

# PLAN OF MANAGEMENT

for

## BRUNSWICK HEADS FORESHORE PUBLIC RESERVES

at

### BRUNSWICK HEADS



for the

**NSW CROWN HOLIDAY PARKS TRUST,  
BYRON SHIRE COUNCIL**

and



**Trade &  
Investment**  
Crown Lands

April 2014

# PLAN OF MANAGEMENT

for

## BRUNSWICK HEADS FORESHORE PUBLIC RESERVES

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**April 2014**



## ***A note to the Brunswick Heads local community, businesses, organisations and visitors to the region***

On behalf of the Board of the NSW Crown Holiday Parks Trust and our management team I am pleased to present this Plan of Management for the Brunswick Heads Foreshore Public Reserves.

In August 2013, the Deputy Premier, the Honourable Andrew Stoner MP announced the appointment of an external Board of Directors to oversee the recently formed NSW Crown Holiday Parks Trust on behalf of the people of NSW.

The Trust was formed to consolidate the operation of twenty six coastal and eight inland holiday parks and reserves located on Crown Land throughout NSW in some of the State's most iconic locations.

Under the Crown Lands Act (1989) (the principal Act governing the administration of Crown Land in NSW) land resources are to be shared equitably in accordance with the principles of environmental protection, conservation and ecological sustainability and public use and enjoyment as well as encouraging multiple use of the land.

The Trust Boards' role is to set the framework and oversee the management of and provide accountability for these holiday and recreational reserves which are enjoyed by hundreds of thousands of domestic and international visitors each year. These facilities are an important part of local and regional communities and economies.

The Board recognises the economic, environmental and social importance of Crown Land to local communities and to the State. It also recognises the ongoing need to improve existing facilities and develop new ones, providing for the sustainability of Crown Land assets for the benefit of the people of NSW - now and into the future.

The Board understands that the ongoing use and management of Crown Land is an important issue for local communities. It is committed to ensuring that local communities and other stakeholders are well informed about plans for the upgrade of public recreation facilities in their area which come under the management of the Board.

It is important for local communities to be aware of the need to plan for the sustainability - both economically and environmentally - of that Crown Land.

This Plan of Management for the Brunswick Heads Foreshore Public Reserves outlines the Trust's proposals to ensure the sustainability of the reserves in the longer term. Improvements have been designed to provide for the convenience and comfort of users and to continue to meet safety and other regulatory requirements, as well as recognising the role of the reserves in the local community.

Some of the key aspects of the Plan of Management include:

- Maintaining the foreshore pathway along Simpsons Creek Park that provides passive recreation and an important link between Town and Bayside Brunswick.
- Protecting and enhancing the coastal cypress endangered ecological community in Simpsons Creek Park.
- Providing improved public pathways linking the network of foreshore reserves along the Brunswick River, Simpsons Creek and Torakina Beach.
- Providing improved public facilities in Banner and Terrace Parks.
- Providing improved access along the foreshore of Banner Park while protecting the Norfolk Pines and accommodating important annual festivals and events.
- Providing new and improved playground facilities in Banner and Terrace Parks.
- Providing a new foreshore walkway around the perimeter of the Torakina Reserve to open up the area for passive recreation.
- Providing a new amenities building, picnic shelters and BBQ facilities in Torakina Reserve
- Providing much needed additional car parking in Torakina Reserve.
- Establishing a bush regeneration zone within the Torakina Reserve and establish a native vegetation restoration program.

The costs associated with delivering the capital improvements and recurrent expenditure associated with the management and maintenance of the recreation reserves is significant, and is only able to be achieved using funds generated from other Trust assets.

Development and upgrade of the Brunswick River Foreshore Public Reserves as proposed in the Plan of Management will provide much needed facilities for the benefit and enjoyment of locals and visitors.

Yours sincerely

*Alan A Revell*

**Chair  
NSW Crown Holiday Parks Trust**

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**APPENDIX C** Torakina Reserve, Proposed New Pedestrian Pathway and Parking, Ardill Payne and Partners

**APPENDIX D** Minutes from Meeting Stakeholders in relation to Banner and Terrace Parks

**APPENDIX E** Vegetation Management Plan for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2011

**APPENDIX F** Summary of Amendments from 2010 Exhibition of Draft Plan of Management Foreshore Reserves

**APPENDIX G** Submissions Report, Draft Plans Of Management, March 2014

## REFERENCES

**DRAWINGS**

- R – 01 - Reserve Locations and Pedestrian Access
- R – 02 - Simpsons Creek Reserve – Proposed Management
- R – 03 - Torakina Park – Proposed Improvements
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- R – 05 – Terrace and Banner Parks – Proposed Improvements
- R – 06 – Banner Park – Concepts for Foreshore Improvements

### Explanatory Note:

The drawings contained in and exhibited in association with this Plan of Management are based on a topographic survey of the land undertaken by registered surveyors and interpretation of aerial photography. In some instances topographic survey was not available. While the bar scales on the drawings can be used to gain an indication of distances on drawings printed from pdf files such copies cannot be relied upon to be “at scale” or in exact proportion to the original drawings. Any person wishing to view drawings “at scale” should do so by accessing the drawings on exhibition at the locations notified by Crown Lands, Department of Trade and Investment and the NSW Crown Holiday Parks Trust.

## 1 PREAMBLE

### 1.1 Introduction

This Plan of Management has been prepared in accordance with the provisions of the *Crown Lands Act 1989* to provide a framework for the future management, use and development of four important public reserves at Brunswick Heads in the Byron Shire.

The Crown land covered by the Plan comprises a community resource in a unique foreshore setting that provides passive and active recreational opportunities for the enjoyment of the community and includes significant environmental and ecological resources that must be preserved and protected. The land has a long history of use by the local community and visitors to Brunswick Heads and comprises (see Drawing R-01);

- The reserved land to the south of Terrace Reserve Holiday Park which will be referred to as the **Simpsons Creek Reserve** - a linear reserve bounded by the Old Pacific Highway to the west and Simpsons Creek to the east.
- **Terrace Park** - adjoins the Brunswick Heads town centre on the eastern side of Brunswick Terrace with frontage to Simpsons Creek between the footbridge and road bridge;
- **Banner Park** - located to the north west of the road bridge and is bounded on the south by Mullimbimbi Street and on the west by Park Street with frontage to Simpsons Creek;
- **Torakina Reserve** - located to the east of the Brunswick Heads town centre. Access is via the road bridge over Simpsons Creek and the reserve has an extensive foreshore to the River and Simpsons Creek as well as vegetated and open areas; and

Memorial Park is to the north west of the town centre adjacent to the foreshore of the Brunswick River and provides a link between Banner Park and Massy-Greene Holiday Park. The Brunswick Heads War Memorial is located in the Reserve. This land is subject to the care control and management of Byron Shire Council and proposed improvement to the reserve are not addressed in this Plan of Management. Memorial Park is identified on drawings to provide context.

This Plan of Management outlines a management direction for the next 5 to 10 years for the reserved land in accordance with the requirements of the *Crown Lands Act 1989*. The purpose of the Plan of Management is to establish objectives, environmental and management strategies and actions and identify the means the Reserve Trusts will employ in the management of the Reserves to meet the needs and expectations of the local and wider community.



## 1.2 Land Status

The following reserves are managed by the NSW Crown Holiday Parks Trust pursuant to the relevant provisions of *the Crown Lands Act 1989* for the benefit of the entire community. The Crown land covered by this Plan of Management is comprised of the following reserves and lots;

- Torakina Reserve – the western part of Lot 423 in DP 729272 which does not include the small beach and southern training wall - Reserve 82780 for Future Public Requirements and LI 317740 for Radio Hut;
- Banner Park – Lot 408 in DP 728643 with an area of 9,000 square metres - part of Reserve 82999 for Public Recreation and Resting Place;
- Terrace Park - Part Lot 416 in DP 728666 - part of Reserve 82999 for Public Recreation and Resting Place; and
- Simpsons Creek Reserve – Part Lot 416 in DP 728666 - part of Reserve 82999 for Public Recreation and Resting Place.

An Administrator was appointed on the 28<sup>th</sup> July 2006 to manage these Reserves. That Trust was replaced by the North Coast Accommodation Trust and in May 2013 the NSW Crown Holiday Parks Trust was created and is now responsible for the care control and management of the reserves.

In each case the areas and improvements recognised by the local community as integral to the public reserves described in this Plan of Management include parts of the adjoining road reserves and other public land controlled and managed by a range of land management authorities. As a result the ongoing management and improvement of the reserves requires a level of co-operation and agreement between the respective land managers.

The land covered by this Plan of Management is also part of the Byron Coast Regional Crown Reserve, R 1012196 for Access, Public Requirements, Rural Services, Tourism Purposes and Environmental and Heritage Conservation notified on 1<sup>st</sup> September 2006.

There are a number of annual license agreements that provide for use of the Reserves and Reserve facilities by community organisations, companies and individuals;

Issued to	Event	Reserve
Byron Shire Council	World Environment Day	Banner Park
Byron Bay Surf Club	Kayak Race	Banner Park
Brunswick Surf Life Saving Club	Mullum to Bruns Paddle	Terrace Park
Byron Shire Council	Australia Day	Banner Park
ARL Carnival Committee	Housie Shed	Banner Park

Brunswick Valley Woodchop & Entertainment Committee Inc	Twilight Markets & Woodchop Carnival	Banner Park
McGregors Family Carnival	McGregors Family Festival	Banner Park
Brunswick Valley Woodchop & Entertainment Committee Inc	Fireworks Display	Torakina Reserve
Brunswick Heads Visitor Centre	Kites and Bikes Festival	Banner and Terrace Parks
Byron Bay Surf School	Stand Up Paddle Board	Terrace Park

A substantial number of community groups and organisations have a close association with and interest in the appropriate improvement and management of these reserves. Their continuing involvement will be integral to achieving the strategies and actions proposed in the Plan of Management.

### 1.3 Byron Coast Regional Crown Reserve

The Byron Coast Regional Crown Reserve comprises Reserve 1012196 for Access & Public Requirements, Rural Services, Tourism Purposes and Environmental and Heritage Conservation and was notified by gazette on 1 September 2006. The Regional Reserve has a total area in the order of 4,825 hectares. The Regional Crown Reserve concept brings together many smaller reserves into an overarching management unit with the aim of developing a more holistic, sustainable and balanced approach which will lead to improvements in the environmental, economic and social fabric of the area.

The Byron Coast Regional Crown Reserve covers a diversity of land types and uses and presents a broad spectrum of values to the community. In general terms it is significant for the following reasons;

- Natural values including tracts of native vegetation, coastal and estuarine features, adjoining nature reserves, key habitat for threatened flora and fauna and wildlife corridors of regional significance;
- Cultural values including Aboriginal heritage sites, historic buildings and structures;
- Long standing social values associated with camping grounds and formalised recreation areas, community centres and clubhouses;
- High recreational values with extensive opportunities for active and passive land-based recreational pursuits as well as access to the coastline, the Pacific Ocean, Brunswick River estuary and various smaller creeks and coastal lagoons for water-based recreation;
- Major tourism values based on the extensive natural attractions, visitor facilities and established tourism infrastructure; and
- Ability to provide quality tourism experiences

The desired management outcomes for Byron Coast Regional Crown Reserve are for the land to be managed in the public interest, with due regard for the regional context and in accordance with best practice.

In due course a Plan of Management under the *Crown Lands Act 1989* will be prepared to determine the management objectives and strategies required to fully realise the public purposes of the Regional Crown Reserve and sustain its values in perpetuity. In the meantime this Plan of Management for the Brunswick Heads public reserves will recognise and address the principles that have been outlined for the Regional Crown Reserve.<sup>1</sup>

#### **1.4 North Coast Holiday Parks**

North Coast Holiday Parks is the trading name that has been adopted for the management and marketing of a number of caravan parks and reserves on the North Coast of New South Wales. A majority of these properties are managed by the NSW Crown Holiday Parks Trust which is a land management corporation established by the Minister for Lands under the provisions of the *Crown Lands Act 1989*.

While a key focus of North Coast Holiday Parks relates to the operation of caravan parks there is a range of wider land management responsibilities addressed. In this context the operational and administrative framework of North Coast Holiday Parks has been structured to ensure;

- the Crown and the community assets are used in accordance with legislative provisions, policy goals and best practice commercial management;
- accurate information is available to the government on the performance of the Reserves and the caravan parks;
- financial and human resources are used efficiently;
- environmental impacts are minimised;
- probity is achieved in the operation of the reserve and the caravan park; contractors and employees comply with established policies and procedures including legal requirements with respect to work health and safety, industrial relations, etc;
- the value of the assets of the community and the Crown are safeguarded and enhanced; and
- the administration and management of the Reserves and any associated commercial activities delivers ecological sustainability, intergenerational equity and identifiable public benefits.

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<sup>1</sup> Byron Coast Regional Crown Reserve, Reserve Profile, Land and Property Management Authority, Crown Lands Division, August 2010

## 1.5 Local History

The Aboriginal people of the Minjangbal and Durrungbil tribes were the first inhabitants of the Brunswick Valley. Brunswick Heads was a place of significance for these people and had importance as a ceremonial meeting place. There was a reliable source of food from the ocean, the estuary and the foreshore which included *dugum* (pipis) and *julum* (fish) and other resources. The landform known as Harry's Hill on the north side of the river was a significant indigenous meeting place described as Durrumbul (water rat) and from the south bank the shape of a water rat can be identified.

The first recorded European identification of the Brunswick River was in 1828 when it was charted and named by Captain Rous of the Royal Navy. It was more than 20 years before the cedar cutters began to exploit the rich supply of timber in the area. Originally logs came down the River on rafts. The logs were then dragged through the surf by bullock teams and winched onto sailing ships to be transported to the timber mills.

By the 1880's Brunswick Heads was an established commercial port, however, the difficulties associated with negotiating the bar resulted in a number of ships being wrecked as they endeavoured to enter the River. The Aboriginal people continued to live in the area alongside the cedar cutters and historical records show they assisted with the rescue of sailors from the shipwrecks. The development and opening of the northern railway line through Mullumbimby in the mid 1890's had a significant impact on the settlement as traders chose to use the safer transport option.

Originally, camping along the banks of the river would have been associated with commercial activities but by the 1920's the town and the region began to build a reputation as a seaside holiday destination. Tourism became an important aspect of the local economy. In the 1940's and 50's Brunswick Heads was among the most popular beach resorts in the region and it was reported that the 1946 Boxing Day crowd numbered 20,000. In the late 1950's a Christmas holiday crowd of 10,000 was accommodated in the caravan parks, guest houses and holiday homes at Brunswick Heads.

The foreshores of Brunswick Heads have always been a focus for recreation and are integral to the character of the village. In the early 1960's major changes were made to the mouth of the river and training walls when breakwaters were constructed under the fishing ports programme. These works included the construction of the Brunswick Heads Boat Harbour which was completed in 1961. The development of the southern breakwater began in 1960 with the construction of the road bridge across Simpsons Creek to transport rock to the site. This also opened up vehicular access to Torakina, Bayside and the surf beaches.

Although there has been significant development of coastal areas to the north and south Brunswick Heads has retained a traditional Australian seaside village character and atmosphere. Timber bridges provide access from the village centre to the river mouth and

the surf beach. The footbridge which crosses Simpsons Creek from Terrace Park was built in 1937 and is listed as a local heritage item. Today Brunswick Heads provides the local community and visitors a mix of cafes, restaurants, specialty shops and accommodation options. The village also hosts a number of community oriented and family friendly festivals and events throughout the year including the Woodchop Carnival which harks back to the early European settlement of the Brunswick Valley.

## 1.6 Basis for Management

The management of the Brunswick Heads Public Reserves is to be in accordance with the objects and principles of Crown land management described in Sections 10 and 11 of the *Crown Lands Act 1989* and the land management provisions of Part 5 of the Act. The land will therefore be used and managed in accordance with the following:

- The Plan of Management applying to the land;
- *Crown Lands Act 1989*;
- *Crown Lands (General Reserves) By-law 2006*;
- *Environmental Planning and Assessment Act 1979* and any planning instrument permitting the use of the land for a specified purpose or otherwise regulating the use of the land; and
- *Local Government Act 1993*.

## 1.7 Recent Improvements

The Minister for Lands appointed an Administrator to take responsibility for care control and management of these Reserves in 2006. The profitable operation of the Brunswick Heads Holiday Parks is the principal source for the funds required to finance the care, control and management of the Reserves. In addition to financing the operation, management and improvement of the Holiday Parks profits have contributed toward;

- an annual contribution to Byron Shire Council for the management of other Crown reserves in the local government area;
- an annual 5% levy on gross turnover to the Public Reserves Management Fund;
- an annual 5% dividend on gross turnover to contribute to broader management initiatives for reserved Crown land; and
- management and improvement of Banner Park, Terrace Park, Torakina Reserve and the reserved land to the south of the Terrace Reserve Holiday Park.

The Reserve Trusts and Crown Lands have undertaken or facilitated a range of actions and works in relation to the Brunswick Heads Public Reserves since 2006:

- Preparation of the Brunswick Foreshore Reserves Strategic Plan;

- Renovations and improvements to public day-use facilities in Banner Park and Terrace Reserve;
- Improvements to lighting along Simpsons Creek;
- Maintenance and improvements to the seawalls;
- Improvements to and maintenance of Torakina Reserve;
- Preparation of the Habitat Restoration Plan for Torakina Park;
- Completion of detailed topographic survey for the Reserves managed by the NSW Crown Holiday Parks Trust;
- Improvements to the sea wall and access points to limit the impact of erosion;
- Construction of a foreshore pedestrian walkway to the Riverfront at Massy-Greene Holiday Park; and
- Improvements to storm water and waste management.

### **1.8 Public Exhibition of the 2010 Draft Plans of Management, Submissions and Community Forum**

Draft Plans of Management for the Massy-Greene and Terrace Reserve Holiday Parks were placed on public exhibition from 13 August to 8 October 2010. At the end of the exhibition period approximately 280 submissions were received. These came in the form of written and emailed submissions from organisations and individuals, signed pro-formas which had been distributed at a public rally during the exhibition period and letters and submissions based on the pro-forma.

A further opportunity for input from the community was afforded through a Community Forum on 22 November 2010 convened by the Brunswick Heads Chamber of Commerce. Representatives of 35 Brunswick Heads' community groups met with officers from the former Land and Property Management Authority, the Trust Administrator and Trust employees and two Directors of Integrated Site Design Pty Ltd.

Many of the issues raised at that time were also applicable to the approach that is taken to the improvement and management of the Brunswick Heads Foreshore Public Reserves. Consequently relevant matters that were identified in that process have been taken into account in the preparation of this Plan of Management. A summary of the issues is included at Appendix F.

### **1.9 Public Exhibition of this Plan and Submissions**

The draft version of this Plan of Management for the Brunswick Heads Foreshore Public Reserves was exhibited for 8 weeks concluding 21 February 2014 in accordance with the requirements of Part 5 of the *Crown Lands Act 1989* and the *Crown Lands Regulation 2006*. The exhibition occurred at the same time as the exhibition of draft Plans of Management for the Terrace Reserve, Massy-Greene and Ferry Reserve Holiday Parks.

Public Information sessions were held on 15 January and 1 February 2014. The information sessions were aligned with community events to ensure high participation rates. The information sessions were well attended with local media reporting hundreds of people present.

A total of 158 submissions were received in response to the four exhibited Plans of Management. In addition, two petitions were received. One petition was in the form of an on-line petition that attracted 2095 signatures. The second petition contained 156 signatures. The matters raised in the petitions were addressed in the submissions assessment.

There was some duplication of issues across different reserves. It is noted that several issue categories apply to two or more reserves. As each Plan of Management is a stand-alone document this duplication resulted in a total of 206 issues being recorded. The breakdown of issues raised by reserve is provided below, including general issues.

<b>Reserve</b>	<b>Number of Issues</b>
Foreshore Reserves	52
Terrace Reserve Holiday Park	48
Massy-Greene Holiday Park	44
Ferry Reserve Holiday Park	27
General Submissions	35
<b>Total</b>	<b>206</b>

### 1.9.1 Issues Raised in General Submissions

Thirty-five categories of general issues were raised in relation to the Trust's proposals across the draft Plans of Management. Issues raised in more than five submissions are listed below.

<b>Issue Categories – General</b>	<b>Number of Submissions</b>
Comply with Council license conditions and regulations	40
Maintain public access to and along the foreshore	35
Retain 30% of sites for permanent residents	27
No restriction on public access though Holiday Parks	12
No fencing of Holiday Parks or Reserves	9
Privatisation of foreshore	7
Maintenance and presentation of foreshore Reserves	6

In regard to these matters the Plan of Management for Foreshore Public Reserves requires the Trust to;

- Comply with all relevant and applicable legislative requirements;
- Continue to provide public access along the foreshore to enable connectivity between the Holiday Parks, other foreshore reserves and Brunswick Heads;
- Only restrict public access to the extent required for security and safety;
- Limit the use of fencing to circumstances where other approaches fail to achieve reasonable requirements with respect to security and safety;
- Continue to provide appropriate access to the foreshore; and
- Fulfill all obligations with respect to the management of reserved land under the control of the Trust.

