



Transport
for NSW

Maritime Management Centre

Transport for NSW Regional Boating Plan Shoalhaven – Illawarra Region

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1. Introduction

The Shoalhaven-Illawarra 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 Huskisson on 2 September 2014 and Kiama on 3 September 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

This region predominately consists of the following major waterways: Lake Illawarra, Shoalhaven River, Jervis Bay, St. Georges Basin, Lake Conjola, Lake Yarrunga and Burrill Lake. These can broadly be categorised in the following catchments: Wollongong, Shoalhaven and Jervis Bay.

Recreational boating activities in the region include water-skiing, sailing, fishing, swimming and kayaking. The region also supports various commercial operations such as commercial fishing vessels, tour operators out of Jervis Bay and port operations through Port Kembla. Further details on waterway users are provided in Chapter 3.

The waterways are covered by four councils:

- ◆ Shellharbour City Council (SheCC);
- ◆ Shoalhaven City Council (ShoCC);
- ◆ Kiama Municipal Council (KMC); and
- ◆ Wollongong City Council (WCC).

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

The region includes the Jervis Bay Territory which is a territory of the Commonwealth of Australia under the Jervis Bay Territory Acceptance Act (1995) and Aboriginal Land Grant (Jervis Bay Territory) Act (1986). This area includes the Booderee National Park, the naval base of HMAS Creswell and a public boat ramp located at Murrays Beach.

The Jervis Bay Marine Park which covers an area of approximately 22,000 ha is also part of the region. The park extends from Kinghorn Point in the north to Sussex Inlet in the south and includes the semi-enclosed waters of Jervis Bay and adjacent ocean. The tidal waters of Currumbene Creek, Moona Moona Creek, Carama Inlet, Wowly Gully, Callala Creek and Currarong Creek are also within the Marine Park.

The Jervis Bay Marine Park is a multiple-use park that aims to protect marine biodiversity, while catering for a range of recreational and commercial activities. Use of the Marine Park is regulated through a zoning plan providing a range of protection levels. The zoning plan

identifies activities that can occur without specific permission and those that require a permit. Other regulations regarding certain activities and species protection also apply under the zoning plan.

Restrictions include a ban on the use of personal watercraft (PWCs) within sanctuary zones, unless travelling directly to or from the point where the vessel was launched, at less than 10 knots. Anchoring and mooring restrictions also apply in the marine park, with designated anchoring zones and a number of courtesy moorings provided at Bindijine, Huskisson and Callala Bay. There are also restrictions in place for recreational and commercial fishing.

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

2.2 Wollongong Catchment

The Wollongong catchment is located in the Illawarra region and has a catchment of approximately 750 km² in size, with a small portion of this located within the Botany Bay, Port Hacking and Georges River region to the north. The major waterways in the Wollongong catchment are Port Kembla, Lake Illawarra and the Minnamurra River. Relevant councils include Wollongong City Council, Shellharbour City Council and a part of the Kiama Municipal Council Local Government Area (LGA).

Port Kembla Harbour is approximately 1.5 km² in size and has an average depth of 6.1 m. Port Kembla is one of three major ports in NSW and is used for the export of coal from the mines of the Illawarra region, general and break bulk cargo, containers and motor vehicle imports. It is also the principal grain export port for producers in Southern and South-Western NSW. The port is recognised as one of the Illawarra community's key assets, supporting the employment of many local people.

A number of other harbours are also located within the catchment including Wollongong Harbour and Shellharbour. Both these harbours have protective breakwaters providing vessel refuge and relatively good access to the ocean.

Lake Illawarra is a shallow coastal lagoon situated between Wollongong and Shellharbour which is approximately 36 km² in size and has an average depth of 2.1 m. The lake is an important ecological and social asset for the Illawarra. Whilst being a popular recreational area, it also provides habitat for wildlife and is a valuable fishing ground. Rock groynes are installed at the entrance of the Lake between Windang and Warilla, connected to the Pacific Ocean by a long and shallow entrance channel. This channel has limited flow capacity and consequently tidal ranges attenuate considerably. Tidal penetration into the lake is restricted to the eastern portion, up to 2 km west of Bevans Island, and does not significantly affect the remainder of the Lake.

Minnamurra River is approximately 2 km² in size and has an average depth of 1.0 m. It is an estuary open to the ocean at the town of Minnamurra between the urban centres of Kiama and Shellharbour.



Figure 2 - Wollongong catchment and surroundings

2.3 Shoalhaven Catchment

The Shoalhaven catchment is approximately 7,300 km² in size. The major waterway in this region is the Shoalhaven River which is approximately 32 km² in size and has an average depth of 2.9 m. The Kiama and Shellharbour LGAs are partially located within this catchment.

The Shoalhaven River originates from the Southern Tablelands and flows through a large coastal floodplain. The Shoalhaven River is highly valued for its scenic attributes and has four main tributaries the Mongarlowe, Corang, Endrick and Kangaroo Rivers. Other minor tributaries include the Ettrema, Boro, Reedy, Danjerra, Yalwal, Broughton, Broughton Mill and Yarrunga Creeks. The river has two entrances approximately 5 km apart. The northern entrance to the

Pacific Ocean at Shoalhaven Heads is open intermittently at times of peak flow and during flood events. The southern entrance is located at Crookhaven Heads and is permanently open. The Shoalhaven River flows south via Berrys Canal to Greenwell Point. This canal links the Shoalhaven River with the Crookhaven River and was constructed to improve ocean access. The Crookhaven River joins the Shoalhaven River at Greenwell Point and flows east to the entrance located at Crookhaven Heads.

Lake Wollumboola, located south of Culburra Beach is approximately 6 km² in size and has an average depth of 0.8 m. It is part of the Jervis Bay National Park and is a coastal lagoon which is open intermittently.

Lake Yarrunga (Tallowa Dam) is located northwest of Nowra and is approximately 8 km² in size.

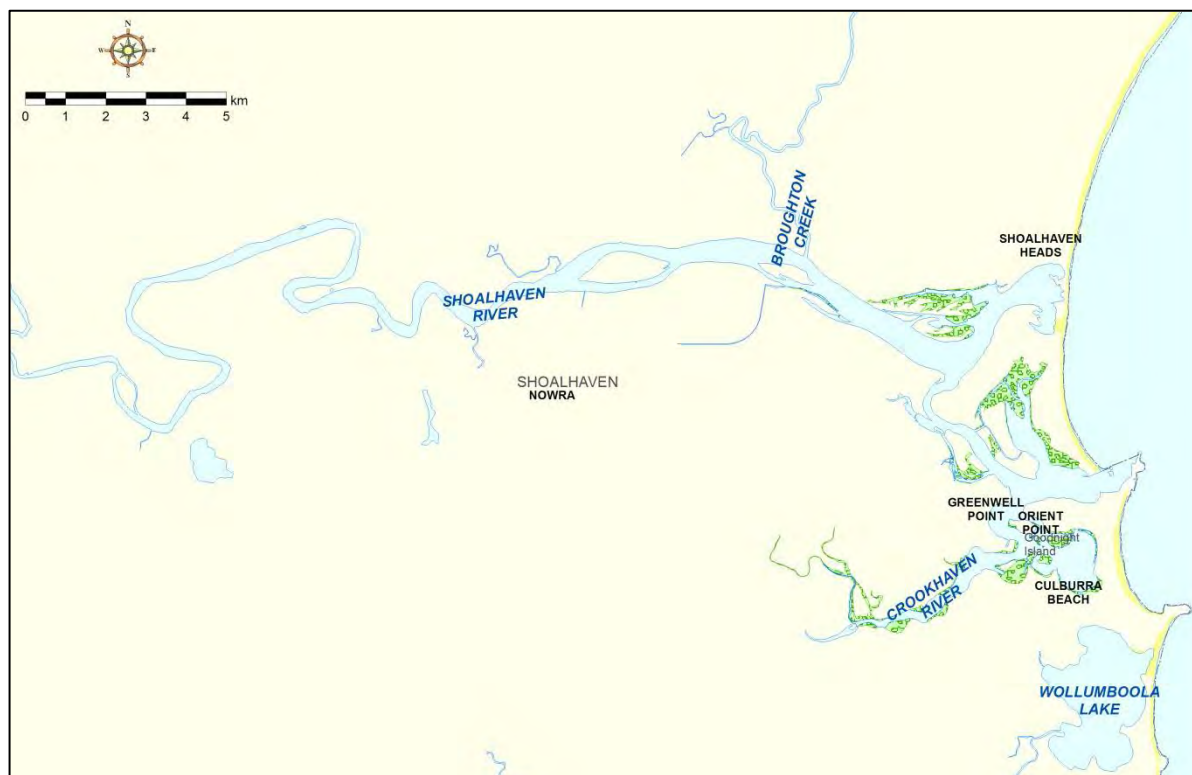


Figure 3 – Shoalhaven catchment and surroundings

2.4 Jervis Bay Catchment

The Jervis Bay catchment is approximately 3,260 km² in size. This catchment includes part of the Shoalhaven LGA, which also extends into the Far South Coast region. Major waterways in this region include Jervis Bay, St. Georges Basin, Sussex Inlet, Lake Conjola and Burrill Lake.

Jervis Bay is approximately 124 km² in size and has an average depth of 16.2 m. Jervis Bay National Park is located 20 km southeast of Nowra around the northern and western shores of Jervis Bay.

St. Georges Basin is approximately 41 km² in size and has an average depth of 5.3 m. The Basin discharges to the ocean through Sussex Inlet which is a 6.5 km long channel ranging between 50 m and 300 m wide.

Lake Conjola is approximately 7 km² in size and has an average depth of 4.0 m. The entrance is located between the townships of Cunjurong Point and Lake Conjola village. The lake is mostly open to the ocean and provides limited ocean access during calm conditions. The major tributary of the lake is Conjola Creek.

Burrill Lake is approximately 4 km² in size and has an average depth of 4.3 m. The entrance is located between a rock platform and the beach sand barrier, resulting in a constricted estuary

mouth. The tidal limit extends 3 km upstream along a narrow, relatively shallow and poorly flushed channel. Stoney Creek is the lake's one major tributary.

Other small waterways in the catchment include: Bungalow Bay and Tabourie Lake.



Figure 4 – Jervis Bay catchment and surroundings



3. Waterway users

Recreational boating is a popular activity in the Shoalhaven – Illawarra regional waterways. The waterways are popular among recreational fishers and an increasing number of visiting boaters from outside of the region. Other common boating activities in the region include water skiing, wake boarding, PWC operation, sailing, rowing, windsurfing, stand-up paddle boarding (SUP), canoeing and kayaking.

The Royal Australian Navy (RAN) has HMAS Creswell located on the south-western shores of Jervis Bay in the Jervis Bay Territory. Creswell consists of the RAN College and four other departments with naval training regularly exercised in nearby waters.

Wollongong catchment

The Wollongong catchment is particularly popular for recreational activities. On Lake Illawarra recreational activities include: boating, fishing and prawning, rowing, water skiing, PWC operation, wind surfing and sailing through the sailing clubs. Paddling of non-powered craft occurs throughout most of the waterways. On the coast and offshore, activities such as surfing, swimming, snorkelling and scuba diving are popular.

In addition to the recreational activities, the Wollongong catchment also accommodates commercial boating activities such as commercial fishing in Lake Illawarra. Port Kembla has a large number of commercial shipping movements as it is Australia's largest vehicle import hub, largest export grain terminal and the second largest coal export terminal in NSW. The coastal waters adjacent to Port Kembla are often used for anchoring of large commercial ships.

Shoalhaven catchment

The Shoalhaven River is a major community resource. The river hosts a range of recreational and commercial boating activities, as well as aquatic events including wakeboarding competitions, rowing and sailing regattas and fishing competitions. Recreational activities include fishing, water skiing, wakeboarding, sailing, rowing, canoeing, kayaking, swimming and cruising. Commercial activities include fishing, aquaculture and hire and drive operations. A number of offshore commercial vessels operate from the Shoalhaven River, primarily based on the Lower Shoalhaven. A number of inshore commercial vessels operate within the estuary itself which include houseboats, hire and drive craft and small tinnies. These boats utilise both the Lower and Upper Shoalhaven.

Recreational activities on Lake Wollumboola include sailboarding, windsurfing, non-powered crafts and fishing. Lake Yarrunga is a popular fishing and canoe/kayak destination. Access to Lake Yarrunga is limited to non-motorised vessels.

Jervis Bay catchment

As a Marine Park, Commonwealth Waters and site of significant Naval activity, there are a number of boating and general access regulations and restrictions applicable to Jervis Bay. Jervis Bay supports a considerable boating community of locals and visitors who engage in activities including inshore and offshore fishing, sailing (including disabled sailing activities), scuba diving, snorkelling and spearfishing, canoeing and kayaking, cruising and swimming. Jervis Bay is also serviced by commercial operators providing whale watching, day cruise, fishing and diving charters, which mainly access the waterway through Currumbene Creek. Large passenger vessels are also increasingly visiting Jervis Bay for tourist visits.

The Royal Australian Navy operates a significant naval facility, HMAS Creswell, on the southern side of Jervis Bay, with warship and fast craft movements regularly occurring on Jervis Bay. The Navy also conducts periodic live fire exercises including shelling of targets on the Beecroft Peninsula weapons range. Additional navigation restrictions may be enforced during these exercises.

St. Georges Basin provides a large expanse of protected water for power boating, towing activities, sailing, canoeing, swimming and fishing. Sussex Inlet allows smaller vessels to access the ocean waters for offshore recreational boating and fishing.

Recreational activities on Lake Conjola include power boating, water skiing, wake boarding, fishing and PWC operation. In addition, the upper reaches of embayment on the lake provide an ideal environment for non-powered waterway uses such as fishing, canoeing and kayaking.

Burrill Lake provides opportunities for a diverse range of recreational activities such as fishing, swimming, cruising and water sports. Tabourie Lake entrance provides protected water for swimming, canoeing and fishing.

3.1 Analysis of existing user data

3.1.1 Licence data analysis

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

- ◆ Shellharbour City Council had a population of 63,605 and experienced a population growth of 5.4%;
- ◆ Shoalhaven City Council (excluding localities in the Far South Coast region) had a population of 92,316 and experienced a population growth of 5.0%;
- ◆ The Council of the Municipality of Kiama had a population of 19,986 and experienced a population growth of 5.3%; and
- ◆ Wollongong City Council had a population of 192,418 and experienced a population growth of 4.5%.

The population growth of the above LGAs is below both the national average growth of 8.32% and the NSW average of 5.63%.

There are approximately 50,000 boat licence holders in the Shoalhaven – Illawarra region. This represents approximately 9% of all boat licence holders in NSW.

The majority of licence holders in the region carry a General Boat Licence with approximately 11% licensed to operate PWCs. This breakdown of licence types is typical across the State.

3.1.2 Registration data analysis

There are approximately 24,000 registered recreational vessels in the Shoalhaven – Illawarra region. This represents approximately 10% of all registered vessels in NSW. The most common vessel hull types in this region are open runabouts followed by cabin runabouts and punts.

A significant majority (89%) of the registered vessels in this region are below 6m and the average vessel length is 4.7m. Vessels less than 6m 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 Shoalhaven – Illawarra region, it does not capture vessels from other regions utilising these waterways, which can add to the local demand particularly during peak holiday periods.

Roads and Maritime's licence and registration data does not capture non-powered craft numbers such as kayaks, canoes, rowing or other beach-launch and sail craft, which do not require registration. Anecdotal evidence suggests that the popularity of these activities is increasing across the 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 forecasts 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 that the South Coast region (which incorporates both the Shoalhaven – Illawarra region and the Far South Coast region) has experienced the second largest growth in the State. Despite this growth (approximately 3.9% per annum across all boat sizes), the South Coast region has the third smallest proportion of boats greater than 6 m in length. This growth pattern together with analysis in this report, suggest that limited storage options in the region may be a factor contributing to the low number of vessels over 6m. This is further discussed in Chapter 6.



4. Safety

Key findings

- Stakeholder consultation suggests high levels of satisfaction with current boating safety measures in the region.
- The Shoalhaven-Illawarra region has a moderate waterway usage; however waterway usage becomes considerably higher during the warmer months and peak tourist periods
- The region has a large percentage of coastal or relatively exposed waterways such as expansive bays and lakes. Coupled with a high proportion of relatively small vessels, boaters can be exposed to elements such as wind and swell.
- Within the online survey feedback, of those dissatisfied (14%) or very dissatisfied (6%) with safety, more than a third of these were concerned specifically with navigation across the Sussex Inlet bar.
- A review of signage, navigation aids and education would help enhance boating safety and the overall boating experience.

Actions

- a. Review strategies to improve on water user behaviour and safe boating practices across the region**
- b. Review placement and planning of navigations aids and signage to improve navigation where appropriate**
- c. Review strategies to improve safe vessel operation in open and offshore waters and when crossing ocean bars**

4.1 Overview of existing safety activities

The MMC has led a successful 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 advertising campaign, an innovative mobile lifejacket promotional van which took the safety message to the boating public statewide (including visits to the Shoalhaven – Illawarra region), a zero tolerance on-water compliance approach and a host of supporting and educational 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 Shoalhaven - Illawarra 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 in the Shoalhaven – Illawarra region are shown on the map 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:
 - Wollongong Harbour;
 - Port Kembla Boat Harbour;
 - Berkeley Boat Harbour, Lake Illawarra;
 - The Basin, Kiama Harbour;
 - Shell Harbour mooring area;
 - Ulladulla Harbour;
 - Minnamurra River;
 - Tabourie Lake and associated tributaries;
 - Shoalhaven River, specifically at Burrier Reach, in the vicinity of Nowra Bridge, between Greenwell Point and Orient Point, and near Shoalhaven Heads;
 - Wollumboola Lake at Culburra;
 - Various bays of Swan Lake, Berringer Lake and Lake Conjola;

- Lake and creek entrances such as Lake Illawarra, Currarong Creek, Sussex Inlet ; and
 - Creeks such as Hooka Creek, Mullet Creek, Duck Creek, Macquarie Rivulet, Rocklow Creek, Bomaderry Creek, Currumbene Creek, Berrara Creek, Conjola Creek, Narrawallee Creek.
- 8 knot zones in the main reach of Sussex Inlet excluding the entrance, the entrance of Burrill Lake and Bungalow Bay.
 - “no wash” and “no towing” zones; and
 - Restrictions in the Jervis Bay Marine Park, including prohibition on the use of PWCs.

Further controls exist in the NSW maritime legislation, including the International Regulations for Preventing Collisions at Sea. These include but are not limited to:

- 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 (eg., 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 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 related to:

- ◆ irregular riding of personal water craft (28%);
- ◆ speeding (14%);
- ◆ condition and planned upgrades of infrastructure (14%); and
- ◆ wash (5%).

The most significant number of complaints received by the Roads and Maritime for the Shoalhaven – Illawarra region related to the popular Jervis Bay area (30%).

