

March 2005



# DRAFT PLAN OF MANAGEMENT

# WHARF RESERVE CLARENCETOWN



HunterDevelopmentBrokerage

**PLAN OF MANAGEMENT**  
**FOR**  
**WHARF RESERVE**  
**CLARENCE TOWN**

**March, 2005**

**PREPARED BY**

**HUNTER DEVELOPMENT BROKERAGE PTY LTD**  
P.O Box 40 MAITLAND NSW 2320  
PHONE: (02) 49336682  
FAX: (02) 49336683  
MOBILE: 0418490188  
Email: [hbd@hunterdevelopmentbrokerage.com](mailto:hbd@hunterdevelopmentbrokerage.com)

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## **PART 1      CONTEXT OF THE PLAN OF MANAGEMENT**

### **1.1      Introduction**

Hunter Development Brokerage Pty Ltd, on behalf of Dungog Shire Council, has prepared this Plan of Management for Wharf Reserve Clarence Town. The Waterways Authority, in addition to funding contributions by the Department of Lands, provides the funding for the plan.

The Plan has been prepared in accordance with Sections 112 to 114 of the Crown Lands Act 1989 and the Draft Guidelines For The Preparation of Plans and Management for Crown Reserves, issued by the NSW Department of Land & Water Conservation.

The principle purpose of the Plan is to determine the focus and direction of the river front reserve, known as Wharf Reserve and provide a management framework. Items of heritage significance, open space, recreational activities and protection from flooding are all important values to be examined in this Plan of Management. It provides the “Why, How and Whom” an area should be managed.

In addition to the establishment of the direction for the reserve, the Plan will outline the requirements for funding, maintenance, rehabilitation and protection of Wharf Reserve.

The following documents have been used to provide background information for the preparation of the draft Plan of Management.

- Dungog Shire Council Local Environmental Plan 1990.
  
- Williams River Catchment Regional Environmental Study, prepared by Department of Urban Affairs & Planning 1996.
  
- Dungog Shire Council Management Plan 1998 – 2001.
  
- Williams River Regional Environmental Plan and Regional Planning Strategy, prepared by Department of Urban Affairs and Planning 1997.
  
- New Project Application 1997/1998 Community Groups for National Heritage Trust (NHT) funding prepared by Clarence Town Landcare Inc.

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- Hunter Water Corporation 1999-2000 Environmental Annual Report.
- Outcomes of Workshop – Plan of Management for Bridge Reserve and Wharf Reserve Clarence Town, prepared by Hunter Development Brokerage Pty Ltd 2000.
- Succeeding with Plans of Management (A guide to the local Government Act and Crown Lands Act) prepared by Department of Land & Water Conservation and Mandis Roberts Consultants 1996.
- River Murray Landscape Guidelines, prepared by Department of Conservation and Natural Resources.
- Development Control Plan No. 24 – Shire of Dungog – Acid Sulphate Soils

No document can make allowances for all events over a long period of time, therefore, it is important that the Plan's performance is constantly monitored. A review is essential for its continued success and for relating achievements to overall management goals. The initial conditions under which this Plan is prepared, such as funding, staffing and demand may change. Monitoring and review will ensure that the Plan remains responsive over time.

A community consultation workshop was undertaken prior to the commencement of the preparation of this draft and forms part of this study. The outcomes of the workshop are attached as **Appendix A**.

The objectives of the workshop were to:

- Identify any issues of concern that interested parties may have regarding the site and to ensure that they were addressed in this Plan of Management;
- Identify the existing patterns of usage of the site;
- Gain an understanding of the community attitudes towards the site;
- To provide an avenue for members of the community to offer suggestions as to how the site could be improved.

Involving the community in the preparation of the Draft Plan of Management ensures that the Draft Plan reflects the needs of those people who have an interest in the site. By making them feel part of the Plan, they have some ownership of this plan and a sense of involvement in relation to the outcomes.

A Plan of Management is prepared by:

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- Identifying the values of the site
- Determining the roles of those involved
- Formulating desired outcomes of the Plan
- Determining the issues to be addressed
- Formulating strategies to manage the Plan

### **Objective of the Plan of Management**

**The main objective of this Plan of Management for Wharf Reserve is to enhance and re-develop the existing Wharf Reserve Area, with an emphasis on vegetation conservation, water quality and historical significance.**

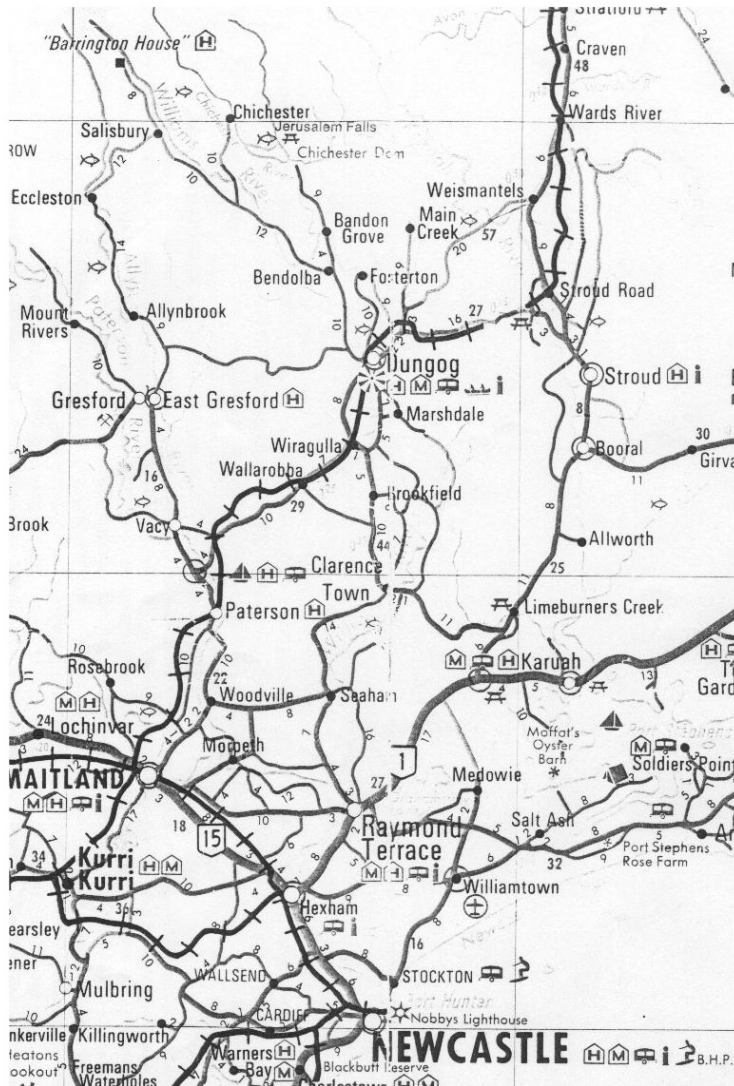
## 1.2 Location and Extent of the Site

### 1.2.1 Site Description

Wharf Reserve comprises approximately 2.6 hectares of land adjacent to the Williams River. The Williams River bounds the reserve to the south, Marshall Street to the West and King Street to the north.

For the purpose of the preparation of the draft Plan of Management, the King Street road reserve area has been included as part of the reserve, even though it is not designated as part of the reserve. The amenities block is situated with this King Street area.

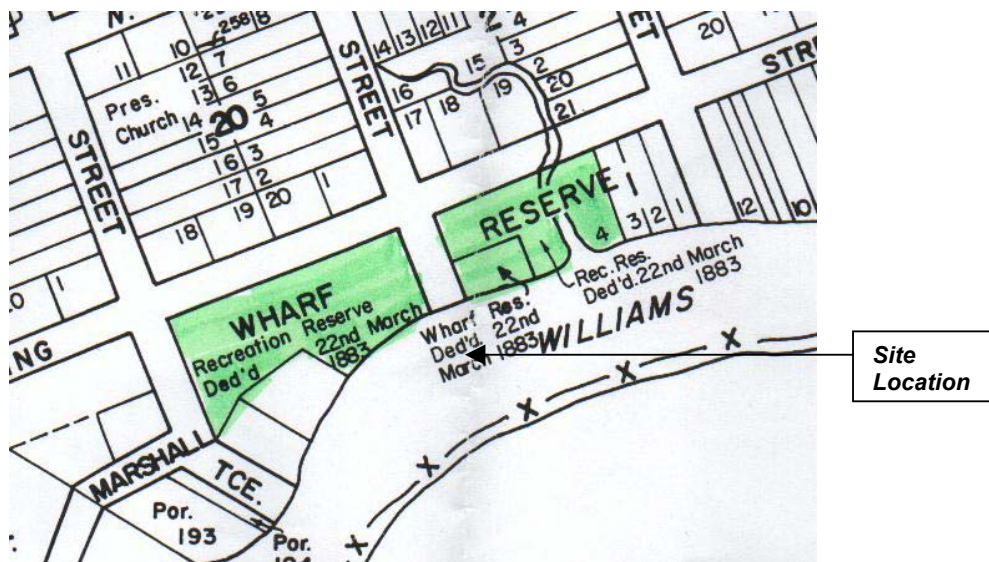
**Figure 1 – Location Plan**





**Figure 1 Location Plan and Figure 1.1 Wharf Reserve Location Plan**, details the location of the reserve in the Clarence Town locality. The reserve is located wholly within the Dungog Local Government Area.

**Figure 1.1 – Wharf Reserve Location Plan**



The details of the existing Wharf Reserve are included in **Figure 2 Land Titles Plan**.

