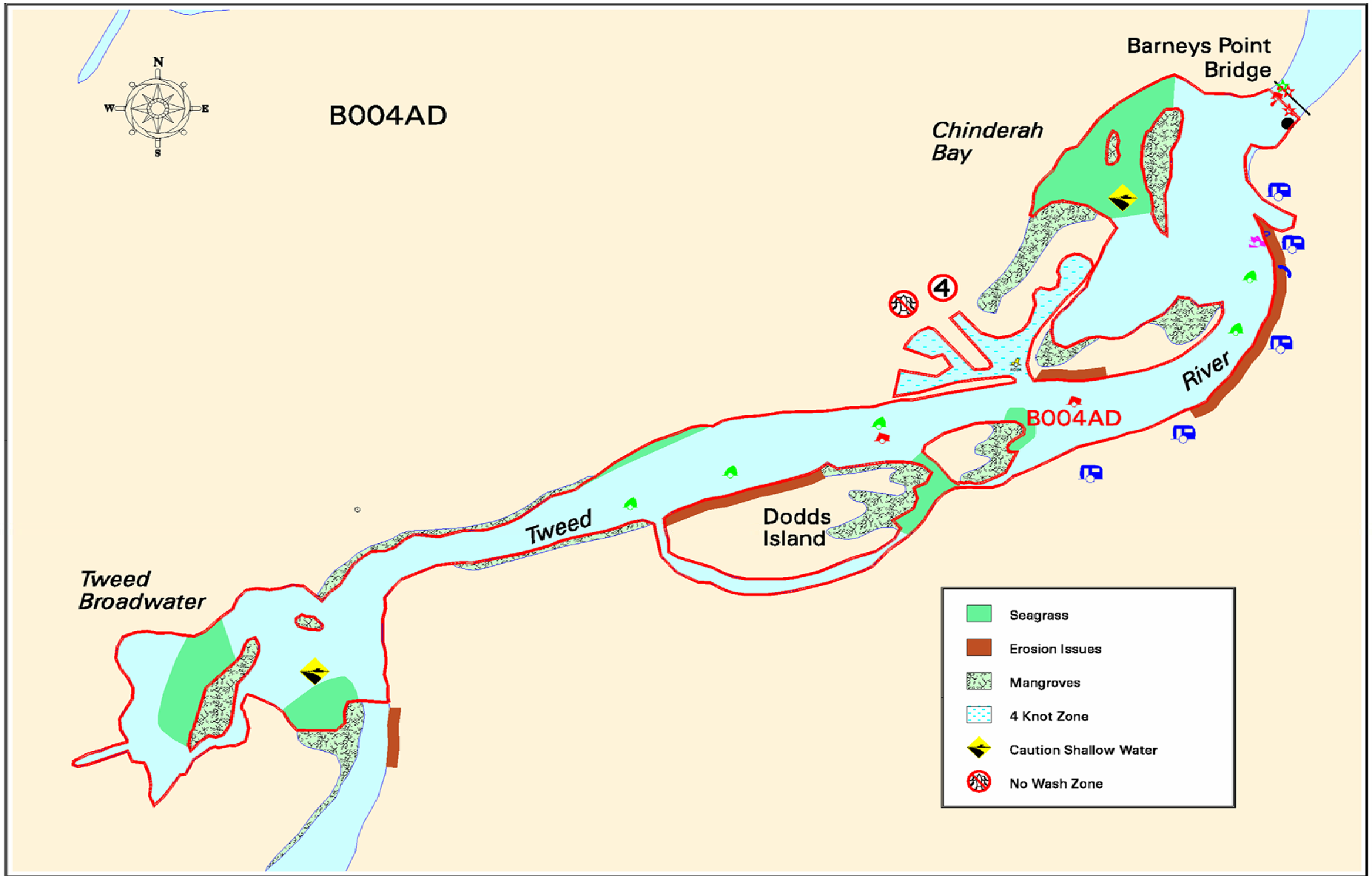


**B004AD**

BARNEYS POINT BRIDGE TO TWEED  
BROADWATER



## 10 BARNEYS POINT BRIDGE TO TWEED BROADWATER (B004AD)

### 10.1 Description:





This section of the river extends from Barneys Point Bridge to a line running east-west across the river immediately upstream from the Tweed Broadwater. This area is adjacent to the village of Chinderah and includes a large area of shallow water at Chinderah Bay; Lillies and Dodds Islands; and a residential canal estate at Oxley Cove.


### 10.2 Navigational Restrictions

- A large area of shallow water at Chinderah Bay and the stretch of water north of Lillies Island.
- Restricted channel width to the west of Dodds Island.
- Four knot and No Wash restrictions in the residential canal estate at Oxley Cove.

### 10.3 Navigational Aids

At the time of writing this plan, the existing navaids consisted of:

Navaid Type	Location	Navaid Type	Location
 Lit Port Beacon	⇒ Immediately upstream of Barneys Point Bridge	 Lit Port GRP Buoy	⇒ Immediately south of Barneys Point Bridge ⇒ North-east of Dodds Island
 Caution Shallow Water Signage	⇒ Chinderah Bay and North of Lillies Island	 Port GRP Buoy	⇒ Channel adjacent to the entrance to Oxley Cove

 Starboard GRP Buoy	⇒ North-east of Lillies Island ⇒ East of Lillies Island ⇒ North-east of Dodds Island ⇒ North of Dodds Island ⇒ Channel adjacent to the western entrance of Boyds Channel
---	--

## 10.4 Boat Ramps

- **Chinderah Boat Ramp – Waugh Street**

The Chinderah boat ramp is located adjacent to the Hacienda Caravan Park. It has no formal parking but has enough off-street parking to accommodate approximately 20 cars with trailers. Access to the ramp is poor due to the surrounding vegetation, and vessel manoeuvrability is restricted due to the narrow and shallow access to the river. There are no other facilities such as holding jetties or pontoons, toilets or fish cleaning areas located at this ramp. There was an average of 22 cars/trailers counted at this site during the survey. In summary, the size and access issues relating to this ramp are exacerbated by the relatively high usage rates.

