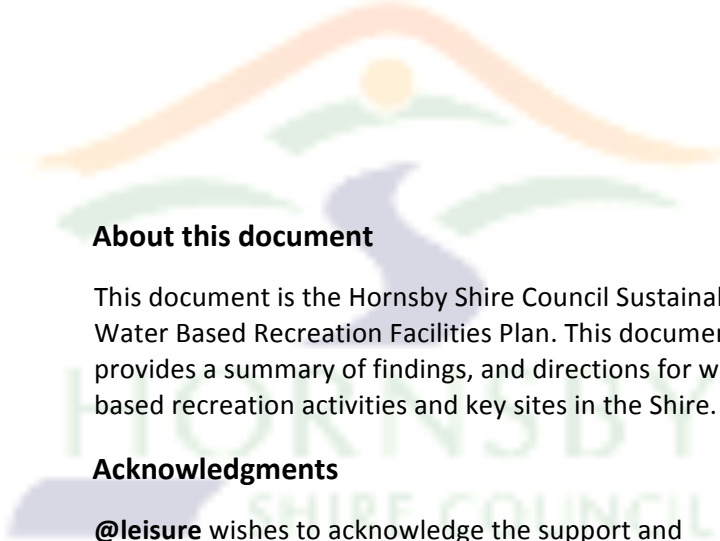




Sustainable Water Based Recreation Facilities Plan



## About this document

This document is the Hornsby Shire Council Sustainable Water Based Recreation Facilities Plan. This document provides a summary of findings, and directions for water based recreation activities and key sites in the Shire.

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# 1. The project

## 1.2 Context

This study focuses on the Lower Hawkesbury River within the Hornsby Shire Council. It is situated within the Hawkesbury Nepean catchment; the longest coastal catchment in NSW. The Hawkesbury River flows 470 kilometres (from south of Goulburn near Lake Bathurst to Broken Bay), draining 21,400 square kilometres, or 2.14 million hectares, of land<sup>1</sup>.

There is a diverse range of authorities responsible for this region including Council, Crown, private owners and the NSW Maritime who are the water management authority. There is a wide range of users who use the river for recreation and commercial operators. These include both visitors and residents who use the river for a variety of activities.

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<sup>1</sup> NSW Maritime

This plan focuses on waterbased recreation in the Lower Hawkesbury and Council infrastructure in the following locations:

- Kangaroo Point
- Crosslands Reserve
- Berowra Waters
- Brooklyn
- Parsley Bay, and
- Wisemans Ferry
- Deerubbin Reserve

Please refer to the following map.

## Context Map Lower Hawkesbury, Hornsby



## 1.2 Background

Council adopted the Unstructured Recreation Strategy in December 2008 and the Lower Hawkesbury Estuary Management Plan in 2009. Within these reports a number of issues are identified including the need for:

- clear and sustainable directions on a wide range of water based recreation uses
- Identification of possible conflicts between users
- greater understanding of user numbers (demand and community preferences)
- Infrastructure and asset condition analysis
- Identification of suitable access points for water based recreation
- information regarding permitted fishing areas, facilities provided and identification of sensitive areas which are not suitable for fishing
- An analysis of information relating to the study area from Recreational Fishing Study in the Sydney Region
- Adequate waste disposal facilities (for recreational fishing waste, foreshore bins and pumpout facilities)
- Principles and guidelines for the provision of current and future facilities for water based recreation.

### 1.3 Project overview

The purpose of this project is to prepare a sustainable water based recreation strategy for public land in the Lower Hawkesbury by consulting with the community to gain a greater understanding of the needs of those who participate in water based recreational activities such as fishing, kayaking, motor boating, water skiing and house boats.

This project addresses the aforementioned issues. It was undertaken in four stages:

- Situational analysis
- Demand and consultation analysis
- An analysis of existing infrastructure
- Strategic analysis and plan development

Due to limitation on funds available for this project, this strategy is a relatively high level plan.

### 1.4 Methods

This project was undertaken in four stages:

**Situational analysis:** This stage included a meeting with Council staff to refine the project scope, and collect local data. A review of all available literature and demographic information was also completed.

**Demand and consultation:** A variety of consultation methods were utilised including inviting submissions, publishing an online survey, undertaking some 40 telephone interviews, and holding a community workshop. Liaison with other agencies and academic institution who had undertaken related research was included in this stage.

**Supply analysis:** This stage involved site inspections of all public access sites, a bus tour with the Estuary Advisory Committee, and a tour with National Parks, an analysis of issues and opportunities at each access point, and a review of condition audit information infrastructure. An inventory of assets was prepared in this stage.

**Strategic analysis and plan development:** A draft and final 'Sustainable Water Based Recreation Facilities Plan' was prepared in this stage, and key actions illustrated on a plan of the study area.

## **1.5 Council's role in the provision of water based recreation**

Council has two roles in the provision for water based recreation. The first is to provide access to recreation opportunities by providing points of entry to waterways for shore based and boat based recreation activities, and to consolidate those points of entry to manageable sites.

The second role is to provide and manage infrastructure to enable people to undertake specific recreation activities (that provide community benefit) and to enhance their experience

The focus of this project is the water based recreation facilities that are publically accessible; not public wharfs for example, that are only accessible by watercraft.

### ***Types of recreation on the Lower Hawkesbury River***

Water based recreation activities that are currently present along the Lower Hawkesbury include the follow:

- Boating (motorised and non motorised)
- Fishing (shore and boat based)
- Waterskiing / wakeboarding
- Personal water craft use (Jetskiing)
- House boating
- Sailing / Yachting
- Kayaking / Canoeing
- Camping
- Swimming

- Walking
- Social / family recreation
- Sightseeing

## **1.6 Key Findings**

### ***Carrying capacity of the River and the sites***

The Lower Hawkesbury is accommodating significant water based use from non-motorised and motorised craft as well as shore based fishing, sight seeing, walking and picnicking.

The majority of users appear to be seeking an experience associated with the scenic, natural beauty and high environmental quality, in a setting with only minimal support facilities.

There is strong evidence to suggest that the nature of the recreational experience, its uniqueness and the environmental conditions associated with the River, will decline with additional use, increased facilities and access locations.

It has not been possible to quantify the carrying capacity of the River or specific sites for specific types of water based recreation.

Results, from a study undertaken by NSW Maritime to identify popular recreational areas for boating, showed that of the 625 unrestricted boat ramps in NSW, 107 were considered to have high recreational use (delays in launching of 30 minutes or more). 157 were considered to have inadequate parking and 166 in poor or very poor condition requiring upgrading within 1 – 2 years.<sup>2</sup> In the 2006 audit, the condition of the Parsley Bay boat ramp was rated good, Berowra Waters boat ramp was rated in good condition, and the condition of the Wisemans Ferry boat ramp was rated poor.

Where the carrying capacity of a site is increased through additional parking and additional facilities there are likely to be environmental impacts that mean the resource quality declines, unless management interventions are introduced. However, if additional access and management is introduced, additional people are likely to be attracted, other than those attracted by pristine natural conditions and minimal comforts and conveniences provided by infrastructure. These additional persons may not be as attached to the natural qualities of the River, and people without an attachment to the River may not be as inclined as other people to protect these qualities.

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<sup>2</sup> NSW Boat Ownership and Storage: Growth Forecasts to 2026, NSW Maritime, Unpublished 2009

## Recommended policy principles:

### Protect the quality of water based recreational experiences in the Lower Hawkesbury by:

- ▶ Not widening or sealing additional road access points to the River
- ▶ Not providing any additional access points to the River from public land (unless others are closed)
- ▶ Not substantially increasing car parking at existing sites
- ▶ Not providing recreational infrastructure that is not dependant on a riparian setting, or can be provided in other locations
- ▶ Not hardening additional informal fishing spots
- ▶ Not increasing the number of moorings or the mooring cap

## Conflicts between use and the environment

A study was completed in 2010 by the NSW department of Industry and Investment (I&I NSW), which identified the location of seagrass, saltmarsh and mangroves located within close proximity to recreational infrastructure on the Lower Hawkesbury River. The study evaluated risks from human activities on these estuarine habitats, using qualitative ecological risk assessment methods. The project divided the Lower Hawkesbury Estuary into sub-catchments and reaches and assessed each separately. The sub-catchments were Pittwater, Cowan, Berowra, Mangrove, Mooney, Mullet and Patonga.



Seven human activity stressors were assessed – recreational fishing, aquatic recreation, foreshore development, stormwater / catchment run-off, sewage, dredging and sedimentation and commercial vessels. These stressors and their effects are outlined in Appendix 1 of this document, and site by site, in the supply analysis in chapter 3.

The report did not provide detailed site specific information for the recreational areas relevant to this study, however, a conclusion can be drawn that there is impact on seagrass, mangroves, saltmarsh and riparian vegetation from boating and recreational activities in the lower Hawkesbury.

### **Conflicts between users**

This study found that conflicts between water based recreation users of the Lower Hawkesbury largely relate to:

- Congestion around boat ramps, including lack of car parks or cars parking in trailer parks
- Rubbish left by users: fishing waste, fire, drink receptacles, plastics and general waste
- Conflicts between motorised and non motorised recreationists / adjacent residents: largely due to noise, behaviour and not observing codes and regulations

- Between large cruiser boats or wakeboard boats and other smaller craft (especially canoeists), due to wakes left
- Between events and commercial fishers (prawn trawling and water ski events)

It should also be noted that there is a potential a conflict between the desire for primary and secondary contact water based recreation (and fish to catch) and potentially declining water quality related to urban development in the catchment and especially from storm water and effluent.

### ***Recommended policy principles:***

- ▶ Where possible separate launching sites for motorised and non motorised vessels
- ▶ Introduce a code of conduct for boat ramps and educate users of boat ramps about ways to plan and prepare off-ramp to increase efficiency
- ▶ Sign spaces for “cars with trailers” and enforce their use only for those with trailers
- ▶ Promote car pooling and access to the River through means other than private car (e.g train)
- ▶ Where possible at remote sites such as Singleton Road, Wisemans Ferry and Crosslands Reserve, rubbish should be taken home and interpretative signs explaining the impact of rubbish should be provided on site

- ▶ Continue to actively communicate regularly with water based recreation stakeholders about usage and the condition of the environment and between commercial fishers and event organisers
- ▶ Increase available information about the ecological characteristics to water based recreation users, to increase attachment to the River and emphasise the importance of protecting the River from degradation
- ▶ Discourage extractive activities such as bait collection
- ▶ Provide more recreational and environment interpretative messages rather than focus on regulations
- ▶ If funds become available, divert effluent onto sports fields and seek to capture and filter run off from urban areas, away from Crosslands Reserve
- ▶ Upgrade key infrastructure to enhance: functionality, sustainability, efficiency of use, and accessibility for people with a disability; and minimise environmental impacts

### **Opportunities to enhance participation and recreational experiences**

The opportunities to enhance participation in recreation in association with the Lower Hawkesbury, than can also be sustained in balance with protecting the environment, relate primarily to: shore based activities for pedestrians, non motorised boating, and providing access to water based pursuits for children and people with a disabilities.

As Council does not control moorings, events and regulations associated with the use of the water, it can influence activity on the water primarily through controlling water based recreation support facilities, access points and launching facilities.

It has not been possible to determine whether a range of boat services for visitors can accommodate people with physical disabilities, due to the range of private visitor services available such as houseboats, charter boats and taxis that enter the Hawkesbury from else where.

If Hawkesbury Railways Station can be made accessible to people using wheelchairs, develop this location as a focus for recreational fishers with mobility impairments.

### ***Recommended policy principles:***

- ▶ Promote water based recreation activities on the Lower Hawkesbury that are non motorised in preference to motorised; those that are physical and involve activity such as kayaking rather than social such as party boats, those that target people with a disability or children over others, and pedestrian and public transport access over car based users
- ▶ Infrastructure on the foreshore should be incrementally redesigned and upgraded to accommodate people with a disability; in particular, this should include physical access and way finding
- ▶ Support existing fishing and sailing clubs to include more opportunities for children and people with a disability
- ▶ Assist sailing and canoe clubs to access club rooms and storage on the water front as the market will typically not provide for these uses (Council could provide planning incentives for these to be accommodated within other commercial uses)
- ▶ Develop and extend return circuit paths along the water front at Brooklyn, for example, as a destination connected to the train station, (in preference to roadway or car parking)
- ▶ Encourage City Rail to provide a lift to the Hawkesbury River station so that people using wheelchairs may access Brooklyn by train

### **Communication with users**

There were considerable differences in perceptions about issues such as the sustainability of fishing, fish stocks, water quality, and its impact (e.g. safety of fishing adjacent to outfalls, and secondary contact recreation at Crosslands Reserve) during the during the consultation program for this project.

Some clear messages based on accurate research on these matters should be prepared and distributed by relevant agencies.

There are a number of municipalities adjoining the River. Different government instrumentalities look after aspects that affect it. As a connected resource, access and impacts in one location will impact on others. Greater protection of the natural environment will mean the River will be able to be used for waterbased recreation in the longer term.

***Recommended policy principles:***

- ▶ Encourage more users to become attached to the River: become involved in its protection and have a greater awareness of how their activities impact on the environment
- ▶ Prepare targeted information about what water based recreation activities can be undertaken where, and how they can remain sustainable
- ▶ Include an environmental message in all water based recreation information
- ▶ Prepare codes of conduct for all waterbased uses and for boat ramp behaviour. These should be promoted through: the boating and fishing licensing and water safety and regulatory processes; clubs; River stakeholders; Councils; NSW National Parks and Wildlife Service; commercial operators events; retail and service and industries supporting water based recreation, and at all access points
- ▶ Prepare a marketing plan addressing signage, maps, fishing, and boating guides and brochures, GPS products and the like.
- ▶ Hold a regular forum of stakeholder and user groups to discuss issues and projects associated with educating users about the river for recreation

## 2. Demand for water based recreation

Demand for water based recreation is likely to be influenced by a range of on-site and off-site trends. These include:

- population growth and demographics
- boat ownership and registrations
- demand for outdoor recreation activities, and outdoor recreation participation patterns generally
- the quality of the recreation resource and facilities available
- the availability (or lack of) of similar opportunities nearby
- economic conditions generally

This chapter discusses the influences on demand, and the demand for specific water based activities present at the key sites of interest on the Lower Hawkesbury.

### 2.1 Demand based on population growth

The demand for water based activities is likely to increase in Hornsby on the basis of population increase alone. The population of the Shire of Hornsby, is projected to grow by 24,300 people from 2011 to 187,000 people by 2036. Table 1, in Appendix 2 provides the projected population up to 2036, by five-year age cohorts. The greatest increase in population will occur in the 70+ years age groups.<sup>3</sup>

Persons interviewed suggested that many users of the Lower Hawkesbury River come from a much wider area than the Shire, in particular from Western Sydney. The population of Western Sydney is likely to increase to three million by 2036 from a projected 2 million in 2011. This is an increase of 58.2% since 2006, and an average annual growth rate of 1.9%.<sup>4</sup>

This population growth is likely to increase the number of people using the Lower Hawkesbury for water based recreation. Urbanisation of the catchment (to house additional people) is also likely to impact on the water quality of the River, and increase the demand for the seafood it provides.

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<sup>3</sup> NSW Statistical Local Area Population Projections, NSW Department of Planning, 2010

<sup>4</sup> Ibid

Based on the high scenic qualities of the Hawkesbury River and the growth of population in the metropolitan region, there is likely to be an increase in demand for tourism associated with the River: houseboats, tours, boat hire, camping, and shore based recreation at infrastructure nodes.

## **2.2 Demand for outdoor recreation activities, and outdoor recreation participation patterns generally**

### **Overview about sources of information**

There are few sources of data available related to water based recreation participation. Most available data is specific to one, or only limited to a number of activities. There are also considerable limitations concerning available data due to sampling.

Known sources of water based recreation participation data include: The National Recreational and Indigenous Fishing Survey (NRIFS) (conducted at a state level every 5 or so years since 2001); the annual Exercise and Recreation and Sports Statistics (ERASS) (conducted annually at state level); and ABS's Children's Participation in Leisure and Cultural Activities (CPILACA) (conducted every three years). Other one-off studies have been undertaken locally. These are listed in the references in Chapter 4.

Boat and fishing licensing information also provide some guide to participation in these activities.

### ***The National Recreational and Indigenous Fishing Survey***

The National Recreational and Indigenous Fishing Survey was conducted across Australia in 2001 and in 2008. The survey was part of a broader national initiative to obtain fisheries statistics on non-commercial components of Australian fisheries. The survey obtained estimates of the level of participation, fishing effort and catch by recreational fishers. The survey results for the 2001 survey were published in 2003. Findings of the 2008 study are yet to be published.

### ***Exercise and Recreation and Sports Statistics***

The annual Exercise and Recreation and Sports Statistics report on some water based recreation participation for people 15 years and over. However, this collects data associated with physical activity and sport, and asks as a qualifying question: "During the last 12 months did you participate in any physical activities for exercise, recreation or sport?" Some boating and fishing activities may not perhaps have been seen by participants as physical activities and this may explain why fishing and other water based activities do not have the same participation rates as some other specific fishing and boating surveys.

Using the National Recreational and Indigenous Fishing Survey some 16% of the population reportedly fish. Using this source, the number people who live in Hornsby that will fish in 2011 is 26,080. Based on NSW ERASS participation rates, (2.1%) the estimated number of people who fish for recreation in Hornsby is estimated at 3,600 which is considerably lower. Further information on these results can be viewed in Table 4, Appendix 2.

Based on ERASS, there are likely to be some 2,000 canoeists / kayakers, 400 rowers, 700 sailors, and 1,800 power boaters in the Shire. Further information including participation projections can be viewed in Table 3, Appendix 2.

The Lower Hawkesbury River has a large catchment area that is used by people from surrounding municipalities, however no valid statistical data exists that is indicative of the distances people to travel to the region.

### ***Online Survey***

An online survey was conducted for this project to obtain the views of users of the Hawkesbury River on water based recreational activities and facilities. This survey was conducted in June, 2010.

A total of 75 respondents completed the survey, of which 39 were males and 4 females.<sup>5</sup> 43% (32) respondents did not state their gender.

The survey results and questions are provided in Appendix 3 and 4.

### ***Community Workshop***

A community workshop was held on 17<sup>th</sup> June, 2010. Detailed notes from this workshop are located in Appendix 5.

### ***Telephone Consultation***

Telephone consultation was undertaken with a range of stakeholders. A list of these stakeholder is provided in Appendix 6.

### ***Written submissions***

Written submissions were invited from all stakeholders. A summary of these is located in Appendix 7.

### ***Visitor demand***

Approximately 838,000 domestic visitors spent 2.3 million nights in the Hornsby area from April 2005 to March 2010.<sup>6</sup> 27% of these visitors are from Sydney.

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<sup>5</sup> There was an over representation of respondents aged 50 years and above, and an under representation of those aged between 10 and 44 years. There was also an over representation of males and an under representation of females in the responses.

53% of all visitors were in the region to visit friends and / or relatives. Hence, these visitors could well have undertaken water based recreation activities using boats and equipment owned by friends or family.

The water based activities that visitors participate in, include:

- chartered boat, cruise or ferry ride (3%)
- waterbased activities or sports (8%)
- going to a beach (10%) (they could have stayed in Hornsby, and travelled to a beach)

Appendix 8 lists the day boat, hire businesses on the Lower Hawkesbury River. These businesses are likely to cater for visitors and local people without a boat. Some types of boat, such as the BBQ boat, do not require the driver to be licensed, hence these activities increase on-water accessibility for the general public.

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6 Written correspondence with Tourism Insights Coordinator, Tourism NSW, 2010

One of the few studies available concerning the use of the River environs by visitors from the region was conducted by CSIRO in 2006.<sup>7</sup> According to this study, picnicking (43%) was the most participated in activity among respondents visiting the Hawkesbury, followed by relaxing (enjoying scenery) (37%), walking / hiking, (34%), recreational boating (18%), recreational fishing (15.1%), canoeing / rowing (14.2%) and water skiing (13%). Fifty different activities associated with the River were identified by some 332 respondents from two samples; people from the Hawkesbury Nepean region, and the wider Sydney metropolitan area. See Table 6, in Appendix 2.

There is an increase in demand for one-off events that people can train for in their own time as there is a decline in sports competitions that require regular routine commitments with a club. As the demand for recreational events increase, there will be greater pressure to stage these (or prepare for these) on weekdays, rather than just on weekends. This will place them in conflict with the commercial users (who are heavily regulated and controlled) and rely on access to the estuary to undertake their operations on weekdays. This will particularly be the case when ski or powerboat events require River closures occur in peak fishing periods.