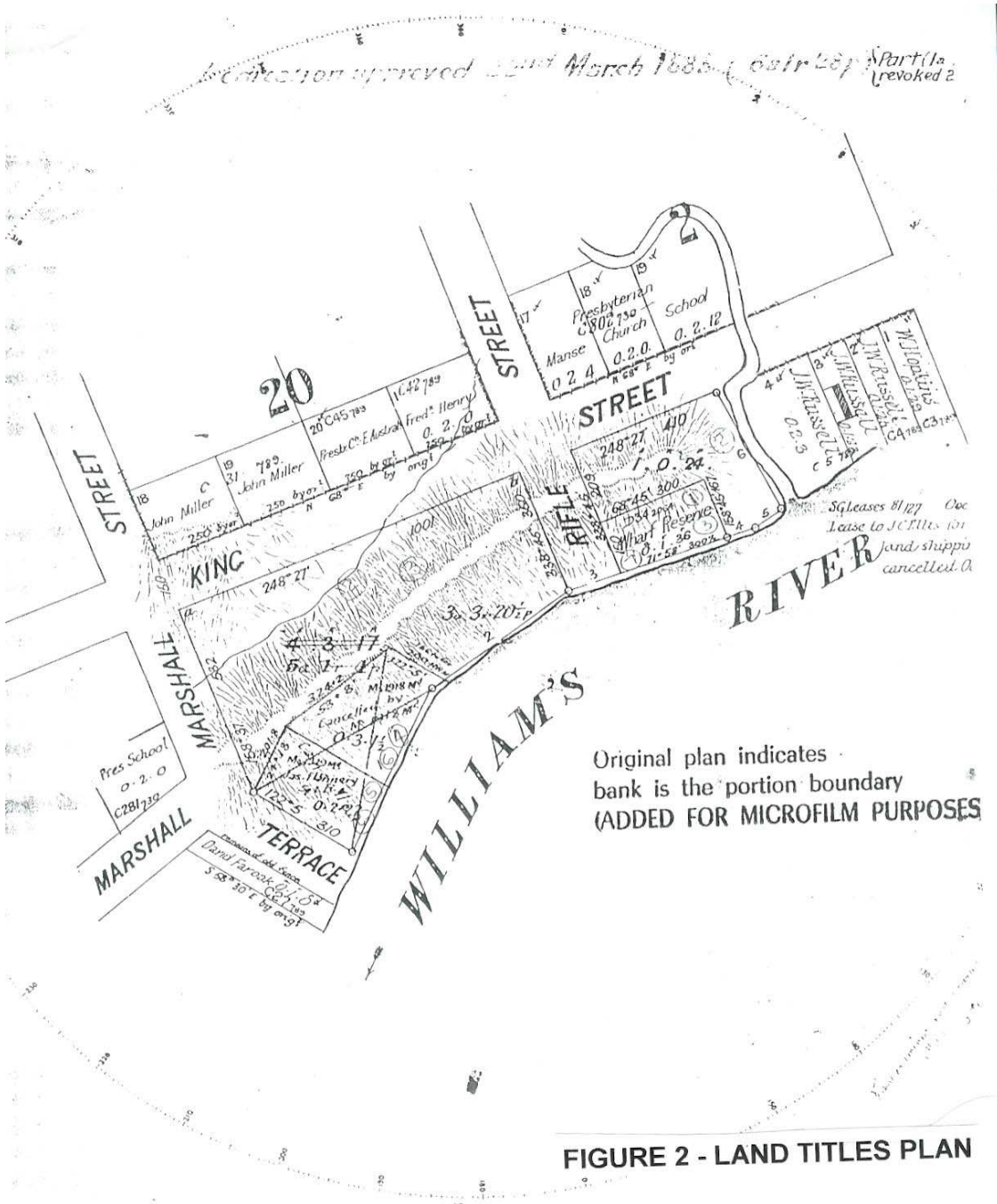


FIGURE 2 - LAND TITLES PLAN

Reference to Corners

Ordering	From	Links	N <sup>o</sup> on Plan
at all	Corners	numbered	↑

Reference to Traverse

Line	Bearing	Distance
1	26° 30'	493 1/2
2	55° 40'	461 1/2
3	71° 58'	150 1/2
4	71° 58'	81
5	55° 37'	87
6	330° 13'	368

I hereby certify that I in person made and on the 8<sup>th</sup> June 1836, completed the survey represented on this plan, on which are shown the bearings and the lengths of the lines measured, and that I used a theodolite in accurate adjustment, and a chain adapted to the standard of the Sydney Observatory to which I commenced the survey at the point a on this plan and as the basis of bearings the lines a to b thereon and the whole of the survey has been executed in accordance

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The current Wharf Reserve was gazetted on 22<sup>nd</sup> March, 1883 for use as a recreational reserve

### **1.3 Regional and Statutory Context**

#### *1.3.1 Regional Context*

Wharf Reserve is a regionally significant area of open space and passive operation, including an informal camping ground.

The background of this Reserve dates back to 1801, when William Paterson explored the navigable extent of the Williams River, discovering an abundance of timber suitable for boat building, as well as plentiful cedar wood stands. It was an ideal stepping off place for exploration and settlement with visitors to the area traveling from as far as the Darling Downs, Gloucester and Taree. Queens Wharf was constructed subsequent to timber getting activities and to facilitate the loading of timber and also the offloading of passengers and supplies.

There were many pioneering families who settled in Clarence Town. The best known was William Lowe, who after being apprenticed to the ship building trade at the Royal Dockyard at Deptford on the Thames, headed for Sydney in 1828, where he met another shipbuilder by the name of James Marshall. In 1830, Lowe took up about ten acres of land on the northern bank of the Williams River at Clarence Town and named it the Deptford Shipyards.

After building several small craft, the partners built the “William the Fourth”, the first oceangoing steamship to be built in Australia and was launched as a paddle wheeler fully rigged with sail on 14<sup>th</sup> November, 1831.

The partnership of Marshall and Lowe was dissolved in 1836 and each went his separate way, but left lasting links in Clarence Town and were later honoured by having streets named after them. The graves of William Lowe, his wife May and several members of his family are in the Clarence Town Cemetery.

This local history is marked in Wharf Reserve with the William The Fourth Monument Stone. During the community workshop, participants were asked to identify the main values of Wharf Reserve. Values are what is important about the place and include the natural, social, recreational, and heritage values.

The following values were identified:

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- Camping
- Fishing
- Main boat ramp
- Large public space
- Accessibility to the water system
- Historical aspect
- Economy
- Quality of fishing in the river
- Recreational asset

### 1.3.2 *Planning Instruments*

Wharf Reserve is covered by the following Planning Instruments:

- **Dungog Local Environmental Plan 1990**

The principal local environmental planning instrument governing land use in the Dungog local government area (LGA) is the Dungog Local Environmental Plan 1990. Council has prepared a draft Dungog Local Environmental Plan 2004, however, this is yet to be gazetted. This LEP zones the Wharf Reserve land as 6(a) (Open Space (Existing Recreation) Zone). The objectives of this zone, as set out in the LEP 1990, are as follows:

- (a) to recognise existing land that is used or capable of being used for active or passive recreation purposes (the traditional concept of a public reserve);*
- (b) to encourage the development of public open spaces in a manner which maximizes the satisfaction of the community's diverse recreation needs;*
- (c) to enable development associated with, ancillary to or supportive of public recreation use; and*
- (d) to encourage the development of open space as major urban landscape elements.*

The reserve is consistent with the objectives of the 6(a) zone and is permissible with development consent.

The draft Plan of Management for Wharf Reserve has been prepared to provide Management Strategies and actions to ensure that Wharf Reserve continues to satisfy the community's diverse recreation needs and to develop the open space as a major urban landscape element.

- **Hunter Regional Environmental Plan 1989 (Heritage)**

This is a Plan that has been made by the Minister for Planning and prepared by the Department of Planning to conserve the heritage of the Hunter Region.

The Plan identifies some 800 specific items that have heritage value worthy of conservation. These include urban and rural dwellings, public and commercial buildings, archaeological remains, bridges, collieries and cemeteries that are classified as being of State, or regional or local significance.

The general aims and objectives of this plan are:

- (a) to conserve the environmental heritage (including the historic, scientific, cultural, social, archaeological, architectural, natural and aesthetic heritage) of the Hunter Region;*
- (b) to promote the appreciation and understanding of the Hunter Region's distinctive variety of cultural heritage items and areas including significant buildings, structures, works, relics, towns, precincts and landscapes; and*
- (c) to encourage the conservation of the Region's historic townscapes which contain one or more buildings or places of heritage significance or which have a character and appearance that is desirable to conserve.*

In 1830 the settlement of Clarence Town was situated along the Williams River at the southern end of the present township where the wharf was once located. The Marshall and Lowe Deptford Shipyard were established by William Lowe and James Marshall within this area at this time and is listed in this Plan under Schedule 3 – Items of Local Significance.

These heritage items are numerically well represented in the region but have a special quality and interest to the local area. They contribute to the individuality and character of an area and are irreplaceable parts of its environmental heritage.

Councils have full responsibility for consenting to proposed changes to items in this group without referral to the department.

The draft Plan of Management for Wharf Reserve has been prepared to ensure that this important historical asset is preserved and its value as a tourist attraction is promoted.

- **Williams River Catchment Regional Environmental Plan and Regional Planning Strategy 1997**

This Regional Environmental Plan (REP) is an outcome of the Healthy Rivers Commission Report on the Williams River and is prepared under the Environmental Planning and Assessment Act 1979 and can influence decisions on land use and environmental management.

The plan applies to the local government areas of Dungog and Port Stephens. The Williams River drainage catchment is an elongated area stretching from the Barrington Tops, to Raymond Terrace and includes the towns of Dungog, Clarence Town and Seaham.

The plan amends the planning controls of the Dungog Local Environmental Plan 1990, for land within the Williams River catchment.

The REP focuses on that part of the riverine corridor which is within 30m either side of the river or streams (both permanent and intermittent flows), shown as blue lines on the 1:25,000 topographic map sheets, published by the Department of Land & Water Conservation. This is because this land acts as a 'buffer' between activities on the land and the water. If riverside vegetation is disturbed, it can accelerate the transfer of sediment and pollutants to the streams. Sustaining water quality depends highly on managing this riparian land.

Consent from Council will be required for any development within 30 metres of the river, including clearing of trees or water-engineering works.

The following are the aims and objectives of the Williams River Catchment Regional Environmental Plan 1997:

(1) *The aims of this plan are to protect and improve the environmental quality of the Williams River catchment through the management and use of the catchment's resources in an ecologically sustainable manner.*

(2) The objectives of this plan are:

- (a) to promote sustainable use of land, water, vegetation and other natural resources within the Williams River catchment, and*
- (b) to promote the protection and improvement of the environmental quality of the catchment, and*
- (c) to establish a co-ordinated and consistent approach to the planning and management of the natural and built environment on a catchment-wide basis by linking the environmental planning system and total catchment management policies, programs and activities within the Williams River catchment, through an endorsed catchment-wide regional planning strategy, and*
- (d) to provide for changes to occur in the use of land in a manner which protects the quality of the catchment's water resources.*

This Plan of Management is consistent with the aims and objectives of the REP as it aims to protect and improve the environmental quality of the catchment by promoting sustainable uses of the land, water and vegetation within the Wharf Reserve.

- **Rivers and Foreshores Improvement Act 1948 No. 20**

This Act provides for the carrying out of works for the removal of obstructions from the improvement of rivers and foreshores and the prevention of erosion of lands by tidal and non-tidal waters.

Wharf Reserve is located along a river (as defined in the Act).

**River includes:** *Any stream of water, whether perennial or intermittent, flowing in a natural channel, or in a natural channel artificially improved, or in an artificial channel which has changed the course of the stream of water and any affluent, confluent, branch, or other stream into or from which the river flows and, in the case of a river running to the sea or into any coastal bay or inlet or into a coastal lake, includes the estuary of such river and any arm or branch of same and any part of the river influenced by tidal waters.*

Therefore any works that are identified to be carried out, as a result of this Plan of Management, will be required to be consistent with this Act.

- **Crown Lands Act 1989**

Wharf Reserve is located on Crown Land, therefore the management of the site must be consistent with the principles of Crown Land Management, as identified in the Crown Lands Act 1989.

These are:

- *that environmental protection be observed*
- *that natural resources be conserved where possible*
- *that public use and enjoyment be encouraged*
- *that multiple use be encouraged*
- *that both the land and its resources be sustained in perpetuity where appropriate; and*
- *that Crown land be dealt with in the best interests of the State in accordance with the above principles*

The Crown Lands Act 1989 outlines the requirements of the Act in relation to how a Plan of Management is adopted. The following table details these requirements

**Table 1      REQUIREMENTS FOR PLANS OF MANAGEMENT UNDER THE CROWN LANDS ACT 1989**

<b>SECTION OF ACT</b>	<b>REQUIREMENT</b>
<b>s. 112</b>	The Minister may cause a draft plan of management to be prepared for Crown Land. A reserve Trust may prepare a Plan of Management with the Minister's consent, and must prepare a Plan if the Minister so directs. The Plan must be prepared within a time period specified by the Minister, and must include provision for matters as required by the Minister. A copy of the plan of management must be forwarded to the Minister
<b>s. 113</b>	The draft plan of management must be referred to the Trust and any other appropriate person for consideration
<b>s. 114</b>	The plan of management may be adopted with or without alterations. The Reserve Trust must carry out and give effect to a plan which has been adopted. Operations on or in the relation to the reserve must be in accordance with the plan of management.

