



Transport
for NSW

Maritime Management Centre

Transport for NSW Regional Boating Plan Botany Bay, Georges River and Port Hacking Region

February 2015



Transport for NSW
18 Lee Street
Chippendale NSW 2008
Postal address: PO Box K659 Haymarket NSW 1240
Internet: www.transport.nsw.gov.au
Email: maritime@transport.nsw.gov.au

ISBN Register: 978 1 922030 68 9

© COPYRIGHT STATE OF NSW THROUGH THE
DIRECTOR GENERAL OF TRANSPORT FOR
NSW 2014

Extracts from this publication may be
reproduced provided the source is fully
acknowledged.

Table of contents

1.	Introduction.....	4
2.	Physical Character of the Waterways	6
2.1	Background.....	6
2.2	Botany Bay Georges River	7
2.3	Port Hacking	8
3.	Waterway Users	9
3.1	Analysis of existing user data	10
4.	Safety	12
4.1	Overview of Existing Safety Activities.....	12
4.2	Complaints	14
4.3	Infringements	14
4.4	Incidents.....	15
4.5	Key findings	17
5.	Access.....	18
5.1	Overview of existing access facilities.....	18
5.2	Key findings	23
6.	Storage.....	25
6.1	Existing storage	25
6.2	Key findings	29
7.	Feedback on Consultation Draft	33
7.1	Feedback Summary.....	33
8.	Delivery Program	34
8.1	Summary.....	34
8.2	NSW Boating Now Funding	34

Table index

Table 1	List of Grants provided to Botany Bay, Georges River and Port Hacking region through the BBP Projects	21
Table 2	Priority Regional Projects	35
Table 3	Implementation of Boating Safety, Access and Storage Actions	36

Figure index

Figure 1	Map of regions	5
Figure 2	Botany Bay – Georges River	7
Figure 3	Port Hacking.....	8
Figure 4	Infringement analysis	15
Figure 5	Example access facilities within the region	20
Figure 6	Completed BBP projects examples within the region	22
Figure 7	Examples of private domestic jetties & boatsheds – private moorings (top two rows), trailer about to tow a vessel and Sylvania Waters Estate (bottom row)	26
Figure 8	Dry storage at Kurnell (top) and an alternative mooring apparatus (bottom)	29
Figure 9	Example on water storage at marinas, boating facilities and commercial moorings within the region.....	29

Appendices

Appendix A	Maps
------------	------



1. Introduction

The Botany Bay, Georges River and Port Hacking 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 maritime 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 Port Hacking (Burraneer) and Botany Bay/Georges River (Sans Souci) on 16 and 17 July 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 three major waterways: Botany Bay, Port Hacking and Georges River, which are situated within a densely populated region.

Recreational boating is a popular pastime in the region, attracting a broad catchment of boaters from within the region and from neighbouring regions, such as Sydney, that undertake a wide variety of boating activities. Further details on waterway users are provided in Chapter 3.

Botany Bay is home to NSW's largest port (containers and bulk liquids/gas). Further details on waterway users are provided in Chapter 3.

These waterways are covered by ten councils:

- Kogarah City Council (KCC);
- Marrickville Council (MC);
- Randwick City Council (RCC);
- Rockdale City Council (Rockdale CC);
- Fairfield City Council (FCC);
- Bankstown City Council (BCC);
- The Council of the City of Botany Bay (CCBB);
- Hurstville City Council (HCC);
- Liverpool City Council (LCC); and
- Sutherland Shire Council (SSC).

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

2.2 Botany Bay & Georges River

The catchment includes both Botany Bay and Georges River. This area also includes 10 local government areas and has a population of around one million people within the council areas.

Botany Bay has a catchment of approximately 55 km² in size, an estuary of approximately 40 km² in size and an average depth of 11.4 m. Major commercial infrastructure in the bay includes Sydney Airport and Port Botany. Relevant councils include Randwick City Council, City of Botany Bay, Rockdale City Council and Sutherland Shire Council.

The Georges River has an estuary of approximately 26 km² in size and an average depth of 10.5 m. It begins near Appin and flows in an easterly direction through Liverpool and the Chipping Norton Lakes to Botany Bay. A number of significant tributaries and creeks feed into the river system, including the Woronora River, Salt Pan and Prospect Creeks. The Georges River falls into the Liverpool and Sutherland local government areas (LGA). The Como Bridge has a 7 m clearance preventing masted vessels in excess of this height travelling further upstream.

The Cooks River also flows into Botany Bay. It has an estuary of approximately 1.2 km² in size and an average depth of 0.9 m. The lower reaches of the river fall within Rockdale City Council's boundaries.



Figure 2 - Botany Bay & Georges River

2.3 Port Hacking

Port Hacking lies to the south of Botany Bay and is less industrial than Botany Bay and Georges River. It has a catchment of approximately 165 km² in size, an estuary of approximately 12 km² in size and an average depth of 9.1 m. Port Hacking begins in the upper reaches of the Hacking River and includes several smaller creeks, such as South West Arm. These generally flow to the east until reaching the Tasman Sea between Cronulla and Bundeena. Port Hacking lies within Sutherland Shire Council. The southern part of the catchment falls within the Royal National Park.

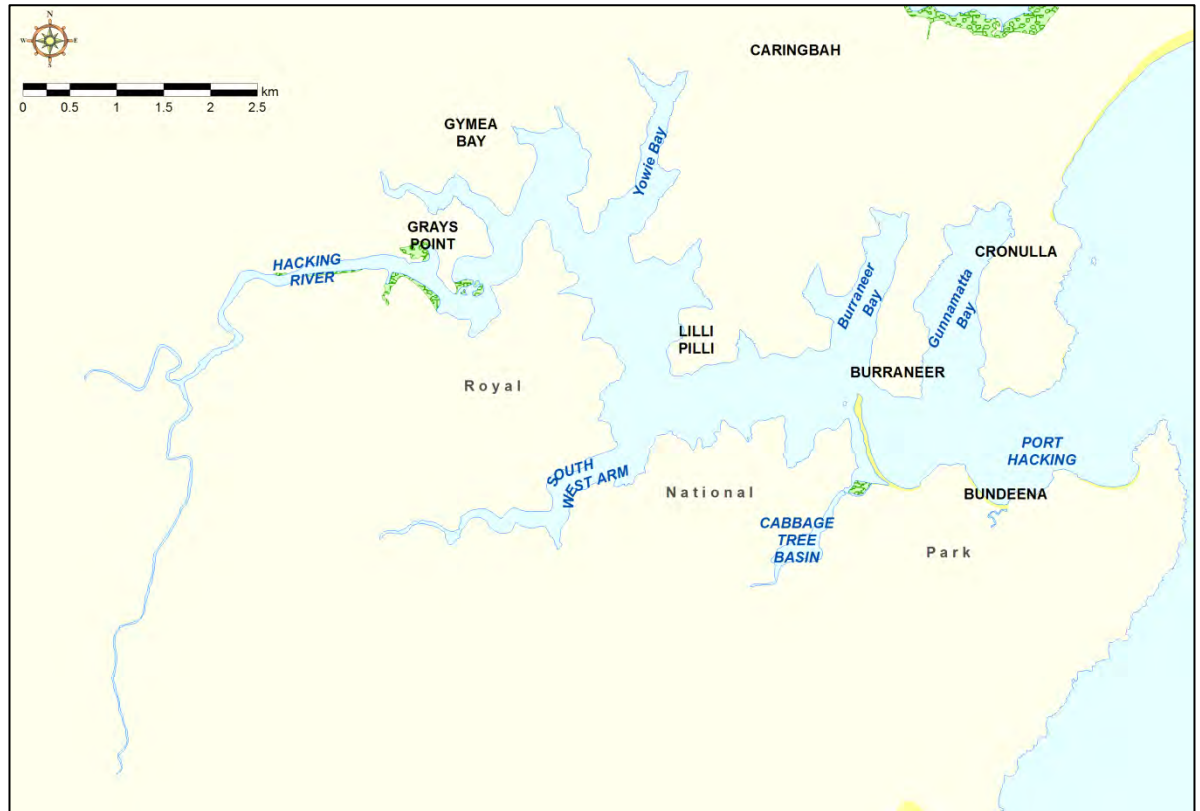


Figure 3 – Port Hacking



3. Waterway Users

Recreational boating is a popular pastime in the Botany Bay, Georges River and Port Hacking regional waterways. Users undertake a wide variety of boating activities including water-skiing, personal watercraft (PWC) operation, sailing and as well as canoeing, kayaking, rowing, dragon boating and other non-powered boating activities. Fishing from vessels and the shore is also extremely popular in the region. In 2002, approximately \$4.1 million of recreational licence fees were used to buy out commercial fishing in Botany Bay to create one of the State's premier recreational fishing havens.