NSW Maritime has recently approved the allocation of 50% grant funding under its Maritime Infrastructure Program (formerly known as WADAMP) in supporting the Tweed Council’s upgrade of the Chinderah Boat Ramp.

- **Homestead Caravan Park**

A private boat ramp located at the Homestead Caravan Park, upstream from Barneys Point Bridge at Chinderah.

- **Hacienda Caravan Park Boat Harbour**

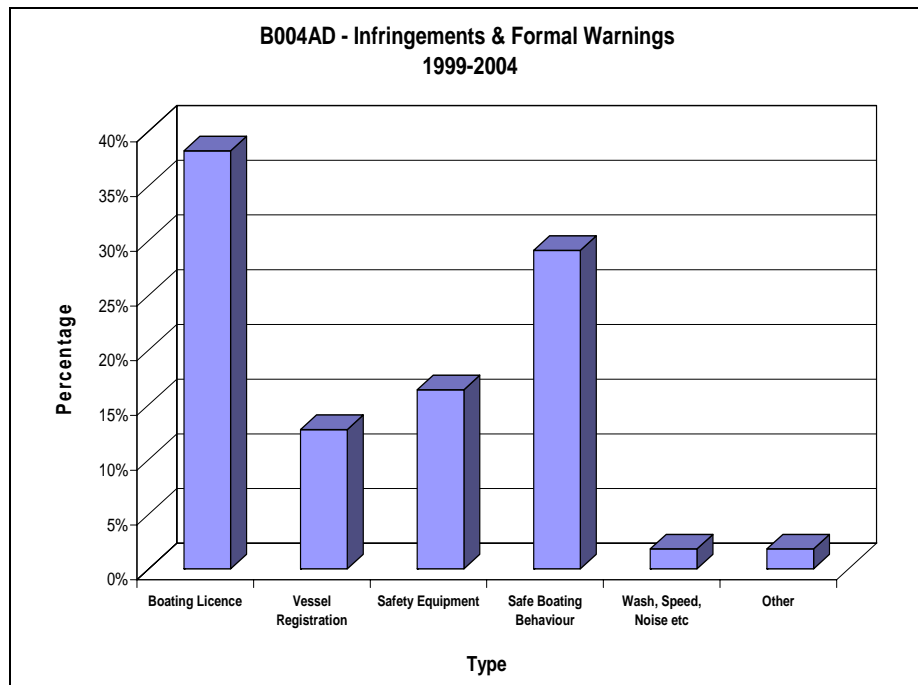
A private boat ramp located at the Hacienda Caravan Park, upstream from the Chinderah boat ramp.

- **Opposite Chinderah Bay Café**

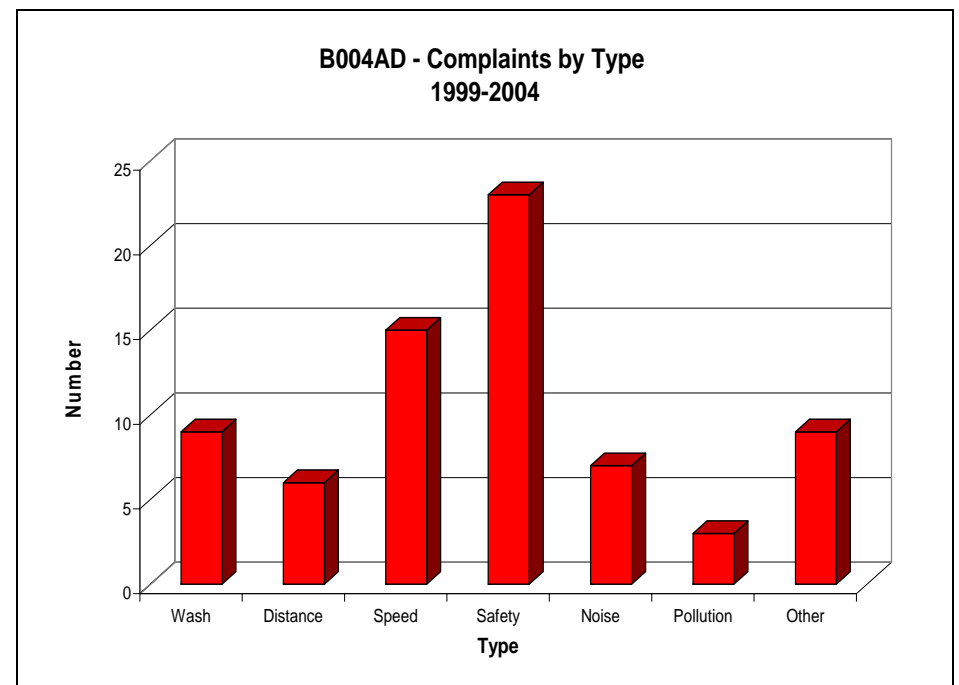
While not a formal boat ramp, a number of water skiers frequented this site over the survey period. An average of five cars/trailers were parked along the adjoining street as no off-street parking was available.

## 10.5 Compliance History

Figure 9 indicates that speed and safety issues are concerns for stakeholders in this section of the river. The Authority's compliance program for area B004AD reflects these concerns with nearly half of the infringements and formal warnings issued during the period 1999 – 2004 being for safety related offences.



**Figure 12**



**Figure 13**

## 10.6 Values

- ◆ Stakeholders including NSW Fisheries and the professional fishing industry value the Chinderah Bay / Lillies Island precinct as an important seagrass and mangrove area and as a nursery for a variety of benthos, fish and shellfish species.
- ◆ Stakeholders value a healthy waterway free from pollutants such as sewage and bilge water.
- ◆ Stakeholders enjoy and value the peaceful nature of this section of the river.
- ◆ Riverbank health and stability is also important to users of the waterway at Chinderah.