The remaining twenty eight issues were raised in four or fewer submissions and in some cases are adequately addressed in the Plan for Foreshore Public Reserves and in other cases are not applicable. A more complete summary of the issues is included at Appendix G.

### 1.9.2 Issues Raised in Submissions in relation to Foreshore Public Reserves

Fifty two categories of issues were raised which had more specific reference to the Trust's proposals for Foreshore Public Reserves. Issues raised by more than five submissions are listed in the following table.

<b>Issue Categories – Ferry Reserve Holiday Park</b>	<b>Number of Submissions</b>
No boardwalk and deck in Banner Park	35
No car park at Torakina Park	29
Retain Terrace Park playground in its current location	27
Improvements to Memorial Park	21
Keep Torakina as natural as possible	21
Renovate Terrace Park Amenities and Facilities	21
Renovate Torakina Amenities	19
Do not expand the Banner Park playground	18
No lighting or security cameras	18
No pathways in reserves	18
Protection of Vegetation in Reserves	18
Address foreshore erosion and sea wall problems	17
Construct pathways from natural materials	15
Maintenance and presentation of foreshore reserves	13



Remove Simpsons Creek Park tennis courts and revegetate	13
Maintain public access to and along the foreshore	12
Improve accessibility to Simpsons Creek via stairs and ramps	11
No playground in Torakina	11
Restrict vehicle access to Simpsons Creek Park	11
Locate pathways away from foreshore	10
Provide kayak / canoe launching facility at Simpsons Creek Park	10
Replace missing Norfolk pines in Banner Park	8
No upgrade of foreshore public reserves	7

A majority of the remaining issues were raised in four or fewer submissions and in many instances refer to aspects of matters that have been addressed in the Plan, eg foreshore access. In other cases there were issues that were beyond the scope of this Plan of Management process. A more complete summary is included at Appendix G. The following section details amendments to the Draft Plan that respond to particular issues.

### 1.10 Amendments to the Draft Plan of Management

A summary of the submissions received during the exhibition period was prepared and reviewed by the Trust Board. The summary was also provided to Crown Lands, Department of Trade and Investment for assessment and review in light of the content of the proposed Plan of Management. At the same time Crown Lands was advised of a number of proposed minor amendments.

Elements of the Draft Plan of Management have been amended where appropriate in response to issues raised during the public exhibition period and pursuant to advice from Crown Lands. Amendments have been made in a way that seeks to ensure the future management of the Reserves addresses government policy, legislative requirements and recognises community input. Details of the principal amendments are provided in the following table.

Issue Category	Comment	Recommendation
Additional lighting in Banner Park.	The trust understands the Woodchop Committee has been gifted lighting that may be suitable for permanent lighting for Banner Park. The impact on neighbouring properties and on the Marine Park would need to be	Make provision in the Plan of Management to specifically authorise installation of permanent lighting in Banner Park at the discretion of the Trust

	considered and assessed in consultation with relevant agencies, however provision should be made in the Plan of Management for installation of suitable permanent lighting to be undertaken given the lighting is available free of charge.	subject to relevant approval requirements.
Allow public art on the Torakina Amenities	The Trust will consider allowing placement of artwork on the Torakina amenities, subject to a number of conditions being met. These relate to the consistency with the natural theme adopted for the Reserve, and the proponents undertaking to install, protect and maintain and replace artwork. The Trust has significant concerns about vandalism, and the artists would need to understand and agree the artwork is placed in the public domain at their own risk.	The Trust will consider allowing placement of public artwork on the Torakina amenities, subject to reasonable conditions being met by the proponents.
Do not expand the Banner Park playground	A large playground is proposed due to the high level of use of the Reserve by families with younger children. The final design will be determined in consultation with the local school and pre-school. While some play equipment may be accessible for children with limited abilities, a complete all-abilities playground is not proposed.	Consult with the local school and pre-school on playground design. Investigate incorporating play equipment that can be used by children with limited abilities
Do not replace missing Norfolk Island pines Banner Park	Norfolk Island pines are an introduced species. There is no justification from an environmental or planning perspective to plant replacement trees. The marginal improvement in visual amenity that could be achieved over time does not warrant the significant impact on the carnival which has been operating continuously over the Christmas/New Year period since 1956 and is part of the fabric of the town.	Amend the plan for Banner Park to delete the replacement of missing Norfolk Island pines from the foreshore.

Ensure appropriate emergency access to Torakina Beach and southern rock wall.	Relocation of the gate is proposed to provide a continuous pedestrian thoroughfare to the southern rock wall and Torakina beach. The Trust's view is this can occur without compromising access or safety. Relocation of the gate will only occur with the agreement of Marine Rescue NSW, Crown Lands and emergency services.	The Plan of Management clarifies the relocation of the emergency access gate to the Brunswick River southern rock wall will only occur with the concurrence of Marine Rescue NSW, Crown Lands and emergency services.
Ensure appropriate pedestrian access to Torakina Beach and southern rock wall.	The car park design provides for a pathway delineated along the northern side of the Torakina Beach car park to the beach access and southern rock wall. This is not clearly shown in the drawings.	Amend plans to clearly show the proposed pathway leading from Torakina reserve to the beach access and south wall.
Improve accessibility to Simpsons Creek via stairs and ramps.	There is an existing ramp access to Simpsons Creek. An upgrade could be considered at design stage for Banner Park and Simpsons Creek upgrade projects. Oyster growth is a concern - any design would need to take that issue into account along with public liability.	Investigate options for upgrade of ramp and stair access points to Simpsons Creek to improve accessibility for people with limited abilities.
Locate pathways away from foreshore.	Paths are designed to provide universal access to reserves for people of all abilities. They are also provided on commonly used pedestrian thoroughfares where grass could not withstand the level of foot traffic. The proposed pathway locations address both of these design criteria. Formal paths are required in Banner Park and Torakina Park to achieve this outcome. However paths may not be required initially in Terrace Park as there is reasonable grass cover and moderate grades.	The Plan of Management authorise the Trust to monitor the accessibility of Terrace Park and install paths if considered necessary to provide access for people with limited abilities, or to provide a surface capable of withstanding the level of foot traffic.
No Foreshore Pathway on Mona Lane Foreshore/ Improvements to Memorial Park	This is not on land under the control of the Trust and was included in Plan of Management to show a concept for the overall network of public pathways to give context to the Trust's proposals	Delete drawings and concepts for all reserves not managed by the Trust.

No lighting or security cameras.	There is no specific plan to install additional lighting. Installation of lighting will occur if required for safety and security. The location of lighting will consider the impact on residential properties and the Marine Park. Consultation with relevant agencies would be required.	Installation of lighting if required is to be undertaken in consultation with relevant agencies having regard to potential impacts on the Marine Park and residential properties
No upgrade of foreshore public reserves.	No coffee shops or similar are proposed. The proposed upgrades provide universal access to picnic tables, seating, and the foreshore including for people with limited abilities while minimising impacts on vegetation. The designs complement the natural setting. Other improvements such as work on amenities, BBQs and park furniture are meeting the basic needs of users of the Reserves.	Specifically exclude or prohibit commercial activities such as cafés kiosks or restaurants from being undertaken in the foreshore reserves.
Provide drinking fountains and bike racks in reserves	Will be addressed in detailed design	Include provision for well designed drinking fountains/water stations and bike racks in foreshore reserves Plan of Management
Provide kayak/ canoe launching facility at Simpsons Creek Reserve	The foreshore area is environmentally sensitive and agencies may be reluctant to approve a new launching facility. However, this is a matter that can be considered in the design of the foreshore restoration project.	The Plan of Management authorise the investigation of a new canoe/kayak launching facility at Simpsons Creek Reserve in conjunction with the foreshore restoration project.
Relocate Pirate Boat and Jetty	The location of the pirate boat (or any similar activity) will be determined in consultation with the Marine Park Authority and Fisheries when the license is reviewed by the Trust.	Amend the draft Plan of Management to indicate the location of the any hire businesses will be determined in consultation with the Marine Park Authority and Fisheries when the license is reviewed by the Trust.

Renovate Terrace Park Amenities and Facilities.	The Plan of Management provides for an upgrade. Feedback suggests a preference for separate change rooms rather than using showers or toilets for changing. Provision of additional changing rooms and showers requires further consideration.	Consider the addition of change rooms and shower to the Terrace Park amenities.
Renovate Torakina Amenities.	The design provided in the draft Plan of Management is a concept design only. The Trust will review contemporary designs that are in keeping with the natural setting and meet the functional requirements of the users of the reserves.	Review the design of the Torakina amenities to ensure it is keeping with the natural setting and meet the functional requirements of the users of the reserves.
Replace Torakina amenities.	Submissions support renovation of the amenities in favour of a new building. The Trust will authorise replacement and renovation and undertake further investigations to determine the best option.	The Plan of Management authorise the renovation or replacement of the Torakina amenities at the discretion of the Trust following a review of the cost of renovation compared to the cost of replacement for revised designs.
Retain Terrace Park playground in its current location	The layout and location of the playground accommodates existing annual events. The playground can be kept in its current location. Active management of tree health to ensure safety will continue.	Keep the playground in its existing location to take advantage of natural shade and maximise open space for recreation and community events

Matters related to changes to legislation and policies that have occurred since the Draft Plan was exhibited have also been updated along with typographic and other minor editorial matters.

### 1.11 Purpose of this Plan

The purpose of this Plan of Management is address the relevant statutory requirements of the *Crown Lands Act 1989* and to establish objectives, performance targets and the means the NSW Crown Holiday Parks Trust will employ to achieve its responsibility for the care, control and management of the Reserves. The most significant issues to be addressed are;

- Implementation of actions recommended in the Brunswick Heads Foreshores Reserve Strategic Plan where relevant and feasible;
- Improving the standard of public infrastructure, facilities and amenities in the Brunswick Heads Public Reserves ;
- Improving pedestrian access to and along the foreshore and reducing conflicts between vehicles and pedestrians;
- Improving equity of access to accommodation and facilities for Holiday Park guests;
- Improving the condition of the river foreshore, in particular sea walls, to preserve the opportunity for continued public access
- Providing facilities that are in harmony with the natural setting to enhance the 'simple pleasures' theme';
- Ensuring principles of environmental and ecological sustainability are incorporated into the development and management practices adopted for the Brunswick Heads Public Reserves;
- Improving environmental and vegetation management;
- Storm water management; and
- Appropriate risk management.

The management actions in this Plan of Management will be formulated to address and achieve the following;

- **Social equity** – decision making that leads to greater physical, cultural and financial access in the delivery of services and facilities;
- **Environmental quality** – using only the resources that are required to deliver facilities and services for public community use and improving overall physical amenity while reducing detrimental impacts on natural assets;
- **Economic prosperity** - promoting the development of jobs and local tourism in a sustainable manner; and
- **Corporate governance** – managing assets and resources in a way that is accountable, transparent, responsive, efficient, equitable and complies with all applicable legislation.

## 2 STATUTORY AND POLICY FRAMEWORK

### 2.1 Introduction

This Plan of Management has been prepared in accordance with the Crown Lands Act 1989, to provide a framework for the future management, use and improvement of the Brunswick Heads public reserves. Other legislation including environmental planning policies, guidelines and strategies also require consideration especially where any new development proposals are contemplated.

### 2.2 Crown Lands Act 1989

The objects and principles of Crown land management are listed in Sections 10 and 11 of the *Crown Lands Act 1989* and form the starting point for the preparation of Plans of Management. The principles of Crown land management are that;

- Environmental protection principles be observed in relation to the management and administration of Crown land;
- The natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;
- Public use and enjoyment of appropriate Crown land be encouraged;
- Where appropriate, multiple use of Crown land be encouraged;
- Where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity; and
- Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

The Act and existing policy for the management of Crown land has always encouraged the appropriate commercial use of reserved Crown land. Commercial activity can meet the needs of public users of a reserve as well as generate the financial means to manage and improve the Crown Reserve system generally. A specific requirement of the Act is the proceeds of commercial activities on reserved Crown land are to be spent on the management of reserved Crown land.

Part 5 of the Act deals specifically with the management of Reserves and matters related to the appointment and responsibilities of Reserve Trusts. The purpose of establishing reserve trusts is to allow reserved Crown land and potentially other land (Crown and freehold) to be managed - to varying degrees of independence from the Crown Lands Division - but subject to Ministerial direction. "Reserve" is a term for an area of land set aside for a public purpose in the sense used in Part 5 of the Act. A reserve trust can manage an unlimited number of reserves or parts of reserves. The affairs of a reserve trust can be controlled by any one of the following;

- The Minister;
- A board of Trustees (up to seven) plus any number of ex officio appointments;

- A corporation (including a Council); or
- An administrator.

Reserve trusts have a statutory responsibility to manage land in the public interest and to achieve the Principles and Objects of Crown Land Management as defined by the Act. The focus of a reserve trust's activities in relation to land under its control is generally defined by the public purpose(s) of the reservation. Where a Plan of Management has been adopted by the Minister for Lands the trust is required to implement the actions described in the Plan. In the absence of a Plan of Management the detail of how a reserve is developed and used is a matter for the trust provided always its actions are consistent with the purpose of the reservation and in conformity with the relevant requirements of the Act.

### **2.3 Crown Lands (General Reserves) By-law 2006**

The public reserves covered by this Plan of Management are not listed in Schedule 1 of the *Crown Lands (General Reserves) By-law 2006*. This By-law covers general administrative management and the use of reserves generally. Importantly, the By-law gives the trust board of the reserve the statutory basis to determine the use of parts of the reserve, set fees and charges, control the entry of vehicles and people, and to control the conduct of persons on the reserve. Consideration should be given to the public reserves described in this Plan of Management being added to Schedule 1 of the By-law to assist the Trusts in the regulation of the ongoing care, control and management of the reserves.

### **2.4 Environmental Planning and Assessment Act 1979**

The *Environmental Planning and Assessment Act 1979 (EP&A Act)* provides the statutory basis for the development consent process in New South Wales. Section 79C of Part 4 of the *EP&A Act* outlines the factors that must be must considered when a Development Application is assessed. The *EP & A Act* has a range of other provisions that may take effect depending upon the nature of a development proposal and the issues that may be encountered.

## **2.5 Relevant Environmental Planning Policies and Instruments**

### **2.5.1 NSW Coastal Policy 1997**

The NSW Coastal Policy 1997 was released by the New South Wales Government to replace the 1990 Coastal Policy. The stated purpose of the Policy is:

*The main challenge for the Government and the community in the coastal zone is to provide for population growth and economic development without putting the natural, cultural and heritage values of the coastal environment at risk. In recognition of this challenge, the Coastal Policy incorporates the principles of ecologically sustainable development (ESD) into coastal planning.*



*ESD aims to ensure that development occurs in such a way that the ecological processes on which life depends are maintained.*<sup>2</sup>

The definition of the coastal zone takes in areas within one kilometre of the ocean, as well as an area of one kilometre around coastal lakes, lagoons, islands, estuaries and rivers. The Policy is described as integrative based on the principles of ecologically sustainable development (ESD) and

- Conservation of biological diversity and ecological integrity;
- Intergenerational equity;
- Improved valuation, pricing and incentive mechanisms; and
- The precautionary principle.

The Policy sets out a hierarchy of goals, objectives and strategic actions which include an emphasis on improving water quality and maintaining public access to the coastline.

The Coastal Policy proposes a range of management planning approaches including catchment management plans be implemented in consultation with relevant agencies to ensure sustainable development and use of natural resources occurs in harmony with the protection of the environment. A Plan of Management under the *Crown Lands Act 1989* is one of the most valuable management tools available to implement the Policy.

### **2.5.2 State Environmental Planning Policy No 14 - Coastal Wetlands**

This policy is based on the mapping of lands considered to constitute environmentally sensitive areas that support coastal wetlands. The aim of the policy is to establish development control measures to ensure the appropriate protection of the lands designated on the mapping.

Under the provisions of the Policy a person must not clear land, construct a levee, drain land or fill land which is covered by the SEPP except with the consent of the local council and the concurrence of the Director-General of Planning. A copy of development applications for such activities must also be forwarded by the local council to the Director of National Parks and Wildlife within 7 days of receipt by the Council. Activities and works on *SEPP 14* wetlands which require development consent are deemed to be designated development. This means the development application must be accompanied by an environmental impact statement and be placed on public exhibition. The impact statement must match requirements set out by the Director General of Planning.

Works involving the restoration of *SEPP 14* wetlands are not be carried out unless the consent of the local council and the concurrence of the Director-General of Planning have been obtained. In practice consent authorities generally require some form of setback or buffer from defined wetlands.

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<sup>2</sup> Coastal Policy, A sustainable future of the NSW Coast - Fact Sheet, 1997

### 2.5.3 State Environmental Planning Policy No 71

*State Environmental Planning Policy No 71 – Coastal Protection (SEPP 71)* was introduced in October 2002 as part of the NSW Government's Coastal Protection Package. *SEPP 71* applies to the coastal zone of the State as defined in the *Coastal Protection Act 1979*. The Policy gives statutory force to some of the elements of the NSW Coastal Policy 1997 and makes the Minister for Planning the consent authority for certain developments. The Policy also defines a category of *sensitive coastal locations*. Finally, the Policy identifies master plan requirements for certain developments in the coastal zone.

While the policy primarily comes under consideration when a development application is submitted for determination the objectives and general principles established in the SEPP should be recognised as relevant to any coastal planning exercise. The objectives of *SEPP 71* are:

- a) *to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales Coast, and*
- b) *to protect and improve existing public access to and along coastal foreshores to the extent that this is compatible with the natural attributes of the coastal foreshore, and*
- c) *to ensure that new opportunities for public access to and along coastal foreshores are identified and realised to the extent that this is compatible with the natural attributes of the coastal foreshore, and*
- d) *to protect and preserve Aboriginal cultural heritage and Aboriginal places, values, customs, beliefs and traditional knowledge, and*
- e) *to ensure that the visual amenity of the coast is protected, and*
- f) *to protect and preserve beach environments and beach amenity, and*
- g) *to protect and preserve native coastal vegetation, and*
- h) *to protect and preserve the marine environments of New South Wales, and*
- i) *to protect and preserve rock platforms, and*
- j) *to manage the coastal zone in accordance with the principles of ecologically sustainable development (within the meaning of section 6(2) of the Protection of the Environment Administration Act 1991), and*
- k) *to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic qualities of the surrounding area, and*
- l) *to encourage a strategic approach to coastal management.*

Clause 8 of the Policy establishes a list of the matters that a consent authority must take into consideration in assessing developments in the coastal zone.

### 2.5.4 State Environmental Planning Policy (Infrastructure) 2007

*State Environmental Planning Policy (Infrastructure) 2007* provides that certain types of works do not require development consent under Part 4 of the *EP&A Act*. However, it does not prevail over *SEPP 14 – Coastal Wetlands*, *SEPP 26 – Littoral Rainforests* or *SEPP State and Regional*

*Development* where there are inconsistencies. Further, the *Infrastructure SEPP* does not remove the requirement to obtain consent from the Minister in relation to State Significant Development.

Clause 20 of *SEPP (Infrastructure)* provides that a range of works are “exempt development” when carried out on behalf of a public authority. These works are itemised in Schedule 1 of the *SEPP* and include paths and ramps for disabled access, fencing, small decks, prefabricated sheds of up to 30 m<sup>2</sup> in area, retaining walls up to 2m in height, landscaping including paving and access tracks, minor external and internal alterations to buildings, open car parks (size is not specified) and demolition of buildings covering an area of up to 100m<sup>2</sup>.

Clause 65 (2) (d) of the Policy provides that in respect of land reserved within the meaning of the *Crown Lands Act 1989*, development can be carried out without consent by or on behalf of the Director-General of the Land and Property Management Authority, a trustee of the reserve or the Ministerial Land Corporation, or an administrator of the reserve if the development is for purposes of implementing a plan of management adopted for the land. It should be noted that where this occurs, a review of environmental factors (REF) under Part 5 of the Act is usually undertaken.

Pursuant to the provisions of Clause 66(2) a number of additional works may be undertaken as exempt development on a Crown reserve where a plan of management has been adopted.

Clearly the provisions of this *SEPP* are relevant to the future implementation of this Plan of Management as well as to the Trust’s ongoing management of the reserved land.

### **2.5.5 Byron Local Environment Plan 1988**

The public reserves addressed by this Plan of Management are subject to the zoning provisions of the Byron Local Environmental Plan (LEP) 1988. In each case the land in the Reserves is subject to the 6(a) (Open Space Zone) apart from a section of the Simpsons Creek Reserve which is 7(a) Wetlands Zone. That part of the Simpsons Creek Reserve is also subject to the provisions of *SEPP 14 Coastal Wetlands*.

