

CORINDI RIVER BOATING PLAN OF MANAGEMENT

(NOVEMBER 2002)



Prepared by:

WATERWAYS AUTHORITY
34 Marina Drive
PO BOX J23
COFFS HARBOUR JETTY, 2450
02 6651 3400

CONTENTS

- 1.0 PREFACE
 - 2.0 OBJECTIVES
 - 3.0 GUIDING PRINCIPLES
 - 4.0 LEGAL BASIS
 - 4.1 Legislative Responsibilities of the Waterways Authority
 - 5.0 ROLE, POLICY AND PLANNING
 - 6.0 SITE DESCRIPTION
 - 6.1 Attractions
 - 6.2 Facilities
 - 7.0 NAVIGATIONAL RESTRICTIONS
 - 7.1 Naturally occurring limitations
 - 7.2 Legislated restrictions
 - 8.0 WATERWAY USAGE PATTERNS
 - 8.1 Common activities
 - 8.2 Complaints and Compliance
 - 9.0 VALUES AND ISSUES
 - 9.1 Values
 - 9.2 Issues
 - 10.0 MANAGEMENT FRAMEWORK
 - 10.1 Navigation
 - 10.2 Environment
 - 10.3 Aquatic Events
 - 10.4 Funding for Boating Infrastructure
 - 10.5 Research
 - 11.0 MANAGEMENT OPTIONS AND RECOMMENDATIONS
 - 12.0 SUMMARY OF OBJECTIVES, ISSUES AND STRATEGIES
 - 13.0 OUTLINE OF CONSULTATION PROCESS
 - 14.0 STRATEGIES AND ACTIONS TABLE
 - 15.0 REVIEW
 - 16.0 REFERENCES
- APPENDIX - SUMMARY OF SUBMISSIONS

1.0 PREFACE

The Waterways Authority is committed to the promotion of sustainable and equitable use of the State's waterways. The Authority places an emphasis on inter-agency co-operation, sharing responsibilities and developing a consultative approach in regard to the environmental management of vessels.

The primary tools used to control the impact of vessels include education, enforcement and the introduction of regulatory restrictions. It is imperative that in introducing any such regulatory measures, consideration be given to all relevant social, environmental, navigational and legislative implications.

The *Corindi River Boating Plan of Management* is the result of extensive consultation and review, and applies to all the waters of the Corindi estuarine system, including Mullet and Saltwater Creeks.

Boating plans of management are designed so as to identify and protect the recreational and environmental values of a waterway, ensure that boating practices maximise user safety and enjoyment, and provide a consistent approach to existing and anticipated future needs.

In preparing this document the Waterways Authority has identified and prioritised the environmental, navigational and safety issues for the described waterway, and all recommendations made on management strategies are proposed in the context of ongoing consultation.

The *Corindi River Boating Plan of Management* will be subject to periodic review.

2.0 OBJECTIVES

- The Boating Plan of Management (BPM) is designed to provide a framework with which to guide boating activities on a particular waterway.
- The Plan is to be responsive to changing priorities and conditions on the waterway and must acknowledge boating and community expectations.
- The Plan is to ensure boating management practices maximise user safety and enjoyment with minimal impact to the environment.
- The Plan is to promote the provision of appropriate infrastructure.
- Once developed, the Plan is to provide a comprehensive body of information regarding boating and related activities on the waterway, and the administrative structures within which these activities take place.

3.0 GUIDING PRINCIPALS

- Explore strategies to promote and ensure the safety of all waterway users.
- Promote sustainable and equitable use of the waterway without the imposition of overly strict regulatory regimes.
- Manage boating activities to minimise detrimental environmental impacts and protect aquatic flora and fauna.
- Ensure best use of Government and community investment.
- Contribute to sustainable resource management.
- Ensure adequate public consultation.
- *Strategies* and *Actions* identified in the Boating Plan of Management are to be consistent with those responsibilities for which the Authority has jurisdiction.

4.0 LEGAL BASIS

The Waterways Authority is not under any statutory obligation to prepare boating plans of management. Plans of management are prepared in the interest of good waterway management, and the boating plan is a document other agencies are able to link to when preparing their various plans.

Also, in the discharge of its functions the Authority seeks to recognise the legislative responsibilities of the various agencies tasked with managing activities on NSW waterways.

4.1 Legislative Responsibilities of the Waterways Authority

Ports Corporatisation and Waterways Management Act – 1995,
Navigation Act – 1901,
Maritime Services Act – 1935,
Commercial Vessels Act – 1976,
Protection of the Environment Operations Act – 1997,
Marine (Boating Safety - Alcohol and Drugs) Act – 1991,

and the Regulations made under those Acts.

5.0 ROLE, POLICY AND PLANNING

All boating and related activities impact to some extent on our waterways. This requires a holistic management approach which, through the planning process, the Waterways Authority attempts to foster with other relevant agencies.

Given the number of waterways involved, the Authority has established a set of criteria for prioritising the development of boating plans of management. This includes but is not limited to:

- i. Those with a high degree of traffic management and/or user conflict issues and/or environmental issues.
- ii. Those for which other agencies have formally advised the Authority that they are preparing plans, policies and similar documents which may impact on the Waterways Authority's operations.
- iii. Those for which funding is readily available for the preparation of boating plans of management.