The Plan of Management for Wharf Reserve has been undertaken in three phases, to ensure that the various requirements of the Crown Lands Act 1989 are met. These phases were:



1. Public consultation to determine the “values” of the Reserve and to agree upon a basis for management. This also included a SWOT (Strengths Weaknesses Opportunities Threats) Analysis for the Reserve
2. Formulation of Management Strategies
3. Preparation of an Action Plan

Dungog Shire Council, Waterways and representatives of the local Dungog Land Care Group, as well as various other community groups currently maintain the site.

The access to the Williams River from Wharf Reserve is limited, yet important to those using the reserve for camping, water activities and other recreational activities. Because of the sensitive nature of this site, it is important that the Plan of Management take into consideration such aspects as erosion and riverbank instability.

## **1.4 The Natural Environment**

### *1.4.1 Landform and Drainage*

Wharf Reserve comprises approximately 2.6 hectares of land adjacent to the Williams River. The Williams River plays a vital role in the life of the Lower Hunter. As well as providing the drinking water for most of the population of the Lower Hunter, the catchment provides valuable recreation and tourism opportunities. It supports an active farming community and is home to a diverse eco-system.

Due to these many demands on the river system, it needs to be understood and managed in an integrated way, so that the river is protected and natural eco-systems are sustained and its value as a community resource is returned.

Because of the importance of the Williams River to the Hunter Water Corporation as a water resource, the Corporation has a strong interest in the ongoing management of the Williams River catchment. In 1997, the river was the subject of an inquiry by the Healthy Rivers Commission. The New South Wales Government subsequently endorsed the report of inquiry.

The Commission found that:

- *in comparison to many rivers in NSW, the Williams River is relatively healthy*
- *the river is mostly able to meet normal expectations placed on it by the community*
- *the aquatic ecosystems do not appear to be under immediate threat*

- *the rates of change in influences that could create stresses in the river are not rapid*

Chichester Dam is situated on the Chichester River, an upper tributary of the Williams. The damming of a river impacts on the natural flows below the dam in two ways. It affects the quantity of downstream flow and the pattern of flow. In order to maintain the natural ecosystems necessary for ongoing river health, water is released from the Dam to emulate natural variability in river flow patterns. Such flows are termed *environmental releases*.

Within the Reserve, there is an open drain that runs east-west through the northern section of the reserve, which would drain to the Williams River.

The site falls from a high point, which is a ridge running through the centre of the reserve. The reserve is traversed by a series of gravel tracks, which form from two main bitumen entrance roads into the reserve being Marshall Street to the west and Rifle Street, to the north. These gravel tracks are fairly well maintained, however, they do have some potholes and erosion along the edges of the gravel roads and there is some pooling of water at the edges of these gravel tracks.

There are several stands of trees located throughout the reserve. **Figure 3 Landform and Drainage**, shows the details of the appearance of the reserve, as well as the different grades on the site.

#### 1.4.2 *Climate*

Climate data is available for the Clarence Town area, with precipitation being measured at Clarence Town since January, 1895.

From data gathered between 1985 and 2001, the following information is available and displayed in **Table 2**. The average wettest month over the recording period is April, with 639.8mm and the driest month is November with 254.1mm.

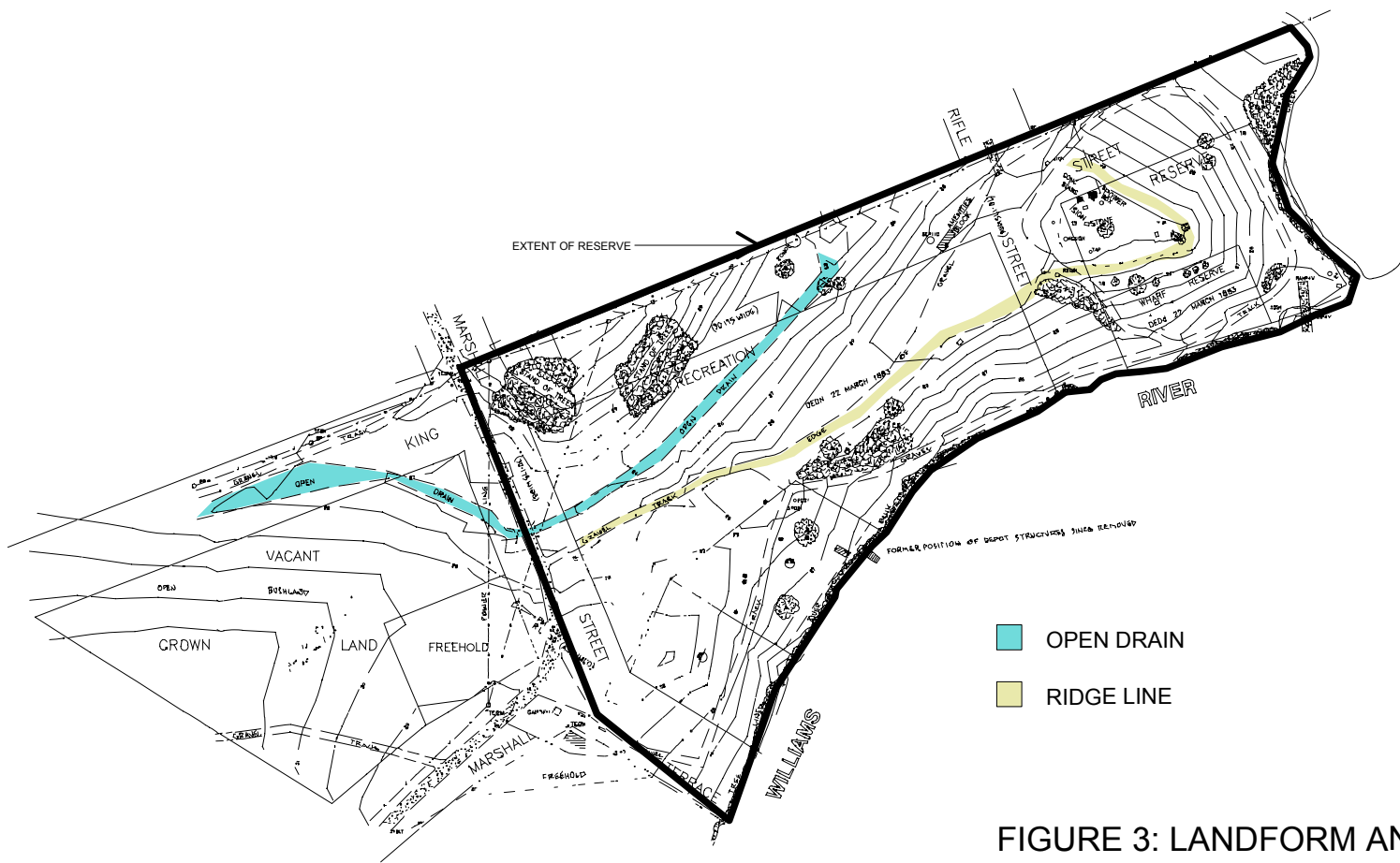


FIGURE 3: LANDFORM AND DRAINAGE

**Table 2 Summary Of Total Monthly Precipitation Using Available Data Between 1895 And 2001**

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Annual
<b>Mean</b>	107.5	107.2	121.6	99.4	87.2	101.3	71.7	63.8	63.6	68.8	72.7	100.8	1064.1
<b>Median</b>	87.3	84.3	91.8	77.7	70.4	72.3	57.5	42.6	47.3	50.7	60.4	81.7	1057.8
<b>Highest</b>	523.3	512	511.4	639.8	354.3	592.4	307.1	472.7	333.4	281.1	254.1	365.2	1734.2
<b>Lowest</b>	8.6	0	0	0	1.2	4.1	0	0	0	1.5	0	5	450
<b>Number</b>	106	106	105	105	105	105	105	105	106	106	106	106	105

Source – Bureau of Meteorology

Temperature and wind data for the area is recorded at Paterson, which is approximately 15km due west of Clarence Town. From recorded data for the period 1967 – 2001, the Mean Daily Maximum Temperature ( °C ) is recorded in January with 29.1, with the Highest Temperature recorded being 44.2 in December and the Lowest Temperature being –4.7, in July. **Appendix B - Climate Data**, contains full climate data.

Wind data has been recorded at Paterson since 1970. The predominant summer and spring winds are from the south east. These are generally very light in the mornings, becoming slightly stronger towards the afternoon. In the autumn and winter, winds tend to be predominantly from the north west to westerlies.

In summary, the following general observation can be made regarding the Clarence Town area. With an Average Annual Rainfall of over 1000mm, the area experiences cool to mild and sunny winters with summers being warm to hot and occasionally humid.

### 1.4.3 Geology and Soils

The majority of the catchment upstream of Seaham is comprised of Carboniferous sediments (for example shale and sandstone) and volcanic sediments formed approximately 300 million years ago. To the north of the catchment in the Barrington Tops these sediments were overlain by Tertiary basalt flows approximately 50 million years ago. Since that time, the basalt flows have been significantly reduced by erosion, some of which drained into the Williams and Chichester rivers. It has been suggested that this eroded basalt was then transported by the river system and deposited as riverbed sediments.

In terms of Wharf Reserve area the Geology and Regolith are part of the Gilmore Volcanic and are comprised of pink to brown lithic sandstone in addition to the occurrence of minor fine sandstone, siltstone and alluvium sediments with indurated sand and gravel.

Mineral deposits within the catchment include vein gold and silver, minor base metals and titanium-rich magnetite. There is some potential for economic gold extraction in the future. There are also some limestone, sapphire, ruby and peat deposits within the catchment.

Soils in the catchment are derived from basalt and therefore contain higher than average natural background levels of phosphorus. Research by CSIRO indicates that basalt is potentially significant for water quality, due to its chemical composition, small grain size and high degree of fracturing, high infiltration capacity and ability to store water and its location at the top of the catchment in steep terrain and a high rainfall area.

Sediment sampling along the Williams River indicates that erosion control of stream banks and floodplains is an important water quality management objective.

Other relevant geological issues include the presence of soils that are highly erodible when subsurface horizons are exposed through clearing or disturbance. These types of soils have primarily formed in the eastern section of the catchment between Seaham and Brandon Grove. Mass movement of soil triggered by wet weather has also been observed particularly on steep lands to the west of the catchment and to the east, between Seaham and Brandon Grove.

Erodible soils contribute to the turbidity of streams by adding sediments to the water. Also, they are not suitable for on site effluent disposal due to their relatively low permeability rates.

Acid sulphate soils are acidic soil layers resulting from the aeration of soil materials that are rich in iron sulphides. In Australia, the acid sulphate soils of most concern are those which formed within the past 10,000 years after the last major sea level rise. When the land was inundated, sulphate in the seawater mixed with land sediments containing iron oxides and organic material. The resulting chemical reaction produced large quantities of iron sulphides in the waterlogged sediments. When these sulphides are exposed to the air, the iron sulphides in the sediment oxidise to produce sulphuric acid, hence the name 'acid sulphate soils' (Sammut and Lines-Kelly, 1995).