#### **Zone No 6 (a) (Open Space Zone)**

##### **1 Objectives of zone**

*The objectives are:*

- (a) to ensure that there is adequate provision of both active and passive open space to serve the present and future recreational needs of residents and visitors,*
- (b) to identify land where existing recreation facilities for the general use of the community are provided,*
- (c) to provide opportunities to enhance the total environmental quality of the Shire of Byron,*
- (d) to encourage plans of management for Crown Lands as required by the [Local Government Act 1993](#).*

##### **2 Without development**

*Works for the purposes of landscaping and bushfire hazard reduction.*

**3 Only with development consent**

*Agriculture (other than animal establishments); child care centres; cycleways; drainage; environmental facilities; markets; primitive camping grounds; recreation areas; restaurants; roads; recreation vehicle areas; showgrounds; utility installations.*

**4 Prohibited**

*Any purpose other than a purpose specified in item 2 or 3.*

**ZONE No. 7(a) (Wetlands Zone)****1. Objectives of zone**

*The objectives are-*

*(a) to identify all lands covered by State Environmental Planning Policy No. 14 - Coastal Wetlands;*

*(b) to identify and preserve estuaries and wetlands and allow them to continue to function as feeding and breeding areas for wildlife, shellfish and fish;*

*(c) to prohibit development within the zone that is likely to have a detrimental effect on the habitat or landscape qualities or the flood mitigation function of the wetlands;*

*(d) to enable development of public works and environmental facilities where such development would not have a significant detrimental effect on the habitat or landscape qualities of the wetland and other significant coastal habitat areas; and*

*(e) to enable the careful control of noxious plants and weeds by means not likely to be significantly detrimental to the native ecosystem. **Om/ins Amd.90 22/3/02***

**2. Without development consent**

*Nil. ins/om Amd.55 17/7/98*

**3. Only with development consent**

*Agriculture (other than animal establishments); building of levees, bushfire hazard reduction; clearing of land; environmental facilities; drains; home industries; oyster farming; primitive camping grounds; roads; utility installations. **om Amd.70 17/3/00; om Amd.90 22/3/02***

**4. Prohibited**

*Any purpose other than a purpose specified in item 2 or 3.*

**2.5.6 Draft Byron Local Environmental Plan 2013**

Council recently completed the preparation of Draft Byron Local Environmental Plan 2013 to conform to the State Government's Standard Instrument. The new planning instrument has been formulated to guide future development and planning in the local government and was on public exhibition until 24 December 2012. The information below is taken from Draft LEP 2013.

Under the provisions of the new LEP the lands on which the Brunswick Heads public reserves are situated are affected by the following proposed land-use zones;

**Zone RE1 Public Recreation****1 Objectives of zone**

- *To enable land to be used for public open space or recreational purposes.*

- *To provide a range of recreational settings and activities and compatible land uses.*
- *To protect and enhance the natural environment for recreational purposes.*

**2. Permitted without consent**

*Environmental protection works*

**3. Permitted with consent**

*Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Entertainment facilities; Environmental facilities; Flood mitigation works; Function centres; Horticulture; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Respite day care centres; Restaurants or cafes; Roads; Signage.*

**4. Prohibited**

*Any development not specified in item 2 or 3*

**Zone E1 National Parks and Nature Reserves**

**1 Objectives of zone**

- *To enable the management and appropriate use of land that is reserved under the National Parks and Wildlife Act 1974 or that is acquired under Part 11 of that Act.*
- *To enable uses authorised under the National Parks and Wildlife Act 1974.*
- *To identify land that is to be reserved under the National Parks and Wildlife Act 1974 and to protect the environmental significance of that land.*

**2 Permitted without consent**

*Uses authorised under the National Parks and Wildlife Act 1974*

**3 Permitted with consent**

*Nil*

**4 Prohibited**

*Any development not specified in item 2 or 3*

**Zone E2 Environmental Conservation**

**1 Objectives of zone**

- *To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.*
- *To prevent development that could destroy, damage or otherwise have an adverse effect on those values.*
- *To identify and protect environmentally sensitive coastal land.*

**2 Permitted without consent**

*Home occupations; Environmental protection works.*

**3 Permitted with consent**

*Boat sheds; Dwelling-houses; Dual occupancies (attached); Environmental facilities; Home businesses; Home-based child care; Recreation areas; Roads.*

**4 Prohibited**

*Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises;*

*Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3.*

### **Zone W1 Natural Waterways**

#### **1 Objectives of zone**

- *To protect the ecological and scenic values of natural waterways.*
- *To prevent development that would have an adverse effect on the natural values of waterways in this zone.*
- *To provide for sustainable fishing industries and recreational fishing.*

#### **2 Permitted without consent**

*Environmental protection works.*

#### **3 Permitted with consent**

*Boat sheds; Boat building and repair facilities; Boat launching ramps; Business identification signs; Charter & tourism boating facilities; Environmental facilities; Flood mitigation works; Jetties; Moorings; Mooring pens; Water recreation structures; Wharf or boating facilities.*

#### **4 Prohibited**

*Business premises; Hotel or motel accommodation; Industries; Multi dwelling housing; Recreation facilities (major); Residential flat buildings; Restricted premises; Retail premises; Seniors housing; Service stations; Warehouse or distribution centres; Any other development not specified in item 2 or 3.*

The individual public reserves are affected by the above land-use zones as follows;

- **Simpsons Creek Reserve** – part RE 1 - Public Recreation, part E 2 – Environmental Conservation and part W1 – Natural Waterways;
- **Terrace Park** - RE 1 - Public Recreation;
- **Banner Park** part RE 1 - Public Recreation, part E 2 – Environmental Conservation;
- **Torakina Reserve** - part RE 1 - Public Recreation and part E 1 – National Parks and Nature Reserves. The eastern part of Torakina Park (not covered by this Plan of Management) including the breakwall is a deferred matter and will continue to be subject to the provisions of the Byron Local Environmental Plan 1988 until further consideration is given to an appropriate land-use zoning under the provisions of the Draft LEP 2013; and

The foreshore areas of each of the public reserves adjoin land that is zoned W 1 – Natural Waterways. Flood risk mapping produced and published as part of the Draft Byron Local Environmental Plan 2013 indicates a substantial proportion of the Brunswick Heads public reserves are within a flood planning area.

It is noted there are a range of issues associated with the application of E2, E3 and E4 zones in new and draft LEP's in the Tweed, Kyogle, Lismore, Ballina and Byron local government areas. These matters are currently being analysed and assessed by the Department of Planning and the outcome of this work is likely to have an impact on the application of environmental zones and other environmental planning controls in the those local government areas.

## 2.6 Policies, Plans and Guidelines

The following policies and guidelines are relevant to the implementation of this Plan of Management. The Reserve Trusts will review policies and guidelines as they are updated or changed and will modify management, operational and development activities accordingly.

### 2.6.1 NSW Coastal Policy 1997

The *NSW Coastal Policy 1997* was released by the New South Wales Government to replace the *1990 Coastal Policy*. The stated purpose of the Policy is:

*The main challenge for the Government and the community in the coastal zone is to provide for population growth and economic development without putting the natural, cultural and heritage values of the coastal environment at risk. In recognition of this challenge, the Coastal Policy incorporates the principles of ecologically sustainable development (ESD) into coastal planning. ESD aims to ensure that development occurs in such a way that the ecological processes on which life depends are maintained.*<sup>3</sup>

The definition of the coastal zone takes in areas within one kilometre of the ocean, as well as an area of one kilometre around coastal lakes, lagoons, islands, estuaries and rivers. The Policy is described as integrative based on the principles of ecologically sustainable development and addresses a number of key coastal management issues including;

- coastal water quality, especially in estuaries;
- disturbance of acid sulfate soils;
- establishing an adequate, comprehensive and representative system of reserves;
- better integration of the range of government agencies and community organisations involved in coastal planning and management; and
- indigenous and European cultural heritage.

The Policy sets out a hierarchy of goals, objectives and strategic actions which include an emphasis on improving water quality and maintaining public access to the coastline.

The Coastal Policy proposes a range of management planning approaches including catchment management plans be implemented in consultation with relevant agencies to ensure sustainable development and use of natural resources occurs in harmony with the protection of the environment. A Plan of Management under the *Crown Lands Act 1989* is one of the most valuable management tools available to implement the Policy.

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<sup>3</sup> Coastal Policy, A sustainable future of the NSW Coast - Fact Sheet, 1997

### 2.6.2 Sea Level Rise

In September 2012 the NSW Government made a number of changes to way in which the planning and development on the coast is managed. As part of the reform package the *2009 NSW Sea Level Rise Policy Statement* was withdrawn with a view to providing greater flexibility in considering local conditions in determining future hazards and preparing coastal management plans. The key components of the first stage of the NSW Government's coastal reforms have;

- Removed the recommendations in regard to statewide sea level rise benchmarks;
- Given support local councils in the determination and adoption of projections with specific relevance to the local conditions;
- Provided clarity with respect to the preparation and issue of Section 149 planning certificates; and
- Made it more straightforward for landholders to install temporary works to reduce the impacts of erosion.

Byron Shire Council has developed a range of policies and programs that allow for ecologically sustainable growth in coastal areas while addressing the risk to life and property from coastal hazards and flooding. This Plan of Management will provide a planning framework for the next five to ten years and it is anticipated that as the accuracy of sea level rise projections improve over time the Plan may need to be reviewed. Most of the existing infrastructure of the Brunswick Head public reserves has a medium design life. The future management approach and any new improvements will be engineered to meet requirements of relevant planning and regulatory controls with respect to coastal development.

### 2.6.3 NSW Floodplain Development Manual, April 2005

The primary objective of the *NSW Government's Flood Prone Land Policy* is to reduce the impact of flooding and flood liability on individual owners and occupiers of flood prone property, and to reduce private and public losses resulting from floods. At the same time, the policy recognises the benefits flowing from the use, occupation and development of flood prone land. The policy promotes the use of a merit approach which balances social, economic, environmental and flood risk parameters to determine whether particular development or use of the floodplain is appropriate and sustainable.

This approach is aimed at avoiding the unnecessary sterilisation of flood prone land. Equally it ensures that flood prone land is not the subject of uncontrolled development that is inconsistent with the exposure of the land to flooding. The policy highlights that primary responsibility for floodplain risk management rests with local councils, which are provided with financial and technical support by the State Government.

The *Floodplain Development Manual* accords with the *NSW Government's Flood Prone Land Policy*. The provisions in the Manual guide councils in the development and implementation of detailed local floodplain risk management plans to produce effective floodplain risk management



outcomes. The Manual also outlines the technical assistance provided by the State Government throughout the floodplain risk management process. The Manual is concerned with the consequences of flooding as they relate to the human occupation of the floodplain for both urban development and agricultural production. It addresses flood risk in full recognition that management decisions taken in respect of the human occupation of the floodplain need to satisfy the social and economic needs of the community as well as being compatible with the maintenance or enhancement of the natural ecosystems that floodplains sustain.<sup>4</sup>

#### **2.6.4 Cape Byron Marine Park Zoning Plan**

All tidal areas of the Brunswick River and Marshalls and Simpsons Creeks lie within the Cape Byron Marine Park. The Brunswick River is within a Habitat Protection Zone which allows for the following activities;

- most forms of recreational fishing and bait collection;
- recreational boating, scuba diving/snorkelling; and
- other activities may be allowed with a marine parks permit (eg. Commercial tourism, events, minor works etc)

#### **2.6.5 Byron Shire Council 2009, Byron Shire Tourism Management Plan 2008 to 2018**

The Byron Shire Tourism Management Plan provides a strategic and integrated framework to guide the management, development and marketing of tourism for Byron Shire. The plan recognises the significance of the tourism industry to the local economy and the need to balance the impact of such activities with other commercial, social and environmental objectives.

The plan endorses continued engagement and discussion with the State government regarding plans to develop Brunswick Heads foreshore as well as the development of plans of management for Crown lands and for infrastructure development and maintenance.

#### **2.6.6 Byron Shire Bike Strategy and Action Plan (Bike Plan) 2008**

The Byron Shire Bike Strategy and Action Plan (Bike Plan) 2000 provides a synthesis of various studies and proposals for an access plan to provide integrated pedestrian pathways and bikeways throughout Byron Shire. The Plan references the following achievements and proposals for Brunswick Heads. On completion the Strategy and Action Plan will provide important connections within foreshore public open space system.

<b>Coastline Cycleway</b>	
<b>Achievements</b>	<ul style="list-style-type: none"> <li>• Southern Pacific Highway interchange to the Bowling Club. Shared pathway/bike track.</li> <li>• Tweed Street. Bicycle lanes on both sides of Tweed Street.</li> </ul>

<sup>4</sup> Foreword, Floodplain Development Manual, NSW Government, 2005

	<ul style="list-style-type: none"> <li>• Massy-Greene Holiday Park to Brunswick Valley Way at the Northern Pacific Highway Interchange. Shared pathway/bike track.</li> </ul>
<b>Proposals</b>	<ul style="list-style-type: none"> <li>• Through Venture Park from Torakina car park to Surf Club. Shared pathway and bikeway.</li> <li>• Tweed Street via the Terrace to Park Street and to the southern side of Fingal Street to Banner Park. Shared pathway/bike track.</li> </ul>

Given the existing and proposed provision of pathway/cycleways through Brunswick Heads this Plan of Management contains provisions for pedestrian links to these facilities. Consideration will also be given to the provision of racks for cyclists at key intersections of pathways and tracks.

### **2.6.7 Brunswick Heads Chamber of Commerce 2011, Brunswick Heads Community Economic Transition Plan “Taking Care of Brunswick” 2011 – 2016**

The Brunswick Heads Community Economic Transition Plan is a five year strategy for the township of Brunswick Heads, developed by the community of Brunswick Heads with the assistance of NSW Trade and Investment. The plan lays out the relevant social and economic issues and sets out the vision and strategic priorities. The areas of major focus are ageing and disability, youth, arts and culture, the built and natural environment, food, transport, housing, disaster management and the local economy including tourism.

With respect the Built Environment, the Natural Environment and the Local Economy & Tourism, the plan seeks to:

<b>Focus Area</b>	<b>Objective</b>
Built Environment	<ol style="list-style-type: none"> <li>1. To improve streetscaping and the visual amenity of the town:</li> <li>2. To improve the condition and amenity of the town’s public reserves and community buildings so that people of all ages and abilities can use and enjoy them.</li> <li>3. Improve and extend pedestrian and cycle pathways connecting the town and the foreshore, and surrounding villages.</li> </ol>
Natural Environment	<ol style="list-style-type: none"> <li>1. To preserve and enhance the natural environment while seeking a balance between conservation &amp; recreational use</li> </ol>
Local Economy & Tourism	<ol style="list-style-type: none"> <li>1. To sustain an innovative, viable and prosperous business sector</li> <li>2. To ensure the viability of the tourism industry in Brunswick Heads</li> </ol>

The ‘Taking Care of Brunswick’ Tourism Management Strategy identifies the ‘Simple Pleasures’ brand as a way to convey the unique characteristics of the township, a basis for the development of tourism services and activities and as a means of attracting like-minded tourists to the town. As a result the Simple Pleasures Marketing Strategy identifies requirements to successfully promote the brand. The Marketing Strategy aligns the ‘Simple Pleasures’ brand with community objectives and projects to support the marketing focus. With the input of a number of community groups and stakeholders, the strategy outlines:

- The aims of the ‘Simple Pleasures’ campaign;

- The key components of the campaign;
- Logo and image development;
- Merchandise specifications;
- Website development;
- Marketing and branding opportunities;
- Evaluation of strategy effectiveness; and
- Marketing Program/Project Analysis to assess ongoing requirements and to ensure its sustainability.

### **2.6.8 The Brunswick Heads Experience – a ten year partnership 2000-2010**

This document was published in 2010 by the Brunswick Heads Chamber of Commerce and NSW Industry and Investment. The publication outlines initiatives that have been taken over the past 10 years in fulfilment of the Chamber’s vision which is “to foster a dynamic local business sector, encouraging sustainable and innovative business development in line with the community’s vision for Brunswick Heads”.

### **2.6.9 Brunswick Heads Tourism Management Strategy 2005**

The requirement for a tourism strategy came out of the development of the “Taking Care of Brunswick” Strategic Plan 2004 – 2009. With particular regard to one of the 3 key areas of the Strategic Plan – Economic Development - the purpose of the Tourism Management Strategy, developed by the Brunswick Heads Chamber of Commerce Business and Tourism Group, was to identify guiding principles and a framework for developing tourism to steer the town’s economic development. In some respects the strategy grew out of a motivation to protect the village from what was perceived to be a lack of control of management of tourist development in Byron Bay.

The primary objective of the Tourism Management Strategy is to preserve the low key village atmosphere and quality of life for residents of Brunswick Heads using a sustainable tourism approach. The approach combines elements of physical and community planning in a way which aims to ensure that development is equitable, minimises resource depletion and environmental degradation and limits the negative social effects of tourism. The approach also aims to ensure a quality experience for the visitor in a manner which ensures that local needs are also met.

The strategy covers six key areas:

1. Natural Environment Sustainable Management. Focuses on protecting the natural environment by supporting low impact activities on the foreshore, dunal, river systems and beach. Providing education and monitoring of appropriate use.
2. Culture and lifestyle preservation and promotion.
3. Communication. Identifying the need to develop marketing tools and improvement of coordination and management of communication between community stakeholders.

4. Land use planning and infrastructure. Recognising the need to improve the presentation of the streetscape and open spaces, improve visitor information and experience and provide access ways for wheelchairs.
5. Marketing. Implement a multifaceted approach to promoting the 'Simple Pleasures' brand which identifies the town's key point of difference from other coastal towns and is consistent with the objectives and values of the township.
6. Economic prosperity and sustainability. Identifies the need to support new and existing tourism activities in a sustainable manner in order to stimulate employment opportunities in the town.

The Strategy suggests that with the assistance of Southern Cross University a number of Studies and Audits be undertaken. These will consider issues such as the provision of tourist accommodation, activities and attractions, the tourist market, the socio-economic impact of tourism on social infrastructure and environmental effects of tourism.

#### **2.6.10 Brunswick Heads Foreshores Reserve Strategic Plan**

The Brunswick Heads Foreshore Reserves Strategic Plan was endorsed by the former Department of Lands in August 2008. The purpose of this Plan is to identify opportunities and actions required to revitalise and improve the quality of the Brunswick Heads Foreshore and to maximise its public use and enjoyment. The genesis of this initiative was recognition by government land management agencies and the community that the existing public land on the foreshore and in the vicinity of Brunswick Heads was under stress and in danger of significant degradation. The problems identified included:

- Lack of adequate public access to and along the foreshore;
- The condition of facilities;
- The condition of the foreshore as expressed in bank erosion, the condition of seawalls, encroachments and damage to mangroves;
- Illegal camping and antisocial activities; and
- Potential impacts from flooding, tidal inundation and sea level rise.

A very important aspect of the Foreshore Reserves Strategic Plan is it provides a set of specific management principles to ensure uniformity of treatment and management of the Crown lands within the study area. The Plan identifies opportunities for additional tourist facilities to provide an income source for improvements, environmental management and ongoing maintenance of the public open space system.

### **2.7 Other Statutory and Policy Documents**

There are a number of other documents that are relevant to the ongoing management of the reserve that have been considered in the preparation of this Plan including;

- Byron Biodiversity Conservation Strategy, 2004;

- Brunswick Heads Settlement Strategy, 2002;
- Brunswick Estuary Management Plan, 2009;
- Brunswick Heads Caravan Parks – Shoreline Redemption Report, 2007;
- Far North Coast Regional Strategy 2006-31;
- *Native Vegetation Conservation Act 1999*; and
- NSW Estuary Management Policy;

## **2.8 Summary**

The management, operation and improvement of the Brunswick Heads public reserves must take account of a range of statutory controls and policies. It is a fundamental requirement of this Plan of Management that the Reserve Trust Managers will comply with the requirements of applicable legislation, regulations, approvals and policies.

### 3 EXISTING SITUATION

#### 3.1 Overview – Drawing R - 01

These reserves provide for a range of functions and activities including active and passive recreational pursuits, community events, spaces for social interaction, access to the foreshore and protection and preservation of environmental and cultural resources.

Parts of the reserves have been significantly altered to accommodate the community's use and activities and in other places the natural features and characteristics have been retained. The banks of the lower estuary have been extensively modified and seawalls are common throughout the area. In some areas intensive unregulated use has severely degraded the natural setting and many of the existing facilities are no longer adequate to support increasing levels of visitation.

Importantly these reserves represent an opportunity to facilitate an integrated approach to the management of a substantial proportion of the public domain open space in Brunswick Heads.

#### 3.2 Simpsons Creek Reserve

This area forms part of the southern gateway to Brunswick Heads. The reserve is a linear land parcel that provides a natural vegetated corridor between Tweed Street and Simpsons Creek. Informal vehicle pull over areas occur at various points along the edge of the road formation. The principal improvement in the reserve is a low key informal hailstone pathway for pedestrians and cyclists which is lit after dark and provides a link to the village centre. At the northern end of the reserve a substantial area is occupied by remnants of bitumen paving and sections of chain wire fence which were part of a tennis court complex.