4.3 Infringements

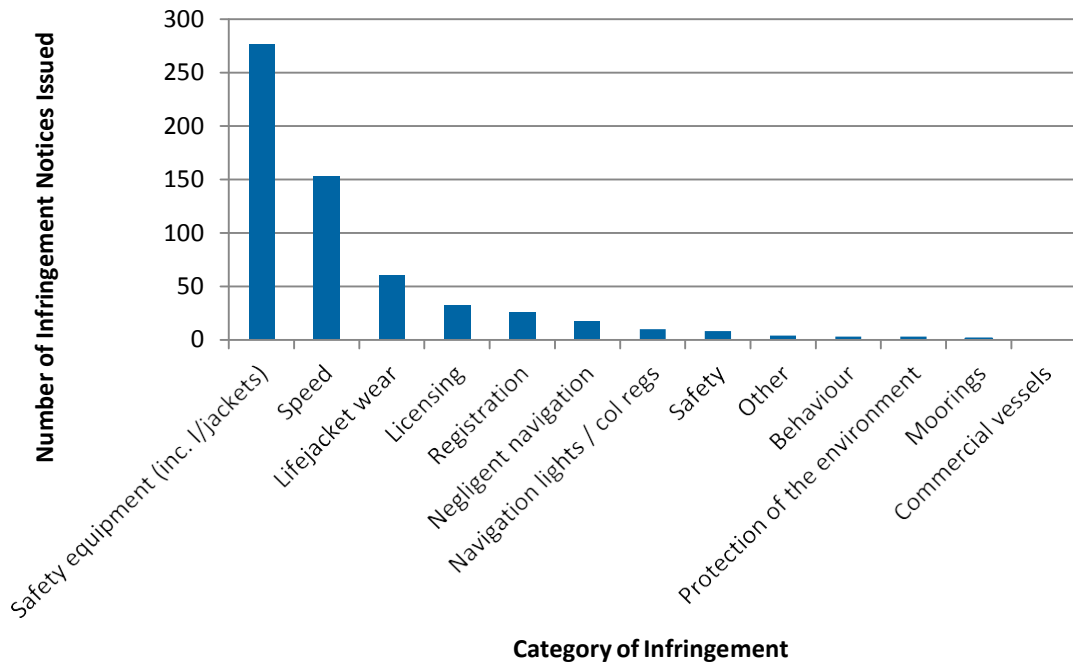
Between 2009 and 2013, the number of penalty notices issued within the Shoalhaven – Illawarra region accounted for 4.9% (approximately 600) of all infringement notices issued throughout NSW. Of the penalties issued over the five year period, approximately 87% were issued by Roads and Maritime, whilst the remainder were issued by NSW Police. In addition to these penalties, 834 formal warnings were issued.

The highly accessible coastal waters of the region accounted for 24% of the region's infringements.

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

- ◆ failure to carry the correct safety equipment (44%); and
- ◆ excessive speed (36%).

Figure 5 – Infringement analysis



4.4 Incidents

In the period between 1 January 2009 and 31 December 2013, there were 67 vessel incidents reported to Roads and Maritime in the region. Twenty-one incidents occurred in the Jervis Bay catchment, 15 in the Wollongong catchment, five in the Shoalhaven catchment and another 26 incidents offshore. Sixty of the incidents involved recreational vessels and four involved commercial vessels. Three incidents involved an interaction between a recreational and commercial vessel.

4.4.1 Incidents resulting in death or injury

Seven fatal incidents have occurred in the region between 2009 and 2013. All of these incidents involved recreational vessels and three took place in the dark between midnight and 3 am. Six of the incidents involved small open runabouts while the remaining incident involved a sailing vessel. Three of the incidents involved a vessel capsizing.

There were also 13 incidents which resulted in serious injury to the victim. A serious injury is classified as one requiring hospitalisation or outpatient treatment. These incidents resulted in 14 injuries with no particular trend in causes. Four were caused by lack of judgement. All 13 incidents occurred in daylight hours, and seven occurred on a weekend. An additional 13 incidents resulted in minor injury to a total of 41 persons; six of these incidents were caused by adverse weather conditions.

4.4.2 Types of vessels

The main types of vessels involved in incidents, where known, were small powered craft (open runabouts 51%, cabin runabouts 13%) and sailing vessels (14%). PWC (6%), larger motor cruisers (5%), punts (5%) and others (6%).

4.4.3 Incident locations

Vessel incidents were concentrated in the following locations.

- ◆ 25 incidents occurred offshore;
- ◆ Eight incidents in Jervis Bay;
- ◆ Eight incidents in Lake Illawarra;
- ◆ Eight incidents in St. Georges Basin, and an additional three in Sussex Inlet; and
- ◆ Six in the coastal waters between Bellambi point and Wollongong Harbour.

4.4.4 Incident causes

Behavioural and environmental factors were identified as the primary cause of the majority of incidents. Eleven incidents were the result of a lack of judgment and an additional four were due to no proper lookout, while 11 incidents were attributable to adverse weather conditions, four to hazardous waters and two to bar crossing. Material factors involving failure of a variety of machinery, electronics or equipment were attributable to seven incidents .

4.4.5 Incident type

The composition of incident types in the Shoalhaven – Illawarra region was somewhat different to State-wide averages. The most common type of incident in this region was vessel capsizing (14 incidents), approximately 21% of the total incidents, which is a greater proportion than the State-wide average of approximately 12%.

The next most common types of vessel incident observed in the region were grounding (10 incidents), collisions with other vessels (9 incidents) and swamping (6 incidents). While there were a number of incidents such as fall overboard (4 incidents) and towing incidents (4 incidents) which had serious consequences, no other incident types registered more than three incidents.

4.4.6 Time of day, month and year

Where the time of the incident is known, most incidents occurred during the day with thirteen recorded at night. Most incidents occurred during the peak boating periods, on weekends between October and March.

4.4.7 Wind and weather

During consultations, anecdotal evidence was provided suggesting that the river and lake entrances can be subject to rapidly changing weather and tidal conditions. In addition, open waterways with large fetch lengths such as Lake Illawarra and St. Georges Basin can develop choppy conditions with strong winds. Of the incidents where the weather conditions are known, approximately 74% occurred on days with clear visibility and fine weather. Approximately two thirds of the incidents occurred where water conditions were described as choppy, rough, very rough or in strong current.

4.4.8 Bar crossings

There are a number of bar crossings, inlets and exposed harbour entrances in this region. These include Wollongong Harbour, Shell Harbour, Lake Illawarra, Crookhaven River, Sussex Inlet, Narrawallee Inlet, Lake Conjola and Burrill Lake entrances. As noted in Section 4.4.4, two bar crossing boating incidents occurred in this region. These figures reflect the State-wide statistics which demonstrate improved safety around crossing bars.

4.5 Key findings

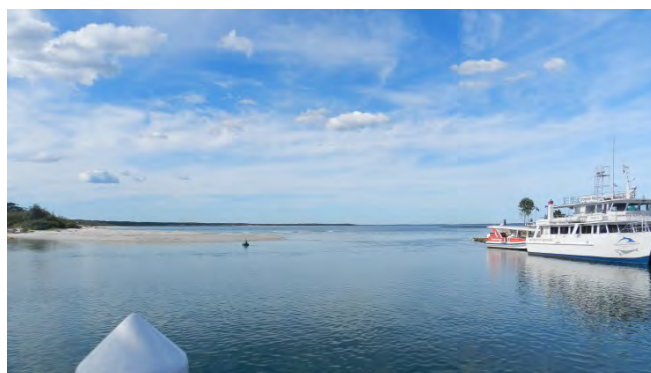
The consultation feedback suggests that boaters in the Shoalhaven-Illawarra region generally have a positive view about safety on the region's waterways. Analysis of complaints, infringements and incidents data suggests that Roads and Maritime will need to continue to actively manage safety on the waterways through its compliance activities and education campaigns. The recreational boating public generally accepted the boating restrictions imposed in the Marine Parks.

The need to improve on-water behaviour of waterway users was a common theme across the different stakeholder groups, particularly in areas where there are conflicting uses of the waterway. Stakeholder feedback specifically mentioned speed and wash from waterway users as issues regularly causing safety concerns. In addition, the feedback identified safety concerns with boaters negotiating coastal bars and navigating through shallow and narrow channels. State-wide education campaigns are important in addressing these safety concerns; however there are also actions that can be taken at the local level such as improving the visibility and clarity of signage and navigation aids along with further educating boaters on negotiating coastal bars and operating in open waters.

During site visits and through stakeholder feedback, numerous examples were noted 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. Updating existing and installing new navigation aids was also cited as an opportunity to deliver improvements for boaters in the area.

Roads and Maritime currently provides a network of web cameras that are available for live online viewing of conditions at a number of key bar crossings. In addition to the existing ocean bar monitoring camera at Sussex Inlet, consideration should be given to expanding the camera network to include some exposed boat ramps and other bars in the region such as the Crookhaven River, Gerringong boat harbour and Currarong boat ramp.

Figure 7 – Example of safety issue



Channel out of Currambene Creek at Huskisson can be difficult to navigate due to the width of channel and exposure to swell in heavy conditions



5. Access

Key finding

- There are a relatively large number of waterway access points in the Shoalhaven-Illawarra region. A number of these facilities would benefit from an upgrade, particularly at popular locations.
- Stakeholder feedback indicated that dissatisfaction with access was largely in relation to the condition and safety of existing access infrastructure and access through navigation channels and across coastal bars.
- Existing access infrastructure at some locations does not meet demand during peak periods and trailer parking facilities could be improved.
- Safe access across coastal bars and safe navigation through channels to lake basins is important to boating in the region. Constricted channels and shallow bar crossings were identified to restrict boating access at various locations.
- Strategic placement of additional facilities, amenities and courtesy moorings may help to improve boating destinations and the boating experience in the region.

Actions

- Work with councils and other partners to improve the condition and capacity of existing boat ramps and other access facilities, including jetties and pontoons**
- Work with councils and other partners to increase capacity of car and trailer parking to better cater for peak demand at strategically significant boating access locations**
- Work with councils and other agencies to enhance and optimise existing facilities at strategic locations, especially at harbours and locations with ocean access, including the maritime precinct in Port Kembla harbour.**
- Continue support for the Rescuing Our Waterways dredging program**

5.1 Overview of existing access facilities

Vessels access the waterways of the Shoalhaven – Illawarra region in several ways including boat ramps, private and commercial moorings, marina berths, and club or private landing facilities. 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. Some public wharves and jetties are also located on the region’s waterways and provide alternate access to vessels that are on the water. Informal dinghy storage facilities are used to access moored vessels. Some waterfront landowners also gain direct access to the waterway through private landing facilities. There is also informal access for smaller vessels (such as canoes and kayaks) from a number of public reserves and beaches.

During the site visits, some of the ramps visited were visually identified to be in below average condition, poorly maintained and lacking amenities.

Boat ramps

There are approximately 64 boat ramps.

- ◆ Location:
 - eleven of these are located on the Shoalhaven River;
 - ten are coastal;
 - eight are located on Lake Illawarra;
 - on both Lake Conjola and in St. Georges Basin there are five ramps each;
 - in both Jervis Bay and Sussex Inlet there are four ramps each;
 - three are located on Minnamurra River and also on Burrill Lake;
 - in both Crookhaven River and Currumbene Creek there are two ramps; and
 - a single ramp is located in the following locations: Currarong Creek, Narrawallee Inlet, Port Kembla, Shellharbour, Swan Lake, Tabourie Lake, and Wollongong Harbour.
- ◆ Material:
 - 54 are concrete ramps;
 - two are bitumen; and
 - the remainder are sand, gravel or earth.
- ◆ Ownership:
 - 44 of the boat ramps are owned and maintained by local council.

Note: Ownership of all maritime assets in Lake Illawarra, excluding breakwaters, have recently transferred from State (lake Illawarra Authority) to Wollongong and Shellharbour councils.

Public jetties, wharves and pontoons

Further analysis of the region’s infrastructure found that there are 41 public access points including wharves, jetties, pontoons and landings.

- ◆ Location:
 - 19 are located on Lake Illawarra;
 - in both Shoalhaven River and St. Georges basin there are four each;
 - on both the coast and Sussex Inlet there are three each;
 - two on Currumbene Creek (Huskisson); and
 - a single facility on each of the following: Burrill Lake; Jervis Bay; Lake Conjola; Minnamurra River; Shellharbour; and Wollongong Harbour.
 - This region also has a considerable number of commercial wharves located on the coast, such as at Jervis Bay, Port Kembla, Shoalhaven River, Wollongong Harbour, Currumbene Creek (Huskisson) and Burrill Lake.

Courtesy moorings

There is one emergency courtesy mooring in the Shoalhaven – Illawarra region, which is located at the entrance to Sussex Inlet. The mooring is provided for use by vessels waiting for conditions on the bar to improve ahead of a crossing and is also used by Marine Rescue when towing in stricken vessels that cannot safely cross the bar. The mooring is not intended in the traditional sense of a courtesy mooring and may be better established as an emergency mooring.

The Department of Primary Industries also administers several Marine Parks public moorings for short-term use, across the Jervis Bay Marine Park. There are currently 16 Marine Parks moorings at four locations. Bindijine, adjacent to Honeymoon Bay, has 13 public moorings for small vessels of up to five metres in length. Two public moorings adjacent to the main village of Huskisson and one at Callala Bay cater for larger vessels of up to 20 metres in length. While providing a convenient facility for boat users, the primary purpose of these moorings is to protect sensitive marine habitat.

Figure 8 – Example access facilities within the region



Crookhaven Heads Boat Ramp



Callala Boat Ramp and Wharf

5.1.1 Better Boating Program grants

Through the Better Boating Program, Roads and Maritime has provided 38 grants totaling over \$2.4 million for 32 projects in the Shoalhaven – Illawarra region between 2005 and 2014. A selection of these can be seen in Figure 9 with all projects listed in Table 1 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 BBP grants provided for projects in the Shoalhaven – Illawarra region

Recipient	Project	Final Grant
Dept Of Primary Industries (Lands)	Belmore Basin Jetty Pontoon - Stage 1 (Feasibility & Design), Wollongong	\$27,500*
Kiama Municipal Council	Kiama Harbour Design - Jetty at Boat Ramp and Pier Head	\$11,500
Kiama Municipal Council	Kiama Harbour Jetty	\$138,355
Kiama Municipal Council	Kiama Harbour Wharf Extension, Kiama	\$212,500
Kiama Municipal Council	Kiama Harbour Wharf Extension, Kiama (Additional Funding)	\$61,238

Recipient	Project	Final Grant
Lake Illawarra Authority	Berkeley Boat Harbour Upgrade (Eastern Basin), Berkeley - Lake Illawarra	\$22,500
Lake Illawarra Authority	Deakin Reserve Boat Ramp Dredging, Oak Flats - Burroo Bay (Lake Illawarra)	\$25,000
Lake Illawarra Authority	Deakin Reserve Jetty Pontoon - Burroo Bay, Oak Flats (Lake Illawarra)	\$55,273
Lake Illawarra Authority	Jetty Upgrades at Griffins Bay, Warrawong & Boonerah Point, Mt Warrigal (Lake Illawarra)	\$80,790
Lake Illawarra Authority	Reddall Reserve Boat Ramp Pontoon	\$40,000
Lake Illawarra Authority	Wollamai Point Jetty Modification, Berkeley	\$47,150
Lake Illawarra Authority	Yallah Bay Boat Launching Facilities, Lake Illawarra	\$100,000
Lake Illawarra Authority	Yallah Bay Boat Launching Facility, Lake Illawarra (Additional Funding)	\$73,000
Lake Illawarra Authority	Yallah Bay Boat Ramp Amenities, Lake Illawarra	\$60,000*
Lake Illawarra Authority	Yallah Bay Jetty	\$30,000
Shellharbour City Council	Shellharbour Boat Harbour Boat Ramp Upgrade & New Jetty (Construction)	\$260,000*
Shellharbour City Council	Shellharbour Boat Harbour Jetty (Investigation & Design), Shellharbour	\$18,000
Shellharbour City Council	Ski Way Park Boat Ramp Upgrade, Oak Flats (Additional Funding)	\$35,000
Shellharbour City Council	Ski Way Park Boat Ramp Upgrade, Oak Flats (Lake Illawarra)	\$41,000
Shellharbour City Council	Ski Way Park Jetty, Oak Flats (Lake Illawarra)	\$41,966
Shoalhaven City Council	Curarong Boat Ramp Upgrade (Stage 2), Curarong	\$148,853*
Shoalhaven City Council	Erowal Bay Boat Ramp Jetty, St. Georges Basin	\$25,000
Shoalhaven City Council	Greenwell Point Boat Ramp	\$200,000
Shoalhaven City Council	Greenwell Point Boat Ramp	\$25,000
Shoalhaven City Council	Greenwell Point Boat Ramp (Additional Funds)	\$107,000
Shoalhaven City Council	Greys Beach Boat Ramp Upgrade	\$11,000
Shoalhaven City Council	Greys Beach Boat Ramp Upgrade (Additional Funding)	\$21,659
Shoalhaven City Council	Greys Beach Boat Ramp Upgrade, North Nowra	\$30,000
Shoalhaven City Council	Island Point Jetty Floating Pontoon (St. Georges Basin)	\$25,073
Shoalhaven City Council	Lake Conjola Boating Infrastructure Improvements	\$35,000
Shoalhaven City Council	Lakehaven Drive Jetty - Design and Investigations, Sussex Inlet	\$82,967
Shoalhaven City Council	Nielson Lane Jetty - Design & Investigation, Sussex Inlet	\$16,874
Shoalhaven City Council	Sanctuary Point Boat Ramp Upgrade Investigation & Design (St. Georges Basin)	\$26,793

Recipient	Project	Final Grant
Shoalhaven City Council	Shoalhaven Heads Boat Ramp Floating Pontoon (Shoalhaven River)	\$65,000
Shoalhaven City Council	Ulladulla Harbour Pontoon	\$100,000
Ulladulla Ski Club	Ulladulla Ski Club Boat Ramp Upgrade - Kings Point	\$63,529
Wollongong City Council	Bellambi Boat Ramp Carpark Lighting Upgrade, Bellambi	\$12,000#
Wollongong City Council	Bellambi Jetty Upgrade	\$71,875
	TOTAL	\$2,448,395

* denotes Active projects as of 11/11/2014

Grant offer declined by Council in January 2014

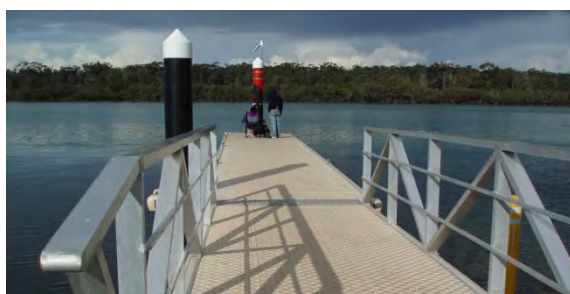
Figure 9 – Examples of completed BBP projects in the region



Bellambi Harbour Jetty



Burril Lake Pontoon



Lakehaven Drive Boat Ramp Pontoon



Greenwell Point Boat Ramp and Pontoon

5.2 Key findings

The Shoalhaven-Illawarra region has a large number of boating access points; however, some of the infrastructure is aged and offers a relatively basic level of amenity. There are numerous opportunities to enhance the boating experience in the region by upgrading the condition of existing facilities. Feedback from stakeholders indicated that the condition of existing facilities was perceived to be the issue of greatest concern. Much of this feedback was in relation to boat ramps requiring ongoing maintenance to ensure that the ramps continue to be in serviceable condition. In addition, more significant works at specific boat access facilities is required to improve their surface or structural condition.

