

March 2005



# DRAFT PLAN OF MANAGEMENT

# BRIDGE RESERVE CLARENCETOWN



HunterDevelopmentBrokerage

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

**March, 2005**

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## Document History and Status

Issue	Revision	Issued To	Qty	Issue Date	Author	Reviewed
Final		DUNOG CITY COUNCIL	5	7/3/05	J. Nichols	K. Nichols

Printed: 7/3/05  
File Location: G:\Jobs\2004\00\23 -Plan of Management - Bridge Reserve.doc  
Client: **Dungog Shire Council**  
HDB Project Manager: Ms Jennifer Nichols  
HDB Reference Number: 00/23

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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 **Bridge Reserve** Clarence Town. The Waterways Authority and the Department of Lands have provided 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. Since a portion of the land within this Study area is Council owned community land, the draft Plan of Management has also been prepared in accordance with the *Local Government Act, 1993*.

The principle purpose of the Plan is to determine the focus and direction of the river front reserve, known as Bridge 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 Bridge 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.

## Plan of Management – Bridge Reserve, Clarence Town

- New Project Application 1997/1998 Community Groups for National Heritage Trust (NHT) funding prepared by Clarence Town Landcare Inc.
- Hunter Water Corporation 1999-2000 Environmental Annual Report.
- SEPP 33 – Caravan Parks.
- Outcomes of Workshop – Plan of Management for Bridge Reserve and Bridge 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 workshops 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.

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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:

- 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**

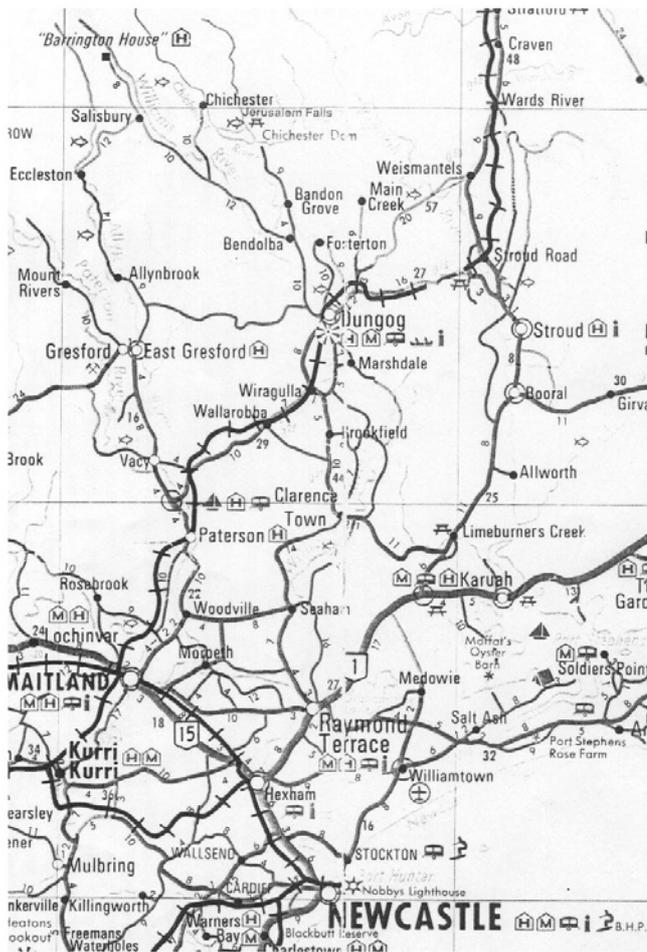
***The main objective of this Plan of Management for Bridge Reserve is to enhance and re-develop the existing Bridge Reserve Area, with an emphasis on vegetation conservation and water quality***

## 1.2 Location and Extent of the Site

### 1.2.1 Site Description

The town of Clarencetown is situated on the banks of the Williams River, approximately 55km northwest of Newcastle in New South Wales. **Figure 1** shows the **Location Plan**.

**Figure 1** Location Plan

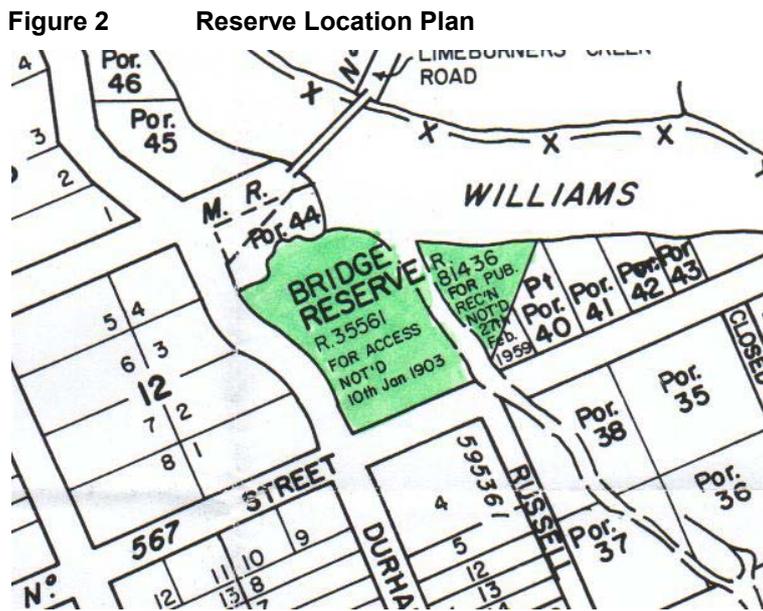


Bridge Reserve comprises of approximately 2.4 hectares of Crown land adjacent to the Williams River. This Crown land also adjoins Council owned community land that is dedicated as community land. The Williams River to the north, Durham Street to the West and Duke Street to the north bound the Reserve.

For the purpose of the preparation of the draft Plan of Management, the Duke Street road area as well as the Council owned community land has been included as part of the Reserve, even though it is not designated as part of the Reserve.

The Williams River Caravan Park, which is located at the western entrance to the reserve, is an important element of the Crown reserve area.

**Figure 2 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.



Part of the contemporary Bridge Reserve (No. 35,561 ) was gazetted on 10<sup>th</sup> January, 1903 for public access. Another section of the reserve (No. 81,436) was gazetted on 27<sup>th</sup> February, 1959, for public recreation.

The Council of the Shire of Dungog purchased the dedicated community land adjoining the Crown Reserve on 6<sup>th</sup> May, 1975.

Many areas of public land are a complicated array of land titles. It is not uncommon to have a Reserve that is partly Council owned community land and partly Crown land, under the care, control and management of Council.

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## 1.3 Regional and Statutory Context

### 1.3.1 Regional Context

Bridge Reserve is a regionally significant area of open space and passive operation, with an informal camping ground existing in the Reserve since the early 1900's. It has been assumed that the 10<sup>th</sup> January, 1903 is the opening date of the camping ground.

During the community workshop, participants were asked to identify the main values of Bridge Reserve. Values are what is important about the place and include the natural, social, recreational and heritage values.

The following values were identified:

- Well used by town
- Large public space
- Recreational asset
- Informal camping
- Accessibility to river system
- History
- Economy
- Quality of fishing in the river

### 1.3.2 Planning Instruments

Bridge 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. The DLEP 1990 zones the Bridge Reserve land as 6(a) (Open Space (Existing Recreation) Zone). It is not likely that this would change with the new LEP. 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 Bridge Reserve has been prepared to provide Management Strategies and actions to ensure that Bridge 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.*

The Williams River Bridge is listed in this Plan under Schedule 2 – Items of Regional Significance.

These heritage items are excellent examples of a type or style and include items that were significant parts of community life during the development of the region, and include early public, ecclesiastical and more prominent commercial and educational buildings of the region.

Items of regional significance may be important components of townscapes and landscapes. They may also have significant associations with the most prominent personalities of the region or be the best works of designers, architects and engineers.

All proposals for demolition, structural alterations, minor renovations, excavation, erection of anew building or land subdivision affecting regional items will require local council consent.

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

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

This REP is an outcome of the Healthy Rivers Commission Report on the Williams River. This Regional Environmental Plan (REP) 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 Bridge 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.

Bridge 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**

Bridge 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

SECTION OF ACT	REQUIREMENT
s. 112	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
s. 113	The draft plan of management must be referred to the Trust and any other appropriate person for consideration
s. 114	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 Bridge 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

Both Dungog Shire Council and representatives of the local Dungog Land Care Group, as well as various other community groups, such as Clarence Town Lions Club, currently maintain the site.