On higher ground there are well-developed stands of Coastal Cypress among extensive areas of mowed grass. In places the Cypress have been underplanted with rainforest species. Large areas of mangrove occupy the low-lying land foreshore to the east which is subject to tidal inundation. The open to dense canopy is dominated by Grey Mangrove *Avicennia marina* to about 8 metres tall with stands of Cottonwood *Hibiscus tiliaceus* commonly occurring along the upper edge of the mangrove. Fortunately the mangrove community is not particularly accessible and as a result the only threats appear to be limited to minor trampling associated with occasional human access and the potential for invasion of the mangrove canopy from adjoining higher land by vines and scramblers.<sup>5 6</sup> Sections of the foreshore, more noticeably to the south of the reserve boundary have been subject to

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<sup>5</sup> Vegetation Management Plan for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2011

<sup>6</sup> Vegetation and Threatened Species Assessment Report for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2010

bank erosion. This is an issue that needs to be monitored as part of the care, control and management of the reserve.

The principal issues to be addressed in the future improvement and management of the reserve include;

- Bank erosion along the Creek foreshore to the north of the Bowling Club;
- Potential impacts from sea level rise and the associated potential impacts of climate change;
- Natural vegetation management and weed control;
- Uncontrolled vehicle access onto the reserve areas;
- Identification of a use for the former tennis court site or removal of the remnant improvements and rehabilitation of the land; and
- Maintenance of the existing pathway system.

### **3.3 Torakina Park**

Torakina Park is a highly accessible area of public open space which is popular with the local community and visitors. The reserve is near the mouth of the Brunswick River and within an extensive, almost unbroken strip of coastal forest and woodland that stretches from Kingscliff to Byron Bay and beyond Brunswick Heads. The reserve is popular because it is close to the beach and breakwall and provides a range of recreational settings. Facilities include an amenity block, picnic and barbecue shelters, seating, an informal perimeter walking track, a sandy beach that is popular with young families and open grassed areas. Parking is provided in South Beach Road as well as within the reserve. The area is used for exercise and walking, access to foreshore for fishing and swimming and picnicking.

There is a very strong community interest in the future improvement and management of the reserve with a number of local groups having an ongoing involvement. These groups include Madhima Gulgan Community Group, Tweed Byron Local Aboriginal Land Council, the Cape Byron Marine Park, Marine Rescue Brunswick, Brunswick Heads Community Dunecare, Brunswick Valley Landcare, Brunswick Heads Chamber of Commerce and the Brunswick Heads Surf Club.

The plant communities in the reserve have developed on dredge spoil deposited in the course of construction of the Brunswick River training walls in the early 1960s. Photos of the site indicate it formerly consisted largely of bare sand with a small area of Coast Banksia /Horsetail She-oak woodland. Parts of the reserve have been allowed to regenerate naturally and these areas have been subject to some weed control and planting activity. The balance of the site has been managed as relatively informal parkland with a sparse to very sparse cover of mainly planted trees and an understorey of mown grassland. Plantings in both areas have consisted of exotic species, indigenous and non-indigenous Australian species.

The primary management considerations for the bushland area of the reserve are competition and dominance by weeds which suppress natural regeneration and compete with native species. There are also impacts associated with the use of the site which result in lighting of camp fires, littering, damage to native plants, unrestrained access for dogs and creation of new tracks through the vegetation.

The principal issues to be addressed in the future improvement and management of the reserve include;

- Appropriate designation of the purpose of the reserve relative to its current and future use;
- Poor condition of public infrastructure including amenities, shelters, signage, park furniture and car parking areas;
- Access control, public safety and security;
- Illegal camping, rubbish dumping, vandalism and antisocial behaviour;
- Overflow parking for events and peak usage times;
- Vegetation management and protection and restoration of significant vegetation and ecological communities;
- Conflicts between pedestrian and vehicle movement; and
- Lack of conforming access and facilities for people with disabilities.

### 3.4 Terrace Park

Terrace Park adjoins the Brunswick Heads town centre and provides scenic views over Simpsons Creek between the footbridge and road bridge. Large figs and Norfolk Island Pines provide some shaded areas and the Park provides facilities including picnic tables, seating, electric barbecues and children's playground equipment. The Sound Shell, incorporating public toilets at the rear of the structure is used as a venue for community music events and concerts. The car park and entrance to the Terrace Reserve Holiday Park is located adjacent to southern boundary of the park. The timber footbridge at the southern end of the Park provides access across Simpsons Creek to the beach and stairs on the foreshore give access to the creek for water based recreation.

A very small stand of remnant littoral rainforest is found in Terrace Park consisting of Deciduous Fig *Ficus superba*, Rusty Fig *Ficus rubiginosa* and Tuckeroo. The large Forest Red Gums adjoining the stands are included as part of the community.<sup>7 8</sup>

Terrace Park is the venue for a number of community events and festivals such as the kites and bikes festival, the 'Mullim to Bruns' paddle, triathlon, fun runs and various other

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<sup>7</sup> Vegetation Management Plan for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2011

<sup>8</sup> Vegetation and Threatened Species Assessment Report for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2010



community events. The principal issues to be addressed in the future improvement and management of the reserve include;

- Public pedestrian access to and along the foreshore;
- Condition and maintenance of park furniture, structures and facilities;
- Poor connectivity to other parts of the foreshore reserve system;
- Provision of facilities that enable effective staging and management of community events;
- Condition of seawalls and the degradation of the edge of the Creek;
- Lack of conforming access and facilities for people with disabilities.

### 3.5 Banner Park

Banner Park is the main focus for public recreational activity and events that occur in and around the village centre. The large Norfolk Island Pines lining the banks of Simpsons Creek are the dominant landscape feature, and the park provides a range of facilities including picnic tables, seating, electric barbeques and a children's playground. The Housie Shed provides an undercover area with ten or more picnic tables catering for larger gatherings and bus tour groups that visit the area. Rock sea walls define the park edge to the creek and stairs provide access to the creek for water based recreation.

A small stand of remnant littoral rainforest to about 10m tall and dominated by Hard Quandong *Elaeocarpus obovatus* together with some Tuckeroo *Cupaniopsis anacardioides* and a White Kamala *Mallotus discolor* is located on the southern edge of the reserve and within the Mullumbimbi Street road reservation. Many of the trees are over-mature, with five trees in Banner Park previously identified as in decline and requiring remedial work. The native understorey is absent from both stands and the ground layer consists of mowed exotic grass or reserve infrastructure. There is no recent regeneration and given the nature of existing management and use of the reserve and the road regeneration is unlikely. Even so this stand of remnant littoral rainforest meets the size and condition thresholds for a Littoral Rainforest Critically Endangered Community (CEC) under the *Environmental Protection and Biodiversity Conservation Act 1999*.<sup>9 10</sup>

Banner Park is the venue for a number of community events and festivals such as the annual 'Fish and Chips' festival held over the Christmas period which includes the amusement carnival and the annual woodchop. The kites and bikes festival and other community activities are also centred on Banner Park. The principal issues to be addressed in the future improvement and management of the reserve include;

- Condition of the park furniture, bbqs, and playground equipment;

<sup>9</sup> Vegetation Management Plan for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2011

<sup>10</sup> Vegetation and Threatened Species Assessment Report for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2010

- Condition of the public amenities and the continuing vandalism of these facilities;
- Limited access for elderly/disabled to and along the river foreshore and to picnic and recreation facilities;
- Ongoing maintenance of the sea walls and stair access points to the creek;
- Park lighting, night security and vandalism;
- Excessive wear of the grass surface in high use areas, in particular around the Housie Shed, playground and creek access at Banner Park; and
- Protection of significant remnant littoral rainforest vegetation.

### 3.6 Memorial Park

Memorial Park is an open grassed space with the principal features being the War Memorial which is located on the Fawcett Street frontage and some riverside vegetation. The Park forms a critical open space and pedestrian link from the village to residential development, Massy-Greene Holiday Park and the Boat Harbour. Memorial Park is under the care, control and management of Byron Shire Council.

### 3.7 Community Safety Audit

In 2007 a Community Safety Audit was undertaken by a team consisting of 16 representatives of the Brunswick Heads community response to concerns raised by the Tweed/Byron Local Area Command of the NSW Police. Those concerns related to the negative perception held by many community members with respect to the level of crime and community safety in the area. The aim of the Audit was to document current and potentially dangerous locations within public areas that may stimulate the likelihood of crime and increase the level of community fear and concerns. The audit area focused on two distinct locations – the eastern and western side of the vehicular bridge over Simpsons Creek, particularly around South Beach Road through to Torakina Park and across to Banner Park. A copy of the Audit is included at Appendix B.

The findings of the audit team identified a number of inadequacies in respect to the existing safety and security in the audited areas which should be addressed to minimise risk to both people and property including;

- Lighting – many of the audit members felt that the overall lighting in the area was inadequate and provided minimal opportunities for surveillance.
- Amenities – many amenities for public use are not being utilised as intended. Many of these structures are in poor condition or are not well maintained, therefore deterring their use by the community.
- General Maintenance – there are some areas where general maintenance is not being regularly kept, particularly with graffiti and landscaping.
- Signage – there are areas where signage is poor, does not exist or fails to provide precise guidance and relevant information.

- Pedestrian access arrangements - crossings and facilities for pedestrians are non-existent in many key locations.

The table below provides a summary of the actions recommended by the Community Safety Audit Team. While implementation of the actions below will improve public safety and security the report notes that *“it should be recognised it is not possible to make areas absolutely safe for the community and their property”*.

<b>RECOMMENDATIONS FROM 2007 COMMUNITY SAFETY AUDIT</b>	
<b>PAGE</b>	<b>HAZARD/RECOMMENDATION</b>
<b>General Impressions of Safety</b>	
<b>7</b>	Need well designed road surfaces, verges and footpaths.
<b>8</b>	To encourage the parks to be used more often, activity generators need to be established catering for all likely user groups.
<b>Lighting</b>	
<b>10</b>	A lighting plan needs to be established for the Brunswick Heads area.
<b>11</b>	Businesses need to leave limited lighting on at night.
<b>Visibility and Sightlines</b>	
<b>12</b>	A landscaping maintenance plan needs to be put in place.
	<b>Signs</b>
<b>14</b>	A maintenance policy is required to ensure signs are regularly kept and in good condition.
<b>14</b>	It is recommended that all alcohol free zone signs are checked and updated with correct expiry dates.
<b>Traffic and Transport Services</b>	
<b>17</b>	Additional pedestrian crossings should be considered as well as existing ones to be upgraded.
<b>17</b>	Consideration should be taken to car parks being sign posted with time limits which are enforced.
<b>17</b>	It is recommended that transport be timetabled to accommodate at peak times to help channel people out of precincts in an orderly manner.
<b>17</b>	Bicycle designated paths can help in creating a healthy activity generator to the area.
<b>General Maintenance</b>	
<b>18</b>	It is recommended that a maintenance policy be put in place.
<b>19</b>	A graffiti rapid removal program should be implemented where graffiti is removed within a 24-48 hour period.
<b>Provision of Services</b>	
<b>21</b>	The public toilets at the rear of the surf club should be demolished and/or re-located.
<b>21</b>	All public toilets should be locked at night when use is minimal.
<b>22</b>	The location of garbage bins should be reviewed to ensure there are enough where needed.
<b>22</b>	Car parks should be re-designed with definition and designation of space.

Relevant recommended actions from any future Community Safety Audit will be considered in the ongoing improvement and future management of the Public Reserves.

### 3.8 Opportunities

There is a range of opportunities that apply equally to the five public domain open space areas addressed by this Plan of Management;

- Improve the standard of presentation and quality of basic facilities which include signage, park furniture, playground equipment, pathways and ancillary structures within the parks to meet current regulatory and safety standards to meet current and future recreational requirements;
- Improvement access for people with disabilities;
- Establish an integrated approach to vegetation management;
- Provide additional landscaping in the parks to enhance amenity and create shade and shelter;
- Remove weeds and unsuitable exotic species and replace with native species wherever appropriate;
- Undertake repairs to rock walls and river and creek foreshores where necessary and consider alternative more natural and less intrusive edge treatments where appropriate;
- Encourage continued community use of the parks for markets, festivals, music performances, carnivals, etc and consult with community groups and organisations to achieve outcomes that will benefit the community as a whole;
- Provide improved pedestrian connections between each of the reserves; and
- Upgrade lighting to improve night time safety and security for the local community and visitors.

**The following Sections describe objectives, strategies and actions required to address these and other essential issues.**

## 4 VISION AND OBJECTIVES

### 4.1 Introduction

This Plan of Management is based on a Vision that will guide the NSW Crown Holiday Parks Trust and the Byron Shire Council in their respective decision making processes. The Vision is consistent with the Management Principles developed for the Brunswick Heads Foreshores Reserves discussed in Section 2.6.10 of this Plan. Implementation of the Vision will address Management Principles that will guide the strategies and actions taken by the Trust.

The Reserve Trusts will implement a co-operative and responsive approach to the care control and management of the Public Reserves in order to meet the community's requirements and achieve greater public value. There is a strong commitment from the NSW Holiday Parks Trust to implement the recommendations that have come from the Brunswick Heads Foreshore Reserves Strategic Plan by financing and undertaking, where appropriate, improvements with the capacity to address key issues of concern, enhance public use and enable public enjoyment of the foreshore reserve network.

### 4.2 Vision

The management and improvement of the Brunswick Heads public reserves will;

- create an integrated and well connected network of public open spaces along the Brunswick River and Simpsons Creek foreshores which provide a diversity of recreational, economic, and social opportunities while protecting and enhancing natural environmental values; and
- ensure these spaces complement one another, are consistent with the coastal village character of Brunswick Heads, minimise negative impacts on the natural environment and provide opportunities for economic sustainability and self-sufficiency to meet future community needs.

### 4.3 Management Principles

In this Plan of Management the following principles have been applied to address the issues that will be addressed in the ongoing management and improvement of the Brunswick Heads public reserves;

**Holistic:** To develop an integrated plan where the relationship between spaces is understood and has the capacity to guide future development of the Reserves irrespective of the agency with future management responsibility.

**Sustainability:** To ensure the Plan of Management delivers outcomes which are economically, environmentally and socially sustainable.

**Cultural Values:** To recognise and respect Aboriginal and European cultural values throughout the Reserves.

**Diversity:** To provide a variety of passive and active recreational and social experiences and commercial opportunities within the context of the natural setting and character of Brunswick Heads and the 'simple pleasures' village theme.

**Recreation:** To encourage sustainable use and enjoyment of the Brunswick Heads Public Reserves by the local community and visitors.

**Accessibility:** To design and develop facilities that enable equity of access for people with disabilities and others with restricted mobility to enjoy the active and passive recreation opportunities provided in the Reserves.

## 5 MANAGEMENT ACTIONS AND STRATEGIES

### 5.1 Proposed Management and Improvement Program

The Reserves that are the subject of this Plan of Management are not income producing assets of the Reserve Trusts and will not generally be used to support private commercial activities and businesses such as cafes and kiosks. Improvements must be funded from other revenue sources. In order to ensure appropriate outcomes for investment in the Reserves the proposed management and improvement of the Reserves over the next five to ten years will give priority to addressing the following issues;

- Environmental and vegetation management;
- Storm water management;
- Appropriate risk management;
- Improving the condition of the river foreshore and the existing sea walls to preserve and improve the opportunity for continued public access to the foreshore and the water;
- Providing only facilities that will fulfil clearly identified community needs;
- Establishing continuity of public pedestrian access to and along the foreshore and reducing conflicts between vehicles and pedestrians;
- Improved access for people with disabilities;
- Improving the standard of public infrastructure, facilities and amenities including park furniture, bike racks, drinking fountains and the like in the Brunswick Heads Public Reserves; and
- Increased and better regulated car parking areas;

**Proposed improvements and changes to the public foreshore reserves will be assessed in consultation with other relevant authorities and include consideration of impacts on the Marine Park, residents, events, local businesses and access for emergency service providers.**

### 5.2 Authorised Works – refer to Drawing R 02 – R-06

The following provides a description of the changes, and improvements that will be made to Brunswick Heads Foreshore Public Reserves over the next 5 to 10 years. These improvements and actions are identified and described in Sections 5 and 6 of this Plan of Management and in the Drawings.

The required development, improvements and works are itemised below for each of the relevant Reserves and are authorised pursuant to Clause 65(2) of *SEPP Infrastructure 2007*.

### 5.2.1 Simpsons Creek Reserve – Drawing R - 02

It is not intended to undertake any substantial built improvements on this part of Reserve 82999. The principal actions during the currency of this Plan of Management will be;

- Preservation and protection of the native vegetation communities in accordance with the Vegetation Management Plan including removal of weeds and exotic plant material;
- Maintenance of the existing pedestrian pathway and improvements to signposting;
- Investigation of the creation of a new kayak/canoe launching facility in conjunction with the foreshore restoration program;
- Restriction of vehicular access in areas where that is causing damage to the natural features of the Reserve;
- Removal of the disused tennis court infrastructure and revegetation of the area if no suitable use can be identified. Consideration will be given to use for parking provided the integrity of the surface is capable of supporting vehicles;
- Fencing if required to achieve environmental protection objectives;
- Storm-water management works to minimise erosion particularly in relation to foreshore of the Creek; and
- Restoration of sections of the Simpsons Creek foreshore in accordance with the recommendations of the 2007 report prepared by Geolink, Brunswick Heads Caravan Parks Preliminary concept designs for shoreline remediation and small boat access and storage<sup>11</sup>. The more recent advice provided to Byron Shire Council by Australian Wetlands Consulting Pty Ltd specifically addresses the rehabilitation of sections of the Simpsons Creek foreshore to the south of the village<sup>12</sup>. The on-going stability of the creek bank will be monitored, including the undercutting of the bank which is evident along this stretch of the estuary where the soil overlays coffee rock.

Authorised Activities and Works: Roadworks; signposting; environmental protection and restoration; storm-water management works; erosion control; demolition; underground service installation; installation of lighting; fencing; and landscaping.

### 5.2.2 Torakina Park – Drawings R – 03 and R - 04

The Habitat Restoration Plan for Torakina Park<sup>13</sup>(refer to Appendix C) will provide the fundamental framework for the future care, control and management of the Reserve and establishes the following objectives;

<sup>11</sup> Brunswick Heads Caravan Parks Preliminary concept designs for shoreline remediation and small boat access and storage, Geolink, 2007

<sup>12</sup> Simpsons Creek Rehabilitation Brunswick Heads, Detailed Design – Treatment B, Drg No AWC1022\_DD05, 01 Draft, Australian Wetlands Consulting Pty Ltd, 2010

<sup>13</sup> Habitat Restoration Plan, Torakina, Brunswick Heads, Bushland Restoration Services, May 2013



- Enhance and expand the existing native vegetation and habitats within the site by implementing best practice ecological restoration practices;
- Increase the regeneration capacity and condition of the native vegetation within the site;
- Protect and expand the populations of threatened flora and fauna and endangered ecological communities by reducing impacts and threats and improving habitat;
- Revegetate highly degraded areas to increase habitat for native plants and animals including threatened species;
- Reduce maintenance over time to a minimum level to ensure that weeds do not invade the area and impact on the native flora and fauna;
- Increase community awareness by providing information on the ecological value of native flora and fauna, environmental weed species and restoration techniques and approach.

The implementation of these objectives will result in improvements to biodiversity values, increase the regeneration capacity of the native vegetation, reduce restoration maintenance time to a minimum and increase the capacity for ongoing involvement of the community in the project. This work will also preserve the capacity of the reserve to support appropriate levels of public use for active and passive recreation.

The Habitat Restoration Plan considers the reserve in terms of the character and condition of the vegetation communities;

#### **Coast Banksia Forest / Littoral Rainforest Precinct**

This community is dominated by Coast Banksia and a number of rainforest tree species. The tallest stratum is 4 – 9 metres tall and the cover is generally mid dense. There is a well-developed mid stratum of rainforest shrubs and young trees and a generally sparse groundcover consisting mainly of native grasses and herbs. The local Dunecare group has undertaken weed control and plantings in this area for a number of years

#### **Coastal Cypress Pine / Coast Banksia Forest to Woodland Precinct**

This community is dominated by Coastal Cypress Pine and Coast Banksia. The tallest stratum is 5 – 10 metres tall and the cover is mid dense to sparse. The cover of the mid stratum ranges from mid dense to sparse and consists in part of rainforest shrubs and young trees. The ground stratum cover is mid dense to sparse and consists mainly of native grasses – Queensland Blue Couch and Prickly Couch.

#### **Parkland / Woodland Precinct**

This community consists of a sparse to very sparse cover of exotic and native trees with little or no lower stratum apart from mown grassland. Species of trees include Horsetail She-oak, Norfolk Island Pine, Slash Pine and New Zealand Christmas Bush.