The region hosts a number of regattas across various boating user types. Over recent years, sailboarding and kite surfing have become very popular in Botany Bay. Other activities such as swimming, diving and stand up paddle boarding (SUPs) are also popular in particular areas across the region.

Botany Bay is Sydney's major shipping port and includes bulk liquid/gas and container facilities. In addition, the two north-south runways of the Kingsford-Smith Airport extend significantly into the bay. Based on July 2012 figures in the boating safety plan for Botany Bay, Georges River, Woronora River and Cooks River, there are 350 commercial vessels based out of Botany Bay or the Georges River.

There is some commercial fishing in the region. Botany Bay is closed to commercial fishing with the exception of abalone gathering and rock lobster trapping. Port Hacking is open to commercial fishing with some exceptions to method and catch.

The western shores of Botany Bay are popular for swimming, PWC riding, kite boarding and windsurfing. The lower Georges River close to Botany Bay hosts the Kogarah Bay Sailing Club, Botany Bay Yacht Club and St George Motor Boat Club. The main channel of the Georges River is utilised by all vessel types, while the protected bays are popular amongst non-powered craft users and water-skiers.

There are numerous commercial marinas on the Georges River. The upper reaches are commonly utilised by PWCs, towing vessels and non-powered craft. The lower reaches of the Woronora River are also popular for non-powered craft as well as PWCs. There are also a number of small craft launching areas.

The Cooks River hosts the St George Rowing Club and the St George Kayak Club. The lower reaches, from the mouth of the river to the Princes Highway Bridge at Tempe, are used primarily to access Botany Bay, either through one of its boat ramps or from a swing mooring. Generally, this area is a busy transit route for rowers and vessels.

As a result of the 8 knot speed zone at Chipping Norton Lake, this area has become a popular boating waterway for non-powered craft along with small powered and sailing vessels. The adjoining waterway, Floyd Bay, has no speed restrictions and is used for all recreational activities particularly PWCs.

There is increasing interest in the potential use of emerging technologies such as Flyboard and Jetlevs in the Port Hacking, Botany Bay and Georges River areas.

There is less boating on Port Hacking than Botany Bay and Georges River due to a smaller estuary size as well the southern banks forming part of the Royal National Park. There are six marinas located throughout the waterway. Port Hacking is popular for activities such as boating, recreational fishing, PWC use, scuba diving, sailing and swimming. It also hosts numerous sporting and recreational clubs in the region.

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 catchments in this region has revealed the following:

- Botany Bay and the Georges River had a collective population of 1,027,107. The area experienced a population growth of 6.87%;
- The Sutherland Shire Council which covers the Port Hacking region had a population of 210,863. The area experienced a population growth of 2.64%;

The population growth of the above catchments was below the national average growth of 8.32%. However, the Botany Bay and the Georges River catchments have grown in excess of the NSW average of 5.63%.

There are approximately 77,000 boat licence holders in the Botany Bay, Georges River and Port Hacking region. This represents approximately 14% of all boating licences in NSW, the second highest contribution in the state.

The majority of licence holders in the region carry a General Boat Licence and approximately 17% are licensed to operate PWCs, the highest percentage in the state.

3.1.2 Registration data analysis

There are approximately 28,700 registered recreational vessels in the Botany Bay, Georges River and Port Hacking Region. This represents approximately 12% of all registered recreational vessels in NSW. The most common vessel hull types in this region are Open Runabouts followed by Cabin Runabouts, PWCs, motor cruisers, yachts, punts and inflatables.

A considerable portion (82%) of the registered vessels in this region is between 2 and 6 m and the average vessel length for the region is 5.1 m. Vessels less than 6 m are defined as trailerable. This has a strong influence on the boating access and storage issues in the Region with a focus on boat ramps and both short and long-term trailer parking.

3.1.3 Other users

While the above data provides information on licence holders and vessels registered in the Botany Bay, Georges River and Port Hacking region, it does not capture vessels from other regions that use these waterways, such as Sydney and Wollongong. The absence of PWC exclusion zones such as those in Sydney Harbour also adds to the region's popularity with users from other regions. This 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 vessel 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 estimated that there may be several thousand of these vessels in the Botany Bay, Georges River and Port Hacking 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; however it identified recreational boat ownership in the Botany Bay, Georges River and Port Hacking region as increasing by around 1.5% annually.



4. Safety

Key findings

- Stakeholder consultation suggests high levels of satisfaction with current boating safety measures in the Region.
- Many stakeholders highlighted that waterway users not acting in accordance with guidelines as the largest source of dissatisfaction.
- Personal water craft were involved in a high percentage of incidents and also attributed to a large percentage of safety issues.
- Improved signage and navigation aids would help enhance boating safety and the overall boating experience.

Actions

- a. Review strategies to improve user behaviour and safe boating practices across the region, particularly amongst PWC users**
- b. Review the placement and planning of navigations aids**
- c. Review and improve signage clarity and visibility**

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 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 Botany Bay, Georges River and Port Hacking 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 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:
 - Picnic Point;
 - Cooks River;
 - Sections of the Woronora River;
 - Bays such as Gwawley Bay, Gynea Bay, Fishermans Bay, Simpsons Bay, Bundeena Bay, Gunnamatta Bay; and
 - South West Arm.
 - 8 knot zones in Oatley Bay, sections of the Woronora River, between Picnic Point and Sandy Point, Great Moon Bay, Chipping Norton Lake, Frenchmans Bay, Quibray Bay, Weeney Bay, Hacking River, Yowie Bay; and
 - 10 knot zones under Alford's Point Bridge, Como Bridge, East Hills Railway Bridge, and the M5 South Western Motorway Georges River East Bridge.
- "no wash" zones;
- personal watercraft prohibited areas;
- all or power boats prohibited areas;
- no anchoring submarine cable zones;
- shallow waters;
- submerged rocks;
- overhead power cables;
- seaplane operating area; and
- no towing zones.

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.

Botany Bay, Georges River, Woronora River and Cooks River Boating Safety Plan

Following extensive public consultation, in November 2012 the MMC published the Botany Bay, Georges River, Woronora River and Cooks River Boating Safety Plan (the Boating Safety Plan) in January 2013. The purpose of the Boating Safety Plan is to underpin the development and implementation of a range of initiatives which aim to address navigation safety issues specific to the waterway. Issues that are identified in the Boating Safety Plan include user behaviour and compliance and enforcement across the region, which are also reflected in this plan.

In response to the issues raised in the Boating Safety Plan, the MMC and Roads and Maritime have developed and are progressively delivering targeted local education and compliance campaigns to educate boaters on safe boating practices. This Regional Plan should be read in partnership with the Boating Safety Plan.

The Boating Safety Plan focuses primarily on issues affecting navigation safety and should be read in conjunction with this plan. Readers should note that the Boating Safety Plan does not cover Port Hacking which is included in this plan.

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 relate to:

- irregular riding of personal water craft;
- vessels not observing correct distances off for all types of vessels;
- speeding; and
- wash.

The greatest number of complaints received by Roads and Maritime for the Botany Bay, Georges River and Port Hacking region related to the popular Woronora River, a tributary to the Georges River. Other noticeable areas for which complaints were received included Georges River, at Picnic Point and Chipping Norton Lake, and Port Hacking.