There is ample direct access to the Williams River from Bridge Reserve and this access is 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*

Bridge Reserve comprises approximately 2.4 hectares of Crown land adjacent to the Williams River. Immediately to the east adjoining to this Crown land is Council owned land that is dedicated as Community Land. 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 a creek, Hilliers Creek, which runs through the centre of the reserve. There is also a flood relief channel which runs from north west to south east through the Reserve.

The flatter section of the Reserve directly adjacent to the River, falls from a high point, which is a ridge running through the centre of the reserve approximately along the line of the gravel tracks. The site falls away slightly from this ridge to the north east to the Williams River and to the south west, to the rear of the Reserve. The caravan park area is on the higher section of the western entrance to the site.

A potential issue raised at the workshop, was a problem of runoff from the caravan park, which is located at the western entrance to the Reserve.

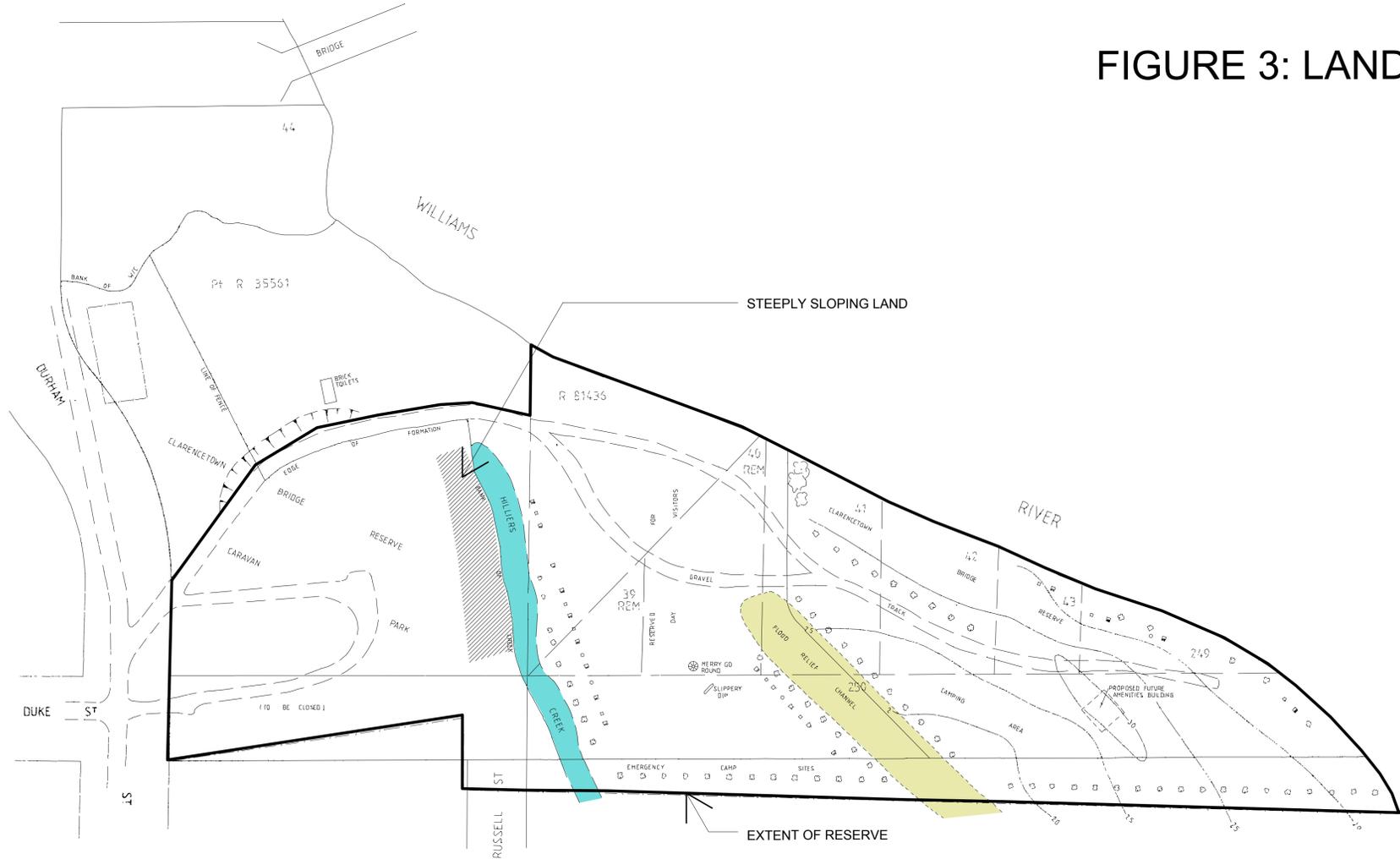
There is one entrance to the site, this being from Durham Street to the west. The access runs through the caravan park as a bitumen sealed road and into the Reserve, where it becomes gravel.

Generally the vehicular speed limit within the reserve is 20km/ph.

There are several stands of trees located through 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. The majority of the vegetation is along the edge of the river, the creekline, the flood relief channel and along the rear boundary of the site.

- HILLIERS CREEK
- FLOOD RELIEF CHANNEL

FIGURE 3: LANDFORM AND DRAINAGE



### 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.

**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 15klm 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** 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 sediment such as mudstone/ siltstone and siliceous sandstone. In addition, to remnant Volcanic tuff deposit that formed approximately 300 million years ago. To the north of the catchment in the Barrington Tops area undifferentiated sediments are overlain by Tertiary basalts, which have been deposited approximately 50 million years ago. Since that time, the process of weathering and subsequent erosion has significantly reduced the basalt caps, with the sediments being transported and re-deposited into the Williams and Chichester rivers to form part of the sediment load of these fluvial systems.

The local geology and regolith was formed as part of the Wallaringa Formation and comprises pink to brown pebble conglomerate and lithic sandstone, minor fine-grain sandstone and siltstone. Alluvial deposits of gravel sand and silt are indurated throughout the formation.

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 that 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, Bridge Reserve is within Planning Zones 3 and 5 and as such are 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 occasional access to the river. 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 well-maintained grassland area dominated by introduced grass species and some weeds. The area is approximately 150m – 200m wide and is the current area for the camping ground.

There are some plantings of native species that have been undertaken along the edge of the creek, the flood relief channel and along the rear of the Reserve. Plantings are generally mature (5 - 10 years old) and consist of various *Eucalyptus sp.*

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 Bridge Reserve, although suitable conditions exist for all four species to occur within the Reserve.

A full list of identified endemic flora species located within the riparian and floodplain zones of Bridge Reserve is as follows:

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

<b>Botanical Name</b>	<b>Common Name</b>
<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>Backhousia myrtifolia</i>	Grey Myrtle
<i>Callistamon viminalis</i>	Weeping Bottlebrush
<i>Casuarina cunninghamiana</i>	River She-Oak
<i>Casuarina glauca</i>	Swamp She-Oak
<i>Clerodendrum tomentose</i>	Hairy Lolly Bush
<i>Cryptocarya glaucescens</i>	Jackwood
<i>Elaeocarpus obovatus</i>	Hard Quandon
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus carnea</i>	Broadleaf White Mahogany

<i>Eucalyptus grandis</i>	Flooded Gum
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Lomandra longifolia</i>	Spiky Matrush
<i>Melia azedarach</i>	White Cedar
<i>Phragmites australis</i>	Native Reed
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Streblus brunonianus</i>	Whalebone Tree
<i>Waterhousea floribunda</i>	Ironwood

Note: Additional native species, which may be growing within the Reserve area includes, *Breynia oblongifolia* (Coffee Bush), *Toona ciliata* (Red Cedar) 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 Hilliers Creek area for foraging and nesting.

#### 1.4.6 Scenic Resources

Bridge 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 activities 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 Bridge Reserve.

During the public meeting held in relation to Bridge 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 Bridge Reserve, which was as a result of both the natural vegetation and its proximity to the Williams River. Visually, the Williams River Bridge also enhances the Reserve.

The main activities that were identified as being undertaken from this reserve, were those such as camping, fishing and canoeing. It was generally agreed by all workshop participants, that upgrading the facilities available in the Reserve and the addition of a boat ramp/jetty, 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 Bridge Reserve environment and undertake various bank stabilization works.

***Plate 1 shows view to the north along the river to the Bridge***



***Plate 2 shows the view to the east across the Williams River to farmland***



***Plate 3 shows the view looking south towards the Reserve***



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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 or swimming.

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.

A particular community concern regarding erosion caused by ski boat wave action has also been identified as a contentious issue.