Under strong acid conditions, high levels of aluminium and other trace metals become mobile in the soil solution. Together with a low pH, this can have a number of detrimental effects, including:

- Surface soil scalding;
- Reduced soil productivity;
- Increased soil toxicity as iron, aluminium, manganese and heavy metals are dissolved;
- Reduced animal productivity due to the discouragement of good quality pasture growth;
- Weakening and corrosion of concrete structures, steel fence posts, building foundations and underground pipes;
- Destruction of aquatic habitat and alterations to waterplant communities; and
- Health effects on aquatic organisms resulting in loss of native species and dominance of acid-tolerant species.

Dungog Shire Council has formulated *Development Control Plan No. 24 – Acid Sulphate Soils*, to ensure the effective management of areas affected by acid sulphate soils. According to this DCP, Wharf Reserve is within Planning Zones 3 and 5 and as such are affected by Acid Sulfate Soils. This will mean that any proposed construction or earthworks, are required to be undertaken in accordance with DCP 24.

#### 1.4.4 Flora

There is a dense, but narrow (15m) corridor of riparian vegetation along the length of the Williams River frontage, broken only by the boat ramp. Vegetation is mostly mature trees (10 – 20m) and symptomatic of riparian environments in the area and include *Eucalyptus sp.*, *Allocasuarinas* and *Acacia sp.* There is little understorey to mid storey and these are generally juveniles of the mature species.

Extending back from the riparian corridor is a grassland area dominated by introduced grass species and weeds. The area is approximately 150 – 200m wide and is the current location of the camping ground.

There are some isolated plantings of native species which have been undertaken at the edge of the camping ground and in selected areas within the grassland (adjacent to the commemorative stone and near the boat ramp). Plantings are generally juvenile tubestock (2 – 5 years old) and consist of various *Eucalyptus sp.*

A small wetland exists on the boundary of the reserve to the north west. This area has been replanted with wetland species to retain wetland conditions.

A review of the NSW National Parks and Wildlife Database, revealed that two (2) vulnerable plant species and two (2) ROTAP (Rare Or Threatened Australian Plants) listed plant species that had been recorded in the Clarence Town area. These include *Eucalyptus glaucine* (Vulnerable), *Tetratheca juncea* (Vulnerable), *Macrozamia flexuosa* (ROTAP) and *Arthrochilus prolixus* (ROTAP). None of these species were noted within the Wharf Reserve, although suitable conditions exist for all four species to occur within the Reserve.

**Table 3. Native Flora Species - Wharf Reserve**

<b>Botanical Name</b>	<b>Common Name</b>
<i>Acacia falcata</i>	Hickory Wattle
<i>Acacia implexa</i>	Lightwood Wattle
<i>Acacia irrorata</i>	Blueskin Wattle
<i>Acacia melanoxylon</i>	Blackwood Wattle
<i>Alphitonia excelsa</i>	Red Ash
<i>Callistamon viminalis</i>	Weeping Bottlebrush
<i>Casuarina glauca</i>	Swamp She-Oak
<i>Crinum pendunculatum</i>	River Lily
<i>Dodonea viscosa</i>	Hopbush
<i>Elaeocarpus obovatus</i>	Hard Quandong
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus carnea</i>	Broadleaf White Mahogany
<i>Eucalyptus fibrosa</i>	Broadleaf Red Ironbark
<i>Eucalyptus grandis</i>	Flooded Gum
<i>Eucalyptus paniculata</i>	Red Ironbark
<i>Exocarpus cupressiformis</i>	Ballarat
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Guoia semiglauca</i>	Guoia
<i>Melaleuca decora</i>	Ornate Paperbark
<i>Melia azedarach</i>	White Cedar
<i>Pandorea pandorana</i>	Wonga-wonga Vine

<i>Parsonia straminea</i>	Monkey Rope Vine
<i>Phragmites australis</i>	Native Reed
<i>Pittosporum undulatum</i>	Sweet Pittosporum

Note: Additional native species, which may be growing within the Reserve area includes, *Allocasuarina torulosa* ( Forest She-oak), *Backhousia myrtifolia* (Grey Myrtle), *Callistemon Salignus* (Pink-tipped Bottlebrush), *Eucalyptus crebra* (Narrowleaf Red Ironbark), *Hymenosporum flavum* (Native Frangipani), *Lomandra longifolia* (Spiky Matrush), *Melaleuca stypheloides* (Spiky-leaf Paperbark), *Syzygium australe* (Brush Cherry), and *Trema tomentosa* (Native Peach).

### 1.4.5 Fauna

There is limited threatened species habitat on the site and is generally restricted to the riparian corridor and the adjacent stands of trees outside the Reserve.

There are ten vulnerable fauna species, as listed in the National Parks and Wildlife database that have been identified in the Clarence Town area. Eight of the species are arboreal and reliant upon suitable nesting locations. There are limited opportunities existing on the site, except in the riparian corridor, although adjoining land and vegetation may provide suitable habitat. The plantings within the Reserve may provide a foraging source for some species.

Two terrestrial species (Spotted – tailed Quoll and Brush-tailed Phascogala) may find suitable habitat on the site, especially Brush-tailed Phascogala, within the riparian area or in the less disturbed areas of grassland.

Numerous common small reptiles, mammals and amphibians are likely to utilize the area, including the wetland for foraging and nesting.

### 1.4.6 Scenic Resources

Wharf Reserve is located along the edge of the Williams River. As such, it has direct access to a large body of water for which many recreational purposes may be undertaken. One of the main strengths of the site is the fact that it is located so closely to the actual township of Clarence Town. The road network leads directly from the town centre to Wharf Reserve.

During the public meeting held in relation to Wharf Reserve a SWOT (Strengths Weaknesses Opportunities Threats) Analysis was undertaken. One of the strengths identified by the



workshop was seen to be the natural scenic quality of Wharf Reserve, which was as a result of both the natural vegetation and the replanting that had occurred.

The main activities that were identified as being undertaken from this reserve, were those such as camping and fishing, and access to the main boat ramp for boating activities. It was generally agreed by all workshop participants, that by upgrading the facilities available in the reserve, it would lead to more efficient use of the existing resources, as well as enhancing the natural scenic resources available on the reserve.

There is some concern regarding the declining water quality due to pollution and erosion and also an increase in noxious species of flora and fauna, for example weeds and carp. This however, can be overcome with an opportunity to re-vegetate with native species of flora within the Wharf Reserve environment and undertake various bank stabilization works.

***The following plates show views of the existing Boat Ramp and approaches***



***Plates illustrating various views of the Riparian Corridor***



***Plates illustrating various views of Reserve***



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***The following shows the area for the proposed wetland***



***The following shows the existing amenities and monument stone***



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### 1.4.7 Natural Hazards

#### **Erosion**

There is some erosion to the riverbank, which is creating instability in the area and it is therefore important that this erosion be addressed in the Management Plan. Every reasonable effort should be made to minimize sediment entering the river. Most of the erosion has occurred as a result of persons getting down to the riverbank either for fishing, swimming activities or launching boats.

It is important that designated areas of pedestrian access to the river are identified within the Management Plan. This will greatly assist in minimizing additional erosion. The following photograph illustrates the erosion caused to the riverbank area.



#### **Flooding**

The most recent significant flood event occurred in this area in early 2001, however there was no recorded level for this event. There was minimal flood damage caused and debris was removed during regular maintenance.

## **Pollution**

The Williams River Catchment Regional Environmental Study shows that both the river and its catchment are in relatively good condition. The catchment has not been greatly urbanized. The major activities are low intensity grazing and increased rural residential settlements.

The principle water quality issues are the incidence of high phosphorus levels and bacterial pollution. Bacterial pollution emanates from urban and rural residential settlement and agricultural practices. It is largely a result of inadequate effluent treatment and can impact on the use of the water system for recreational, agricultural and other purposes.

## **Acid Sulphate Soils**

According to Department of Land & Water Conservation Acid Sulfate Soil Maps, Wharf Reserve is located within Planning Zones 3 and 5 and is therefore affected by Acid Sulfate Soil conditions, as such will require that all earthworks and construction be carried out to withstand the effects of these soils.

Acid sulfate soils generate sulfuric acid that leaches into drainage lines and through floodwaters, dissolving aluminium, heavy metals and arsenic from soil minerals and corroding steel and concrete. Dissolved aluminium kills vegetation and aquatic life. In sub-lethal doses, it stunts growth and breaks down defences against disease.

Engineering hazards include corrosion of steel and concrete, low bearing strength and uneven subsidence, very high permeability of undisturbed muds, but low permeability and slow consolidation of re-worked material and the blockage of drains by ochre.

In the case of sulphidic soils, the hazards associated with acidity are potential high and will not materialize unless the soils are drained and excavated. However, sulphidic soils are commonly saline and sulphidic clays and peats are soft and of low bearing capacity.

## **Weeds**

It is evident from the site inspection, that there are some weeds including alligator weed over some of the natural vegetation of the site. An important strategy of the Management Plan will be

to reduce the numbers of these weeds and keep them under control, so they do not detract from the natural vegetation of the reserve.

## **1.5 Historical Context**

Clarence Town is thought to be the 7<sup>th</sup> oldest settlement in Australia. The town is situated on the banks of the Williams River, approximately 55km north west of Newcastle in New South Wales. The first white man to explore the region was Lieutenant Colonel Paterson on the 25<sup>th</sup> July 1801. Paterson left his ship, the “Lady Nelson” at Greenhills and proceeded upstream in a little boat to the two falls.

Following soon upon Paterson’s exploration of the Williams River, timber getters began to settle the area, realising the wealth of top grade hard woods to be had. One of the first settlements along the Williams River was named Erranghi. By 1926 the town was named Clarence Town, after the chief of Clarence, who in 1830 became King William IV of England.

The river was the highway and carried the trades of Dungog and Gloucester to and from Newcastle and Sydney. Steamers traveled up the river from Newcastle three times a week and many people visited each other by boat, rowing to Raymond Terrace and Newcastle using the tides to advantage. The river teemed with live steamers and punts carrying food, milk supplies, pit props, cedar and sawn hardwood timbers from the two sawmills that were in operation at the time. The Williams River Steam Navigation Company Ltd was formed in 1880, when shippers and producers from Dungog and Clarence Town subscribed £2,000 to purchase a steamer, “The Favourite”.

The background of Wharf Reserve dates back to 1801, when William Paterson explored the navigable extent of the Williams River, discovering an abundance of timber suitable for boat building, as well as plentiful cedar wood stands. It was an ideal stepping off place for exploration and settlement of areas as far as the Darling Downs, Gloucester and Taree. Queens Wharf was constructed subsequent to timber getting activities and to facilitate the loading of this timber and also the offloading of passengers and supplies.

It was the site of the Deptford Shipyards and many sea-going ships were constructed in the area, including the William IV, the first steam ship to be built in Australia, which was launched in 1831. The Wharf Reserve area of the Williams River is the cradle of much of the area’s local early history.

Located on the Wharf Reserve site is a monument to William IV. There is excellent public access to this monument. The monument is listed in the Hunter Regional Environmental Plan 1989 – Heritage -

Heritage Schedule No. 5. It dates back to 1981 where its original use was as a monument, a reminder of the areas involvement within the shipping industry. It commemorates the launch of the William IV in 1841.

### *1.5.1 Aboriginal Heritage*

A search of the National Parks and Wildlife Services Aboriginal Sites Register Database has shown that one known Aboriginal site is currently recorded near the Wharf Reserve area. According to the search sheet, the Aboriginal site is described as a burial site, was recorded on the 1<sup>st</sup> July, 1989 and the site name is Paradise Island, site ID 38-4-0147 in zone 56.

This site is some considerable distance from Wharf Reserve.