## 10.7 Issues

- ◆ Vessels impacting on seagrasses and mangroves in the Chinderah Bay / Lillies Island area, an important fish and prawn nursery. The site is characterised by extensive areas of shallow water presenting a natural navigation hazard for all but the smallest of vessels.
- ◆ Bank stability in an area near the entrance to Oxley Cove and an area between the Chinderah Boat Ramp extending to the revetment work at Jenner's Corner on the old Pacific Highway.
- ◆ The proposed construction of a large marina at Chinderah. Issues include the effects on water quality, river health, bank stability, safe navigation and the general amenity of the area.
- ◆ Four steel posts extending approx 3 metres out of the water adjacent to the entrance of the Colonial Caravan Park Boat Harbour.

## 10.8 Management Strategies and Action Plan

Outcome	Strategies	Actions	Timeframe
Minimise boating activity in the Chinderah Bay / Lillies Island area. The main navigation	<ul style="list-style-type: none"> <li>▪ Maintain existing management strategies such as:                             <ul style="list-style-type: none"> <li>○ Channel definition</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Monitor and review the existing configuration of navigation aids marking the extent of the channel.</li> <li>▪ Educate boaters to avoid shallow water and to boat safely</li> </ul>	} } Ongoing }

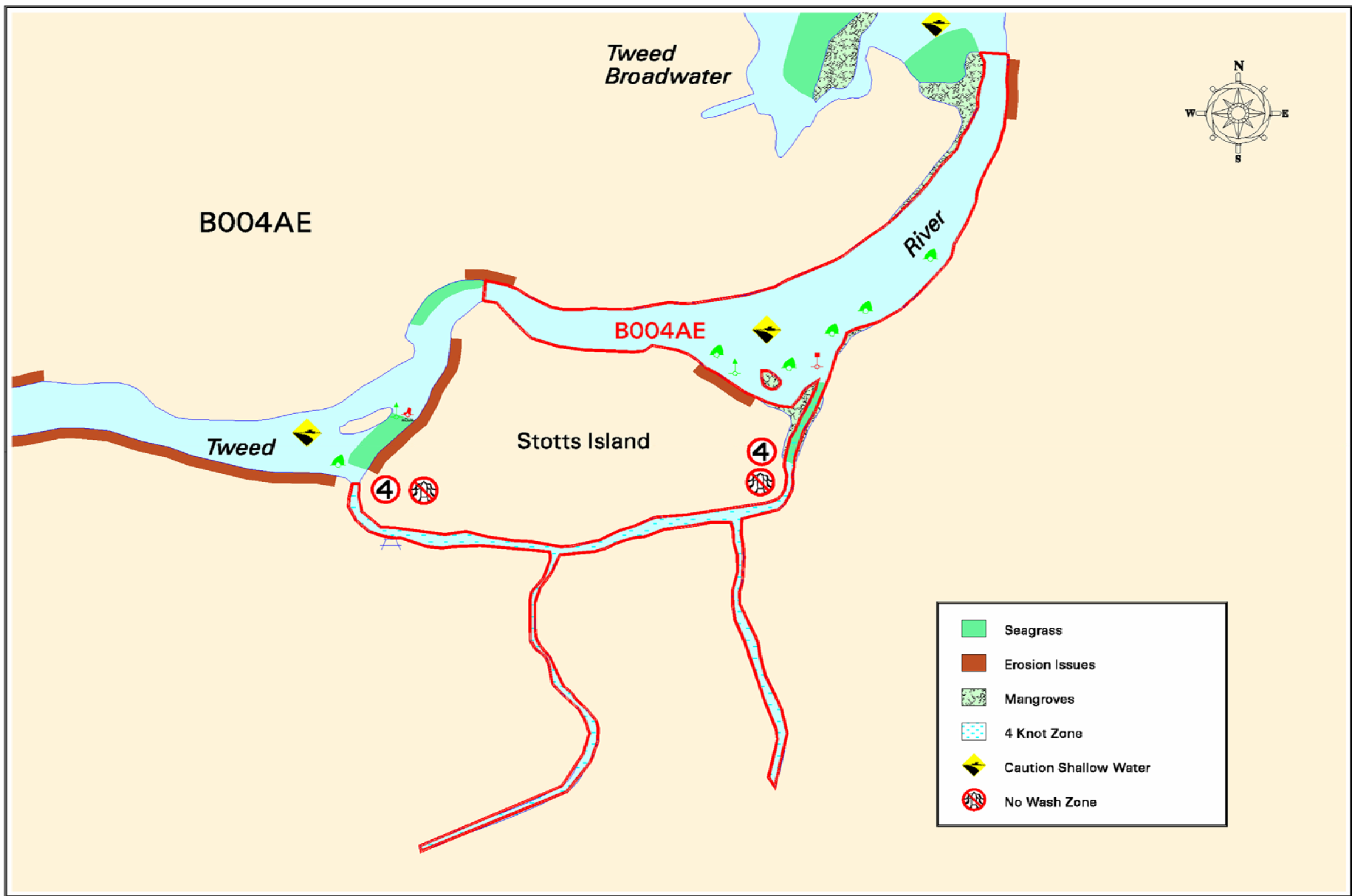
Outcome	Strategies	Actions	Timeframe
channel runs along the eastern foreshore of the river maintaining a significant distance from these areas.	<ul style="list-style-type: none"> <li>o Education</li> </ul>	in the marked channel.	
Minimise the impact of boating on bank stability in the areas adjoining Oxley Cove.	<ul style="list-style-type: none"> <li>▪ Education, signage and liaison with Tweed Council.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recommend to Tweed Council revetment work to be undertaken in the Oxley Cove area when funding becomes available.</li> <li>▪ As an interim measure, erect "Minimise Wash" signage and install a number of aquabuoys at the appropriate distance off the bank.</li> </ul>	} } Short Term } }
Employ appropriate management strategies consistent with the size and nature of any future proposed boating facilities.	<ul style="list-style-type: none"> <li>▪ Management strategies for any future marina project will be developed once the nature, size and extent of the facility is known. Strategies will be consistent with the Authority's commitment to river health, water quality, bank stability and in line with existing policies relating to safe navigation.</li> </ul> <p>At the time of releasing this boating plan approval for the Chinderah Marina has been granted but construction has not commenced. The strategies developed for this section of the river will be reviewed prior to completion of the marina development.</p>		
Mitigate the risk of accidents and/or incidents in the Hacienda Caravan Park Boat Harbour	<ul style="list-style-type: none"> <li>▪ Liaison with Department of Lands</li> </ul>	<ul style="list-style-type: none"> <li>▪ Recommend the removal of 4 steel posts extending approximately 3 metres out of the water adjacent to the entrance of the boat harbour.</li> </ul>	Short Term