The Corindi River and associated waterways are at present subject to two specific planning documents.

- (a) The 'Corindi River Estuary Management Plan' (August 1999) – Ulmarra Shire Council Estuary Management Committee.
- (b) The 'Solitary Islands Marine Park Zoning Plan' (April 2002) – Marine Parks Authority.

The 'Corindi River Estuary Management Plan' (CREMP) is due for review by the Pristine Waters Council Estuary Management Committee (EMC), and EMC member input was therefore sought as part of the consultation process in formulating this *Corindi River Boating Plan of Management*. The boating plan also adopts proposals made under the 'Solitary Islands Marine Park Zoning Plan', which took effect on the 1st August 2002.

Finally, consideration must be given to the nature of the waterway, usage patterns and general waterway activities, as low level use does not warrant an overly detailed plan or legislative regime. Those management strategies resulting from the planning process are subject to periodic review, so producing a living document adaptable to changing patterns of use over time.

6.0 SITE DESCRIPTION

The Corindi River catchment falls within the Pristine Waters Local Government area (previously the Ulmarra Shire Council).

The Corindi River is permanently open to the ocean, its mouth discharging to the sea some 200 meters east of the township of Red Rock. Approximately 240 residential properties form the township, with approximately 360 in nearby Corindi.

The estuarine portion of the river covers 0.6 km² and is adjoined by 2 km² of SEPP 14 Coastal Wetlands.

Other sensitivities around the estuarine system include the little tern nesting area located in the sand dunes on the northern bank of the river mouth, and the Corindi River and Saltwater Creek tributary bordered by Yuraygir National Park.

The system also falls within the jurisdiction of the Solitary Island Marine Park (SIMP) and contains areas of seagrass and mangrove vegetation considered very important as fish habitat.

Around 12 km of the waterway can be navigated in most tidal conditions, however, the river predominantly suites smaller craft over the majority of this length. Tidal influences further restrict navigation around the river entrance, where vast sandy shoals become exposed at low tide, and again upstream along the shallow, mangrove lined channels of Saltwater and Mullet Creeks.

Corindi River supports a deep channel for the most part, yet the upper extremities hold numerous unmarked hazards in the form of large snags and fallen trees. The river comes to a final narrow impasse due to these obstructions.

6.1 Attractions

The broad exposed shoals of the river mouth are directly accessible to the Red Rock township and attract both local residents and tourists alike as they provide an ideal location for children to wade, for swimmers, walkers, fishers and bait collectors.

Offshore reefs in the area are popular for fishers, and a few boaters familiar with the Corindi River entrance make their way across the river mouth to access these offshore waters. However, the majority of boaters tend to concentrate their activities on the river itself, mostly fishing, with some aquaplaning.

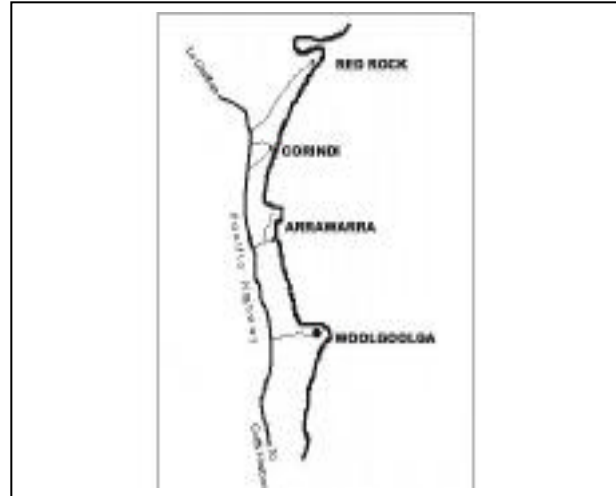
The estuary is largely banked by bushland, and the natural setting attracts those with canoes and kayaks who can negotiate the shallows, enjoying the scenery.

A board-walk extending from the boat ramp at Red Rock along the western shoreline was installed for access upstream, guided walks, and to protect the river bank vegetation and sites.

Occasionally small sail craft launch at the Red Rock ramp, yet the area is rarely utilised for this activity as the useable expanses of the entrance provide the only suitable waters for their operation, and the area becomes extremely reduced with the falling tide.

6.2 Facilities

Red Rock provides all the services of a general store, Bowling Club, holiday accommodation, a caravan park, public toilets and patrolled surf beaches. Corindi township, situated 6 km south of Red Rock, also offers a general store, club, caravan park and holiday accommodation, although the nearest major centre is Woolgoolga, located approximately 20 km south on the Pacific Highway



The Corindi River has a single boat launch facility at Red Rock. This ramp received an upgrade in year 2000, jointly funded through Local Council and the Waterways Authority. The facility consists of launching ramp only, with no additional lighting, fish cleaning tables, or allocated parking. During peak season up to 35 boat trailers have been observed parked at the ramp at any one time. The estuary can also be accessed along its tributaries upstream of Red Rock, from both freehold properties and Crown lands, by aid of 4WD.