A considerable proportion of waterway usage is focused on and around coastal or exposed (unsheltered) waterways. Coastal access locations such as the boat ramps at Bellambi,

Shellharbour and Austinmer have been identified as having limitations on access opportunities due to their exposure to ocean wave energy. Other exposed locations, such as at Island Point (St. Georges Basin), are also subject to significant wind-chop in certain adverse weather conditions. Ongoing management and future planning is important to maintain accessibility across coastal bars and through navigation channels in the region. Of great importance to waterway users are the entrances at Currumbene Creek, Windang and Sussex Inlet and the navigation channels into St. Georges Basin and Lake Illawarra.

Currently there are some sheltered access points at Wollongong, Shellharbour, Kiama and Ulladulla that are attractive destinations and havens for visiting recreational boaters. Opportunities to enhance these facilities could include tie-up facilities and on-water amenities/facilities, as well as sheltered pontoon and boat ramp access.

The consultation feedback suggests that at some strategically significant access points there is a lack of capacity to accommodate demand at peak times. Specific capacity concerns were raised at Murrays Beach and Bellambi boat ramps. In addition to the demand not being met, the provision of boat wash-down facilities, fish cleaning tables and other amenities could further enhance boating at these locations.

A particular opportunity has been identified to improve the existing maritime precinct on land owned by Roads and Maritime in Port Kembla harbour.

Figure 10 – Examples of access issues



Approach to Greys Beach boat ramp. Orientation restricts efficient use of ramp.



Greys Beach boat ramp. Opportunity to widen ramp and provide more lanes to meet demand



Sanctuary Point boat ramp. Council has concept design for new ramp and pontoon. Difficult access is experienced at the existing ramp especially at low tide



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.
- Stakeholders expressed the need for both on water storage and dry storage to be strategically located in the region to support storage as well as employment, tourism and the local economy.
- Due to limited on-water storage in the region, long waiting lists for private moorings in popular areas may limit access for boaters.
- Due to the high concentration of mooring areas, particularly in coastal regions, dinghy storage is currently mostly informal.
- Increased popularity in the use of non-powered craft has resulted in informal storage in some popular areas.

Actions

- d. Work with councils and other partners to help deliver projects that support strategic growth in boat storage capacity in the region and improve harbour storage facilities**
- e. Explore the need for dinghy and non-powered craft storage**

6.1 Existing storage

6.1.1 Overview of existing storage types

Storage for vessels is generally provided on-land for smaller trailerable vessel (< 6 m) 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 the Shoalhaven – Illawarra region are:

- ◆ Private moorings;
- ◆ Commercial moorings;
- ◆ Commercial marina berths; and
- ◆ Domestic berths, moorings and other associated 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 in Figure 11.

Figure 11 – Existing storage facilities ¹



Ulladulla Harbour storage



Commercial berths at Huskisson



Wollongong Boat Harbour with a combination of berths and mooring



Private moorings in Jervis Bay

Storage at private facilities can be adjacent to private property through domestic jetties, slipways, boatsheds, and berths or fore and aft moorings or on private swing moorings. Private swing moorings usually also require access to the water with a tender, for example a 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.

6.1.2 Overview of existing storage volume

It is estimated there are approximately 1,550 vessels on-water or at associated land facilities in the region. Of these, approximately 700 are private moorings and just over 160 are commercial mooring licences issued and administered by Roads and Maritime.

As with other regions, there are numerous wetland leases administered under licence with NSW Trade and Investment (Crown Lands), some of which are included in the total storage spaces quoted above. However, it is difficult to quantify numbers as the use is usually exclusive to the property owner and they cannot be sub-leased or licensed. The above numbers also include those current licence holders for domestic jetties and facilities on Lake Illawarra who are being transferred from the Lake Illawarra Authority. In Jervis Bay, zoning for the Jervis Bay Marine Park governs the type of development, storage and on-water activities.

There is considerably less on-water storage available in this region compared with some other regions in the State. Part of the reason is that similar to some of the north coast regions, the Shoalhaven-Illawarra is characterised by a number of small boat harbours, such as at Wollongong, Kiama, Jervis Bay and Ulladulla, together with river systems. Registration and other data shown in Section 3.1.2 highlights that a significant majority (89%) of the registered vessels in this region are below 6 m and are therefore most likely stored on trailers. Conversely, it is also possible that the limited on-water storage influences the types of boats used in the area.

While the numbers for each category and area of storage are in many cases approximate, they can be generally grouped as follows:

Wollongong to Currarong

There are a number of small harbour marinas, clubs and other boating facilities that commonly contain commercial fishing berths including:

- ◆ Wollongong – <25 berths; 10 moorings;
- ◆ Port Kembla – <25 berths;
- ◆ Kiama – <30 berths; and
- ◆ Greenwell Point – < 10 berths used by local commercial fishermen and charter vessel operators.

Additional storage in this part of the region is spread across a variety of types and controls, including:

- ◆ Several hundred private moorings from Wollongong to Currarong, including 40 small craft moorings on the Minnamurra River, as well as moderate number of domestic jetties / licences;
- ◆ <35 commercial mooring licences;
- ◆ Limited on-land storage / temporary access used by the local sailing clubs for members with smaller sailing vessels; and
- ◆ The Shell Cove Masterplan proposal includes a 300 berth floating marina that will be open to residents, visitors and charter operations at a future date (2019 or possibly earlier).

Jervis Bay to Ulladulla

There are a number of small harbour marinas, clubs and other boating facilities that commonly contain commercial fishing berths including:

- ◆ Huskisson at Currumbene Creek – < 15 berths (commercial) and are part of a Special Purpose Zone in the Jervis Bay Marine Park;
- ◆ Ulladulla - < 30 commercial fishing and charter berths; and
- ◆ Sussex Inlet Marine Centre – 8 berths.

Additional storage in this part of the region is spread across a variety of types and administration, including:

- ◆ A moderate number (>450) of private moorings as well as numerous domestic jetties / licences;
- ◆ Riviera Keys Canal Estate in Sussex Inlet (300 jetties), Panorama Waters Estate at Basin View (<15 jetties) and Pattimore Canal at Lake Conjola (<25 jetties), all for exclusive use of property owners;
- ◆ <95 commercial mooring licences; and
- ◆ Shoalhaven City Marina is a proposed development for up to 30 berths on the Shoalhaven River near Greenwell Point. The proposed development includes a dry stack facility for approximately 200 vessels as well as boat repair and fuelling facilities.

Sailing and other clubs

There are a number of sailing and other clubs which can provide varying small amounts (<30) of on-land storage for members with sailing vessels (beach launch) across the region such as:

- ◆ Jervis Bay Sailing Club;
- ◆ Koonawarra Bay Sailing Club;
- ◆ Oak Flats Sailing Club;
- ◆ Creswell Sailing Centre;
- ◆ Port Kembla Sailing Co-op Ltd;
- ◆ Sailability Callala;
- ◆ Sailability Illawarra;
- ◆ Wollongong Yacht Club;
- ◆ Illawarra Yacht Club;
- ◆ Southern Highlands Sailing Club;
- ◆ Vincentia Sailing Club;
- ◆ Shellharbour City Rowing Club;
- ◆ Sussex Inlet & Basin Yacht Club;
- ◆ Ulladulla Water Ski Club;
- ◆ Shoalhaven Rowing Club; and
- ◆ Shellharbour Ski Club.

Dinghy and non-powered craft storage

Due to the moderate number of moorings in a variety of locations currently in the region, dinghy storage is generally not formalised for access to moorings. Whilst dinghies are often launched from private property, in popular access and mooring areas such as at Callala Bay, Lake Conjola, Woollamia and Sussex Inlet, storage is an issue. Similarly, storage is an issue where non-powered craft activities are more popular such as along the rivers and entrances. Storage options include designated dinghy storage areas with locking points or the provision of dinghy storage racks.

6.2 Key findings

Feedback from stakeholders in relation to storage highlighted the following issues:

- ◆ the need for more on water storage such as marinas or 'mini marinas' in the region at Port Kembla or Wollongong, Sussex Inlet, Greenwell Point, Jervis Bay and Ulladulla;
- ◆ the need for dry storage for vessels including non-powered craft at strategic locations in the region such as at Woollamia, Plantation Point, Lake Conjola and Lake Tabourie;
- ◆ the need to maintain current levels of storage for commercial operations such as whale and dolphin watching, fishing charter and emergency vessels to support the local economy;
- ◆ the need for secure long-term trailer storage due to the popularity of the region with Sydney boaters and the cost and time factor in transporting trailerable vessels regularly on roads.

While only a small proportion of vessels in the region are over 6m, this region also experienced the second largest growth in boats for the State. Moreover, the average size of recreational vessels across the State is forecast to increase. Accommodating the region's boat storage

needs as vessel registrations and the size of vessels grow will require a balanced combination of additional on-water and dry storage options.

Harbours along the NSW coast are important layovers for cruising vessels as well as focal points for tourism and commercial activities including commercial and recreational fishing and charter vessels. This region is a very popular destination for longer stays as well as weekends, bringing many boaters to the region on a regular basis. All the small harbours currently offer minimal storage and are primarily used by the commercial fishing fleets. Ulladulla is one area that still has a strong commercial fishing industry.

Failing to plan for boat storage growth not only impacts on the experience of boaters in the region but also risks generating negative impacts for the community more broadly. Increased storage capacity will also be needed for paddle craft and other vessels which do not require registration and therefore do not appear in growth forecasts, as anecdotal evidence suggests that the popularity of these craft is growing at a faster rate than registered vessels.

Analysis from the consultation feedback and site visits has identified the following key issues that would benefit from a more strategic approach to boat storage.

Increasing storage capacity in the region

In relation to moorings, there were a small number of key locations with longer waiting lists including at Ulladulla and Wollongong at. Other areas including Ulladulla North, Upper North Shoalhaven and Nowra that do not have a waiting list have not allocated moorings for several years. Shoalhaven City Council has also been working with the Department of Primary Industries in relation to possible opportunities to increase mooring numbers in Jervis Bay.

It should be noted that there are limitations to expanding mooring capacity at a number of locations, such as at Callala Bay, which is bounded by sensitive seagrass beds and highly susceptible to adverse weather conditions, and the wetlands located in Currumbene Creek, which are protected under State Environmental Planning Policy 14 and can be very narrow and shallow in places.

Observations, as well as feedback from stakeholders identified issues including the need for increasing on-water storage and the need to support the local boating and general community. The lack of modern facilities was seen as an inhibitor to attracting vessels and more visitors to the region, which would bring economic benefits. In particular, stakeholders noted that lack of storage was an inhibitor to buying larger boats.

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 moorings 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 which is available at:

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

Storage for dinghies and other small craft

There were a small number of areas identified as requiring more formalised storage at Callala Bay and along the Currumbene Creek. Moreover there was general feedback regarding lack of storage for dinghies in the region, however converse feedback highlighted that the current system of storage had worked over a long time period and should not be changed.

Additionally there were comments from sailing groups, individuals and paddle craft users that there was a need for formal storage for these recreational craft. For example, at Plantation Point, sailing dinghies are launched from the beach and there is no associated storage. Storage for paddle craft including kayaks, canoes and SUPs, which are being used in increasing numbers in the region was also highlighted as an issue in some of the less urbanised areas along river and lakes, for example at Lake Tabourie and Lake Conjola.

Figure 12 - Examples of existing boat storage issues



Dinghies in Woollamia



Recreational vessels stored on or near beach at Callala Bay



7. Feedback on Consultation Draft

7.1 Feedback Summary

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

7.1.1 Safety

Submissions were generally supportive of the proposed safety actions in the Consultation Draft, particularly the need to improve user behaviour. The importance of educating boaters, particularly visiting holidaymakers, about safe behavior and acting with courtesy towards other boaters was suggested as being of particular importance. Wash was highlighted as a significant issue of concern.

A number of submissions questioned the appropriateness of unlimited speed restrictions on the water, particularly in closed waters environments, with most of these suggesting an upper limit of 40 knots.

At the public information sessions, comments were made about compliance issues being observed at a number of location and local safety issues relating to ocean boat ramps, depth constraints at a number of bar crossings and dangers relating to offshore reefs and bombooras.

7.1.2 Access

Feedback suggested there was broad agreement that there are significant opportunities to improve and modernise boating infrastructure in the region. Councils 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 was repeatedly raised during consultation sessions and in submissions on the Draft Plan. The main locations where navigation dredging was requested were at the entrances to Sussex Inlet and Lake Conjola, and to a lesser extent at the mouth of Currumbene Creek.

Since the release of the Draft Report, over \$750,000 has been allocated by NSW Trade and Investment through the Crown Lands Sustainable Dredging Strategy for these projects, with \$232,500 made available for dredging a Sussex Inlet, \$272,000 for the entrance to Lake Conjola and \$204,000 for Currumbene Creek. The Government is providing up to 50 per cent towards the actual costs of each project, with local councils providing the remaining funds or in partnership with local stakeholders.

Specific comments were also made regarding the need to improve access and parking facilities at various locations around Sussex Inlet and Lake Conjola. Further work in determining the best locations for these works is required. There were also a number of suggestions that facilities need to be better designed to cater for the elderly and disabled.

Many people commented on the proposal to improve access facilities at Huskisson Wharf, with a strong view being presented that any improvement must provide significant benefit for recreational boaters, and not just provide additional access or storage for commercial boats. Provision of fueling facilities was also suggested by a number of parties.

7.1.3 Storage

The need to identify on water and land based storage options at key boating areas was highlighted in consultation with Councils and other stakeholders. Improving berthing facilities at a number of coastal ports and harbours including at Shell Harbour, Wollongong, Kiama and Ulladulla Harbour, and to consider dry storage options at Port Kembla, was suggested. A number of submissions were also received suggesting the need for additional marina facilities to service the region.

There was general feedback regarding lack of storage for dinghies in the region, however converse feedback highlighted that the current system of ah-hoc storage has worked over a long time period and should not be changed.

7.1.4 Other Issues

In consulting with stakeholders and the general public on the development of the Shoalhaven-Illawarra 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.

Similar issues arose in consultations on a number of other Regional Boating Plans, including in particular, the Upper Williams River in the Port Stephens Hunter 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 Tweed Heads and Grafton 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

\$4.7 million in NSW Boating Now funding has been allocated to support delivery of 16 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. 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 assist with emergency repairs to boating infrastructure, particularly after flood or storm events.

Table 2 – Priority Regional Projects

1. Expand car/trailer parking and wash down bays at Kiama Harbour boat ramp
2. Upgrade boat ramp and install jetty at Shellharbour Boat Harbour
3. Renew existing jetties on Lake Illawarra (Boonerah Point, Ski-Way Park, Burroo Bay)
4. Upgrade car/trailer parking at Bass Point boat ramp
5. Upgrade Huskisson Wharf including improved recreational access
6. Install pontoon for non-powered vessel launching at Huskisson (Dent Street)
7. Upgrade boat ramp and car/trailer parking and install pontoon at Sanctuary Point boat ramp (Sanctuary Point Road)
8. Install pontoon, upgrade car/trailer parking and approach to boat ramp, and investigate options for an additional ramp at Grey's Beach boat ramp, North Nowra
9. Install pontoon and upgrade car/trailer parking at Woollamia boat ramp
10. Investigate installation of pontoon at Ulladulla Harbour northern boat ramp
11. Upgrade ramp, parking and install pontoon at Lake Conjola following further investigations into preferred site
12. Upgrade ramp, parking and install pontoon at Sussex Inlet following further investigations into preferred site
13. Investigate possible locations for sewage pumpout at Greenwell Point
14. Upgrade Kanahooka boat ramp
15. Install pontoon and upgrade car/trailer parking at Port Kembla boat ramp
16. Investigate access and car/trailer parking improvements for Berkeley Harbour

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

	Action	Delivery
Safety	Review strategies to improve on water user behaviour and safe boating practices across the region	Roads and Maritime will work with MMC to review the current approach to addressing the user behavior issues for the region including education, communication and compliance campaigns within the region.
	Review placement and planning of navigations aids and signage to improve navigation where appropriate	Roads and Maritime will review and upgrade as required existing signage and navigation aids across the region.
	Review strategies to improve safe vessel operation in open and offshore waters and when crossing ocean bars	Roads and Maritime will work with MMC to review and update the education and compliance campaigns to raise awareness of safety issues associated with crossing coastal bars. RMS to continue to expand the existing network of bar crossing cameras and to improve communication of conditions at bar crossings and ocean access ramps.
Access	Work with councils to improve the condition and capacity of existing boat ramps and other access facilities, including jetties and pontoons	\$4.7 million in NSW Boating Now funds have been allocated to support the delivery of the 16 Priority Regional Projects listed in Table 2.
	Work with councils to increase capacity of car and trailer parking to better cater for peak demand at strategically significant boating access locations	
	Work with councils and other agencies to enhance and optimise existing facilities at strategic locations, especially at harbours and locations with ocean access, including the maritime precinct in Port Kembla harbour.	Funding has been allocated towards installing a pontoon and upgrading parking at Port Kembla boat ramp (Project 15).