# **B004AE**

TWEED BROADWATER TO RAWSON ISLAND



# 11 TWEED BROADWATER TO RAWSON ISLAND (B004AE)

## 11.1 Description:





This section of the river extends from the Tweed Broadwater to a line running north-south across the river at Rawson Island. This area includes large areas of shallow water north east of Stotts Island. It also includes Stotts Channel. Both the Tweed Broadwater and Stotts Island Nature Reserve are important habitat areas. Stotts Island is listed on the Australian Heritage Commission's Register of National Estate and contains the last remnant of the Tweed River subtropical rainforest. National Parks and Wildlife Service has also identified Stotts Island Nature Reserve as "critical habitat" pursuant to the Threatened Species Conservation Act 1995.




## 11.2 Navigational Restrictions

- A large area of shallow water north-east of Stotts Island.
- A narrow marked navigable channel extending along most of the eastern side of the river.
- Four knot and No Wash restrictions are in force in Stotts Channel.

## 11.3 Navigational Aids

At the time of writing this plan, the existing nav aids consisted of:

Navaid Type	Location	Navaid Type	Location
 Port Pipe Beacon	North-east of Pelican Island Between Rawson and Stotts Islands	 No Wash Signage	⇒ Eastern entrance to Stotts Channel ⇒ Western Entrance to Stotts Channel
 Starboard Pipe Beacon	⇒ West of Pelican Island	 Four Knot Signage	⇒ Eastern entrance to Stotts Channel ⇒ Western Entrance to Stotts Channel

 Lit Starboard GRP Buoy	⇒ There are five of these Nav aids marking the channel north-east of Stotts Island.	 Caution Shallow Water Signage	⇒ Stretch of water north-east of Stotts Island.
 Port Aqua Buoy	⇒ Between Rawson and Stotts Islands		