A large Recreational Reserve near the entrance buffers the residential properties of Red Rock from 'on water' activities, and is heavily utilised as a picnic and meeting area throughout the year. This reserve is managed by the Red Rock Reserve Trust, who together with the Yarrowarra Aboriginal Corporation organised the extension and upgrade of the elevated board-walk.

7.0 NAVIGATIONAL RESTRICTIONS

The Corindi River system is a small estuary with naturally occurring restrictions arising from tidal state. Vessel activities are further contained on the estuary by a number of legislated restrictions.

7.1 Naturally occurring limitations

The natural characteristics limiting vessel activity include the shallow waters of its ever changing river mouth, the ocean entrance itself, the shallow waters of Saltwater Creek, and the numerous submerged hazards along the upper extremity of Corindi River.

In regard to the dynamic nature of siltation on the lower estuary, particularly in the vicinity of the boat ramp, dredging was last required in 1998, and undertaken by Ulmarra Shire Council in order to allow the continued use of these waters by vessels throughout the boating season.



It is important to note that the tidal flow through the narrow ocean entrance is extreme, and is considered by the Authority to be hazardous for swimmers and small craft alike. At present there is no signage to indicate this hazard on the estuary.

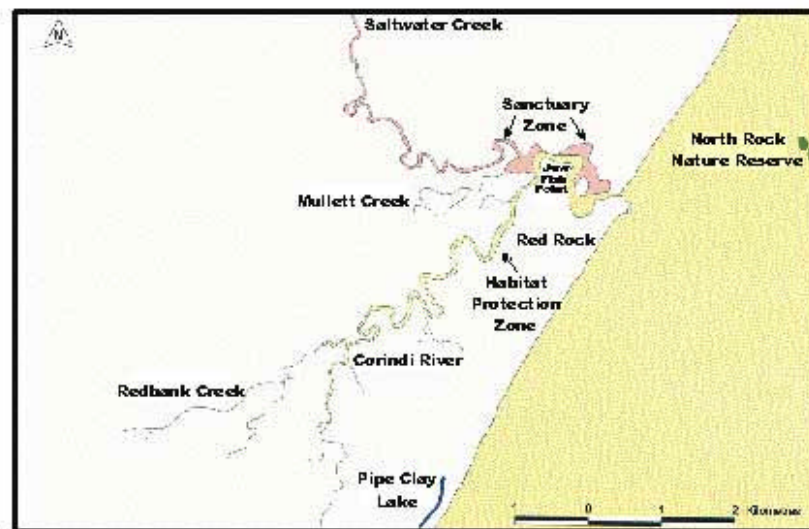
Similarly, no general warning of the likely existence of submerged hazards exists at the extremity of the upper estuary.

7.2 Legislated restrictions

The current legislative restrictions include an 8 knot speed limit, gazetted and sign posted on the Corindi River, starting at a point 1200 meters upstream of Jewfish Point and extending downstream to the river entrance. Most interaction between swimmers and power craft is concentrated in the waters near Red Rock and the purpose of restricting speed in this area is on the basis of safety. Reduced speed is also preferred for vessels navigating in the vicinity of the ever changing, shallow sand flats.

An operational limit for Hire Craft on the waterway was signposted at the eastern most extremity of the Recreational Reserve, although the existing hire craft facility discontinued after 1996 and the sign post itself has more recently corroded. This sign delineated the smooth water plying limits in order to keep commercial hire activities well clear of the ocean entrance where tidal flow can be dangerous, particularly for human powered craft.

Under the '*Solitary Islands Marine Park Zoning Plan*' a *sanctuary zone* is established along the northern shores of the estuary and onward upstream to include all waters of Saltwater Creek. In the interest of protecting sea grasses, vessels are not permitted to anchor in this zone other than in emergency situations, where preservation of life or property requires.



The '*Solitary Islands Marine Park Zoning Plan*' also prohibits the use of personal watercraft (PWC) on the estuary, upstream of the boat ramp. These craft are permitted to launch at the boat ramp and proceed slowly downstream in order to access offshore waters through the river entrance. The speed and activity of PWC while on this section of the river (approximately 500m) is in addition managed under maritime legislation by the gazetted speed limit, and the restrictions on 'irregular driving' of these craft whilst in the vicinity of residential areas. The marking of this prohibition on personal watercraft is yet to be determined.

8.0 WATERWAY USAGE PATTERNS

Patterns of use over the entire estuary are extremely seasonal in nature. While little formal data has been recorded to define and quantify this changing level of activity, some general conclusions can be drawn from observations and anecdotal evidence. Direct indicators are also available in the form of Boating Incident Reports, Complaint Reports, and enforcement actions recorded by the Authority.

8.1 Common activities

By far the majority of activity on the estuary does not involve the use of water craft and takes place around Red Rock, as people **wade, swim, snorkel** and **fish** the lower reaches. In the warmer months and during holiday periods the area can see up to 200 people in the water at any one time. This level of activity is however isolated to these few occasions, commencing December through to January and peaking again during Easter and school holidays. In contrast the river sees declining activity for the remainder of the year, culminating in very little to no visitation through the winter months. At these times it is mostly local residents utilising the waterway with a concentration of activity on weekends.