#### **Turbidity**

Turbidity results from the amount of suspended solids within the water. Siltation and turbidity can reduce light penetration of water, adversely affecting phytoplankton and aquatic plant growth. This is also linked to stream bank erosion, as all eroded material is deposited directly into the water. Turbidity can result from power boat and water skiing activities.

#### **Flooding**

The most recent significant flood event occurred in this area in March, 2001. There was minimal flood damage caused and debris has been removed during regular maintenance. There was no recorded level for the flood event, however, local residents sited the flood at the top of the BBQs in Bridge Reserve.

#### **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.

### **Weeds**

It is evident from our site inspection, that there are some weeds that are encroaching on 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, and by 1926 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 Terrance and Newcastle using the tides to advantage. The river teemed with live steamers and punters 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 Bridge Reserve dates back to 1903, when it was gazetted for public access. The “Brig O Johnson” Bridge over the Williams River was opened in May 1879. The bridge replaced the punt, that was previously used to cross the river. The operator of the punt, Mr Clegg, was the first

person to walk over the bridge. Constructed of massive timbers, the bridge is a fine example of colonial bridge building. The estimated construction cost of the bridge was £6,820 and marked a milestone in the history of the Williams River.

According to the Regional Eco-tourism Resource Inventory Part B – Heritage Attractions, the Clarence Town Bridge is listed as having a heritage listing in Hunter Regional Environmental Plan 1989 (Heritage), with Heritage Schedule No. 2. It is described as having “good access by road and still in use.”

### *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 Bridge 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 Bridge Reserve.

## **1.6 Existing Development and Uses**

### *1.6.1 Introduction*

The Bridge Reserve which comprises both a Crown Land component and Council’s community land is zoned 6(a) Public Open Space, while the adjoining area to the west is zoned 1(c) Rural, and 2(a) Residential to the south.

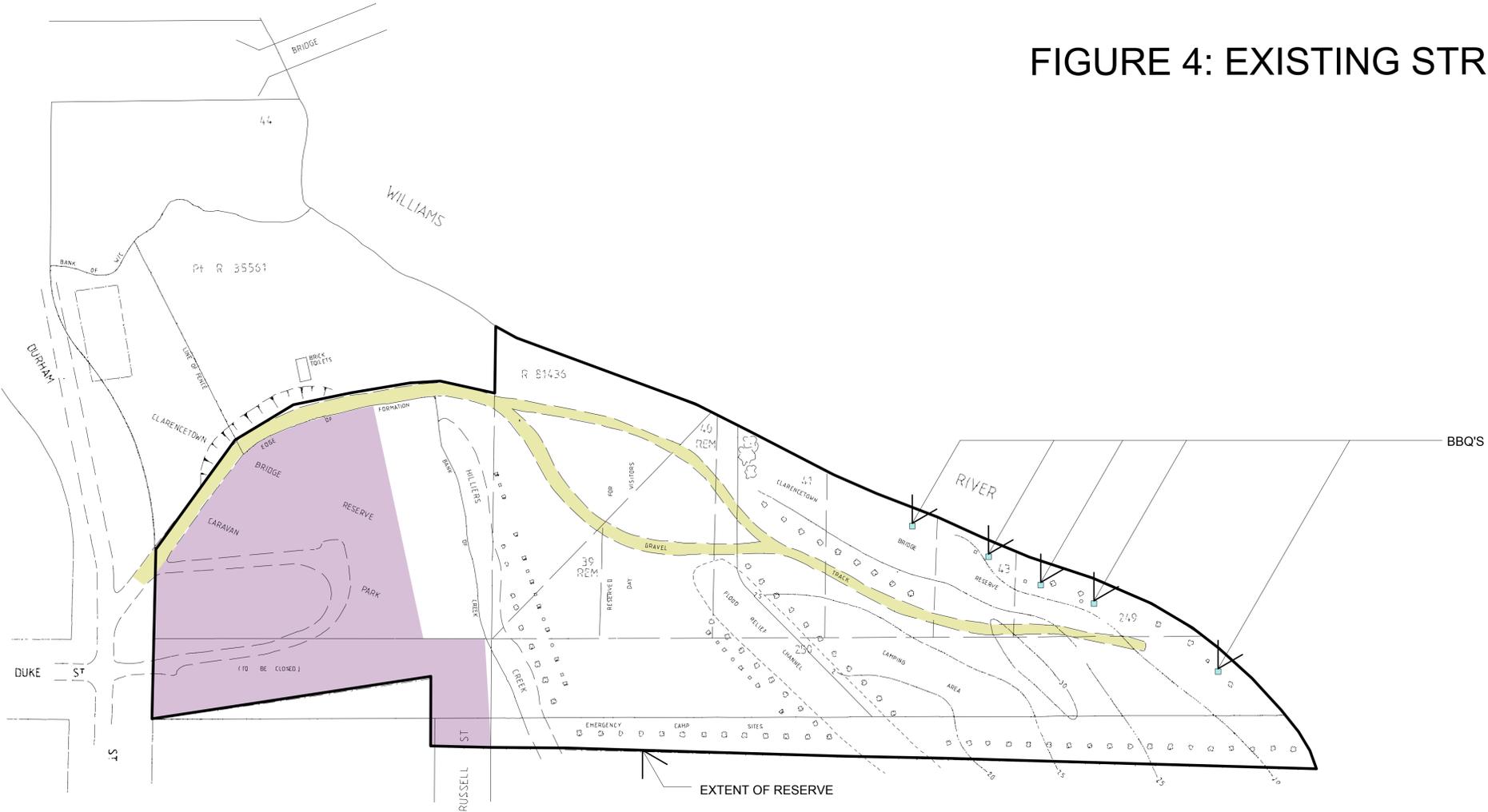
Development within the Bridge Reserve primarily consists of facilities relating the recreational aspects of the reserve. These include picnic area facilities, an amenities block in caravan park area, camping areas, carparking and a gravel access track running through the site.

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

- Camping sites
- Caravan Park, including a brick amenities block
- Numerous BBQ’s, picnic tables and garbage bins

- WILLIAMS RIVER CARAVAN PARK
- GRAVEL TRACKS

**FIGURE 4: EXISTING STRUCTURES & BUILDINGS**



Plan of Management – Bridge Reserve, Clarence Town

- Gravel access track traversing the site
- Carparking area
- Flood relief channel

There is one access to the reserve, being via Durham Street, which is a bitumen sealed road, from which the gravel track extends and runs through the Reserve. The site has been disturbed over a long period of time. The following plates show various views of the Reserve.



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### 1.6.2 *The Williams River Caravan Park*

The Williams River Caravan Park is situated at the main entrance to the Reserve. As advised by Council, the caravan park comprises nine (9) permanent sites, plus four (4) cabins for casual hire, as well as eight (8) powered sites.

Council has commenced upgrading of the facility, with the establishment of four cabins for tourist accommodation. The caravan park has one amenities block that consists of showers and toilets and is connected to a pump out system. The pump out system is also connected to the amenities facility block at the Lions Club Park adjacent. Council has also upgraded the amenities block and are currently upgrading the general layout of the park and the road system.

These upgraded facilities would assist in alleviating the impacts currently on the Reserve, caused by visitors camping on the formal areas of the Reserve. The following plates show various views of the Caravan Park.



### 1.6.3 *Recreation Opportunities*

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

- The development of a fishing expo or the like;

- The opportunity to promote tourism and in particular the history of the bridge and the surrounding township of Clarence Town;
- The development of overnight accommodation and cabins;
- The development of adventure tours;
- The provision of longer stay camping;
- The development of a jetty along the river bank for fishing and other water sports; and
- The development of an historic walkway linking to Wharf Reserve.

## 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**. 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 Bridge Reserve. Each Landscape Unit is described separately below.