## **1.6 Existing Development and Uses**

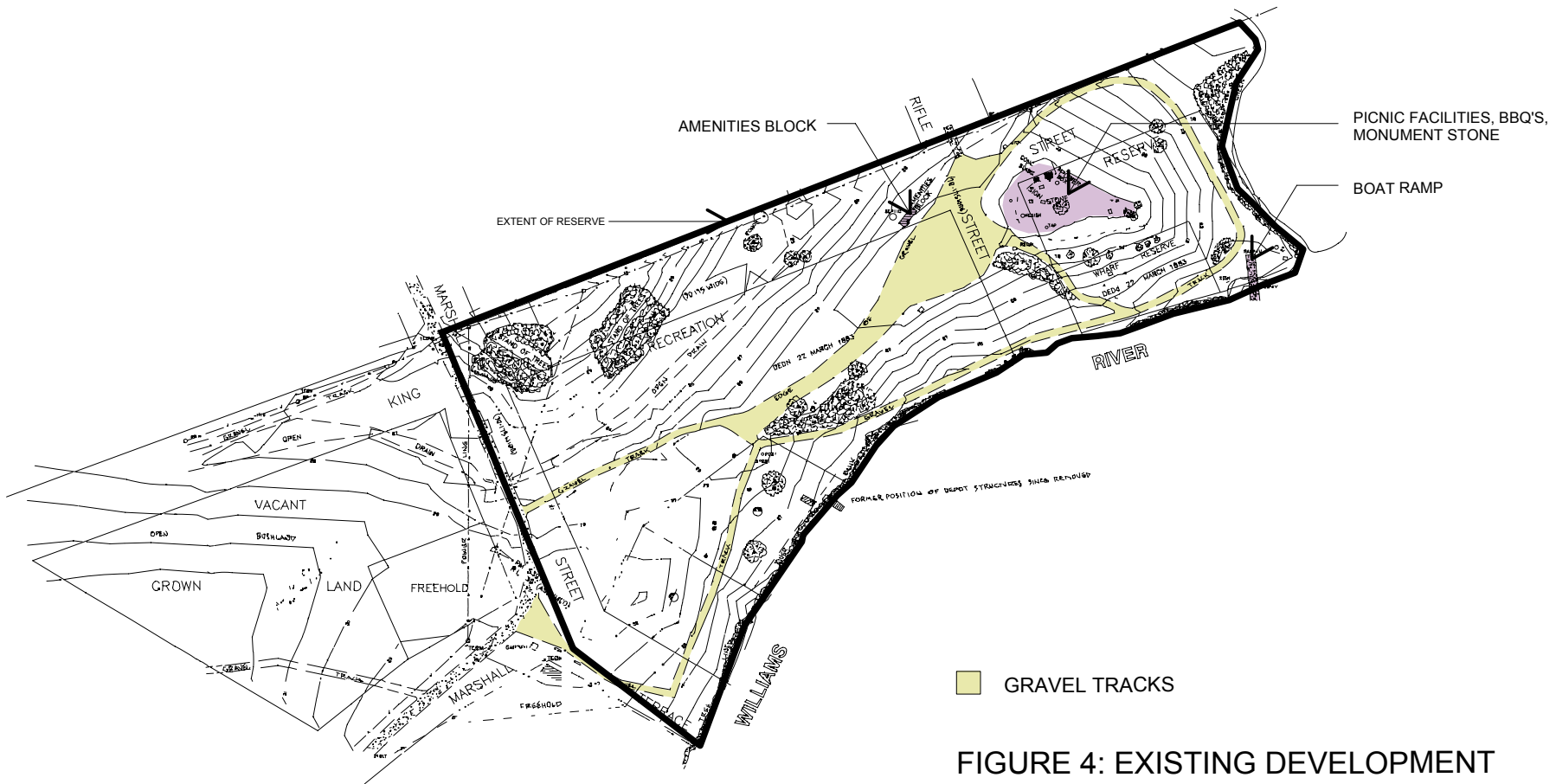
### *1.6.1 Introduction*

The Wharf Reserve is zoned 6(a) Public Open Space, while adjoining areas to the north are zoned 2(a) Residential, 5(c) Special Uses (Limited Building Area) Zone, 3(a) Business and 7(a) Rural Environment Protection (Flood Liable Land) Zone.

Development within the Wharf Reserve primarily consists of facilities relating the recreational aspects of the reserve. These include the boat ramp, picnic area facilities and amenities block, carparking, and various gravel tracks throughout the site.

Existing buildings and structures are indicated on **Figure 4 - Existing Development** and are summarized by the following points.

- The boat ramp is located on the south eastern side of the reserve
- The monument area is in the north eastern portion of the reserve
- A brick amenities block
- Numerous BBQ's, picnic tables and garbage bins
- Gravel tracks traversing the site
- Carparking area





Currently there are two access points to the reserve, one being via Marshall Street, which is a bitumen road from which the gravel track extends, the other from Rifle Street, which turns from a bitumen road to a gravel road. The Rifle Street entrance tends to be more orientated towards the boat ramp end of the reserve, whilst the Marshall Street entrance appears to be a secondary entrance.

### *1.6.2 Recreation Opportunities*

Existing recreation opportunities in the Reserve generally include picnic facilities and water sports, such as fishing, motor boating, water skiing and canoeing. Further opportunities, which may be explored in relation to recreation from this Reserve, include;

- The opportunity to promote tourism and in particular the history of the site and the surrounding township;
- The development of overnight accommodation and cabins;
- The development of adventure tours;
- The provision of longer stay camping; and
- The development of jetties along the riverbank for fishing and other water sports.

### *1.6.3 Environmental Opportunities*

One of the suggested uses for the area proposed area is that of a wetland feature to enhance the flora and fauna of the site, as well as assisting with drainage.

A constructed wetland is a generally shallow waterbody with a large proportion of its water surface covered by macrophytes. Wetlands can provide a good habitat for flora and fauna, provide recreational and visual amenity and can be linked to community education programs or stormwater reuse schemes, if properly designed.

Wetlands have some limitations in that they need a reliable water supply to remain 'wet' at all times, and require proper design and construction to limit any impacts on public health through mosquitoes and mosquito-borne diseases, limit impacts on groundwater pollution.

Hydrological overload (e.g. flooding) and wetland efficiency and flow events that exceed design capacity will result in reduced water quality, similarly high flow events may result in a heavy load

of pollutants, including litter, sediments and nutrients, which may impact on wetlands 'health'. Maintenance following these events can reduce impacts.

The proposed wetland will need to be designed in accordance with Department of Land and Water Conservation Guidelines and NSW Environment Protection Authority requirements.

## 1.7 Landscape Units

To assist in formulating the draft Plan of Management, the Reserve has been divided into a series of Landscape Units, which are shown on **Figure 5 - Landscape Units**. Each unit has a different visual character reflecting a distinct combination of natural features (landform, vegetation) and manmade developments (vegetation clearing, roads, recreation facilities).

An analysis of these landscape units provided the basis for identifying Management Zones to be incorporated into the Management Plan for the Wharf Reserve. Each Landscape Unit is described separately below.

### Landscape Unit A – Riverfront / Riparian Corridor

#### Description

- All of the Reserve that follows the creek line along the eastern riparian boundary of the reserve and along Williams River frontage to the southern boundary of the site.
- Generally tree covered with *Eucalypt Grandis* trees as the eucalypt species and immature River She-Oak planted throughout the reserve dominant species.
- Much of the bank area has been disturbed due to people gaining access to the riverbank, leading to bank instability and erosion.
- Contains main boat ramp for the area.

#### Significance

- The conservation value is high, as it is a natural feature of the riverfront.
- The conservation of this area is encouraged, due to opportunities for panoramic views of the natural landscape setting of the river frontage.
- The wharf area is of historical significance and is therefore, required to be conserved.

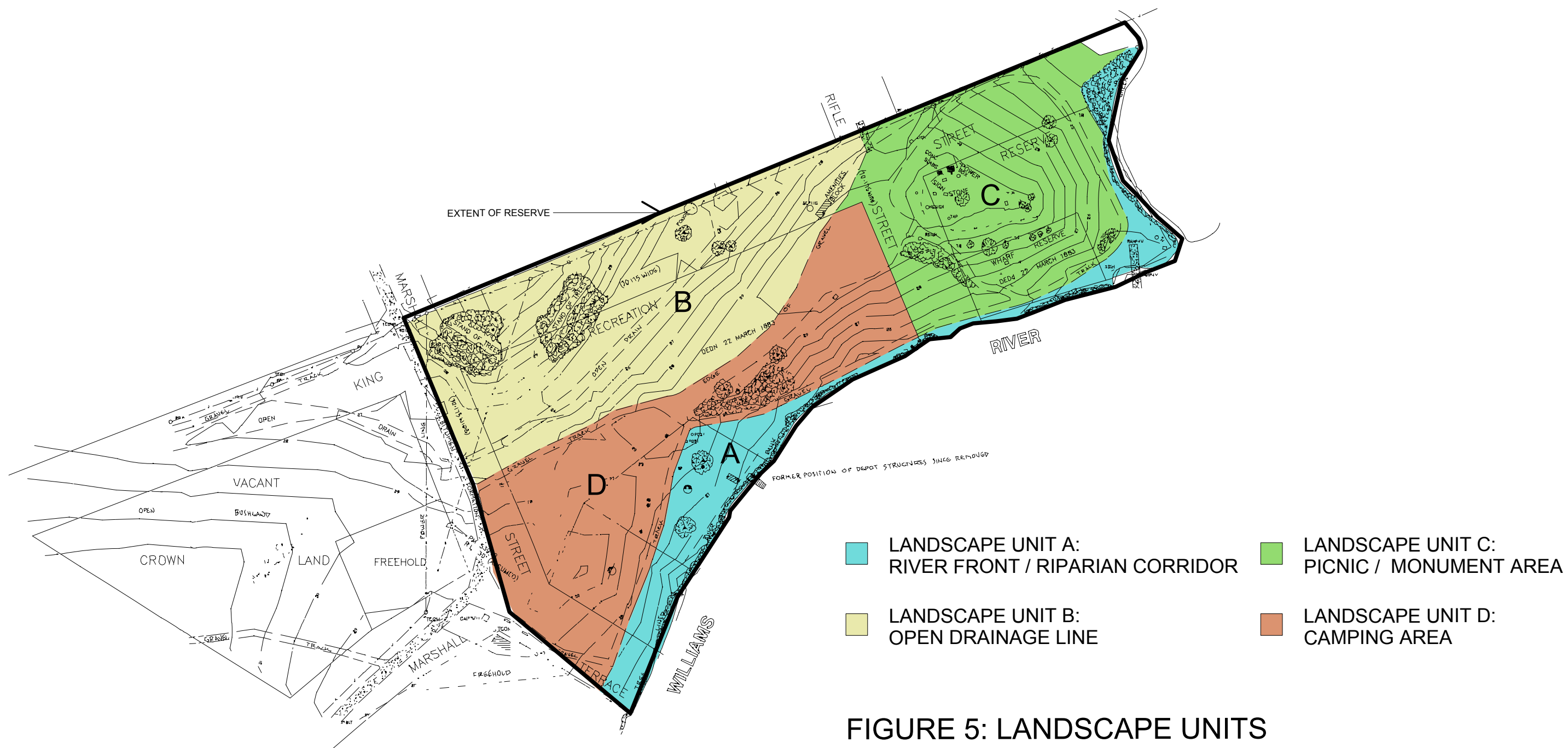


FIGURE 5: LANDSCAPE UNITS

### **Management Issues**

- Measures to be taken to prevent further erosion of the riverbank.
- Limited and identified pedestrian access to the riverfront to discourage an adhoc approach.
- The remnant native vegetation in this unit requires restoration/ reestablishment and the reintroduction of fauna habitat to be encouraged.
- Drainage works required to minimize further soil erosion and bank instability.