There was no direct evidence of fire and the presence of fire sensitive species such as Coastal Cypress Pine suggests that fire has not been a significant element in this community.

The main environmental and vegetation management considerations relating to the future use and improvement of Torakina Park are;

- competition and dominance by weeds which suppress natural regeneration and compete with native species; and
- impacts associated with the uses of the site such as camp fires, littering, damage to native plants, unrestrained dogs and the creation of informal tracks through the bushland.

Therefore proposed management actions and physical improvements to the reserve will seek to allow for regulated access and use within the context of the protection and improvement of the natural environmental assets of the land. The proposed improvements will be compatible with the identified vegetation management precincts and the preservation and protection of the vegetation communities.

A formal **public parking area for 18 cars** will be established on the northern side of South Beach Road. The proposed layout is partly within Torakina Park and partly within the road reserve. A copy of the plan is included at Appendix D. Existing parking in and around the principal reserve access points is largely ad hoc with resulting conflicts between vehicles and pedestrians and attendant safety concerns. While it is recognised this proposal does not purport to fully cater for peak visitation periods it will provide a vastly improved situation for a majority of the year by regulating day to day access for vehicles and pedestrians. Construction of the car park will require removal of one Coastal Cypress, however, extensive compensatory planting will be undertaken as part of the vegetation management strategy.

The location and design of the car parks and any associated changes to pedestrian access will also consider the possible relocation of the emergency access to the Southern Rock wall. The objective will be to ensure convenient pedestrian access to both Torakina Beach and the Southern Rock wall while ensuring the emergency access is organised in a way that matches the requirements of emergency service providers. Finalisation of the detailed design will be undertaken in consultation with Marine Rescue NSW, Crown Lands and other relevant service providers.

**The existing public amenity block** will be renovated or replaced. Aspects of the existing building are in poor condition and in recent years it has been expensive to maintain and has been subject to ongoing vandalism. In the first instance the Trust will assess the cost to undertake a comprehensive renovation of the existing building. This will include improvement to the functionality of the building and its capacity to be altered to better address issues related to security and vandalism.

If the cost to undertake such a renovation is prohibitive a new amenity will be constructed close to the site of the existing facility. The proposed building will be of a scale and design that is appropriate to the location and will include male and female sections with toilets, showers and changing areas. Facilities will also be provided for people with disabilities. Key considerations in the design of any new building will include construction and maintenance costs, minimising the possible impacts of vandalism, security and aesthetic compatibility with the surrounding area.

The Trust will consider allowing the placement of “public artwork” on the renovated or new amenity block subject to an understanding on the part of the proponents that the works may be subject of vandalism. The Trust would require the proponents to take responsibility for the installation, placement and maintenance of the artworks and removal if the situation became unworkable.

Existing **picnic and barbecue facilities** will be progressively improved with the provision of additional picnic tables and shelters within the Parkland/Woodland Precinct of the reserve. This will recognise and confirm this area as the main focus for more intense public use of the reserve.

The vegetation management activity in the Coastal Cypress Pine/Coast Banksia Forest to Woodland Precinct **will create a number of more open areas scattered through the reserve**. This will occur as a result of the removal of weeds and exotic plants and the removal of lower level branches from more mature vegetation and where appropriate picnic benches will be installed in some of these clearings.

The **perimeter walking track** will be progressively improved to provide an informal pathway that provides continuity of foreshore pedestrian access. The standard of the track will be similar to the existing pathway in the Simpsons Creek Reserve, however, it is not intended that this pathway will be lit.

The management of the **Coast Banksia Forest Littoral Rainforest Precinct** will be focussed entirely on the preservation and improvement of the vegetation community with no formal public access to this area. While fencing will be used to discourage entry to the regeneration areas the availability of public access along the pathway system will not be hindered.

In line with the recommendations of the Community Safety Audit some improvements will be made to the lighting of key areas between sunset and sunrise, however, it is emphasised that the level to which lighting can be improved will be subject to budgetary constraints. In addition the location and design of fittings will be subject to consultation with the relevant authorities and include an assessment of any likely adverse impact on nearby residences and on the Marine Park.

Suggestions have been made for the development an “all abilities playground” and a “sculpture walk” in Torakina Park. These are not projects that have been identified for implementation in this Plan of Management. The Plan does provide for improvements to the existing playgrounds in Terrace and Banner Parks and consideration will be given to incorporation of some “all ability” equipment as part of those upgrades.

The concept for the creation of a “sculpture walk” could have potential application within the Brunswick Heads village public open space system but would require ongoing community consultation to develop a detailed proposal. Existing issues in relation to vandalism are a particular concern for the Trust and in this regard it is considered Torakina Park would not provide an ideal setting. In addition at this stage the principal objectives of the Rehabilitation Plan are directed toward maintaining the natural character and features of the reserve.

Authorised Activities and Works: Demolition; roadworks and car park construction; renovation of public amenities; construction of public amenities; underground utility service installation; installation of lighting; vegetation management; removal of trees but only as recommended by an appropriately qualified arborist and in accordance with the Habitat Restoration Plan; installation of park furniture; construction of picnic shelters; walking track construction; environmental protection works; storm-water management and erosion control; signposting; fencing; and landscaping.

### **5.2.3 Banner Park and Terrace Park - Drawings R – 05 and R - 06**

The proposed improvements to these Parks have been determined on the basis of assessment of the existing facilities and vegetation and input received from the community. In April 2012 representatives of the NSW Crown Holiday Parks Trust met with key stakeholders to identify particular issues of concern and to inform the Trust on the way in which facilities are used and major community events operate. Minutes from the meeting are included at Appendix E. Proposed improvements to these Parks will be focused on providing for the continued community use of the reserves in a way that will preserve natural features and resources.

Terrace Park and Banner Park will be improved through the upgrade of various existing facilities that have fallen into disrepair and provision of new facilities. Consideration will be given to formalising the pedestrian pathway through Terrace Park but only if the levels of foot traffic begin to have a continuing adverse impact on the environment. Other significant works will include erosion control, fencing, development of infrastructure and utilities, landscaping, foreshore rehabilitation and development of and improvements to

public amenities and recreation facilities. The objective will be to establish and maintain a viable and sustainable network that links various areas of public land along Simpsons Creek and Brunswick River.

In Terrace Park the existing children's playground will be retained in the current location to take advantage of the mature shade trees with a new pedestrian pathway to the north to link from Fingal Street to the pedestrian footbridge over Simpsons Creek. Existing features including the Sound Shell, public toilets and park furniture and shelters will be improved and replaced where appropriate. Consideration will be given to expanding the Sound Shell amenities to include showers and changing areas.

In Banner Park the foreshore pedestrian pathway will be more clearly established and developed in a position that will not inhibit the community activities that occur in the reserve. An integral part of the foreshore improvement program will be a concept for a raised deck constructed from timber sourced from the region with seating and picnic settings which will also use local hardwoods. The design will;

- Retain clear access and space for markets and events;
- Assess requirements for the provision of additional permanent lighting;
- Protect the roots of Norfolk Pines in a high traffic area and provide safe pedestrian access;
- Create a focal point for enjoyment of the scenic qualities of the foreshore;
- Upgrade the existing playground and provide integrated seating to allow parents to supervise children and provide physical separation between the playground and Simpsons Creek. This work will be undertaken to accommodate the high levels of use of the existing facility by families with younger children. The design process will include consultation with the local school and pre-school. The installation of equipment for children with limited mobility will be investigated as part of the this process;
- Investigation of the development of improved and new access stairs and ramps from the foreshore into Simpsons Creek;
- Ensure adequate access opportunities are provided for people with limited mobility; and
- Provide links to the Brunswick River and Simpsons Creek foreshore pathways with pedestrian connections to Torakina Park and beyond.

Other important improvements will include additional seating near the existing formalised parking areas and improvements to the Housie Shed to introduce more natural light into the centre of the building. Access to the small beach adjacent to the road bridge will be improved.

The Trust will work with other agencies including the Cape Byron Marine Park Authority and NSW Roads and Maritime Services in relation to licensing commercial activities in the reserves.

**Authorised Activities and Works:** Demolition; roadworks and car park construction; maintenance of public amenities; building alterations; renovation of public amenities; construction of public amenities; underground utility service installation; lighting installation; vegetation management; removal of trees but only as recommended by an appropriately qualified arborist; installation of park furniture; construction of picnic shelters; pedestrian pathway and deck construction; repair and construction of foreshore access structures; environmental protection works; sea wall restorations; environmental management works; storm-water management and erosion control; signage; fencing; and landscaping.

### **5.3 General Improvements**

#### **5.3.1 Foreshore Access**

The Brunswick Foreshore Reserves Strategy includes a commitment to the progressive establishment of appropriate, safe and practical public access along the foreshores with a view to reducing conflicts between vehicles and pedestrians. The implementation of this process must also recognise the environmental and ecological attributes of the foreshores and assign the highest priority to preserving and protecting those features. The condition of the river and creek foreshore including the seawalls is integral to maintaining and improving the availability of public pedestrian access. In every case the approach to design and construction will provide facilities designed to be in harmony with the natural setting to reinforce the “simple pleasures” theme.

#### **5.3.2 Foreshore Restoration**

The management of the foreshore areas in and adjacent to each of the Public Reserves is a matter that will receive ongoing attention as a matter of priority. Since taking up responsibility for care control and management of the Brunswick Heads holiday parks and associated public open space areas the work has been undertaken at Ferry Reserve, Massy-Greene and Terrace Reserve to repair and restore sections of the foreshore.

These works were undertaken on the basis of report prepared by Geolink in 2007 which detailed “Preliminary concept designs for shoreline remediation and small boat access and storage for the Brunswick Heads Caravan Parks”. More recently Australian Wetlands

Consulting Pty Ltd provided advice to Byron Shire Council on the rehabilitation of sections of the Simpsons Creek foreshore to the south of the village. The recommendations of these reports will inform the approach to works carried out on the foreshore with detailed design being developed in consultation with the Marine Park Authority and Fisheries to ensure environmental management priorities and objectives are correctly addressed.

### **5.3.3 Fencing, lighting and internal pedestrian pathways**

These Reserves are essentially accessible by the community at all times, however, fences are required in various locations to limit access for people and vehicles, to protect significant and sensitive environmental resources, to provide safety and security for people and to protect public assets and to regulate the directions of pedestrian movements. The provision of access for people with limited mobility will be provided wherever that is appropriate and practical.

### **5.3.4 Signs**

An integrated approach is required for all aspects of signage including provision of information to visitors, environmental education and regulation of activities. As well consolidation of signs as opposed to a proliferation of small signs presenting warnings and prohibitions is required to more effectively communicate with the users of the public reserves and ensure the design and quantity of signs is appropriate to the natural setting.

### **5.3.5 Environmental Management**

Environmental initiatives cover vegetation management, water use controls and energy efficiency. There are opportunities for improved storage and recycling of wastes, including green waste. In many cases environmental objectives can be achieved through design features of the roads, facilities and buildings generally.

To achieve an acceptable level of environmental management and sustainability it is intended that the following issues be considered in relation to all aspects of the improvement of the Public Reserves:

- use of low ecological impact materials;
- use of renewable materials; and
- use of low embodied energy materials.

## **5.4 Assessing Proposed Improvements**

This Plan of Management proposes that a number of improvement projects are undertaken by the Reserve Trust over the next 5 to 10 years. There has been wide ranging analysis and consideration of these proposals during the preparation of this Plan, however, the use

of the Reserves by the community is dynamic and priorities can change for a variety of reason. Therefore a number of questions should be considered by the Reserve Trust when deciding whether a particular land use or development is to proceed within the Reserve at any particular time;

- The need for the proposal – is it still required and will it promote and support the use and enjoyment of the Reserve?
- Benefit – will the improvement bring direct benefits to the users of the Reserve?
- Impact – will the proposal have any adverse impact on any existing or emerging legitimate use of the reserve?
- Are there any new or emerging environmental or land management constraints that should be considered and assessed in relation to the proposed improvement? and
- Does the Trust have the resources to effectively manage and maintain the proposed facility for the ongoing benefit of Reserve users? and

## **5.5 Funding Proposed Improvements**

The Brunswick Heads public reserves are not income producing assets of the Reserve Trusts and therefore the funds required to undertake day to day management as well as any proposed improvements must be drawn from other areas. In the case of the NSW Crown Holiday Parks Trust the capacity to manage and improve the public reserves is reliant upon the ongoing profitable operation of the Brunswick Heads Holiday Parks. As a consequence available funds will be applied firstly to ongoing essential management actions with new capital works being implemented subject to the trading outcomes from the operation of the Holiday Parks. At the same time the Reserve Trust will apply for grant funding that may be available from time to time for projects that have public and environmental benefits.



## 6 PLAN OBJECTIVES, STRATEGIES AND ACTIONS

The following tables detail the Management Strategies and Management Actions to be implemented by the Reserve Trusts. In the first instance the Strategies and Actions are designed to achieve the Vision for the Reserves and address the Management Objectives outlined in Section 4. The implementation of the identified Actions will address the Management Issues identified in Section 3.3. Where further documentation is required the planning and design process will be guided by and comply with the Vision, Objectives and Strategies established by this Plan.

### 6.1 Regulatory Compliance

**Objective:** To ensure the development and management of the Reserves complies with all applicable statutory standards.

Strategy	Actions
Provide facilities to conform to relevant regulations.	<ul style="list-style-type: none"> <li>• Through sound design ensure proposed improvements comply with the requirements of any relevant and applicable statute, code or policy;</li> <li>• Address requirements with respect to access and parking for people with disabilities.</li> </ul>

### 6.2 Health, Safety and Risk Management

**Objective:** To provide and maintain facilities to minimise risk to staff and to people who use the Reserves.

Strategy	Actions
Continue to provide health, safety and risk management for the public use of the reserves and for staff involved in maintenance and management activities.	<ul style="list-style-type: none"> <li>• Maintain practical and appropriate access throughout the Foreshore Public Reserves for emergency service providers;</li> <li>• Undertake ongoing comprehensive risk assessment of the Reserves on the basis of a structured WH and S Management Plan;</li> <li>• Minimise public risk through the ongoing implementation of a risk management strategy;</li> <li>• Ensure all staff and management is appropriately trained;</li> <li>• Install security cameras as required to address issues of vandalism, security and public safety;</li> <li>• Provide lighting as required and where appropriate to enhance security and safety between sunset and sunrise;</li> <li>• Maintain and use any equipment in accordance with regulations and manufacturer's specifications;</li> </ul>

	<ul style="list-style-type: none"> <li>• Store and use chemicals as required by regulations and in accordance with manufacturer's recommendations.</li> </ul>
Ensure the enjoyment and use of the reserve is not compromised by inappropriate behaviour.	<ul style="list-style-type: none"> <li>• Undertake a review of the activities that should be prohibited or regulated on the reserve;</li> <li>• Consider adding the Reserves addressed by this Plan of Management to the list of reserves in Schedule 1 of the <i>Crown Lands (General Reserves) By-law 2006</i>;</li> <li>• Install public notices in appropriate locations within the reserves to specify the activities that are prohibited or permitted in accordance;</li> <li>• Work with the NSW Police to address issues related to inappropriate behaviour in and around the reserves.</li> </ul>
Maintain facilities to appropriate standards.	<ul style="list-style-type: none"> <li>• Continue to maintain an asset management register and fund the ongoing implementation of the Park's asset management plan.</li> </ul>
Protect life and property from the consequences of natural events.	<ul style="list-style-type: none"> <li>• Maintain an adequate emergency evacuation plan.</li> </ul>

### 6.3 Environmental Management

**Objective:** To ensure the vegetation and the natural environmental features of the Reserves are managed in accordance with sound ecological principles and for the enjoyment of the community and visitors.

Strategy	Actions
Maintain environmental integrity.	<ul style="list-style-type: none"> <li>• Formulate and implement an Environmental Management Strategy to identify, minimise and manage the environmental impacts of the Trust's activities on the environment by systematically integrating environmental management into daily operations, long term planning and other quality management systems;</li> <li>• Where required undertake a Review of Environmental Factors before proceeding with implementation of proposed improvements and development;</li> </ul>
Promote and maintain the health of existing and proposed vegetation and landscaping.	<ul style="list-style-type: none"> <li>• Preserve and protect existing native vegetation when relocating sites or undertaking improvements;</li> <li>• Only use endemic native species for landscaping and tree replacement;</li> <li>• Use non invasive grass species when turfing in the Reserves;</li> <li>• Remove weeds and re-vegetate areas appropriate to land-</li> </ul>

	<p>use, design and management of facilities;</p> <ul style="list-style-type: none"> <li>All arboricultural work shall be best practice and undertaken by a qualified arborist.</li> </ul>
Improve and maintain environmental and visual amenity.	<ul style="list-style-type: none"> <li>Implement a replacement planting program for any trees required to be removed and provide protection during establishment.</li> </ul>
Minimise disturbance to native vegetation.	<ul style="list-style-type: none"> <li>Use appropriate siting for facilities and walkways;</li> <li>Carefully manage pedestrian and vehicle access;</li> <li>Define buffer areas and protect vegetation through mulching, edge planting and/or fencing as appropriate.</li> </ul>
Implement effective catchment management to minimise impacts on water quality.	<ul style="list-style-type: none"> <li>Implement erosion control measures, litter and silt traps and drainage line filters where required to control storm water;</li> <li>Use chemicals in accordance with approved Trust and AS guidelines;</li> <li>Promote catchment management principles as appropriate.</li> </ul>
Minimise fire hazard to property and appropriately manage natural coastal vegetation.	<ul style="list-style-type: none"> <li>Provide and maintain adequate fire control access;</li> <li>Provide and maintain fuel free and fuel reduced zones where necessary. Minimise disturbance to natural vegetation;</li> <li>Do not allow solid fuel campfires or cooking fires.</li> </ul>
Manage coastal processes and climate change while allowing for natural occurrences.	<ul style="list-style-type: none"> <li>Close access and repair damage as necessary after storm events;</li> <li>Develop specific climate change adaptation plans in accordance with government policy.</li> </ul>

#### 6.4 Sustainability

**Objective:** To ensure the principles of ecological and environmental sustainability are incorporated into the design and management of facilities and infrastructure within the Reserves so resources are used efficiently throughout their lifecycle and to meet the needs of the community.

Strategy	Actions
Sustainable Development	<ul style="list-style-type: none"> <li>Assess improvement and development proposals in the light of sustainability principles;</li> <li>Implement best practice approaches to achieving sustainable resource management.</li> </ul>
Resource Sustainability	<ul style="list-style-type: none"> <li>Promote sustainability in the design, construction and management of assets including use of low embodied</li> </ul>

	<p>energy materials, replaceable resources, plantation timbers, etc;</p> <ul style="list-style-type: none"> <li>• Price goods and services to recover the full life cycle costs of providing the goods and services including the use of natural resources and assets and disposal of waste.</li> </ul>
Reduce carbon footprint.	<ul style="list-style-type: none"> <li>• Progressively reduce dependence on high CO<sup>2</sup> energy sources by acquiring electricity from renewable energy sources.</li> </ul>
Minimise use of water and energy.	<ul style="list-style-type: none"> <li>• Manage resources with an emphasis on energy minimisation, water use minimisation, water harvesting and re-use, and responsible waste management.</li> <li>• Recycle waste where possible and appropriate.</li> </ul>

## 6.5 Facilities

**Objective:** To optimise the recreational and other public use of the Public Reserves consistent with principles of ecological sustainability while improving presentation and management of existing facilities and providing new facilities for the community and day visitors.

Strategy	Actions
Implement a staged development process that is achievable in terms of planning and financial constraints.	<ul style="list-style-type: none"> <li>• Undertake improvements to the Reserves based on the internal capacity of the Reserve Trust to support the funding and ongoing maintenance of the works.</li> </ul>
Maintain and upgrade designated recreation areas to cater for a range of active and passive recreation opportunities.	<ul style="list-style-type: none"> <li>• Provide recreation facilities within existing appropriate and designated locations. This may include over time: <ul style="list-style-type: none"> <li>- picnic tables, shelters and electric BBQs</li> <li>- public toilets and beach showers</li> <li>- playgrounds</li> <li>- garbage bins</li> <li>- lighting</li> <li>- shade tree planting (use mainly local native species)</li> <li>- pedestrian pathways</li> <li>- bike racks</li> <li>- off street parking</li> <li>- fencing to protect natural vegetation</li> <li>- directional and interpretive signs.</li> </ul> </li> </ul>

<p>Develop, maintain and rationalise existing pedestrian access to best suit current use and conditions and to ensure access safety, usability and protection of the natural environment</p>	<ul style="list-style-type: none"> <li>• Maintain the Foreshore Public Reserves to provide for appropriate public access that addresses the requirement to protect and preserve the environmental attributes of the locality;</li> <li>• Generally permit pedestrian access throughout the Reserves but subject to operational and management requirements with respect to the safety, security and environmental protection and rehabilitation;</li> <li>• Improve and maintain the existing foreshore pathways within the Reserve for public pedestrian use and provide surfaces that are appropriate to levels of use;</li> <li>• Review existing pathway system (both constructed and informal access) taking account of; <ul style="list-style-type: none"> <li>- level of use</li> <li>- vegetation</li> <li>- erosion</li> <li>- visibility and convenience</li> </ul> </li> <li>• Close, relocate and/or upgrade pathways as required;</li> <li>• Adapt pathway design to local topography and conditions as appropriate eg. board and chain, stairs, gravel or sand tracks, bitumen sealed or paved paths, pathway definition by bollards or fencing;</li> <li>• Provide for use by cyclists where safe and appropriate;</li> <li>• Maintain access structures and vegetation to encourage use, ensure safety and protect vegetation in riparian areas. Temporary pathway closure may be required after storm events. Improve the Reserves and develop facilities as described in this Plan of Management and as generally indicated on Drawings.</li> </ul>
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## 6.6 Accessibility

**Objective:** To design and develop facilities that enable equity of access for people with disabilities and others with restricted mobility to enjoy the active and passive recreation opportunities provided in the Reserves.