### Landscape Unit A – River Front / Riparian Corridor

#### Description

- All of the reserve that follows the northern boundary of the reserve along the Williams River.
- Sections of the bank area have been disturbed due to people gaining access to the riverbank.
- Generally tree covered riparian vegetation

#### Significance

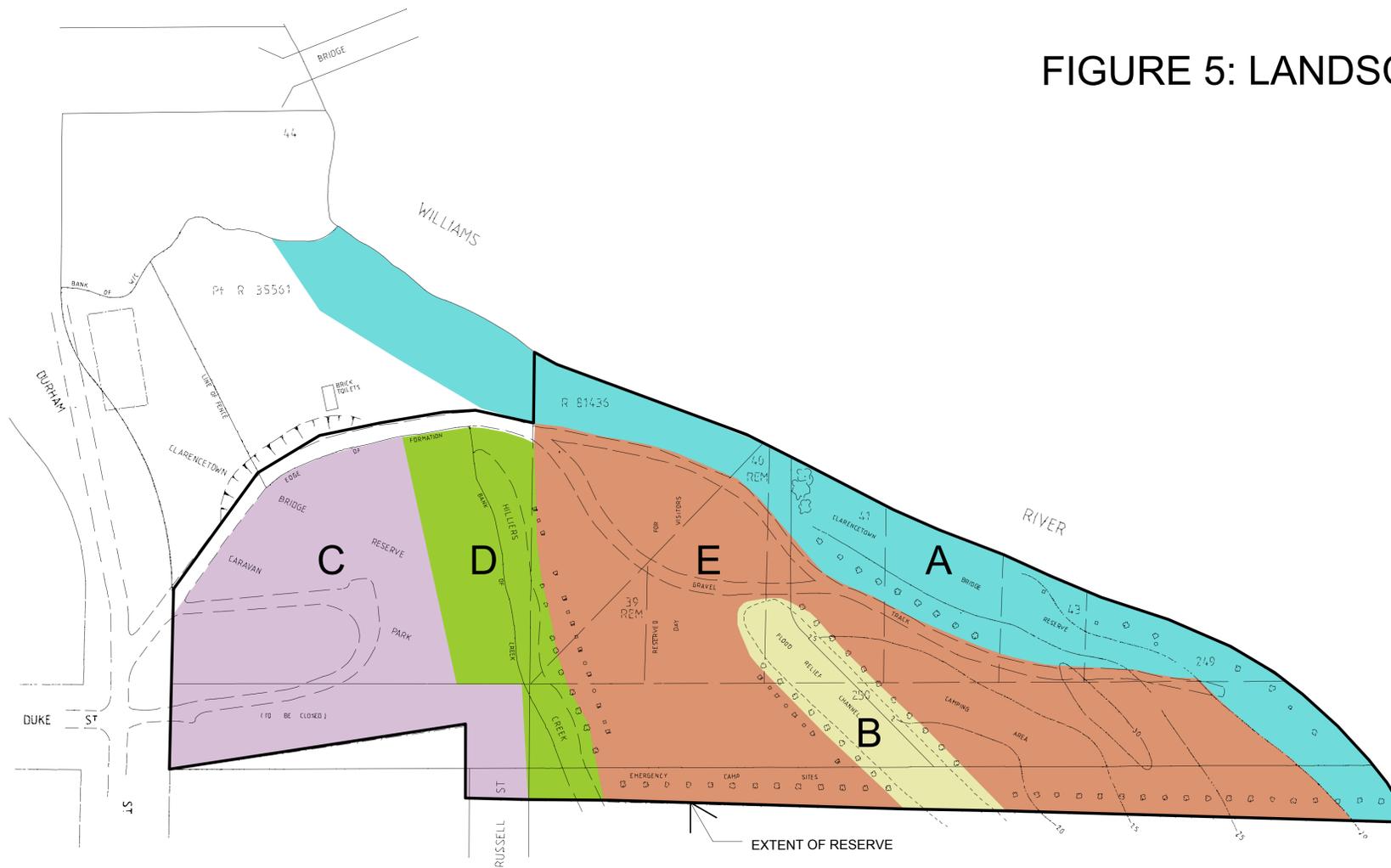
- The conservation value is high, as it is a natural feature of the riverfront.
- The conservation of this area is encouraged due to opportunities for scenic views of the natural landscape setting of the river frontage and views to the historic Clarence Town Bridge.

#### Management Issues

- Measures to be taken to prevent further erosion of the riverbank.

- LANDSCAPE UNIT A:  
RIVER FRONT / RIPARIAN CORRIDOR
  - LANDSCAPE UNIT B:  
FLOOD RELIEF CHANNEL
  - LANDSCAPE UNIT C:  
CARAVAN PARK
- LANDSCAPE UNIT D:  
HILLIERS CREEK
  - LANDSCAPE UNIT E:  
CAMPING & DAY VISITOR AREA

FIGURE 5: LANDSCAPE UNITS



- Limited and identified pedestrian access to the riverfront to discourage an adhoc approach.
- Sections of this unit have been severely disturbed by bicycles and this area needs to be extensively remediated in relation to drainage.
- General drainage works required to avoid further soil erosion and bank instability.
- Reference should be made to the Williams River Total Management Plan.
- Re-vegetation and reestablishment of native endemic species should be a primary management issue.

## **Landscape Unit B – Flood Relief Channel**

### **Description**

- A flood relief channel runs from the northwest to the southeast through the centre of the site.
- The area is a flood relief channel.

### **Significance**

- This depression is used as a relief channel in times of flooding along the Williams River.

### **Management Issues**

- No camping allowed in this area.
- Area needs to be cleared of introduced weed species.
- Erosion issues need to be addressed.
- Maintenance and enhancement of groundcover within the Reserve area.

## **Landscape Unit C – Caravan Park**

### **Description**

- This area relates to the formal caravan park area of the Reserve.
- The caravan park is at the main entrance to the Reserve.
- There are minimal shade trees and the caravan park is in general need of an upgrade.

### **Significance**

- Recreational values are important due to the opportunities for formal visitor camping areas and caravan sites.

### **Management Issues**

- Council has commenced upgrading of the existing facilities, however additional work is still required.
- Regular maintenance of the caravan park required.

## **Landscape Unit D – Hilliers Creek (inc. steep banks)**

### **Description**

- Hilliers Creek runs in a northwest to southeast direction at the base of the slope leading down from the caravan park to the west of the reserve.
- This is a significant water body on the site.
- The banks of this creek are highly vegetated.
- Steeply sloping bank on western side of the creek

### **Significance**

- The conservation value is high, as it is a natural water body on the reserve.

### **Management Issues**

- This creek area could be utilized as a feature of the site, with suitable landscaping
- Re-vegetation and the re- establishment of additional fauna habitat to be encouraged.
- Further studies required in relation to water quality issues

### **Landscape Unit E – Camping and Day Visitor Area**

#### **Description**

- This is a relatively flat area covered in grassland and takes up the majority of the site.
- The flood relief channel that is Landscape Unit B, runs through the centre of this site.
- Contains a stand of trees along the southern boundary of the Reserve.
- This unit contains the gravel tracks that provide access around the site.

#### **Significance**

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

#### **Management Issues**

- Relocation or construction of additional amenities units and picnic facilities required in this unit.
- Gravel tracks need upgrading.
- Picnic facilities require upgrading and maintenance.
- Restrict vehicular access to the camping area.

## **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 Bridge Reserve results from a combination of its access to the Williams River and its close location to town, the provision of camping and picnic facilities and that it caters for a variety of water uses, including fishing, swimming and canoeing.

Most visitors to the Reserve are attracted by this access to the Williams River as well as the scenic views available from the riverbank. Most visitors stay for relatively short periods of time, as there are not adequate facilities available for long 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 upgrading of facilities in the Bridge Reserve, including small jetties and walkway to 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 Clarendontown 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.

Bridge Wharf was gazetted on 10<sup>th</sup> January, 1903, for public access.

#### 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 Bridge 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 Pty Ltd.

*“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 Williams River Bridge, which is situated to the north of Bridge Reserve is listed. It also has a heritage listing under the Hunter Regional Environmental Plan 1989 (Heritage) - Heritage Schedule No. 5. The bridge dates back to 1879 with its original use to replace the punt, which was the main way of crossing the Williams River at this point.

The “Brig O Johnson” Bridge over the Williams River was opened in May 1879. Constructed of massive timbers, the bridge is a fine example of colonial bridge building. The estimated construction cost of the bridge was £6,820 and marked a milestone in the history of the Williams River.

### *1.8.3 Adjoining Land Use and Ownership*

The Bridge Road Reserve is adjoined primarily by 2(a) Residential land to the south, 1(c) land to the west.

The main objectives of the 2(a) Residential and 1(c) Rural Residential zones are to permit the development of low-density residential lots and related activities.

The main objective of this Plan of Management for Bridge Reserve is to enhance and redevelop the existing Bridge Reserve area, with an emphasis on vegetation conservation and water quality. 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 Bridge Reserve area is via Durham Street. This street runs directly through the township of Clarence Town to the Bridge Reserve area.

## **1.9 Reserve Management**

The Bridge Reserve is made up of a section of Crown Land, as well as a section of Council owned community land.