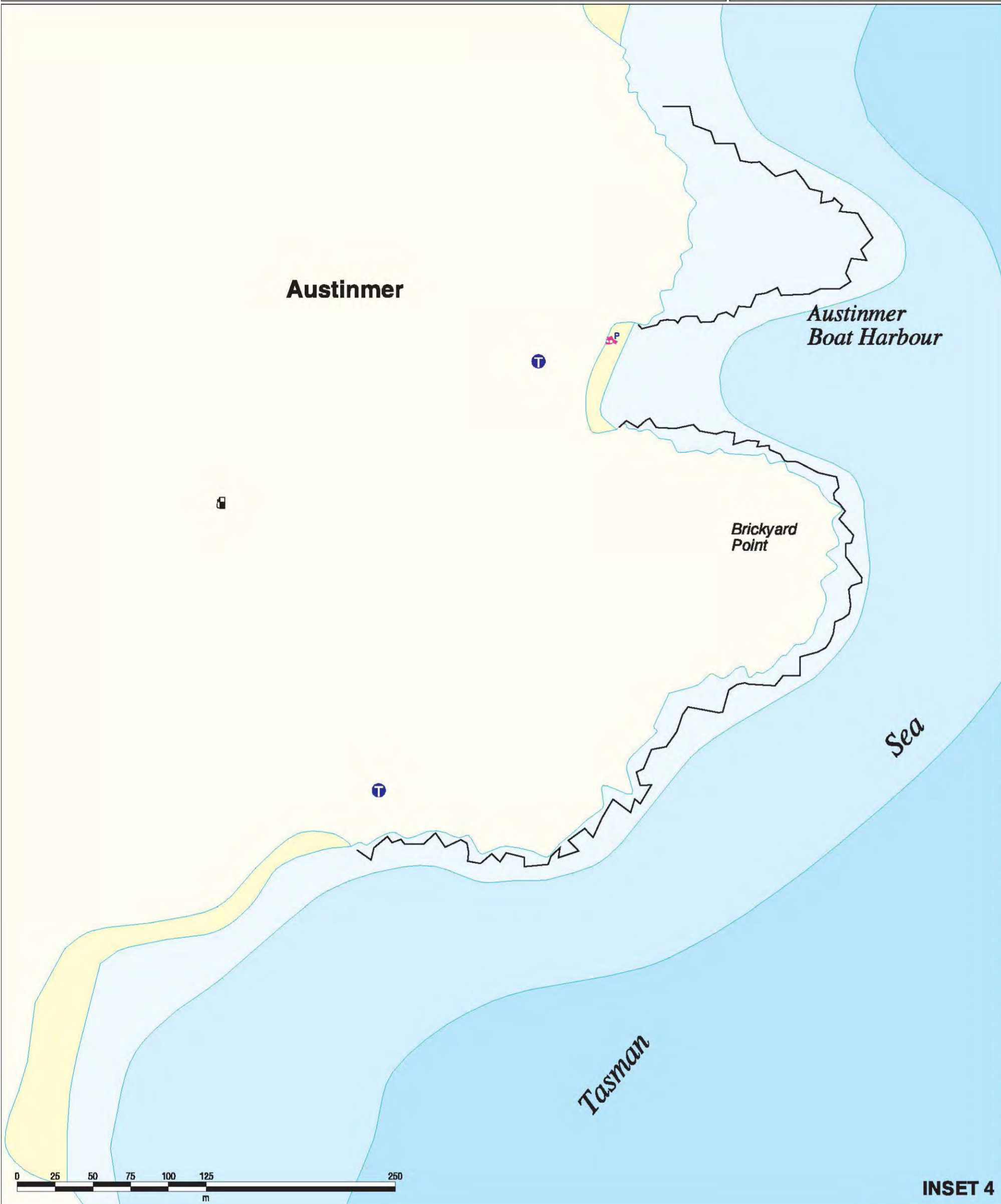
	<p>Continue support for the Rescuing Our Waterways dredging program</p>	<p>MMC and Roads and Maritime will continue to support the Rescuing Our Waterways dredging program and will work with Crown Lands on a longer term strategy for navigation dredging in NSW.</p> <p>Since the Consultation Draft was released, Rescuing Our Waterways round 2 funding has been allocated to:</p> <ul style="list-style-type: none"> • Sussex Inlet (\$232,500) • Curumbene Creek (\$204,000) • Lake Conjola (\$272,000)
<p>Storage</p>	<p>Work with councils and other partners to help deliver projects that support strategic growth in boat storage capacity in the region and improve harbour storage facilities</p>	<p>MMC has begun working with Crown Lands and industry to identify coastal infrastructure needs to support boat storage and access facilities in NSW coastal harbours.</p>
	<p>Explore the need for dinghy and non-powered craft storage</p>	<p>While initial consultation suggested there is unmet demand for dinghy and non powered craft storage in the region, this has not been identified as a priority project at this time. The need for such storage will be assessed again for funding under the second round of NSW Boating Now funding allocations.</p>

Appendices

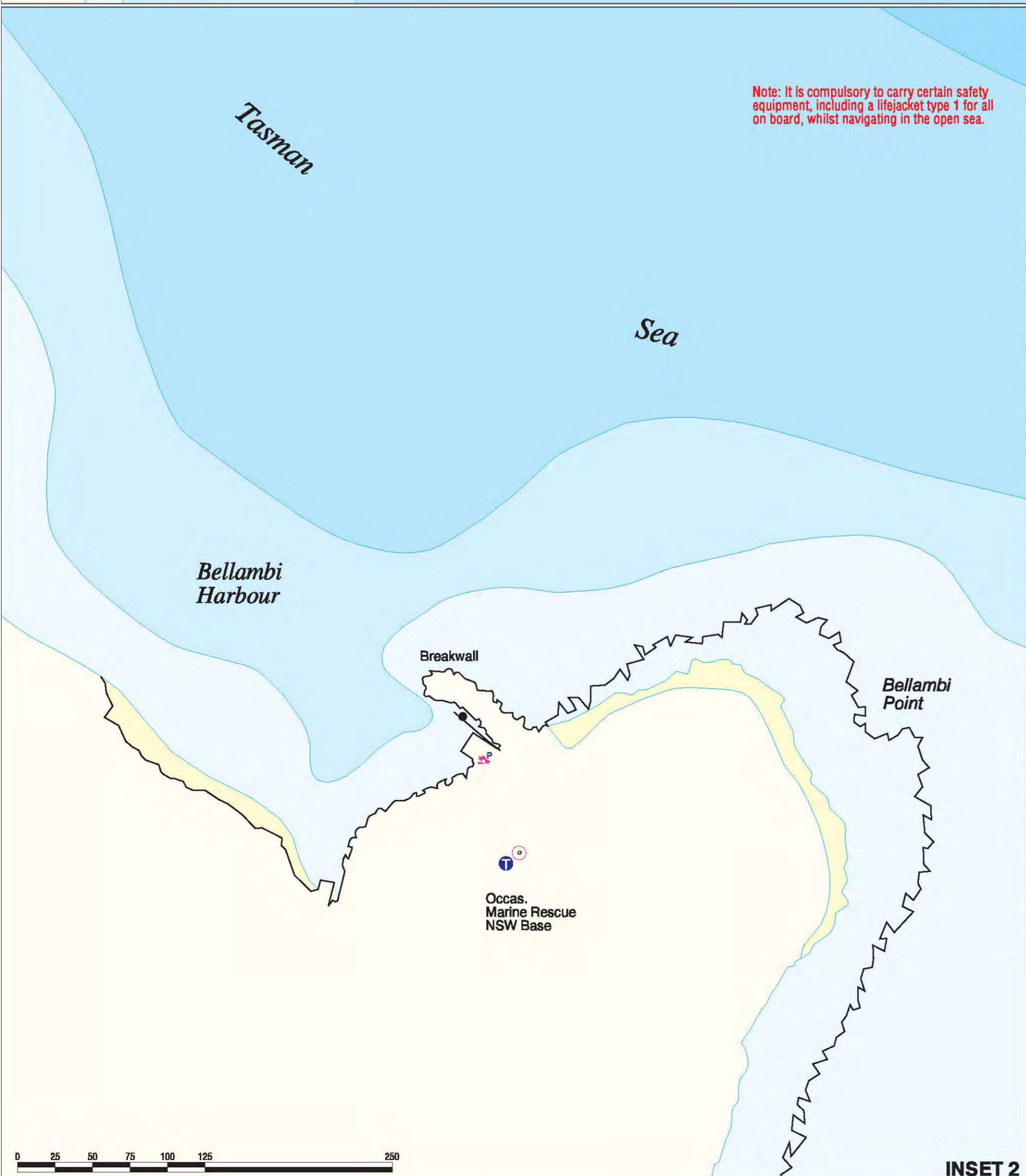
Appendix A – Maps



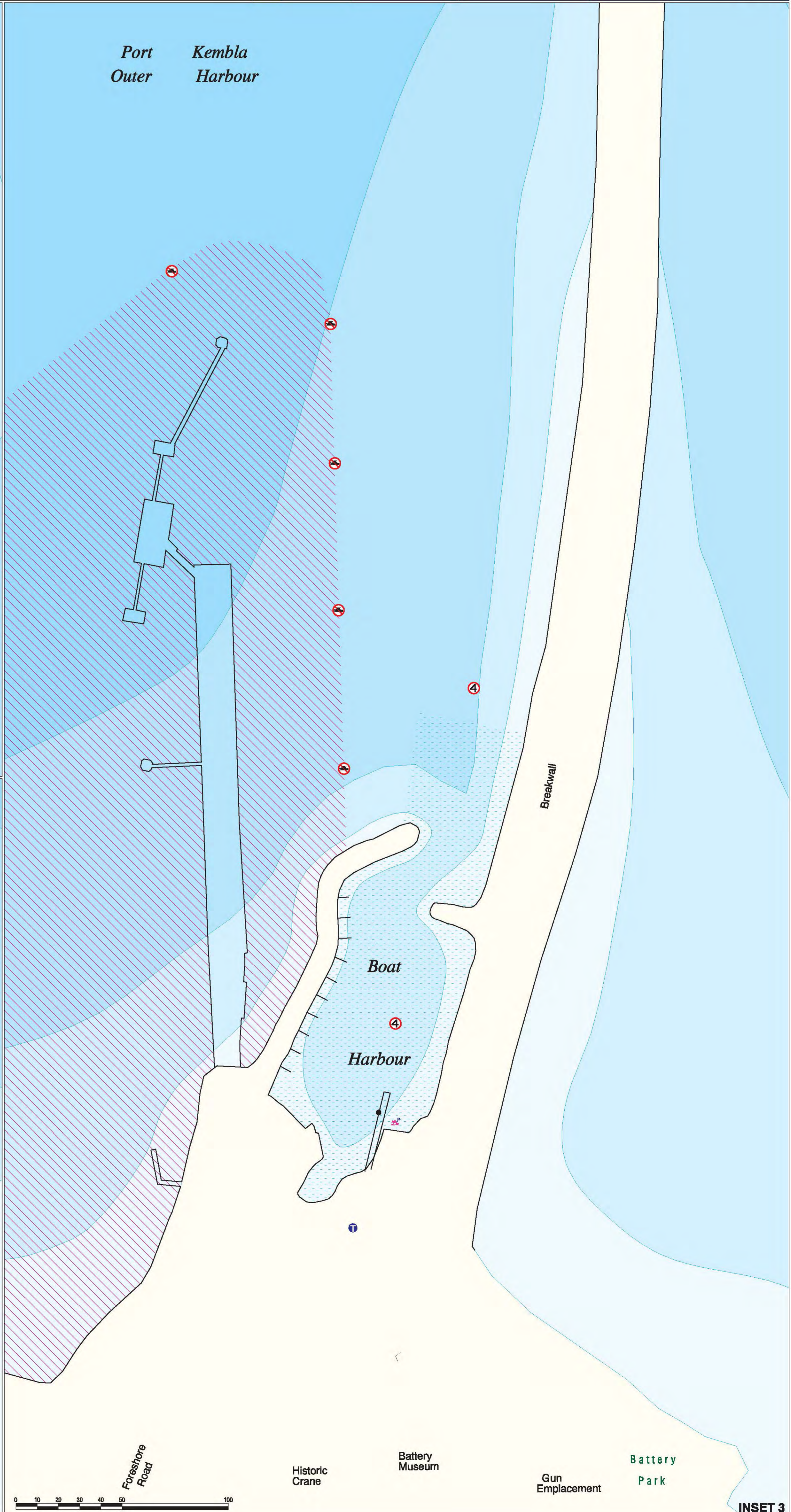
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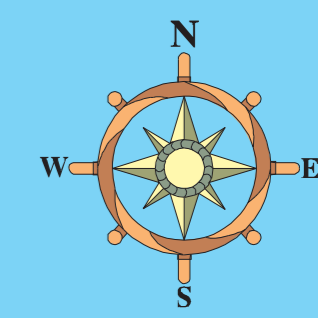
INSET 4



INSET 2



INSET 3



MAP OF
**Wollongong Harbour to Port Kembla including
 Insets of Bellambi and Austinmer Boat Harbours**

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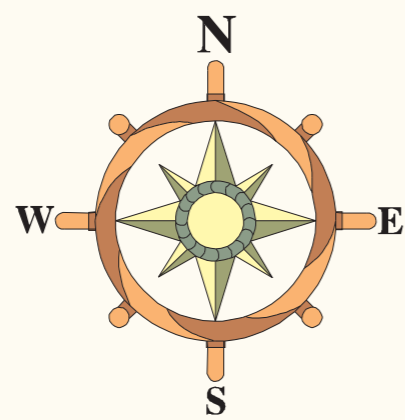
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MAP OF
Burrill and Tabourie Lakes and Ulladulla Harbour
Locality Insets for Bawley Point and Kioloa Areas

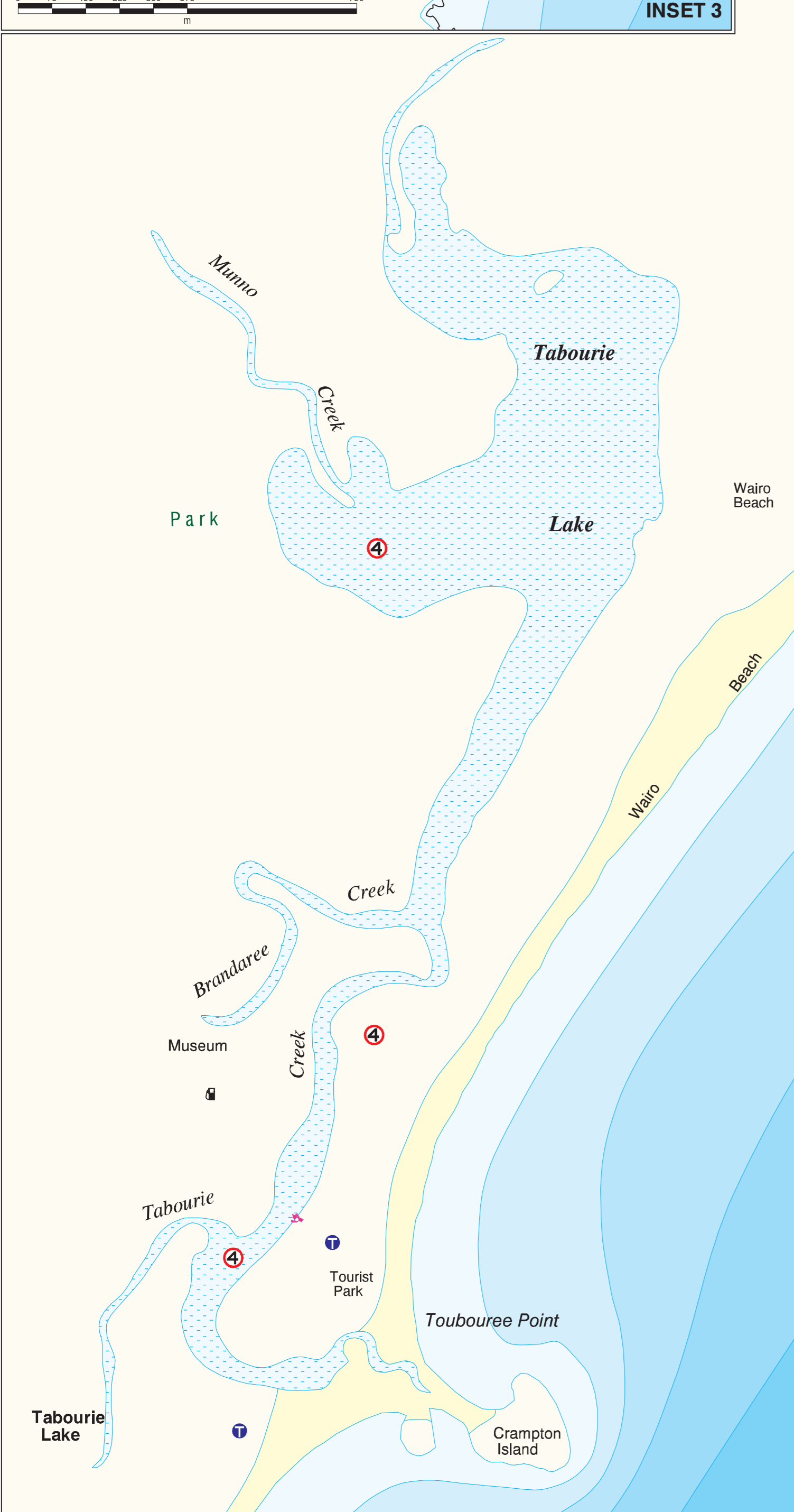
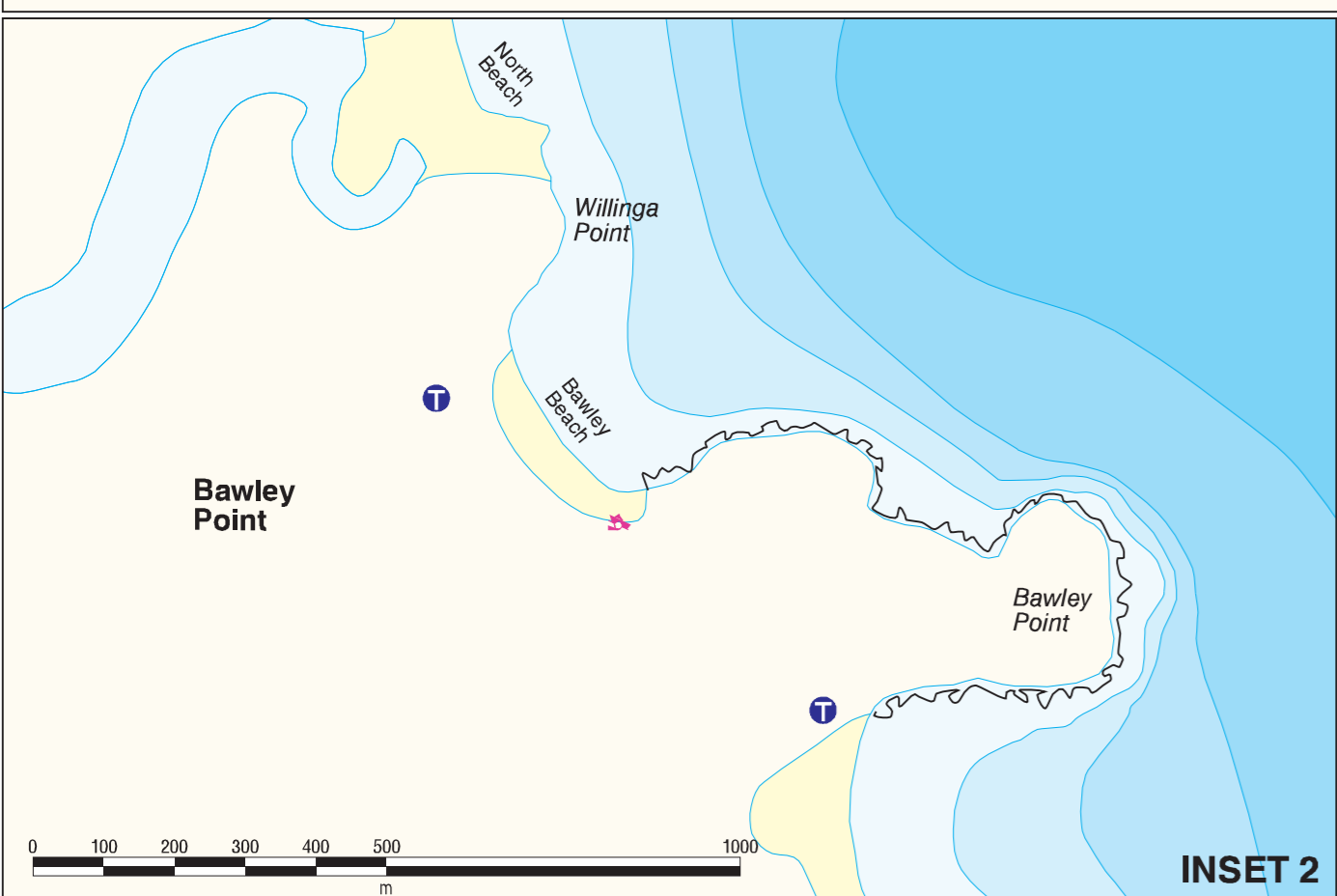