4.3 Infringements

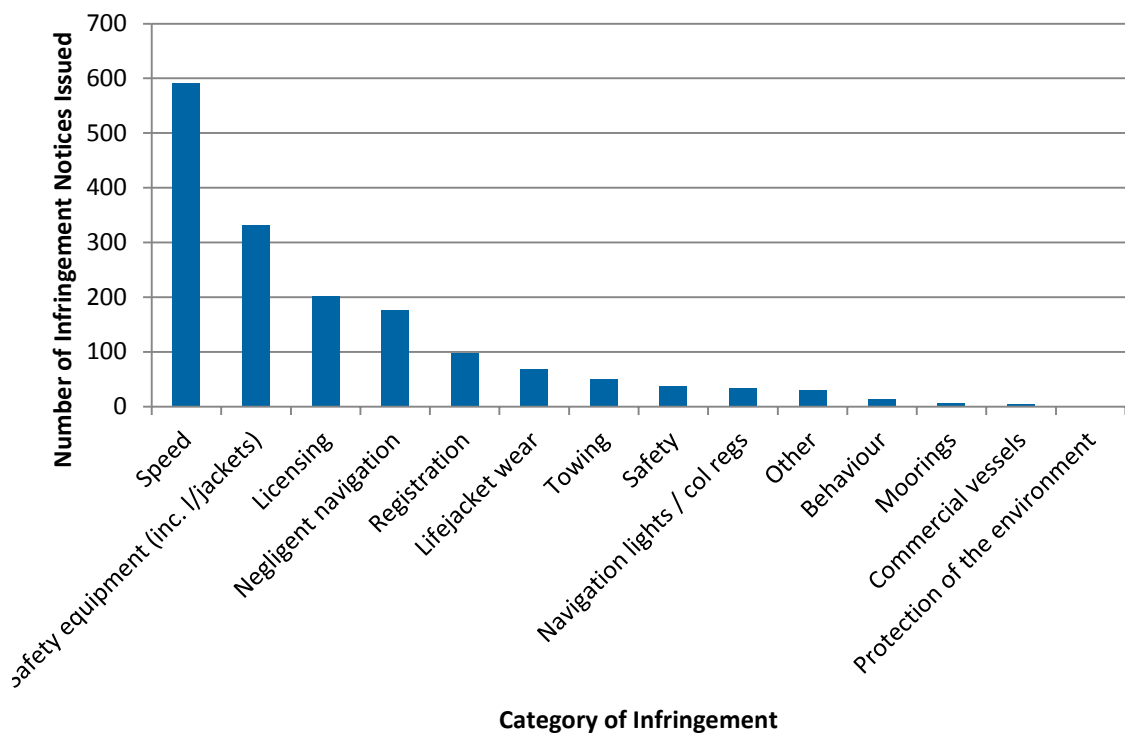
Between 2009 and 2013, the number of penalty notices issued within the Botany Bay, Georges River and Port Hacking region accounted for 13% of all infringement notices issued throughout NSW. Of the penalties issued over that period, approximately 70% were issued by Roads and Maritime, whilst the remainder were issued by NSW Police. In addition to these penalties, 2,460 formal warnings were issued. The highly trafficked waters of Georges River accounted for 44%

of the region's infringements while an additional 30% took place in Botany Bay. Despite a large number of complaints being directed towards the Woronora River, very few penalties were issued here.

As indicated in Figure 4 below, the infringements for which the most penalty notices were issued in the region were for:

- excessive speed;
- failure to carry the correct safety equipment;
- failure to carry the required licence; and
- negligent navigation.

Figure 4 – Infringement analysis



4.4 Incidents

In the period between 1 January 2009 and 31 December 2013, there were 200 vessel incidents reported to Roads and Maritime in the region. Fifty-six incidents occurred in Botany Bay, 44 occurred on the Georges River, 57 occurred in Port Hacking, and another 43 incidents occurred offshore. One hundred and seventy-one incidents involved recreational vessels, 11 involved an interaction between a recreational and commercial vessel and 18 involved commercial vessels only. This breakdown of incidents among vessel categories is broadly consistent with state-wide observations with a slightly greater concentration of recreational vessels.

4.4.1 Incidents resulting in death or injury

Nine fatal incidents resulting in 11 deaths have occurred in the region during this period. All of these incidents involved recreational vessels only. Four of these incidents took place between 6 pm and 6 am when waterway usage is reduced. Six of the incidents involved open motorised runabouts, with all of the nine being motorised vessels of some hull type. Excess alcohol was the cause of fatality on two occasions. All incidents were either due to collision, capsizing or a fall overboard. Of the 11 deaths, 10 of the deceased were not wearing an appropriate lifejacket

and drowned. It is probable that most of these victims would have survived had they been wearing a lifejacket at the time of the incident.

Twenty-nine incidents resulted in serious injury to the victim. A serious injury is classified as one requiring hospitalisation or outpatient treatment. These incidents resulted in 32 injuries. Two thirds of these incidents took place on the weekend and PWCs were involved in more than a quarter of them. Collisions were the primary incident type, either with fixed objects, submerged objects or other vessels.

4.4.2 Types of vessels

The main types of vessels involved in incidents, where known, were small powered craft (open runabouts 31%, cabin runabouts 12%) and larger motor cruisers (10%), sailing vessels (12%), and PWCs (16%). PWCs and sailing vessels were involved in a much greater percentage of incidents than their proportion of region-wide registrations. Inflatables (4%) and non-powered vessels (2%) were not highly represented. The remaining 13% consisted of a multitude of vessel types with small individual representations.

4.4.3 Incident Locations

While incidents occurred throughout the region, there are a number of areas where the incidents were concentrated. These areas are:

- 19 incidents occurred in the North-East of Botany Bay;
- 15 incidents occurred in Kogarah Bay;
- 15 incidents occurred in Burraneer Bay (Port Hacking);
- 12 incidents occurred in Yowie Bay (Port Hacking); and
- 10 incidents occurred in Gunnamatta Bay (Port Hacking).

4.4.4 Incident Cause

Behavioural and environmental factors were identified as the primary cause of the majority of incidents. Thirty-five incidents were attributed to a lack of judgment and another 19 were caused by a lack of proper lookout, while 35 incidents were the result of weather or tidal conditions. The influence of weather conditions in this region is recorded as significantly greater than the state average. Material factors were attributable to 20 incidents involving failure of a variety of equipment, machinery, electronics or hull.

4.4.5 Incident Type

Incident types in the Botany Bay, Georges River and Port Hacking region were relatively similar to state-wide averages. Over a third (70 incidents) involved collisions between vessels, similar to the state-wide average. A considerable number of collision incidents occurred offshore (43).

The next most common type of vessel incident observed in the region was vessels capsizing (26) and collisions with a fixed object (26). No other incident type registered more than nine occurrences.

4.4.6 Incident Operation

Vessel operation at the time of an incident provides some insight into their nature. While 116 occurred when vessels were underway, 25 vessels were moored and 13 were at anchor or berth, which is broadly similar to the state-wide proportions. Twenty one of the incident collisions noted at Section 4.4.5 involved collisions with vessels that were moored or berthed – mostly by vessels breaking their berths or moorings and colliding with other moored vessels.

Three tow sport incidents were reported during the period, almost half of the state-wide average.

4.4.7 Time of day, month and year

Where the time of the incident is known, 152 occurred during daylight; 56 in the morning and 96 in the afternoon. Forty eight incidents occurred at night, with an even spread before and after midnight. The number of incidents recorded peaked in January, most likely due to increased waterway usage during warmer weather. It may be expected that there would be a correlation between climate and the number of incidents, i.e. poor weather resulting in more incidents, yet this was not obvious from the data. Weekends were the most likely days for incidents to occur, especially on Sunday.

4.4.8 Wind and weather

The region's waterways can be subject to rapidly changing weather conditions, including substantial winds and wave chop, which can cause problems for boaters, particularly in small vessels. Of the incidents where the weather conditions are known, approximately three quarters occurred on days with clear visibility and fine weather. More than 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 are no bar crossings in the region due to deep water entrances at Botany Bay and Port Hacking.

4.5 Key findings

The consultation feedback suggests that boaters in the Botany Bay, Georges River and Port Hacking region generally have a positive view about safety on the Region's waterways. Analysis of complaints, infringements and incidents data suggests that, as busy waterways with multiple types of users, Roads and Maritime will need to remain vigilant in actively managing 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 was a common theme across the different stakeholder groups. Particular attention was drawn to PWC users, who were identified by various groups as having poor etiquette. Interstate and state-wide education campaigns are important in supporting this objective; however there are also actions that can be taken at the local level such as improving the visibility, clarity of signage and appropriate enforcement of user zoning as seen in areas such as Chipping Norton Lake.

There are examples of faded and/or obscured safety signage, or safety signage that is "lost" among a cluster of signage. Updating navigation aids has also been identified as opportunity to deliver improvements for boaters in the area.



5. Access

Key findings

- There are relatively few waterway access points in the Botany Bay, Georges River and Port Hacking region to service a significant population.
- There is significant strain on capacity at most access points even amongst relatively new and well-managed facilities. Capacity of car and trailer parking is also strained and limited at most access points.
- There are many locations in the region that are popular day trip destinations and supporting infrastructure would enhance the boating experience.
- Shallow waters and shifting sand banks in some bays and channels provide difficult access.

