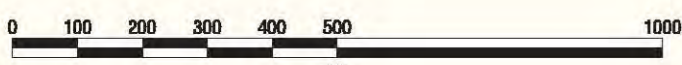
Horseshoe Beach

Nobbys Beach

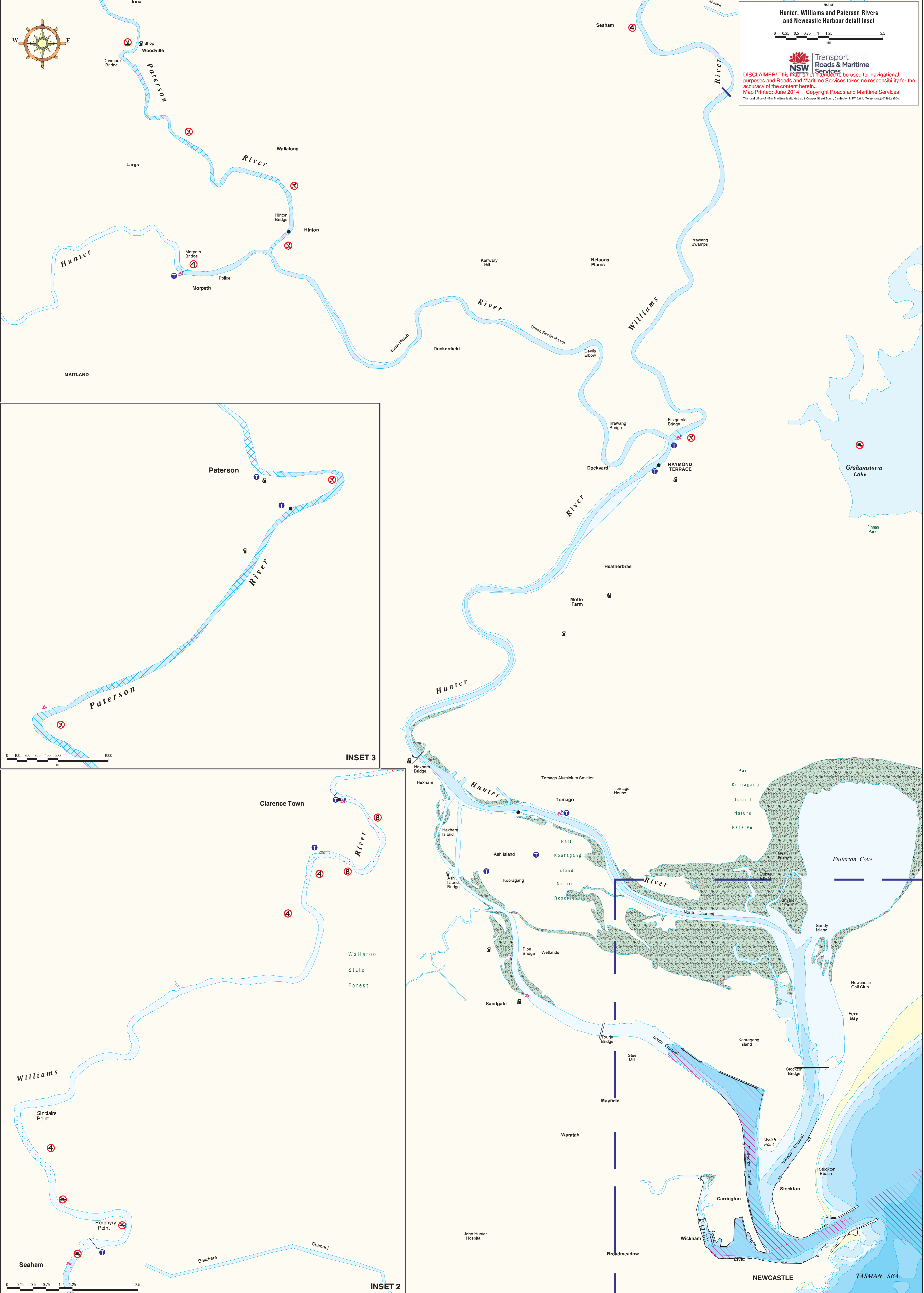
Flagstaff Hill