Dungog Shire Council currently manages and undertakes regular maintenance of the 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 Bridge Reserve. These include the Clarence Town Lions Club and local Landcare Groups.

## **PART 2 THE MANAGEMENT PLAN**

### **2.1 Management Objectives**

Bridge Reserve was dedicated as a Reserve on the 10<sup>th</sup> January, 1903. 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 Bridge 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 enhanced as much as possible, so that any associated wildlife habitat values will be maximized to ensure ecological sustainability;
- Only those recreation opportunities that require or are compatible with 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 Bridge 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 Bridge Reserve is the opportunity for the use of the Williams River waterway. Facilities required by visitors engaging in this primary recreation activity (proposed jetty or small boat ramp, access to the water front, 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 enhancement of access to the site, to reduce congestion.
- The development of longer stay camping areas in the caravan park area of the Reserve.
- The introduction of a jetty to assist with bank instability.
- The promotion of the historical and cultural aspects of this Reserve.
- The construction of a walking trail linking Bridge Reserve to Wharf Reserve.
- A designated car parking area, to reduce the degradation and soil erosion on this site.

- A comprehensive effluent management strategy to be developed for the Reserve.
- The establishment of a designated pedestrian access to the foreshore, with links back to the camping ground, 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 assure 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 Bridge Reserve:

- Well used by the town
- Large public space
- Recreational asset
- Informal camping
- Accessibility to river system
- Historical
- Economy
- Quality of fishing in the area

#### LEVEL OF SIGNIFICANCE

	Local	District	Region	State	National	International
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 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**

Bridge 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, 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 promote the history of the Williams River Bridge. Clarence Town, the first town established in the catchment in 1832, was a major ship-building centre, which utilised 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 and the Williams River Bridge opened in 1879.

**2.2.2 Site Constraints**

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

The Bridge Reserve site currently has the following constraints:

- Amenities and facilities in need of significant and ongoing maintenance work, especially picnic tables, toilets and Bar-b-ques.
- Rubbish removal and lack of rubbish bins
- Work needs to be undertaken to upgrade the gravel access roads running through the Reserve
- Lack of boating facilities, such as jetties and a boat ramp
- 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
- Vandalism
- Lack of servicing
- Lack of funding
- Competing interests from different groups
- Noxious and introduced flora and fauna species

## **Opportunities**

The Bridge Reserve site has the following opportunities

- The opportunity to enhance tourism
- Promote the historical aspects of the bridge and of the township of Clarence Town
- Re-vegetation of the Reserve to encourage native vegetation
- It is a large flat open space with room to develop further recreational activities
- Overnight accommodation and cabins in the caravan park
- 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 town facilities such as shops and the local hotel
- Reserve has a natural scenic quality, with natural vegetation and replanting
- Promotion of both active and passive water uses

### 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 Bridge Reserve.

The main issues relating to Bridge 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 active and passive facilities, these activities 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, identifying particularly, the lack of a jetty or ramp for small boats, 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 enhancement 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. Erosion is also caused by ski-boat wave action and this has been identified as a major problem. Camping areas are also a source of effluent.

## **2.3 Management Zones**

### **2.3.1 Introduction**

Bridge Reserve has been divided into a series of zones, each of which requires particular management actions. These Management Zones 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** 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.

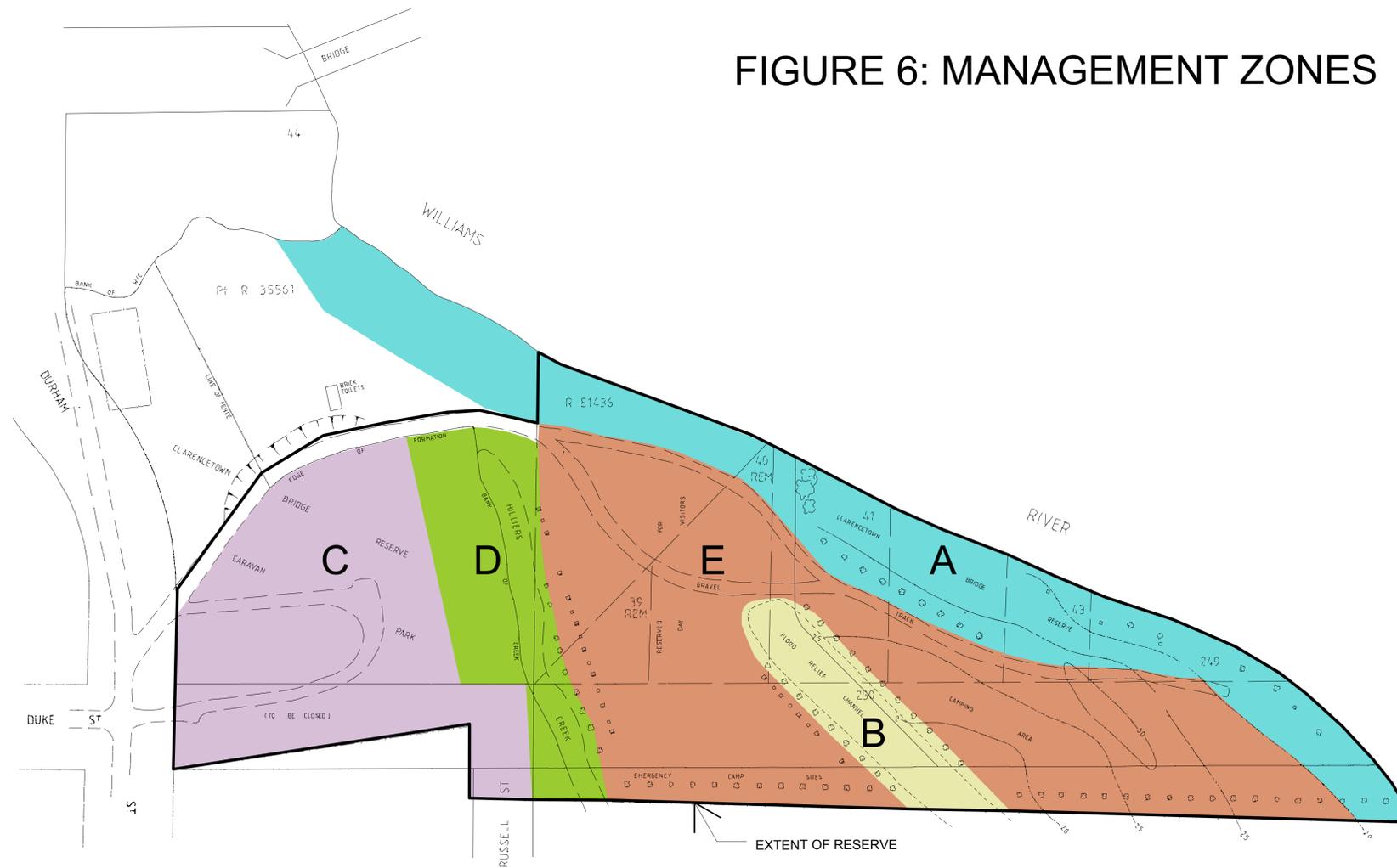
### **2.3.2 Management Zone A – River Front ./ Riparian Corridor**

#### **Description**

- Area of the reserve that follows the Williams River frontage along the northern boundary above the site.
- Dense screen of trees running along this riverfront.
- Due to adhoc access to the river, there is some bank instability and erosion.
- In some sections the bank slopes quite steeply down to the river.
- There is a small section along the riparian corridor approximately along the centre of the boundary frontage to the Williams River, which is an area of dense casurina trees. In this area there is little to no understorey present and no ground cover vegetation whatsoever. It is an area of severe erosion and appears to be utilized as a bike track, as there is evidence of jumps made from mounds of earth.

- MANAGEMENT ZONE A:  
RIVER FRONT / RIPARIAN CORRIDOR
  - MANAGEMENT ZONE B:  
FLOOD RELIEF CHANNEL
  - MANAGEMENT ZONE C:  
CARAVAN PARK
- MANAGEMENT ZONE D:  
HILLIERS CREEK
  - MANAGEMENT ZONE E:  
CAMPING & DAY VISITOR AREA

FIGURE 6: MANAGEMENT ZONES



### ***Management Objectives***

- To enhance the scenic views along the river frontage.
- To rehabilitate areas impacted upon by existing recreation facilities and activities.
- To develop defined pedestrian links to the river front and further to Wharf Reserve.
- To provide more organized pedestrian access to the riverfront.
- To reduce soil erosion.
- To rehabilitate area in the section under the Casuarina trees.