Vessel use tends to correlate with that of swimmers and holidaymakers, although their presence and activity is greatest around the high tide. A maximum of up to 40 vessels has been noted at any one time during the absolute height of the boating season. Again, this occurs during the main holiday period when conditions are ideal, and quickly declines for the remainder of the year. Primarily vessels are used for the purpose of fishing, and very occasionally family groups will tow aquaplaners upstream from Jew Fish point. The 8 knot speed restriction does allow for craft on the lower reaches to tow an aquaplane at low speeds, although this usually takes place on high tide.

During the holiday period a number of small craft are temporarily left **moored** along the riverbank near the caravan park and also near the boat ramp. No more than about 8 craft have been observed at any one time, and the community, Council, and Waterways, to date have tolerated the practice.

Passive craft (canoes, kayaks, sailing vessels) do frequent the estuary routinely, canoes and kayaks on the most part, with no specific peak of activity identified on the limited data available. It would appear that their presence is fairly consistent throughout the year with an average of around 5 craft at any one time.

The Red Rock / Corindi Surf Lifesaving Club stages events on the estuary when poor weather conditions prevent the use of offshore waters, particularly for the 'nippers'. Club rowers use the estuary for practice throughout the year and the club organises an annual quadrathlon in April and triathlon in October. If well attended the events can attract up to 200 participants. The paddle and swim legs of these events take place in the area from the river entrance to Jew Fish Point.

8.2 Complaints and Compliance

In comparison to other waterways the Authority receives very few complaints in relation to vessel activity on this estuary, particularly as a result of conflict between waterway users. A notable reduction in complaints was recorded over the 2001/2002 boating season (being October 2001 to Easter 2002).

Skiing and Aquaplaning

Some concern has been expressed by local residents on a few occasions in relation to ski activities on the estuary, in particular the lower estuary from Jew Fish Point to the entrance within sight of the township. In most cases these complaints are non-specific in terms of identifying craft and offender, limiting the Authority's capacity to respond on a case by case basis. These reports also tend to relate to speed rather than actual ski offences. Resident concerns appear to be in regard to possible environmental impacts, such as the Little Tern nesting area (October – February), the potential for wash to cause bank erosion, and on the issue of noise, rather than the issue of safety.

It is important to note that no serious complaints in relation to the interaction between fishing or paddle craft and the ski vessels on the upper reaches (being outside the 8 knot area) has been recorded to date. This may be due to the fact that in most cases on this particular estuary towing involves the use of an aquaplane at lower speeds, rather than a water ski at high speed.

Finally, there does not appear to be any general objection to the towing of small children behind tinnies at very low speeds, a common practice at the river entrance.

Speed

Speeding is the main compliance issue on the estuary and enforcement action has ensued where offences have been detected. There has also been some general concern expressed by swimmers with regard to vessel speed around the entrance.

The 8 knot speed limit is a legacy of the past, and for small craft, which frequent the area, it is the speed most likely to produce wash. This speed will tend to keep vessels from planing and so keep the bow high, creating a minor visual obstruction. Given that the Corindi River system is quite small, with narrow, shallow channels, this is not considered the ideal speed for craft operating in the vicinity of large and dispersed numbers of swimmers, such as is the case on the lower estuary (the entrance to Jew Fish Point).

Accidents and Incidents

Given the nature of the estuary and proximity of passive and active recreational pursuits, the Corindi River system has an impressively low record of reported incidents. The most serious accidents have involved the loss of swimmers caught in the strong run out tide at the river mouth, being dragged into the surf zone.

The upper estuary has short, narrow and winding sections with no specified speed restriction, however, it is important to note that there have been no collisions recorded. This may in some part be attributable to the overall usage levels being low, minimising the possibility of vessels coming into contact, and by the fact that most vessels navigate the river in good conditions of high visibility. The general rules of navigation in relation to *right of way*, *steering to starboard*, *proper lookout*, *safe speed*, and *distance off* are sufficient to manage these interactions where they do occur.

Other

Other safety related issues detected include an absence of life jackets, although overall compliance is high, and the more recently observed practice of bow riding. These matters are considered by the Authority to be of a serious nature and are managed on a case by case basis via routine patrol and inspection, and ongoing education campaigns.

9.0 VALUES AND ISSUES

9.1 Values

The Corindi River estuary provides an attractive natural setting for many recreational pursuits, and is afforded unique protection courtesy of its status as Marine Park, bordered in part by National Park.

Promotion of passive use of the waterway was identified as a valuable consideration in both the *Corindi River Estuary Management Plan* and *Zoning Plan, Solitary Islands Marine Park*. This value can be adopted in the process of determining management strategies for controlling activities on the waterway.

The *Corindi River Estuary Management Plan* also made reference to the existence of aboriginal sites on the river considered of significant importance. These sites may be afforded additional protection through strategies implemented under the Boating Plan of Management by way of wash protection.

Safety of navigation and equitable use of the waterway, together with minimal environmental impact are also values to be reflected in the development of management strategies.