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7 Sense of Place: Towards a Methodology of Value Externalities Associated with Urban Water Systems – The Hawkesbury – Nepean Case Study, CSIRO, 2006



The implications for shore based recreation infrastructure and foreshore parks of an increase in demand for water based recreation from visitors are:

- the strong demand for accommodation on the River, on the foreshore and in the vicinity, including camping
- the demand for services associated with shore based recreation such as toilets and shelters, food and beverage, car and trailer parking and picnic areas
- the demand for services to support waterbased uses, such as pump out facilities, fuel and importantly boat launching and mooring facilities, fishing platforms and cleaning facilities
- the importance of education about local conditions and on-site management; in particular clear signage
- the need for the consistent management of operators, use and events on the water, and foreshore facilities
- the importance of visitor information, and
- the likely high demand for sports and leisure activities that can be undertaken socially, at any time, and not necessarily as part of a club. These include one-off events. Social activities might include for example: walking, cycling, fishing, swimming, boating, and food and beverage.

Whilst there is likely to be considerable demand for other recreation activities on the foreshore due to the scenic value of the River, facilities that are not dependant on the water or directly support its use, shouldn't be provided when there is limited space. Such facilities include play equipment, (that is generally readily available elsewhere, and may restrict the provision of shade and launching facilities that could encourage young children to sail, for example).

### ***Boat Ownership and Registration***

The number of boats registered in NSW has grown on average around 2.8% annually in the last decade, and more rapidly than the state's population. As of 1<sup>st</sup> of July 2009, there were 229,000 registered vessels in NSW including over 223,000 recreational craft (97%).<sup>8</sup> See Table 5, Appendix 2 for yearly increases.

From 1999 to 2009, the number of registered boats over 6m has increased more rapidly than boats under 6m. Within the 10-year period, NSW has seen a 4.4% annual growth in boats larger than 6m, compared to 3% for boats smaller than 6m. However, smaller boats still comprise approximately 84% of all registered boats in NSW.<sup>9</sup>

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<sup>8</sup> NSW Boat Ownership and Storage: Growth Forecasts to 2026, NSW Maritime, 2009

<sup>9</sup> Ibid

The increase in size of boats provides additional challenges in the Hawkesbury River. These relate to: launching (congestion at ramps and scouring of the sea bed at the end of the ramp that can be hazardous for other users at low tide); parking, due to the length of trailers; and conflict with other users (due to the size of the wake created).

In Hawkesbury / Broken Bay region, the number of registered boats larger than 6m has increased annually at the rate of 3.3% compared to 1.6% for boats smaller than 6m. Murray River / Southern Highlands experienced the fastest increase in large boats at 10.7% per annum, compared to 3.5% for smaller boats.<sup>10</sup>

Regional boat ownership in Hawkesbury / Broken Bay has increased by 20.9% at an annual rate of 1.9% from 1999 – 2009.

Hawkesbury / Broken Bay has the 2<sup>nd</sup> largest number of boats among NSW regions, however has held a declining proportion of the State's boats: 21.6% in 1999 compared to 19.7% in 2009. Overall Hawkesbury / Broken Bay has had relatively slow growth in boat ownership; 1.9% compared to 2.9% for NSW.<sup>11</sup>

Anecdotal evidence from stakeholders indicated that there has been a considerable down turn in boat sales in the region since the global financial crisis.

Rules governing the use of lifejackets on recreational vessels on all NSW navigable waters have been strengthened from 1 November 2010. The new laws require children less than 12 years of age to wear a lifejacket, and for all others: one to be worn in "heightened risk" boating. This includes boating at night, boating alone, in deteriorating weather conditions, and when being towed on the water, e.g. when wakeboarding or waterskiing. Canoeists / kayakers will need to wear a lifejacket when greater than 100 metres from shore, and at all times in ocean waters.

There is some suggestion by stakeholders that these laws may dissuade a number of users from taking up boat based recreation activities.

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10 NSW Boat Ownership and Storage: Growth Forecasts to 2026, NSW Maritime, 2009

11 Ibid

## Sailing / Yachting

From 2005 to 2009, there has been a decrease in the number of sailing / yachting club members in NSW. Sailing club numbers fell from 13,238 in 2005 to 11,411, a decrease of 1,827 members. This is a total decrease of 13.8%, or 2.8% annually.<sup>12</sup>

The participation rate in sailing in NSW for persons 15 years and over has decreased from 1.2% in 2001 to 0.5% in 2009. Nationally, the demand for sailing among persons 15 years and over has also decreased from 1% in 2001 to 0.5% in 2009.<sup>13</sup> It is estimated that there are some 650 sailors aged 15 years and over in the Hornsby Shire, based on these participation rates.

The demand for sailing among children aged between 4 and 15 years, (as an organised sport) has increased slightly from 0.3% in 2000 to 0.4% in 2009, nationally.<sup>14</sup>

There has however been a significant increase in people with a disability participating in sailing, through programs such as Sailability. Attendees of the community workshop noted that there are no opportunities for junior development or accessible sailing in the Hawkesbury, mainly due to lack of space and suitable launching conditions.

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12 2008 – 2009 Annual Report, Yachting Australia, 2009

13 Exercise, Recreation and Sport Survey, SCORS, 2010

14 Children's Participation in Cultural and Leisure Activities, ABS, 2009

Super yachts visit the Hawkesbury from time to time.<sup>15</sup>

The following preferences were identified by sailors who were respondents of the online survey conducted for this project:<sup>16</sup>

- the majority of the sailors felt that the River can sustain additional growth
- the key facilities sailors use are boat mooring, car parking, rubbish bins, wharves and public toilet facilities
- sailors consider boat ramps, seats, tables, information boards, public jetties, picnic shelters, pontoons and wharves are mostly in need of upgrading
- most sailors sought semi remote settings with no facilities and those with natural spaces with basic infrastructure, rather than formally designed places for social activities with a degree of comfort and convenience

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15 Telephone consultation with Manager BIA Divisions, Boating Industry Association, 2010

16 For full survey analysis please see Appendix 1

There are three sailing / yachting clubs located on the Lower Hawkesbury, all of which utilise Parsley Bay as their entry points for their watercraft. These are:

- The Hawkesbury River Yacht Club
- The Hornsby PCYC Sailing Club
- The Hawkesbury River Sailing Club

The Hawkesbury River Yacht Club is located at Parsley Bay and the Club has a floating clubhouse. It holds point score races usually on the third Saturday of the month with the over run and additional races held on other available Saturdays. They have approximately 15 boats with about 2-4 members per boat. Membership has remained relatively steady, with a peak of 20 boats a few years ago.<sup>17</sup> The club identified the following issues:<sup>18</sup>

- “we have a floating clubhouse and our boat is tied up to this. It would be nice if Council would let us moor it in the basin so we can transport people from the pontoon to the clubhouse.... We only have a floating clubhouse, because we can’t get anything on the land. The Railway owned the only land we could find that was potentially suitable. We need a space with water access; we only need a space as big as a double garage. It would need to be peppercorn rent. We have our meetings and start from our floating clubhouse”
- “Brooklyn has a major car parking problem; I don’t think that there is a practical solution”
- “improving the ability to get dinghies on and off the little beach is a priority, there is a loose step”
- “there is probably more room for more recreational use on the River. We don’t get a sense that the River is full up, or that the facilities are full on”
- “most of our people use the pontoon that is on the back of the rock wall, not the one off the park. It is a bit shallow and it would be nice if it was deeper there, our boats can’t get there in there at low tide”
- “haven’t observed any conflict of interest between users – fishermen can be a nuisance, not when they are fishing but it’s the rubbish. The fish cleaning table is fine, but some people leave bait on pontoons, lines get caught and they don’t haul them back in. It’s nothing big enough to worry about”.

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17 Yachting NSW website:

<http://www.nsw.yachting.org.au/db/clubdisplay.asp?ID=515871andAction=DisplayandMenuID=Clubs%2F1055%2F0%2F>, accessed 2010

18 Telephone consultation with Commodore, Hawkesbury River Yacht Club, 2010

The Hornsby PCYC (Police and Community Youth Club) Sailing Club is located at Brooklyn. It has a membership of 90 and uses Parsley Bay on Saturdays.

The PCYC operates primarily as a training club. The club identified the following issues:<sup>19</sup>

- rubbish bins – “location of bins is an issue, people are lazy – put them closer to the boat ramp itself. Dangar Island and Wobbies Beach residents come over and dump rubbish in the bins”
- “lack of car parking – limited by space. Some people park in resident’s front yards. I have spoken with fishermen who have travelled all the way from Penrith and St Marys and they haven’t been able to get a car spot”
- “boat wash down area at Parley Bay would be good. There used to be a tap located close to the ramp and this would cause congestion problems while people blocked access to the water while washing down their boat. Since the introduction of water restrictions most people now tend to wash their boats at home. The location of a future wash down area is critical to its success”
- “some people object to sailing boats being on the boat ramp and say its for powered boats only”

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19 Telephone consultation with Commodore, Hornsby Police and Community Youth Club, 2010

- “we make a point of being out of the way of other ramp users, and using it at nonpeak times”
- “ramp rage is getting worse and worse every year, once a guy pulled a knife on someone who was hassling him to hurry”
- “policing of the ramps and educating the users would help”
- “dredging is an issue. Parsley Bay is very shallow at low tide, although it doesn’t affect the majority of people”

The Hawkesbury River Sailing Club (Trailer Sailors) currently has approximately 30 members. There are approximately 10 races per year on Sundays from October to March. All members store their boats at home. The following issues were identified by the club:<sup>20</sup>

- “there is no conflict, use of the ramp is very amicable”
- “we have a storage shed above the cemetery. Council erected it on Council land. It was for the purposes of our club, but we share it with Hornsby PCYC and Theatre in the Park, as they needed somewhere to store some of their stuff. The shed is in need of replacement as it is in poor condition. There may be interest in contributing some capital towards this.

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20 Telephone consultation with Vice President, Hawkesbury River Sailing Club, 2010

- The shed serves as a useful piece of infrastructure for the community as it stores a rescue boat, marker buoys, a motorboat, and theatre sets and props”
- “some days conditions can be difficult, other days they are not”
- “there is no conflict on the water; there is lots of water for all! Sydney harbour would be twice as bad”
- “we haven’t observed any environmental issues”
- “overhanging trees in the area behind the boat ramp restrict the number of boats that can be rigged up at any one time. Instead of four, we can only have three. Each boat takes 30 – 45 minutes to rig up. Boats must be rigged up as close to the ramp as possible, as masts are 17, 18, 19 foot high and you can’t drive around with them up, due to electrical wiring”.

Other consultation identified that there is an issue at the boat ramp on Sunday morning with trailer sailors<sup>21</sup> as they can take a long time to rig and organise themselves. They don’t need to do it on the ramp. They should rig their boats off to the side, prior to moving onto the ramp.

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21 Community Workshop, 2010, personal communication with Department of Industry and Investment

## Canoeing / Kayaking

Participation trends in canoeing / kayaking indicate an increase in demand from people 15 years and over, especially by males and the middle to older age groups (35 to 54 years) from 0.7% in 2001 to 1.2% in 2009.<sup>22</sup> This trend is also consistent with anecdotal evidence provided by stakeholders.

Canoeists and kayakers generally paddle closer to the shore than other watercraft users, in order to explore the area and be in more sheltered areas. This activity is considered to be as much about the trip as the destination and users generally seek a nature / wilderness experience.<sup>23</sup>

Anecdotal evidence suggests that a large number of canoeists use the Lower Hawkesbury and many are not members of a club.

Educational institutions (schools and TAFEs), outdoor recreation camps / operators as well as private individuals and family groups, use the River for canoeing.

Maximum Adventure, an outdoor based recreation company use the Lower Hawkesbury to host kayaking events.

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22 Exercise, Recreation and Sport Survey, SCORS, 2010

23 Conflict between sea – kayakers and motorised watercraft users along the Abel Tasman National Park Coastline, Hawke and Booth, 2001

These events are growing in popularity, and have between 200 – 400 participants. The company uses private ramps for their events, and says there is not enough parking at private ramps or enough open space to prepare.<sup>24</sup>

Online survey respondents who are canoeists indicated that:

- canoeists use all key public access points in the Lower Hawkesbury
- car parking, picnic shelters, rubbish bins, public toilets, information boards, canoe ramps and seats are the most required facilities for canoeists
- the majority seek a semi remote natural space with no public facilities
- canoeists generally indicate car parking facilities as satisfactory
- one third of the canoeists are members of a club

There are no canoeing or kayaking clubs on the Lower Hawkesbury, although there are two based in the Upper Hawkesbury that use the Lower Hawkesbury and events are conducted there. The clubs indicate that membership is growing. They use the River during daylight savings. Outside of these they train for the Hawkesbury Canoe Classic.

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24 Telephone consultation with Adventure Paddle, Maximum Adventure, 2010

This event is being held on the 24<sup>th</sup> and 25<sup>th</sup> of October, 2010 and approximately 600 canoeists will paddle under moonlight for 111km to raise money for a charity. The River is closed from Windsor to Wisemans Ferry, during the Classic.<sup>25</sup>

Information gathered from interviews with key stakeholders in regards to the canoeing / kayaking showed generally most canoeists don't need purpose built facilities however:

- ramp access or beach access is desirable, at places like Spencer<sup>26</sup>
- dual access ramps are fine for canoeists<sup>27</sup>
- boat ramps are fine for canoe access, however to enhance safety canoe steps are required at busy ramps<sup>28</sup>(eg Berowra Waters)
- for social paddling such as in the Lower Hawkesbury, canoe steps are not needed,<sup>29</sup> but canoe steps are needed where there is racing<sup>30</sup>

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25 Hawkesbury Canoe Classic Inc. website:

<http://www.canoeclassic.asn.au/about/>, accessed 2010

26 Telephone consultation with BIA Divisions Manager, Boating Industry Association, 2010

27 Ibid

28 Telephone consultation with Adventure Paddle, Maximum Adventure, 2010

29 Telephone consultation with BIA Divisions Manager, Boating Industry Association, 2010

30 Ibid

- canoeing / kayaking camps require toilets, access to fresh water and flat land suitable for camping (eg enough for 5 – 6 tents)<sup>31</sup>
- participation in canoeing is increasing, however this may be in line with general River usage<sup>32</sup>.
- the Windsor Canoe Club recently commenced an independent study into access points, however it was not completed
- some complaints have been made about canoeists / kayakers not paying to use ski park ramps

Other comments made relating to canoeing include the following:

- the Club have noticed weed growth in the River. It has been very bad in the past two years. This needs to be looked at it<sup>33</sup>
- the Clubs suggests there is some conflict concerning kayakers and water skiers. This is generally as a result of the lack of understanding about the rules regarding distances that people need to keep away. The River is windy, and as a kayaker you need to go the shortest route
- wake boarders are more problematic than water skiers, as wake boarders leave big waves

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31 Telephone consultation with Southbound Adventures, 2010

32 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

33 Telephone interview with the Windsor Canoe Club, 2010

- Berowra Waters is very good for canoeists to launch and land: Parsley Bay and Kangaroo Point are easy access. At Wisemans Ferry, launching is ok, as they have a beach.<sup>34</sup>
- camp leaders try to get to boat ramps before clients to clean up particularly at Mooney Mooney Point and Berowra Waters.<sup>35</sup>
- easier access to the waters edge at Crosslands Reserve might be better, but it isn't a priority<sup>36</sup>.
- designated camp sites are a higher priority than water access<sup>37</sup>
- removal of vegetation for camp fires needs to be controlled<sup>38</sup>
- more litter pick ups are required particularly after weekends and long weekends<sup>39</sup>
- educational signs about protecting vegetation, illegal campfires and taking litter home<sup>40</sup> are required at popular bays and campsites

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34 Ibid

35 Telephone consultation with Southbound Adventures, 2010

36 Ibid

37 Ibid

38 Telephone consultation with Southbound Adventures, 2010

39 Ibid

40 Ibid



- speedboaters and jet skiers can cause a hazard, particularly from the west of Wisemans Ferry, never had an incident, but students are warned about it. Erosion is evident here from faster boats<sup>41</sup>

### House boating

There are four commercial houseboat providers on the Lower Hawkesbury. These are:

- Luxury Afloat (Kangaroo Point, Brooklyn)
- Ripples (Sandbrook Inlet Marina, Brooklyn)
- Able Hawkesbury River Houseboats (Wisemans Ferry)
- Brooklyn Marina (Brooklyn)

Houseboating is participated in all year round. There are only 45 houseboats on the Lower Hawkesbury and users cannot go within 30 metres of anything solid<sup>42</sup>.

NSW Maritime advise that many houseboats commonly head up to Coal and Candle Creek: a very deep stretch of water leading to Akuna Bay. They often have ski boats or PWCs towed behind.

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<sup>41</sup> Ibid

<sup>42</sup> Telephone consultation with Luxury Afloat, 2010

Comments related to houseboats included:

- “the requirements of house boating are public wharves and pump out facilities”<sup>43</sup>
- “house boaters enjoy the quietness of the River and the misty mornings”<sup>44</sup>
- “people who hire house boats don’t know where they are going (upstream or downstream) and signs could help”<sup>45</sup>
- “the majority of house boaters just want to go out and do nothing, maybe swim, fish and read a book”<sup>46</sup>

### Personal watercraft

From 1999 to 2009, personal watercraft (PWC) registrations have increased by 5.5%, and at an annual rate of 0.6% in NSW. Further, the PWC licences in NSW have increased by 11.6% in the 10-year period, at an annual rate of 1.2%.<sup>47</sup>

The Boating Industry Association indicates that there has been an increase in the number of PWC using the Hawkesbury.

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<sup>43</sup> Ibid

<sup>44</sup> Community Workshop, 2010

<sup>45</sup> Ibid

<sup>46</sup> Telephone consultation with Luxury Afloat, 2010

<sup>47</sup> Annual Report 2009, NSW Maritime, 2009

Whilst there are no regional statistics available to support this, anecdotal evidence provided by a member of the Lower Hawkesbury Estuary Management Committee and Luxury Afloat suggests there has been an increase in PWC use. It was suggested at the Community Workshop, that while jet skis are present, they are not sure if numbers are increasing<sup>48</sup>.

PWC are restricted from operating within 200m of the shore in waters from Port Hacking to Wamberal. Hawkesbury River is in this Restriction Zone for PWC's. They are not permitted to be used for 'irregular driving' within 200 metres of a River bank or shore when operating in the Restriction Zones. Penalties apply. Examples of 'irregular driving' are:

- driving in a circle or other pattern or
- weaving or diverting, or
- surfing down or jumping over or across, any swell, wave or wash

This means that PWCs must be operated generally in a straight line within 200 metres of the shoreline<sup>49</sup>. Hence they tend to pass through along the River rather than have a presence at the main recreation sites.

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<sup>48</sup> Community Workshop, 2010

<sup>49</sup> NSW Maritime.

NSW Maritime indicate the majority of PWC in the Lower Hawkesbury launch from Deerubbin Reserve at Mooney Mooney Point, Brisbane Water, and Berowra Waters, and off the back of houseboats.

### **Power boating**

No power boating clubs are located in the Lower Hawkesbury study area, however there is one club located at Windsor on the Upper Hawkesbury.

The “Bridge to Bridge” race is the main power boat racing event, hosted every year on the Hawkesbury River. It runs for the length of 112 kms and attracts power boaters from all over Australia.<sup>50</sup>

Most residents use power boats to travel to Brooklyn from Dangar Island, however a few use row boats.

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<sup>50</sup> Seabreeze website:

[http://www.seabreeze.com.au/News/Power%20Boats/Powerboat-classic-set-to-bring-the-Hawkesbury-River-alight\\_3529064.aspx](http://www.seabreeze.com.au/News/Power%20Boats/Powerboat-classic-set-to-bring-the-Hawkesbury-River-alight_3529064.aspx), accessed 2010

Responses from power boaters in the online survey for this project indicate:

- the main access points for power boaters, are: Deerubbin Reserve, Parsley Bay, Brooklyn and Berowra Waters
- the majority of power boaters do not require additional access points
- the facilities in need of an upgrade include: rubbish bins, boat wash down facilities, pump out facilities, boat moorings, public toilet facilities, tidal swimming pool, trailer parking, fish cleaning tables and fire places

Consultation also identified that:

- there are club activities on the Lower Hawkesbury that attract 30 or more large cruiser boats that are slow and create considerable wash for others
- there are always wash problems with big cruisers and an education campaign should be launched in regards to this<sup>51</sup>
- education is needed for those who do not slow down around moored boats

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51 Telephone consultation with Luxury Afloat, 2010

## Water skiing

National demand for water skiing and power boating<sup>52</sup> has decreased slightly for persons aged 15 years and over, from 1.2% in 2001 to 0.9% in 2009. NSW participation is slightly lower than national rates at 0.8% in 2009.<sup>53</sup> This trend is consistent with anecdotal evidence provided by stakeholders.