Strategy	Actions
<p>Provide facilities that facilitate equity of access.</p>	<ul style="list-style-type: none"> <li>• Design and construct facilities to address the relevant requirements of AS 1428 – Design for Access and Mobility;</li> <li>• Where possible and practical construct pathways at grades and widths complying with the relevant requirements of AS 1428 – Design for Access and Mobility;</li> <li>• Progressively improve accessibility to existing facilities;</li> </ul>

	<ul style="list-style-type: none"> <li>• Install park furniture that takes account of the requirements of people with restricted mobility including parents with young children and carers;</li> <li>• Provide visitor parking for people with disabilities.</li> </ul>
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## 6.7 Integrated Management

**Objective:** To promote and assist integrated coastal land management associated with the use of the Brunswick Heads Public Reserves.

Strategy	Actions
Implement the Plan of Management and relevant statutory requirements in an ongoing, co operative and timely manner within the available resources.	<ul style="list-style-type: none"> <li>• Liaise with other local, regional and state authorities particularly where co-ordination of activities on adjoining lands is involved.</li> <li>• Maintain awareness of the activities of other authorities particularly in relation to the use of the waterway and waterfront land;</li> <li>• Maintain liaison and dialogue with emergency service providers to ensure appropriate access arrangements are provided and maintained;</li> <li>• Obtain approvals and consents as required; and</li> <li>• Continue liaison with Crown Lands in relation to new and emerging government policy that impacts on the management of reserved Crown land.</li> </ul>
Enable leases and licenses for appropriate uses.	<ul style="list-style-type: none"> <li>• All existing leases and licenses and new applications will be reviewed by the Trust, when appropriate, with reference to the provisions of relevant legislation and this Plan of Management;</li> <li>• The Trust will not enter into leases and licenses that for commercial activities that detract from the character and purpose of the reserves such as cafes and kiosks;</li> <li>• The Reserve Trusts may enter into a lease or license for whole or part of the lands to which this Plan applies provided the management of the land is in accordance with this Plan of Management and relevant Crown approvals and policies, the use of the land is in the public interest and the granting of the lease or license is in accordance with the relevant provisions of the <i>Crown Lands Act 1989</i>.</li> </ul>
Maintain a continuing dialogue with the local Council and the	<ul style="list-style-type: none"> <li>• Liaise and co-operate with adjoining land management authorities including Byron Shire Council to achieve continuity of public pedestrian foreshore access and consistency with respect to the standard of surface finish,</li> </ul>

community in relation to the management of the parts of the Reserve that used by the public.	width and signposting.
Protect and enhance Aboriginal cultural values in the Reserve	<ul style="list-style-type: none"> <li>• Comply with the requirements of the “Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW” before proceeding with improvement works;</li> <li>• Identify and protect significant sites and consult with relevant groups and authorities prior to commencement of works on site;</li> <li>• Ensure access to significant sites for Aboriginal use;</li> <li>• Provide interpretation of significant sites where appropriate;</li> <li>• Maintain on-going consultation with local elders and Department of Environment &amp; Conservation.</li> </ul>
Protect and enhance European cultural and historic values in the Reserve	<ul style="list-style-type: none"> <li>• Identify and protect significant sites;</li> <li>• Provide appropriate interpretation of significant sites where desirable.</li> </ul>

## 7 IMPLEMENTATION AND REVIEW

This Plan of Management has been prepared pursuant to the provisions of the Crown Lands Act 1989 to provide an appropriate statutory basis for the continuing improvement and operation of the Brunswick Heads public reserves managed by the NSW Crown Holiday Parks Trust and Byron Shire Council.

This Plan provides a medium term strategy for the management and improvement of the reserves. It is anticipated the majority of the works described will be implemented over a five to ten year period. Priorities for works and funding are to be addressed on an annual basis to meet development priorities and community needs.

The key outcomes that will be achieved as a result of the implementation of this Plan of Management are;

Social Equity – the improvement of the Public Reserves provide a variety of recreational settings that are accessible to the whole community. This will add to the experience for people who visit Brunswick Heads and add to the provision of facilities for the local community. The development of new facilities and the improvement of existing facilities will be designed to cater for people with restricted mobility.

Environmental Quality – The focus for the continuing care, control and management of the Public Reserves includes specific initiatives aimed at preserving existing natural vegetation, progressively removing exotic and invasive species from the Reserve and providing for environmental rehabilitation in the context of facilitating appropriate levels of public access and use. Specific attention will also be given to storm-water drainage to reduce the impact of erosion.

Importantly the design of facilities will address principles of ecological sustainability and responsibility to minimise use of water, energy and non-renewable resources as well as encourage recycling.

Economic – The improvements to the Public Reserves will support local community events and tourism initiatives that are an integral part of the character of Brunswick Heads and that attract visitors to the area.

Corporate Governance – The Reserve Trusts have a range of policy and procedural measures in place to ensure the management of the Public Reserves is in the public interest and consistently addresses the associated issues of procedural fairness, probity and security of the value of the assets of the community of NSW.



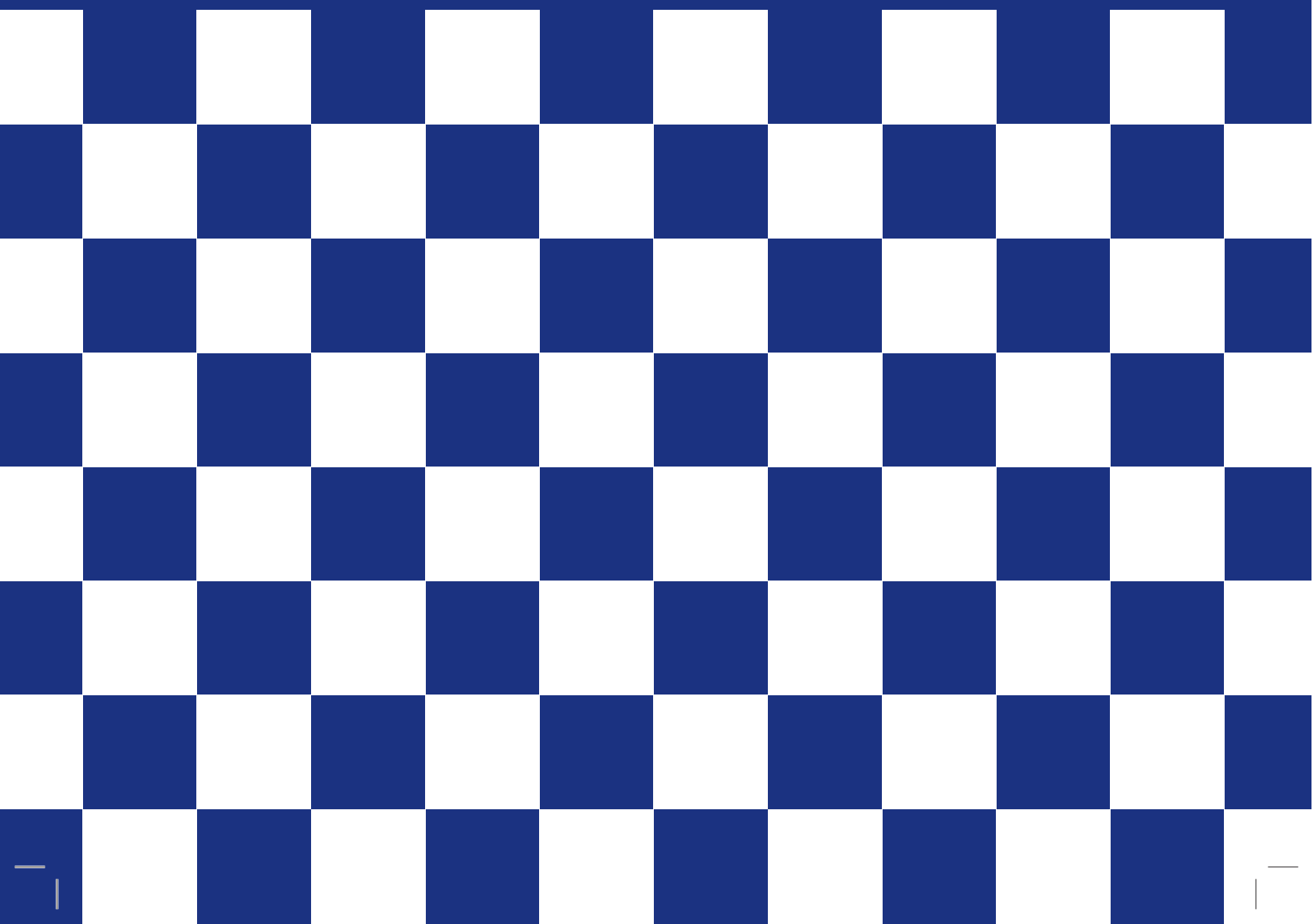
Progress in relation to the implementation of the Plan of Management will be monitored by the respective Trusts and the Trusts will report on an annual basis to NSW Department of Trade and Investment, Crown Lands.

This Plan is to be reviewed approximately every five years or as required to ensure it continues to be relevant to and consistent with government legislation and policy and community expectation.

# **APPENDIX A**

## **Brunswick Heads Community Safety Audit**

# BRUNSWICK HEADS COMMUNITY SAFETY AUDIT

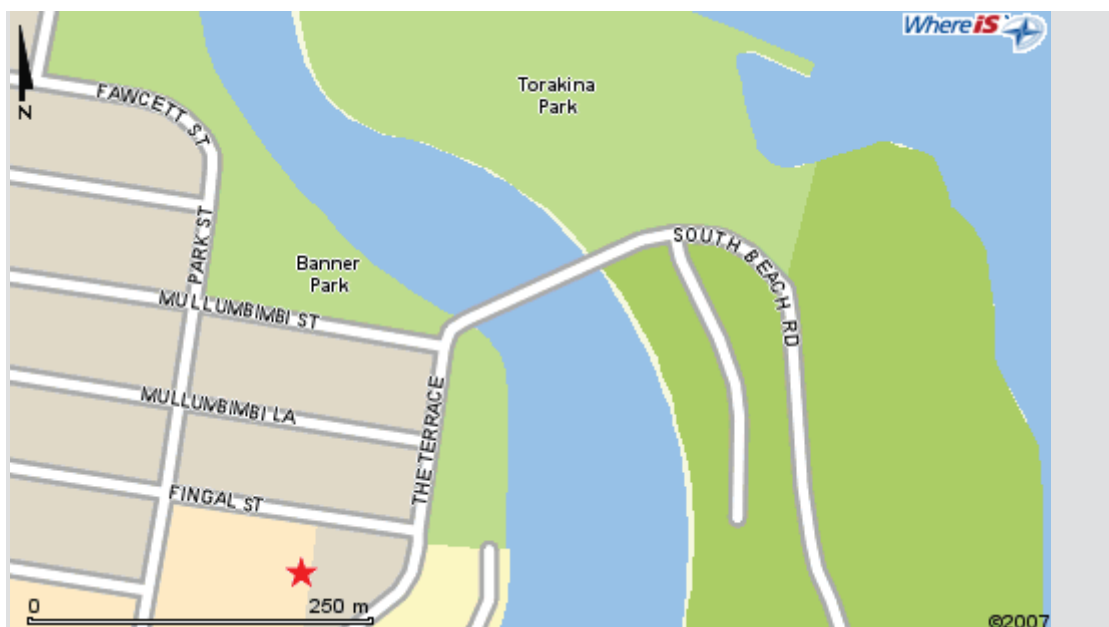


## Executive Summary

This report reflects the findings and recommendations of a Community Safety Audit team consisting of 16 members of the community who conducted an audit on the town of Brunswick Heads on Thursday 19 July 2007 between 3:30pm to 4:30pm and 7:00pm to 8:00pm. This audit was commissioned in response to concerns raised by the Tweed/Byron Local Area Command. These concerns relate to the negative perception many community members hold in respect to the level of crime and community safety in the area. Community Safety Audits are an excellent means to document current and potentially dangerous locations within public areas that may stimulate the likelihood of crime and increase the level of community fear and concerns.

Brunswick Heads is situated approximately 15 minutes north of Byron Bay. It is a small north coast holiday village situated at the mouth of the Brunswick River. Brunswick Heads has a population of approximately 1900 people, however during the summer months increases with visiting tourists.

The audit area focused on two distinct locations – the eastern and western side of the bridge, particularly around South Beach Road through to Torakina Park and across to Banner Park.



The daytime audit was conducted in daylight hours from 3:30pm to 4:30pm. The weather was fine with dry bitumen. There were people frequenting the area utilizing the retail businesses as well as the other amenities nearby. The night time audit was conducted from 7:00pm to 8:00pm with fine conditions.

The objective of this audit was to identify and evaluate the safety and security related risks and the protection of people and property from the threat of internal and external criminal exposure and anti-social behaviour.

## Brunswick Heads Community Safety Audit

The audit focused on the following areas:

- 1 General Impressions of Safety
- 2 Lighting
- 3 Visibility and Sightlines
- 4 Signs
- 5 Traffic and Transport Services
- 6 General Maintenance
- 7 Provision of Services
- 8 Police Strategies

The findings of the audit team found that there were a number of inadequacies in respect to the existing safety and security in the audited areas, which needs to be addressed in order to minimize risk to both people and property. They included:

1. Lighting – many of the audit members felt that the overall lighting in the area was inadequate and provided minimal opportunities for surveillance.
2. Amenities – many amenities for public use are not being utilised as intended. Many of these structures are in poor condition or are not well maintained, therefore deterring their use by the community.
3. General Maintenance – there are some areas where general maintenance is not being regularly kept, particularly with graffiti and landscaping.
4. Signage – there are areas where signage is poor or does not exist. Signage is a precise way of guiding people and providing information necessary to reduce the opportunity for excuses.
5. Pedestrian facilities – crossings and facilities for pedestrians are non-existent. To properly encourage people into the area, facilities need to be in place to accommodate for such activity.

## Audit Team Representation

The audit team consisted of:

### Audit

David Alexander  
Mary Ashton  
Jill Ball  
Mike Cook  
Penny Fuller  
Bruce Garrard  
Neville Green  
Charelle Grobath  
Ian Heiniger  
Col Mackay  
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### Tweed/Byron Local Area Command

Sergeant Stuart Crawford  
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Crime Coordinator  
Crime Prevention Officer

## Introduction

The primary purpose of this audit was to identify and evaluate safety and security related issues to reduce opportunities of crime, anti-social behaviour and the threat of internal and external criminal exposure by:

- 1 Discouraging opportunities for physical violence,
- 2 Reducing the opportunities for crime against property,
- 3 Improving community partnerships between citizens, police and other agencies,
- 4 Providing feedback to management,
- 5 Reducing urban decay,
- 6 Rejuvenating community pride and cohesion.

The businesses within the Brunswick Heads area provided a variety of services that caters to the local residents of the area. This area is also popular and frequented by tourists during the summer months. There are areas that have been identified by local members of the community as being unsafe, particularly during the hours of darkness. Due to a lack of lighting in many locations, there are areas being identified as 'no go' zones encouraging illegitimate behaviour.

Safer by Design is a crime prevention strategy that focuses on the design, planning and structure of our cities and neighbourhoods. It aims to reduce opportunities for crime by using design and space management principles, which reduce the likelihood of essential crime ingredients from intersection in time and space.

Safer by Design is based on Crime Prevention through Environmental Design (CPTED). The main principles of CPTED include:

- Surveillance
- Access Control
- Territorial Reinforcement

The key principles aims to create community 'turf' by turning ambiguous public space into well defined - well used semi public areas. Natural community supervision is achieved through inclusion not exclusion. One of the most important aims of CPTED is to design people into places.

Crime Prevention through Environmental Design (CPTED) strategies must work in conjunction with other crime prevention strategies and police operations. It does not work alone.

## Observations & Recommendations

### 1. General Impressions of Safety

Generally, the audit area is well maintained and used by members of the community during the day. It is freely used by residents, commercial users as well as tourists during the summer months. However, it is also during these summer months that the safety level in the area does decline. Most members of the audit team felt comfortable within the audit site.

During the night, there are areas, particularly around the Torakina and Banner Parks where they are often congregated by large groups of youth. As a result, these are areas avoided by families and other members of the community.

#### Issues:

- Overall, there is no connectivity for pedestrians in the area. With a lack of pedestrian facilities and others that are confusing (including crossings and footpaths), it is difficult to walk to various locations.



- Torakina Park has no activity generators to encourage legitimate use of the area. As a result, it enables large groups of youth to congregate that often intimidate and keep other people away.





## Brunswick Heads Community Safety Audit

- The bridge for vehicles is often used by youth to jump off into water, which can be dangerous.



### Recommendations:

1. Well designed road surfaces, verges and footpaths can help to define boundaries and transitions from one type of spatial territory to another.
2. Generally, pedestrians feel more comfortable sharing wide paths rather than narrow paths. Routes that people are comfortable using are more likely to be re-used and enjoyed (increasing community supervision). Paths with bright/even lighting, wide/even paving can enhance route definition and safety for the pedestrian.



Normal pedestrian activity at night can increase surveillance and natural community policing. 'Abnormal' activity such as drunkenness and loutish behaviour will deter many people from venturing out at night.

3. Research has showed that many public order incidents are alcohol related street offences and often occur within eyesight of pubs and other licensed premises. Accordingly, nearby parks are at greater risk of crime than many other areas. Close attention should be paid to crime opportunity reduction near these sites.

## Brunswick Heads Community Safety Audit

4. To encourage the parks to be used more often, activity generators need to be established catering for all likely user groups. Multi-purpose recreation can attract a wide range of user groups to an area. Demographically specialized activities serve a purpose, but care should be taken to ensure that the needs of one user group don't conflict with the needs of others (e.g. locating a skate park next to a retirement village).



5. Communities with inadequate resources for young people often have to deal with the consequences of youth boredom, inappropriate behaviour and delinquency.

6. Barriers help to restrict, channel and encourage the movement of people. Physical barriers increase the effort required to commit crime. Currently, the barrier at the bridge is a natural ladder that can aid someone to climb. It is recommended that this barrier be increased in height and designed to minimize the opportunity for climbing.

## 2. Lighting

Members of the Audit team provided their input into identifying lighting deficiencies. Overall, the audit team felt that lighting in the area was poor where some areas were specifically identified as having poor illumination during hours of darkness where community members would not use. Lighting in public places should cater for pedestrians however this does not occur in Brunswick Heads. Pedestrian scale lighting will attract people into areas and increase night supervision.

Lighting should be used in 2 ways:

2. Placed in areas where potential guardianship exists from neighbouring residents;
3. Located in places where night time activity is encouraged.

## Brunswick Heads Community Safety Audit

It should be emphasized that the responsibility for improving and rectifying lighting problems does not fall solely on public service utilities. Some issues entail affirmative action from other stakeholders operating in the area.