9.2 Issues

- 1) Management of interaction between vessels and passive waterway users on the lower estuary, and control of vessel speed.
- 2) Management of personal watercraft use on the estuary as per Marine Parks Authority proposal.
- 3) Control of vessel wash and potential for bank erosion along the lower estuary where greatest activity occurs.
- 4) Protection of sensitive areas, eg. Little tern nesting area, aboriginal sites.
- 5) Waterskiing and aquaplaning on the lower estuary, and vessel noise.
- 6) Proliferation of signage at the boat ramp and general condition of advisory signs on the estuary.
- 7) Insufficient signage to indicate danger of navigation near the river entrance.
- 8) No signage to indicate submerged hazards at the upper extremity of Corindi River, which has the deeper navigable channel along its length. This is not considered to be an issue for the significantly shallower tributaries where fallen debris is quite visible.
- 9) Siltation restricting navigation in the vicinity of the Red Rock boat ramp.
- 10) Minimal boating facilities.

10.0 MANAGEMENT FRAMEWORK

10.1 Navigation

The interaction between powerboats, swimmers and other passive craft is managed by the Waterways Authority, and by the application of maritime legislation, through licensing, registration and the 'rules of the road'. Non compliance with legislation is monitored by conducting routine patrols of the estuary, and this function is conducted by Boating Service Officers based at the Coffs Harbour Regional Office. These officers currently operate north and south of the Coffs Harbour Service Centre, from Valla to Station Creek.

10.2 Environment

Environmental impact of activities on and around the estuary are the responsibility of several State and local government authorities, all of whom were consulted in the development of this Boating Plan of Management. The values, goals and objectives of these authorities were incorporated into the final plan.

Where dredging is proposed for the purpose of maintaining a navigable channel, this will be subject to approvals from the relevant authorities, being Department of Land and Water Conservation, Pristine Waters Council, Marine Parks Authority and NSW Fisheries.

In relation to the management of snags and fallen trees, it is important to note the recommendations made under the *Fisheries Management Act 1994*, through the *Fish Habitat Protection Plan 1*. Submerged vegetation is considered to be an important fish habitat and removal should be considered as a last resort only after all other options have been reviewed. It is within such parameters that the management strategies are drafted.

The Waterways Authority recognises that pollution from vessels is a relatively small contributor to water quality problems. However, in line with other State Government agencies, Waterways maintains a commitment to conserving and enhancing the environmental qualities of State waters. Under the Protection of the Environment Operations Act 1997, the discharge of raw sewage from vessels into the waters of NSW is prohibited. Waterways Authority officers can issue on-the-spot fines to an individual or corporation for polluting water.

10.3 Aquatic Events

Where an organisation wishes to make application to hold an aquatic event on a given waterway, the Waterways Authority may issue an aquatic licence with conditions. The approval process includes notification of the Marine Parks Authority, Pristine Waters Council and any associated landholder prior to such activities being promoted on the Corindi River. This notification allows for the interests of those bodies to be addressed.

10.4 Funding for Boating Infrastructure

As part of the integrated management of the State's waterways, the Waterways Asset Development and Management Program (WADAMP) enables the Authority, by funding waterway infrastructure, to greatly improve amenities for the boating public and marine sector on New South Wales waterways.

WADAMP is jointly funded and delivered by the Waterways Authority and proponents including boating and marine organisations and Local and State government. The Waterways Authority utilises revenue raised from vessel registration and property leases, in funding its contribution to WADAMP.

Boating and community organisations, industry, Local and State government authorities are invited to submit applications for projects that contribute to the objectives of the Waterways Asset Development and Management Program. Eligible projects funded could include: boat ramps; public wharves/jetties; installation of public moorings and pump out facilities.

In addition, funding for boating and waterway related infrastructure can also be sourced through Department of Land and Water and NSW Fisheries funding programs.

10.5 Research

The Waterways Authority records specific boating related information in the form of incident and complaint reports, records of compliance activity, data on registered vessels and licences issued, and limited recording of observations made during routine patrol duties. This information can be compiled and utilised for the purpose of monitoring estuary usage patterns into the future, and in the future review of boating management strategies.

11.0 MANAGEMENT OPTIONS AND RECOMMENDATIONS

The preparation of management strategies is to reflect the apparent low level usage of the river whilst also recognising that there is an absence of detailed data recorded to date. General conclusions will be drawn at this stage of the planning process and strategies developed which allow for incremental changes over time, in conjunction with periodic review.

- 1) **Management of interaction between vessels and passive waterway users on the lower estuary, and control of vessel speed.**