### 11.4 Compliance History

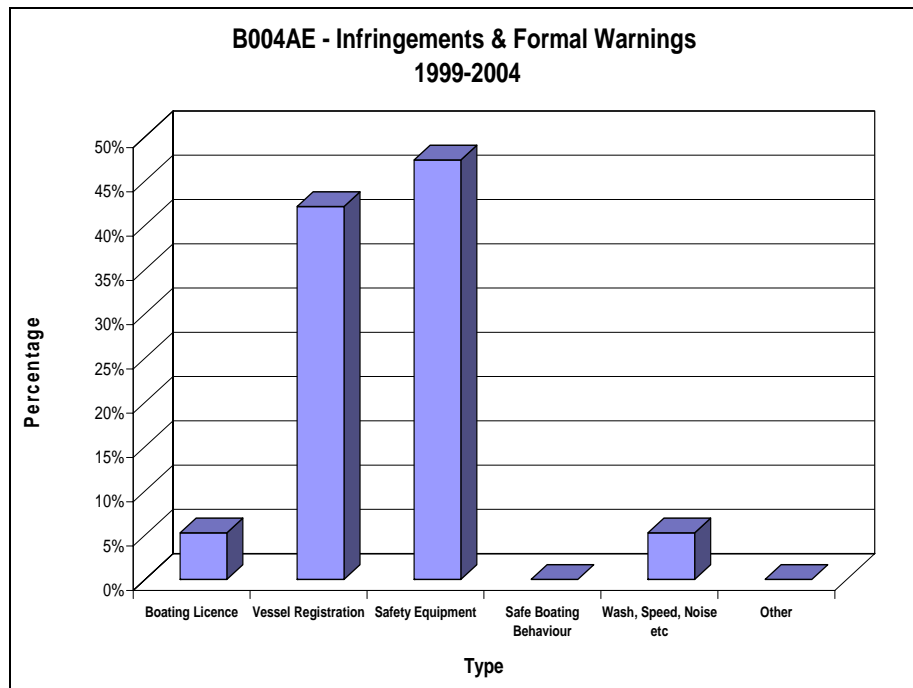


Figure 14

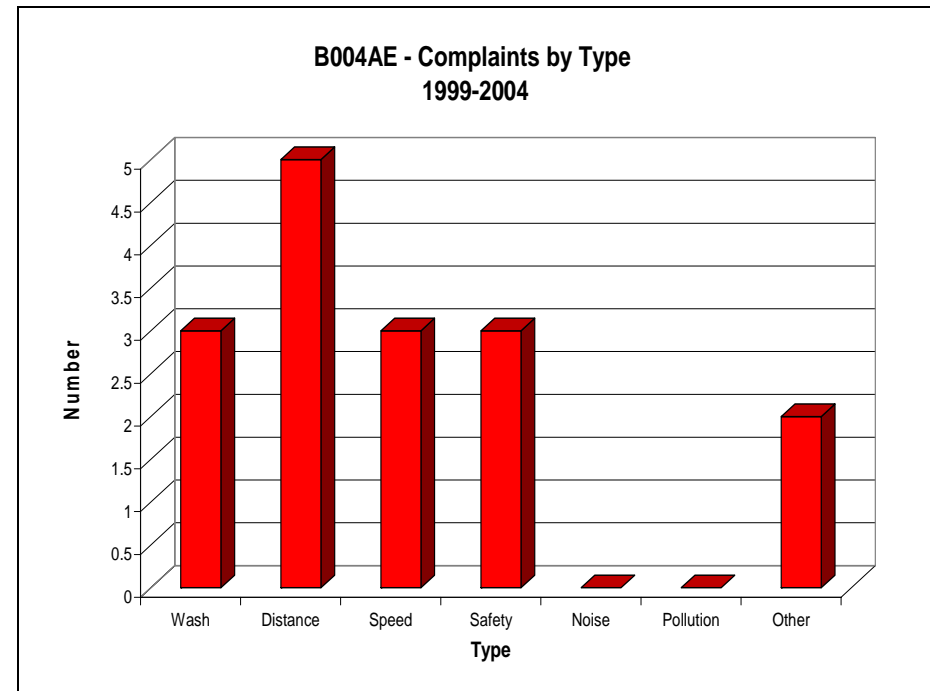


Figure 15

It is considered that the small number of complaints (see Figure 11) over the period 1999 – 2004 is due mainly to the low level of residential development within this management section. Infringements and formal warnings were also low, however, a number of “close quarter” incidents have been recorded in the Pelican Island channel area over the same period.

### 11.5 Values

- ◆ Stakeholders value the environmentally sensitive and important habitat areas of the Stotts Island Nature Reserve.
- ◆ Stakeholders also value the safe and equitable use of this section of the river, especially the safe co-existence of the varying recreational activities carried out around Stotts Island.

### 11.6 Issues

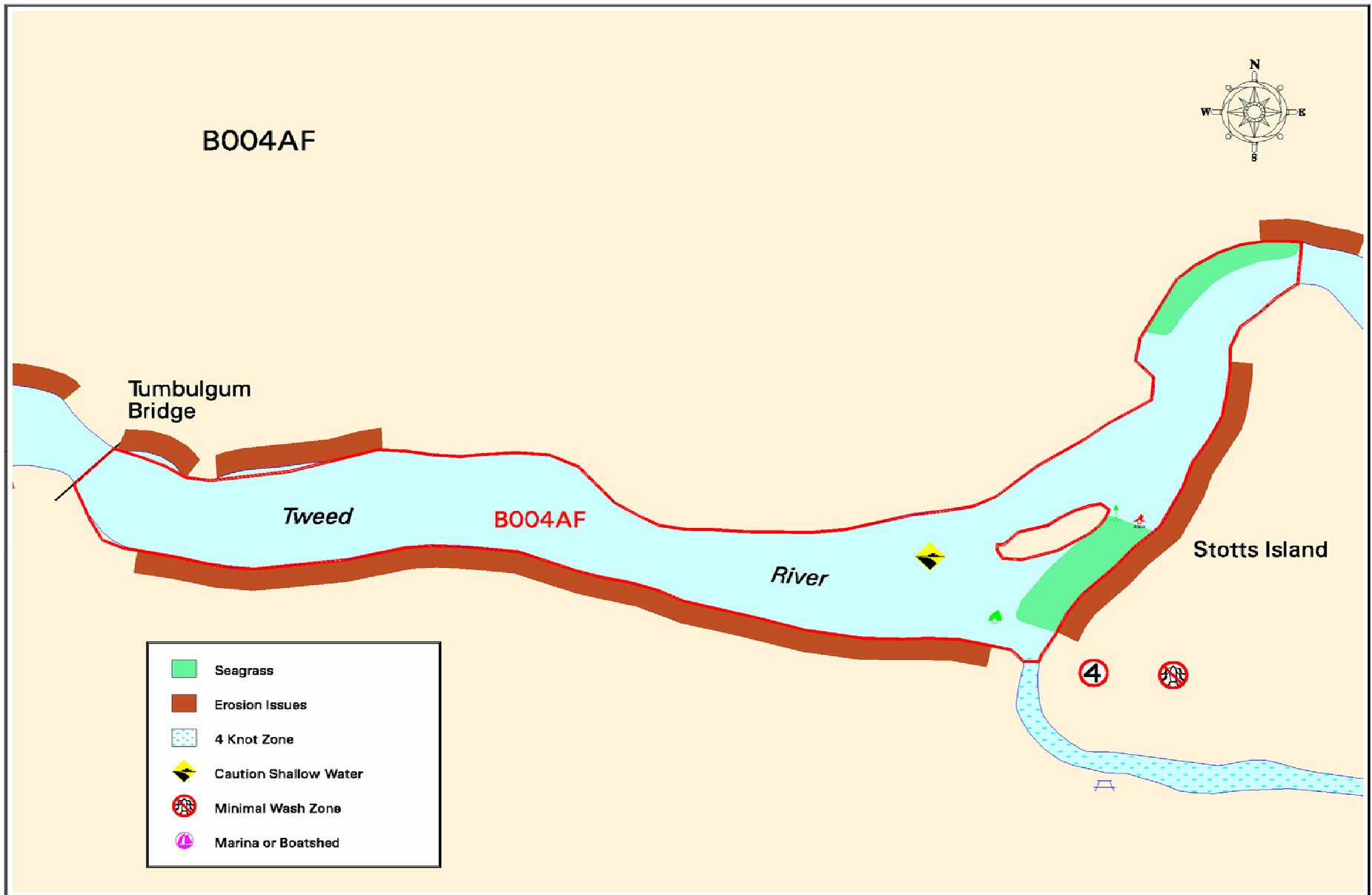
- ◆ A sharp bend in the only navigable channel between the north-east corner of Stotts Island and Pelican Island is a safety concern, particularly as a wide range of boating activities such as skiing, wake boarding, fishing and house boating occur in this channel. NSW Maritime will closely monitor this section of the river and proactively pursue the feasibility of dredging an alternative channel in the wider stretch of river north of Pelican Island. Along with the strategies aimed at reducing the risk of accidents/incidents in this area, outlined in section 11.7, NSW Maritime will promote the development of Codes of Conduct in partnership with a variety of end user groups. These Codes of Conduct will outline the agreed responsible approach to overcoming potential situations that exhibit an inherent risk to safe and equitable use of the river.
- ◆ The impact boating has on Stotts Island Nature Reserve and its surrounds. The only navigable channel in this section of the river runs adjacent to this important aquatic, avian and terrestrial species habitat. Stotts Island is listed on the Australian Heritage Commission's Register of National Estate and contains the last remnant of the Tweed River subtropical rainforest. National Parks and Wildlife Service has also identified Stotts Island Nature Reserve as “critical habitat” pursuant to the Threatened Species Conservation Act 1995. The river north of Pelican Island, while expansive, comprises shallow water and is therefore unnavigable to the majority of vessels.
- ◆ The impact of boat wave action on the banks of Stotts Island and the western side of the channel opposite the north-western corner of Stotts Island.