TASMAN SEA

NEWCASTLE CITY CENTRE



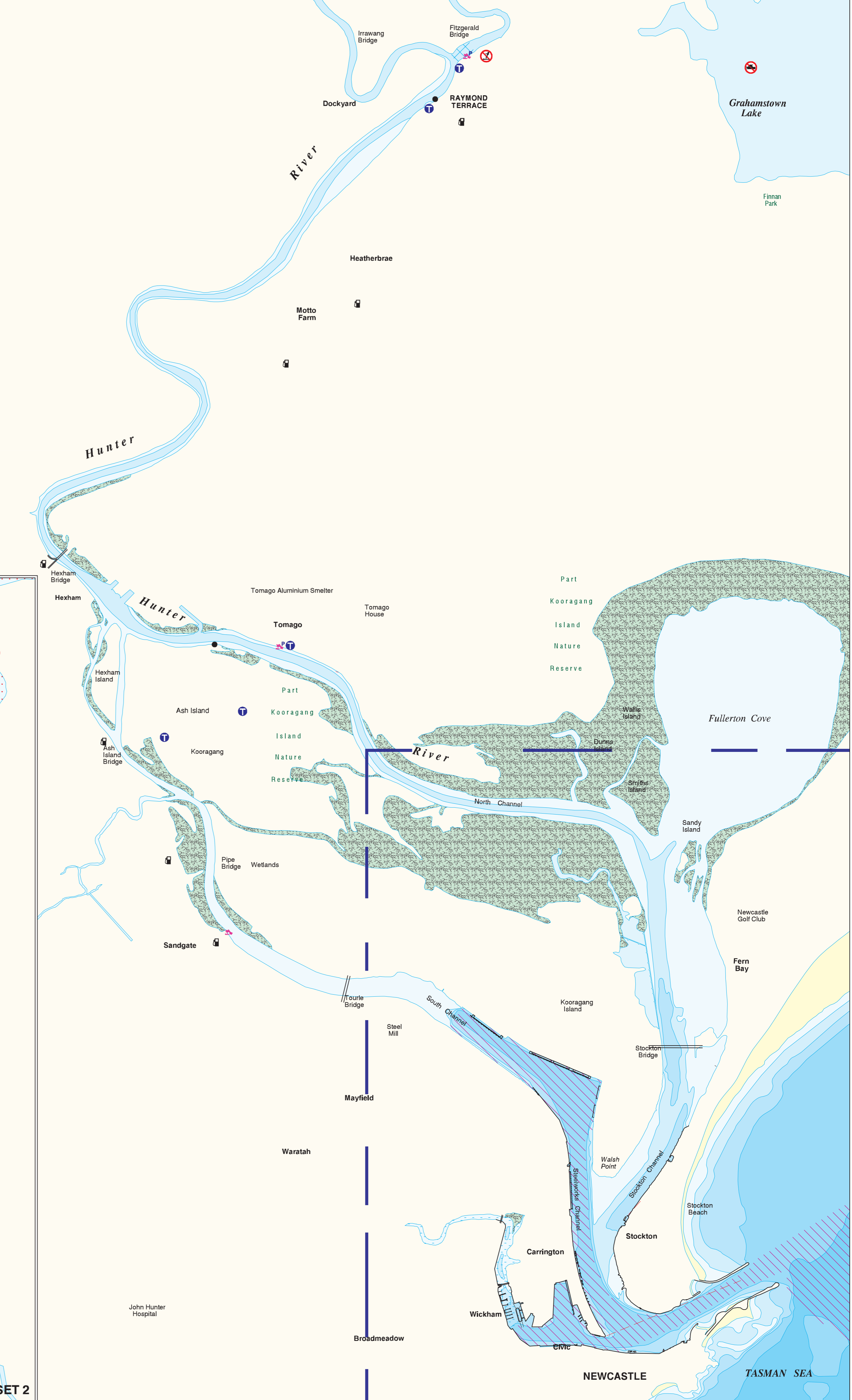
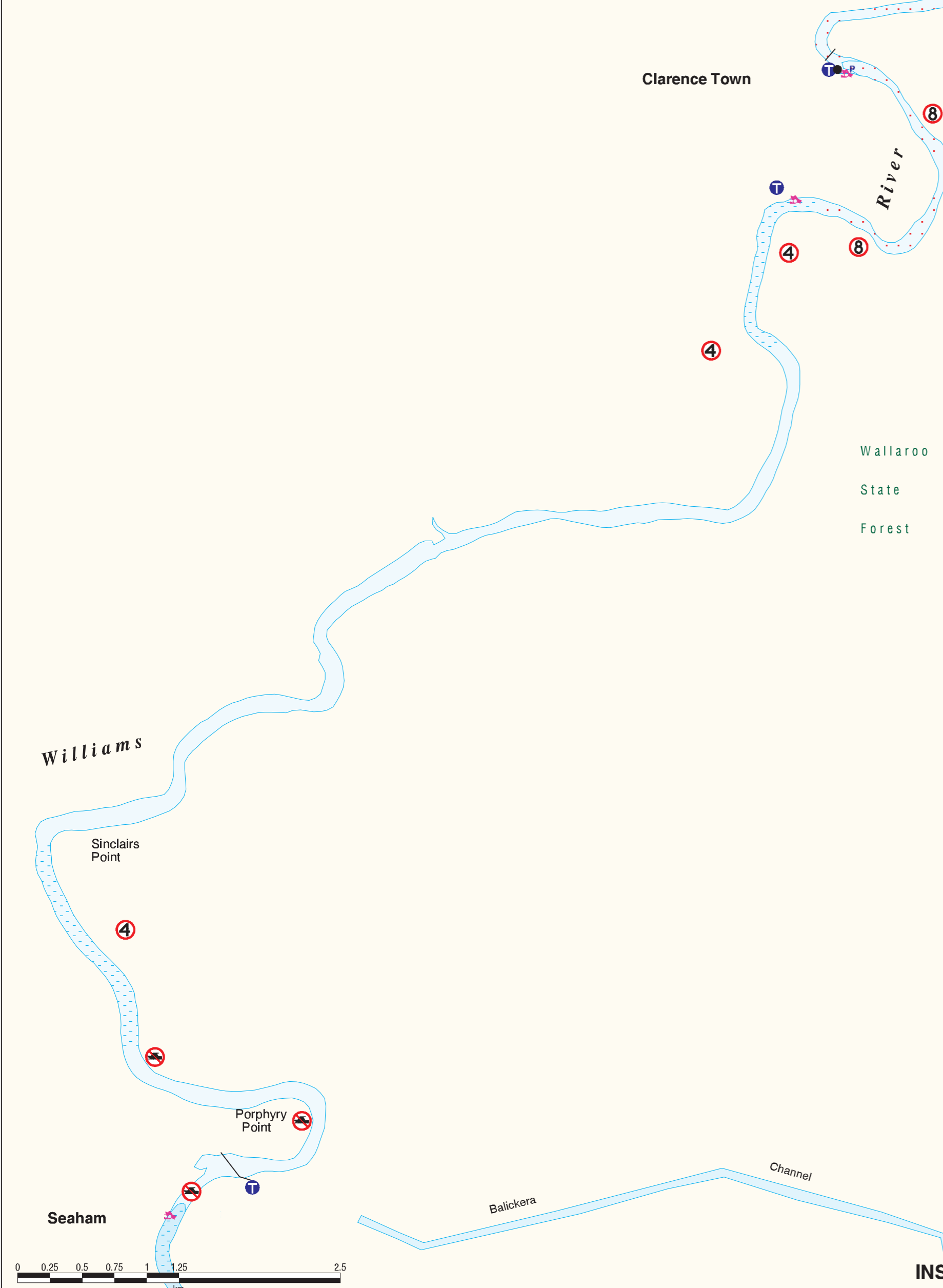