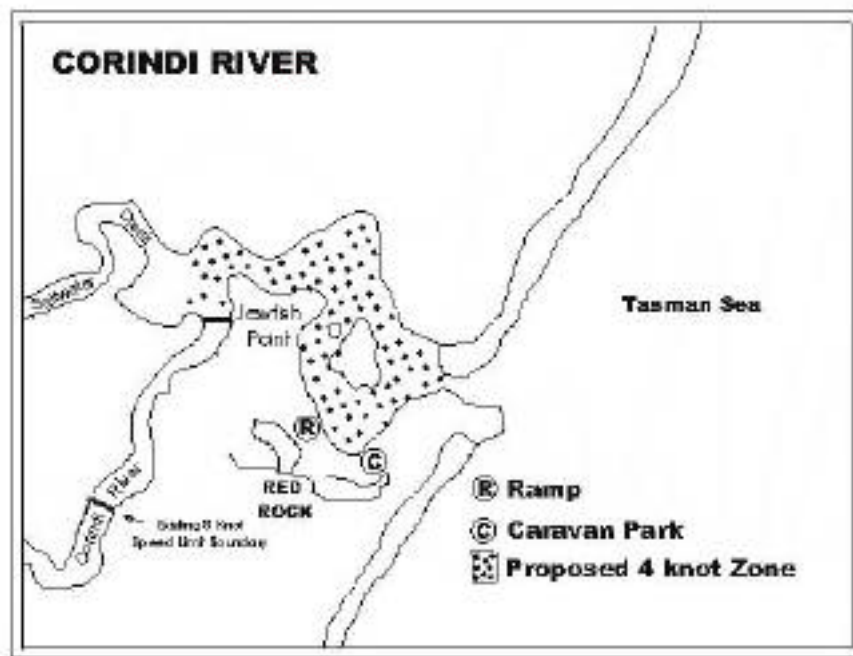
It is noted that the existing *Corindi River Estuary Management Plan* proposes the elimination of the existing 8 knot speed limit, and in its place, a reduced area from the entrance to 100 mtr upstream of the ramp be gazetted 4 knots. In addition, the plan suggests the prohibition of waterski and PWC activities upstream of Jew Fish Point. This would effectively allow unlimited skiing from

100 mtr upstream of the ramp all the way to Jew Fish Point, an unintentional oversight, which this plan seeks to redress.

Given that the current speed restriction of 8 knots may contribute to both safety and wash issues, the Authority could reduce the gazetted speed to 4 knots. This will effectively manage interaction between vessels and swimmers, improve visibility from vessels navigating in the vicinity of the majority of passive activities, and minimise the possibility of higher speed grounding of vessels on the sand banks. It will also afford greater protection to the sea grasses in what is predominantly zoned sanctuary under the SIMP Zoning Plan, without imposing the inconvenience of a speed restriction over the entire estuary.

The current upstream boundary of the speed restricted area (1200 meters upstream of Jew Fish Point) cannot be supported, given that this section of river is a lengthy deep water channel, which can be safely navigated at greater speed. Should this section remain 8 knots, vessels will be travelling at a wash producing speed, whilst a 4 knot limit over the whole length would impose an unnecessary regulatory control.

It is therefore recommended that the 8 knot speed restriction be reduced to 4 knots for that section of the Corindi River commencing at the river entrance and terminating near the upper most boundaries at which the Marine Park sanctuary zones terminate. That is, approximately 500 mtr upstream from Jew Fish Point so as to encompass the whole of the lower estuary.



2) Management of personal watercraft use on the estuary as per Marine Parks Authority proposal.

Given that Solitary Island Marine Park legislation prohibits the use of personal watercraft upstream of the Red Rock boat ramp, it is recommended that the MPA place appropriate signage to this effect at the ramp, and be consistent with similar signage used by the Waterways Authority throughout the State. This signage is to be considered in the context of all other signage proposed for display at the ramp, in order to minimise the visual impact at this site.

No additional restrictions for PWC use are recommended on the lower estuary other than any existing speed restrictions applying to all vessels, and 'distance off' and 'irregular riding' rules applicable to all personal watercraft.

It is also recommended that no further 'PWC Prohibited' signage be placed on the estuary until deemed necessary, subject to review at a later stage in the ongoing planning process.

3) Vessel wash and potential for bank erosion along the lower estuary where greatest activity occurs.

It is anticipated that a reduction in the speed limit to 4 knots on the lower estuary will minimise the wash associated with travelling at 8 knots, and so minimise the potential for wash impact along the reserve area retaining wall.

4) Protection of sensitive areas, eg. Little Tern nesting area, aboriginal sites.

Again, the reduction in speed on the lower estuary will create a more passive environment in the sanctuary zone and little tern nesting area.

In relation to aboriginal sites along the foreshores of the estuary, should it be identified that protection of these sites would be assisted by public awareness or reduced vessel wash, it may be appropriate to place advisory signs to this effect at those locations. This option would be considered on the advice of the Yarrawarra Aboriginal Corporation.

5) Waterskiing and aquaplaning on the lower estuary, and associated vessel noise.

Given that an 8 knot speed currently applies, and a 4 knot reduced speed is being proposed, either measure in conjunction with ongoing patrols should be adequate to contain offending activities without the introduction of a specific 'ski restricted' area. By introducing a 'ski restricted' area on the lower estuary it would by default create an offence for the towing of children at low speed behind small craft. At this stage it has been determined that such activity is not an identified issue of concern, and the offending high speed skiing can be better managed by a gazetted speed restriction as proposed above.

The option of creating a 'ski restricted' zone upstream, outside the speed-restricted area, may be considered at a later date. This will be determined in a future review should it be identified as a cause of conflict or an inappropriate activity on the estuary. It would appear premature to impose this restriction until it is clearly identified as a problem on the upper estuary, as currently it does not present on complaints recorded.

Finally, the shallower tributaries of Saltwater Creek and Mullet Creek, by their very nature require no specific regulatory measures to contain skiing activity.