Actions

- d.** Work with Councils and other partners to improve the condition and capacity of boat ramps and other access facilities
- e.** Work with Councils and other partners to increase trailer parking capacity and provide appropriate facilities at access locations
- f.** Provide additional courtesy moorings at popular destinations and ensure, where possible, that appropriate amenities are available
- g.** Identify key areas for specific users and provide appropriate infrastructure at these strategic locations to minimise multi-user conflict

5.1 Overview of existing access facilities

Vessel access to the waterways of the Botany Bay, Georges River and Port Hacking region is available through several avenues including private and commercial moorings, marina berths, club or private landing facilities and boat ramps.

Trailer vessels can be launched and retrieved at public boat ramps, some of which have public facilities available, such as trailer parking, fish cleaning and toilets, as well as through smaller sailing, rowing or similar clubs. There is also informal access for smaller vessels such as dinghies, runabouts, and non-powered vessels from public foreshore land including reserves and beaches. Larger vessels generally access the waterway at their on-water storage facilities such as marinas or through dinghy access to vessels kept on moorings.

Public wharves and jetties are also located on the region's waterways and provide access to and from the water for recreational and commercial vessels.

Some of the ramps visited were visually identified to be in below average condition, insufficient to meet demand, lacking amenities and access facilities. This is reinforced by stakeholder feedback as well as the existing literature that was reviewed.

Boat ramps

There are currently approximately 28 boat ramps.

- Location:
 - 14 are located on Georges River;
 - Four are located in Port Hacking; and
 - Botany Bay, Chipping Norton Lake, Cooks River and the Woronora River account for the remaining 10 ramps.
- Material:
 - 22 are concrete;
 - Five are bitumen; and
 - One is made of sand.
- Ownership:
 - & 21 of the boat ramps are owned and maintained by local councils (see section 2.1 for a full list of councils in the region).

Public jetties, wharves and pontoons

In addition to ramps there are approximately 45 public access points in the region including wharves, jetties, pontoons and landings.

- Location:
 - 22 in Georges River;
 - 13 in Port Hacking; and
 - Botany Bay, Chipping Norton Lake, Cooks River and the Woronora River account for the remaining 10.

Courtesy moorings

Current courtesy moorings include:

- Five at Towra Point;
- Three on Georges River at Lugarno opposite Moon Point;
- Three in Port Hacking near Carruthers Bay;
- Three in Port Hacking near Dark Bay;
- Two in Frenchmans Bay, Botany Bay;
- Two in Port Hacking at Jibbon Beach;
- Two in Port Hacking at Warumbal;
- One at Sutherland Point, Botany Bay; and
- One at Sans Souci near the Georges River 16 ft Sailing Club.

Figure 5 – Example access facilities within the region



Kogarah Bay



Burraneer Bay



Tom Ugly's Bridge



Gunnamatta Bay



Sylvania



Sylvania



Silver Beach



Kogarah Bay



Cooks River



Kyeemagh Boat Ramp

5.1.1 Better Boating Program grants

Through the Better Boating Program Roads and Maritime has provided grants totalling over \$3.1 million were provided for 35 projects in the Botany Bay, Georges River and Port Hacking region between 2005 and 2014. A selection of these can be seen in Figure 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 Grants provided to Botany Bay, Georges River and Port Hacking region through the BBP Projects

Recipient	Project	Final Grant
Bankstown City Council	Rabaul Road Boat Ramp Facility Upgrade (Pontoon), Georges Hall	\$40,000
Bankstown City Council	Rabaul Road Boat Ramp Facility Upgrade, Georges Hall (Stage 2 - Pontoon Carpark)	\$200,000
Bankstown City Council	Rabaul Road Boat Ramp Upgrade - Georges Hall, Georges River	\$51,000
Bankstown City Council	Rabaul Road Boat Ramp Upgrade (Solar Lighting), Georges Hall	\$3,500
Chipping Norton Lake Authority	Floyd Bay Boat Ramp Construction	\$80,000
Cooks River Motor Boat Club	Cooks River Boat Jetty	\$49,652
Fairfield City Council	Bradbury Wharf, Chipping Norton Lake	\$74,520
Kogarah City Council	Dover Park Boat Ramp Carpark Access Road Upgrade, Blakehurst	\$115,000
Kogarah City Council	Dover Park Sailing Facility - Blakehurst, Kogarah Bay	\$88,871
Kogarah City Council	Endeavour Street Wharf Pontoon Upgrade, San Souci	\$22,225
Liverpool City Council	Davy Robinson Reserve Boat Ramp Upgrade - Construction (Stage 1 - Boat Ramp Pontoon), Moorebank	\$246,706
Liverpool City Council	Davy Robinson Reserve Boat Ramp Upgrade - Stage 2 (Seawall) Stage 3 (Carpark), Moorebank	\$202,475*
Liverpool City Council	Davy Robinson Reserve Boat Ramp Upgrade (Design), Moorebank	\$27,780
Liverpool City Council	Davy Robinson Reserve Jetty	\$49,000
NPWS	Pool Flat Pontoon, Royal National Park (Hacking River)	\$195,136*
NPWS	River Access (Stage 1) - Georges River National Park	\$100,000
NPWS	River Access (Stage 2) - Georges River National Park	\$100,000
NPWS	River Access (Stage 3) - Georges River National Park	\$100,000
Rockdale City Council	Kyeemagh Boat Ramp Refurbishment (Stage 1), Cooks River	\$50,000
Rockdale City Council	Kyeemagh Boat Ramp Refurbishment (Stage 2), Cooks River	\$27,302

Rockdale City Council	Kyeemagh Boat Ramp Refurbishment (Stage 3), Cooks River	\$55,000
Rockdale City Council	Kyeemagh Boat Ramp Refurbishment (Stage 4), Cooks River	\$27,500
Sutherland Shire Council	Albert Delardes Reserve Pontoon Facility (Stage 1), Illawong	\$30,000*
Sutherland Shire Council	Bonna Point Boat Ramp Carpark Upgrade (Additional Funding 3)	\$80,565
Sutherland Shire Council	Bonna Point Boat Ramp Carpark Upgrade, Botany Bay (Additional Funding 2)	\$140,000
Sutherland Shire Council	Bonna Point Boat Ramp Upgrade New Pontoon, Botany Bay (Additional Funding 1)	\$230,000
Sutherland Shire Council	Bonna Point Boat Ramp Upgrade New Pontoon, Kurnell (Botany Bay)	\$100,000
Sutherland Shire Council	Gunnamatta Bay Boat Ramp Upgrade, Cronulla	\$30,000*
Sutherland Shire Council	Hawkesbury Esplanade Boat Ramp, Sylvania Waters - Pontoon Upgrade (Stage 2)	\$50,000
Sutherland Shire Council	Hospital Bay Jetty Upgrade & New Pontoon, Cronulla	\$78,375*
Sutherland Shire Council	Wally s Wharf Sewage Pump-out, Dolans Bay	\$87,187*
Sutherland Shire Council	Wally s Wharf Sewage Pump-out, Dolans Bay (Additional Funding)	\$98,454*
Sutherland Shire Council	Water Street Boat Ramp Upgrade, Burraneer Bay	\$15,000
Sutherland Shire Council	Yowie Bay Boat Ramp Upgrade New Pontoon, Port Hacking	\$67,500
Sutherland Shire Council	Yowie Bay Boat Ramp Upgrade New Pontoon, Port Hacking (Additional Funding)	\$210,368
	TOTAL	\$3,123,116

* denotes Active projects as of 11/11/2014

Figure 6 – Completed BBP projects examples within the region



Hawkesbury Esplanade Pontoon, Sylvania Waters



Hawkesbury Esplanade Boat Ramp, Sylvania Waters



Bradbury Wharf, Chipping Norton Lakes



Cooks River Motor Boat Club Public Pontoon



Dover Park Sailing Facility, Georges River



Georges River National Park river access



Georges River National Park river access



Kyeemagh Boat Ramp



Swallow Rock Boat Ramp, Grays Point, Port Hacking



Bonna Point, Kurnell

5.2 Key findings

The Botany Bay, Georges River and Port Hacking region has a relatively low number of access points with respect to the population of boaters in the region, which is partly owing to a limited amount of public access due to high levels of waterfront or near water property and the extensive lengths of National Park. The consultation feedback suggests there is a lack of capacity at most access points. To accommodate demand at peak times and to keep pace with the expected growth in boat ownership over the next decade, planning and upgrading of facilities, especially car and trailer parking, has been identified as a requirement. Despite the strain on waterway access, there are numerous facilities in the region that are relatively new and well-managed.