The waterskiing market has split into skiing and wakeboarding. Wakeboarding tends to be more attractive to the younger market. Consultation with users suggest more traditional water skiing has declined locally, but there is no hard evidence of this.

Wakeboard boats are very powerful and with their shape create bigger waves for boarding. As a result, there is more erosion of riverbanks.

There is a major growth in cable wakeboarding as an action sport in Australia over the last few years. There is a cable wake park in Penrith.

The majority of the water skiing is supported by facilities along the northern shores of the Hawkesbury (Gosford LGA) and it is largely upstream in the vicinity of Wisemans Ferry.

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52 Exercise, Recreation and Sport Survey puts these two activities together, so separate participation rates were not available

53 Exercise, Recreation and Sport Survey, SCORS, 2010

Commercial fishers are concerned about the extent of closures for events, especially during the autumn run of the prawn season. NSW Maritime advise that they try to minimise the impact of closures of the River for water ski events by scheduling them out of the main boating season.

Responses from water skiers in the online survey showed the following:<sup>54</sup>

- water skiers would like additional access points to the Lower Hawkesbury
- water skiers mainly use boat ramps, wharves pontoons, public toilets, seats and tables
- facilities that the water skiers indicated that needed an upgrade were boat ramps, wharves for boats, pontoons, public toilets, camping facilities, seats and tables

Comments gathered in consultation in regards to water skiing were:

- “water skiing and wakeboarding are growing in popularity”<sup>55</sup>
- “there has been an increase in the number of children and older people water skiing”<sup>56</sup>

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54 For full survey analysis please see Appendix 1

55 Telephone consultation with President, NSW Water Ski Federation, 2010

56 Ibid

- “NSW Waterski Federation are planning an accessible water ski facility at the NSW Ski Gardens”<sup>57</sup>
- “water skiing is a family sport”<sup>58</sup>
- “the majority of water skiers own their own boats”<sup>59</sup>
- “Wisemans Ferry boat ramp requires an upgrade”<sup>60</sup>
- “people that don’t have wake boarding boats, buy devices to add weight to their boat to create a bigger wake”<sup>61</sup>
- “water skiing and wakeboarding activity in the Wisemans Ferry area has increased, but there has been a decrease in the overall number of participants on the whole River”<sup>62</sup>
- NSW Maritime advise that some of the older ski boats do get swamped by wakes from wakeboard boats
- “that access to a sandy beach is preferred to run from for water skiers and wake boarders”<sup>63</sup>
- “water skiers and other motorised users are ruining the River experience for others”<sup>64</sup>

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57 Ibid

58 Ibid

59 Ibid

60 Ibid

61 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

62 Ibid

63 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

64 Community Workshop, 2010

- “infrastructure requirements for water skiing include: boat ramp, fuel purchase supplies, café, lunch spot and toilets”<sup>65</sup>
- “wakeboard boats create bigger waves and more foreshore erosion”<sup>66</sup>
- “some activities are more anti social than others, such as waterskiing and jet skis”<sup>67</sup>
- “the younger demographic are changing to wakeboarding, it is cooler now like snowboarding is to snow skiing”<sup>68</sup>
- “NSW Water Ski close down the River up to 20 times per year (this applies only to the narrow sections). During this time you cannot ski or wakeboard as there are only small channels on the edge of the River that can be used”<sup>69</sup>
- as Wisemans Ferry is a long way from Hornsby most skiers and wake boarders from the Shire would not be likely to use the main boat ramp, but use private launch facilities associated with caravan parks where they are likely to stay.
- NSW Maritime are not likely to introduce any more regulations to control water ski or power boating in the area – as it is only a very small industry.

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65 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

66 Community Workshop, 2010

67 Ibid

68 Telephone consultation with Black Diamond Wakeboarding, 2010

69 Ibid

Information gathered in telephone consultation in regards to the Bridge to Bridge race showed<sup>70</sup>:

- “the number of participants is increasing”
- “the number of boats participating is 150, heading towards 200”
- “the number of entries peaked in the 1980’s - 1990’s with 425 – 427 boat entries”
- “the race was not held in 2000 – 2001 due to public liability issues. The race is rebuilding year by year since then”
- “you need to be a member of Ski Australia in order to participate in the event”
- there is concern that the seagrass beds – especially that near Dangar Island are being damaged by inadvertent straying of boats across the area. The Bridge to Bridge event current goes from Dangar Island and it may be environmentally beneficial to start the race from Mooney Mooney Point where are be better provisions for event marshalling etc, as, well, as less environmental impact
- “a good relationship is enjoyed with the residents of Dangar Island, and that seagrass is buoyed off during the event”

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70 Telephone consultation with President, NSW Water Ski Federation, 2010

- NSW Maritime advise that the timing of events such as the Bridge to Bridge are now set to ensure it is high tide and hence there will be little damage to the seagrass. All large ski events are set outside of the main ski / boat season so as to impact less on other users.

### Recreational fishing

The estimates of participation in recreational fishing vary considerably depending on the source.

According to NRIFS the proportion of the NSW population that fish for recreation was 16.3%. (Almost 24% of the NSW male population go fishing, while only 10% of females, fish). This equates to over 26,080 people fishing in the Shire in 2011 (See Table 4, Appendix 2).

The NRIFS, 2003 report indicates that participation rates in fishing are much lower in the metropolitan area than regional NSW. The Sydney region (in which Hornsby Shire is located) recorded the lowest participation rate of any region (13.1%) or 19,631 people fishing in Hornsby. However, the Sydney metro area had the largest number of recreational fishers (482,739 fishers) by virtue of its population size.

Based on participation rates collected for the Hornsby Leisure Strategic Plan 2004, approximately 30% of people said they fished in the last year (2003). This equates to over 44,900 people.

The greatest number of fishers are in the 30 – 44 age-group bracket, however participation rate was highest among 5 – 14 years (33% males and 23% females).<sup>71</sup>

Nationally, about 41% of the total fishing effort (9.5 million events) occurred in coastal waters, with estuarine waters accounting for 35% (8.1 million events).<sup>72</sup>

Results from the National Recreational and Indigenous Fishing Survey identified that the top three reasons for fishing in descending order were to relax and unwind, for sport, and to be with family and to be outdoors. Only a small proportion caught fish for food as their primary motivation.<sup>73</sup>

Since 2001, on average 495,000 fishing licences are sold per year in NSW. An analysis of licence sales has shown that sales are highly variable from year-to-year for a variety of reasons, including:<sup>74</sup>

- license renewals, some anglers only renew their licenses when they next go fishing, rather than upon expiry;
- some fishers are now choosing to purchase three year licenses instead of annual licenses;

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71 National Recreational and Indigenous Fishing Survey, Fisheries Research and Development Corporation, 2003

72 National Recreational and Indigenous Fishing Survey, Fisheries Research and Development Corporation, 2003

73 Ibid

74 Written correspondence with Fisheries Manager, Recreational Licensing, Fisheries Resource Management, 2010

- drought, inland sales vary according to prevailing drought conditions; and
- ocean currents and weather, the East Australian Current can vary from year-to-year and can influence offshore water temperatures and associated fishing opportunities.

The Boating Industry Association indicates that in 2006 boat fishing was the most participated in activity from a boat (74%), followed by waterskiing (22%) and cruising with a power boat (20%).<sup>75</sup>

In 2003, NSW had the greatest number of recreational fishers in Australia, at approximately 999,000 people (14.9% of the population as at June 2003 at 6,687,000), followed by Queensland at 785,000 and Victoria at 550,000. Nationally, recreational fishing was more popular among males (2.3 million) than females (1.1 million).<sup>76</sup>

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<sup>75</sup> Statistics are from Australia, 2006. Source: BIA.

<sup>76</sup> National Recreational and Indigenous Fishing Survey, Fisheries Research and Development Corporation, 2003

### ***Fishing clubs in Hornsby Shire***

There are five fishing clubs in Hornsby Shire:

- The Ku-Ring-Gai, Hornsby Angling & Casting Club Inc.
- Windybank's Fishing Club
- Hornsby RSL Fishing Club
- The Anglers Rest Fishing Club
- Sea Bees Boating Club Inc. (Metro Sydney. Has more than 200 members)

Based on ERASS 2009 figures, fishing is one of the activities least likely to be organised with only 0.2% of people who fish, choosing to do so as part of a club, organisation or centre in NSW.<sup>77</sup>

Membership in fishing clubs was low compared to the number of people who fish, with 4.3% of fishers nationally.<sup>78</sup>

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<sup>77</sup> Exercise, Recreation and Sport Survey, SCORS, 2010

<sup>78</sup> National Recreational and Indigenous Fishing Survey, Fisheries Research and Development Corporation, 2003

Responses from motorised boat based recreational fishers in the online survey showed:<sup>7980</sup>

- the majority of motor boat recreational fishers launch from Brooklyn, followed by Parsley Bay and Berowra Waters
- slightly more motor boat recreational fishers felt that additional access points to the Lower Hawkesbury are required, than those who thought more access points were not needed
- the majority of the motor boat recreational fishers said that the Lower Hawkesbury River cannot sustain additional growth
- the main facilities used by motor boat recreational fishers are boat ramps, trailer and car parking, fish cleaning tray, rubbish bins, public toilets and boat wash down facilities
- most of the motor boat recreational fishers ranked ramp facilities as satisfactory or in need of an upgrade
- the majority of motor boat recreational fishers seek “natural spaces with basic facilities”, rather than “semi remote setting with no public facilities” or “formally designed places with good level of accessibility”

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79 For full survey analysis please see Appendix 3

80 Note: No responses from shore based recreational fishers were received in the online survey conducted for this study.

Comments from consultation in regards to recreational fishing showed:

- “fish stocks are much lower than 30 years ago”<sup>81</sup>
- “fish numbers have definitely declined in the last 10 – 20 years”<sup>82</sup>
- “there is an adequate number of fish in the River”<sup>83</sup>
- “fish cleaning facilities need upgrading”<sup>84</sup>
- “gill netting should be stopped”<sup>85</sup>
- “the number of recreational fishing boats on the River has increased in the past 10 – 15 years”<sup>86</sup>
- “there are arguments, particularly on the weekends when fishers will not move for boats at Kangaroo Point”<sup>87</sup>
- “to stop people fishing at Kangaroo Point, they need to be taught techniques so that they don’t get snagged up at other areas”<sup>88</sup>
- “Sydney has the worst fish cleaning tables in all of Australia”<sup>89</sup>

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81 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

82 Telephone consultation with Sea Bees, 2010

83 Community Workshop, 2010

84 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

85 Ibid

86 Ibid

87 Telephone consultation with Luxury Afloat, 2010

88 Telephone consultation with a member of Shore Fishing Australia, 2010

89 Telephone consultation with a member of Shore Fishing Australia, 2010



- “jet skiers and water skiers are the biggest issue for fishers”<sup>90</sup>
- “fishing platforms are excellent for fishers. Since one was put in at Georges River, South Sydney, it has been a lot cleaner and is ideal now”<sup>91</sup>
- “Mooney Mooney Point is the first preference for launching your boat when going up River”<sup>92</sup>
- “live bait such as poddy mullet, yellowtail, mackerel and squid can be collected”<sup>93</sup>
- “there is a variety of fish to be caught”<sup>94</sup>
- “bag limits should be decreased”<sup>95</sup>
- “Kangaroo Point is used by recreational fishers, five days a week. 8-10 fishermen will be there between 8pm to 10pm”<sup>96</sup>
- “there are dangerous places where people fish past the “lodge”. They are parking and fishing along Singleton Road – access, rubbish and toileting are issues”<sup>97</sup>
- “fishing camps come from all over Sydney and set up at least every other weekend”<sup>98</sup>

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90 Ibid

91 Ibid

92 Telephone consultation with Sea Bees, 2010

93 Telephone consultation with a member of Shore Fishing Australia, 2010

94 Community Workshop, 2010

95 Telephone consultation with a member of Shore Fishing Australia, 2010

96 Telephone consultation with Owner, Luxury Afloat, 2010

97 Community Workshop, 2010

98 Ibid

- “Apple Tree Bay and Church Point ramps are not being used to capacity, as use incurs fees”<sup>99</sup>
- Brooklyn should get upgrades similar to those at Mooney Mooney Point<sup>100</sup>
- “Parsley Bay needs a pontoon arrangement where you can launch your boat adjacent to the ramp, like at Mooney Mooney Point”<sup>101</sup>
- “Parsley Bay is a regional boat ramp”<sup>102</sup>
- “there are very few public ramps and you often end up going to a ski park”<sup>103</sup>
- “fishing clubs cannot organise any outings on the Lower Hawkesbury, due to poor access and fees”<sup>104</sup>
- “Wisemans Ferry is too noisy for fishers”<sup>105</sup>
- “there has been a call for a ramp in Wisemans Ferry for years”<sup>106</sup>
- “fishing platforms are required on the Lower Hawkesbury. These enhance safety and allow an area for mums and dads to watch from”<sup>107,108</sup>

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99 Telephone consultation with Sea Bees, 2010

100 Ibid

101 Ibid

102 Ibid

103 Ibid

104 Ibid

105 Ibid

106 Ibid

107 Ibid

108 Telephone consultation with Australian Sportfishing Association, 2010

- “we have one outing to Berowra Waters a year. There is a real problem with parking due to the restaurant. There is a need to fish of a morning, so that you get a spot. In the afternoon / evening you cannot get parking. Although there are a number of spots there marked for trailers and cars – restaurant patrons park there anyway. We don’t want any arguments so we go somewhere else”<sup>109</sup>
- “Crosslands Reserve could be attractive for small craft, canoeists, kayakers and small powered craft. It would be fantastic particularly because the parkland is there. It could provide opportunities for socialising and social / family recreation and camping”<sup>110</sup>
- “very important linkage between car parking and amenities”<sup>111</sup>
- “if bins are located close by to fish cleaning tables, fishers will use them”<sup>112</sup>
- “toilets, bin and fish cleaning table are required at Wisemans Ferry”<sup>113</sup>
- “Mooney Mooney car park requires an upgrade”<sup>114</sup>

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109 Telephone consultation with Sea Bees, 2010

110 Ibid

111 Ibid

112 Ibid

113 Ibid

114 Ibid

- “conflict between commercial and recreational fishers always exists.<sup>115</sup> Weekend, public holiday closures to the commercial fishers is a solution to this conflict”
- “clearly defining trawling grounds and education on both sides of the fence would also help”<sup>116</sup>.
- “more access is required to the Lower Hawkesbury River”<sup>117</sup>
- “at a minimum a garbage bin lighting and parking is required for fishers”<sup>118</sup>
- “commercial fishing is one of the main impacts on fish numbers in the area”<sup>119</sup>
- “people travel from all areas to fish the Hawkesbury River”<sup>120</sup>

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115 Telephone consultation with Sea Bees, 2010

116 Telephone consultation with Australian Sportfishing Association, 2010

117 Ibid

118 Ibid

119 Ibid

120 Ibid

Information gathered during the telephone consultation in regards to shore based fishing on Singleton Road showed:

- “that there are no objections to formalising fishing areas on Singleton Road, as it will stop bush degradation and because there are limited areas for shore based fishing”<sup>121</sup>
- “clearly defined access trails and bins would resolve a lot of environmental issues. Fencing off areas that you want to keep anglers out of and providing access points in areas where they are allowed to go would help”<sup>122</sup>
- “it could be a good idea if there was more Ranger activity on the weekend to prevent litter”<sup>123</sup>
- “the block of bins on Singleton Road is the only solution. As long as Council empties them regularly it should be fine”<sup>124</sup>
- “it will be taken over by illegal campers and people that want to drink and party. The area is too remote and cannot be supervised”<sup>125</sup>

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121 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

122 Telephone consultation with Australian Sportfishing Association, 2010

123 Telephone consultation with a member of the Lower Hawkesbury Management Committee, 2010

124 Ibid

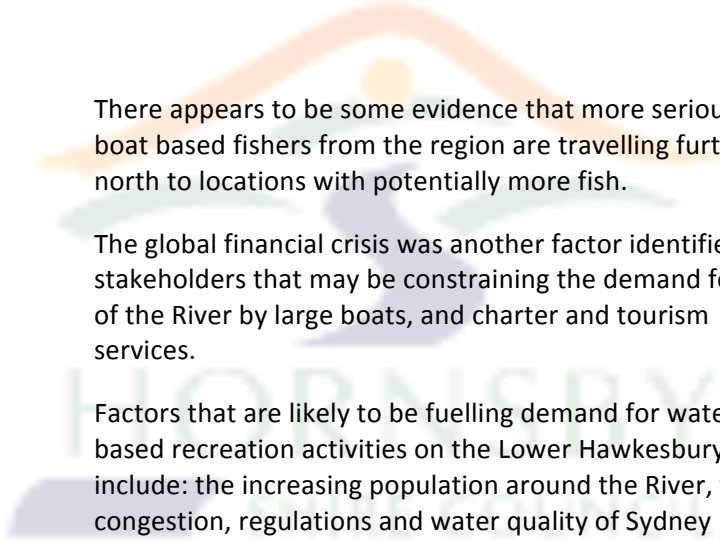
125 Telephone consultation with Riverlands Caravan Park, 2010

## Other influences on demand

The majority of stakeholders interviewed said that the competitive strength of the Lower Hawkesbury for waterbased recreation relates to: the high scenic quality of the estuary and the high degree of naturalness. These are due to abutting national parks and rural lands. The findings of the online survey conducted of this project reinforced the desire for nature-based experiences across all activities, even power boaters.

Anecdotal evidence suggests that demand is being constrained by the limited number of ramps and pontoons accessible by car, the numbers of car parks, congestion at ramps, and the depth of water at Brooklyn and Parsley Bay. Poor water quality, at some sites for example at Crosslands Reserve, as compared to Bobbin Head may also constrain demand. The condition and the price of using infrastructure (such as boat ramps), and congestion at boat ramps may also limit or divert demand to other locations.

The lack of fish and fishing platforms also appears to be influencing local demand, for shore based fishing. A number of people interviewed believe that the River has been over fished, and that catches have declined over the last 30 years. Children and people with a disability who can't use a boat are not easily able to get to suitable locations to fish due to topography.



There appears to be some evidence that more serious boat based fishers from the region are travelling further north to locations with potentially more fish.

The global financial crisis was another factor identified by stakeholders that may be constraining the demand for use of the River by large boats, and charter and tourism services.

Factors that are likely to be fuelling demand for water based recreation activities on the Lower Hawkesbury include: the increasing population around the River, the congestion, regulations and water quality of Sydney Harbour, and the declining quantity and quality of open space available to residents of the Sydney region.

## 3. Supply Analysis

### 3.1 Deerubbin Reserve

#### Context

Deerubbin Reserve is located in Gosford Shire, at the end of a peninsula extending southwards into the Hawkesbury River estuary. It is the point at which the Sydney-Newcastle Freeway and Pacific Highway cross from the Central Coast into Sydney's metropolitan area at Brooklyn and in the Hornsby Shire.

The topography of Deerubbin Reserve is steep until it approaches the River. The Deerubbin Reserve adjoining the freeway, is a key access point to the Hawkesbury River. It is used for water based users and as a wayside stop for people (including those towing caravans) travelling up the freeway.

Trailer sailors can't get to Deerubbin Reserve from downstream because the freeway and railway bridges are too low.

Infrastructure at this location includes a (See Appendix 9, for a site inventory):

- Boat ramp
- Public pontoon
- Fish cleaning table
- Lighting

- Car park and boat trailer parking
- Public toilets
- Picnic facilities
- Information booth

This is a large site with considerable parking used by other freeway users as well as fishers and boaters.

This site has been proposed as a future commuter car parking destination to serve River communities.

Deerubbin Reserve is an ideal location for boaters travelling up the River to launch. However, it has mangroves located close to waterbased infrastructure. Potential environmental effects that could occur to these mangroves if current human activity increased include: trampling of vegetation (saltmarsh and mangroves), compaction of sediment, lower ground level, increased retention of tidal water, damage to pneumatophors and mature plants, grass pollutants trapping sediment; erosion and change in sediment composition<sup>126</sup>.

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<sup>126</sup> This information was provided in email correspondence by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI, and was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010. This outlines what could potentially occur rather than what is occurring at each of the sites. The information was gathered as part of the projects mapping process, however, the areas for the habitats in close proximity to each site are not exact as precise GIS measurements were not available.