### ***Proposed Actions***

- Revegetation of the riparian corridor, by planting endemic species including suitable groundcover and understorey species which are able to adapt to this environment (Refer Table 3 for a selection of suitable species).
- Construction of two (2) small jetties at the eastern end of the reserve.
- Construction of a small jetty at the western end of the reserve.
- Provision of a tap to one of the jetties on the waterfront.
- Extension of a formal pedestrian walkway along the riverfront linking to the proposed jetties, so as to reduce further impacts of erosion on the site.
- Upgrade signage to reflect historical aspects of the site and to mitigate any potential erosion issues.
- Necessary studies to be undertaken to investigate the management of water quality in the Williams River

### ***2.3.3 Management Zone B – Flood Relief Channel***

#### ***Description***

- This is an area in the centre of the Reserve and includes the flood relief channel.

#### ***Management Objectives***

- To provide an effective flood relief channel, that is weed free.
- To enhance this natural water body.

### ***Proposed Actions***

- Undertake weed eradication in the flood relief channel
- Ensure that 'No Camping' is allowed in this zone.
- Necessary studies to be undertaken to investigate the management of water quality in the Flood Relief Channel

### **2.3.4 Management Zone C – Caravan Park**

#### ***Description***

- This area relates to the formal caravan park area of the Crown Reserve.
- The caravan park is located at the main entrance to the Reserve.
- There is currently one permanent site and 26 short term sites.

#### ***Management Objectives***

- To provide formal longer stay tourist accommodation.
- To ensure that there is no impact on the environment in relation to on-site effluent disposal.

#### ***Proposed Actions***

- Upgrade caravan park in general, including entrance signage, landscaping, mowing and maintenance.
- The provision of 4 cabins for longer-stay accommodation for tourists.
- The provision of more shade trees.
- Increase current amenities block to cater for increased tourist levels.

### **2.3.5 Management Zone D – Hilliers Creek**

#### **Description**

- This is an area in the centre of the Reserve and includes Hilliers Creek.

#### **Management Objectives**

- To provide a weed free environment.
- To enhance this natural water body.

#### **Proposed Actions**

- Undertake weed eradication along the Hilliers Creek Boundary
- Ensure that there is No Camping in this area of the Reserve
- To clean out the Hilliers Creek waterbody, revegetate with additional native flora species and rehabilitate and improve habitat for foraging and nesting related activities of flora and fauna species such as the Spotted Tail Quoll and Brush – Tailed Phascogala and reptile and amphibian species.
- Necessary studies to be undertaken to investigate the management of water quality in Hilliers Creek

### **2.3.6 Management Zone E – Camping and Day Visitor Area**

#### **Description**

- This is a large, flat, well grassed area on the western side of the Reserve.
- There are very few shade trees in this area, apart from the rear boundary area.
- There are several stands of large mature Eucalypts trees in this zone (Refer Table 3 for endemic species)
- The gravel access track runs through this section of the Reserve.
- This area includes a block of portable toilets and a bank of garbage bins.

### ***Management Objectives***

- To provide public access to the Williams River, so that visitors can enjoy the scenic view of the water body.
- To provide a community focus point
- To provide support facilities, such as picnic areas, toilets and parking, without creating additional impacts on the Reserve.
- To provide a safe road network within the Reserve.
- To encourage short stay camping in one designated area on the Reserve.
- To revegetate the zone to provide more shade trees and camping areas.
- Provision of camping amenities.
- Create pedestrian links from camping ground to the waterfront.

### ***Proposed Actions***

- Extension of power to camping area.
- Provide a designated day carparking area.
- Provision of an additional amenities block.
- Construction of an Open Pavilion to provide a community focus point for activities
- Construction of a bridge from the new amenities block across the pond to facilitate and encourage use of that facility by campers staying in the open camping area.
- Provision of children's playground equipment.
- Provide a suitable landscaped entrance feature to the reserve.
- Firewood to be provided for Bar-b-ques.
- Provision of additional Bar-b-ques, garbage bins and picnic tables.
- Provide signage relating to the historical aspects of the site.
- Undertake additional planting of large shade trees.
- Provide suitable edge treatment to gravel access road, so as to discourage vehicles driving all over the camping ground.
- Enhance the Park Manager's role and the activities of Landcare groups or other community organizations could be explored for the Reserve area.

## **2.4 Administration**

Dungog Shire Council currently provides some resources to maintain Bridge 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. An opportunity exists to enhance the current Park Manager's role and also to encourage and enhance the activities of the Local Landcare groups and/ or other community organisations to facilitate the new Plan of Management. The following Action Plan outlines this.

## **2.5 Staffing**

Maintenance of Bridge Reserve is currently carried out by staff from Dungog Shire Council, as well as volunteers from various community groups. While this provides adequate maintenance of the general carparking area and picnic areas, it does not provide adequate maintenance for the riparian area and general areas of the Reserve. The caravan park has a permanent manager on site, who is responsible for the day to day management issues and maintenance.

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. 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.

## 2.7 Priorities

To assist with the implementation of the Plan of Management for Bridge 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**

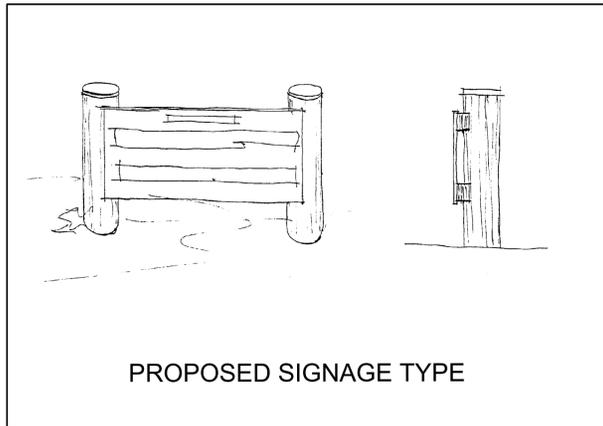
Although this Plan of Management has been prepared by undertaking a “values” based approach, it is necessary that management issues be identified and for actions to be linked to these issues. To function as a true working document, the Action Plan is linked to the Management Strategies defined in the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

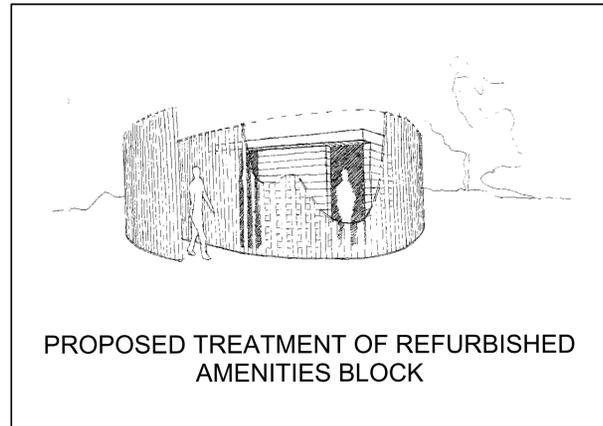
The following Action and Performance Plan sets out the issues, proposed actions, objectives, priority, performance measures, group responsible and an estimated cost. It needs to be read in conjunction with **Section 2.2 Management Strategy**.

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

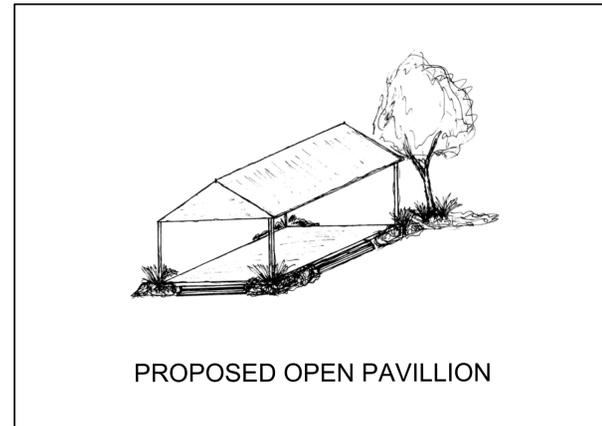
- High Priority                      Action to be completed within one year
- Medium Priority                  Action to be completed within 1 – 2 years
- Low Priority                        Action to commence within 5 – 10 years and completed within 10 years
- Long Term                         Action 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