## 11.7 Management Strategies and Action Plan

Outcome	Strategies	Actions	Timeframe
Reduction of the risk of accidents/incidents occurring in the narrow navigation channel between the north-east corner of Stotts Island and Pelican Island.	<ul style="list-style-type: none"> <li>▪ Education and the tightening of navigations restrictions in the channel.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Install “No Anchoring” signage and aquamarks in the channel.</li> <li>▪ Educate and where necessary enforce no anchoring regulations.</li> <li>▪ Liaise with hire &amp; drive operators to educate customers concerning the dangers associated with anchoring and other activities in the channel.</li> <li>▪ Monitor and review in terms of safety.</li> </ul>	<p>Short term</p> <p>Short term</p> <p>} Short } term &amp; } ongoing }</p>
Reduce the impact of boating on the Stotts Island Nature Reserve.	<ul style="list-style-type: none"> <li>▪ Navigation restrictions</li> <li>▪ Investigate alternative channel options.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Install aquamarks at appropriate distance from the bank in the sensitive area on Stotts Island opposite Pelican Island. Monitor and review.</li> <li>▪ Improve existing 4 knot signage throughout Stotts Channel.</li> <li>▪ Investigate, in conjunction with the Dept of Lands, Council and DIPNR through the Tweed River Committee, the feasibility of dredging an alternative channel in the wider stretch of river north of Pelican Island.</li> </ul>	<p>Short term</p> <p>“</p> <p>Long term</p>

**B004AF**

RAWSON ISLAND TO TUMBULGUM BRIDGE





## 12 RAWSON ISLAND TO TUMBULGUM BRIDGE (B004AF)

### 12.1 Description:



This section of the river extends from Rawson Island to the Tumbulgum Bridge. A traffic bridge joining Tumbulgum to North Tumbulgum represents the only major navigation hazard on this stretch of river. This is a quiet section of river that is ideal for a wide range of boating activities.

### 12.2 Navigational Restrictions

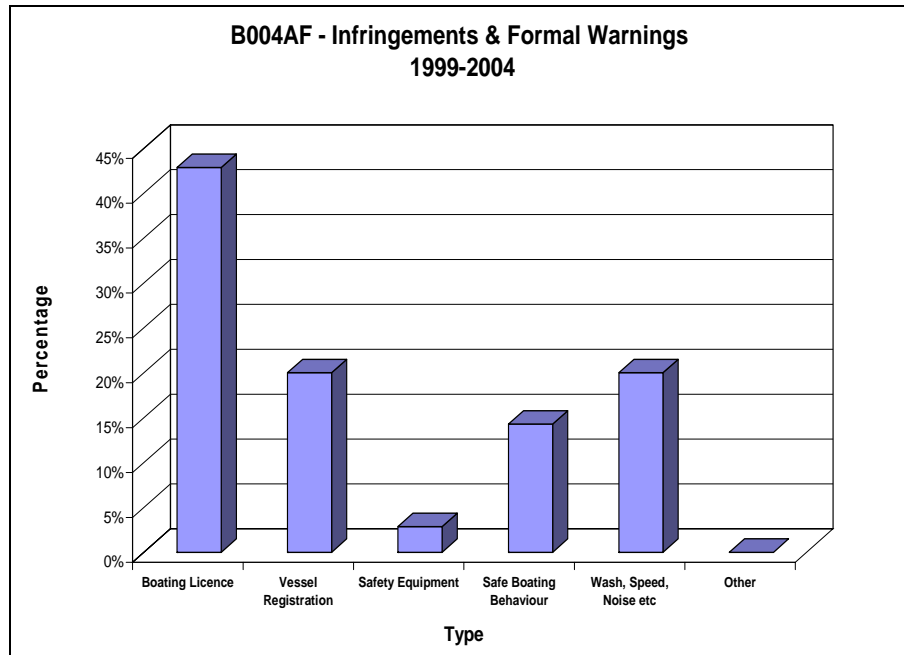
- Pylons of traffic bridge joining Tumbulgum to North Tumbulgum.
- An area of shallow water immediately upstream of Rawson Island.