6) Proliferation of signage at the boat ramp and general condition of advisory signs on the estuary.

It is recommended that consultation between the various authorities be promoted to assist in keeping the visual impact of signs on the estuary to a minimum.

As described, a 'PWC restricted' sign is recommended for placement at the boat ramp.

All speed restriction signs to be replaced with new '4 knot' signs and the speed limit area be reduced in size to correspond with the limit of the sanctuary zones.

Removal of 'Hire Craft Limit' sign near the entrance and replacement considered if and when any new boat hire operation commences.

7) Insufficient signage to indicate danger of navigation near the river entrance.

It is recommended that a medium size 'Bar Warning' sign be placed at the location of the corroded 'Hire Craft Limit' sign (located on the shoreline on the downstream end of the reserve).

8) No signage to indicate submerged hazards at the upper extremity of Corindi River.

It is recommended that an 'aquamark' indicating unmarked hazards ahead, be placed in the river where the proliferation of hazardous snags commences. This moored marker may then be adjusted as new obstructions are identified, without the environmental impact of removing important fish habitat.

Unmarked hazards are not considered to be an issue for the significantly shallower tributaries of Saltwater and Mullet Creek where fallen debris is quite visible, as the marking of hazards does not eliminate the vessel master's responsibility to maintain a proper lookout.



Where any large hazard is identified for removal this will be done in accordance with recommendations made under the NSW Fisheries Habitat Protection Plan.

9) Siltation restricting navigation in the vicinity of the Red Rock boat ramp.

The Waterways Authority will support application made by Pristine Waters Council for maintenance dredging to remove unconsolidated marine sediment in the vicinity of the boat ramp as required. This issue is considered particularly significant where build up of sediment is likely to impact on recreational boating activities approaching peak season. It is recommended that Council budget for this contingency to maintain a navigable channel from the entrance, upstream.

10) Minimal boating facilities.

Boating and recreational facility demands are few in this estuary. Future projects may include an upgrade to boat ramp parking, a small landing wharf at the ramp, a wharf at Jew Fish Point, and possibly further upstream at some strategic point to access flora/fauna or other points of interest. No recommendation is made for these facilities at this time, as all such upgrades have the potential to increase access and user activity to a level that may conflict with the current values and objectives.

12.0 SUMMARY OF OBJECTIVES, ISSUES AND STRATEGIES

OBJECTIVE	ISSUE	STRATEGY
<p>Provide a framework to guide boating activity and a comprehensive body of information on boating activity</p> <p>Respond to changing priorities and conditions on the river, acknowledging boating and community expectations</p> <p>Maximise user safety, enjoyment and equitable use, with minimal impact to the environment</p>	<p>No specific boating management plan in place for Corindi River</p> <p>Community and user consultation</p> <p>Interaction between active and passive use on lower estuary – and vessel speed Promote passive use</p> <p>Protect sensitive areas</p> <p>Vessel wash on lower estuary</p> <p>Personal watercraft access and restrictions</p> <p>Waterskiing and aquaplaning on lower estuary</p> <p>Marking of hazardous river bar entrance</p> <p>Marking of submerged snags on upper extremity of main tributary</p> <p>Siltation build up around boat ramp</p>	<p>Waterways Authority to produce a Corindi River Boating Plan of Management</p> <p>Draft Boating Plan of Management to be publicised for two months to allow written submissions</p> <p>Reduce length of speed limited area on lower estuary to correspond more closely with SIMP sanctuary areas and reduce speed from 8 knots to 4 knots.</p> <p>Make 'No Wash' signs available for identified sites</p> <p>4 knot speed limit</p> <p>Signpost upstream PWC prohibition at the boat ramp</p> <p>Contain by reduction of speed limit to 4 knots</p> <p>Warning sign to be placed downstream from reserve</p> <p>Aquamark to be placed at commencement of snags</p> <p>WA to advise Council and support dredging application when required</p>
<p>Promote provision of appropriate infrastructure</p>	<p>No demand for additional infrastructure, and potential for additional facilities to conflict with passive use objectives</p>	<p>Flag additional facility options in final management plan for consideration in future reviews.</p>

13.0 OUTLINE OF CONSULTATION PROCESS

1. Pristine Waters Estuary Management Committee (PWEMC) was consulted at the initial stages of the proposal in order to gain endorsement for the process to be undertaken to produce a Corindi River Boating Plan of Management.

The PWEMC consists of representatives from the primary Government agencies and community groups likely to hold the greatest interest in such a plan. By consulting with this group from the outset the Waterways Authority was able to gain details of the broader sections of the community that would have an interest in the formulation of a Boating Plan of Management.

2. The *Corindi River Boating Plan of Management – Discussion Paper (July 2002)* was subsequently drafted and presented to members of the PWEMC for additional input, and comment on the objectives, values and strategies.

The document was also submitted for internal review within the Waterways Authority.

3. All submissions were then considered in the drafting of the *Corindi River Boating Plan of Management* prior to its public release, with the document again being resubmitted for internal review.

4. The *Draft Corindi River Boating Plan of Management (August 2002)* was made available for public comment for a period of two months. The document was advertised locally in both the ADVERTISER and the ADVOCATE during this period, and accompanied by a media release.