Potential stressors include increased access to habitats in Mooney Mooney Creek including mangroves, saltmarsh and mudflats as well as increased bait collecting and fishing in these areas. See Appendix 1 for further information.

### **Issues and Opportunities**

Deerubbin Reserve at Mooney Mooney Point is not as aesthetically pleasing as other locations as it does not have the bushland backdrop and has been highly modified / engineered with a large car park and breakwater.

The site can be busy with cars from the freeway. Some people interviewed indicated this site is popular with older people travelling through as a stop-off point with their caravans. This provides some congestion for boat owners trying to park and launch from the site.

### **Infrastructure**

Anecdotal evidence from telephone interviews indicates the pontoon at Deerubbin Reserve is in excellent condition and is the best design for accessibility to the water on the Lower Hawkesbury.

Public access for canoeing is sufficient, and dual access ramps are also suitable for canoeists.

While the two-lane boat ramp has improved since its upgrade, it is still very crowded during the summer months and is often littered with rubbish. It was noted that some canoeing groups arrive early at this location in order to pick up the rubbish before clients arrive.

Users said the fish cleaning table is dated and has issues with bird excrement.

A site on the north east side of the old pacific highway is a popular fishing spot. This could be made safer and formalised.

Gosford City Council conducted a community survey regarding a possible commuter vessel berthing and car parking facility at Deerubbin Reserve. 56.8% (192 persons) of respondents said they would use a berthing and parking facility here, while 32.2% (109 persons) would not. 55.9% (189 persons) of respondents would be willing to pay a reasonable fee for the use of a secured combined vessel berthing / car parking facility (14.5% would not and 17.5% are unsure.<sup>127</sup>

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<sup>127</sup> Gosford City Council, Community Survey 2009/2010

If this site was developed as the regional commuter hub for River communities, it would take pressure off the smaller locations that are important for environmental waterbased recreation that have major space constraints.

Deerubbin Reserve has been proposed as an alternative for the start of the Bridge-to-Bridge power boat race, so that seagrass adjacent to Dangar Island would be less susceptible to damage.

Changing the start location of the race hasn't previously received support due to the historic tradition that the race starts from Dangar Island.

As the timing of such events has been modified (after the season and at high tide) this may be less of an issue now.

#### ***Future use of Peat Island***

Attendees at the community workshop said Mooney Mooney near the workers club could potentially sustain a new access point to the River.

The Hawkesbury River rescue and other volunteer service have their radio base on Peat Island. If this site is developed for housing when the health services leave, attendees at the community meeting said this would be great location for community water based opportunities and volunteer water based recreation services.



**Image 1: North side of the Pacific Highway**

### Suggested Actions: Deerubbin Reserve

- ▶ Establish a regular maintenance routine with more frequent litter pick-ups in peak periods such as the summer months and long weekends
- ▶ Consider updating the design of the fish cleaning table and providing more shelter (See Appendix 10 for examples of fish cleaning tables)
- ▶ Consider retaining a facility on Peats Island for boating and water based recreation volunteer services, and other water based recreation where possible
- ▶ Encourage further dialogue between Hornsby and Gosford Councils over the development of a regional commuter hub at Mooney Mooney Point
- ▶ Consider facilitating a site on the north east side of the Pacific Highway as a popular fishing spot. This could be made safer and formalised by providing a gap in the guard rail, and designing a suitable water edge. This area is pictured in the following image . (Note: This may not be the best site for an accessible fishing platform due to the difficulty in parking a vehicle away from the road; unless off road car parking and an accessible path of travel to a fishing platform could be provided, and the platform located with access to deep water.

### 3.2 Wisemans Ferry

#### Context

The River at Wisemans Ferry has a backdrop of trees, hills and sandstone caves, and then rolling farmland on the southern side. Wisemans Ferry township is encircled by four national parks: Dharug, Yengo, Cattai and Marramarra. In 2006 the population of Wisemans Ferry and Laughtondale, combined, was 500 persons.<sup>128</sup>

Public infrastructure at Wisemans Ferry includes the following: (See Appendix 9, for a site inventory):

- Boat ramp, in association with a timber public wharf and a very small unsealed and unformed car park area / boat trailer parking
- There is a newer concrete wharf and tie up facilities within walking distance downstream from the other timber wharf. This was for the former Lady Hawkesbury boat
- Adjacent to the River there is a recreation reserve. This reserve has a fenced playground, circular path for children's wheeled toy vehicles, a sports oval (with cricket nets and cricket wicket), tennis courts, picnic shelter, tables and public toilets

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<sup>128</sup> Dictionary of Sydney, 2006



Evidence obtained from interviews and surveys suggests Wisemans Ferry is popular with water skiers and wake boarders, and has a number of caravan parks with private ramps, including the NSW Ski Gardens, which is owned by the NSW Water Ski Federation.

The River edge at the wharf has a wall constructed from sand bags.

Considerable revegetation has been conducted along the River and reserve frontage in Wisemans Ferry. Wisemans Ferry has mangroves very close to waterbased infrastructure and the shoreline. Increased boat activity (could cause damage to riparian habitats above and below the water). Boat activity and boat wash are the main stressors on this plant community.

Potential environmental impacts on mangroves if current human activity is increased include: bank erosion, turbidity and sediment transport affecting sediment accretion and erosion to habitats downstream<sup>129</sup>. See Appendix 1 for further information.

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<sup>129</sup> This information was provided in email correspondence by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI, and was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010. This outlines what could potentially occur rather than what is occurring at each of the sites. The information provided in the Appendix was gathered as part of a mapping process, however, habitats in close proximity to each site are not exact as precise GIS measurements were not available.

## Issues and Opportunities

There is a proliferation of signs (some of which are defaced) and posts on the foreshore adjacent to the public wharf. When inspected it was noted that the wharf's conditions could be improved and made more accessible to people with mobility impairments.

There was erosion where the timber meets the ground and the wharf didn't have wheel stops to act as a precaution to stop wheelchairs and strollers from rolling over the edge.

Council staff advise that improvements have been undertaken and works are complete. Picnic tables in the adjacent reserve were not accessible to people using wheelchairs.

A community workshop attendee said there is a private pump out at Wiseman's 1km downstream from the fishing table that isn't being used. Council staff are not aware of this possible facility, and whether it is in Hornsby Shire.

### ***The boat ramp***

Anecdotal evidence suggests that demand for boat ramps in Wisemans Ferry is greater than supply. Owners of private parks stated that there was significant demand from members of the public to use their ramps, and use is for a fee, as there are not enough public ramps. One park owner said that; at times, they have had to curtail public use, as the demand was overwhelming.

The condition of the boat ramp in Wisemans Ferry was considered as poor, as part of an audit undertaken by NSW Maritime in 2007.<sup>130</sup> Evidence obtained during consultation is consistent with this assessment.

It was suggested by stakeholders that the boat ramp capacity needs to be increased to two lanes, and improvements need to be made to parking especially trailer parking. It was suggested that at times the ramp is unusable, due to the condition of the ramps unsealed surrounds. Parking at Wisemans Ferry and Brooklyn - trailer parking in particular, was considered a priority by attendees at the community workshop.

One difficulty with the current ramp and parking at Wisemans Ferry is that these are located on land owned by the Land and Property Management Authority, and hence Council is not able to upgrade these facilities.

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<sup>130</sup> NSW Maritime Boat Ramps Audit, 2007

Council however has a sealed area used for car parking further up the road. This could also be enhanced and formalised.

Attendees at the community workshop said the boat ramp at Wisemans Ferry needs an upgrade, and the caravan park owners previously opposed the upgrade, at the time.

Attendees at the community workshop asked if the ramp at Wisemans Ferry previously used for the Lady Hawkesbury, could be used for more recreation access. Council staff however said that this facility was falling into disrepair.

Attendees at the community workshop said the ramp at Laughtondale is not good at low tide.

### ***Accessibility***

The lack of accessibility to enter the water was also raised as an issue for water skiers or wake boarders with a disability. NSW Water Ski Federation are investigating the feasibility of putting in accessible infrastructure at the NSW Ski Gardens, and are in the process of planning and liaising with Council over this.

Wisemans Ferry is quite remote from residents in Hornsby and as such, a large proportion of boating use is associated with accommodation premises.

There appear to be a number of private access points, ramps and jetties near Wisemans Ferry. Some stakeholders suggested these would be unlikely to have planning approval. The complexities of the development approvals process for facilities straddling water and land, mean the process takes some considerable time.

### **Events**

The Wisemans Ferry area of the River is closed regularly for events. Last year it was closed twenty times for NSW Water Skiing events.<sup>131</sup> The closure of the River on weekdays (such as for the Australian Ski Titles) also impacts on commercial fishers when these events restrict trawling times, especially in peak prawn season. The closure of the River impacts on, and limits other public recreational use of the River, as users must stay close to the edges. Boats travelling at speed, with large wash can be hazardous for paddlers. Therefore due to the popularity of this location for water skiing and wake boarding, canoeists / kayakers will encounter less risk at other sites, particularly during peak season and long weekends.

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<sup>131</sup>Telephone consultation with Black Diamond Wakeboarding, 2010

### **Fish cleaning**

There may be demand for a fish cleaning table at Wisemans Ferry. The strategic placement of infrastructure can encourage or discourage recreation within particular areas. By placing infrastructure in Wisemans Ferry it may encourage shore based fishers from Singleton Road to fish away from this vulnerable area.

Although Wisemans Ferry is noisy at times and not ideal for fishing, a cleaning table can provide for fishers in non peak times, as well as families visiting the area, and ensure that infrastructure is available to support a diversity of interests.

Refer to Appendix 10 for photographs of various fish cleaning table designs. There are a number of different styles of fish cleaning tables, however simple steel structures with access to water on the tray are best.

### **Fishing sites along Singleton Road**

A number of fishing sites along Singleton Road have been created by fishers pushing through the vegetation to the riverbanks. In most cases the public road is narrow and there is a narrow verge and relatively narrow band of riparian vegetation between the road and the River. It would appear fishers camp and have fires at these sites. There has been significant rubbish left and some have left domestic furniture and items to facilitate later use.

At one site close to Singleton's Mill, Council has undertaken revegetation and vehicle control works and installed a number of large rubbish receptacles.

Where possible it would be desirable for cars to be parked on the side of the road away from the River, to protect riparian vegetation.

A number of stakeholders are not generally in favour of retaining multiple fishing access points along Singleton Road, and suggest most, if not all sites be revegetated. The NSW National Parks and Wildlife Service own a freehold site on the River where a house was located. This may be suitable for developing a small car park and space for fishing. Some demand may be able to be directed away from other sites if this was developed.

In relation to the other sites along Singleton Road, it is advisable that Council does not provide rubbish bins, and that some interpretive signage be erected to advise of the impact of rubbish on the environment, and recommending it be taken home.



**Image 2: Singleton Road, Wisemans Ferry**



**Image 3: Wash from boats, Singleton Road, Wisemans Ferry**

### Suggested Actions: Wisemans Ferry

- ▶ Seek assistance from NSW Land and Property Management Authority to increase the number of lanes at the public boat ramp from one to two lanes, and make improvements to the car and trailer parking
- ▶ Continue to liaise with the NSW Water Ski Federation, with regard to accessible access to the water, for water skiers and wake boarders
- ▶ Provide a fish cleaning table at Wisemans Ferry
- ▶ Consolidate and upgrade signage at the Wisemans Ferry boat ramp
- ▶ Facilitate canoeing / kayaking launching at one location in Wisemans to enhance safety
- ▶ Restrict car access to the land between the public roadway and the River along Singleton Road
- ▶ Revegetate all small sites that have been compacted and trampled along Singleton Road. Erect interpretive signage at the cave site, to advise of the impact of rubbish and recommend it be taken home
- ▶ Work with NSW National Parks and Wildlife Service to develop one small site as a fishing spot, in the vicinity of Singleton Mill,

### 3.3 Crosslands Reserve

#### Context

Crosslands Reserve is 19 hectares in area, and is part of the larger Berowra Valley Regional Park. The site is accessible by road and River. The site offers the facilities of an urban park, within a bushland setting.<sup>132</sup> A master plan for Crosslands Reserve was adopted by Council in 2006.

There are two distant areas of the reserve, one maintained by Council with play facility, sealed paths, toilet block and viewing platforms and the other managed by NSW National Parks and Wildlife Service. This is primarily a camp site, with walking trails, boat ramp and picnic facilities and open grassy areas. There is a beach on the River at this location. The lower north east area of Crosslands Reserve is prone to tidal inundation and can be submerged up to 100mm during king high tides.

Crosslands Reserve is situated on the Great North Walk. It is some 7km from Berowra Waters.

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<sup>132</sup> Crosslands Reserve Master Plan, 2006

Through consultation and surveys, it was identified that Crosslands Reserve is popular with canoeists / kayakers and picnickers. Crosslands Reserve is used by a large number of organised groups such as adventure tours, TAFES, schools, scouts, commercial groups (including canoeists), for eco walks and aboriginal heritage walks.

Crosslands Reserve has mangroves and saltmarsh very close to the picnic areas and car park. Increased shoreline activity from more people accessing the site close to mangroves, in addition to gross pollutants, are the main stressors on these plant communities. Potential environmental effects that could occur to mangroves if current human activity include: trampling of vegetation, compaction of sediment, damage to pneumatophors and mature plants<sup>133</sup>. Potential environmental effects that could occur to saltmarshes if current human activity increased include: trampling of vegetation, compaction of sediment, lower ground level, increased retention of tidal water, gross pollutants trapping sediment<sup>134</sup>. See Appendix 1 for further information.

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<sup>133</sup> This information was provided by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI, and was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010. This outlines what could potentially occur rather than what is occurring at each of the sites. The information was gathered as part of the projects mapping process, however, the areas for the habitats in close proximity to each site are not exact as precise GIS measurements were not available.

<sup>134</sup> Ibid

Whilst the reserve is relatively close to Hornsby, a relatively narrow road probably limits demand.

Public infrastructure at this location includes:


- Camp sites
- Picnic tables
- An unsealed boat ramp- restricted to small vessels
- Public toilets
- Car parking
- Viewing platforms overlooking the River
- Sandy beach
- Walking tracks
- Play equipment
- Trail

(See Appendix 9, for a site inventory).

## **Issues and opportunities**

### ***Primary function***

The nature of the setting sought after by users at this location is associated with high environmental and aesthetic values. This site is most suited to nonmotorised boating activity, due to the shallow water in the vicinity.



Council has installed a new toilet block in 2010 at the reserve and upgraded associated furniture to meet demand and user needs.

An outside tap is required by canoeists to wash off away from the toilets, so that the toilet block is not left wet and muddy.

#### ***Access for people with a disability***

If the design of facilities such as toilets and the viewing platforms were upgraded, more people with a disability could use the site.

The viewing platforms do not have wheel stops to act as a precaution to stop wheelchairs and strollers from rolling over the edge. These platforms are not close to the water except at high tide, and the water isn't deep enough to enable fishing, nor is there the ability to launch canoes from these.

Furniture on the north east part of the reserve needs to be upgraded and should be made accessible to people using wheel chairs.

#### ***The boat ramp and access to the creek***

The boat ramp is muddy and people are using the edges to avoid the mud. This is making the ramp wider and impinging on the flora on the ramps edges. The water is quite shallow in the area, and the ramp has barriers to launching motor boats. Stakeholders suggest that the Convention Centre would like to open up the ramp to motor boats, and create better access to the Convention Centre across the River. The master plan recommends against this.

The convention centre on the other side of the creek has sought additional boat access to the boat ramp to transport supplies. This point is not deep enough for motor boat access. The Estuarine Management Plan prohibits use of motor boats in the area.

There is some erosion of the banks of the River in the area managed by Council, and especially adjacent to the viewing platforms where people are accessing the River. Some areas have been fenced off for rehabilitation.

#### ***Water quality***

The water quality at Crosslands Reserve is said to be relatively poor in comparison with other locations in the catchment such as Bobbin Head. The master plan indicated the site returned a "fair" rating for "secondary contact" recreational uses with a 67% overall compliance rating. Elevated enterococci levels are the main concern here.

Hornsby Heights Sewerage Treatment Plant discharges into Berowra Creek and affects the water quality at Crosslands Reserve. This source provides about 10mg/l per day of effluent suitable for secondary contact water based recreation. The effluent is not considered recycled water, as it is not drinkable.

Sydney Water advise that this effluent is likely to be only a small proportion of the total pollution going into the creek.<sup>135</sup>

A greater source of pollution is likely to be from runoff from suburban streets. The amount of effluent is unlikely to increase in next 10 years unless Council allows a significant amount of additional residential development. Sydney Water advise that this effluent could be used on sports ground sites in the vicinity of Hornsby Heights, however this would cost approximately \$7million dollars.<sup>136</sup>

The DIPNR water quality investigation recognised that the 2004 monitoring period was not a particularly wet season, noting that “it is generally accepted that bacterial levels are more likely to exceed guidelines during [wet weather] events, due to input from stormwater drains, occasional sewer overflows and overland flow”.<sup>137</sup>

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<sup>135</sup> Telephone consultation with Sydney Water, 2010

<sup>136</sup> Telephone consultation with Sydney Water, 2010

<sup>137</sup> Crosslands Reserve Master Plan, 2006

No signage indicating water quality concerns were noted on site.

### **Suggested Actions: Crosslands Reserve**

- ▶ Promote Crosslands Reserve as the primary place for non motorised boats and canoes / kayaks, on the Lower Hawkesbury. This area has an opportunity to become a hub canoeists, due to the shallow water (that excludes motor boats from this area) and the grassed open space area (that provides areas for lunch, group rest stops, camping and trip preparation)
- ▶ Seek to constrain the widening of the boat ramp to minimise damage to surrounding vegetation. This maybe done through provision of recycled plastic matting that encourages use on the existing ramp for example, or through design to limit its width
- ▶ Enhance the accessibility of furniture and facilities on the site especially the river platforms, and the picnic facilities in the northern section of the reserve
- ▶ Keep the main comforts and facilities to one area (eg area currently maintained by Council and retain the other as primarily natural area)
- ▶ Provide a wash down tap / shower for canoeists, away from the toilet facility
- ▶ Seek to improve the water quality at the reserve through managing stormwater, and directing effluent to other reserves for example



### 3.4 Berowra Waters

#### Context

Berowra Waters is a marina with a boat ramp and ferry access, set in Berowra Creek. It has a variety of services and infrastructure including the following:  
(See Appendix 9, for a site inventory)

- Public boat ramp
- Marina
- Public toilets
- Multilevel car park and trailer parking
- Floating pontoon
- Fish cleaning table
- Playground
- Picnic shelter facilities
- General store and bait shop
- Boat hire
- Ferry crossing
- Remains of old tidal pool
- Restaurants

Works have recently been undertaken to enhance pedestrian safety through the marina area and from the ferry.

Mangroves are located close by to Berowra Waters. Increased access via boat to saltmarsh and mangrove habitats upstream from this site, particularly around Calga Creek, and nearby on the opposite bank are the main stressors on this environment, as well as, gross pollutants

Potential environmental effects that could occur to mangroves if current human activity increased due to improved amenities at Berowra Waters include: trampling of vegetation (saltmarsh and mangroves), compaction of sediment, lower ground level, increased retention of tidal water, damage to pneumatophors and mature plants, gross pollutants trapping sediment<sup>138</sup>. See Appendix 1 for further information.

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<sup>138</sup> This information was provided by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI. It was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010. This outlines what could potentially occur rather than what is occurring at each of the sites. The location of habitats at each site are not exact as precise GIS measurements were not available.

## Issues and Opportunities

Berowra Waters is a very high usage area, and litter is a significant issue. Litter is picked up by Council every other day. Anecdotal evidence and observations suggest that the rubbish issue has been exacerbated since the multi level car park was constructed. (See the following image). Council has plans to put in a bin enclosure to house six 240l general waste bins and four 240l recycling bins.



**Image 4: Monday bins at Berowra Waters**

Cars park in the trailer parking. Current signage indicates that cars **and** trailers can park in particular areas, rather than cars **with** trailers. This needs to be controlled and enforced.

There is evidence of fires being regularly lit in a number of places on the foreshore. There used to be a fireplace at the picnic area but this was removed in the redevelopment.

The two lane boat ramp is regularly congested, and given the current traffic and large boats, additional lanes would be more practical. This will require design expertise and any additional lanes should be added to the 'creek side,' to ensure that the picnic area / green space is not reduced. It is important to note that it is more important to preserve the green space than to increase the number of boat ramp lanes.