### **Landscape Unit B – Open Drainage Line**

#### **Description**

- An open drain runs east west through the northern part of the site.
- The area is a catchment for runoff.

#### **Significance**

- Is a natural path for the drainage of runoff through the site.

#### **Management Issues**

- Appropriate erosion control, sediment traps to be in place.
- No camping to be allowed in this area.
- Revegetation and the introduction of fauna habitat to be encouraged.

### **Landscape Unit C – Picnic / Monument Area**

#### **Description**

- This is one of the main areas of development on the reserve and includes the main gravel entry, an historic monument stone, power box, picnic facilities, barriers and signs.
- Located on the north eastern side of the reserve.
- Slopes to the east towards the creek line.

### **Significance**

- Area of high disturbance and low vegetation.
- Is the site of the historic stone monument.
- Vehicles travel through this area to access the boat ramp area.

### **Management Issues**

- Picnic facilities are severely degraded and require major maintenance.
- Additional planting is required to increase the quality of flora in this area.
- Carparking areas need to be consolidated.

## **Landscape Unit D – Camping Area**

### **Description**

- This area falls from a high point through the centre of the Reserve falling slightly to the west and gradually to the south east to the boundary formed by the Williams River.
- Contains some stands of trees and some replanting has been carried out.
- This unit contains many of the gravel tracks, which traverse the site.

### **Significance**

- Recreational values are important due to the opportunities to provide overnight camping areas.
- Contains main carparking area.

### **Management Issues**

- Additional planting required in the western area proposed for overnight camping to provide shelter and prevent erosion.
- Relocation or construction of additional amenities units and picnic facilities required in this unit.
- Gravel tracks may require upgrading.

## **1.8 Social Environment**

### *1.8.1 Recreational Values*

The Williams River catchment remains an attractive area valued for its rural and forest scenery, its streams, heritage and quiet rural towns. The primary recreation value of the Wharf Reserve results from a combination of its access to the Williams River and its close location to town, the provision of the boat ramp and picnic facilities and that it caters for a variety of water uses, including fishing, power boating and canoeing.

Most visitors to the Reserve are attracted by this access to the Williams River as well as the scenic views available on the riverbanks. Most visitors stay for relatively short periods of time, as there are not adequate facilities available for overnight camping stays.

Many of the opportunities which have been identified in the workshop relating the preparation of this Plan of Management, have indicated that the regeneration of the Wharf Reserve would lead to an enhancement of tourism in the area, the possibility of a yearly festival, based around the waterway, an increase in adventure tours, and the opportunity to encourage native vegetation within the site.

Reserve areas not only play an important nature conservation role but they also contribute significantly to the maintenance of water quality, biodiversity and recreational pursuits, as well as promoting the awareness and appreciation of places of significance within the catchment.

The physical attributes and accessibility of the Williams Valley represent a number of opportunities for recreation and tourism, including participation in water based (or water enhanced experiences) such as angling, camping, motor boating, water skiing, picnicking, horse riding, bush walking, pleasure driving and canoeing. In addition, the catchment also offers opportunities for cultural tourism, with the presence of historic buildings and sites throughout the area.

There is a need to manage the land and water resources within the catchment, so as to conserve and enhance the ecological heritage and scenic qualities, which are available, not only for the local community, but the many visitors to the area.

Visitors to the area come primarily from areas such as the Lower Hunter, Raymond Terrace and Maitland areas, as well as within the Dungog Shire Council area itself.

Queens Wharf was proclaimed as a public wharf on the 3<sup>rd</sup> July, 1925.

#### 1.8.2 *Aboriginal Sites / European Sites*

A search of the National Parks & Wildlife Services (NPWS) Aboriginal Sites Register Database, has shown that one known Aboriginal site is currently recorded in or near the Wharf Reserve area. This site is described as;

- One (1) Burial Site recorded on the 1<sup>st</sup> July, 1989, site named “Paradise Island” zone 56.

National Parks & Wildlife Services noted in their letter to Hunter Development Brokerage, that *“the following qualifications apply to the Aboriginal Sites Register Database;*

- *The database only includes recorded sites. Large areas of NSW have not been the subject of systematic survey or the recording of Aboriginal history. These areas may contain sites which are not currently listed on the Aboriginal Sites Register.*
- *Site records come from a variety of sources and are variable in their accuracy. When a database identifies sites in or near the area, it is recommended that the exact location of the sites be determined by relocation on the ground.*
- *The criteria used to search the database are derived from information provided by the client and assume that this information is correct.*

*You should be aware that all Aboriginal sites are protected under the National Parks & Wildlife Act 1974, regardless of their inclusion on the sites register and it is an offence to damage or destroy them without the prior permission of the Director General of the National Parks & Wildlife Service.”*

## **European Sites**

According to the Regional Eco-Tourism Resource Inventory Part B – Heritage Attractions, the William IV monument, which is situated on the Clarence Town Wharf Reserve is listed. It also has a heritage listing under the Hunter Regional Environmental Plan 1989 (Heritage) - Heritage Schedule No. 5. The monument dates back to 1811 and is a reminder of the area's involvement in the shipping industry. It commemorates the launch of the William IV in 1841, the first steam ship built in Australia.

The background of Wharf Reserve dates back to 1801, when William Paterson explored the navigable extent of the Williams River and discovered an abundance of timber suitable for boat building, as well as plentiful cedar wood stands. It was an ideal stepping off place for exploration and settlement with visitors traveling to the area from locations as far away as the Darling Downs, Gloucester and Taree. Queens Wharf was constructed subsequent to timber getting activities and was used to facilitate the loading of timber and also the off loading of passengers and supplies. Many seagoing ships were constructed in the area including the William IV, the first steam ship to be built in Australia and launched in 1831.

The wharf area of the Williams River is the cradle of much of the area's local early history.

### *1.8.3 Adjoining Land Use and Ownership*

The Wharf Road Reserve is adjoined primarily by 2(a) (Residential A Zone) Residential land to the west and to the north, 5(c) (Special Uses (Limited Building Area) Zone) land to the west, north and east and some 3(a) (General Business Zone) and 7(a) Rural Environment Protection (Flood liable Land) Zone) land to the north.

The objective of the 5(c) Special Uses (Limited Building Area) Zone is to control the development of flood prone land within residential areas. All activity in this area requires development consent.

The objective of the 7(a) (Rural Environment Protection (Flood Liable Land) Zone) is to identify flood liable land generally within or adjacent to existing urban areas.

The main objective of this Plan of Management for Wharf Reserve is to enhance and redevelop the existing Wharf Reserve area. As this is a reserve area that has been used for many years,



it is well integrated into the township of Clarence Town. Access to the Wharf Reserve area is via Marshall Street or Rifle Street. Both of these streets run directly through the township of Clarence Town to the Wharf Reserve area.

## **1.9 Reserve Management**

Dungog Shire Council currently manages and carries out maintenance of Wharf Reserve.

There are also a number of other organizations within the Dungog Shire Council area and in particular the Clarence Town area, which take an active interest in the upkeep and management of Wharf Reserve. These include the Clarence Town Fishing Club, the Clarence Town Land Care group and the Clarence Town Aquatic Club.

## **PART 2 THE MANAGEMENT PLAN**

### **2.1 Management Objectives**

Wharf Reserve was dedicated as a Reserve on the 22<sup>nd</sup> March, 1883. The Reserve is now primarily used for public recreation, as well as the preservation of a significant natural waterway. The following management objectives have been adopted in accordance with that purpose.

- *To allow water based (water enhanced) experiences*
- *To promote cultural tourism*
- *To promote the scenic attractions of the reserve*
- *To manage the Reserve so as to;*
  - *Conserve the water catchment quality*
  - *Retain an aesthetically attractive water way*
  - *Conserve the archaeological and historical values*
  - *Encourage native vegetation and fauna*
- *To provide other waterway uses compatible with the management objectives stated above.*

There is a need to manage the land and water resources within the Reserve area so as to conserve and enhance the ecological, heritage and scenic qualities that are available, not only for the local community, but the many visitors to the area.

These objectives will be achieved by maintaining the inherent natural values of the reserve in perpetuity, while providing recreation opportunities that do not compromise those natural values.

### **2.2 Management Strategy**

In order to determine what actions should be taken to improve the Wharf Reserve and to assist in the guidance of future development of the site, the key stakeholders were consulted in a workshop. These user groups and key stakeholder organisations included:

- The Clarence Town Aquatic Club;
- Clarence Town Progress Association;
- Hunter Water Corporation;
- Waterways Authority;

- Dungog Shire Council;
- Clarence Town Lions Club
- The Clarence Town Landcare Group;
- The Clarence Town Fishing Club;
- The Hunter Native Fish Association; and
- The General Public

The criteria adopted were:

- Remaining vegetation to be retained and enhance as much as possible, so that any associated wildlife habitat values will be maximized to ensure ecological sustainability;
- Only those recreation opportunities that require the unique characteristics of the Reserve are to be developed;
- Recreation activities that may increase the risk of damage and/or destruction of native vegetation or cause soil erosion will be limited to designated areas, so that the impacts can be minimized;
- Recreation facilities that attract large numbers of users will be confined to a minimal area in order to restrict further impacts on flora and fauna values of the Reserve;

On the basis of these criteria, a Management Strategy was developed for Wharf Reserve with the aim of achieving a balance between recreation and conservation values. The strategy provides the framework for the Management Plan and is summarized by the following points:

- The primary recreation value provided by Wharf Reserve is the opportunity for the use of the Williams River waterway. Facilities required by visitors engaging in this primary recreation activity (the boat ramp, wharf, access road to the ramp, information boards, toilets, fish cleaning area and picnic facilities) are to be developed to the extent that they do not significantly reduce the flora and fauna values of the Reserve.
- Secondary recreation values include picnic facilities, walking trails and cultural appreciation are to be provided to the extent that they do not significantly reduce the flora and fauna conservation values.
- The establishment of a single access to the site, preferably from the Rifle Street entrance to ensure a more defined movement of traffic within the Reserve.
- The introduction of an overnight camping area on the western side of the Reserve for longer stay visitors to the area.
- The introduction of a jetty separate to the ramp, to reduce congestion around the ramp site.

- The reconstruction of Queens Wharf adjacent to the boat ramp, to incorporate the historical and cultural aspects of this reserve.
- The construction of a walking trail linking Wharf Reserve to Bridge Reserve.
- A designated boat trailer parking area, to encourage boats to be dropped off onto the ramp and then the trailers moved away to reduce congestion around the boat ramp area as well as further degradation and soil erosion on this site.
- A comprehensive effluent management strategy to be developed for the Reserve.
- The establishment of a pathway with steps down to the foreshore, with links back to the camping ground to be used as a defined pedestrian access to the foreshore, thereby decreasing the current adhoc situation at present.

### *2.2.1 Values of the Site*

To achieve the objectives of the Management Plan, a values driven approach has been adopted to ensure that the draft plan will remain valid for a long period of time. Traditionally Plans of Management have been driven by issues and prepared to resolve problems over a short period of time. Unfortunately, this approach tends to lead to plans of management often being outdated very quickly. A values approach is based on the assumption that the values identified by the community will change at a slower rate than issues.