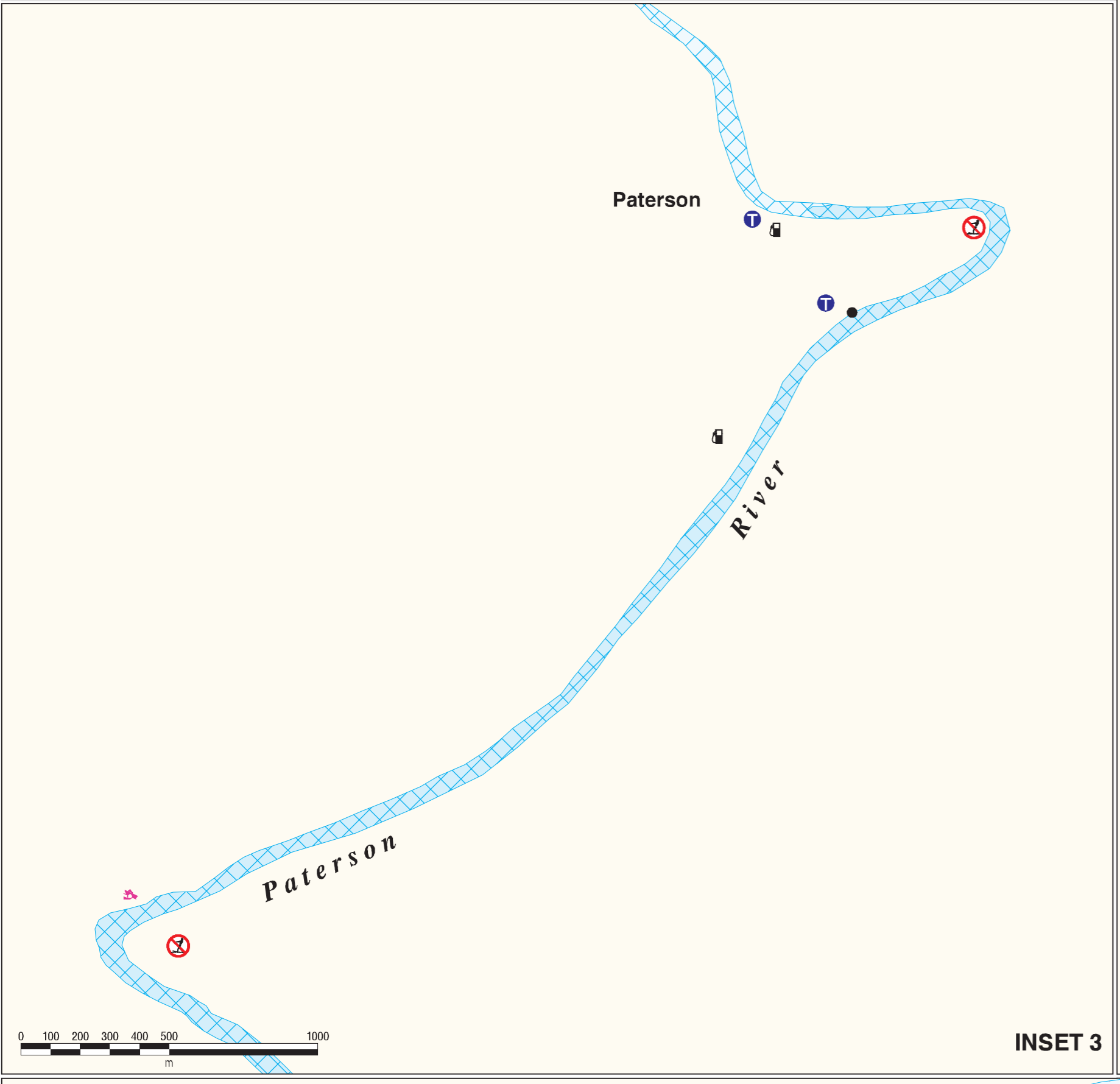
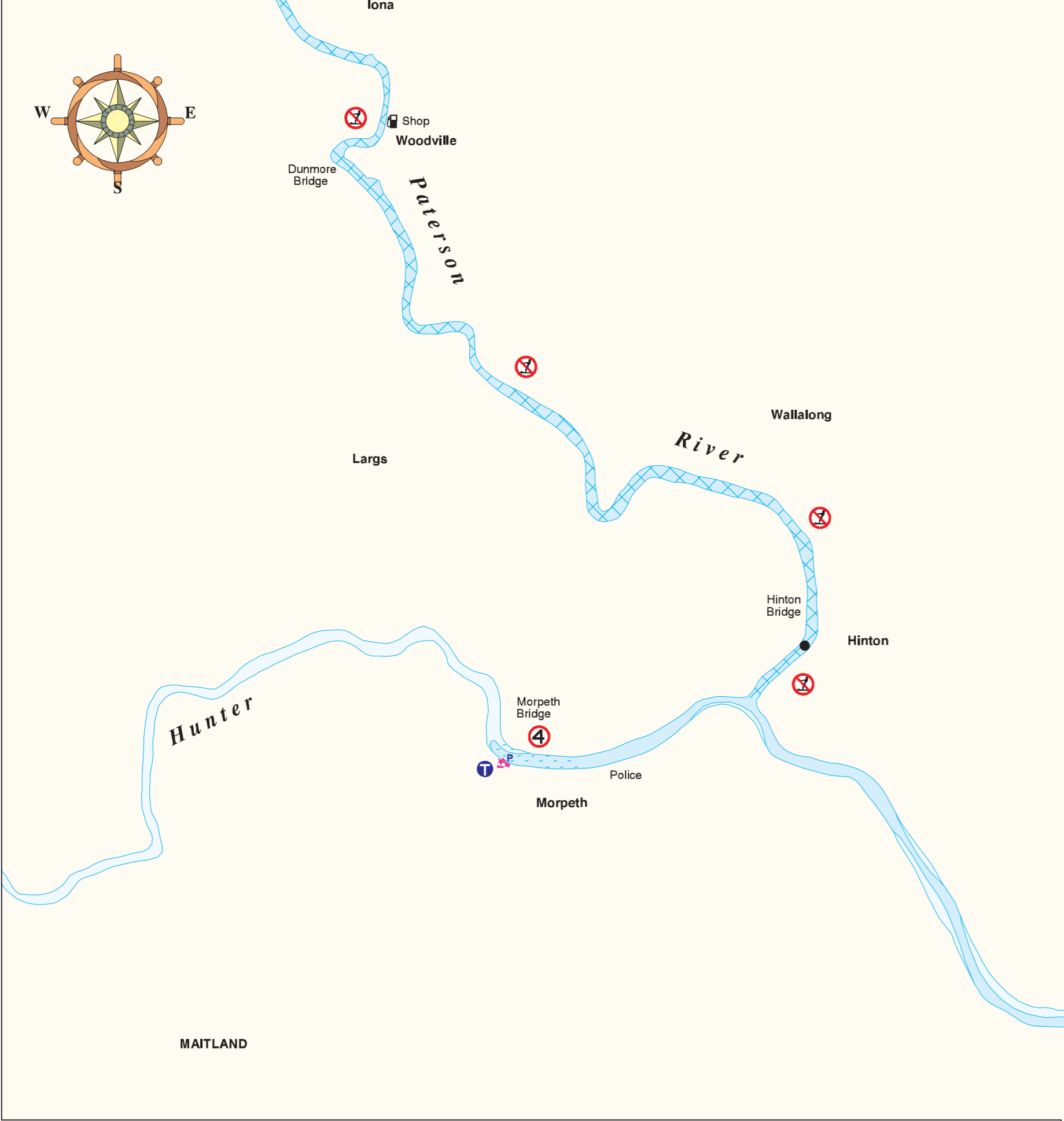
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