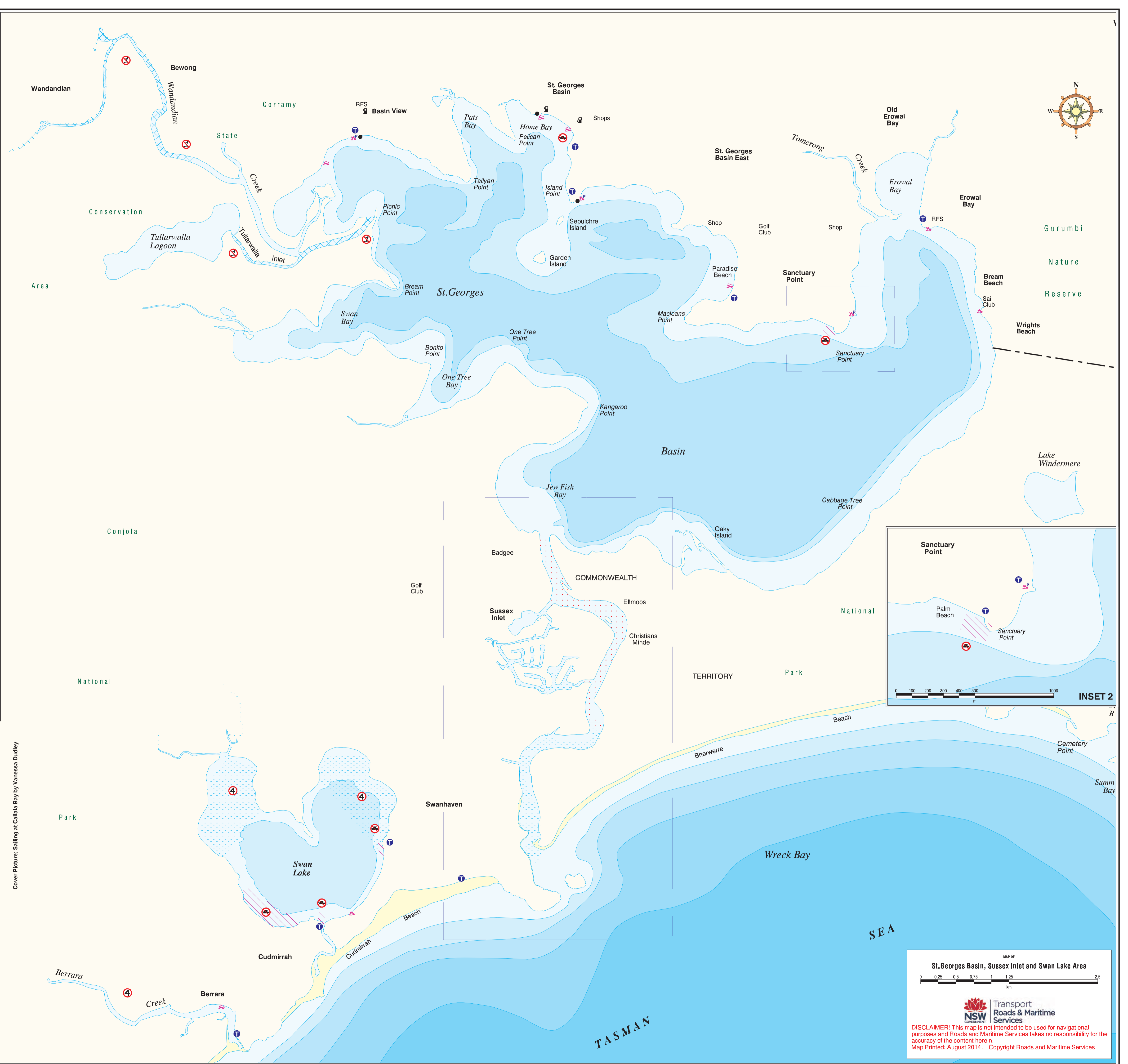
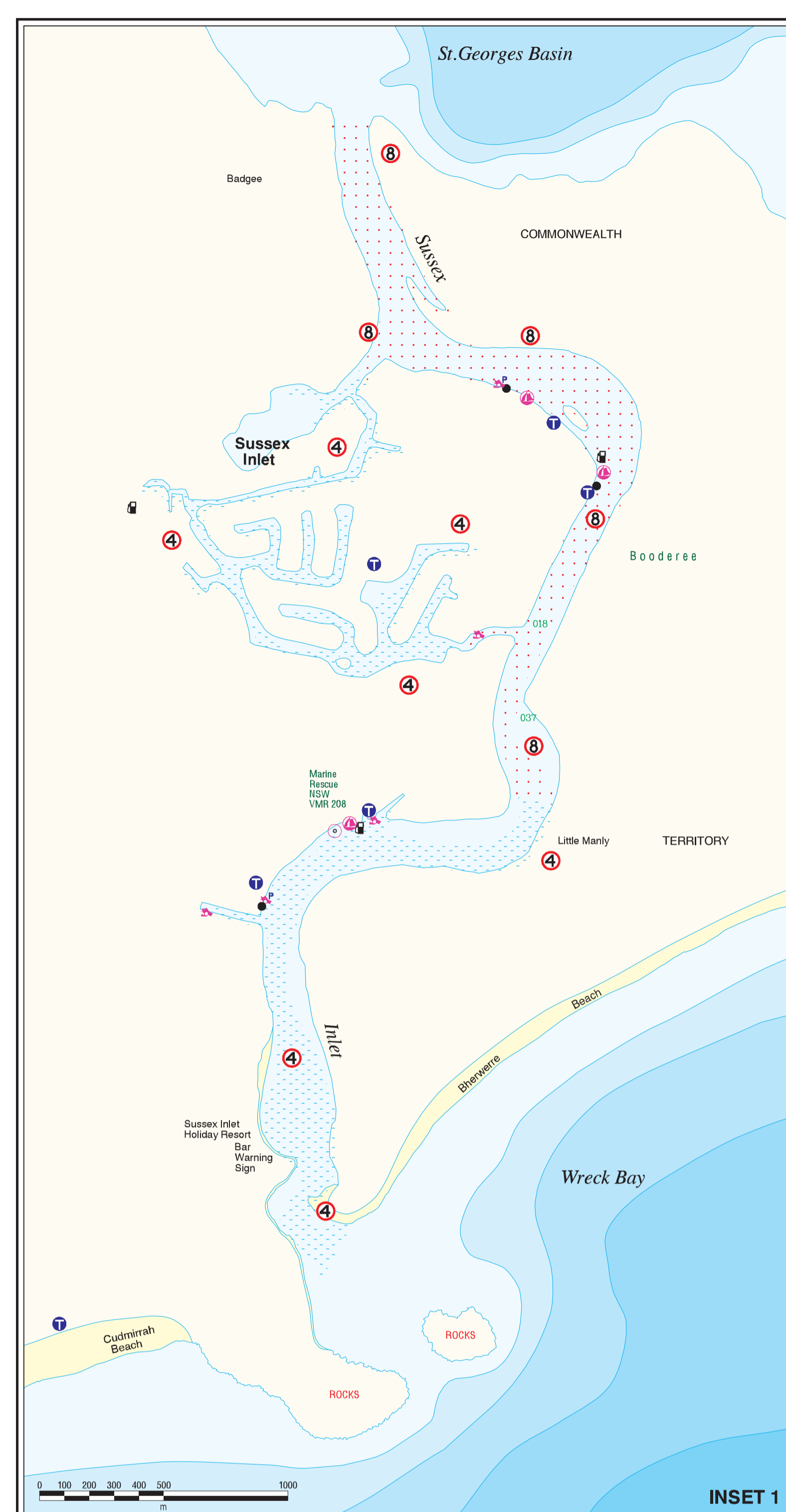
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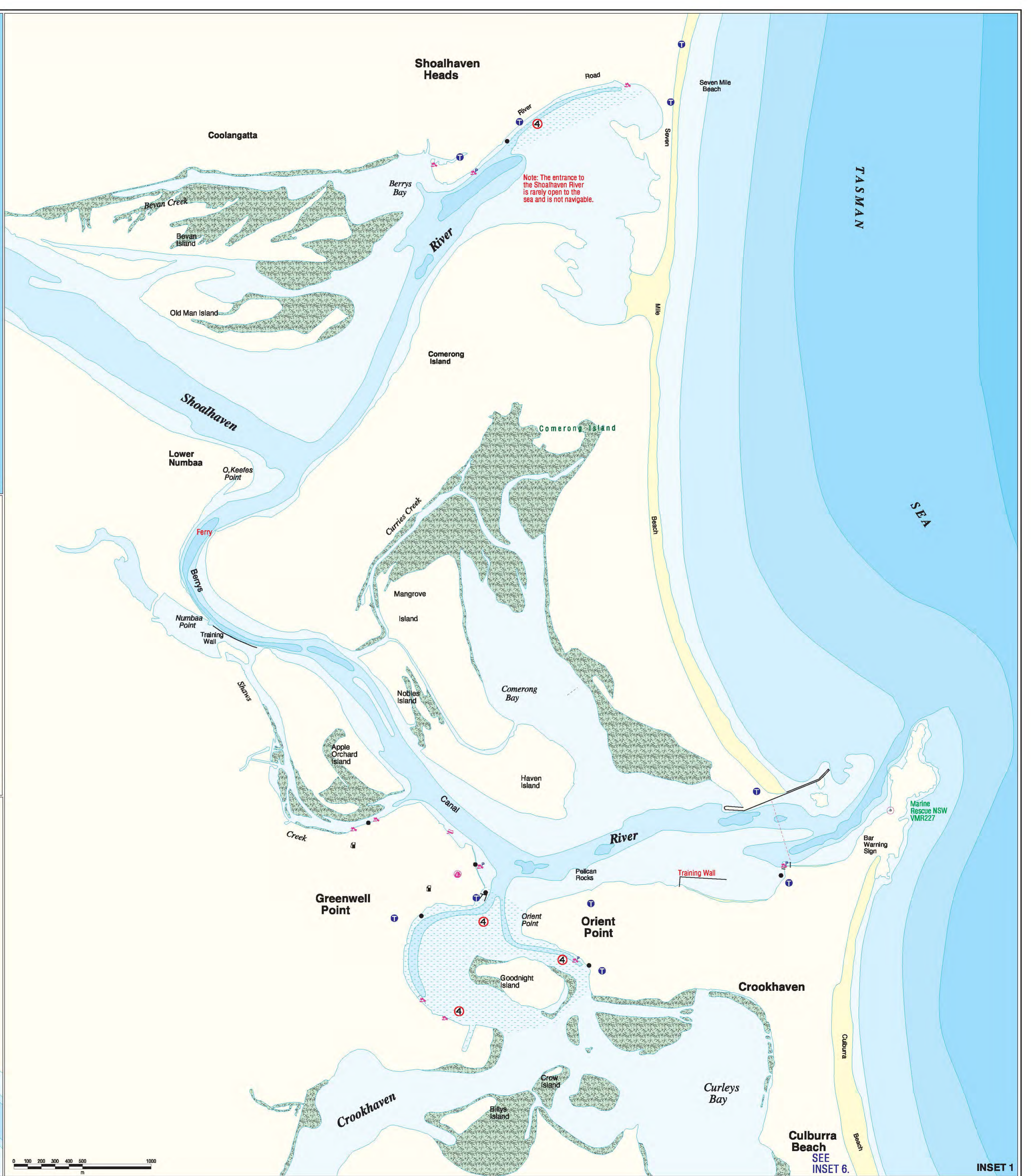
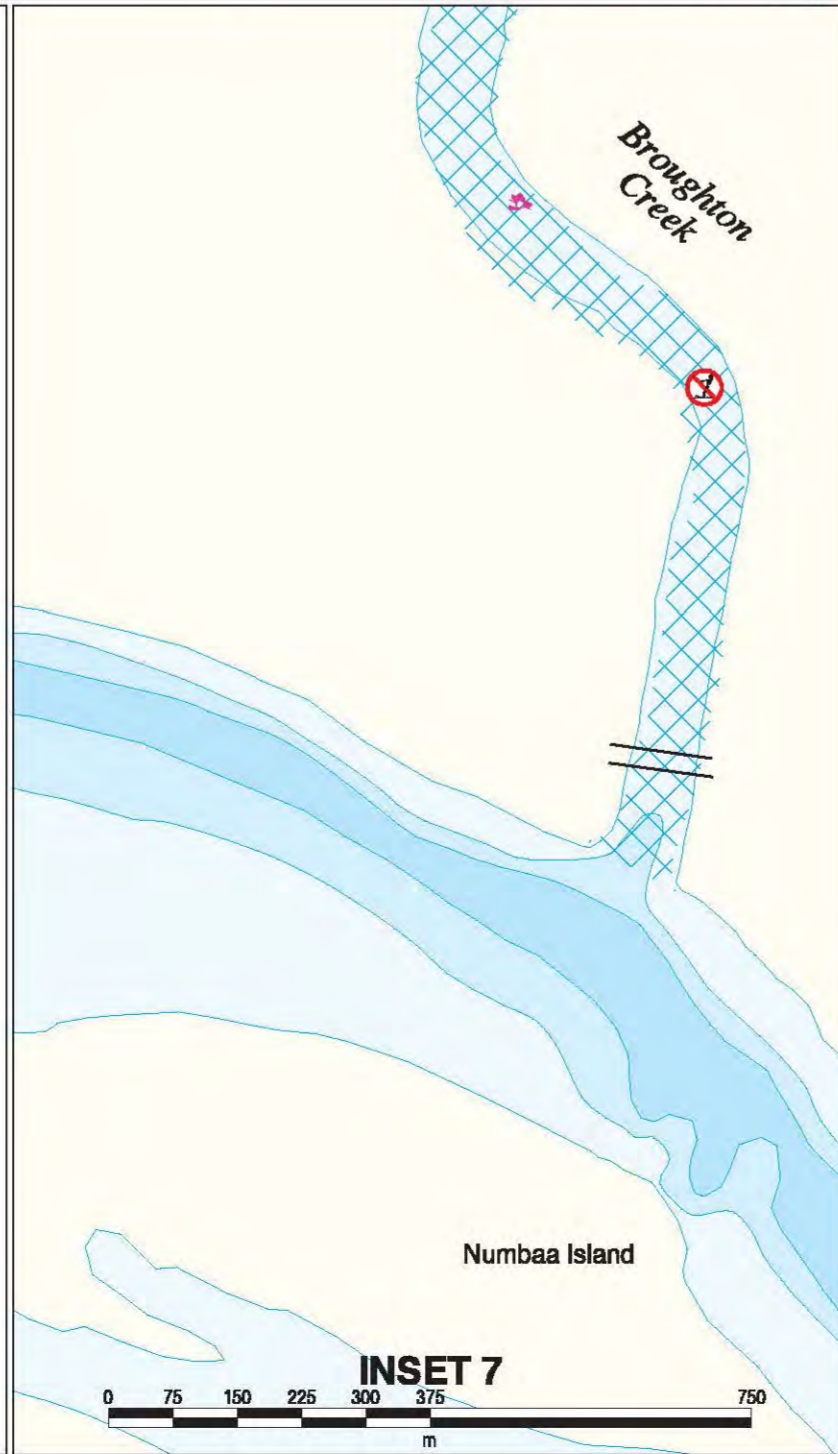
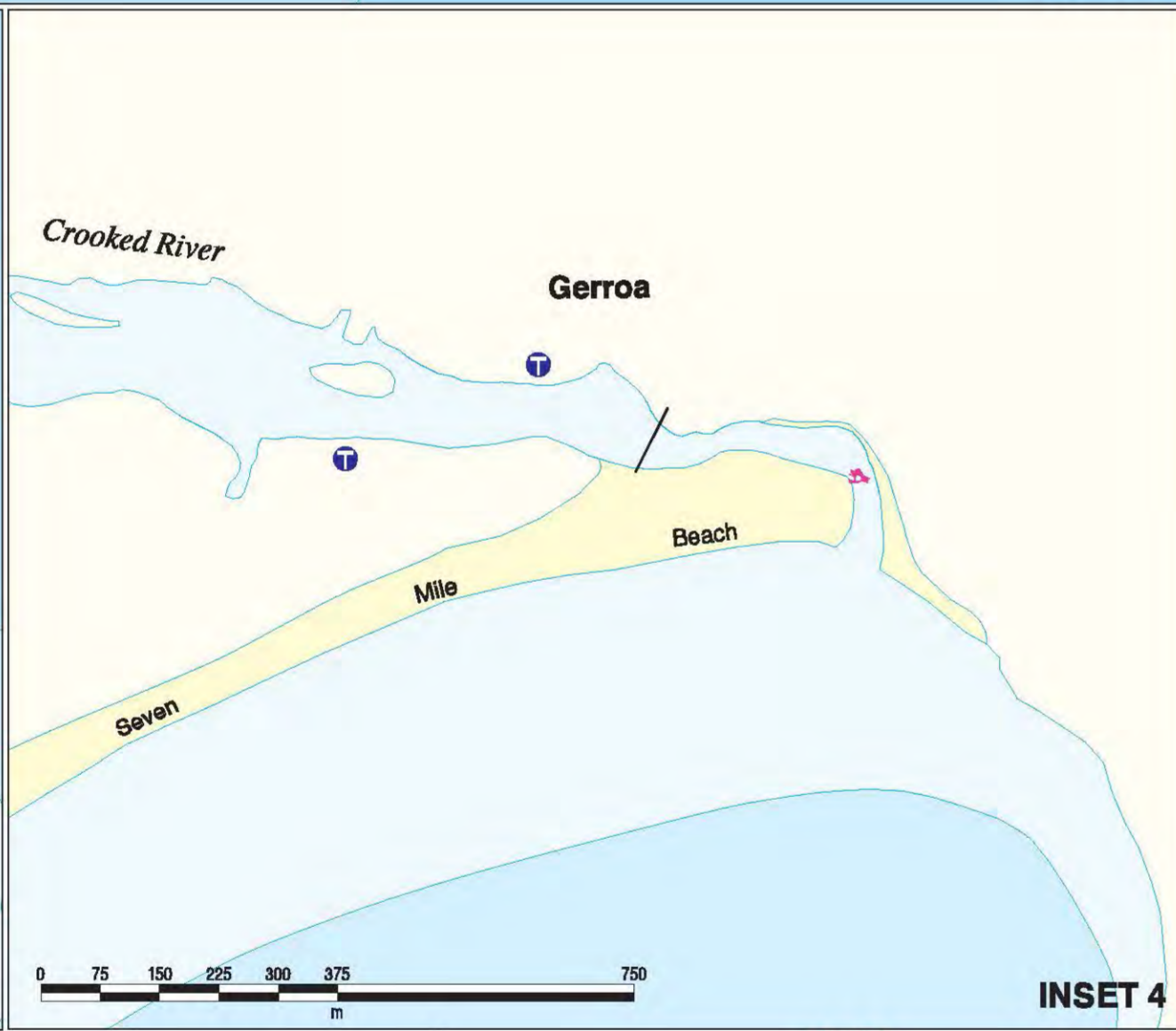
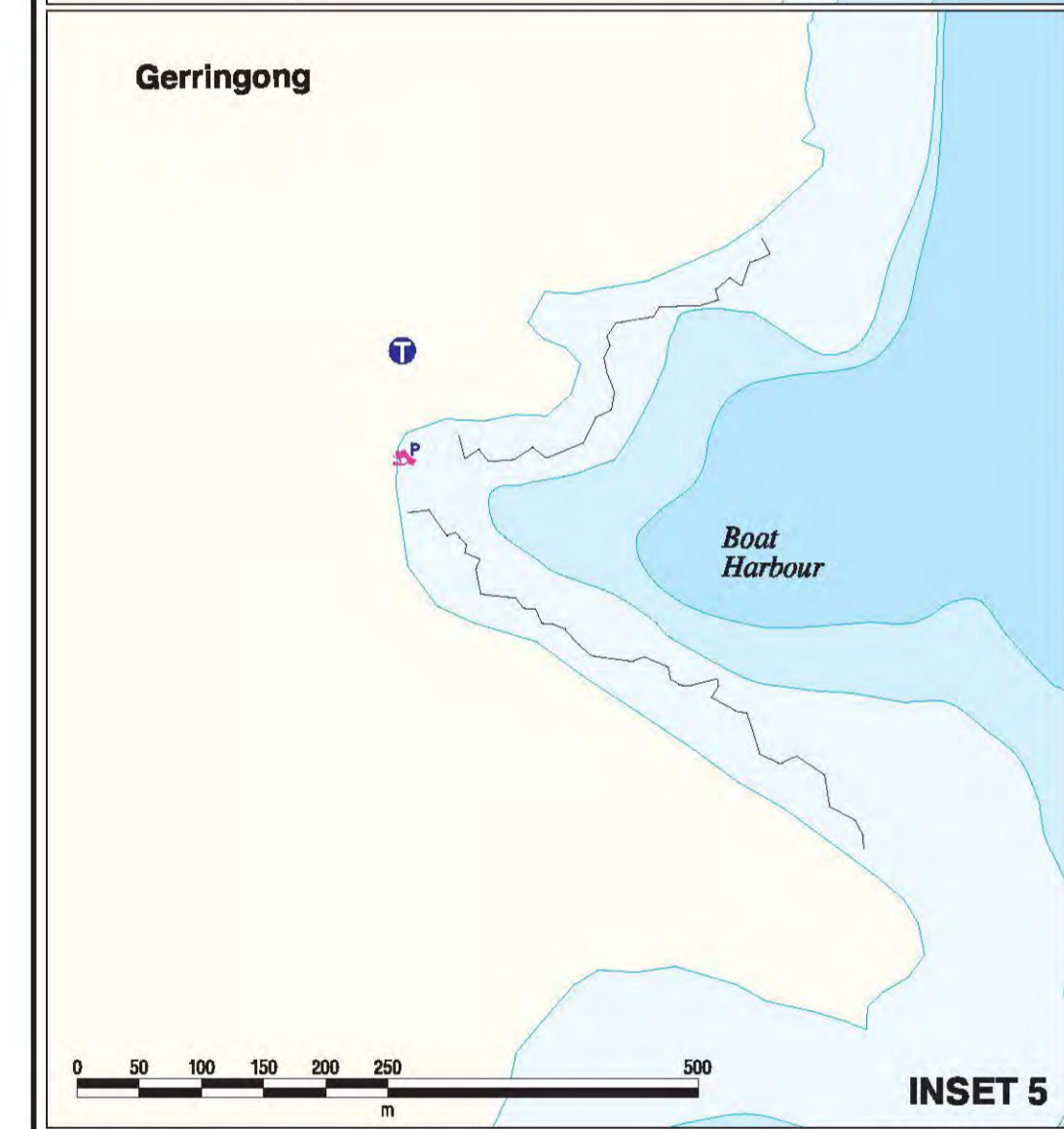
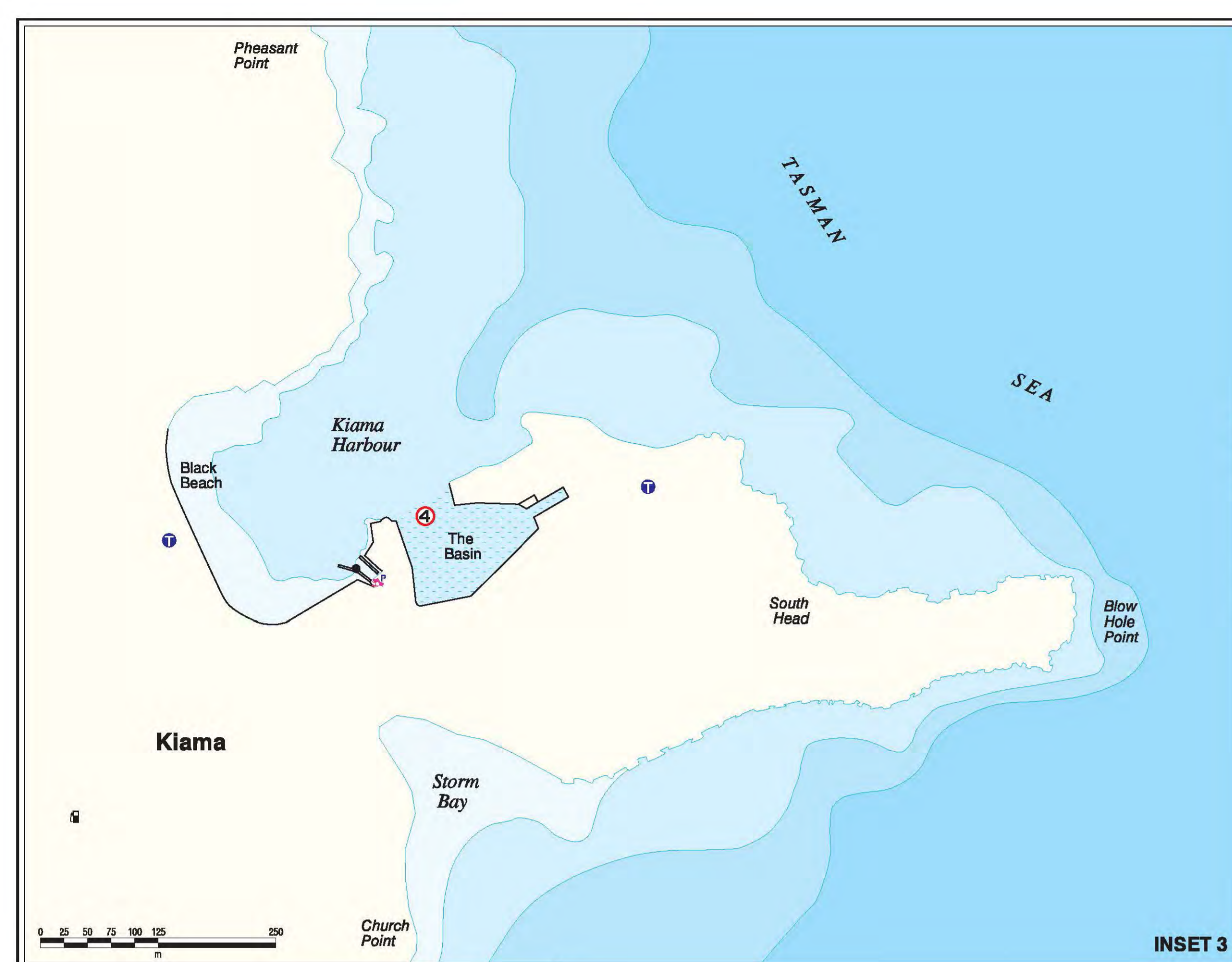