### 12.3 Navigational Aids

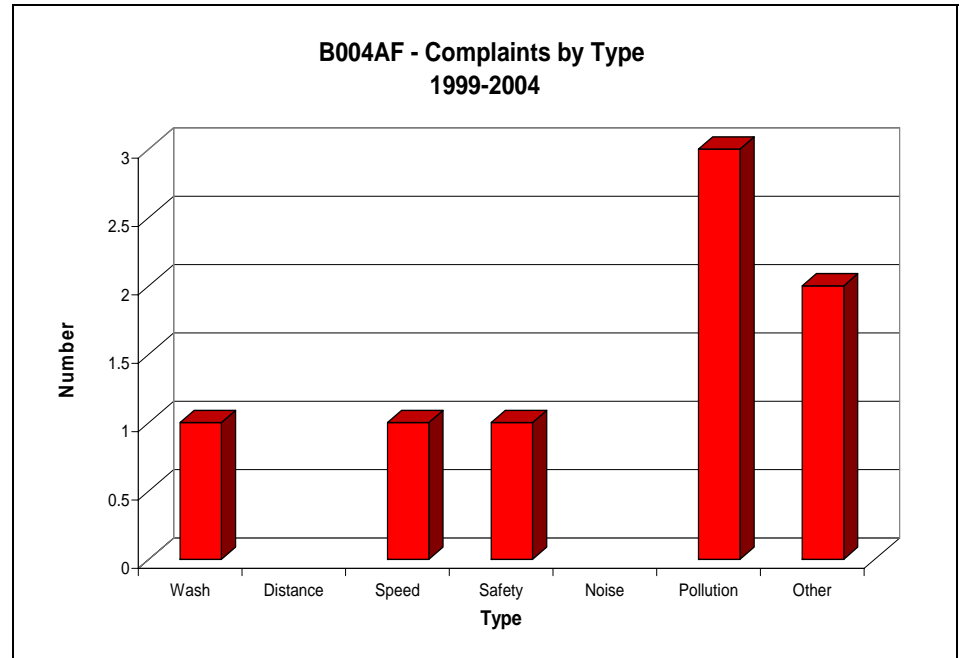
At the time of writing this plan, the existing nav aids consisted of:

Navaid Type	Location
 Starboard GRP Buoy	⇒ Channel marker immediately upstream of Rawson Island.
 Caution Shallow Water Signage	⇒ Immediately upstream of Rawson Island

## 12.4 Compliance History



**Figure 16**



**Figure 17**

It is considered that the small number of complaints (see Figure 17) over the period 1999 – 2004 is due mainly to the low level of residential development within this management section. Infringements and formal warnings were also low, and related to licensing and registration issues.

## 12.5 Values

- ◆ The section of river is valued as a safe and pleasant waterway for a variety of boating activities especially skiing, houseboating and fishing.

## 12.6 Issues

- ◆ This section of river is a quiet area away from urban precincts and is considered under-utilised in terms of boating activity.
- ◆ The southern bank has been identified in the Tweed Estuary Bank Management Plan as an area of medium to high erosion potential.

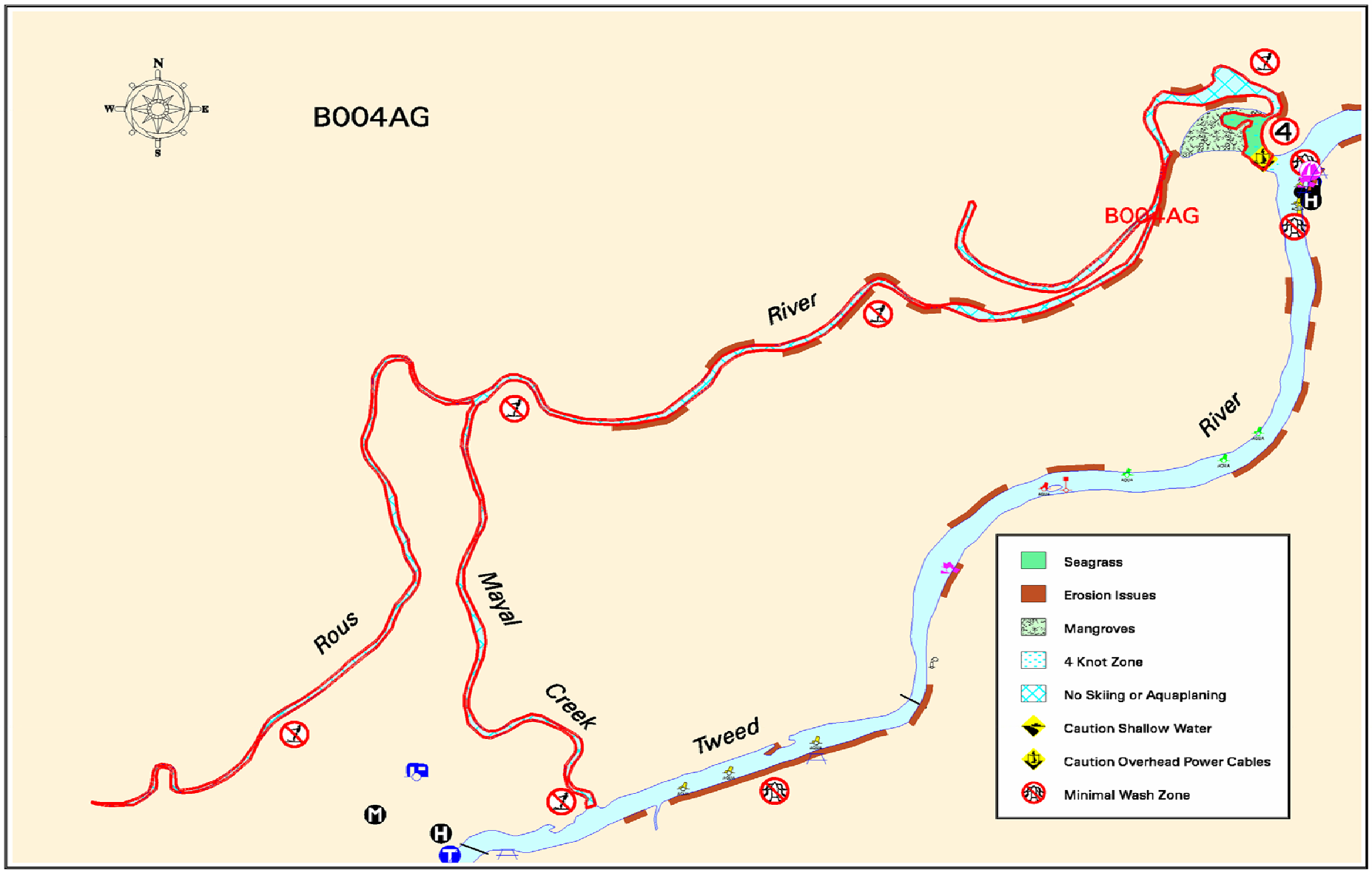
## 12.7 Management Strategies and Action Plan