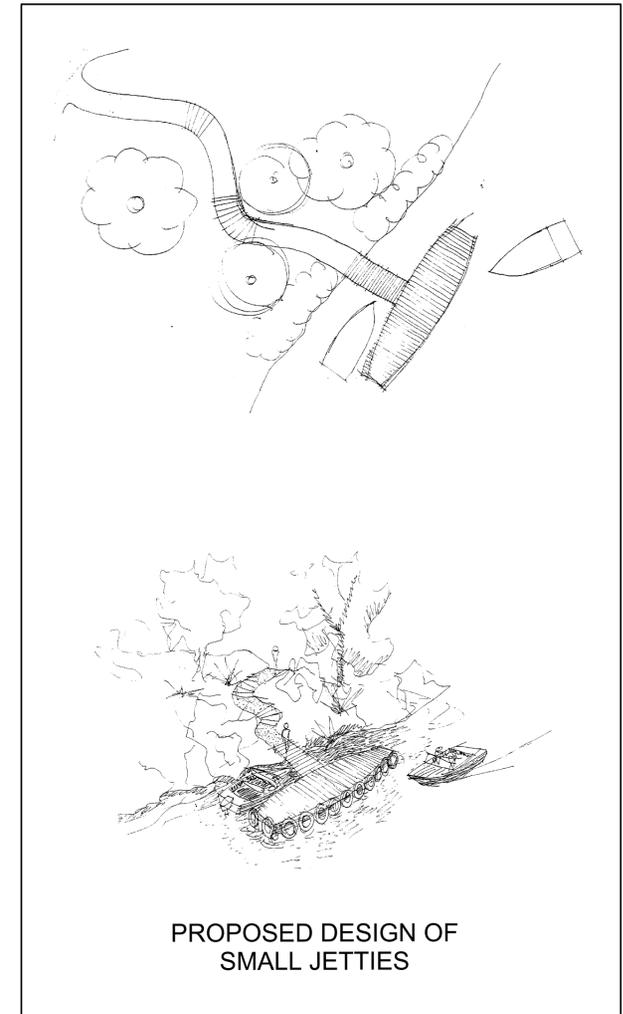
PROPOSED SIGNAGE TYPE



PROPOSED TREATMENT OF REFURBISHED AMENITIES BLOCK



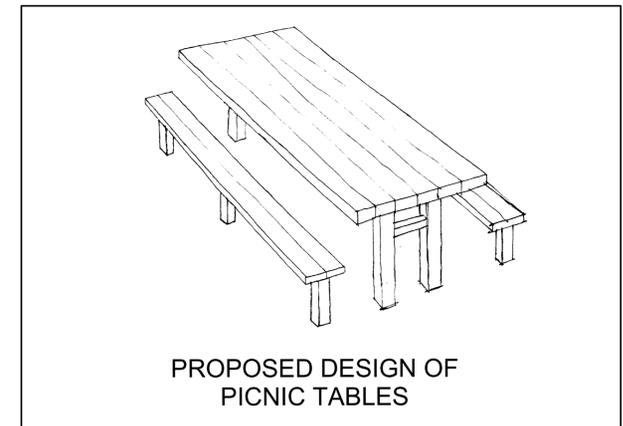
PROPOSED OPEN PAVILLION



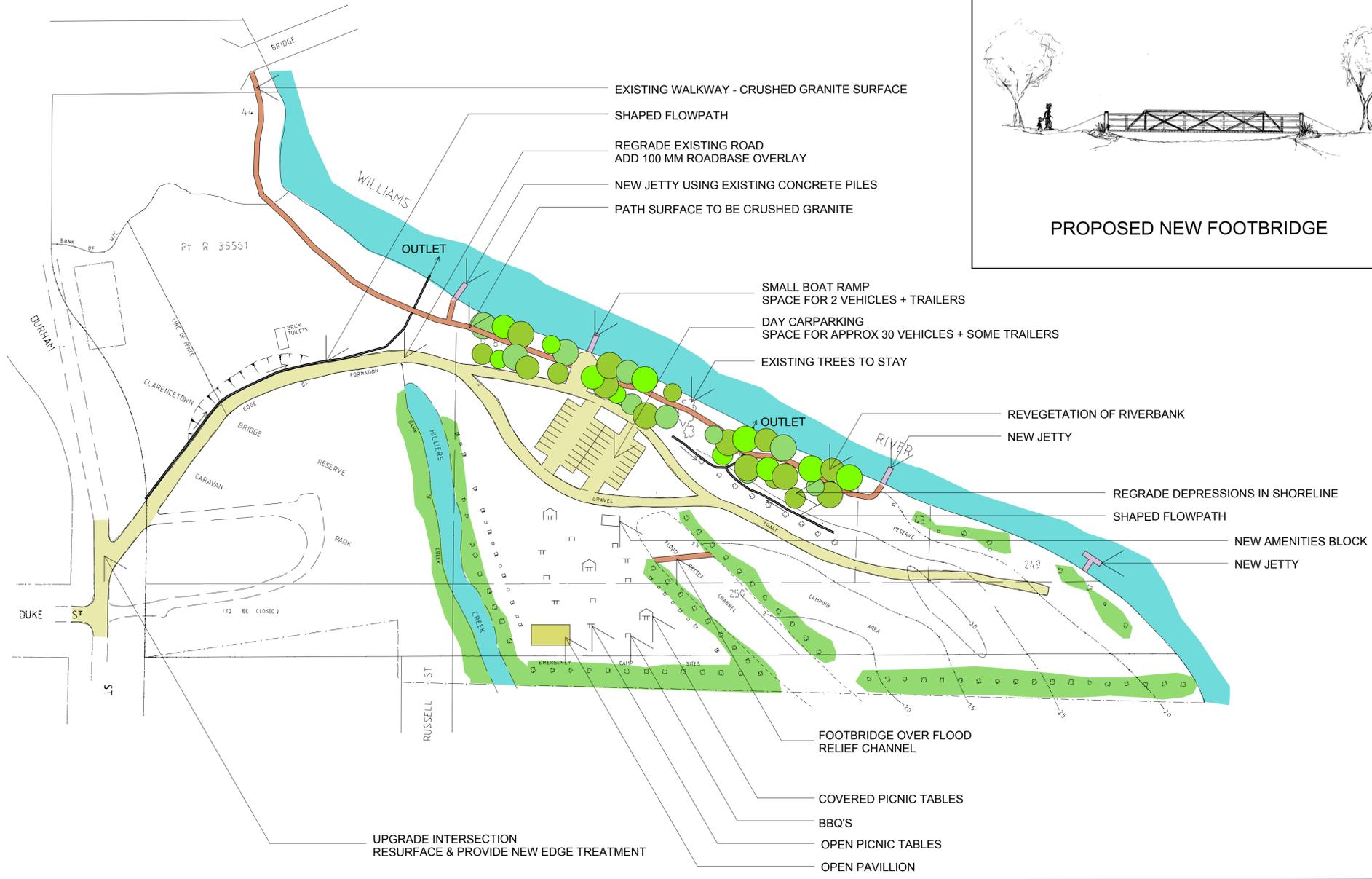
PROPOSED DESIGN OF SMALL JETTIES



PROPOSED NEW FOOTBRIDGE



PROPOSED DESIGN OF PICNIC TABLES



**MASTERPLAN - BRIDGE RESERVE, CLARENCETOWN**

**BRIDGE RESERVE – ACTION AND PERFORMANCE PLAN**

**March, 2005**

**MANAGEMENT ZONE A – Riverfront and 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 riparian areas</i>	High		Re-vegetation plan is undertaken
<b>To rehabilitate areas that have been impacted by existing recreation facilities &amp; activities &amp; reduce soil erosion</b>	<i>Construction of a small jetty at western end of reserve</i>	Medium		Jetty is constructed
	<i>Construction of small boat ramp</i>	Medium		Boat ramp constructed
	<i>Maintain 8 knot speed restriction</i>	Ongoing		8 knot speed restriction maintained
	<i>Provision of a tap to jetty</i>	Low		Tap is installed
	<i>Construction of 2 small jetties at eastern end of reserve</i>	Medium		Jetties are constructed
<b>To provide more organized pedestrian access to riverfront</b>	<i>Extension of the pedestrian walkway along the riverfront</i>	Medium		Pedestrian accessway constructed
	<i>Upgrade signage, both directional and to reflect historical aspects of the site</i>	Medium		Signage designed, purchased and installed
<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 – Flood Relief Channel