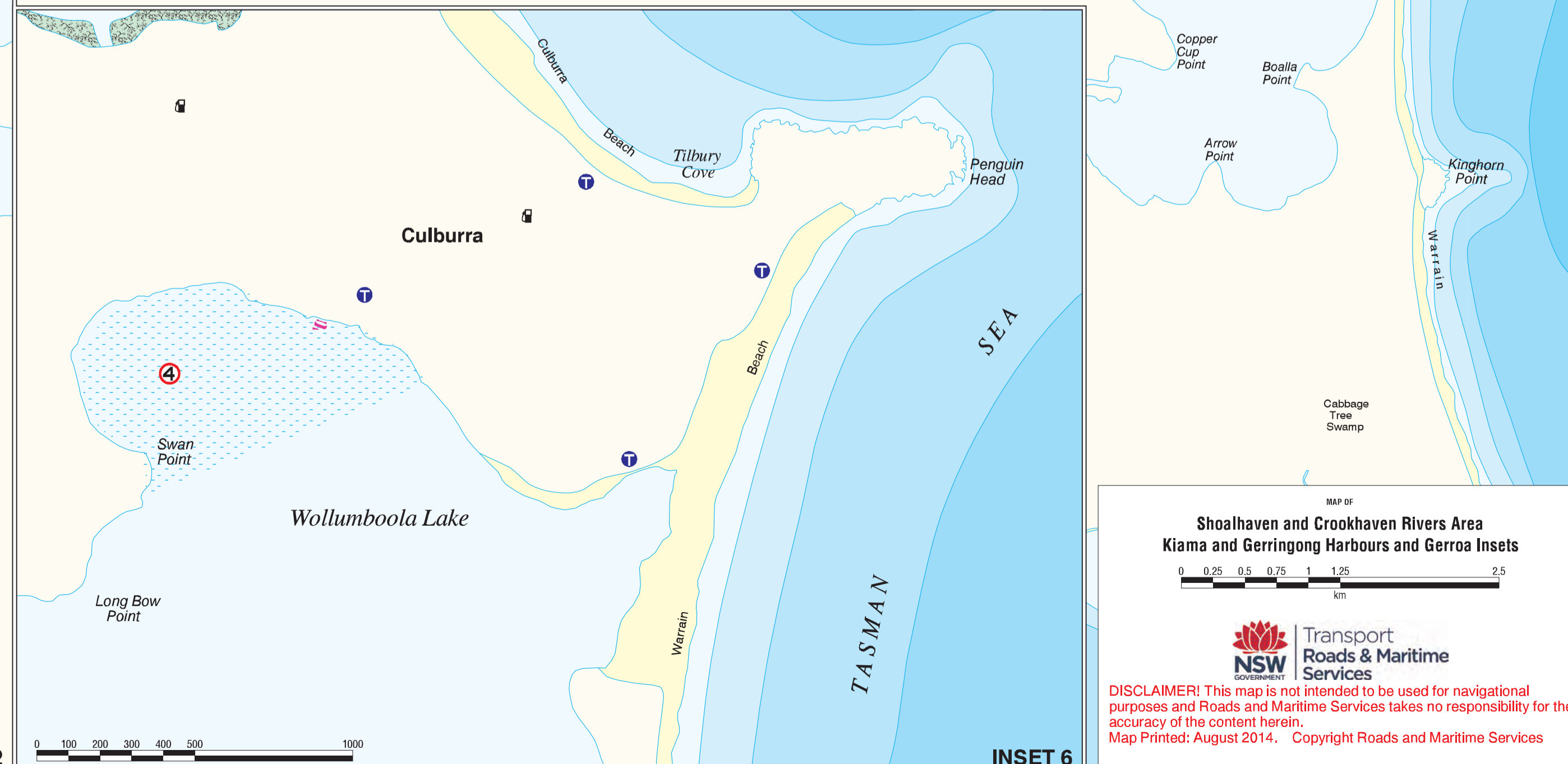
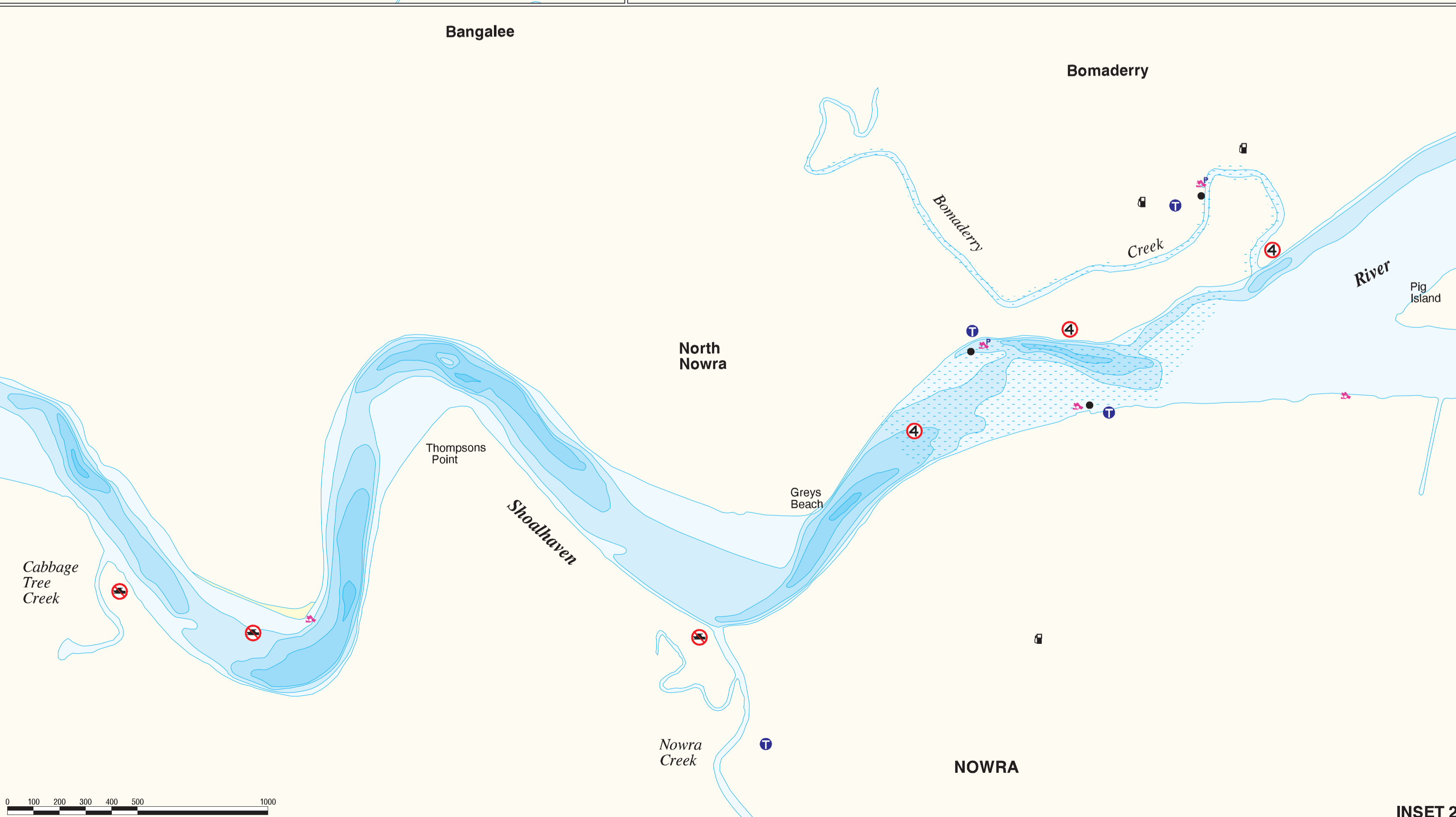
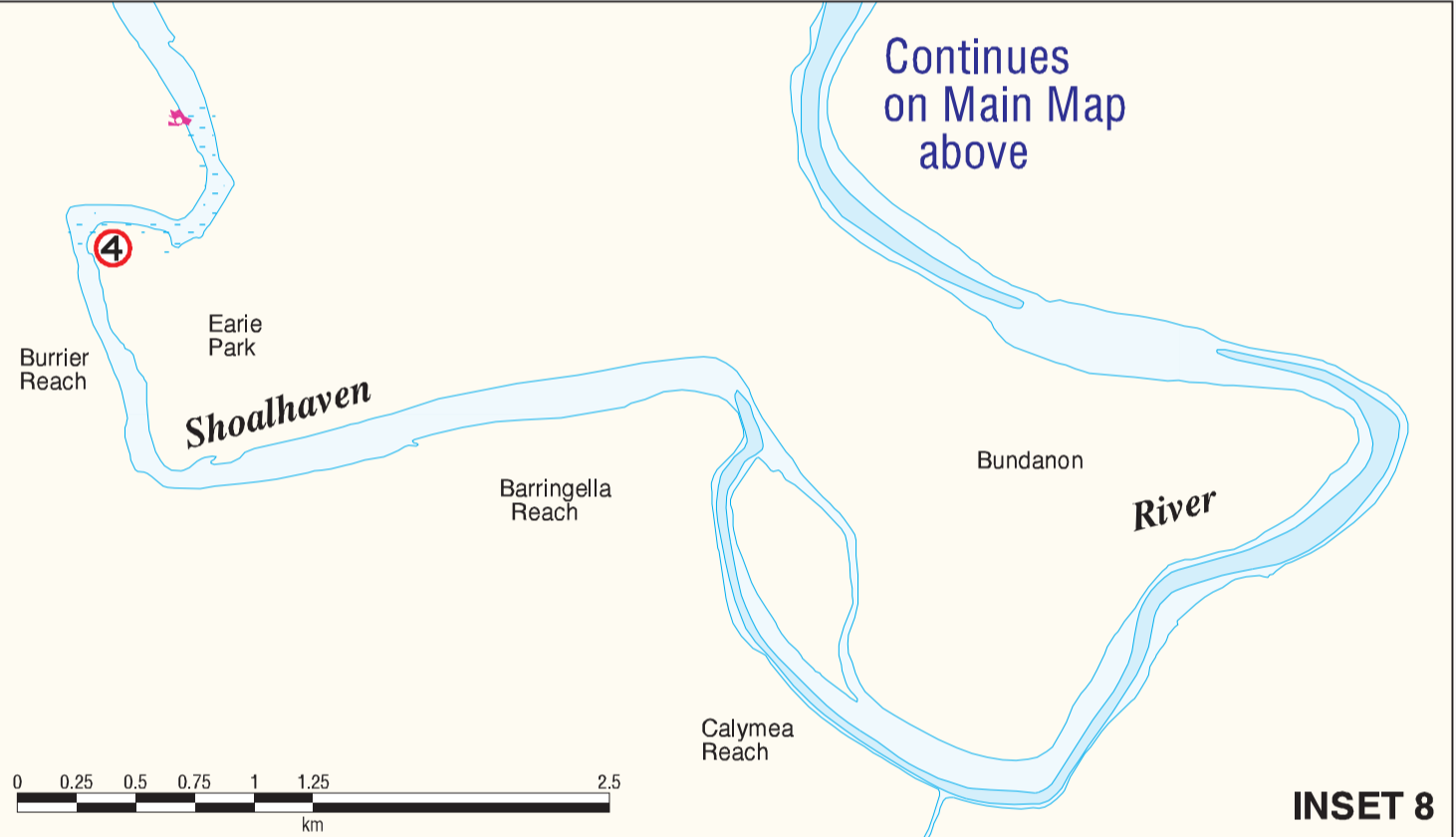
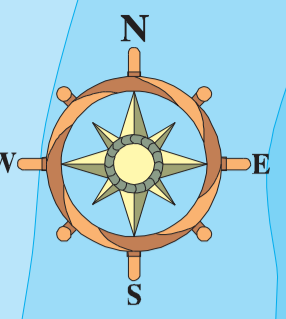
ULLADULLA