Large vessels are not permitted to launch here, however they do. This has caused considerable concern.

Whilst canoeists don't see the need for a separate ramp, due to congestion on the main boat ramp, provision of a separate set of canoe steps may alleviate congestion and enhance safety.

There is considerable bank erosion on the north side of the Berowra Creek and north of the ferry, from shore based recreational fishers.



**Image 5: Fish cleaning table at Berowra Waters**

### **Suggested Actions: Berowra Waters**

- ▶ Monitor the litter pick-up service, especially after weekends and after the installation of the new bin enclosure
- ▶ Educate the public about the dangers of fires through educational signage
- ▶ Erect clear signage that distinguishes car parks as separate from parks for cars with trailers. Enforce these
- ▶ Educate users about ramp use: large cruisers are not to use this ramp
- ▶ Consider providing canoe access separate to the main boat ramp to protect their safety and alleviate ramp congestion
- ▶ Undertake revegetation works of banks eroded by recreational fishers

### 3.5 Kangaroo Point

#### Context

Kangaroo Point is located on a headland on the southern shore of the Hawkesbury River at the junction of the River and the Sandbrook Inlet, to the west of Brooklyn and the adjacent to the Pacific Highway.<sup>139</sup> A masterplan for this site was completed in 2004.

Kangaroo Point is the only site on the Lower Hawkesbury to provide a public pumpout facility. Facilities at the site include:

- Public boat wharf
- Boat ramp- (1 lane) old car ferry ramp to the ruins (Gosford side)
- Public pontoon
- Fish cleaning table
- Car park
- Pump out facilities
- Recreation reserve
- A roadhouse / restaurant (currently closed and up for redevelopment)
- Residence
- Luxury Afloat Houseboat Hire

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<sup>139</sup> Telephone consultation with Black Diamond Wakeboarding, 2010

- Marine Research Field Laboratory (shed with marine testing equipment; building shared with Luxury Afloat)
  - Passenger and goods loading / unloading point
- (See Appendix 9, for a site inventory)

Kangaroo Point has mangroves and seagrass beds located close to water based recreation and shore-based activity.

Potential environmental effects that could occur to mangroves if current human activity increased due to improved amenities at Kangaroo Point include: trampling of vegetation, compaction of sediment and damage to pneumatophores and mature plants.<sup>140</sup>

The potential stressors to these mangroves are increased shoreline activity from more people accessing the site; and gross pollutants. The wharf is located within 10 metres of the mangroves. The distance from the seagrass beds to the wharf is approximately 47m, and 38m from the marina.

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<sup>140</sup> This information was provided by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI. It was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010. This outlines what could potentially occur rather than what is occurring at each of the sites. The location of habitats in close proximity to each site are not exact, as precise GIS measurements were not available.

Potential environmental effects that could occur to seagrass if current human activity increased, include: erosion, increased turbidity, decreasing growth conditions, damage or removal of seagrass blades or rhizomes.<sup>141</sup> Potential stressors to seagrass beds include increased boat activity. See Appendix 1 for further information.

## Issues and Opportunities

### *Level of development*

A master plan for the site recommends more space for shore based recreation and retains the commercial boating offer, as well as proposes to upgrade the café/restaurant. It provides minimal car parking and identifies the significance of the area is as one of the few locations where water based recreation is possible in a bushland park.

There has been some pressure to provide commuter parking at this site to serve River communities. A major commuter parking facility is not considered to be appropriate in this location, due to the site's size and carrying capacity, and its importance as a recreation reserve.

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<sup>141</sup> Ibid

Some requests have been made for additional moorings – especially for boats owned by River communities. The site is too small to provide for these. Toilets are needed, but are proposed as part of a proposed café.

There is a rock shelf at this location, and then deep water (but a fast current), however it is seen as a good place to fish.

The master plan proposes a children's playground in this location. @leisure considers that the area is so small it should primarily provide for activities that depend on the water. Due to the low carrying capacity of the site play equipment is not recommended. However, if playground equipment is to be provided it should be ancillary in nature and not a destination type playground.

### *Fishing adjacent to the sewerage outfall*

There was a lot of concern raised about fishing adjacent to the sewerage outfall from this location. Anecdotal evidence suggests that fishers, fish from here daily.

Sydney Water indicate that the outfall is some 14m below the surface of the water, and the quality of the effluent going into the River is very high: 50% higher than that from the West Hornsby plant going into Berowra Creek<sup>142</sup>.

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<sup>142</sup> Telephone consultation Sydney Water, 2010

This means it is not likely to be a problem to take fish from here as the water is “just short of drinking water quality” and the dilution ratio is 1: 14,000. There is also much less impact from effluent now than from when there were septic tanks. There are no signs saying “don’t fish”.

It is too steep to provide an accessible fishing platform here.

Staff said there is a lot of night fishing here. The commercial operators say that people make a lot of noise at night, and they leave rubbish.

The boat ramp at Kangaroo Point is the old ferry ramp (as pictured in the following image), and cannot really be upgraded to include further lanes. Council don’t advertise that there is a ramp here because it is difficult to access, and if people don’t park correctly or it is congested, they need to reverse their vehicles about 100m. The Department of Sport and Recreation use this ramp with a punt to take supplies to their facilities.



**Image 6: Kangaroo Point boat ramp**

The current wharf is not accessible to people who use wheelchairs, although the public pontoon has an accessible path entry.

Increased shoreline activity from more people accessing the site close to mangroves, and the potential gross pollutants from the sewerage outfall are the main environmental issues at Kangaroo Point.



### Suggested Actions: Kangaroo Point

- ▶ Continue to improve aesthetics of public infrastructure, accessibility, pedestrian access to the public wharf and consolidate signage
- ▶ Redevelop the current structures (sheds and dilapidated buildings) to provide better for current uses only, including café and public toilets
- ▶ Provide fishing opportunities away from the houseboat operator
- ▶ Due to limited space place a higher priority on elements that support water based recreation

## 3.6 Parsley Bay

### Context

Parsley Bay has the largest boat ramp on the Lower Hawkesbury with three lanes. This ramp attracts people from all over Sydney and is often referred to as a 'ramp of choice' on internet fishing forums. Parsley Bay is used by all sailing and yachting clubs on the Lower Hawkesbury River. Some residents of River and island communities commute through Parsley Bay.

Facilities at this site include:

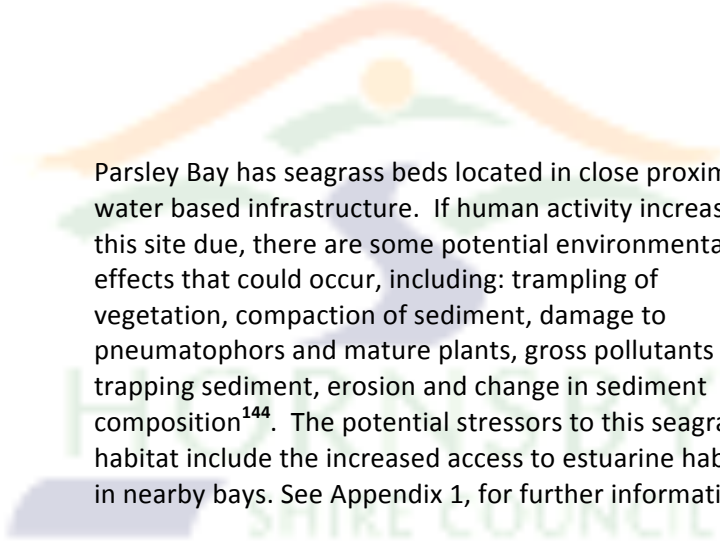
- Boat ramp
- Public pontoons (x2)
- Fish cleaning table
- Car park and boat trailer parking
- Public toilets
- Picnic facilities
- Tangler bins

(See Appendix 9, for a site inventory)

An audit completed by NSW Maritime in 2007 determined that the condition of the boat ramp was good.<sup>143</sup>

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<sup>143</sup> NSW Maritime Boat Ramps Audit, 2007



Parsley Bay has seagrass beds located in close proximity to water based infrastructure. If human activity increased at this site due, there are some potential environmental effects that could occur, including: trampling of vegetation, compaction of sediment, damage to pneumatophors and mature plants, gross pollutants trapping sediment, erosion and change in sediment composition<sup>144</sup>. The potential stressors to this seagrass habitat include the increased access to estuarine habitats in nearby bays. See Appendix 1, for further information.

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<sup>144</sup> This information was provided in email correspondence by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI, and was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010.

## Issues and Opportunities

### ***Access and storage for dinghies and canoeists***

The stepped path down to the beach area at Parsley Bay can be difficult to manoeuvre when carrying a dinghy. It was identified during consultation that a ramp leading down to the beach would be preferable.<sup>145</sup>

Farther around the point from Parsley Bay there are some sheds used by the sailing club and for other functions. Council is concerned that they are being used inappropriately by homeless people and they would be best removed<sup>146</sup>.

The possibility of providing a more suitable storage facility for the dinghies was raised in the consultation, and that many of the boats may no longer be used or required – or have just been left there. The same applies generally to moorings in this vicinity. It may be worthwhile for Council to have a fee system that ensures boats are not left on the foreshore when they are no longer required.

Currently dinghies are attached by a ring to the rock wall, as pictured in the following image. This does however, add character to the area. Some people interviewed said NSW National Parks and Wildlife Service want to get rid of the boats from the rock face.

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<sup>145</sup> Telephone consultation with Windsor Canoe Club, 2010

<sup>146</sup> Staff workshop



This area is however the responsibility of Council. The consultation determined that the informal storage of dinghies at Parsley Bay is generally satisfactory to users at present.

In other Councils such as Pittwater, vertical dinghies racks are rented on an annual basis from Council. This provides an orderly storage method, and ensures that those not being used or no longer required do not clutter the beach.

Under the provisions of the Impounding Act 1993, Council may remove vessels that are abandoned, derelict or illegally stored on the foreshore areas where they constitute a hazard, cause damage to the environment or a nuisance to foreshore areas that do not comply with the conditions of use for Council's dinghy storage.



**Image 7: Current dinghy storage arrangement at Parsley Bay**

### ***Design of the foreshore***

The shoreline needs to be restabilised with rocks. See image below. This will enable a more natural edge, which will provide better habitat, as well as retention of the small beach area. Redesign of the seawall should be done in accordance with the DECCW guidelines for 'environmentally friendly seawalls'.



**Image 8: Foreshore at Parsley Bay to be restabilised**

In the process of reconstructing the wall, there is an opportunity to redesign a grassed foreshore area and provide a more aesthetically pleasing and functional space for pedestrians, with picnic tables and rubbish receptacles.

The area is currently not level, not well separated from traffic, and has a number of signs and bins and bollards cluttering the space.

The tangler bins (pictured below) appear to be a good innovation. The one at Parsley Bay is difficult to spot. Perhaps it needs to be a bright colour, and more education may be needed about its use.



**Image 9: A tangler bin at Parsley Bay**

Boat users suggested that a boat wash down area at Parsley Bay would be desirable. The siting of such a facility is critical to its success.

“There used to be a tap located close to the ramp and this would cause congestion problems while people blocked access to the water while washing down their boat”.



**Image 10: Signage at Parsley Bay**

Signage in the picture above says “no aquatic activities”. This sign would be more beneficial if it said no swimming and diving. A separate sign says no fishing. These could be consolidated.

The fish table draws pelicans, which creates a lot of bird mess. The location of fish cleaning table is considered suitable. It is pressure cleaned every fortnight in summer and once per month in winter (as well as the ramp).

### ***The public boat ramp and loading dock***

Users said the boat ramp “gets packed out” – boat trailers have been seen parked up to a kilometre away. There isn’t adequate space to increase the width of the ramp.

The loading dock is currently too steep for the garbage punt – if redesigned, the loading dock could be used for three other private barge companies. See image below of rubbish barges using the public ramp and recreational fishers on the loading dock that the garbage barge should be using.



**Image 11: Rubbish barges using public ramp at Parsley Bay**



**Image 12: Recreational fishers on loading dock that the rubbish barge should be using**

The consultation for this project found most sailors use the pontoon that is on the back of the rock wall. They say “it is a bit shallow and it would be nice if it was deeper there, as our boats can’t get in there at low tide”.

One of the sailing clubs use a small shed on the land. There are other sheds in the vicinity that Council would like removed as they are in poor condition and may be used for inappropriate purposes.

### Suggested Actions: Parsley Bay

- ▶ Consider introducing an annual permit system, and racks for dinghy storage that are sympathetic to the character of the area
- ▶ Upgrade the loading dock to take the rubbish barges and other utility uses off the public boat ramp
- ▶ Consider providing a small shared clubroom facility for sailing clubs if a suitable site can be found adjacent to the water
- ▶ Consider colouring the tangler bin to make it more obvious, and continue to educate people about its use
- ▶ Work with NSW Maritime and adjacent Councils to introduce a standard code of conduct for boat ramps, that speed up use and minimise opportunities for conflict between users
- ▶ Introduce clear parking limits and ensure cars without trailers do not park in parks for car with trailers
- ▶ Redesign the foreshore green space to be more aesthetically pleasing, pedestrian friendly, accessible and functional for water based recreation users
- ▶ Consolidate signage to advise people not to swim or fish
- ▶ Consider either extending or relocating the most easterly pontoon slightly or making the water deeper in this location, to aid launching for yachts

### 3.7 Brooklyn (McKell Park)

#### Context

Brooklyn is known as the gateway to the Lower Hawkesbury. It is a popular location for boating as the topography of the bay ensures that it is sheltered.

Water based recreation facilities at Brooklyn include the following: (See Appendix 9, for a site inventory)

- Marina (with fuel)
- Boat hire
- Tidal pool
- Boat ramp
- Public wharf
- Car parking and boat trailer parking
- Public toilets ( x 2)
- Lookout

The channel into the marina is shallow and narrow and is used by ferries and other commercial boats, so small boats need to take care. The wharf is suitable for chartered access on the end “T” heads. There is a 10 minute limit for those using the on-shore facilities unless you make arrangements with the dock master. It is possible to stay overnight in a visitor berth by prior arrangement.<sup>147</sup>

Brooklyn is very accessible as it is on the main Sydney – Newcastle train line and the station is very close to the water and the public wharf.

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<sup>147</sup> Pittwater Yacht Charter Holiday Guide

This site would be a good site to make accessible to people using wheel chairs because of the proximity of the station to the water and because the foreshore is flat.

Brooklyn has seagrass, saltmarsh and mangroves very close to water based recreation and shore-based activity. Increased shoreline activity and gross pollutants, are the main stressors on these plant communities.

Potential effects of recreational activity on mangroves include trampling, damage to vegetation and compaction of sediment. For saltmarsh; lower ground level, increased retention of tidal water, and gross pollutants trapping sediment are potential effects of human activity. For seagrass; erosion, increased turbidity, decreasing growth conditions, and damage or removal of seagrass blades or rhizomes, may result from additional boat activity.

The site has considerable heritage significance, as McKell Park, which abuts the water, was the location where Sir Henry Parkes drafted the first Australian constitution. Some interpretative panels telling the story of Brooklyn are provided at the eastern end of the park. However they have been vandalised. The site also has a children’s playground.

## Issues and Opportunities

### Accessibility

This site would probably be the most suitable location in the Shire for the construction of a fishing platform to encourage people that may find it difficult to access the water by boat to fish. It could be constructed only a metre and a half out from the foreshore to access the main channel which is quite deep. It could be accommodated at the eastern end of McKell Park. The ground is relatively flat around the shore from the railway station, so access can be made with ease. The railway station however is elevated and does not have a lift.

The foreshore is dissected by the marina and car parking. There is an older style toilet block, which takes up a small reserve, that could be consolidated with other uses.

A wide public promenade, constructed in a circuit along the foreshore from the station, around the point connecting back to the station, should be developed in the long term.



Image 13a: Federation foreshore pathway at Brooklyn

The wharf is in a congested location, however it would be difficult to relocate. It is not currently accessible by people who rely on wheelchairs, and works to rectify this are proposed.

Views obtained through consultation indicate that car parking is a significant issue at this location. During peak periods, cars are parked in residents front yards, as car parking bays are full. It was also noted that restaurant patrons park in bays marked out for cars and trailers.

The foreshore granitic path is not well formed or continuous, and it needs to be reconstructed to better accommodate drainage and water run off.



**Image 13b: The foreshore pathway at Brooklyn during rain**

### ***Other infrastructure***

Some stakeholders believe that due the high level of development already undertaken at this site, that this site would be one where any additional development should be accommodated – as a sacrifice to ensure the environment is protected at other sites.

Some stakeholders also suggest that the channel needs to be dredged to provide better for boating.



**Image 14: Brooklyn public pontoon**

The pontoon needs to be reconstructed (see image above). Council has money to redevelop the pontoon and make the wharf accessible.

Works are currently being undertaken on the tidal pool.

### Suggested Actions: Brooklyn

- ▶ Encourage City Rail to provide a lift to the Hawkesbury River railway station so that people using wheelchairs may access Brooklyn by train
- ▶ Construct a wide accessible public promenade in a circuit along the foreshore from the railway station, around the point to Parsley Bay and connecting back to the station
- ▶ Consider constructing an accessible fishing platform in McKell Park
- ▶ Promote public transport access to Brooklyn and associated water based recreation facilities
- ▶ Incrementally improve: public spaces around Brooklyn; pedestrian circulation; wayfinding; and landscape design, and consolidate public toilet facilities
- ▶ Consider creating a loop shared trail on the west side of the railway including where possible some waterfront at Sandbrook Inlet.



## 4. SUMMARY

The following is a summary of the recommended policy principles.