### Issues:

- There are specific areas that were identified as having poor lighting. These locations include:
  - **Torakina Park, it's public toilet and the car park, particularly during the summer months when tourist activity is greater;**
  - **Memorial Park;**
  - **13 Fingal Street – at the corner of Park and Fingal Streets;**
  - **The vehicle/pedestrian bridge;**
  - **Under shop front awnings and on private businesses;**
  - **South Beach Park and its lane; and**
  - **Outside the Surf Club car park.**

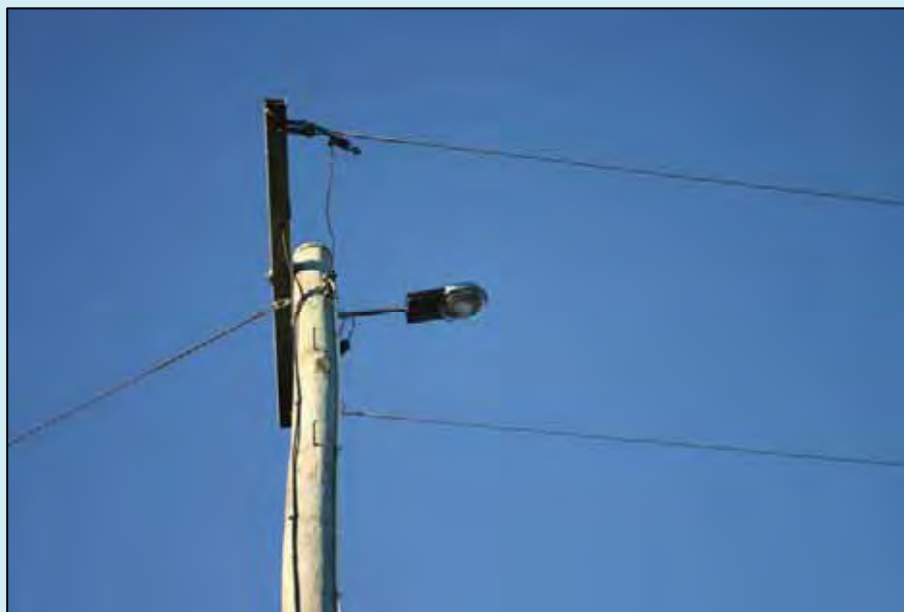


## Brunswick Heads Community Safety Audit

- Torakina Park has lit up its BBQ facilities however it has created pockets of darkness in the surrounding areas due to an uneven distribution of lighting. Furthermore, this BBQ facility is hidden behind the public toilet building and is not easily observed by passersby.



- Maintenance of lighting is poor, where in some locations, luminaries were in existence but they were not working or in much unkept conditions.



## Brunswick Heads Community Safety Audit

### Recommendations:

1. A lighting plan needs to be established for the Brunswick Heads area. This should include a replacement policy where lighting is fixed within a 24 to 48 hour period.
2. Cheap luminaries are ultimately expensive if they are easily vandalized. High quality, vandal resistant lamps are less likely to require replacement or maintenance (ongoing labour costs).
3. Businesses need to leave a limited amount of internal lighting on at night to enable patrolling police and passer bys to monitor activities within the business.



4. Lighting should meet minimum standards. Crime and fear reduction are specified as key objectives in Australian lighting standard AS1158 for public streets, car parks and pedestrian areas. Effective lighting contributes to public safety by reducing fear, increasing community activity, improving visibility and increasing the chance that offenders will be detected and apprehended.
5. Walking from overtly bright places into dark places, or dark to light places can lessen a pedestrian's ability to see and recognize people, objects and colours. Transition lighting can help to reduce (night) vision impairment.
6. It is recommended that special attention be paid to lighting along pedestrian pathways and movement predictors (to permit the facial recognition of approaching persons at 15 metres). Areas besides thoroughfares should also be evenly lit to avoid opportunities for concealment/entrapment.
4. Car parks:
  - Research has shown that many old and new car parks fail to meet average and minimum lighting standards. Interviews with Facility/Operations Managers revealed that lux levels in some car parks were calculated to achieve maintenance levels at the time of installation only. Within 12 months, tubes can lose up to 20% of their capacity

## Brunswick Heads Community Safety Audit

resulting in facilities that fall below recommended levels. A broadly accepted, non-technical yardstick of lighting effectiveness in public car parks is that lighting should be bright and even enough to permit an observer to see into the back seat of a parked vehicle. From a crime prevention perspective, enclosed fire exits, corridors and waiting areas require bright, even lighting.

### 3. Visibility & Sightlines

Visibility and sightlines throughout the audited area were good. There were areas where structures and landscaping were identified as having concealment opportunities and obstructing clear surveillance along pathways.

Overall, the area was described as having clear pedestrian areas and road markings with no major issues identified.

#### Issues:

- There is some overgrown landscaping in Torakina Park that restricts visibility beyond the front. There are pathways that continue through this landscaping however they cannot be seen from passive surveillance that exists from the street.



- The BBQ facility is also hidden behind the public toilets and cannot be seen. At night, this area is commonly frequented by groups of youth who congregate here – with good lighting and no guardianship, it is an ideal location for illegitimate activity.

#### Recommendations:

1. Public gardens can be both attractive and safe. Vegetation quantities can impact density and natural surveillance. Garden plans should strike a balance between ambience and safety and this plan should involve a long-term

## Brunswick Heads Community Safety Audit

maintenance plan to ensure landscaping is regularly trimmed and kept low. When selecting and maintaining vegetation, consideration should be given to the possibility of areas becoming entrapment sites in the future.

2. Research and strong anecdotal evidence indicates that vegetation is commonly used by criminals for their concealment and to help them constrict rape victims (entrapment pockets). Plants that block sight lines lessen natural surveillance. A safety convention for vegetation is: lower tree limbs should be above average head height, and shrubs should not provide easy concealment. A yardstick height of 900mm (maximum) is often applied to shrubs in 'at-risk' areas.

### 4. Signs

Signs in some areas were identified as being poor and low in numbers. However, there were other areas described as having too much signage that confused the community. Some signs were also old and outdated, particularly enforcement signs that could not be acted upon by police due to its advertised expiry dates. Many were damaged and had not been replaced – it was evident that the damage was not recent and it reflected the maintenance of signs in the area.

#### Issues:

- In some areas, there are too many signs and it is too complicated to read.
- There are no directional signs to ensure proper use of the footbridge. As a result, many people use the vehicle bridge to cross on foot becoming very dangerous for pedestrians.
- There are no signs on Torikina Beach to inform users that it is unpatrolled. This beach is used exclusively by families and there is nothing to warn them of tides and currents in the water.



## Brunswick Heads Community Safety Audit

Recommendations:
1. Consider a notice or art board for public notices and information advertising for residents and business owners/users of the area in a central location. Signs providing directional information are best located at (or prior to) junctions requiring people to make decisions. This can reduce excuse-making opportunities.
2. Space design is a better communicator of area designation than signage. Signs, however, can effectively supplement and reinforce important requirements and advice. When used, warning signs should be clearly signposted and exist in adequate number.
3. A maintenance policy needs to be in place to ensure signs are regularly kept and in good condition. It is also suggested that long term signs are re-located on a regular basis to re-divert people's attention to it.
4. It is recommended that all alcohol free zone signs are checked and updated so that expiry dates are current. This will allow for proper enforcement of signs without confusion.
5. The street/shop number must be prominently displayed at the front of all businesses.
6. The number should be a minimum height of 120mm and be visible at night. This also ensures you comply with the Local Government Act, 1973, Section 124, Order 8.
7. The business name must also be prominently displayed at the front of the businesses.

### 5. Traffic and Transport Services

Both pedestrian and vehicular traffic was light at the time of inspection. There is a distinct lack of pedestrian facilities throughout the entirety of Brunswick Heads where it is difficult to get from one amenity to another. There are also some locations where there is conflict between vehicles and pedestrians making it dangerous for users.

Transport services in the area were minimal, however adequate and appropriate for the area.

Issues:
<ul style="list-style-type: none"><li>• There are areas where a pedestrian crossing does not exist but is needed. These</li></ul>



## Brunswick Heads Community Safety Audit

areas are:

- **The crossing at the School is unmarked and should be more formalized. Currently, it is only identified as a crossing by flags and is often ignored by vehicles;**



- **There are no decent pedestrian crossings throughout the town and what paths do exist does not connect the town's amenities to each other;**
- **Both Venture and Torikina Parks have no paths at all;**
- **There is no pedestrian crossing from the path leading off the beach to the footbridge;**
- **The footpath coming off the eastern end of the footbridge ends and does not continue, forcing pedestrians onto the road.**



- **The car parks do not facilitate the number of holiday tourists that attend the**

## Brunswick Heads Community Safety Audit

area. As a result, there is a lot of congestion of vehicles on the road and pedestrians on the road.



- The car parks are often used by campers to park their vehicle and stay in there overnight – or to leave their vehicle in the car park and camp at the nearby beach.
- There is limited public transport in Brunswick Heads. This raises concern if the skate park is put in Brunswick Heads. Demographically, more youth reside in Ocean Shores. If youth attend the skate park and cannot get back to Ocean Shores, this will increase the problem of illegitimate loitering in Brunswick Heads.

### Recommendations:

1. There is a distinct lack of pedestrian facilities throughout Brunswick Heads. Additional pedestrian crossings should be considered as well as existing ones to be upgraded and re-painted.
2. It is recommended that the school zone be upgraded with the road painted and appropriate signage reflecting the environment.
3. Consideration should be taken to having the car parks sign posted with time limits. By not encouraging all day parking, this can also reduce the risk of crime to motor vehicles.  
*NB: Multi-skilled council rangers in both security and enforcement duties can assist in gathering intelligence for the Local Area Command as well as encourage 24 hour rostering.*

## Brunswick Heads Community Safety Audit

4. Some type of access control can be an effective means of regulating vehicle movement. Consideration should be taken to locking up car parks when not used at night to restrict the areas being used for camping or other illegal activities.
5. It is recommended that transport be timetabled to accommodate at peak times to help channel people out of precincts in an orderly manner. This should be considered with the closing times of licensed premises and the erection of the skate park.
6. Bicycle designated paths can help in creating a health activity generator to the area. These paths can be located alongside roads or in parks. When they are placed in close proximity of capable guardians, they can reduce crime risk to users.

### 6. General Maintenance

The general maintenance of the audit sites appeared to be reasonably clean however, there were a number of locations identified where maintenance was poor. This included low levels of graffiti, landscaping and property damage, which contributed to creating a feeling of hesitation to use the area.

Generally, people will recognize areas that are well used and cared for – and those that are not. Research shows that public areas displaying strong ownership cues are less likely to be improperly used than those that don't - leaving the community with the perception that there is no pride or ownership to that given area or space.

#### Issues:

- The area is not very well maintained. When work is carried out it is substandard and the area appears to lack pride.
- The public toilet structure outside the surf club is in very poor condition and not well maintained at all. They are very dirty and not hygienic for members of the public to use.



## Brunswick Heads Community Safety Audit

- There were some signs of graffiti around the area. The graffiti located was both new as well as old pieces that had been there for some time.

### Recommendations:

1. Maintenance is a strong indicator of area safety and is recommended that it be carried out on a regular basis to enhance the appearance of the area. Staff that is rostered over a 24 hour period promotes guardianship in the area and eliminates the risk of crime to occur. Furthermore, by regularly maintaining the area, it creates ownership and encourages people to go and stay in that area.
2. Clean, well-maintained areas often exhibit strong territorial cues. Research shows that run-down areas impact perceptions of fear, community confidence to use public space and ultimately, crime opportunity. An area with a reputation as an unsafe place (whether deserved or not) is likely to be negatively affected by people's reticence to live, visit, work, invest and shop in the area.
3. Vandalism can induce fear and avoidance behaviour in public spaces. The act and outcome of graffiti can reward offenders. The display of one's handy work to others can be a strong motivation to repeat the behaviour. The longer 'tags' are left on display, the greater the reward and repetition will occur. In identified locations of graffiti, both new and old graffiti was evident. A graffiti management plan is recommended.
  - Rapid removal has proven to be a successful long-term graffiti management strategy where graffiti is removed within a 24 to 48-hour period.
  - Graffiti vandals favour porous building surfaces, as 'tags' are difficult to remove and often a ghost image will remain even after cleaning. Stainless steel and (light coloured) high gloss ceramic tiles are commonly used in high-risk areas. Graffiti resistant materials are recommended particularly on ground floor levels of buildings. These surfaces are comparably easy to clean, and help to distribute light into/through internal areas.

## 7. Provisions of Services

Brunswick Heads has many small businesses operating in the area, including a licensed premise. Services such as public telephones and Automatic Teller Machines (ATMs) and are also provided. There is a problem where audit members do feel there are not enough garbage bins in the area and the public toilets are not well placed or utilised.

Issues:

- The public toilets outside the surf club are in very poor condition and are not used legitimately. It is known by local residents to be used for homosexual activity.



- They are poorly maintained both inside and out. Due to its appearance, they are not well used and often avoided.
- The windows leading to the male showers at the rear of the block can be seen by passer bys as they are very low to the ground.
- The toilets are not well lit. Even during the day, there is not a lot of natural daylight going into the structure and therefore avoided.



## Brunswick Heads Community Safety Audit

- The public toilets located in Torakina Park have no access control. They are not secured and there were some signs of poor maintenance of landscaping at the entry to the toilets providing concealment opportunities.



- There are not enough garbage bins in the area, leaving spots of rubbish in certain locations, particularly in the parks.

- The car parks around the beach, particularly at the rear of the surf club and next to Torakina Park are poorly designed where the space is not properly utilised leaving the opportunity for the area to be used illegitimately.



- There is illegal camping in the area, particularly around the surf club. Many people park in the rear car park and then move to the beach to sleep at night. There are minimal police and ranger patrols conducted at night in this area – therefore there is no enforcement.

## Brunswick Heads Community Safety Audit

Recommendations:
<p>1. In older designs of public toilets, they are often located away from the public eye. While the design, placement and orientation of facilities should not breach privacy, buildings should be positioned in areas that are easily access and supervised by passing pedestrians and motorists.</p>
<p>2. It is recommended that the public toilets located at the rear of the surf club is demolished and/or re-located to another area that is more visible to members of the public.</p>
<p>3. It is recommended that public toilets are closed at night. These are the times when there are less people out in public and the need to use them is minimal.</p>
<p>4. Communities with inadequate resources for young people often have to deal with the consequences of youth boredom, inappropriate behaviour and delinquency. With the services available for the youth, it is recommended that programs be established to assist with youth education and activities.</p> <p><u>Skate park:</u></p> <ul style="list-style-type: none"> <li>• If a skate park is to be established in Brunswick Heads, it is recommended that further investigation be looked into the demographics of the area and where it is better located. Transportation and control of youth moving to and from the facility should be properly monitored to ensure legitimate use of the area.</li> </ul>
<p>5. In the absence of garbage bins (number and placement), or if bins are full some people will litter rather than carry trash to other receptacles. The design of bins can stimulate and/or exacerbate fear and avoidance behaviour. The design of garbage bins should be vandal resistant and a suitable size to ensure that they are emptied on a regular basis.</p>
<p>6. It is recommended that the car parks throughout Brunswick Heads be re-designed. Currently, these areas have ambiguous land cues and are susceptible to trespassing increasing the opportunity for crime. The car parks need to have more definition and designation of land use to properly guide vehicles throughout the area. This includes kerbing, line marking, signage and access control. This access control will also help control illegal parking of campers in the area.</p> <p><i>NB: Multi-skilled council rangers in both security and enforcement duties can assist in gathering intelligence for the Local Area Command as well as encourage 24 hour rostering.</i></p>

## 8. Policing Strategies

Currently, there are no special operations focusing on the Brunswick Heads area from local police. Operations are in place for the Brunswick Heads area, however nothing

## Brunswick Heads Community Safety Audit

specific other than High Visibility Policing (HVP) patrols of licensed premises. These operations are seasonal and are mainly conducted in the summer months. Police presence in the Brunswick Heads area is predominantly reactive.

### Recommendations:

1. Crime prevention strategies can push crime from one area to another. This is known as crime displacement. A criminal searching for a target, believing that the necessary risk or effort to commit a crime is too high or that the rewards are too low may move to another site offering better odds. Most crime, however, is opportunistic not premeditated. Typically, opportunistic crimes are only *thought about* when the right ingredients intersect at the right time – and in the right place. When crime ingredients are kept apart, opportunistic crime is likely to be prevented. Blocked crime that was never thought about, cannot lead to ‘conscious’ displacement. The reverse condition to displacement is called Positive Displacement or *Diffusion of Benefits*. A London study effectively demonstrated this condition when efforts to curb street level prostitution (by changing traffic patterns) resulted in unintended, but significant reductions in burglary and car theft in treated areas.
2. It is recommended that the Local Area Commander’s Crime Prevention Officer (CPO) and Youth Liaison Officer (YLO) be responsible to the Crime Manager for all public relations/crime prevention/youth strategies for Brunswick Heads. This should include the PCYC in developing programs and utilizing facilities more effectively that already exist.
3. It is strongly recommended that a HVP operation be implemented during peak time periods in the allocated hot spots of Brunswick Heads. If this is not achievable, it is suggested that a beats crew is tasked daily to hot spot locations.
4. A public relations exercise should be implemented every year to improve the rapport between police and the local community. This can be achieved by having a police open day and a BBQ to attract local community to the police station. It is recommended that a Duty officer is tasked with this responsibility.
5. Regular Vikings operations should also be used to supplement current policing operations.
6. Quarterly community safety precinct committees should be held by the Local Area Command to improve communication between the police and community.



## Summary

Tweed/Byron Local Area Command, the sponsors of this Community Safety Audit, has a vital interest in ensuring the safety of members of the community and their property. By using the recommendations contained within this document, any person who does so acknowledges that:

It is not possible to make areas evaluated by the Community Safety Audit Team absolutely safe for the community and their property.

Recommendations are based upon information provided to, and observations made by Community Safety Audit Team members at the time the audit was conducted.

Crime Prevention through Environmental Design (CPTED) strategies cannot be used on its own. The social contextual factors **must** be considered prior to implementing CPTED or any other crime prevention treatment options.

The Community Safety Audit Team hopes that by using the recommendations contained within this document, criminal activity will be reduced and the safety of members of the community and their property will be increased. However, it does not guarantee that all risks have been identified, or that the area audited will be free from criminal activity if its recommendations are followed.

We would like to take this opportunity to thank all those members of the community involved in conducting this Safety Audit to improve community safety.

## 9 Community Safety Audit Action Plan

Page #	Hazard/Recommendation	Responsible stakeholder
<b>General Impressions of Safety</b>		
7	Need well designed road surfaces, verges and footpaths.	Council and RTA
8	To encourage the parks to be used more often, activity generators need to be established catering for all likely user groups.	Council
<b>Lighting</b>		
10	A lighting plan needs to be established for the Brunswick Heads area.	Council
11	Businesses need to leave limited lighting on at night.	Chamber of Commerce
<b>Visibility and Sightlines</b>		
12	A landscaping maintenance plan needs to be put in place.	Council
<b>Signs</b>		
14	A maintenance policy needs to be in place to ensure signs are regularly kept and in good condition.	Council
14	It is recommended that all alcohol free zone signs are checked and updated with correct expiry dates.	Council
<b>Traffic and Transport Services</b>		
17	Additional pedestrian crossings should be considered as well as existing ones to be upgraded.	Council and RTA
17	Consideration should be taken to having car parks sign posted with time limits and enforced.	Council and Police
17	It is recommended that transport be timetabled to accommodate at peak times to help channel people out of precincts in an orderly manner.	Council
17	Bicycle designated paths can help in creating a healthy activity generator to the area.	Council
<b>General Maintenance</b>		
18	It is recommended that a maintenance policy be put in place.	Council
19	A graffiti rapid removal program should be implemented where graffiti is removed within a 24-48 hour period.	Council
<b>Provision of Services</b>		
21	The public toilets at the rear of the surf club should be demolished and/or re-located.	Council
21	All public toilets should be locked at night when use is minimal.	Council
22	The location of garbage bins should be reviewed to ensure there is enough where needed.	Council
22	Car parks should be re-designed with definition and designation of space.	Council
<b>Policing Strategies</b>		
22	Crime Management Unit to include youth related programs with PCYC for the Brunswick Heads area.	NSW Police

## Brunswick Heads Community Safety Audit

<b>22</b>	HVP operations during peak time periods in the allocated hot spots of Brunswick Heads.	NSW Police
<b>22</b>	A public relations exercise should be implemented every year to improve the rapport between police and the local community.	NSW Police
<b>22</b>	Regular Vikings operations should be used to supplement current policing operations.	NSW Police
<b>22</b>	Quarterly community safety precinct committees should be held by the Local Area Commander.	NSW Police

## **APPENDIX B**

**Habitat Restoration Plan, Torakina, Brunswick Heads, Bushland Restoration Services,**

**May 2013**

# Habitat Restoration Plan

## Torakina

### Brunswick Heads



May 2013

Cover Page

Left Cypress pine forest adjacent to track

Right Cypress pine forest with Macaranga and Forest Red Gum

Plan prepared by



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## **1 Introduction**

Bushland Restoration Services Pty Ltd (BRS) was contracted by Madhima Gulgan Community Group to prepare a restoration plan for the area known as Torakina Park adjacent to the Brunswick River at Brunswick Heads. The Northern Rivers Catchment Authority (NRCMA) has provided funds to Madhima Gulgan Community Group through the 2012 Incentives program for preparation of this Plan.

Torakina Park is crown land. The management of the property identified for this Plan has been recently transferred from the Department of Lands to the North Coast Accommodation Trust (NCAT). The NCAT contract Byron Shire Council to maintain the parkland area of Torokina. Brunswick Heads Dunecare undertakes weed control and plantings along the beachfront at the east of the reserve.

A Plan of Management for the whole of the area is to be commenced by NCAT in May 2013 with proposed exhibition for public comment in July 2013. Prior to the exhibition the NCAT will undertake extensive consultation with stakeholder groups and the community. The Plan of Management will include a concept plan for the site including facilities such as shelter shed, barbeques, walkways and parking.