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To provide an effective flood relief channel</b>	<i>Undertake weed eradication program</i>	High		Weed eradication program undertaken
<b>To enhance the natural waterbody</b>	<i>Carry out program to clean out waterbody, revegetate and introduce additional fauna species</i>	Medium		Regeneration works undertaken
	<i>Ensure that there is No Camping on this section of the Reserve – provision of adequate signage and suitable barriers</i>	High		No Camping occurring
<b>Environmental Management</b>	<i>Necessary studies to be undertaken to investigate the management of water quality in the Flood Relief Channel</i>	High		Necessary studies undertaken

### MANAGEMENT ZONE C – Caravan Park

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To encourage overnight and longer stay camping/tourist facility</b>	<i>Extend power to camping area</i>	Medium		Power extended
	<i>Undertake planting of additional large shade trees</i>	Low		Trees planted
	<i>Provision of suitable edge treatment to gravel access road</i>	High		Edge treatment carried out
<b>Provision of camping amenities</b>	<i>Establish additional picnic tables, Bar-b-ques and other camping facilities</i>	High		Additional facilities constructed
<b>To provide formal longer stay tourist accommodation</b>	<i>Upgrade of caravan park including entrance signage, landscaping, mowing and maintenance</i>	High		General upgrade undertaken
	<i>Provision of 2/3 cabins aimed at longer stay accommodation</i>	Medium		Cabins constructed
	<i>Planting of additional shade trees</i>	Medium		Trees planted
<b>Ensure that there is no impact on the environment</b>	<i>Upgrade amenities block to cater for increased use</i>	High		Amenities upgraded

## MANAGEMENT ZONE D – Hilliers Creek

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To provide an effective waterbody</b>	<i>Undertake weed eradication program</i>	High		Weed eradication program undertaken
<b>To enhance the natural waterbody</b>	<i>Carry out program to clean out waterbody, revegetate and introduce additional fauna species</i>	Medium		Regeneration works undertaken
	<i>Ensure that there is No Camping on this section of the Reserve – provision of adequate signage and suitable barriers</i>	High		No Camping occurring
<b>Environmental Management</b>	<i>Necessary studies to be undertaken to investigate the management of water quality in Hilliers Creek</i>	High		Necessary studies undertaken

## MANAGEMENT ZONE E – Camping and Day Visitor Area

Objectives	Proposed Action	Priority	Group Responsible	Performance Measure
<b>To provide public access to the Williams River</b>	<i>Provide a suitable landscaped entrance feature</i>	Medium		Entrance landscaping complete
<b>To provide support facilities without creating additional impacts on reserve</b>	<i>Construct additional amenities block</i>	High		Amenities block constructed
	<i>Undertake planting of large shade trees</i>	Medium		Shade trees planted
	<i>Provision of playground equipment</i>	Medium		Playground equipment constructed
	<i>Provision of additional Bar-b-ques, garbage bins, picnic tables, firewood</i>	High		Additional facilities provided
	<i>Provision of signage relating to historical aspects and directional</i>	Medium		Signage designed and installed
<b>To provide a safe road network within the reserve</b>	<i>Provide a designated day carparking area</i>	Medium		Carparking area designed and constructed
	<i>Provide suitable edge treatment to gravel access roads</i>	Medium		Edge treatments constructed
	<i>Construction of a bridge over billabong</i>	Low		Bridge constructed
<b>To provide a community focus point</b>	<i>The construction of an open pavilion</i>	Low		Pavilion constructed

## 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

**File Ref: 00/23**

Summary of the submissions received in relation to the public exhibition of the Plans of Management

**WRITTEN SUBMISSIONS**

<b>Name</b>	<b>Address</b>	<b>Comment</b>
<b>Williams River Care Association</b>  <b>Mr John Ellis</b>	PO BOX 257 RAYMOND TERRACE NSW 2324	<p>There should be more information in relation to the current degree of degradation to the reserves and the rivers</p> <p>Does the current toilet block meet current council standards?</p> <p>The new plan should have an emphasis on conservation of the vegetation and water quality</p> <p>The new plan must increase values of the reserve for the local community</p> <p>Thoughtfully placed picnic areas with views of the river</p> <p>Creation of a walkway/cycleway/bridle path along the lower river front path (away from motor vehicle traffic) , with the addition of a bridge and gravel path across the creek, linking to Grey Street via the pony club grounds</p> <p>Through road from Fotheringay Road, to be sealed and speed limited</p> <p>Not in favour of camping ground at Wharf Reserve</p> <p>Riparian vegetation and conservation funding should be highest priority</p> <p>Restoration as a vegetation reserve</p> <p>Other suggestions include:</p> <ul style="list-style-type: none"><li>• an arboretum showcasing local biodiversity</li><li>• a children's playground</li><li>• historical and biodiversity display panels</li></ul>

<p><b>Lyn Rayward</b></p>	<p>83 Fotheringay Road CLARENCETOWN NSW 2321</p>	<p>Does not support the blocked entrance from Marshall Street. Keep it open as a through road with limited speed to encourage "neighbourhood watch"</p> <p>Supports the construction of a bridge to the pony club land and Grey Street</p> <p>Does not support the additional jetties proposed, however if jetties are built, would like to ensure that bank protection and reinforcement is undertaken</p> <p>Camping should not be allowed until the sewer is installed and there are adequate facilities</p> <p>Commends the plan for controlling traffic and making the track near the river on Wharf Reserve for pedestrians</p> <p>The development of the reserve and the town should be moving to encourage ecotourism and historical appreciation, rather than speed boaters</p>
<p><b>Bill and Bev McKinnon Matthews</b></p>	<p>"Pepercorns" 64 Williams River Close CLARENCETOWN NSW 2321</p>	<p>The increasing population living within walking distance of the town, consideration should be given to off-road pedestrian access</p> <p>In relation to Wharf Reserve, would like to see a Multi-purpose walking trail to run through the Reserve to connect Marshall Street with the central shopping area on Grey Street, incorporating a bridge over the creek and through the Rivercare Wetlands Reserve</p> <p>Concerned that there were too many car parking areas shown on the proposed plan for Wharf Reserve</p> <p>Feel that Wharf Reserve should be kept primarily for day trippers, with limited camp sites</p> <p>Priority to be given to the stabilisation of the riverbank, river access sites and upgrading the boat ramp</p> <p>Support the construction of a jetty</p>
<p><b>Dungog Shire Mayor Mr Steve Low</b></p>	<p>DUNGOG SHIRE COUNCIL PO BOX 95 DUNGOG NSW 2420</p>	<p>The billabong at Bridge Reserve should include a bridge across the pond so that there is easier access to the amenities block. Suggests that the bridge could be a replica of the main road bridge</p> <p>Need to address the maintenance of the quality of water in the billabong</p> <p>Suggests putting Hillers Creek as a separate landscaping unit with recommendations for necessary studies to be undertaken in relation to water quality of the billabong</p> <p>The provision of an open pavilion on the River Flats in Bridge Reserve</p> <p>The wetlands at Wharf Reserve should be a chain of ponds, with a pathway/cycleway following the watercourse, with access to Grey Street</p> <p>An aim of the POJ should be to link the two reserves as well as other community facilities</p> <p>Aim towards linking up of all current and proposed cycleways and walkways</p> <p>The camping areas of Wharf Reserve to be user friendly to encourage campers in the correct locations rather</p>

		<p>than the river bank. Suggest that the camping areas accommodate vehicle parking beside the camp sites</p> <p>Supports the through road through Wharf Reserve</p> <p>Special consideration needs to be paid to river bank erosion in Wharf Reserve. This needs to be flagged in the POM. This needs to be flagged as an annexure for future additional so that funding can be secured for additional studies as may be required</p>
<b>Digby Rayward</b>	83 Fotheringay Road CLARENCETOWN NSW 2321	<p>Would like to see a link through Wharf Reserve to the Main Street of Clarencetown that can be used by joggers, cyclists etc</p> <p>The construction of a pedestrian bridge from wharf Reserve onto the pony club land so that there is a direct link to the main street</p> <p>Consideration should be given to the construction of exercise sits along the walkway</p> <p>Children's play area in the top section</p> <p>The road from Marshall Street should not be closed, however, the speed on the road should be limited</p> <p>Need to reconsider the priorities listed in the report</p> <p>Consider that the toilet facilities at Wharf Reserve are inadequate and unmaintained</p> <p>Resources spent on the Reserves need to be considered as the reserves are used unfrequently. The main thrust of the plan should be for locals and day-trippers</p> <p>Suggests that all overnight camping be located at Bridge Reserve</p> <p>Consideration of jetties should be last of priorities Keep Eco-tourism in mind Need to encourage passive use of the river, eg: swimming, canoes, fishermen etc</p>