Cover Picture: Sailing at Callala Bay by Vanessa Dudley



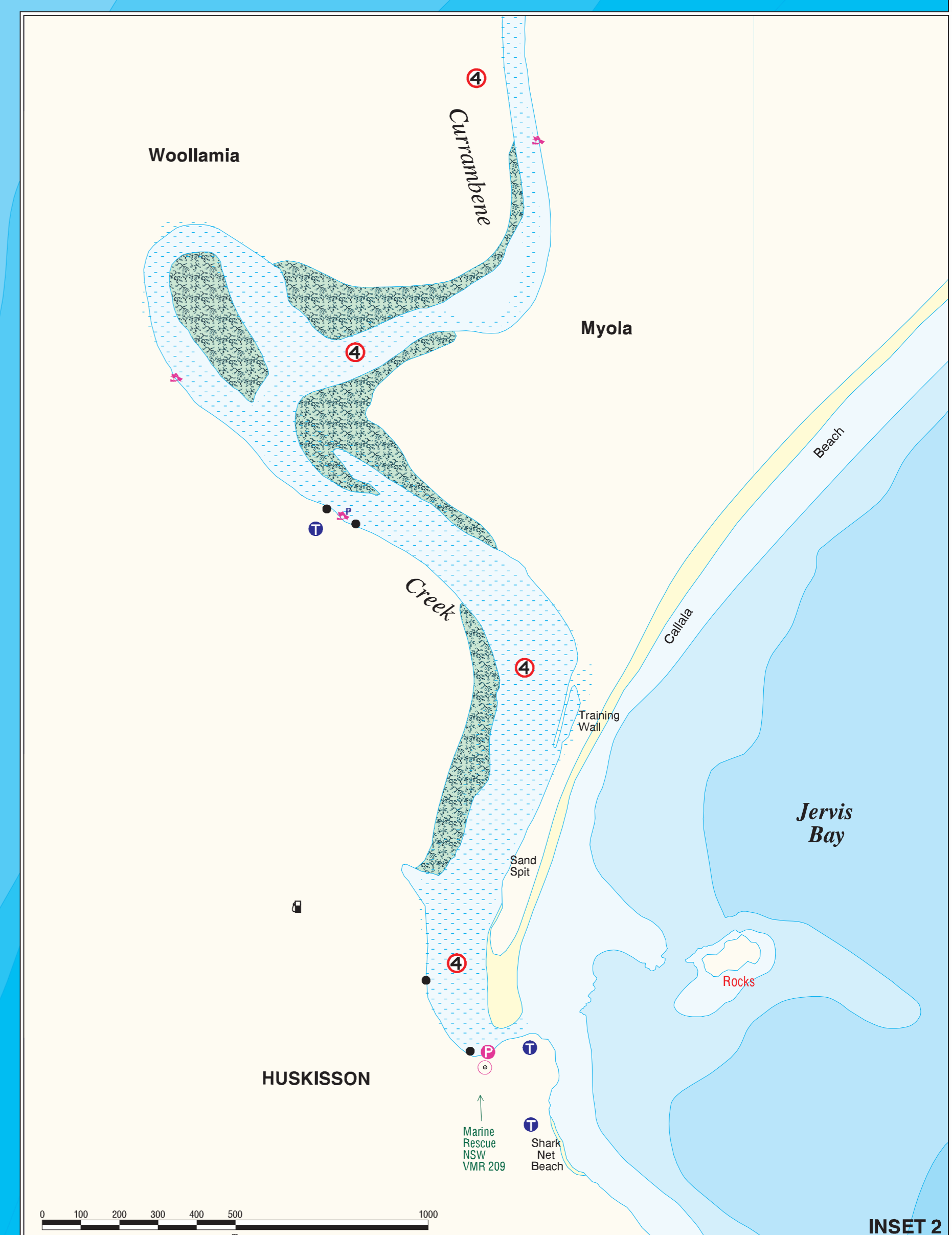
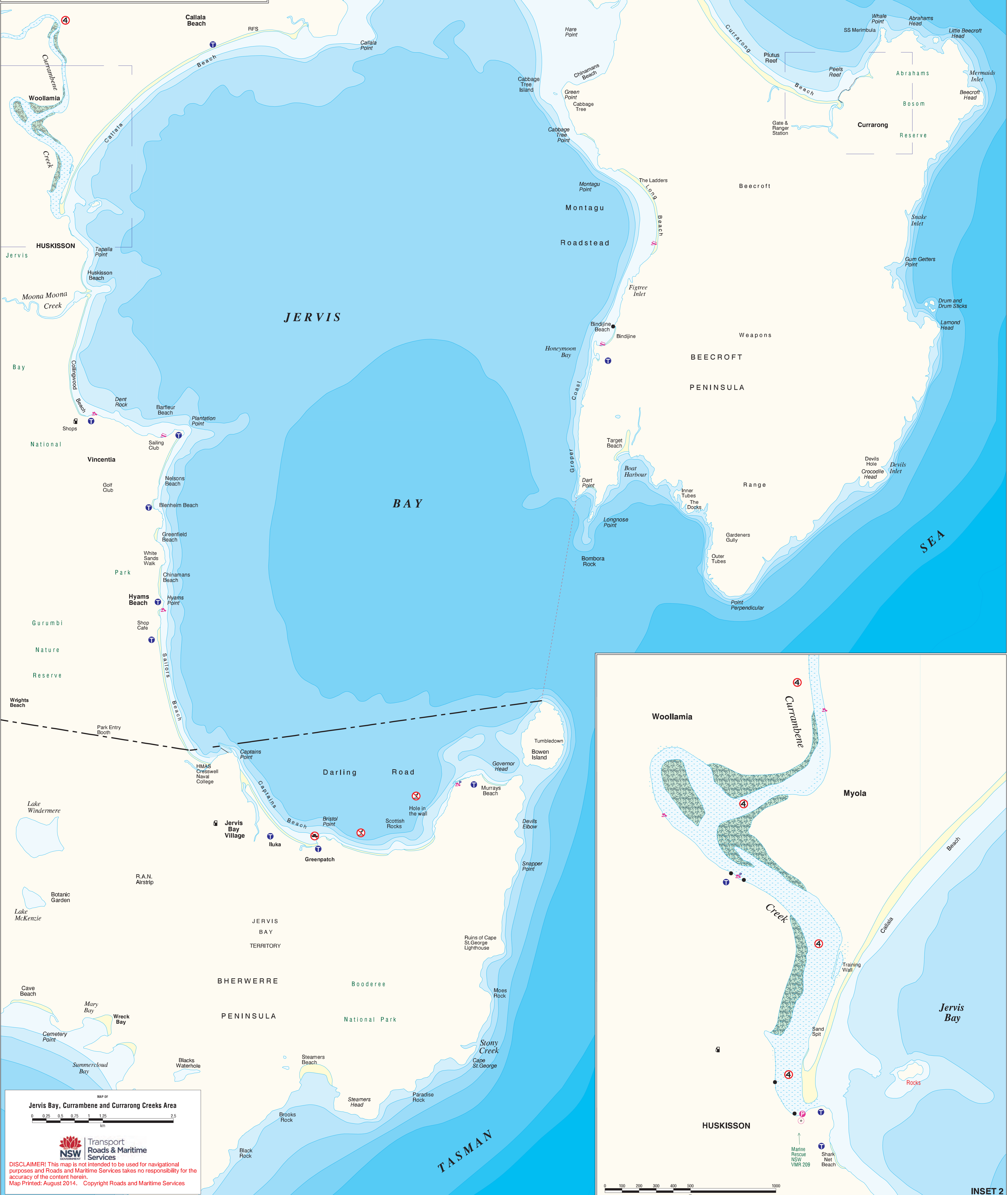


MAP OF
Shoalhaven and Crookhaven Rivers Area
 Kiama and Gerringong Harbours and Gerroa Insets

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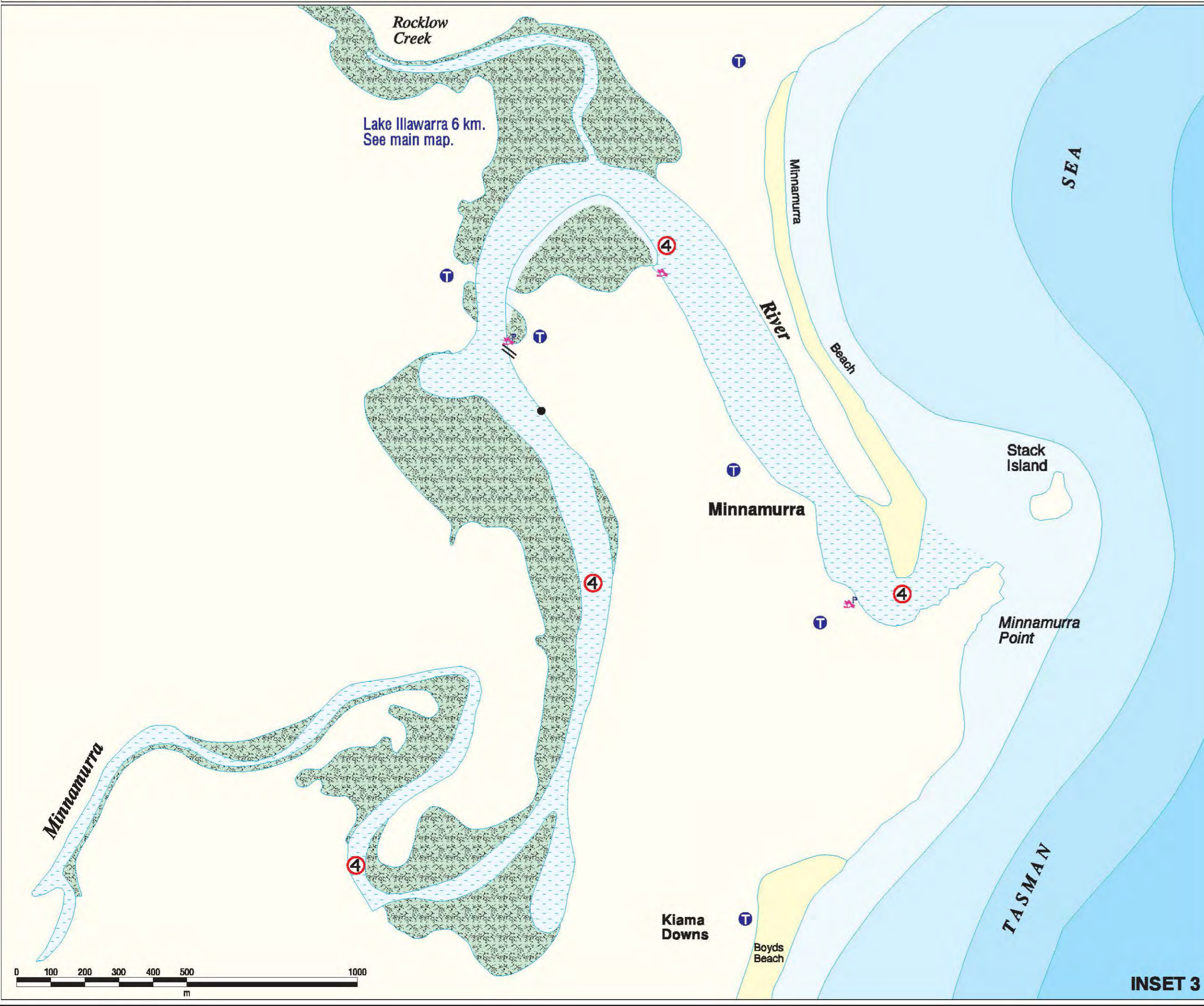
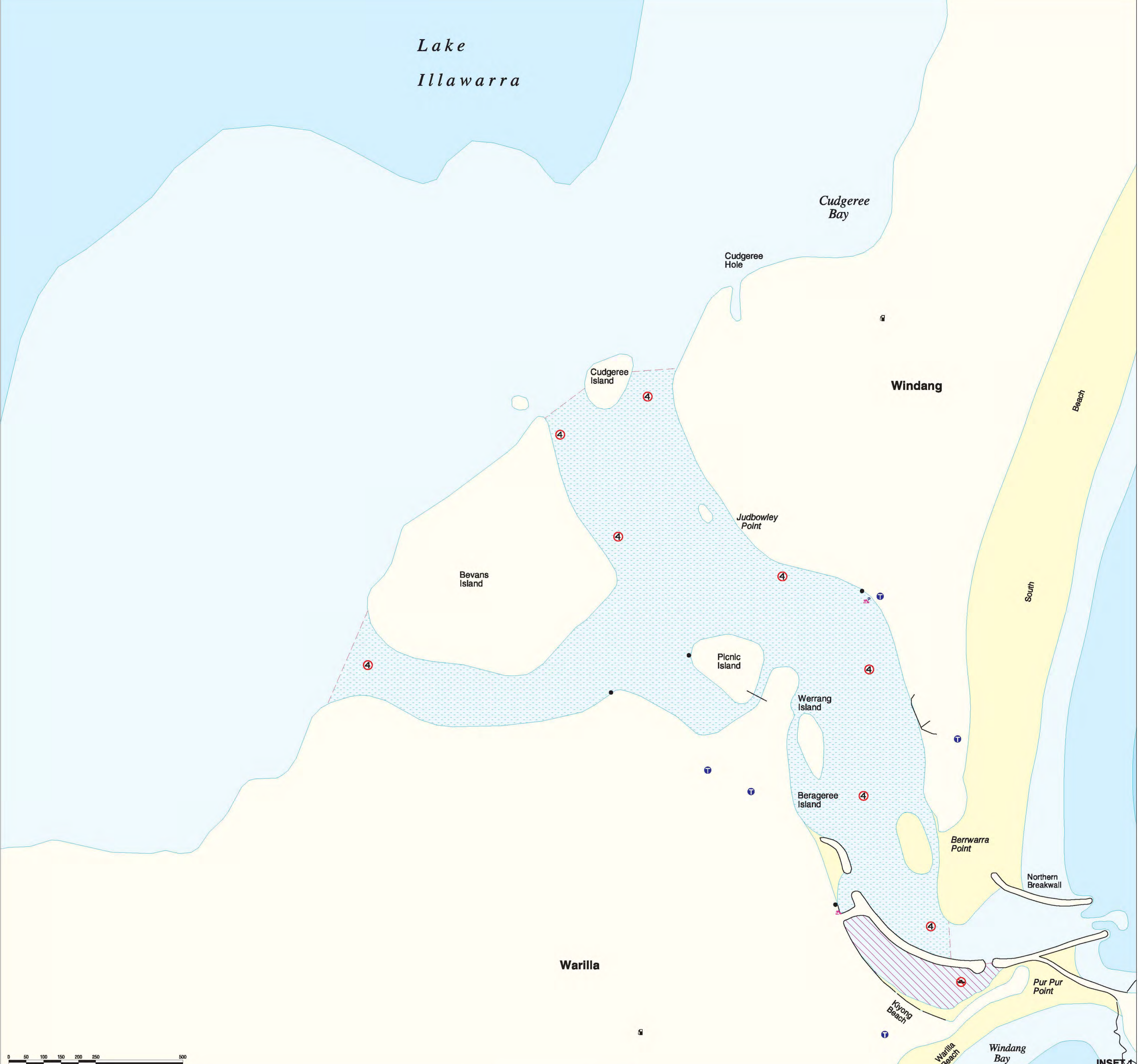