### Carrying capacity of the River and the sites

#### *Recommended policy principles:*

**Protect the quality of water based recreational experiences in the Lower Hawkesbury by:**

- ▶ Not widening or sealing additional road access points to the River
- ▶ Not providing any additional access points to the River from public land (unless others are closed)
- ▶ Not substantially increasing car parking at existing sites
- ▶ Not providing recreational infrastructure that is not dependant on a riparian setting, or can be provided in other locations
- ▶ Not hardening additional informal fishing spots
- ▶ Not increasing the number of moorings or the mooring cap

### Conflicts between use and the environment

#### *Recommended policy principles:*

- ▶ Where possible separate launching sites for motorised and non motorised vessels

- ▶ Introduce a code of conduct for boat ramps and educate users of boat ramps about ways to plan and prepare off-ramp to increase efficiency
- ▶ Sign spaces for “cars with trailers” and enforce their use only for those with trailers
- ▶ Promote car pooling and access to the River through means other than private car (e.g train)
- ▶ Where possible at remote sites such as Singleton Road, Wisemans Ferry and Crosslands Reserve, rubbish should be taken home and interpretative signs explaining the impact of rubbish should be provided on site
- ▶ Continue to actively communicate regularly with water based recreation stakeholders about usage and the condition of the environment and between commercial fishers and event organisers
- ▶ Increase available information about the ecological characteristics to water based recreation users, to increase attachment to the River and emphasise the importance of protecting the River from degradation
- ▶ Discourage extractive activities such as bait collection
- ▶ Provide more recreational and environment interpretative messages rather than focus on regulations
- ▶ If funds become available, divert effluent onto sports fields and seek to capture and filter run off from urban areas, away from Crosslands Reserve
- ▶ Upgrade key infrastructure to enhance: functionality, sustainability, efficiency of use, and accessibility for people with a disability; and minimise environmental impacts



## Opportunities to enhance participation and recreational experiences

### *Recommended policy principles:*

- ▶ Promote water based recreation activities on the Lower Hawkesbury that are non motorised in preference to motorised; those that are physical and involve activity such as kayaking rather than social such as party boats, those that target people with a disability or children over others, and pedestrian and public transport access over car based users
- ▶ Infrastructure on the foreshore should be incrementally redesigned and upgraded to accommodate people with a disability; in particular, this should include physical access and way finding
- ▶ Support existing fishing and sailing clubs to include more opportunities for children and people with a disability
- ▶ Assist sailing and canoe clubs to access club rooms and storage on the water front as the market will typically not provide for these uses (Council could provide planning incentives for these to be accommodated within other commercial uses)
- ▶ Develop and extend return circuit paths along the water front at Brooklyn, for example, as a destination connected to the train station, (in preference to roadway or car parking)
- ▶ Encourage City Rail to provide a lift to the Hawkesbury River station so that people using wheelchairs may access Brooklyn by train

## Communication with users

### *Recommended policy principles:*

- ▶ Encourage more users to become attached to the River: become involved in its protection and have a greater awareness of how their activities impact on the environment
- ▶ Prepare targeted information about what water based recreation activities can be undertaken where, and how they can remain sustainable
- ▶ Include an environmental message in all water based recreation information
- ▶ Prepare codes of conduct for all water based uses and for boat ramp behaviour. These should be promoted through: the boating and fishing licensing and water safety and regulatory processes; clubs; River stakeholders; Councils; NSW National Parks and Wildlife Service; commercial operators events; retail and service and industries supporting water based recreation, and at all access points
- ▶ Prepare a marketing plan addressing signage, maps, fishing, and boating guides and brochures, GPS products and the like.
- ▶ Hold a regular forum of stakeholder and user groups to discuss issues and projects associated with educating users about the river for recreation

The following map outlines the recommendations by location at the lower Hawkesbury River

# SUSTAINABLE WATER BASED RECREATION FACILITIES PLAN

## Summary of recommendations by location at the Lower Hawkesbury River

### 1 Wiseman's Ferry

- Assess the feasibility of increasing the public boat ramp from one lane to two lanes, and making improvements to car and trailer parking
- Liaise with the NSW Water Ski Federation, with regard to accessible access to the water, for water skiers and wake boarders
- Provide a fish cleaning table
- Consolidate and upgrade signage at the boat ramp
- Facilitate canoeing / kayaking at one location at this site to enhance their safety
- Restrict car access to the land between the public roadway and the River along Singleton Road
- Revegetate all the small sites that have been compacted and trampled along Singleton Road. At the cave site erect interpretive signage to advise of the impact of rubbish and recommend it be taken home
- Work with NSW National Parks and Wildlife Service to develop one small site on freehold land in the vicinity of Singleton Mill, as a fishing spot

### 2 Deerubbin Reserve

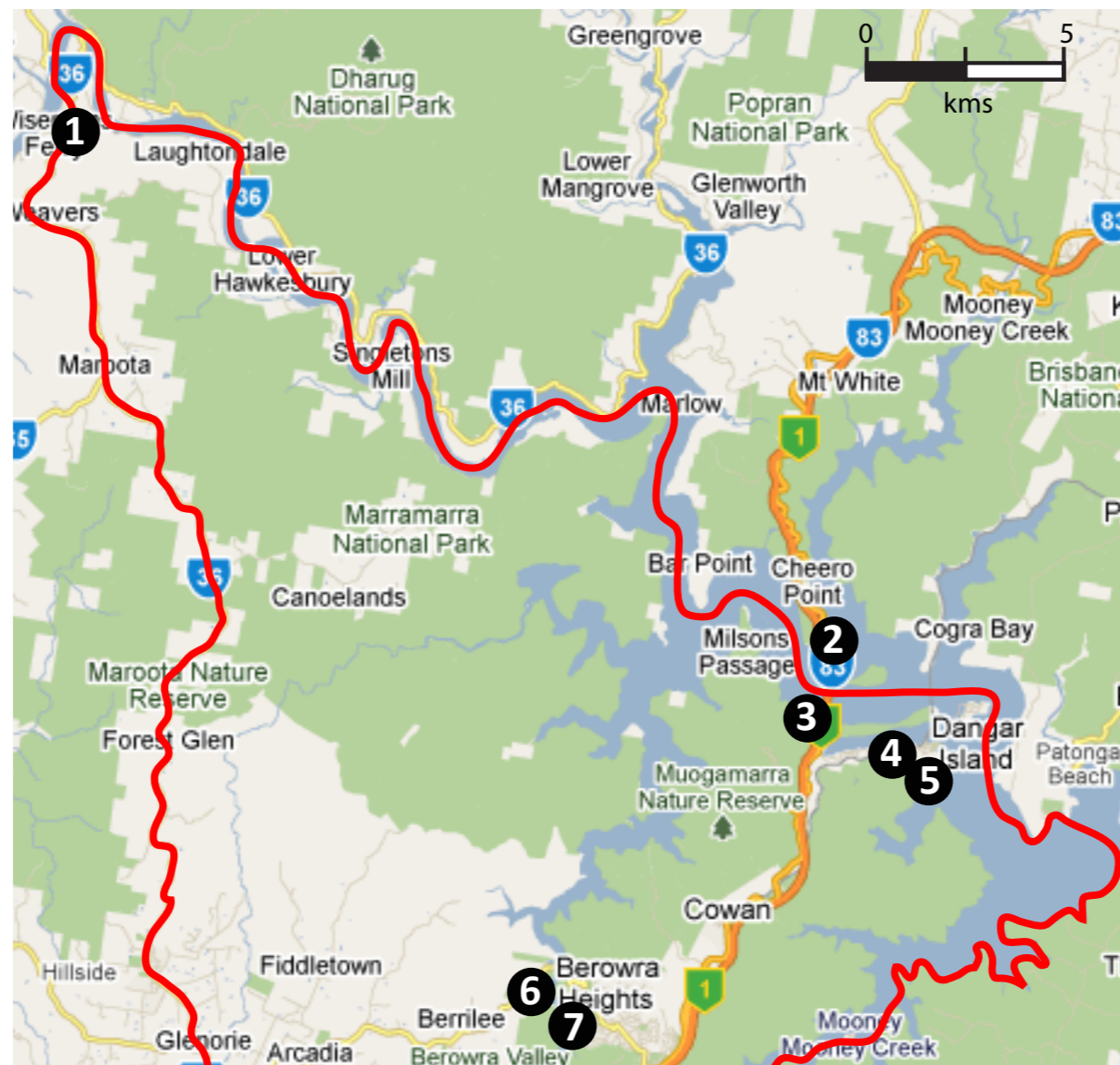
- Establish a regular maintenance routine with more frequent litter pick-ups in peak periods
- Consider updating the design of the fish cleaning table and providing more shelter
- Consider retaining a facility on Peats Island for boating and water based recreation volunteer services, and other water based recreation where possible
- Encourage further dialogue between Hornsby and Gosford Councils over the development of a regional commuter hub at Deerubbin Reserve
- Consider facilitating a site on the north east side of the Pacific Highway as a popular fishing spot

### 3 Kangaroo Point

- Continue to improve aesthetics of public infrastructure, accessibility and pedestrian access to the public wharf and consolidate signage
- Redevelop the current structures to provide better for current uses only
- Provide fishing opportunities away from the houseboat operator
- Due to limited space place a higher priority on elements that support water based recreation

#### PLEASE NOTE:

This is not a stand alone product. Refer to Sustainable Water Based Recreational Facilities Plan for further information.




### 4 Brooklyn

- Encourage City Rail to provide a lift to the Hawkesbury River railway station
- Construct a wide accessible promenade along the foreshore from the railway station to Parsley Bay and connecting back
- Consider constructing an accessible fishing platform in McKell Park
- Promote public transport access to Brooklyn and water based recreation facilities
- Incrementally improve public spaces around Brooklyn, pedestrian circulation, wayfinding and landscape design, and consolidate public toilet facilities
- Consider creating a loop shared trail on the west side of the railway including where possible some waterfront at Sandbrook Inlet



#### LEGEND

 Hornsby Shire boundary

 Study sites

### 5 Parsley Bay

- Consider introducing an annual permit system and rack for dinghy storage
- Upgrade the loading dock to take the rubbish barges and other utility uses off the public boat ramp
- Consider providing a small shared clubroom facility for sailing clubs
- Consider colouring the tangle bins and continue to educate people about its use
- Work with NSW Maritime and adjacent Councils to introduce a standard code of conduct for boat ramps that speeds up use and minimises opportunities for conflict between users
- Introduce clear parking limits and ensure cars without trailers cannot park in trailer parks
- Redesign the foreshore green space to be more aesthetically pleasing, pedestrian friendly, accessible and functional for water based recreation users
- Consolidate signage to advise people not to swim or fish
- Consider either extending or relocating the pontoon slightly or making the water deeper in this location to aid launching for yachts

### 6 Berowra Waters

- Monitor the litter pick-up service, especially after weekends and after the installation of the new bin enclosure
- Educate the public about the dangers of fires through educational signage
- Erect clear signage that distinguishes car parks as separate from cars with trailers. Enforce these
- Educate users about ramp use: large cruisers are not to use this ramp
- Consider providing canoe access separate to the main boat ramp to protect their safety and alleviate ramp congestion
- Undertake revegetation works of banks eroded by recreational fishers

### 7 Crosslands Reserve

- Promote as the primary place for non motorised boats and canoes / kayaks on the Lower Hawkesbury
- Seek to constrain the widening of the boat ramp to minimise damage to surrounding vegetation
- Enhance the accessibility of furniture and facilities on the site
- Keep the main comforts and facilities to one area
- Provide a wash down tap / shower for canoeists away from the toilet facility
- Seek to improve the water quality at the reserve through managing stormwater, and directing effluent to other reserves for example

## 5. APPENDICES

### ***Appendix 1: Human disturbance, potential stressors and the potential environmental effects on the Lower Hawkesbury River***

A project called “Estuarine habitat mapping and geomorphic characterisation of the lower Hawkesbury River and Pittwater estuaries’ project was conducted by Astles, West and Creese, in 2010. It mapped eight different estuarine habitats throughout the estuary.

The project sought to better understand the distribution of estuarine habitats and the potential threats to these habitats from human activity. These habitats include: seagrass, mangroves, saltmarsh, mudflats, sandflats, rocky reef, foreshore habitat and water column. They were mapped in the estuarine catchments, reaches and general geomorphic zones in: Berowra Creek, Hawkesbury River – Fluvial Delta, and Hawkesbury River – Riverine Channel.

The table below outlines the potential stressors and potential effects of what could occur if current human activity at the study sites on the Lower Hawkesbury was to increase due to improved amenities.

It is important to note there is no quantitative information on the level of human activity at these sites, and their effects on the surrounding estuarine habitats.

This table lists what could potentially occur rather than what is occurring at each of the sites.

The information in the table was gathered as part of the project’s mapping process, however, the areas of habitat in close proximity to each site are not exact, as precise GIS measurements were not available.

**Table 1: Human disturbance, potential stressors and the potential environmental effects on the Lower Hawkesbury River<sup>148</sup>**

Site	Nearest Vegetated Estuarine Habitat	Area of habitat, m2	Human disturbance	Potential Stressors	Potential effects
Berowra Waters	Mangroves	3042	Concrete car park & boat ramp; hard artificial wall along mangrove edge, picnic area.	Increased access via boat to saltmarsh and mangrove habitats upstream from site, particularly around Calna Creek and nearby on opposite bank; gross pollutants (litter)	Trampling of vegetation (saltmarsh & mangroves), compaction of sediment, lower ground level, increased retention of tidal water, damage to pneumatophors & mature plants, gross pollutants trapping sediment
Crosslands Reserve	Mangroves	5170	Hard surface car park, extensive picnic area <10m from mangroves	Increased shoreline activity from more people accessing site close to mangroves; gross pollutants	Trampling of vegetation, compaction of sediment, damage to pneumatophors & mature plants
	Saltmarsh	495	Distance from saltmarsh to picnic area approx. 72m	Increased activity may lead to more people encountering saltmarsh habitat via mangroves	Trampling of vegetation, compaction of sediment, lower ground level, increased retention of tidal water, gross pollutants trapping sediment
Mooney Mooney Point	Mangroves	1445	Concrete car park & boat ramp, picnic area; Distance from carp ark to mangrove approx. 25m	Increased access to habitats in Mooney Mooney creek - mangroves, saltmarsh & mudflats; increased bait collecting & fishing in these areas	Trampling of vegetation (saltmarsh & mangroves), compaction of sediment, lower ground level, increased retention of tidal water, damage to pneumatophors & mature plants, gross pollutants trapping sediment; erosion, change in sediment composition
Brooklyn	Mangroves	32267	Foreshore parkland within 10m	Increased shoreline activity from more people accessing site close to mangroves; gross pollutants	Trampling of vegetation, compaction of sediment, damage to pneumatophors & mature plants

<sup>148</sup> This information was provided by Karen Astles - Research Scientist in the Aquatic Ecosystems Unit of NSW DPI, and was gathered as part of the Estuarine habitat mapping and geomorphic characterisation of the Lower Hawkesbury River and Pittwater estuaries, Astles, West and Creese, 2010.

Site	Nearest Vegetated Estuarine Habitat	Area of habitat, m2	Human disturbance	Potential Stressors	Potential effects
	Saltmarsh	4428	Foreshore parkland within 10m	Increased shoreline activity from more people accessing site close to saltmarsh; gross pollutants	Trampling of vegetation, compaction of sediment, lower ground level, increased retention of tidal water, gross pollutants trapping sediment
	Seagrass	Large area but patchy	Distance from marina to seagrass approx. 85m; Distance from moorings to seagrass approx. 10-12m	Increased boat activity	Erosion, increased turbidity decreasing growth conditions, damage or removal of seagrass blades or rhizomes
Kangaroo Point	Mangroves	678	Wharf, hard surface car park <10m from mangroves	Increased shoreline activity from more people accessing site close to mangroves; gross pollutants	Trampling of vegetation, compaction of sediment, damage to pneumatophores & mature plants
	Seagrass	6648	Distance from seagrass bed to wharf approx. 47m; Distance from seagrass bed to marina approx. 38m	Increased boat activity	Erosion, increased turbidity decreasing growth conditions, damage or removal of seagrass blades or rhizomes
Parsley Bay	Seagrass		Distance from seagrass bed at Dangar Is to entrance to harbour approx. 671m; Hard surface car park, wharves, picnic area, break wall, hard artificial foreshore	Increased access to estuarine habitats in nearby bays	Trampling of vegetation, compaction of sediment, damage to pneumatophores & mature plants, gross pollutants trapping sediment; erosion, change in sediment composition
Wiseman's Ferry	Mangroves	175	Two car ferries, agricultural foreshore, parkland/picnic area	Increased boat activity to shoreline and riparian habitats above and below; increased boat wash	Increased bank erosion, increased turbidity and sediment transport affecting sediment accretion and erosion rates to habitats downstream

## Appendix 2: Population and demand projections

The population of the Shire of Hornsby is projected to grow by 24,300 people from 2011 to 2036 or at a rate of 0.6% per year. The following table shows the population projections for Hornsby in 5-year age cohorts.



**Table 2: Population projections for Hornsby in 5-year age cohorts (2011 - 2036)<sup>149</sup>**

Age (years)	2011	2016	2021	2026	2031	2036
0-4	9,160	9,360	9,760	9,960	10,240	10,510
5-9	10,170	10,050	10,290	10,560	10,830	11,130
10-14	10,940	10,920	10,940	11,060	11,380	11,670
15-19	12,100	11,780	11,780	11,760	11,950	12,280
20-24	12,240	12,180	11,990	11,930	12,060	12,280
25-29	9,490	10,220	10,360	10,250	10,380	10,640
30-34	9,380	10,050	10,600	10,730	10,800	11,010
35-39	11,220	11,060	11,740	12,120	12,390	12,530
40-44	12,100	12,060	11,980	12,520	12,940	13,260
45-49	12,650	12,150	12,200	12,030	12,610	13,030
50-54	11,870	11,640	11,290	11,260	11,180	11,720
55-59	9,920	10,530	10,400	10,050	10,100	10,070
60-64	8,580	8,650	9,190	9,040	8,830	8,920
65-69	6,580	7,520	7,630	8,060	8,010	7,890
70-74	5,040	5,970	6,910	7,020	7,500	7,540
75-79	4,020	4,750	5,710	6,690	6,940	7,510
80-84	3,470	3,520	4,210	5,100	6,120	6,490
85+	4,070	4,600	5,010	5,780	7,070	8,850
<b>Total</b>	<b>163,000</b>	<b>167,000</b>	<b>172,000</b>	<b>175,900</b>	<b>181,300</b>	<b>187,300</b>

<sup>149</sup> Population Projections by LGA, Department of Planning NSW, 2010

Using ERASS the number of people in Hornsby that are 15 years and over, participate in water based recreation can be projected using state participation rates. The projected demand for water based recreational activities in Hornsby based on this source are shown below. Note: as previously indicated in the body of this document, these projections are likely to be a significantly underestimation of participation for some activities such as fishing, as they may not be typically identified as a physical activity or sport.

**Table 3: Projected number of participants (organised and non-organised) for water based recreational activities in Hornsby (2011 – 2036)<sup>150</sup>**

Activities	2011	2016	2021	2026	2031	2036
Canoeing / kayaking	1,956	2,004	2,064	2,111	2,176	2,248
Fishing	3,749	3,841	3,956	4,046	4,170	4,308
Rowing	489	501	516	528	544	562
Sailing	815	835	860	880	907	937
Swimming	23,635	24,215	24,940	25,506	26,289	27,159
Waterskiing / Powerboating	1,304	1,336	1,376	1,407	1,450	1,498

Using the participation rate for recreational fishing of 16%, illustrated in the National Recreational and Indigenous Fishing Survey<sup>151</sup>, the number of recreation fishers has been estimated below.

**Table 4: Projected number of participants in recreational fishing within Hornsby arising from the National Recreational and Indigenous Fishing Survey (2006 – 2036)**

2006	2011	2016	2021	2026	2031	2036
25,088	26,080	26,720	27,520	28,144	29,008	29,968

From 1991 to 2008, the number of registered vessels in New South Wales increased by 79,203 or 57.4%. On average that is a 3.3% increase per annum.

The following table shows the number of, and the yearly change in registered vessels in New South Wales from 1991 to 2008.

<sup>150</sup> Exercise, Recreation and Sport Survey, SCORS Research Group, 2009

<sup>151</sup> National Recreational and Indigenous Fishing Survey, Fisheries Research and Development Corporation, 2003



**Table 5: Number of and yearly change in registered vessels in New South Wales by year (1998 - 2008)<sup>152</sup>**

Year	No. of vessels registered	Change in no. of vessels since year before	% change in no. of vessels since year before
1998	164,880	10,062	6%
1999	170,044	5,164	3%
2000	173,946	3,902	2%
2001	179,835	5,889	3%
2002	184,744	4,909	3%
2003	191,199	6,455	3%
2004	196,234	5,035	3%
2005	203,393	7,159	4%
2006	209,382	5,989	3%
2007	213,387	4,005	2%
2008	217,074	3,687	2%

<sup>152</sup> New South Wales Maritime, 2009

**Table 6: Percentage of people participating in recreation activities associated with the Hawkesbury<sup>153</sup>**

Activity	%
Picnicking	43.4
Relaxing (Enjoying Scenery)	37.0
Walking/ hiking	34.0
Recreational boating	18.4
Recreational fishing	15.1
Swimming	14.8
Canoeing / rowing	14.2
Water skiing	13.0
Tourist / paddle ferry rides	5.4
Watching wildlife	5.1
Cycling	4.5
Sailing	4.5
Restaurant / café	4.2
Camping	3.6
Jet skiing	1.8
Crossing over the River / passing through	1.2
Paddling / wading in the water	1.2
Visiting / meeting friends	1.2
Watching ski races	1.2
Employment on or near the River	0.9
SES / fire brigade activities	0.9
Water testing	0.9
4 wheel driving	0.6
Bus trips	0.6

<sup>153</sup> Sense of Place: Towards a Methodology of Value Externalities Associated with Urban Water Systems – The Hawkesbury – Nepean Case Study, CSIRO, 2006



Activity	%
Children's leisure activities	0.6
Holidaying on the River	0.6
House boating	0.6
Jogging	0.6
Observing the water levels / quality	0.6
Recreational boating	0.6
Abseiling	0.3
Bird watching	0.3
Volunteering – clean up Australia day	0.3
Craft shows	0.3
Crop growing	0.3
Crossing Wisemans Ferry	0.3
Family activities	0.3
Horse riding	0.3
Kayaking	0.3
Motor bike riding	0.3
Paddle wheeler	0.3
Revegetation projects	0.3
Scouts	0.3
Sightseeing	0.3
Sitting by the River	0.3
Visiting Danger Island	0.3
Visiting parks	0.3
Visiting the Oyster farms	0.3
Walking the dog	0.3
Wildflower sightseeing	0.3
Windsurfing	0.3

### **Appendix 3: Online survey results**

An online survey was conducted to obtain the views of users of the Hawkesbury River on water based recreational activities and facilities. This survey was conducted in June, 2010. A total of 75 respondents completed the survey, of which 39 were males and 4 females.<sup>154</sup> 43% (32) respondents did not state their gender.

#### **Activities undertaken in the Lower Hawkesbury River**

Respondents were asked which water based recreational activities they participated in.

Of the 75 respondents the following main activities were represented:

Powerboating	30%
Motorised boat based recreational fishing	20%
Sailing	19%
Canoeing / kayaking	4%
Houseboating	4%
Water skiing	3%
Camping	1%

<sup>154</sup> There was an over representation of respondents aged 50 years and above, and an under representation of those aged between 10 and 44 years. There was also an over representation of males and an under representation of females in the responses.