Values are what is important about a place and include natural, social, recreational and heritage values.

The following was seen as the main values for Wharf Reserve:

- Camping
- Fishing
- Main boat ramp
- Large public space
- Accessibility to water system
- Historical aspect
- Economy
- Quality of fishing in the river and
- Recreational asset

**LEVEL OF SIGNIFICANCE**

	<b>Local</b>	<b>District</b>	<b>Region</b>	<b>State</b>	<b>National</b>	<b>International</b>
Availability of camping	✓	✓	✓			
Recreational asset	✓	✓	✓			
Availability of fishing	✓	✓	✓			
Access to river	✓	✓	✓			
Large public space	✓	✓				
Accessibility to water system	✓	✓	✓	✓		
Historic aspect	✓	✓	✓	✓		
Adds to the economy of Clarence Town	✓	✓	✓			
Quality of fishing in the river	✓	✓	✓	✓		

**Natural Values**

The main natural values as identified as part of the workshop included the fact that it was a large public space with accessibility to a water system. The Williams River Catchment is an attractive area, valued for its rural and forest scenery.

The river retains significant scenic and ecological values, which need to be conserved.

**Recreational Values**

Wharf Reserve provides a venue for many local clubs and groups, including the local aquatic club, fishing club and various other boating organizations. The main values that were identified in the workshop for this Reserve, included camping, fishing, utilization of the boat ramp, accessibility to a large public open space and the quality of the fishing in the river.

**Heritage Values**

One of the major heritage values as determined by the workshop was to see the preservation and the reinstatement of the former Queens Wharf. Clarence Town, the first town established in

the catchment in 1832, was a major ship-building centre, which exploited the timber resources of the valley. The river provided a major transport route for passengers, produce, goods and supplies, until the arrival of rail around the turn of the century.

### 2.2.2 *Site Constraints*

Due to the natural hazard of flood events in the area, as well as the presence of Acid Sulphate Soils, it is imperative that any future developments take into account the effects of flooding and that any new proposals address flood-proofing of amenities. Flooding will also affect the safety risk of camping in this flood prone land.

The Wharf Reserve site currently has the following constraints:

- Amenities and facilities in need of major maintenance work, especially picnic tables, toilets and Bar-b-ques.
- Rubbish removal and lack of rubbish bins
- Significant road work needs to be undertaken to upgrade the gravel roads running through the Reserve, primarily to assist in remediation of erosion to the edges of these roads
- Lack of boating facilities, such as jetties to tie up to
- Access to the water is in an adhoc way and therefore this has lead to major instability and erosion of the river bank
- Internal sign posting is very poor
- Rubbish bins tend to be used for town rubbish
- Weed problems
- Lack of road structure and sign posting
- Vandalism
- Lack of servicing
- Lack of funding
- Too many restrictions especially on boating people
- Noxious and introduced flora and fauna species

## **Opportunities**

The Wharf Reserve site has the following opportunities

- The opportunity to enhance tourism
- Promote the historical aspects of the site and of the township of Clarence Town
- Re-vegetation of the Reserve to encourage native vegetation
- It is a large open space with room to develop further recreational activities, including overnight accommodation and cabins
- The possibility of a yearly festival based around the waterway
- An increase in adventure tours
- The location of the reserve being close to town with immediate access back to facilities such as shops and the local hotel
- Reserve has a natural scenic quality, with natural vegetation and replanting
- There is an opportunity to construct a wetland

### *2.2.3 Issues Analysis*

The workshop held in conjunction with the preparation of this Plan of Management undertook a SWOT analysis to determine the strengths, weaknesses, opportunities and threats in relation to Wharf Reserve.

The main issues relating to Wharf Reserve were the following.

## **Facilities**

The feeling of the workshop in relation to facilities was that the condition of the amenities on the Reserve needed to be upgraded, so that better facilities were available. This is twofold, both being able to present better facilities to those already using the Reserve and also to attract more tourists, because of the quality of the amenities available. It was also felt, that by having areas set aside for different water uses such as water skiing, canoeing, fishing, etc, facilities will be able to be developed for each of these independent uses, thus enabling a better relationship between the different water activities.

One of the major concerns is to establish better boating facilities, particularly better landing facilities for small boats and canoes, so that it will reduce the adhoc use of people getting down

to the riverbank, causing erosion and bank instability. Another strength was the availability of large open public space adjacent to the river. It was seen that this could be upgraded, in particular with the introduction of overnight camping areas, to encourage longer stays. It was certainly felt, however, that there would need to be a major upgrade of all the facilities on the Reserve for any of these opportunities to be realized.

## **Environment**

The second most important issue to the group was that of the environment. In order to ensure that the Reserve is developed to its best potential, it must be done so with regard to the environment. There is a concern that declining water quality is due to pollution and erosion. Powerboats are a source of fuel and oils and wave action can stir up bottom sediments assisting remobilization of phosphorus. Camping areas are also a source of effluent.

## **2.3 Management Zones**

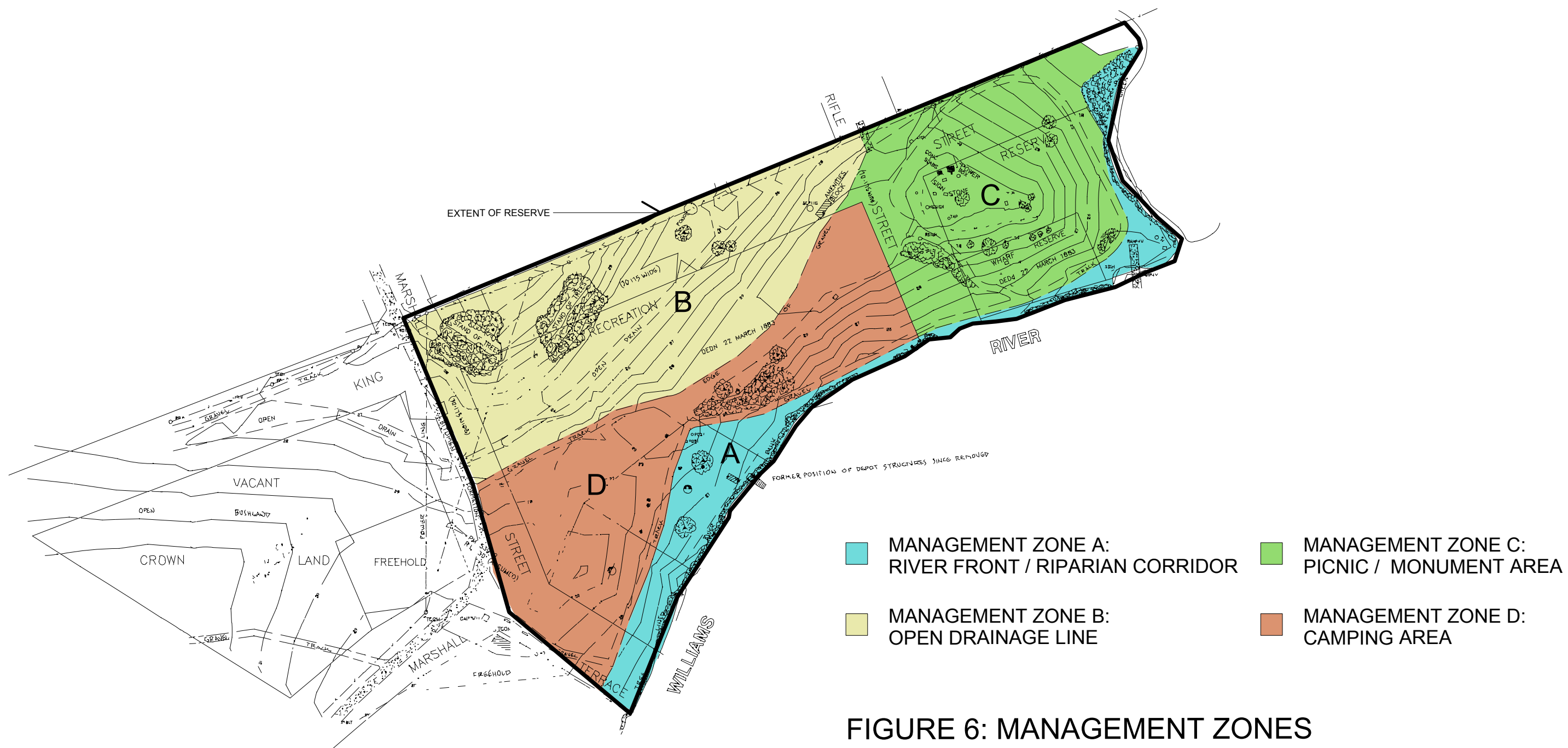
### **2.3.1 Introduction**

Wharf Reserve has been divided into a series of zones, each of which requires particular management actions. These Management Zones generally correspond with the Landscape Units described in *Section 1.7*. These Management Zones form the basis of the Management Plan for the Reserve. **Figure 6 - Management Zones**, illustrates these Management Zones. These zones are addressed separately in the following sections.

The Management Zones generally follow the edges of the gravel tracks running through the Reserve and these tracks tend to delineate the difference areas of the Reserve.

In order for this Management Plan to be successful, it is necessary that suitable signage be installed at the entry point to the Reserve. This will assist visitors to the Reserve in utilizing the site in an orderly manner, thereby achieving the objectives of the Management Plan.





### **2.3.2 Management Zone A – Riverfront / Riparian Corridor**

#### **Description**

- Area of the Reserve that follows the creek line along the eastern boundary and along the Williams River frontage to southern boundary of the site.
- Dense screen of trees running around these boundaries.
- Due to adhoc access to the river, there is bank instability and soil erosion.
- The south eastern corner of this Management Zone contains the boat ramp.

#### **Management Objectives**

- To enhance the scenic views along the river frontage
- To rehabilitate areas that have been impacted by existing recreation facilities and activities
- To reduce congestion around the boat ramp
- To provide more organized vehicle access to the boat ramp
- To develop defined pedestrian links to the foreshore and further to Bridge Reserve

#### **Proposed Actions**

- Reconstruction of Queens Wharf Boardwalk adjacent to existing boat ramp
- Stabilise the riverbank by utilizing natural methods including coir logs and native vegetation such as *Phragmites australis* and *Callistemon viminalis* for soil stabilization.
- Construct a second jetty further along the western end of the river frontage
- Construct defined pathways to waters edge
- Remove metal pylons from the rivers edge
- Revegetation of riverside
- Upgrade existing boat ramp
- Provision of a 'beach' area adjacent to the boat ramp
- Necessary studies to be undertaken to investigate the management of water quality in the Williams River

### **2.3.3 Management Zone B – Open Drainage Line**

#### **Description**

An open drainage line runs east west through the north western part of the site. This falls away from the ridge through the centre of the Reserve, to the north western corner of the site.

- There are no significant views of the river from this zone, however, there are some views to the north back towards the township of Clarence Town.

#### **Management Objectives**

- To provide an environmental area utilising natural drainage on the site.
- To introduce additional native flora and fauna to the reserve.
- To minimise soil erosion.

#### **Proposed Actions**

- Carry out any drainage works required to construct a wetlands area.
- Carry out plantings around wetland area.
- Provide seating around wetland area.
- Provide signage regarding the wetland, including identification of flora and fauna.
- Provide a walking path through wetland.
- Necessary studies to be undertaken to investigate the management of water quality in the Open Drainage Line

### **2.3.4 Management Zone C – Picnic / Monument Area**

#### **Description**

- Main area of development and includes the main gravel entry, the historic monument stone, power box, picnic facilities, log barriers and signs.
- Located on the north eastern side of the Reserve.
- Slopes to the south east towards the creek line and the Williams River.