MAP OF
Jervis Bay, Currambene and Currarong Creeks Area

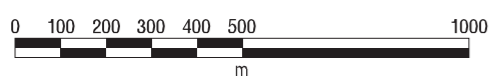
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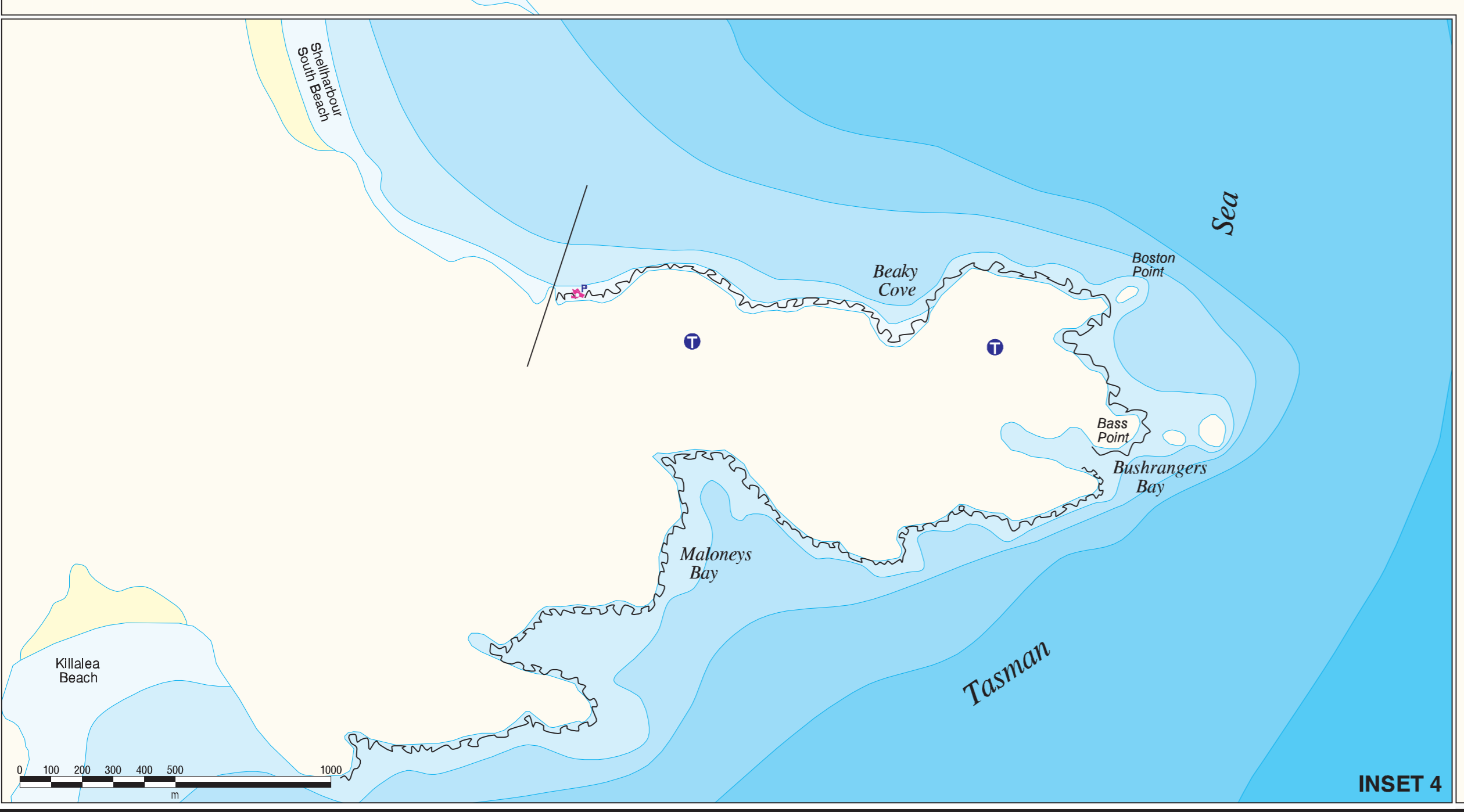
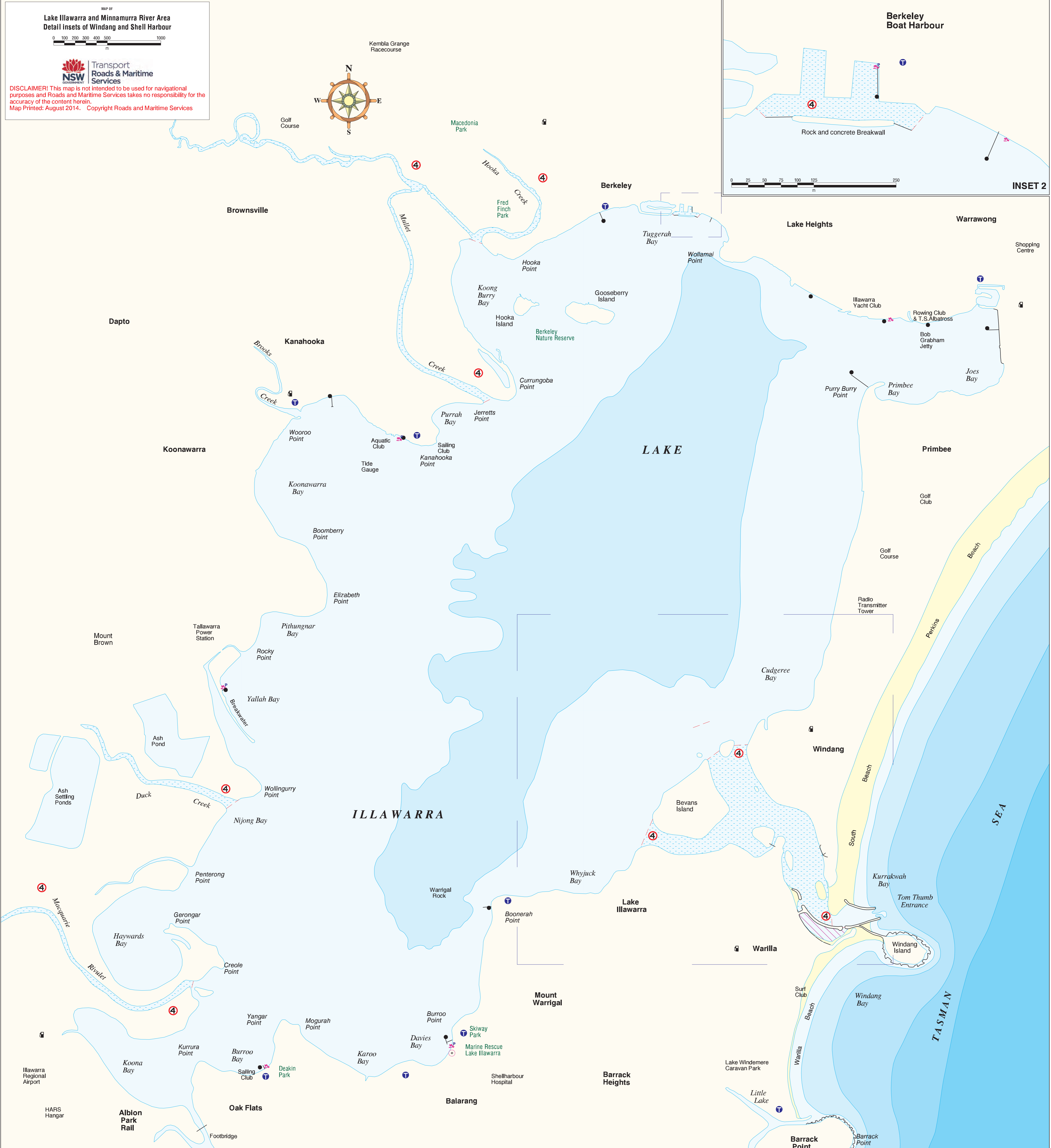
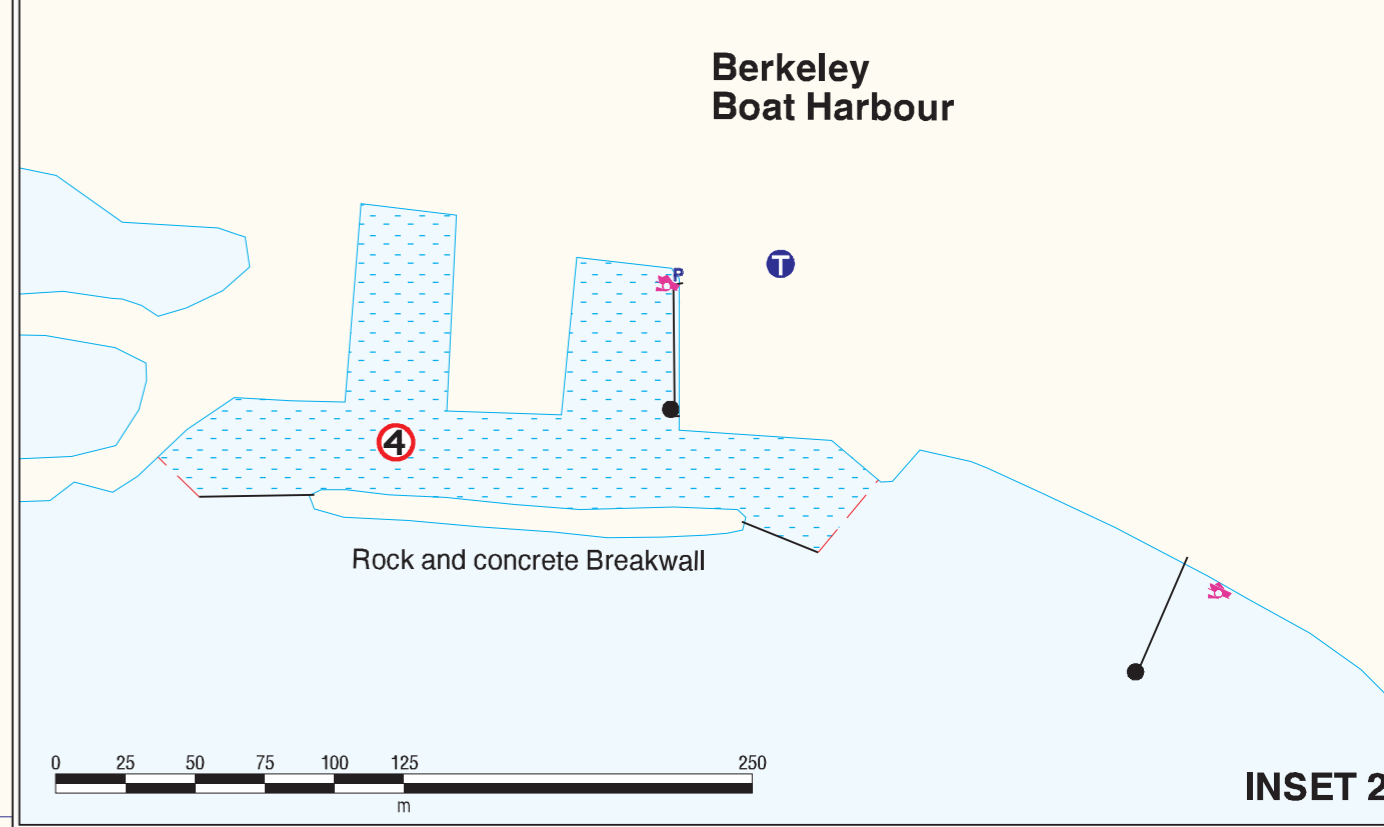
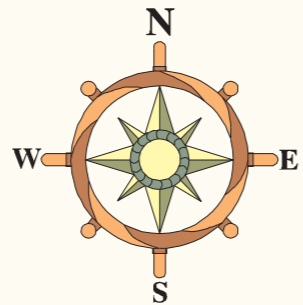
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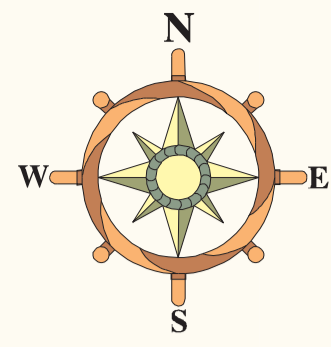


MAP OF
Lake Illawarra and Minnamurra River Area
Detail insets of Windang and Shell Harbour



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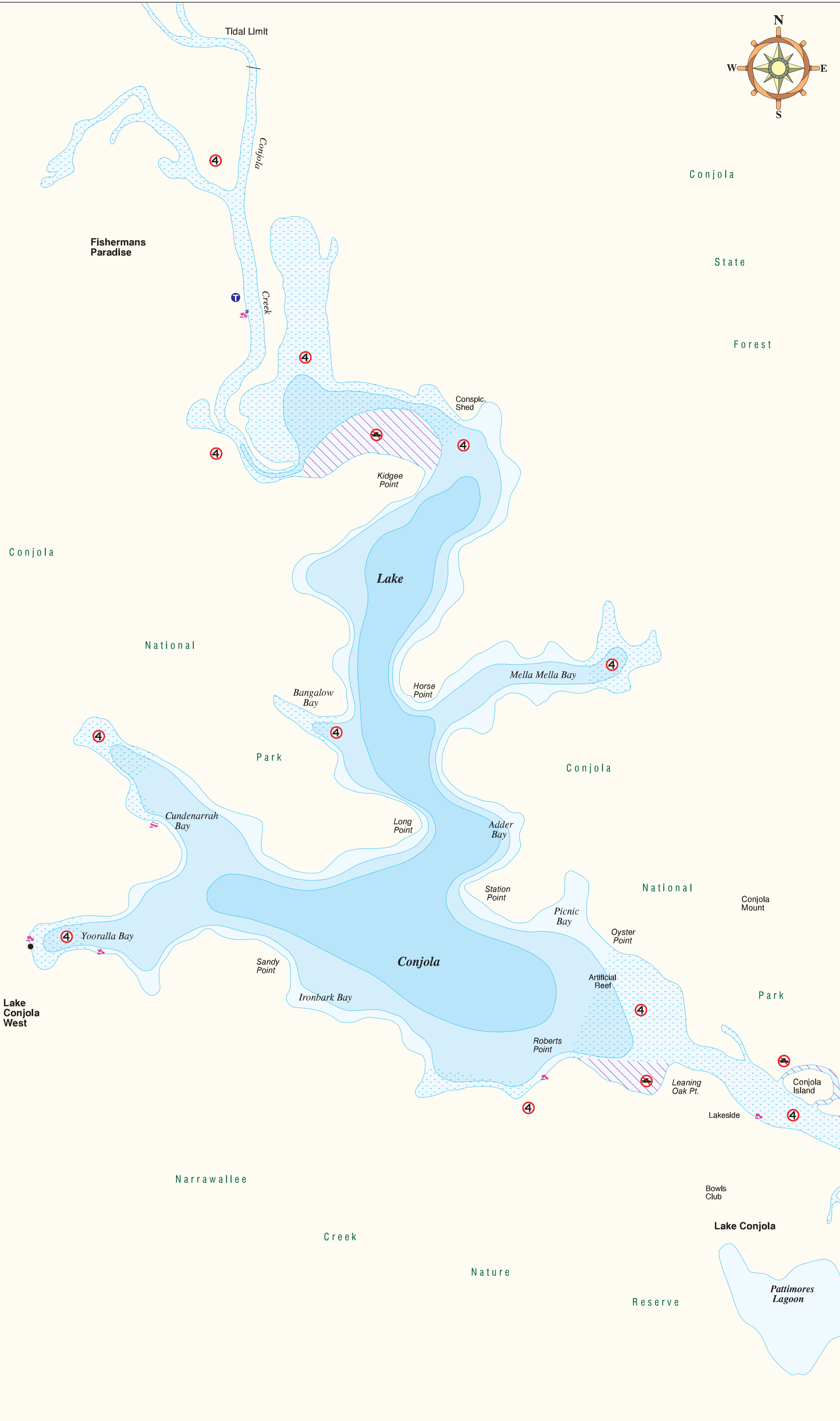
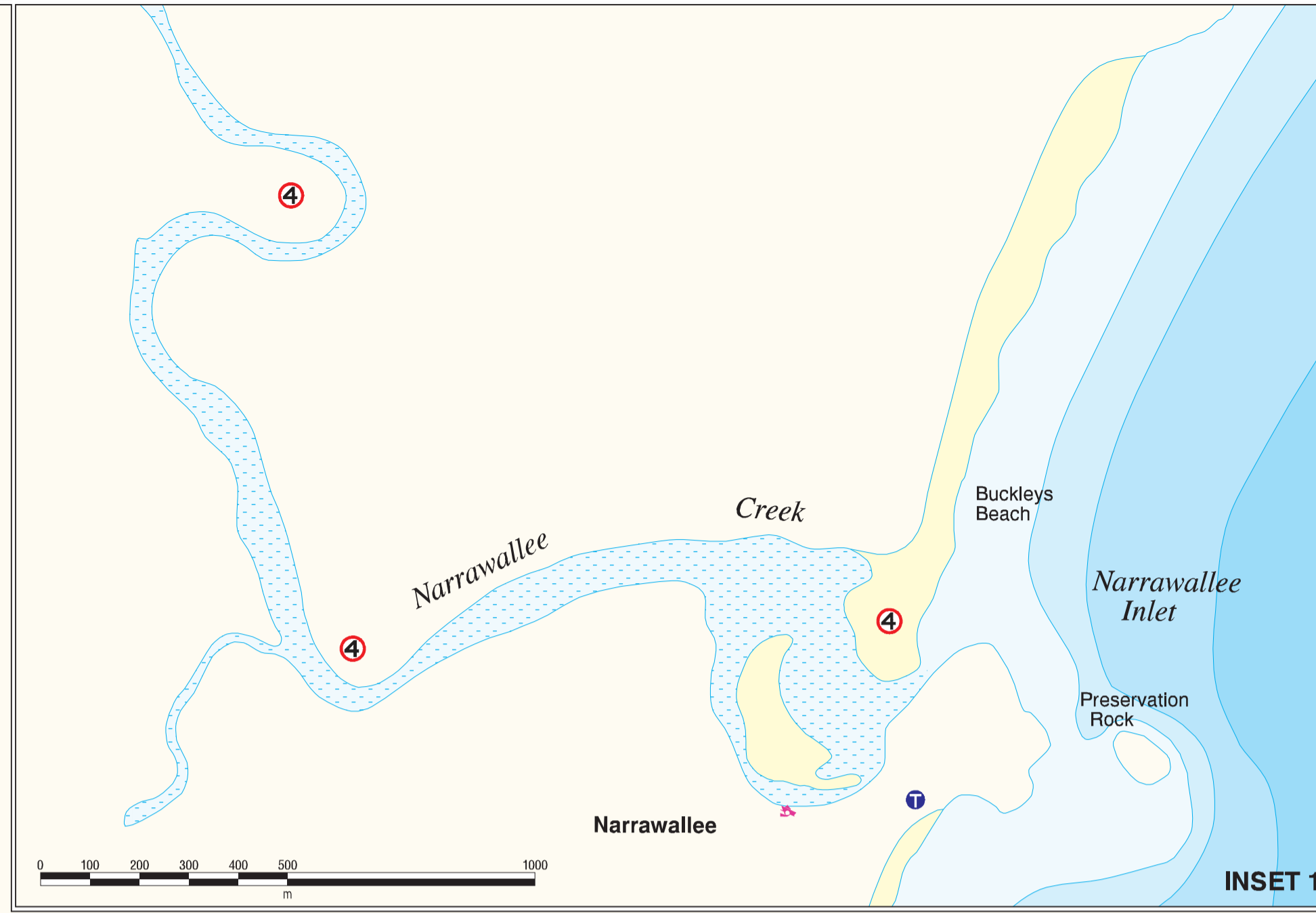




Conjola

State

Forest



MAP OF
**Lake Conjola, Bendalong Boat Harbour
and Inset of Narrawallee Inlet**

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