There are opportunities to significantly enhance the experience of a great proportion of boaters in the region through the upgrade of and strategic placement of additional access infrastructure facilities. With the relatively low number of existing boat ramps and access points in the region, and for ongoing safe and available waterway access opportunities, ensuring these access points are well maintained and equipped to service future demand is imperative. Currently, the most consistent limitation on access opportunities is the capacity of car and trailer parking at access locations.

The region also boasts a range of locations that are very popular for day trips and regularly services a large quantity of anchored and moored boats. During periods of high waterway usage these areas can become very busy and lead to conflicts with other users. The provision of a

number of additional courtesy moorings at these locations as well as improving and increasing accessible facilities and amenities would not only enhance boating experience, but would also lead to reduced environmental impacts from anchoring of boats and misuse of the waterway.

Site inspections and stakeholder feedback also indicated that several bays and waterway channels limit access due to shallow waters and siltation. By providing access infrastructure for appropriate user groups such as non-powered vessels or vessels with minimal draft at these locations; will alleviate capacity issues at deep water access locations whilst also reducing conflicts between user groups.

Botany Bay Fishing and Boating Infrastructure Improvement Program

In May 2014, the Minister for Primary Industries announced the \$5 million Port Botany Boating and Fishing Improvement Program which will provide two offshore artificial reefs, a new safe fishing platform and an additional boating access point for Botany Bay. MMC is working with Roads and Maritime and the Department of Primary Industries (DPI) to progress these initiatives.



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.
- Identifying opportunities for dry storage facilities is a priority for the region.
- Increasing long-term car/trailer parking capacity was identified as a priority.
- Long waiting lists for private moorings in popular areas are limiting access and storage for boaters.
- Navigation is restricted in a number of popular bays due to the current arrangement of moorings.
- Dinghy and non-powered vessel storage in coastal areas, where moorings are concentrated, is informal and access to moored vessels is often difficult.

Actions

- h. Establish a Botany Bay, Georges River and Port Hacking Boat Storage Strategy**
- i. Review organisation of moorings to improve access and navigation and increase capacity in selected areas**
- j. Work with Councils to improve long-term off-street trailer parking capacity**
- k. Provide dinghy storage racks for areas with high concentrations of moorings**

6.1 Existing storage

6.1.1 Overview of existing storage types

Storage for vessels is generally provided on-land for smaller trailerable vessels (< 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 Botany Bay, Georges River and Port Hacking region are principally administered as follows:

- Private moorings;
- Commercial moorings (all types);
- Commercial marina berths; and

- Domestic berths, moorings and other associated storage.

Storage can be at private or commercial facilities. 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 of dry storage include Kurnell (dry-stack), Como Marina and McKay Marine (hardstand). Access to vessels is usually through the commercial land site.

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, for example a dinghy, and this vessel also requires its own form of storage on-land. Additionally in this region there is a canal estate at Sylvania Waters with significant numbers of private storage spaces.

Vessels less than 6 m in length are most often stored on trailers on private property or public roads.

Figure 7 – Examples of private domestic jetties & boatsheds & private moorings



6.1.2 Overview of existing storage volume

It is estimated that there are approximately 4,000 vessel storage spaces on-water or at associated land facilities in the region. Additionally there are a number of dry storage spaces in the region. Of the vessels stored / spaces on-water, approximately 1,800 of these are at private moorings and 430 at commercial moorings. These are administered by Roads and Maritime. The total number of commercial moorings also includes approximately 300 moorings associated with marinas, clubs or associated boat facilities.

As with other regions, there are numerous facilities administered under licences with NSW Trade and Investment (Crown Lands), some of which are included in the total storage spaces quoted above. As an example, the southern foreshores west of Sylvania Marina to Como Marina hold in excess of 300 private storage facilities such as domestic jetties, berths or boatsheds. A large proportion of these do not have boats. The use is usually exclusive to the property owner and they cannot be sub-leased or licenced.

With approximately 12% of all registered recreational vessels in NSW in this region and the proportion over 6 m growing considerably from 1999 to 2009 to approximately 18% of the total, demand for on-water storage is particularly high.

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

Botany Bay – Georges, Woronora and Cook Rivers

- There are several marinas, clubs and other boating facilities including:
 - Tom Ugly's Bridge Marina – 29 berths, 8 moorings;
 - Sylvania Marina – 60 berths, 18 moorings;
 - Blakehurst Marina – 40 berths, <10 moorings;
 - Como Marina – 29 berths, 11 moorings and approximately 25 trailerable vessels on hardstand;
 - Lugarno Marina – 20 berths, 10 moorings;
 - McKay Marine – 20 moorings, <15 hardstand;
 - Picnic Point Boatshed – 20 moorings;
 - Brighton Fishermen's co-op (Muddy Creek) – 50 moorings;
 - Shell Point Marina – 18 moorings; and
 - Lewis Anchorage Marina at Taren Point.
- St George Motor Boat Club – 151 berths, 18 moorings. *Note: additional 78 berths approved.*
- There are approximately 600 private and 260 commercial moorings including those listed for marinas, clubs and boating facilities, as well as a numerous domestic jetties, in the waterways. These are concentrated west of Captain Cook Bridge with a small number of commercial moorings and private domestic licences in Woollooware Bay.
- Sailing clubs:
 - Botany Bay Yacht Club with – 29 moorings;
 - St George Sailing Club – 3 moorings;
 - Blakehurst Cruising Club – 9 moorings;
 - Georges River 16 ft Skiff Club – 2 moorings;
 - Yarra Bay Sailing Club, hardstand for external storage and inside stacks; and
 - Connells Point Sailing Club – 1 mooring.
- As with smaller clubs in other waterways, most offer members access to storage for smaller vessels. Generally these vessels are stored on-water or land-based, in an open hardstand area, or inside stacks in smaller sheds. This plan has not included all numbers at these sites in its overview, however generally sailing clubs and associated facilities can often store from small numbers to in excess of 60 sailing (beach-launch) craft. Those vessels stored on land are usually not required to be registered and so do not appear in those total numbers.

Sylvania Waters

- The boating infrastructure is attached to Sylvania Waterways Ltd and is governed through a Body Corporate as they are on freehold land (submerged) land; they cannot be sub-leased to non-residents.
- The body corporate has stated that there are over 360 private jetties / pontoons / boatshed are in the Sylvania Waters estate.

Port Hacking

- Marinas and yacht clubs located in Port Hacking include:
 - Cronulla Marina – 70 berths;
 - Burraneer Bay Marina – 70 berths, 31 moorings. *Note:* the marina has plans to increase the number of storage spaces by an additional 27 permanent berths, three (3) casual berths and two (2) hardstand berths and has received support from the Joint Regional Planning Panel (JRPP) in 2013;
 - Dolan's Bay – 29 berths, 22 moorings;
 - Yowie Bay Marina – 15 berths, 17 moorings;
 - Royal Motor Yacht Club Port Hacking– 64 berths and 10 moorings; and
 - Attwell's Boatshed – 2 work berths, 23 moorings.
- Sailing clubs include Cronulla Sailing Club – 10 moorings and <20 hardstand, Port Hacking Open Sailing Club. As with Botany Bay and Georges River sailing clubs these smaller clubs offer members access to storage.
- There are over 1,000 private moorings in Port Hacking. Approximately 31% of these are occupied by sailing vessels, including yachts, tri-marans, sailing catamarans and other sail craft. This compares with approximately 50% of sailing vessels in the state, followed closely by Lake Macquarie with approximately 46% sailing vessels on private moorings.
- There are approximately 170 commercial moorings, a large proportion attached to marinas, clubs and other boating facilities.

Proposed Georges Cove Marina, Moorebank

The proposal received support from the Sydney West Joint Regional Planning Panel (JRPP) in October 2013. If delivered, the project will include a marina with 186 wet berths, 250 dry berths, and associated facilities.

Figure 8 – Dry storage at Kurnell (top) and an alternative mooring apparatus¹ (bottom)



Figure 9 – Example on-water storage at marinas, boating facilities and commercial moorings within the region



6.2 Key findings

The Botany Bay, Georges River and Port Hacking region includes some of the more popular waterways in NSW, in part due to its proximity to Sydney and the highly urbanised surrounding suburbs. As noted above, this region has the second highest number of boat licences and the

¹ Images obtained from <http://www.capemarine.net/smp/gallery/smpgalleria.html>

highest percentage of boaters licenced to operate PWCs in the State. The region also has almost 30,000 registered recreational vessels.