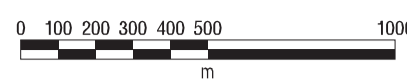


MAP OF  
**Hunter, Williams and Paterson Rivers  
 and Newcastle Harbour detail Inset**



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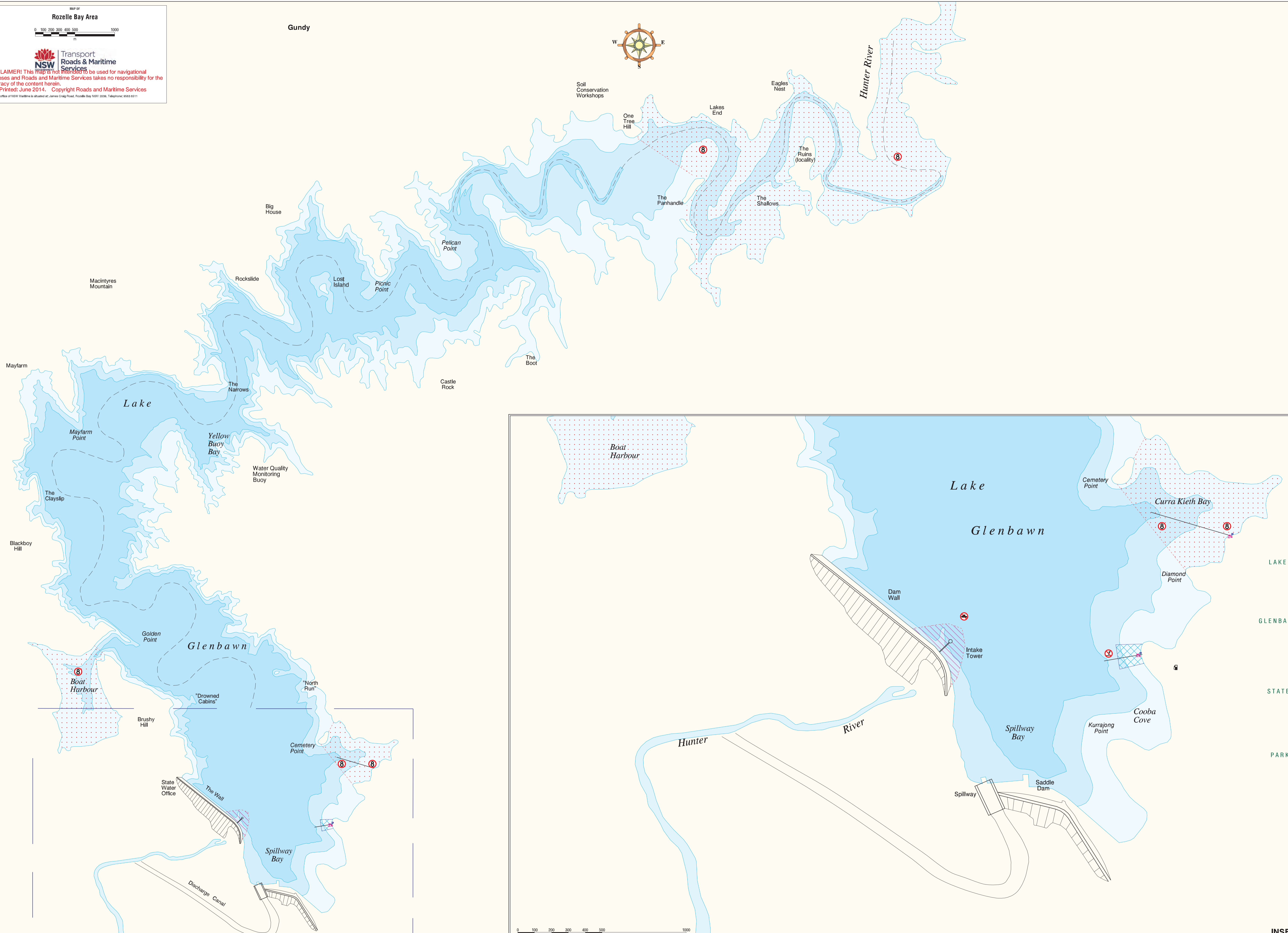
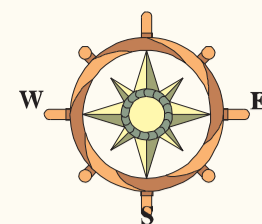