### **Key findings by activity**

#### **Recreational fishing**

Responses from motorised boat based recreational fishers in the online survey showed the majority:

- Stored their boat at home
- Launch from Brooklyn (followed by Parsley Bay and Berowra Waters)
- Felt that additional access points to the Lower Hawkesbury are required, (slightly more than those who thought no more access points were needed)
- Said that the Lower Hawkesbury River cannot sustain additional growth
- Use boat ramps, trailer and car parking, fish cleaning trays, rubbish bins, public toilets and boat washdown facilities
- Ranked ramp facilities as “satisfactory” or “in need of an upgrade”
- Stated they were looking for “primarily natural spaces, with some provision of basic infrastructure such as a boat ramp only or fishing platform” or “those with a degree of comfort and convenience”, or “semi remote natural, spaces that are quiet, peaceful and have no public facilities” (very few selected formally designed places for social activities with a good level of accessibility and support facilities)

Comments in regards to sustainability included:

- “they need more policing and more servicing”

When asked what strategies the Council could adopt to ensure the sustainability of the Lower Hawkesbury, fishers suggested:

- controlling some activities on the River to protect the environment, or
- manage fishing access points better to stop incidental damage to vegetation and the shoreline, and remove cars from the River edge
- remove access to the River in some locations

Actions that fishers considered to be a priority included:

- upgrading the existing facilities
- educating and informing River users about sustainability issues and opportunities for water based recreation

Actions that they did not consider to be a priority included:

- re-vegetate / restore damaged foreshore areas
- provide additional or new facilities
- provide new access points to the River
- a combination of all of the above

Additional comments by motorised boat based recreational fishers included:

- “need for more pump-out facilities and better management of rubbish and faecal contamination of the River and access points”

- “reduce limit on fish catches”
- “overall I’m happy. I always worry about pollution, overuse, fish stocks etc”

## Sailing / Yachting

The majority of sailors felt that the River can sustain additional growth.

Comments in regards to sustainability issues included:

- “club and / or facility based areas is needed”
- “the Hawkesbury is a delicate environment. Fishing needs to be restricted and ‘no take’ zones need establishing”
- “I believe far more damage is done by the over fishing by commercial fishermen and dragging their nets along the bottom. There is an abundance of vegetation that will re grow. Fires have been part of this land for thousands of years and it is the minority of people who abuse the land and waterways knowingly. They should be held accountable by police and rangers”
- “there is a strong community spirit on the Lower Hawkesbury, and volunteer groups help protect it”

The key facilities sailors they use are boat mooring, car parking, rubbish bins, wharves for boats and public toilet facilities. They consider boat ramps, seats, tables, information boards, public jetties, picnic shelters, pontoons and wharves in need of an upgrade.

Sailors sought “semi remote natural, spaces that are quiet, peaceful and have no public facilities settings with no facilities”, as well as those with “primarily natural spaces with some provision of basic infrastructure such as a boat ramp only or fishing platform” equally over “formally designed places for social activities with a good level of accessibility and support facilities, as well as a degree of comfort and convenience”.

In the opinion of sailors, the key strategies to ensure water based recreational uses are sustainable included:

- manage fishing access points better to stop incidental damage to vegetation and the shoreline, and remove cars from the River edge
- provide basic facilities at select access points that can accommodate more people without damage over others, and controlling some activities on the River to protect the environment

The strategies they did not consider a priority were:

- removing access to the River at selected locations
- controlling some activities or events to protect the environment

Should funds become available, Sailors suggested a combination of all actions as a priority. These included:

- re-vegetate / restore damaged foreshore areas
- provide additional or new facilities
- provide new access points to the River
- upgrading the existing facilities
- educating and informing the users about sustainability issues, and opportunities for water based recreation

Additional comments made by sailors were:

- “the Council needs to spend more money, more frequently, in maintaining the existing facilities. I am a rate payer”
- “facilities are generally good, however we must be acutely aware that we can destroy the environment so easily and with increases in population these pressures will only increase. Restrictions will be required”
- “keep the Hawkesbury clean and peaceful. Consider regulating jet skis and water skiers”

All but one sailor that completed an online survey were members of the Hawkesbury River Yacht Club, and one was a member of the Royal Prince Alfred Yacht Club.

## Water skiing

The majority of water skiers suggested they require additional access points to the Lower Hawkesbury.

Water skiers mainly use boat ramps, wharves for boats, pontoons, public toilets, seats and tables. Facilities that water skiers indicated need an upgrade are: boat ramps, wharves, pontoons, public toilets, camping facilities, seats and tables.

Should funds become available, the majority of water skiers indicated that a combination of all actions is required. These included:

- re-vegetate / restore damaged foreshore areas
- provide additional or new facilities
- provide new access points to the River
- upgrade existing facilities
- educate and inform River users about sustainability issues, and opportunities for water based recreation

## Canoeing / Kayaking

The majority of canoeists stored their boat at home.

Canoeists used all key public access points at the Lower Hawkesbury, with the exception of Singleton Road Wiseman's Ferry. No canoeists stated that additional access points are required.

In regards to the River sustaining additional facilities and the use that follows, canoeists made the following comments:

- "best to upgrade existing ones, then educate community to avoid unnecessary impacts on the River"
- "formal facilities will centralise users and protect surrounds"

Car parking, picnic shelters, rubbish bins, public toilets, information boards, canoe ramps and seats are the facilities most used by canoeists.

Canoeists generally indicated the car parking facilities, at the Lower Hawkesbury as satisfactory.

Most of the canoeists seek "semi remote settings that are peaceful and have no public facilities" over "natural spaces with basic facilities", and "formally designed spaces with good level of accessibility".

Priorities for canoeists included:

- re-vegetation / restoring damage foreshore areas
- educating and informing River users about sustainability issues and a combination of all strategies

Actions that canoeists do not consider a priority, included:

- provide additional or new facilities
- provide new access points to the River
- upgrade existing facilities

One third of the canoeists from the survey are members of a club, namely Windsor Canoeing Club.

Additional comments made by canoeists included:

- “I think they are very good in the area and have no further comments. I am happy with the current number of facilities and I do not think there is a need for further sites”

## Power boating

Responses from power boaters in the survey showed:

- The main access points for power boaters are Mooney Mooney Point, Parsley Bay, Brooklyn and Berowra Waters.
- The majority of power boaters do not require additional access points.
- Most power boaters indicated that they think the River is able to sustain additional facilities and the use that follows

Comments in regards to sustainability included:

- “degradation and litter are caused by people, not facilities - visitors to the area need to be educated not discouraged through lack of facilities - particularly rubbish bins and garbage barges!!”
- “it can sustain additional facilities if properly managed”
- “believe that the problem is not one of increased usage, but of facilities provided always being insufficient to level of usage”
- “responsible use promotes awareness of the value of these areas. Out of sight out of mind, results in neglect and abuse, not preservation”

The main facilities used by power boaters included: boat mooring, wharves, pump out facilities, rubbish bins, car parking, fuel and public toilet facilities. The main facilities in need of an upgrade include: rubbish bins, boat wash down facilities, pump-out facilities, boat mooring, public toilet facilities, tidal swimming pool, trailer parking, fish cleaning trays and fire places.

More power boaters seek “semi remote settings that are peaceful and have no public facilities”, than those seeking “primarily natural spaces with some provision of basic infrastructure such as a boat ramp only or fishing platform”.

Power boaters see “controlling some activities on the River to protect the environment”, as the best way to keep the Hawkesbury sustainable. This was followed by “providing basic facilities at selected access points, that can accommodate more people without damage over others”, and “managing fishing access points better to stop incidental damage to vegetation and the shoreline and removing cars from the River edge”.

Power boaters consider a combination of all actions is required to maintain sustainability. These included:

- re-vegetation / restoring damage foreshore areas
- educating and informing River users about sustainability issues and a combination of all actions
- provide additional or new facilities
- provide new access points to the River
- upgrade existing facilities

More power boaters are members of a water based recreation club than not. The clubs include:

- Halvorsen Club
- Palm Beach Yacht Club
- Royal Motor Yacht Club
- Ku-ring-gai Motor Yacht Club

Additional comments made by power boaters in the survey included:

- “this area is exceptional and effort should be made to encourage sustainable visitation. Good facilities support responsible usage”
- “ban fishing from public jetties”
- “try and get the general public to do the right thing. Take their rubbish home. The biggest priority is to do a check on the Rivers health - there are a number of outfalls into the River that need to be looked at. Council need to better manage what is already there, rather than look at putting in new things. At Apple Tree Bay they have shored it up with sandstone - this is good so that people don't do damage to the banks”
- “respect and love of the unique Hawkesbury area is a requirement, if long term beauty is to be maintained”



## Responses to key questions: overall

### *Do respondents use a boat and where do they store it?*

36% (27)<sup>155</sup> of the respondents cited that they store their boat at a marina. 18.6% (14) of the respondents were power boaters who stored their boat at a marina. Another 7% (5) were sailors, while a further 5% (4) house boaters stated they stored their boats at a marina. Only 11% selected a marina, which are given below. All five respondents who used Parsley Bay to store their boat are sailors.

**Table 5: Percentage and number of respondents storing their boats in a marina<sup>156</sup>**

Marina	% of respondents	No. of respondents
Parsley Bay	7%	5
Brooklyn / Sandbrook Inlet	3%	2
Berowra Waters	1%	1

<sup>155</sup> Two additional respondents had stated they store their boats at a marina, however they had selected employment or volunteer work as their main activity. To ensure the integrity of the data, these were removed from the report as it is uncertain whose boat it is.

<sup>156</sup> One of the removed respondents had stated Kangaroo Point as the marina that they store their boat.

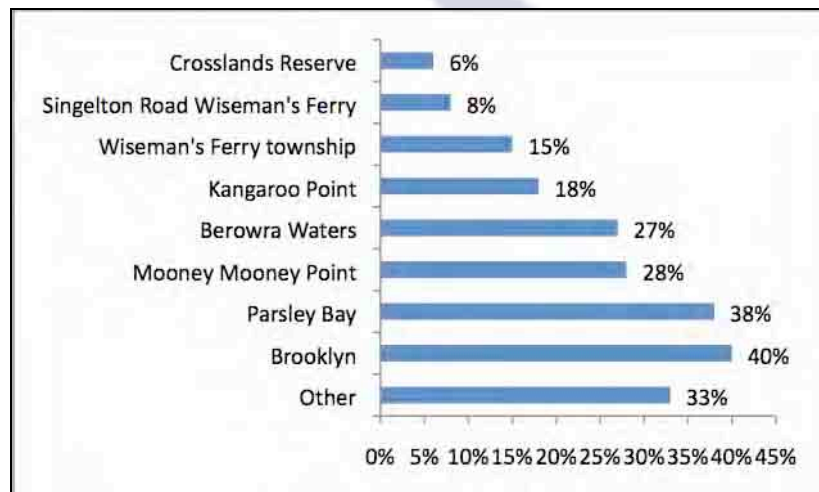
- 27% (20) of the respondents stored their boat at home
- 13% (10) of the respondents said that the boat they used was not theirs
- 3% (2) did not use a boat for their water based recreational activities
- 19% (14) of the respondents did not answer this question

### ***Access points on Lower Hawkesbury where respondents participate in main activity***

All respondents were asked to select as many access points as they use to participate in their main activity.

- Brooklyn was the most commonly used access point among respondents with 32% (24) selecting it as one of the locations they use to participate in their main activity on Lower Hawkesbury River
- 31% (23) of the respondents also selected Parsley Bay as another access point used to participate in their main activity
- Mooney Mooney Point was another commonly used access point for respondents' main activity with 23% (17) also selecting it

**Figure 15: Percentage of respondents using each access point to participate in their main activity<sup>157</sup>**



33% of the respondents cited other access points, not included in this plan. Some of the more commonly used other access points among respondents were: Akuna Bay, with 8% (6) of the respondents also using this access point for their main activity

Other access points stated by respondents were:

- Bobbin Head
- Cowan Creek
- Dangar Island
- Appletree Bay

<sup>157</sup> The total of the percentages will not equal 100%, as the chart shows the percentage of respondents who use each access point. Respondents could select more than one access point and some did not select any at all.

***Can the Lower Hawkesbury River sustain additional facilities and the use that follows?***

The Australian Estuaries Database classifies the Lower Hawkesbury River of a 'high' conservation value, with a 'real' conservation threat, and how some recreational fishing spots in relatively remote locations have damaged vegetation, and rubbish and fires have degraded them. Taking this statement into consideration, the respondents were asked if, in their opinion the River could sustain additional facilities, and the use that follows.

21% (16) of the respondents felt that the Lower Hawkesbury River could sustain additional facilities and the use that follows, while 17% (13) felt that it couldn't. 62% (46) of the respondents did not answer the question.

***Strategies to ensure sustainability at the Lower Hawkesbury***

The respondents were asked to rate the strategies to ensure the sustainability of Lower Hawkesbury, by importance.<sup>158</sup> A mean score was devised for each strategy to quantify the overall level of importance.

Unanimously: providing basic facilities at select access points that can accommodate more people without damage was selected as the most important strategy for the Council to adopt by the respondents.

Controlling some activities or events on the River to protect the environment was rated second, while managing fishing access points better to stop incidental damage to vegetation and the shoreline, and removing cars from the edge of the River was ranked as third.

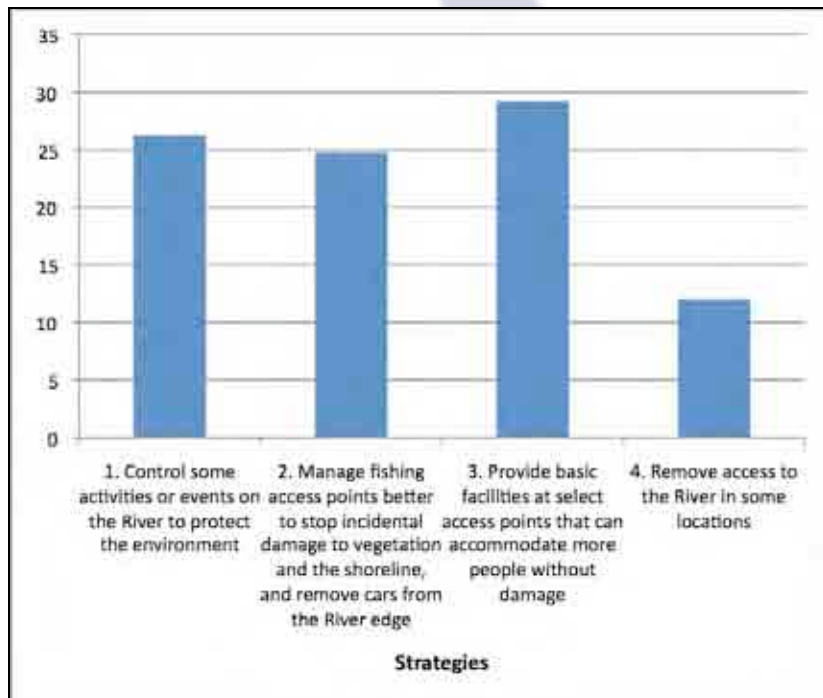
Removing access to the River in some locations was ranked as the least most important strategy for Council.

The chart below shows the comparison of the mean scores.

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<sup>158</sup> Each strategy was given a score of 4 every time it was voted as the most important, 3 if voted as 2<sup>nd</sup> most important, 2 if voted 3<sup>rd</sup> most important and 1 if voted the least important.

Figure 16: Importance of each strategy to ensure sustainability of the Lower Hawkesbury by mean score<sup>159</sup>



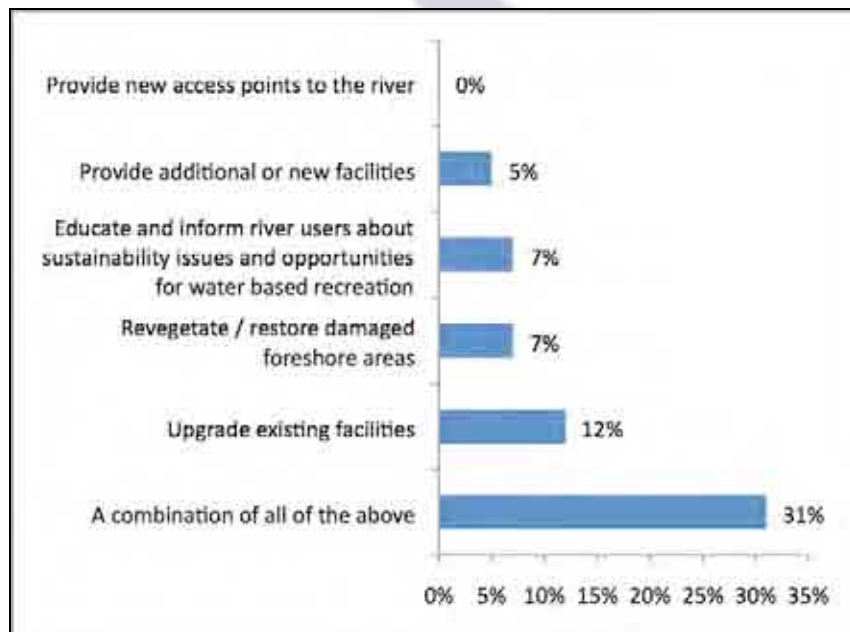
**Should funds become available, what actions should be a priority?**

Respondents were asked to choose which action should be Council’s priority if funds become available.

Total percentages of respondents by actions are shown in the following graph.

<sup>159</sup> Most important is the highest score

Figure 17: Percentage of respondents by actions that should be a priority for the Council, should the funds become available<sup>160</sup>



<sup>160</sup> The total of the percentages will not equal 100%, as 45% of the respondents did not answer the question

#### **Appendix 4: Survey questions**

1a. What type of water based recreational activities do you undertake along the Lower Hawkesbury?

- Recreational fishing (shore based)
- Recreational fishing (water based, motorised boat)
- Recreational fishing (water based, non-motorised boat)
- Canoeing / Kayaking
- Power boating (excluding water skiing)
- Water skiing
- Sailing
- House boating
- Camping
- Other, please specify

1b. Which activity that you listed previously do you consider to be your main activity?

1c. If you use a boat, where do you store it?

- At marina
- At home
- It's not my boat
- I don't use a boat

1d. If you store your boat at a Marina, which one?

- Berowra Waters
- Brooklyn / Sandbrook Inlet
- Parsley Bay
- Kangaroo Point

2. Which locations do you access the Lower Hawkesbury River from, when you participate in your main activity?

- Mooney Mooney Point
- Parsley Bay
- Brooklyn
- Kangaroo Point
- Berowra Waters
- Crosslands Reserve
- Wiseman's Ferry township
- Singleton Road Wiseman's Ferry
- Other, please specify

2b. If you are a shore based recreational fisher, where do you fish?

2c. Is there a need for additional access points to the River for your main activity?

2d. If yes, in what location are additional access points required?

3a. When you participate in your main activity, what type of facilities do you usually use at the main location you identified?

- Boat ramp
- Wharf (for boats)
- Public jetty (for pedestrians)
- Fish cleaning tray
- Boat mooring
- Boat storage
- Pontoon
- Tidal swimming pool
- Car parking
- Trailer parking
- Fire place / pit
- Picnic shelter
- Fishing line / hook / sinker disposal
- Rubbish bins
- Boat wash down
- Fuel
- Pump out facilities
- Public toilet facilities
- Canoe ramp
- Information board

- Camping facilities
- Seats
- Tables
- Other, please specify

3b. How would you rate the facilities you use?

- Needs upgrade
- Satisfactory
- Good
- Excellent

3c. Are additional facilities needed to support your activity? If so, where?

3d. Thinking about your main activity, what type of setting / experience are you seeking when you go to the River?

- Semi remote natural, spaces that are quiet, peaceful and have no public facilities
- Primarily natural spaces with some provision of basic infrastructure such as a boat ramp only or fishing platform
- Formally designed places for social activities with a good level of accessibility and support facilities, as well as a degree of comfort or convenience
- Other, please specify

4a. The Australian Estuaries Database has classified the Hawkesbury River of a 'high' conservation value, with a 'real' conservation threat.

Some recreational fishing spots in relatively remote locations have damaged vegetation, and rubbish and fires have degraded these.

Based on this information, do you think that the River can sustain additional facilities and the use that follows?

- Yes
- No
- Please explain

4b. Generally, what strategy should be the Council adopt to protect the River and maintain recreational facilities at a sustainable level?