The demand for additional on-water and on-land boat storage in this region is demonstrated by the long waiting lists for private mooring licences in a number of bays, the occupancy rates at commercial sites, feedback from stakeholders and the prevalence of boat trailers being parked on residential streets in the area. Recent approvals/support for increased storage numbers in the region at a number of commercial sites also suggests demand for additional boat storage.

Accommodating the region's boat storage needs as vessel registrations and the size of vessels grow will require a combination of additional on-water and dry storage options.

Non-powered boating activities are also popular in the region. While numbers are not easily identifiable since these vessels do not require registration, anecdotal evidence suggests that the popularity of these craft is growing at an even higher rate than that identified for registered vessels. Storage options for these vessels will therefore also need to be considered in this region.

In 2013, the MMC developed the Sydney Harbour Boat Storage Strategy which examined the existing capacity and forecast demand for boat storage in Sydney Harbour. The Strategy seeks to identify the best way to accommodate growth by planning for the mix of storage facilities best suited to meet the characteristics of vessels and usage in the region. Adopting similar principles in the Botany Bay, Georges River and Port Hacking region will help achieve a common understanding of future boat storage requirements across all stakeholder groups.

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. As with other regions, dry storage, private moorings and other on-water storage including commercial marinas, need to be part of an overall approach for managing boat storage in the region. For example, there may be opportunities where Government funding can assist in establishing public marina facilities that could increase storage capacity while reducing the size of mooring fields.

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

Demand for private moorings and on-water storage berths

A number of areas in the region have a significant waiting list in comparison to total moorings such as Dolans, Gunnamatta, Great Turriell, Gynea Bay, Picnic Point, Sandy Point and Oatley. This data also reflects the feedback received from stakeholders in relation to waiting lists and supports the demand for more on-water storage in the region.

At the same time, navigation and access is often made difficult in and around some bays with high mooring numbers particularly at peak times. Examples of such bays include Gunnamatta, Burraneer, Yowie, Kogarah and Gwawley Bays. Apart from Gwawley Bay with less than 120 moorings, the other bays all have approximately 200 moorings and Gunnamatta has in excess of 270 moorings. Some of these bays are also in close proximity to yachting/sailing clubs and are also adjacent to designated racing areas.

While there is a clear demand for additional private mooring licences, any further increase to mooring numbers would further impact on navigation and access in and around these mooring areas. A balanced approach is therefore required that optimises existing mooring configurations and identifies 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 increased mooring capacity through policy and regulatory changes and by using alternate mooring systems such as fore and aft or multi-point moorings. In addition, there may

be opportunities where Government funding can assist in establishing public marina facilities that could increase storage capacity while reducing the size of mooring fields. 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

Currently, there is a dry storage facility at Kurnell which offers a combination of outdoor and indoor dry-stack spaces and has a moderately high occupancy rate. There are also a few sites in the region that offer a minimal amount of land storage, such as Como Marina.

Based on current hull types in the region, a substantial majority of vessels from 6-12 m could be stored at a dry storage facility if such facilities were made available. An additional dry storage facility could also assist addressing the challenges associated with boat trailers being parked on residential streets (further discussed below) as well as complementing on-water storage in this region (which is the preferred type of storage for vessels over 10 m).

Due to the challenges presented by high density urbanisation in the region, there are few appropriately sized sites adjacent to the waterways for dry storage. One option that could be explored further is at Taren Point where the Sutherland Shire Council and the Sutherland Shire Marine Association are working with local operators to identify opportunities to support marine precincts through zoning.

Long-term trailer parking

Boat trailer parking on residential streets has been identified as a key issue in a number of suburbs around Botany Bay, the Georges River and Port Hacking. For example, stakeholder feedback identified Swallow Rock (Grays Point), Yowie Bay (Wonga Road) Water Street and Wally's Wharf in Burraneer Bay as areas where trailers are being left parked on a long-term basis as well as limited short-term parking for trailers.

In 2013, MMC released a report from a Boat Trailer Working Group established to investigate options to better manage long-term boat trailer parking. The report (<http://www.transport.nsw.gov.au/publications-reports/boat-trailer-working-group-report>) highlights a number of opportunities to reduce the incidence of long-term boat trailer parking on residential streets. Following consideration of public feedback on the options identified in a package of new measures was announced by the Minister for Roads and Freight on 18 November 2014 including:

- \$5 million to be made available to work with councils and other organisations to help establish dedicated off-street boat trailer parking facilities;
- Introducing legislative amendments to allow councils to take impoundment action against boat trailers that are left in the same spot on local roads for more than three months;
- Authorising councils to issue fines for unregistered trailers parked on local roads; and
- Giving councils the flexibility to decide whether to issue parking permits to boat trailers owned by local residents as part of local parking permit schemes.

Dinghy storage

The majority of private mooring licence holders in this region are from suburbs adjacent to the waterways or in very close proximity. Many dinghies are therefore stored on private land having exclusive access to waterways, which was observed at a number of foreshore residences. There was some evidence of informal dinghy storage in areas such as Kogarah Bay. Feedback from stakeholders and councils in the region also referred to Little Turriell Bay, Lilli Pilli and Gunnamatta Bay as requiring both dinghy/tender and non-powered craft storage. Stakeholders also suggested the need for public access points such as boat ramps, parks and wharves in the region to have strategically placed storage for dinghies and other non-powered craft.

The BBP has in the past provided grants to councils in other regions to provide dinghy storage racks. This region would benefit from dinghy storage racks in the areas with higher mooring density in Port Hacking and the Georges River. The provision of storage for other non-powered craft in appropriate locations would also help to improve the boating experience in the region.



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

There were few submissions on the Consultation Draft that made specific comments on safety issues however a number of issues were raised at the Public Information Sessions. The perceived reckless behaviour of some PWC users was raised as a concern across the Region. Suggested actions included increased presence of BSOs in popular areas and better education and signage targeted at PWC users. Representatives from PWC user groups also suggested the need to incorporate a practical component into the PWC licence test to better train and educate PWC users about safe behaviour on the water.

7.1.2 Access

The feedback received broadly endorsed the key findings regarding Access, with submissions from Councils helping to inform the list of projects identified in Chapter 8 which will receive priority funding allocations as part of the NSW Boating Now program.

Comments at the Public Information Sessions strongly supported the need for more courtesy moorings and also suggested the need for improved wharf infrastructure in the region to provide access points for passengers on larger vessels along with emergency access point in Botany Bay. Randwick City Council and NPWS have sought support for assessing the feasibility of constructing new wharves at La Perouse and Kurnell respectively. Concern was also raised about a proposal for an exclusive use aquatic licence for a three- month trial of a Flyboard operation in Botany Bay. It was suggested that broader public consultation needs to be undertaken before aquatic licences are granted.

Increasing siltation and sand movement was highlighted as impacting on the safe navigation of vessels at locations such as Dolls Point, Port Hacking and Kogarah Bay. It was also noted that the bridges in Botany Bay pose a physical barrier to the movement of larger vessels, increasing the need for additional access infrastructure within the Bay itself.

7.1.3 Storage

There were limited comments received on storage issues, but there was support for reviewing the configuration of mooring fields in popular areas to ensure a more efficient use of navigable waters. As with access infrastructure, the need to provide more storage facilities for large vessels within Botany Bay was highlighted as an important issue.



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

\$3.5 million in NSW Boating Now funding has been allocated to support delivery of 19 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 be assist with emergency repairs to boating infrastructure, particularly after flood or storm events.