The Draft Plan was distributed directly to individuals on request, and sent to the identified stakeholders listed below:

Red Rock Recreational Reserve Trust
Red Rock Preservation Society
Red Rock Resident and Ratepayers Association Inc.
Yarrawarra Aboriginal Corporation
Red Rock and Corindi Surf Life Saving Club
Red Rock Caravan Park
Red Rock Fishing Club
Pristine Waters Council
Marine Parks Authority
NSW Fisheries
National Parks and Wildlife Service
Department of Land and Water Conservation

The Plan was also made available at Waterways Authority Coffs Harbour Service Centre, The Amble Inn at Corindi, Red Rock Bowling Club, Woolgoolga Tourist Information Centre, Coffs Harbour Tourist Information Centre, the local general stores of Corindi and Red Rock, and via a link from the Waterways Authority web site.

5. On close of the consultation period all submissions were analysed and applied in finalising the *Corindi River Boating Plan of Management (November 2002)*.

14.0 STRATEGIES AND ACTIONS TABLE

(Numbers refer to 11.0 Management Options and Recommendations)

STRATEGIES	ACTIONS
<p>1. Reduce speed limit from existing 8 knots to 4 knots.</p> <p>Reduce length of current speed limited area on lower estuary to correspond more closely with Marine Park sanctuary zoning.</p>	<ul style="list-style-type: none"> • Remove 8 knot speed gazettal on Corindi River. • Install gazettal and signage for 4 knot speed restricted area upstream from river entrance, to within 500m upstream of its confluence with Mullet Creek. • Monitor activity through review period and immediately extend 4 knot speed restriction into the sanctuary zones of Mullet and Saltwater Creek should it become evident that a serious speed issue exists.
<p>2. Personal Watercraft to be permitted to launch at ramp and travel at 4 knots via channel out to sea. PWC's prohibited upstream.</p>	<ul style="list-style-type: none"> • Waterways to adopt Marine Park Authority management option for restriction of PWC activity. • Waterways to install 'PWC prohibited' sign at boat ramp to indicate restriction. • Waterways to conduct regulatory patrols.
<p>3. Waterways to provide appropriate signs to mark any sites identified as being effected by vessel activity.</p>	<ul style="list-style-type: none"> • No sites identified at present.
<p>4. Waterways to provide appropriate signs to mark any sensitive areas identified as being effected by vessel activity.</p>	<ul style="list-style-type: none"> • No sites identified at present.
<p>5. Contain and monitor vessel towing activities (waterskiing and aquaplaning).</p>	<ul style="list-style-type: none"> • Waterways to continue compliance patrols and monitoring of towing activities. • Waterways to record complaints in relation to towing on the estuary and identify specific areas of concern, eg, wakeboarding, noise, speed, area of activity etc. • Towing activity to be addressed as a priority issue at the time of review of the Boating Plan.

STRATEGIES	ACTIONS
6. Consult and co-ordinate placement of advisory signs with other agencies where possible.	<ul style="list-style-type: none"> Utilise Pristine Waters Estuary Management Committee for consultation.
7. Mark the hazardous bar entrance for both vessels and swimmers. Place warning sign downstream end of reserve.	<ul style="list-style-type: none"> Waterways remove 'hire craft limit' sign and replace with bar warning sign. Sign to also indicate presence of shallow rock.
8. Single small aquamark to be placed at the uppermost extremity of the navigable section of Corindi River, to indicate the commencement of the densely snagged section.	<ul style="list-style-type: none"> One lightweight 850mm high yellow aquamark with 'hazard' markings to be placed at extremity of river and removed when no longer required.
9. Waterways Authority to support applications by Council to conduct small scale dredging in order to maintain boat ramp.	<ul style="list-style-type: none"> Waterways to support the inclusion of a dredging plan into the Corindi River Estuary Management Plan as it undergoes imminent review.
10. Waterways Asset Development and Management Program funding is available for the development of boating related amenity. Options for consideration to be included in the Boating Plan of Management.	<ul style="list-style-type: none"> Waterways recognises that there is no support for additional facilities on the estuary at this time. All future proposals to be included in documentation at time of review of Boating Plan and presented for public consultation.

15.0 REVIEW

The Corindi River Boating Plan of Management will be subject to review on a three yearly basis, both internally and with reference to the Pristine Waters Council Estuary Management Committee. Where significant redrafting of the Plan and waterway restrictions occurs, public comment may be sought at this time.

16.0 REFERENCES

1. Marine Parks Authority, 2002
Overview of the Zoning Plan, Solitary Islands Marine Park, April 2002
Marine Parks Authority, Coffs Harbour
2. Ulmarra Shire Council and Coffs Harbour Catchment Management Committee *Corindi River Estuary Management Plan*, August 1999
3. NSW Fisheries, 1999

Policy and Guidelines Aquatic Habitat Management and Fish Conservation
(eds AK Smith and DA Pollard)
NSW Fisheries, Port Stephens Research Centre
4. NSW Department of Land and Water Conservation, 2000
www.dlwc.nsw.gov.au/care/water/estuaries/Inventory/corindi.html