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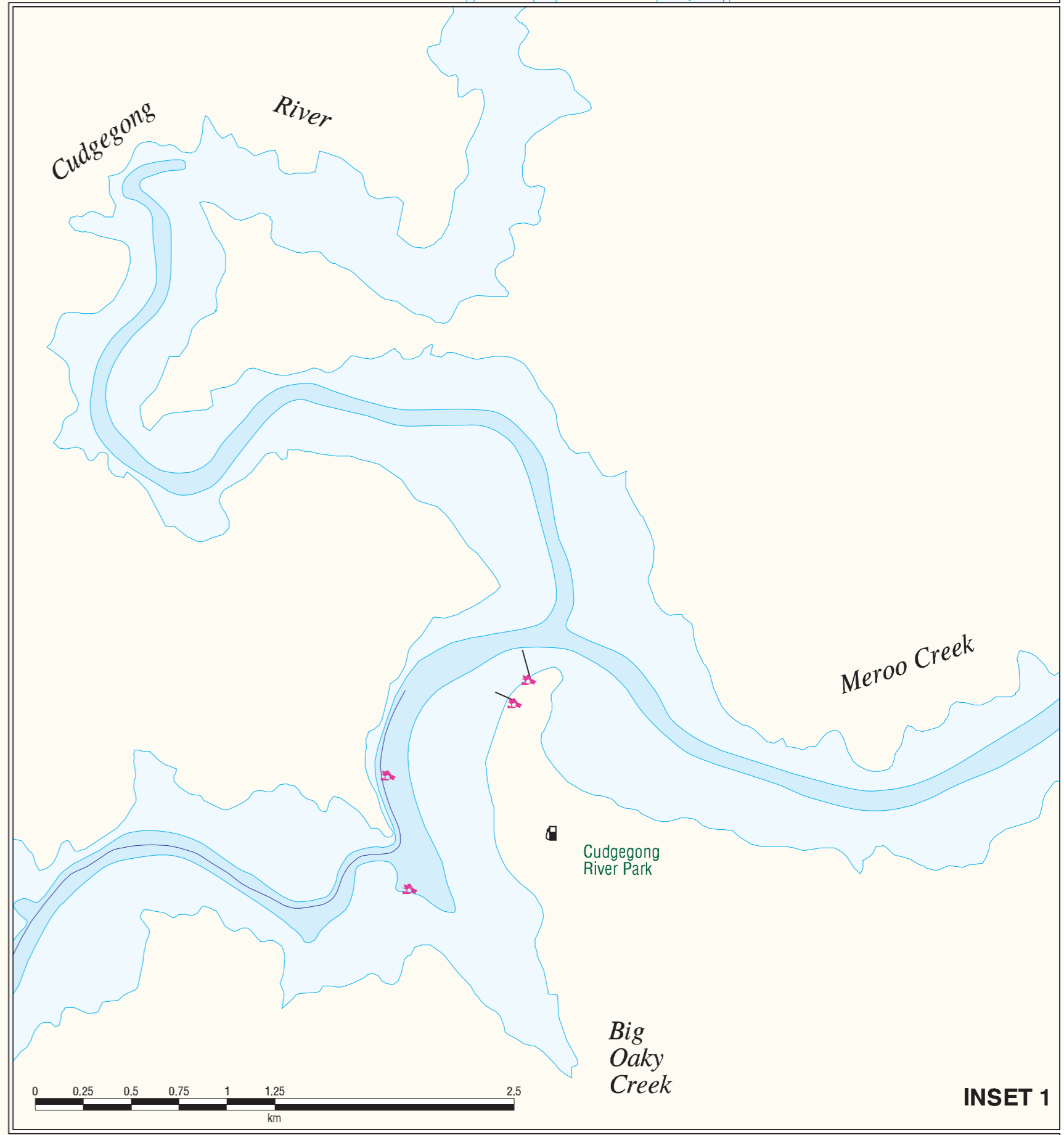
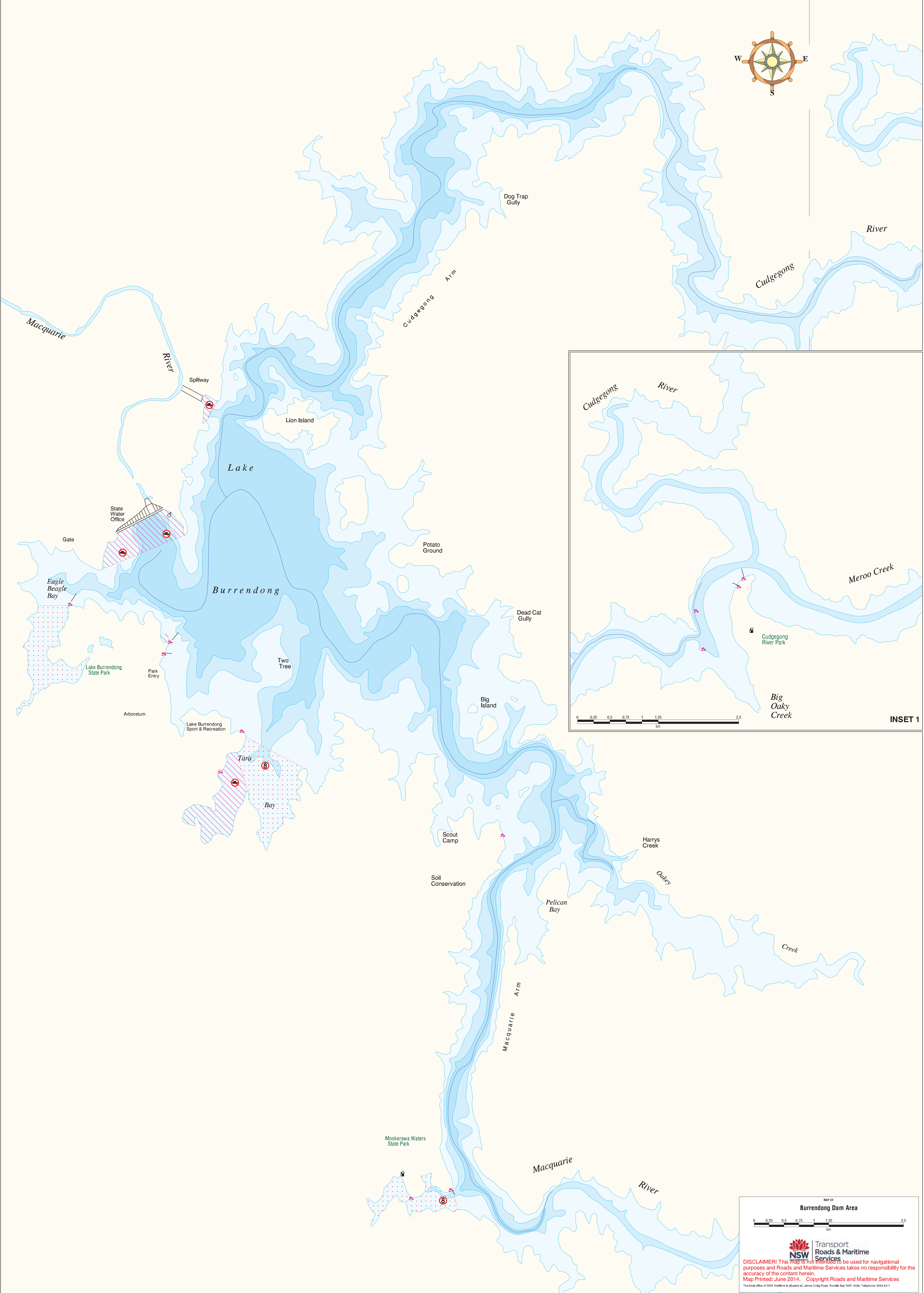
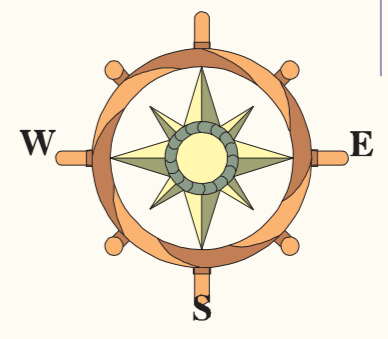
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Gundy



LAKE  
GLENBAWN  
STATE  
PARK



MAP OF  
**Burrendong Dam Area**

**NSW** Transport  
**Roads & Maritime**  
**Services**

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