Table 2 – Priority Regional Projects

1. Upgrade boat ramp, install pontoon and improve amenities at Oatley Bay
2. Support feasibility study for constructing wharves at La Perouse and Kurnell
3. Investigate options to enhance access at Malabar boat ramp
4. Upgrade jetty at Pleasure Point
5. Upgrade parking and seawall at Davy Robinson Reserveboat ramp, Moorebank
6. Develop Small Craft Low Impact Facility at Old Ferry Road Reserve, Illawong
7. Upgrade boating facilities and investigate options to improve parking at Scylla Bay Reserve, Como
8. Upgrade boat ramp and wharf at Tonkin Park, Cronulla
9. Upgrade boat ramp and install pontoon at Burnum Burnum Sanctuary, Woronora
10. Install pontoon and undertake repairs to boat ramp at Tom Ugly's Bridge, Sylvania
11. Investigate potential for Small Craft Low Impact Facility at Captain Cook Bridge South, Taren Point
12. Upgrade boat ramp and parking and install pontoon at Bonnet Bay (Washington Drive)
13. Install pontoon at Holts Point Place boat ramp, Sylvania Waters
14. Investigate possible locations for sewage pump-out facilities in Botany Bay
15. Investigate opportunities to improve boating access in Botany Bay between Cooks River and Georges River
16. Upgrade lighting and toilets at Kyeemagh boat ramp (Mutch Avenue)
17. Improve access to Prospect Creek at Lansvale Reserve, Lansvale
18. Replace pontoon at Revesby Beach, Revesby
19. Upgrade boat ramp at Connell Road – Oyster Bay

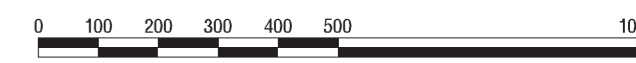
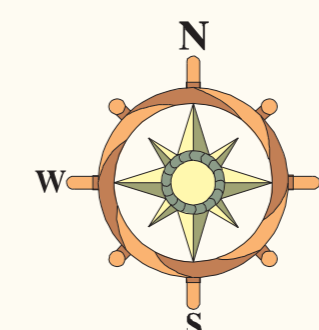
Table 3 – Implementation of Boating Safety, Access and Storage Actions

	Action	Delivery
Safety	Renew and refresh navigation aids	Roads and Maritime will review and upgrade existing navigation aids across the region as required.
	Review strategies to improve user behaviour	Roads and Maritime to work with MMC to review current approach to addressing the user behaviour issues identified for this region. This will include : <ul style="list-style-type: none"> • Implementation of initiatives from the <i>Botany Bay, Georges River, Woronora River and Cooks River Boating Safety Plan</i>. • Reviewing other strategies to minimise conflict between different waterway users with a focus on PWC operation.
	Improve signage and visibility	Roads and Maritime to review and upgrade as required existing signage across the region.
Access	Work with Councils and other partners to improve the condition and capacity of boat ramps and other access facilities	\$3.5 million in NSW Boating Now funds have been allocated to support the delivery of the 19 Priority Regional Projects listed in Table 2.
	Work with Councils and other partners to increase trailer parking capacity and provide appropriate facilities at access locations	These projects are in addition to the Port Botany Boating and Fishing Improvement program which will also support improved access to Botany Bay
	Provide additional courtesy moorings at popular destinations and ensure, where possible, that appropriate amenities are available	Roads and Maritime will investigate feasibility of installing courtesy moorings in the Botany Bay, Georges River and Port Hacking region such as Jibbon Beach, Frenchmans Bay.

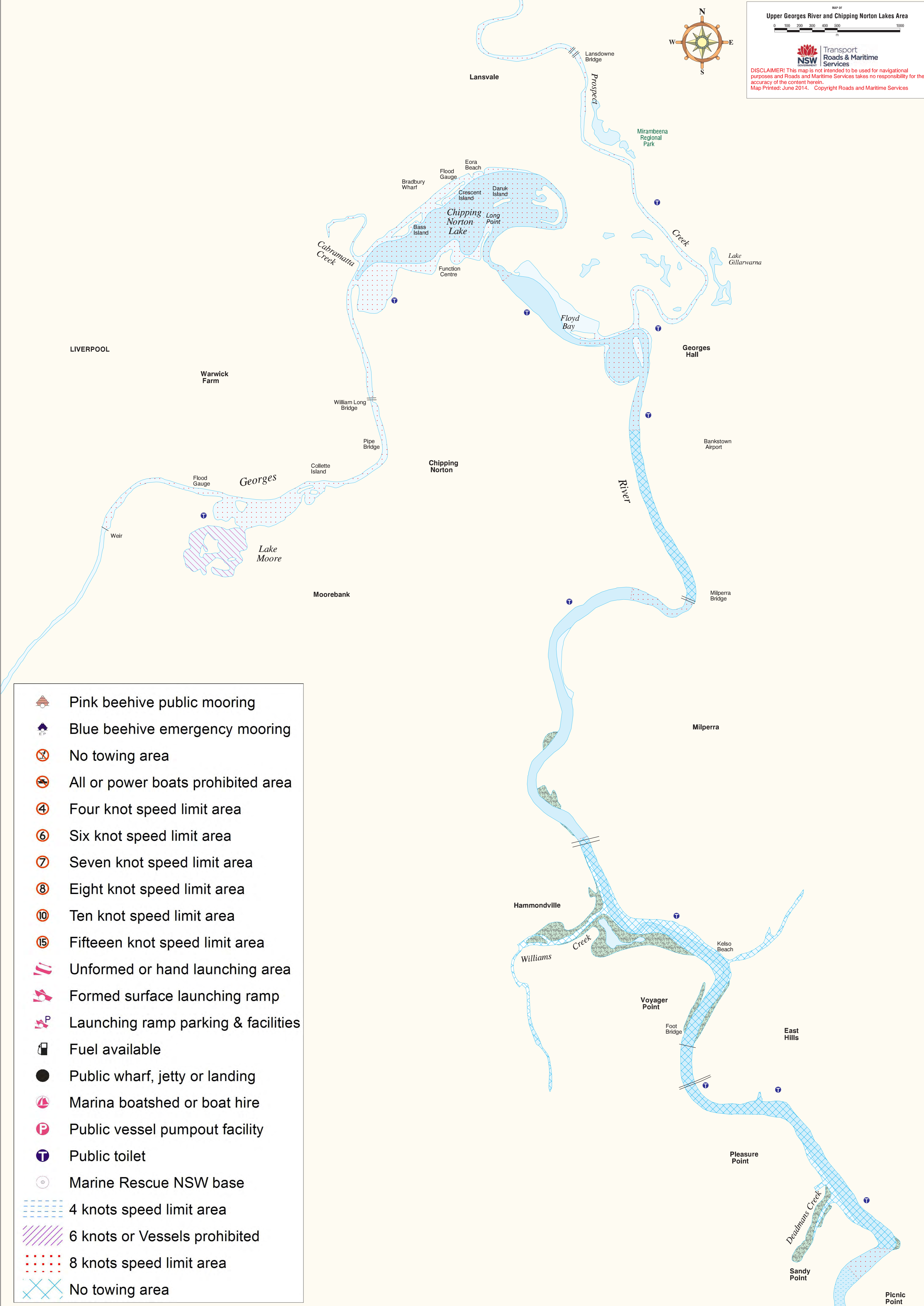
	<p>Identify key areas for specific users and provide appropriate infrastructure at these strategic locations to minimise multi-user conflict</p>	<p>NSW Boating Now funding has been allocated to small craft/low impact vessel launch facilities at Old Ferry Road Reserve Illawong (Project 6) and Captains Cook Bridge South, Taren Point (Project 11) to encourage separation of user groups and minimise multi-user conflict.</p> <p>Roads and Maritime and MMC will explore additional opportunities to separate different waterway user groups.</p>
<p>Storage</p>	<p>Establish a Botany Bay, Georges River and Port Hacking Boat Storage Strategy</p>	<p>MMC will consult with relevant Councils to develop a Botany Bay, Georges River and Port Hacking Boat Storage Strategy to identify the best mix of boat storage options required to keep pace with the expected growth in vessel numbers in the Region.</p>
	<p>Review organisation of moorings to improve access and navigation and increase capacity in selected areas</p>	<p>The MMC will undertake further consultation 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.</p> <p>In addition, 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.</p>
	<p>Work with Councils to improve long-term trailer parking capacity</p>	<p>The Government has announced a \$5 million package to address long term trailer parking in metropolitan areas of NSW.</p>
	<p>Provide dinghy storage racks for areas with high concentrations of moorings</p>	<p>While initial consultation suggested there is unmet demand for dinghy 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

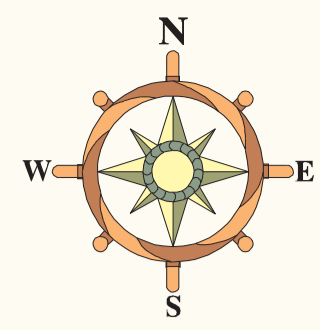
Appendix A – Maps



DISCLAIMER! This map is not intended to be used for navigational purposes and Roads and Maritime Services takes no responsibility for the accuracy of the content herein.
Map Printed: June 2014. Copyright Roads and Maritime Services



-  Pink beehive public mooring
-  Blue beehive emergency mooring
-  No towing area
-  All or power boats prohibited area
-  Four knot speed limit area
-  Six knot speed limit area
-  Seven knot speed limit area
-  Eight knot speed limit area
-  Ten knot speed limit area
-  Fifteen knot speed limit area
-  Unformed or hand launching area
-  Formed surface launching ramp
-  Launching ramp parking & facilities
-  Fuel available
-  Public wharf, jetty or landing
-  Marina boatshed or boat hire
-  Public vessel pumpout facility
-  Public toilet
-  Marine Rescue NSW base
-  4 knots speed limit area
-  6 knots or Vessels prohibited
-  8 knots speed limit area
-  No towing area