- Control some activities or events on the River to protect the environment
- Manage fishing access points better to stop incidental damage to vegetation and the shoreline, and remove cars from the River edge
- Provide basic facilities at select access points that can accommodate more people without damage
- Remove access to the River in some locations



4c. Should funds become available, which of the following actions should be a priority?

- Revegetate / restore damaged foreshore areas
- Upgrade existing facilities
- Provide additional or new facilities
- Educate and inform River users about sustainability issues, and opportunities for water based recreation
- Provide new access points to the River
- A combination of all of the above
- Don't know

4d. What more could Council do in the management of the River foreshore and associated facilities to help make more pleasurable and recreation use sustainable?

The suburb you live in

Gender

- Male
- Female

Your age

- Under 10
- 10 – 14
- 15 – 19
- 20 – 24
- 25 – 29
- 30 – 34
- 35 – 39
- 40 – 44
- 45 – 49
- 50 – 54
- 55 – 59
- 60 – 64
- 65 and above

Are you a member of a water based recreation club?

- Yes
- No

5. Do you have any other comments about water based recreational facilities on the Lower Hawkesbury?

## **Appendix 5: Notes from community workshop**

The community workshop was held on 17<sup>th</sup> June, 2010. The following notes were taken on the night:

### **Welcome and Background**

- Council explained that funding had come from a grant held in the Water Catchments Team and a desire to address an action from the Lower Hawkesbury Estuary Management Plan
- As the URS contained a chapter on fishing this was seen as a natural extension, so the Parks and Landscape Team and the Water Catchments Team are working together with @leisure on the project

### **The Project**

- @leisure explained the project and the focus
- The link with National Parks and places such as Bobbin Head was questioned. It was explained that the project was focusing on land that Council has care, control and management there of

### **Vision**

@leisure asked what was their vision for the River

- It was mentioned that upstream from Wiseman's to Windsor was wall to wall boats, especially in peak holiday times. Downstream from the McDonald River the activities are increasing. It would be bad if downstream became as busy as upstream

### General Discussion

- Don't want more food outlets like at Bobbin Head
  - If you put in more car parking, more will come
  - In Vancouver there are lots of boat compounds, people take public transport to the site, more boat parking
  - Jet skis are present but not sure if their numbers are increasing
  - Restrictions for jet skis are set by Maritime
  - Rowing, organised groups such as schools
  - Come from Singleton Rd on pushbikes, canoe from Canoelands
  - There is a rowing race 2 x year around Dangar Island
  - At one stage 9 holiday parks were proposed along the foreshore of the River near Wiseman's. Not all were approved
  - Zoning of foreshore should be considered, can help control access to the River
  - The zoning of foreshores controls River access - existing zoning is controlling River use in Hornsby Shire.
  - There was a proposal to change the land zoning along Singleton Road to allow more recreational access and caravan parks this was opposed because there were 9 Caravan parks in a six-kilometre radius of Wisemans Ferry. Existing uses and Park proprietors concerned about business viability.
- Office of the Hawkesbury Nepean was created to try and have a responsible agency control development
  - Not everyone is in agreement with this group
  - There was surprise that the Catchment Management Authority weren't interested. As a past director she said they wouldn't consider it their responsibility but they should still have an interest

## Strengths and Weakness of the River

### Strengths

- It is what it is
- Scenic
- Wildlife
- River – it's a real River
- Topography
- Houseboat hire, they love the quietness and the misty mornings
- Fish, a real variety of fish
- No ferries, so good for sailors
- Good water quality

### Weaknesses

- Parking chaos
- Not enough trailer parking
- Cars are using trailer parking at Berowra Waters
- Bobbin Head, fees are costly
- Lots of people come from outside the local area
- Waterskiing and some other motorised use is ruining it for others, should be restricted

## Conflicts and Carrying Capacity

### Are there conflicts?

- Some at boat ramps due to crowding
- Perhaps launch different boats at different ramps

### Can the River sustain more use?

- Yes, but would change the character

## Discussion

- Trailer sailors can be a problem on a Sunday
- Boat Ramp could be widened or lengthened (at Parsley Bay?)
- If you could add more access where would it be?
  - Mooney Mooney near the Workers Club
  - Deerubbin Reserve (Gosford side) can be busy with cars from the freeway
  - Trailer sailors can't get to Mooney Mooney because of the bridges
- Car parking for River settlements can be a problem
- There might be a conflict with commercial and recreational fisherman on weekdays
- Ramp at Wiseman's needs an upgrade, this was opposed by the caravan park owners at the time
- The opposition to the ramp at Wisemans Ferry again was due to caravan park proprietors relying on people using the parks and their ramps. Note (There use to be a caravan park right at Wisemans Ferry behind the existing Petrol Station.)
- There is already a Caravan Park in Singleton Road with a ramp - although this ramp has issues at low tide.
- Ramp at Laughtondale not good at low tide

## Suggestions by Activity: to enhance participation and sustainability

- Should be more activities for kids, school holiday activities
- It was indicated that public liability was expensive for these activities
- The existing facilities are not good to support these kids programs, need shade, cover, parking and amenities
- They do fishing for kids at Chowder Bay, Narrabeen, Bobbin Head
- The facility at Wiseman's for the Lady Hawkesbury, could this be used for more recreation access?

### Suggestions by Location: to enhance participation and sustainability

- Kangaroo Point may encourage more people, instead of Deerubbin (Gosford side)
- Don't want big developments along the River
- Everyone uses the River, not just Hornsby residents
- No increase in use at Singleton Rd
- Mooney Mooney– Peats Island would be great
- The volunteer radio base is at Peats Island
- Parking is a disaster at McKell Park
- Rubbish: if there are more bins would people use them? Are they in the right place?
- There is a pump out at Wiseman's 1km downstream from the fishing table that isn't being used
- Fisheries: putting in fishing platforms, great for kids

### Specific Infrastructure

- VRA Hawkesbury
- Fishing workshops e.g.: rock fishing workshop which is coming up
- Public Education Displays, could talk to the users, should do more education
- People who hire the houseboats don't know where they are going (upstream or downstream)
- Signs may help with directions
- Are houseboats increasing? Not sure

### Environmental suggestions

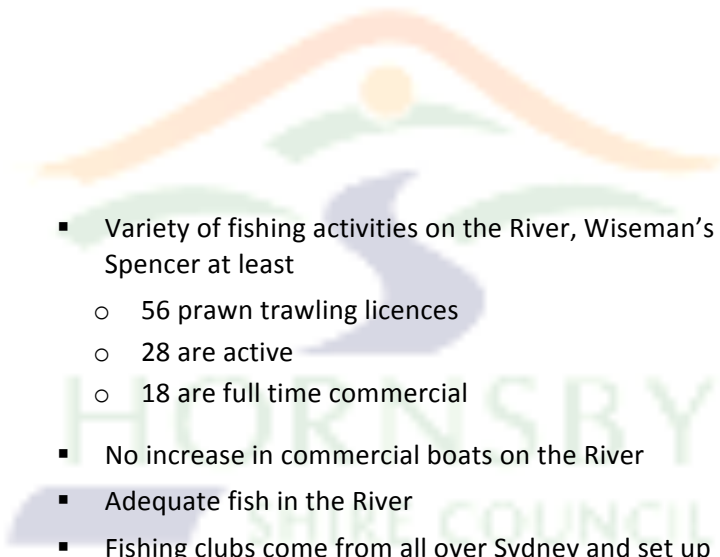
- Dangar shores, seagrass needs to be maintained
- Speed boats seem to have responded well to the buoys
- Mooring design by the CMA, good design doesn't harm seagrass
- The number of Moorings are increasing in Parsley Bay, many don't seem to get used. Legality of some moorings?
- Encourage 4 stroke motors, not 2 stroke
- More people want to clear their foreshores for access
- Could jetties be shared? So others could be removed?

### Key Issues for Each Activity and Overall

- There are lots of activities, many different groups – diversity may result in conflicts
- On shore amenities, Singleton Road not a through road
- How should we deal with this damage? Tents only
- Maybe National Parks should provide a managed area for them to go to because it's remote
- Close ad hoc sites, create a better place
- Dangerous place where they fish, past the "lodge" they are parking and fishing along Singleton rd – access, rubbish and toileting are issues
- Perhaps size and speed of vessels is an issue
- Education needed for larger vessels on how they impact moored vessels especially 2 days a year
- Education is needed for boats who fail to slow down for moored boats.
- Speed is an issue, historically has been allowed so may be hard to change

### Long Term Vision

- Is there a vision that you'd like to share?
- Vision should be for more than 10 years
- Population increase will be large so has to encompass all users
- Appreciate that some things have an impact on the environment
- Have noticed a subtle increase in waterskiing over last 3 years
- Specific annual events: crucial as they cater for everyone
- Recreational fishing: might increase as there are some concerns with fishing in Sydney Harbour
- Impact on the foreshore: boat designs are important
- Wakeboard boats – powerful – create bigger waves for waterskiing. More erosion on the foreshore as a result
- Natural area so close to major population centre
- It's clean
- We should try to retain what we have
- Not a lot of development, should try to keep it that way
- Commercial fishing not allowed in Sydney Harbour
- Water quality: River doesn't get "flushed out" anymore
- Silt build up is taking place as a result

- 
- Variety of fishing activities on the River, Wiseman's to Spencer at least
    - 56 prawn trawling licences
    - 28 are active
    - 18 are full time commercial
  - No increase in commercial boats on the River
  - Adequate fish in the River
  - Fishing clubs come from all over Sydney and set up camps at least every other weekend
  - Some activities are more anti - social than others such as water skiing and jet skiing
  - Not many activities for kids
  - Sailability won't work as the sailing club is not accessible by land
  - Kayaks are growing in numbers
  - Dragon boats? No facilities, clubs have tried in the past

#### **Priorities for Council**

- Parking at Wiseman's and Brooklyn –trailer parking in particular
- Upgrading of boat ramps
- Recreational Fishing grants - go for it



## **Appendix 6: Organisations interviewed by telephone**

The following is a list of the organisations and persons that kindly donated time to allow @leisure to undertake telephone consultation

- Hornsby Shire Council – Parks Asset Coordinator, Team Leader Estuary Management and Technical Officer Asset Management
- Gosford City Council
- Black Diamond Wakeboarding – Staff member
- NSW Water Ski Federation - President
- Maximum Adventure – Adventure Paddle
- Australian Sport Fishing Association - President
- Hawkesbury River Yacht Club - Commodore
- Hawkesbury Canoe Classic – Committee Member
- Boating Industry Australia – Manager BIA Divisions
- Hawkesbury – Nepean Catchment Management Authority
- Delrio Resort – Staff member
- Shore Fishing Australia – Author of ‘Guide to fishing in the Hawkesbury River’
- Hornsby River Sailing Club – Vice- President
- Luxury Afloat – Owner / Operator
- Milson Island Sport and Recreation Camp
- Riverlands Caravan Park - Owner
- Hornsby PCYC Sailing Club - Commodore
- Sea Bees Boating Club - President
- Southbound Adventures – Staff member
- Members of the Lower Hawkesbury Estuary Management Committee – 4 members
- Tourism NSW, Tourism Insights Coordinator
- Industry and Investment NSW – Fisheries Manager, Recreational Licensing
- Recreational Fishing Alliance – Vice President / Public Officer
- Department of Environment and Climate Change – Manager Lower Hawkesbury Area – Parks and Wildlife Division
- NSW Maritime – 2 staff
- Fishing and Agriculture Department – Primary Industries – 4 staff
- Windsor Canoe Club
- National Parks and Wildlife Service
- Office of Hawkesbury Nepean – 2 staff
- Nepean Rowing Club
- Sydney Water

## Appendix 7: Stakeholder submissions

Submissions were invited from all stakeholders, and were advertised in the project press release. The following table is a summary of the submissions received by @leisure.

NUMBER	DATE	KEY POINTS RAISED IN SUBMISSION
Community Respondent 1	19/06/10	<ul style="list-style-type: none"> <li>▪ Boat owner living in Hornsby shire with a mooring on the Hawkesbury.</li> <li>▪ We need to have dinghy racks at both Parsley Bay and Baden Powell Ave these surely would not cost much to build and straight away tidy the area for any visitor, along with making a safe place for boat owners to lock there dinghy and Hornsby council could charge a small fee like the councils on the northern beaches</li> <li>▪ Council needs to do something about the boat ramp at the end of Baden Powell Ave so that boat owners can access their boats no matter what the tide, this could be done by dredging or by building a wharf wide enough to get a dinghy along and out past the low tide mark , I am not talking about a full blown concrete ramp that power boats would try and access day and night and upset the local residents</li> <li>▪ I feel it would be a great advantage to have some moorings in some of our lovely bays that we could tie up to for a couple of hours or overnight</li> </ul>
Community Respondent 2	21/06/10	<p>These elements should be included in the water based recreational facility plan:</p> <ul style="list-style-type: none"> <li>▪ All River foreshores protected from commercial development,</li> <li>▪ A noise cap be on water recreational vehicles, such as skidoos</li> <li>▪ A curfew on noise level after an appropriate hour,</li> <li>▪ A licence to prove ability to use rental boats,</li> <li>▪ Periodic inspection on yachts for lawful sanitary tanks,</li> <li>▪ Water skiers to use River centre or designated area.</li> </ul> <p>The Hawkesbury River is one of Sydney's major heritage sites, a significant beauty spot and while a River is essentially a holiday and leisure resort the River needs all the environmental protection possible, now and for the future.</p>
Community Respondent 3	21/06/10	<ul style="list-style-type: none"> <li>▪ It is evident that Gosford Council does not have appropriately zoned areas for commercial ventures. Barges and other commercial uses are currently within sensitive residential areas without proper environmental safeguards. It is a waste of time for Hornsby Council to promote a standard without genuine support from other local councils</li> <li>▪ Kayaking is growing in popularity as are other passive uses on the waterway. Within areas such as Berowra Creek, the Hawkesbury to Marlow and Cowan Creek and Broken Bay. Speed and wash from big plastic boats are a menace and a danger to small watercraft</li> </ul>

NUMBER	DATE	KEY POINTS RAISED IN SUBMISSION
Community Respondent 4	28/06/10	<ul style="list-style-type: none"> <li>▪ The fishing table in Singleton Road has only just appeared and has been put there by a recreational fisher - it is used</li> <li>▪ The boats upstream of Wisemans Ferry are in peak use in Summer, weekends and holiday periods are at maximum use. Not weekdays</li> <li>▪ The section of River down stream of Wisemans Ferry is experiencing increased recreation use since the 2007 flood and the silting of the MacDonald River</li> <li>▪ There is increased recreational fishing in the Hawkesbury due to the commercial closure of Sydney Harbour (The closure was because of the contamination of fish - this means that fish are also unsafe for recreational fishers as well)</li> <li>▪ I would also note that the workshop facilitator indicated that HNCMA were contacted</li> <li>▪ Concern for safety of recreational fishing along Singleton Road which will get worse with population growth.</li> <li>▪ There was a flood in 2007 that was major from St Albans to Spencer</li> <li>▪ The River does not get the flushes that it use to - but we have been in a drought.</li> </ul>

## Appendix 8: Boat hire

**Table 7: Boat hiring businesses on the Lower Hawkesbury River by type of boat and location**

Business and location	Type of boat
Brooklyn Central Boat Hire and General Store <sup>161</sup>	Runabouts, party pontoon boats, Fish and cruise boat, BBQ boat
Brooklyn Marina Hawkesbury Home Cruisers Brooklyn Road, Brooklyn 162	Houseboats, runabouts, BBQ boats
Berowra Waters Marina Bay Road, Berowra Waters 163	BBQ boat, runabouts, kayaks
Boab Boat Hire <sup>164</sup> Berrilee, available from all public ramps	High powered trailer boats. Centre cab, sports rider, runabout, Kimberley all-rounder
Ripples Houseboat Holidays, Brooklyn	Houseboats
Luxury Afloat - Brooklyn (Kangaroo Point)	Houseboats
Able houseboats , Wisemans Ferry	Houseboats
Relaxation Boat Hire, (Clipper Cruiser Hire) Akuna Bay	Small day hire boats, luxury cruisers and houseboats, kayaks

<sup>161</sup> Brooklyn Central website: <http://www.brooklyncentral.com.au/>, accessed 2010

<sup>162</sup> Brooklyn Marina website: <http://www.brooklynmarina.com.au/>, accessed 2010

<sup>163</sup> Berowra Waters Marina website: <http://www.bbqboat.info/>, accessed 2010

<sup>164</sup> Boab Boat Hire website: <http://www.boabboathire.com.au/>, accessed 2010

## Appendix 9: Inventory

Location	Wharf	Boat ramp type	Marina	Pontoon	Playground	Wash Down facilities	Fish Cleaning	Lighting	Car park	Boat trailer parking	Public Toilets	Paths	Picnic facilities	Lookout	Other	Non motorised sports access	Accessibility of infrastructure
Deerubbin Reserve (Gosford Shire)	No	Two lane concrete ramp split by a floating pontoon	No	Public pontoon	No	No	Yes	Yes at pontoon	Yes	Yes	Yes	Yes	Yes	No		Yes, canoes and kayaks	
Parsley Bay	Yes	Two lane concrete with jetty located 25m away. Utility ramp, Loading dock?	No	Yes, two pontoons located on the east and west side (east side only used by sailing boats). Both have concrete decking	No	Yes	Yes	Yes (pontoon and public ramp)	Yes	Yes	Yes	Yes	Yes	No	Located at the end of George St Brooklyn. Easy launch and retrieval however jetty is located 25 metres from ramp. A small sand beach on left side of ramp enables access to boat when launching and a holding area for the boat on return <sup>165</sup>	Yes (canoes, kayaks, dinghy's) – Council would like to formalise access point. Presently it is a natural beach launch	Stepped path to beach area is not suitable for wheelchairs

<sup>165</sup> Boab Boat Hire

Location	Wharf	Boat ramp type	Marina	Pontoon	Playground	Wash Down facilities	Fish Cleaning	Lighting	Car park	Boat trailer parking	Public Toilets	Paths	Picnic facilities	Lookout	Other	Non motorised sports access	Accessibility of infrastructure
<b>Brooklyn</b>	Yes. Public wharf (timber on edge of railway line)	Concrete ramp,	Yes - two: commercial and residents	Public pontoon, concrete with timber deck east end	Yes	No	No	Yes along foreshore path, car park, tidal pool,	Yes	Unmarked parking at train station	Yes (two sets)	Unsealed paths long foreshore: difficult in wet	Yes	Yes in McKell Park	Tidal swimming pool	Yes, canoes and kayaks	Wharf is not accessible. Pontoon is accessible. Would be a good site to make accessible due to the proximity of the water to the station and the flat foreshore.
<b>Kangaroo Point</b>	Yes	Concrete ramp, single lane	Yes	Public pontoon, concrete deck	No	No	Yes	No	Yes, very small	No	No	Road	Yes	No formal lookout	Sewerage retrieval system, pump out facilities	Yes, canoes and kayaks	Wharf is not accessible. Pontoon is accessible
<b>Berowra Waters</b>	No	Concrete two lane ramp with floating pontoon	Yes	Private jetties, two pontoons. One timber in the east (timber decking) and one in the west (concrete decking)	Yes	Yes	Yes	Yes	Yes multi level carpark		Yes	Yes	Yes	No	General store, bait and tackle	From pontoon. Alternative concrete step provided – water is too shallow	

Location	Wharf	Boat ramp type	Marina	Pontoon	Playground	Wash Down facilities	Fish Cleaning	Lighting	Car park	Boat trailer parking	Public Toilets	Paths	Picnic facilities	Lookout	Other	Non motorised sports access	Accessibility of infrastructure
<b>Wisemans Ferry</b>	Yes (two wharves) One concrete and wharf constructed for the Lady Hawkesbury timber public ramp	Concrete ramp	No	No	Yes	No	No	Wharf is lit but not boat ramp	Yes, unformed	Yes	Yes (Located in near by park)	Yes from public wharf to concrete wharf and up the hill to the recreation reserve. No sealed access to the boat ramp	No	Yes	Sports oval with cricket wicket, cricket nets, ski jump litter trap, lit tennis court	Yes, canoes and kayaks	Not accessible for waterskiing or wakeboarding NSW Water Ski Federation are assessing the feasibility of putting in accessible infrastructure at the NSW Ski Gardens
<b>Crosslands Reserve</b>	No	Concrete ramp	No	No	Yes	No	No	No	Yes	Yes	Yes	Sealed pathways	Yes	Yes, 2 x viewing platform		Yes, canoes and kayaks. No motorised boat access at this site	Is the design of facilities such as toilets and platforms were upgraded, more people with a disability could use the site

























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