Outcome	Strategies	Actions	Timeframe
More utilisation of this section of river thus relieving other more utilised sections such as Tumbulgum.	<ul style="list-style-type: none"> <li>▪ Liaison and education</li> </ul>	<ul style="list-style-type: none"> <li>▪ Promote the area between Tumbulgum Bridge and Rawson Island as a suitable location for learner skiers due to the low level of activity, thus removing learners from the higher use area adjacent to Tumbulgum village.</li> </ul>	Short term
Mitigate the impact of vessel activity on bank stability.	<ul style="list-style-type: none"> <li>▪ Education and review</li> </ul>	<ul style="list-style-type: none"> <li>▪ Monitor and review</li> </ul>	Ongoing



**B004AG**

ROUS RIVER



## 13 ROUS RIVER (B004AG)

### 13.1 Description:



The Rous River is a navigable waterway with its entrance at Tumbulgum and runs in a generally southwest direction roughly parallel to the main Tweed River. Narrow and bordered mostly on both sides by agricultural activity, the Rous River has significantly less boating traffic than the main Tweed arm.

### 13.2 Navigational Restrictions

- The entire river is to be gazetted a “no towing” zone.
- A four knot restriction from the Rous and Tweed Rivers confluence extending 800 metres upstream of the Rous.

### 13.3 Navigational Aids

At the time of writing this plan, the existing nav aids consisted of:

Navaid Type	Location
 Yellow Aqua Buoy	⇒ Located at the entrance to the Rous River and denoting no towing and four knot speed restriction.
 Four Knot Signage	⇒ Located at various points from the Rous and Tweed Rivers confluence extending 800 metres upstream of the Rous.

## 13.4 Infrastructure

- There are currently no established ramps or public wharves located on the Rous.

## 13.5 Compliance History

- ◆ Speed restrictions and low level boating activity has meant that compliance is a low priority in this section of the estuary. Only 6 complaints have been registered with Maritime over the period 1998-2003. These complaints were almost entirely speed related.

## 13.6 Values

- ◆ The Lower Rous (from the confluence with the Tweed River and extending 800 metres upstream) is valued as an area containing mangroves and other ecologically sensitive flora and fauna.
- ◆ The Rous is also valued as a safe and pleasant waterway for a variety of boating activities especially houseboating and fishing.

## 13.7 Issues

- ◆ The Tweed Estuary Bank Management Plan raised the issue of erosion at a number of areas along the Rous. Banks, especially on the outer bends, suffer erosion problems and are largely unprotected where the river adjoins a significant agricultural belt. Factors contributing to erosion include flooding, agricultural activities, wind and boat wave action and bank composition. The Rous has been a gazetted 8 knot zone since 1947 when a speed restriction was introduced over the entire estuary. These restrictions followed representations by the Tweed Heads Branch of the ALP who expressed concern regarding damage "*...to fishing boats moored in the river, erosion of banks (and damage caused to) other small rowing and motorboats...*" by large displacement vessels travelling at, or near, their maximum hull speed. The Rous is the only remaining section of this 1947 restriction. Subsequent vessel wake studies (See Section 5.4) have shown that the highest potential for erosion from vessels occurs when they are cruising "off the plane". While vessel size is also a factor, it is generally agreed that vessels



cruising at 8 knots are not planing and therefore produce wake waves that have a higher potential to erode unstable riverbanks than at higher or lower speeds.

- ◆ Concern has been expressed by stakeholders relating to the impact of boating, especially on sensitive mangroves, seagrass beds and other flora and fauna on the Lower Rous. In addition, this area has blind bends that are potentially hazardous for navigation.
- ◆ Stakeholders have expressed the need for recreational boating facilities to be installed on the Rous, for example at Pat Smith Park.

### 13.8 Management Strategies and Action Plan

Outcome	Strategies	Actions	Timeframe
Mitigate further potential for erosion from vessel wake waves.	<ul style="list-style-type: none"> <li>▪ Amend existing boating conditions and restrictions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Remove existing 8 knot restriction.</li> <li>▪ Maritime to encourage Council to identify potential erosion sites and put in place monitoring mechanisms such as aerial photo or survey points.</li> </ul>	Short term  Ongoing
Mitigate the impact of vessels in the ecologically sensitive Lower Rous area near the confluence with the Tweed.	<ul style="list-style-type: none"> <li>▪ Amend existing boating conditions and restrictions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Place a 4 knot speed limit on the area from the Tweed / Rous confluence and extending 800 metres upstream.</li> <li>▪ Erect appropriate signage and install 4 knot aqua markers at each end of the zone.</li> <li>▪ Remove existing 8 knot restriction.</li> </ul>	} } } Short term } }
Provide for the safe and environmentally responsible use of the Rous by the boating public.	<ul style="list-style-type: none"> <li>▪ Reconfigure existing management strategy.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Place "No Towing" and "No Freestyling" restrictions on the entire Rous River.</li> <li>▪ Educate boaters on safe speed</li> </ul>	} } Short term } }

## NSW Maritime

Outcome	Strategies	Actions	Timeframe
		<ul style="list-style-type: none"><li>▪ Install appropriate signage and aquamarks along the Rous.</li><li>▪ Liaise with Council on the need for new facilities and monitor river usage in light of the new strategies to enable an assessment of the possible need for additional facilities on the river.</li></ul>	Ongoing