Woolooware

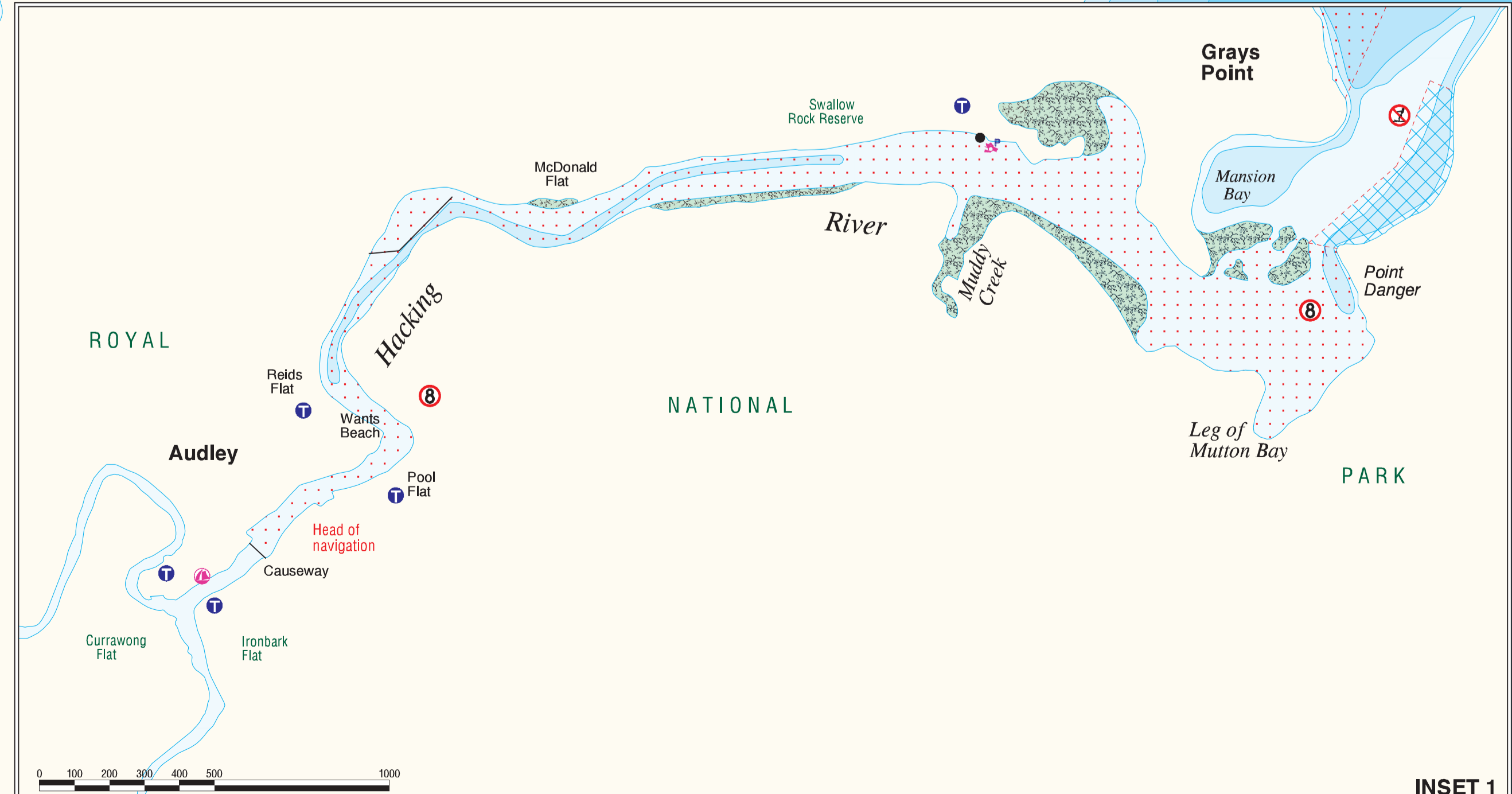
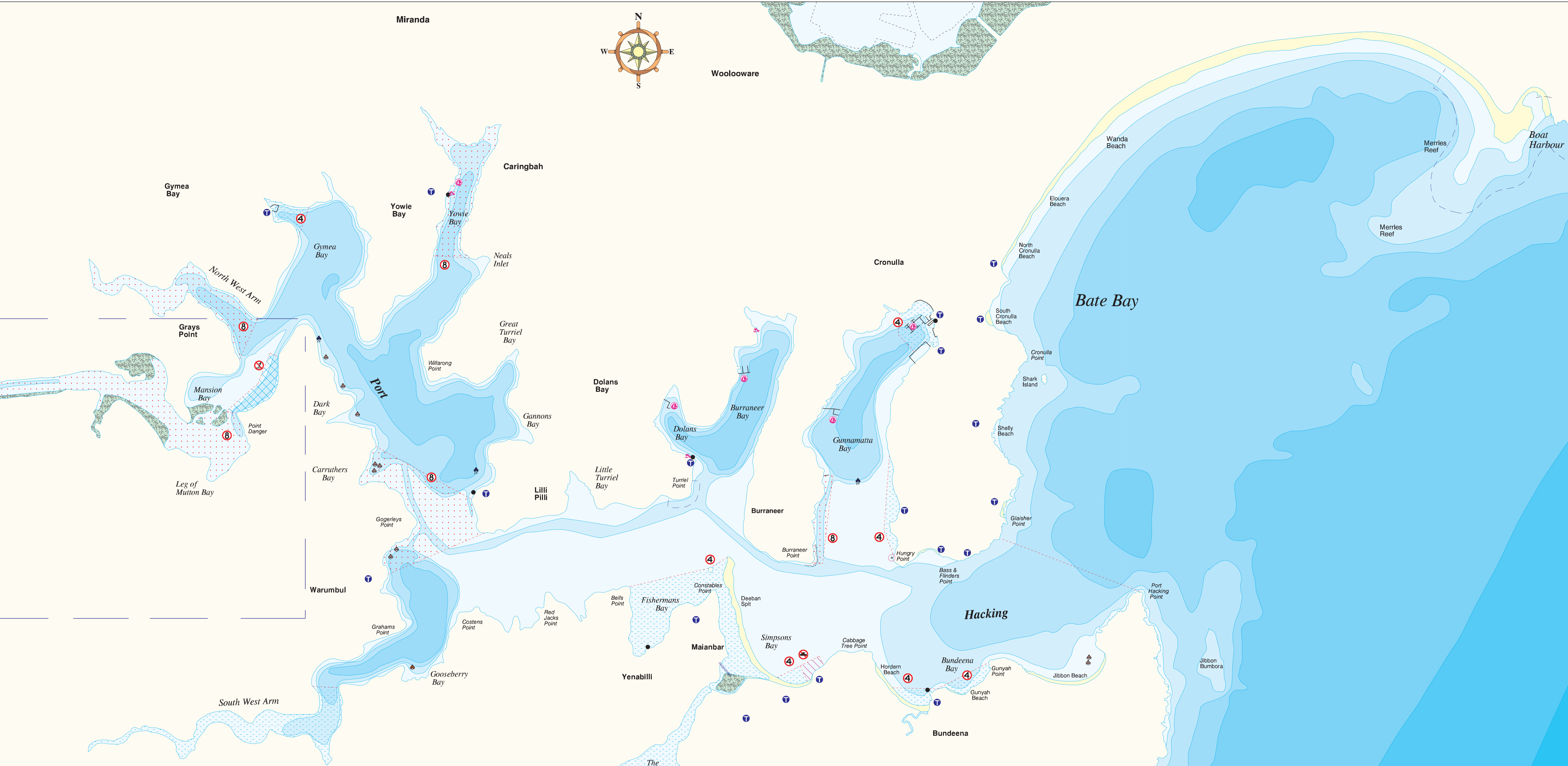
Miranda

Caringbah

Cronulla

Bate Bay

Boat Harbour



MAP OF
Port Hacking - Bate Bay and Hacking River Area
0 100 200 300 400 500 1000
m

 **Transport
Roads & Maritime
Services**
DISCLAIMER: This map is not intended to be used for navigational purposes and Roads and Maritime Services takes no responsibility for the accuracy of the content herein.
Map Printed: June 2014. Copyright Roads and Maritime Services

INSET 1