### **Management Objectives**

- To conserve the cultural aspects of the site.
- To provide public access to the Williams River, so that visitors can enjoy the scenic view of the waterbody.
- To provide support facilities, such as picnic areas, toilets, parking, without creating additional impacts on the Reserve.
- To provide a safe road network within the Reserve.

### **Proposed Actions**

- Block off western entrance and retain only the Rifle Street entrance.
- Provide a suitable landscaped entrance feature to the Reserve.
- Undertake restoration and enhancement measures to the monument stone.
- Provide signage relating to the historical aspects of the site.
- Provision of additional bar-b-ques, garbage bins and picnic tables.
- Replacement of existing picnic facilities.
- Firewood to be provided for bar-b-ques.
- Provide a designated day carparking area.
- Upgrade existing amenities block.

### **2.3.5 Management Zone D – Camping Area**

#### **Description**

- This zone falls from a high ridge running through the centre of the Reserve falling slightly to the west and gradually to the south east to the boundary formed by the Williams River.
- It contains some stands of trees, and some replanting has been carried out.
- This management unit contains many of the gravel tracks, which traverse the site.

#### **Management Objectives**

- To encourage overnight or longer stay camping in one designated area of the Reserve.
- To consolidate carparking on the site.
- Re-vegetate the zone to provide more shade trees and camping areas.

- Provision of camping amenities.
- Create pedestrian links from camping ground to waterfront.

### **Proposed Actions**

- Provide for a through road from the western entrance, however this entrance should only be open during the day and gated at night.
- Establishment of designated carparking areas
- Construct new amenities facilities within this zone.
- Undertake additional plantings of large shade trees.
- Extension of power to camping area.
- Establish additional picnic tables, bar-b-ques and other camping facilities.

## **2.4 Administration**

Dungog Shire Council currently provides some resources to maintain Wharf Reserve, (currently a maintenance budget of some \$11,000 is shared between Bridge Reserve approximately 80% and Wharf Reserve approximately 20%) however, a number of member of other organizations within the Clarence Town area have voluntarily contributed their time and effort to assist in the maintenance of this area.

It is important with the introduction of a new Plan of Management that it be determined who will be responsible for the implementation of this new plan. The following Action Plan outlines this.

## **2.5 Staffing**

Maintenance of Wharf Reserve is currently carried out by staff from Dungog Shire Council, as well as time volunteered by various groups from the community. This does not currently provide adequate maintenance for the general areas of the Reserve.

To adequately maintain all of the Reserve and to cope with anticipated increase in usage of the Reserve, it is envisaged that a more comprehensive maintenance plan will need to be undertaken. This is in addition to the labour requirements of any capital works to develop new facilities that may be carried within the Reserve.

## 2.6 Funding

There are various sources of funding which may be applied to this site as well as expenditure from current Council revenue and these sources can be investigated. There may also be opportunities for funding through the Department of Land & Water Conservation, which would need to be investigated. Some of the areas that may be investigated for funding include:

- Allocation of funds for capital works to provide recreational facilities.
- High visitation area grants for assisting in development of facilities.

In 1997, the Clarence Town Land Care Incorporated under the Heritage Trust Funding Scheme made an application. The primary aim of the project was to enhance and protect the riverbanks and prevent further erosion of the Williams River, in addition to providing tourist and teaching facilities. The title of this project was “Rebirth of a Queen – The Greening of Wharf Reserve”.

For this particular application, Dungog Shire Council, the community and the Department of Land & Water Conservation were working together in relation to achieving the goals of this project. Unfortunately, in this particular case, the application for funding was not successful.

It is important with the introduction of a new Plan of Management that it be determined who will be responsible for the implementation of this new plan. The following Action Plan outlines this.

## 2.7 Priorities

To assist with the implementation of the Plan of Management for Wharf Reserve, the proposed actions for each Management Zone have been listed in **the Action Plan**, together with an indication of their relative priority. A three-tiered level of priority has been used to indicate the time frame in which the actions should be implemented. One of the main priorities to be considered is that of halting further degradation of flora and fauna values of the Reserve. Therefore, those actions that have been given the highest priority are those that will allow rehabilitation of areas that have been degraded.

It should be noted, that the priorities allocated in the Action Plan are based on professional judgment and are not related to a budget schedule. It does however, provide a basis for the preparation of such a budget and will assist in determining future funding and staffing requirements.

### **PART 3 THE ACTION AND PERFORMANCE PLAN**

Although this Plan of Management has been prepared by undertaking a “values” based approach, it is necessary that management issues be identified and for actions to be linked to these issues. To function as a true working document, the Action Plan is linked to the Management Strategies defined in the Management Plan.

These outcomes need to be reviewed annually to determine performance. The objectives and management issues will need to be reviewed less frequently, approximately every three years.

The following Action and Performance Plan sets out the issues, proposed actions, objectives, priority, performance measures, group responsible and an estimated cost. It needs to be read in conjunction with Section 2.2 Management Strategy.

The strategy of works to be carried out is outlined below:

- High Priority                      Action to be completed within one year
- Medium Priority                    Action to be completed within 1 – 2 years
- Low Priority                        Action to commence within 5 – 10 years and completed within 10 years
- Long Term                         Action to be commenced within 5 – 10 years and not necessarily completed
- Ongoing                            Action is carried out on a regular basis for the life of the Plan
- Commenced                        Action has commenced
- Completed                         Action has completed

**WHARF RESERVE – ACTION AND PERFORMANCE PLAN**

**March, 2005**

**MANAGEMENT ZONE A – Riverfront / Riparian Corridor**

<b>Objectives</b>	<b>Proposed Action</b>	<b>Priority</b>	<b>Group Responsible</b>	<b>Performance Measure</b>
<b>To enhance scenic views along the river front</b>	<i>Re-vegetation of riverside</i>	Medium		Re-vegetation plan is undertaken
	<i>Remove metal pylons from rivers edge</i>	High (3)		Pylons removed
<b>To rehabilitate areas that have been impacted by existing recreation facilities &amp; activities</b>	<i>Place rock armoring along areas of bank instability</i>	High (1)		Reconstruction of river-bank is complete
<b>To reduce congestion around boat ramp and provide better access ramp</b>	<i>Upgrade existing boat ramp</i>	High (1)		Boat ramp is upgraded
	<i>Provision of a 'beach' area adjacent to the boat ramp</i>	High (1)		Beach area constructed
	<i>Reconstruct Queens Wharf Board Walk adjacent to existing boat ramp</i>	Medium		Queens Wharf Board Walk is constructed
	<i>Construct a second jetty further along the western end of the river frontage</i>	Medium		Jetty is constructed
<b>To develop defined pedestrian links to Bridge Reserve</b>	<i>Construct defined pathways to waters edge</i>	High (2)		Pedestrian accessways constructed
<b>Environmental Management</b>	<i>Necessary studies to be undertaken to investigate the management of water quality in the Williams River</i>	High		Necessary studies undertaken



## MANAGEMENT ZONE B – Open Drainage Line

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To provide an environmental area by utilizing natural drainage on the site</b>	<i>Carry out drainage works and construct a wetlands area</i>	Medium		Wetlands area is constructed
	<i>Carry out plantings</i>	Commenced		Re-vegetation Plan is undertaken
	<i>Provide seating</i>	Medium		Seating is installed
	<i>Provide educational/informative signage</i>	Medium		Signs designed, purchased and installed
	<i>Provide a walking path through the wetland</i>	Medium		Walking path established
<b>Environmental Management</b>	<i>Necessary studies to be undertaken to investigate the management of water quality in the Open Drainage Line</i>	High		Necessary studies undertaken

## MANAGEMENT ZONE C – Picnic / Monument Area

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To conserve cultural aspects of the site</b>	<i>Undertake restoration and enhancement measures to monument stone</i>	Medium		Restoration works completed
	<i>Provide signage relating to historical aspects of the site</i>	Medium		Signage is designed, purchased and installed
<b>To provide public access to the Williams River and provide support facilities for visitors enjoyment</b>	<i>Block off western entrance and retain Rifle Street entrance, with a landscaped entrance feature</i>	High (1)		Access to the site is constructed
	<i>Provide additional B-B-Qs (and firewood), garbage bins and picnic tables</i>	High (1)		Low maintenance, high functionality facilities installed
	<i>Maintenance to existing facilities</i>	Ongoing		
	<i>Relocation of existing amenities block</i>	High (2)		New amenities block constructed
<b>To provide a safe road network within the reserve</b>	<i>Provision of a designated day carparking area</i>	High (2)		Design and construction of carparking area

## MANAGEMENT ZONE D – Camping Area

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To encourage overnight and longer stay camping</b>	<i>Provision of a designated overnight camping area</i>	High (3)		Design and Construction of Camping Area
	<i>Construct new toilet amenities and camping facilities</i>	High (3)		New facilities constructed
	<i>Undertake plantings of large shade trees</i>	Commenced		Re-vegetation Plan commenced
	<i>Extend power to camping area</i>	Medium		Power extended to camping area
<b>Create pedestrian links from camping ground to waterfront</b>	<i>Construct defined pathways to water's edge</i>	High (2)		Pedestrian accessways constructed

Plan of Management – Wharf Reserve, Clarence Town

## **LIST OF REFERENCES**

Clarencetown Landcare Inc., 1998, *New Project Application 1997/1998 Community Groups for National Heritage Trust Funding*

Crown Lands Act, 1989

Department of Conservation and Natural Resources., *River Murray Landscape Guidelines*

Department of Land and Water Conservation & Mandis Roberts Consultants., 1996. *Succeeding with Plans of Management (A Guide to the Local Government and Crown Lands Act)*.

Department of Urban Affairs and Planning., 1999 - 2000 *Williams River Catchment Regional Environmental Study*

Department of Urban Affairs and Planning., 1997 *Williams River Catchment Regional Environmental Plan and Regional Planning Strategy*

Department of Urban Affairs and Planning and Heritage Office., 1996 *Conservation Management Documents*

Department of Urban Affairs and Planning., *State Environmental Planning Policy No. 33 - Caravan Parks*

Department of Planning., 1992, *Planning Initiatives for Manufactured Home Estates - Discussion Paper*

Dungog Shire Council., *Development Control Plan No. 24 - Acid Sulphate Soils*

Dungog Shire Council., 1990, *Local Environmental Plan of Management*

Dungog Shire Council., 2001 *Management Plan - 1998/2001*

EDAW (Aust) Pty Ltd., 1994 *Mount Sugarloaf Public Recreation Reserve - Plan of Management*

ERM., 2000 *Newcastle Showground Draft Plan of Management - Vol. 1*

ERM., 2000 *Newcastle Showground Draft Plan of Management - Vol. 2, Action and Performance Programme*

Hunter Development Brokerage Pty Ltd., 2000, *Outcomes of Workshop - Plans of Management for Bridge Reserve and Wharf Reserve, Clarencetown*

Hunter Water Corporation., *Environmental Annual Report*, 1999 - 2000

Lake Macquarie City Council, 1991, *Lake Macquarie Recreation Area - Plan of Management, Community Facilities Department*. Lake Macquarie City Council

Local Government Act, 1993

NSW Department of Lands., 1989, *Putty Beach Reserve Plan of Management*. Sydney

Rivers and Foreshores Improvement Act, 1948