This Plan will be used by the land manager to direct on-ground works and to guide the allocation of program funds. The Plan will also be used by bush regeneration contractors to implement on ground works and the recovery of the associated plant communities at Torakina.

Restoration works are detailed in the Plan. The areas identified for restoration within Torakina Park and subject to this plan are hereafter referred to as “the site”.

## **2. Aims and Objectives**

The overarching aim of an ecological restoration project is;

To restore to the extent possible the structure, function, dynamics and integrity of the pre-existing vegetation and the habitat it supports (SERI).

Best practice objectives to achieve the aim are.

- Enhance and expand the existing native vegetation and habitats within the site by implementing best practice ecological restoration practices;
- Increase the regeneration capacity and condition of the native vegetation within the site;
- Protect and expand the populations of threatened flora and fauna and endangered ecological communities by reducing impacts and threats and improving habitat;
- Revegetate highly degraded areas to increase habitat for native plants and animals including threatened species;
- Reduce maintenance over time to a minimum level to ensure that weeds do not reinvade the area and impact on the native flora and fauna;
- Increase community awareness by providing information on the ecological value of native flora and fauna, environmental weed species and restoration techniques and approach.

The aims and objectives will guide the project to improve the condition and biodiversity values, increase the regeneration capacity of the native vegetation, improve connectivity for flora and fauna, reduce restoration maintenance time to a minimum and increase community capacity to restore bushland remnants.



## Community involvement

Torakina Park includes a walking track around the perimeter, mown areas of grassland with basic facilities such as shelter shed and barbeques, sandy beach and remnant bushland. The area is used for walking, fishing, picnicking and Dunecare activities. There is community interest in the management of the area and the proposed restoration detailed in this Plan will need to fit with these interests. Interested parties include NCAT, Madhima Gulgan Community Group, Tweed Byron Local Aboriginal Land Council, Marine Parks, Marine Rescue Brunswick, Brunswick Heads Community Dunecare, Brunswick Valley Landcare, Brunswick Heads Chamber of Commerce and Brunswick Heads Surf Club.

The NCAT plan preparation will include community consultation through the Brunswick Heads Chamber of Commerce. The focus of their Plan will include improvements in the reserve such as amenity buildings and facilities, public safety and security, formalisation of the perimeter walking track, unauthorised uses such as camping, campfires and rubbish and an assessment of the trees in the parkland to ensure public safety.



Plate 1 Area maintained by Brunswick Heads Dunecare adjacent to parkland

## 3 Site Description

### 3.1 Location

The property is located in Byron Shire adjacent to South Beach Road, Brunswick Heads. The Brunswick River is the northern boundary and Simpsons Creek part of the southern boundary. See **Figure 1**.

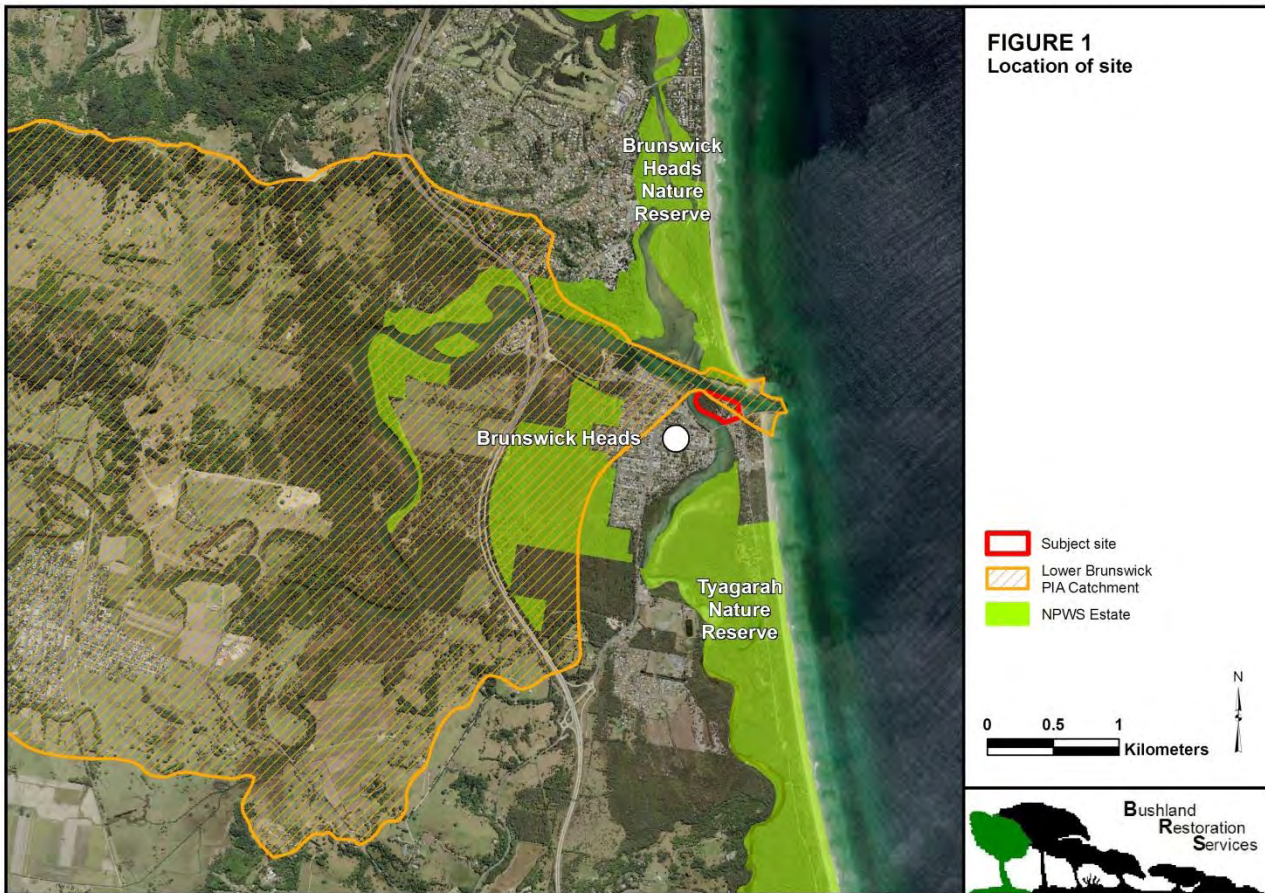
### 3.2 Topography

The site is generally flat.

### 3.3 Tenure and zoning

The property is described as Lot 423 DP729272 with an area of 4.94ha.

The property is crown land managed by North Coast Accommodation Trust (NCAT) and is zoned under Byron Shire Council LEP (1988) as 6(a) Open Space.



### 3.4 Soils

The site has been reconstructed using dredge spoil deposited in the course of construction of the Brunswick River training walls in the early 1960s.

## 4 Vegetation

### 4.1 Native vegetation

The site was surveyed in November 2012. A record was made of native and exotic species of plants. See Appendix 1 for a list of native species recorded. A list of weeds and non-indigenous Australian species is set out at Appendix 2.

Vegetation at the site has been described as three communities. The location of the communities is set out at **Figure 2** and the communities are described below.

All plant communities at the site have developed on dredge spoil deposited in the course of construction of the Brunswick River training walls in the early 1960s. Photos of the site indicate it formerly consisted largely of bare sand with a small area of Coast Banksia / Horsetail She-oak woodland.

Part of the project area has been allowed to naturally regenerate. These areas have been the subject of some weed control and plantings. The balance of the site has been managed as formal parkland with a sparse to very sparse cover of mainly planted trees and an understorey of mown grassland. Plantings in both areas have consisted of exotic species, indigenous and non-indigenous Australian species.

## **1 Coast Banksia Forest / Littoral Rainforest**

This community is dominated by Coast Banksia and a number of rainforest tree species. The tallest stratum is 4 – 9 metres tall and the cover is generally mid dense. The main rainforest tree species present in the tallest stratum are Three-veined Cryptocarya, Horsetail She-oak, Macaranga, Screw Pine, Lilly Pilly, Brown Bolly Gum and Cheese Tree are also present in the tallest stratum. There is a well-developed mid stratum of rainforest shrubs and young trees and a generally sparse groundcover consisting mainly of native grasses and herbs. The local Dunecare group has undertaken weed control and plantings in this area for a number of years. The cover of weeds in the tallest stratum is insignificant (0 – 5%) – and consists of the non-indigenous Australian species Weeping Paperbark and Alexandra Palm which have been planted. The cover of weeds in the lower strata is insignificant (0 – 5%) to minor (5 – 20%) and consists of Summer Grass, Bitou Bush, Asparagus Fern, Umbrella Tree, Painted Spurge, Coast Teatree and New Zealand Christmas Tree.

## **2 Coastal Cypress Pine / Coast Banksia Forest to Woodland**

This community is dominated by Coastal Cypress Pine and Coast Banksia. The tallest stratum is 5 – 10 metres tall and the cover is mid dense to sparse. Macaranga, Horsetail She-oak, Screw Pine, Paperbark, Celery Wood, Ribbonwood, Forest Red Gum and Willow Bottlebrush are also present in the tallest stratum. The cover of the mid stratum ranges from mid dense to sparse and consists in part of rainforest shrubs and young trees. The ground stratum cover is mid dense to sparse and consists mainly of native grasses – Queensland Blue Couch and Prickly Couch. The cover of weeds in the tallest stratum is insignificant (0 – 5%) and consists of Umbrella Tree, Weeping Paperbark, Norfolk Island Pine, Mango and Pine Trees.). The cover of weeds in the mid stratum is generally insignificant (0 – 5%) and consists mainly of Lantana and Bitou Bush. The cover of weeds in the ground stratum is minor (5 – 20%) to common (20 - 50%) and consists mainly of Asparagus Fern and exotic grasses.

## **3 Parkland / Woodland**

This community consists of a sparse to very sparse cover of exotic and native trees with little or no lower stratum apart from mown grassland. Species of trees include Horsetail She-oak, Norfolk Island Pine, Slash Pine and New Zealand Christmas Bush.

There was no direct evidence of fire and the presence of fire sensitive species such as Coast Cypress suggests that fire has not been a significant element in this community.

### **4.2 Conservation Status**

#### **4.2.1 Landscape Context and Connectivity**

The site is located near the mouth of the Brunswick River within a long, almost unbroken strip of coastal forest and woodland that stretches from Kingscliff to Byron Bay and beyond.

Brunswick Heads Nature Reserve is about 100 metres to the north across the river. Tyagarah Nature Reserve is 500 metres to the south. There are a number of national parks and nature reserves nearby in the hinterland 13 to 17 km distant.

It is not within areas identified in Fauna Key Habitats for North East NSW (2011 revision), but is less than 500 metres from such areas to the north and south (DECCW 2011a).

It is immediately adjacent to areas identified in Fauna Corridors for North East NSW (2011 revision) (DECCW 2011b).

The site is effectively identified by the Biodiversity Forecasting Tool (DECCW 2010) as high priority for both conservation and repair.

The total area of the site is 4.94 ha. With the benefit of survey undertaken for this plan, it is estimated that 3.14 ha (64%) is native vegetation.

#### 4.2.2 Threatened plants

One threatened plant species was recorded during the survey.

**Table 1 Threatened and rare species of plants recorded on the site**

SCIENTIFIC NAME	COMMON NAME	TSC ACT <sup>1</sup>	EPBC ACT <sup>2</sup>
<i>Cryptocarya foetida</i>	Stinking Cryptocarya	v	v

Additional species of threatened plants recorded in the Atlas of NSW Wildlife within 5 km of the project area are listed below in **Table 2**.

**Table 2 Threatened species of plants recorded within 5 km of the property**

SCIENTIFIC NAME	COMMON NAME	TSC ACT <sup>1</sup>	EPBC ACT <sup>2</sup>
<i>Acacia bakeri</i>	Marblewood	v	
<i>Acronychia littoralis</i>	Scented Acronychia	e	e
<i>Archidendron hendersonii</i>	White Lace Flower	v	
<i>Bosistoa transversa</i>	Three-leaved Bosistoa	v	v
<i>Corokia whiteana</i>	Corokia	v	v
<i>Cryptocarya foetida</i>	Stinking Cryptocarya	v	v
<i>Cynanchum elegans</i>	White-flowered Wax Plant	e	e
<i>Davidsonia jerseyana</i>	Davidson's Plum	e	e
<i>Drynaria rigidula</i>	Basket Fern	e	
<i>Elaeocarpus williamsianus</i>	Hairy Quandong	e	e
<i>Endiandra floydii</i>	Crystal Creek Walnut	e	e
<i>Endiandra hayesii</i>	Rusty Rose Walnut	v	v
<i>Endiandra muelleri</i> subsp. <i>bracteata</i>	Green-leaved Rose Walnut	e	
<i>Floydia praealta</i>	Ball Nut	v	v
<i>Geodorum densiflorum</i>	Pink Nodding Orchid	e	
<i>Grevillea hilliana</i>	White Yiel Yiel & White Silky Oak	e	
<i>Hamieria hygrophiloides</i>		e	
<i>Macadamia tetraphylla</i>	Rough-leaved Queensland Nut	v	v
<i>Marsdenia longiloba</i>		e	v
<i>Melicope vitiflora</i>	Northern Evodia	e	
<i>Ochrosia moorei</i>	Southern Ochrosia	e	e
<i>Peristeranthus hillii</i>	Brown Fairy-chain Orchid	v	
<i>Phaius australis</i>	Swamp Orchid	e	e
<i>Randia moorei</i>	Spiny Gardenia	e	e
<i>Syzygium hodgkinsoniae</i>	Red Lilly Pilly	v	v
<i>Syzygium moorei</i>	Durobby or Coolamon	v	v
<i>Tinospora tinosporoides</i>	Arrow-head Vine	v	v
<i>Xylosma terrae-reginae</i>	Xylosma	e	

1. Threatened Species Conservation Act 1995 (NSW)

2. Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The two native vegetation communities at the site are Endangered Ecological Communities. Community 1 is Littoral Rainforest in the New South Wales North Coast Bioregion. Community 2 is Coastal Cypress Pine Forest in the NSW North Coast Bioregion.

### 4.3 Weeds

Thirty weeds were recorded on the site and are listed in **Appendix 2**.

The majority of the weeds recorded are confined to the bushland on the west of the site. Bitou bush is dominant along the northern and eastern boundary. Other dominant weeds include Lantana, Coast Teatree, Painted spurge, Asparagus fern and exotic grasses.



Plate 2 Bitou bush along the boundary with the Brunswick River

Five of the weeds recorded are noxious. The relevant control objectives and categories are set out in **Tables 3 and 4**.

**Table 3 Noxious Weeds recorded on site**

Scientific name	Common name	Noxious weed status
<i>Chrysanthemoides monilifera</i> subsp <i>rotundata</i>	Bitou Bush	4
<i>Ageratina riparia</i>	Mistflower	4
<i>Cinnamomum camphora</i>	Camphor Laurel	4
<i>Lantana camara</i>	Lantana	4
<i>Baccharis halimifolia</i>	Groundsel	5

**Table 4 Declared Noxious Weeds Control Categories and Objectives**

Class	Control Objectives	Control Categories
4	Minimise the negative impact of those plants on the economy, community or environment of NSW	The growth and spread of the plant must be controlled according to the measures specified in a management plan published by the Local Control Authority
5	Prevent the introduction of those plants within NSW or from NSW to another jurisdiction	The presence of the weed on land must be notified to the local control authority (Far North Coast Weeds) and the weed must be fully and continuously suppressed and destroyed

## 5 Fauna

### 5.1 Habitat features

The littoral vegetation communities provide habitat for a range of fauna particularly birds, micro bats and flying foxes. Features such as the leaf litter, native groundcovers including grasses, ferns and sedges, native vines, thickets and nectar and fruit bearing native plants recorded on the site provide fauna habitat.

Threatened species of fauna recorded in the Atlas of NSW Wildlife within 5 km of the property are listed below in **Table 3**.

**Table 3 Threatened species of fauna recorded within 5 km of the property**

SCIENTIFIC NAME	COMMON NAME	TSC ACT <sup>1</sup>	EPBC ACT <sup>2</sup>
<i>Amaurornis olivaceus</i>	Bush-hen	V	
<i>Anseranas semipalmata</i>	Magpie Goose	V	
<i>Anthochaera phrygia</i>	Regent Honeyeater	E	E
<i>Botaurus poiciloptilus</i>	Australasian Bittern	E	E
<i>Burhinus grallarius</i>	Bush Stone-curlew	E	
<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	V	
<i>Caretta caretta</i>	Loggerhead Turtle	E	E
<i>Chelonia mydas</i>	Green Turtle	V	V
<i>Coracina lineata</i>	Barred Cuckoo-shrike	V	
<i>Crinia tinnula</i>	Wallum Froglet	V	
<i>Cyclopsitta diophthalma coxeni</i>	Coxen's Fig-Parrot	E	E
<i>Dasyurus maculatus</i>	Spotted-tailed Quoll	V	E
<i>Dugong dugon</i>	Dugong	E	
<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E	
<i>Esacus neglectus</i>	Beach Stone-curlew	E	
<i>Grus rubicunda</i>	Brolga	V	
<i>Gygis alba</i>	White Tern	V	
<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	V	
<i>Haematopus longirostris</i>	Pied Oystercatcher	E	
<i>Irediparra gallinacea</i>	Comb-crested Jacana	V	
<i>Ixobrychus flavicollis</i>	Black Bittern	V	
<i>Lathamus discolor</i>	Swift Parrot	E	E
<i>Lichenostomus fasciocularis</i>	Mangrove Honeyeater	V	
<i>Litoria olongburensis</i>	Olongburra Frog	V	V
<i>Miniopterus australis</i>	Little Bentwing-bat	V	
<i>Miniopterus schreibersii oceanensis</i>	Eastern Bentwing-bat	V	
<i>Monarcha leucotis</i>	White-eared Monarch	V	
<i>Myotis macropus</i>	Southern Myotis	V	
<i>Nyctimene robinsoni</i>	Eastern Tube-nosed Bat	V	

SCIENTIFIC NAME	COMMON NAME	TSC ACT <sup>1</sup>	EPBC ACT <sup>2</sup>
<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V	
<i>Pandion haliaetus</i>	Osprey	V	
<i>Petroica boodang</i>	Scarlet Robin	V	
<i>Phascolarctos cinereus</i>	Koala	V	V
<i>Planigale maculata</i>	Common Planigale	V	
<i>Potorous tridactylus</i>	Long-nosed Potoroo	V	V
<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	V
<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V	
<i>Ptilinopus superbus</i>	Superb Fruit-Dove	V	
<i>Puffinus carneipes</i>	Flesh-footed Shearwater	V	
<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	
<i>Sterna albifrons</i>	Little Tern	E	
<i>Stictonetta naevosa</i>	Freckled Duck	V	
<i>Syconycteris australis</i>	Common Blossom-bat	V	
<i>Todiramphus chloris</i>	Collared Kingfisher	V	
<i>Tyto capensis</i>	Grass Owl	V	

1. Threatened Species Conservation Act 1995 (NSW)

2. Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)

## 6 Management Considerations

Management considerations identified by NCAT are the range of uses of the parkland and adjacent bushland area. The preliminary investigation of the whole of Torakina for NCAT by Elks (2008) reported that there is an opportunity to;

- Expand community facilities into existing cleared areas, and
- Improve emergency access to the northern part of the area, especially for fire fighting.

The Elks report states “Fire is an issue because the dominant flora is fire-sensitive and could be killed or severely damaged by fire. This applies particularly to dense vegetation in the northern part, much of which has no emergency access and would be inaccessible to fire-fighting equipment”. It was considered that by providing fire buffers (Planning for Bushfire Protection) could be achieved without significant impact on the vegetated area.

The NCAT Plan of Management (in preparation) will include consultation with the various stakeholders both community and government, recommendations for development of facilities within the parkland, addressing fire protection requirements and ensuring the perimeter walkway is safe. The Plan of Management (NCAT) will also include recommendations to reduce the impacts on the bushland area (the site).

The main management considerations relating to the bushland area are competition and dominance by weeds which suppress natural regeneration and compete with native species and the impacts associated with the uses of the site such as camp fires, littering, damage to native plants, unrestrained dogs and creating tracks through the bushland.



Plate 3 Walking track through the site on the northern perimeter

### **Environmental and Noxious Weeds**

Environmental weeds are listed in Section 4.3. Recommendations for control are included in Section 7.

### **Public Access and track maintenance**

A narrow walking track is located around the perimeter of the site between the river and the bushland. The track provides good access to the site for walking, dog exercise, fishing as well as unauthorized use such as camping.

A full assessment and management regime of the track is required to address the following points; visibility along the track, track width, track pavement, seating and signage and management of vegetation along the extremity of the track to provide easy access along the track and to restrict pedestrian access to adjoining native vegetation..

Community feedback indicates that a soft surface such as Hall stone is utilized in any track upgrades. This surface fits with the natural environment and is easy to maintain.

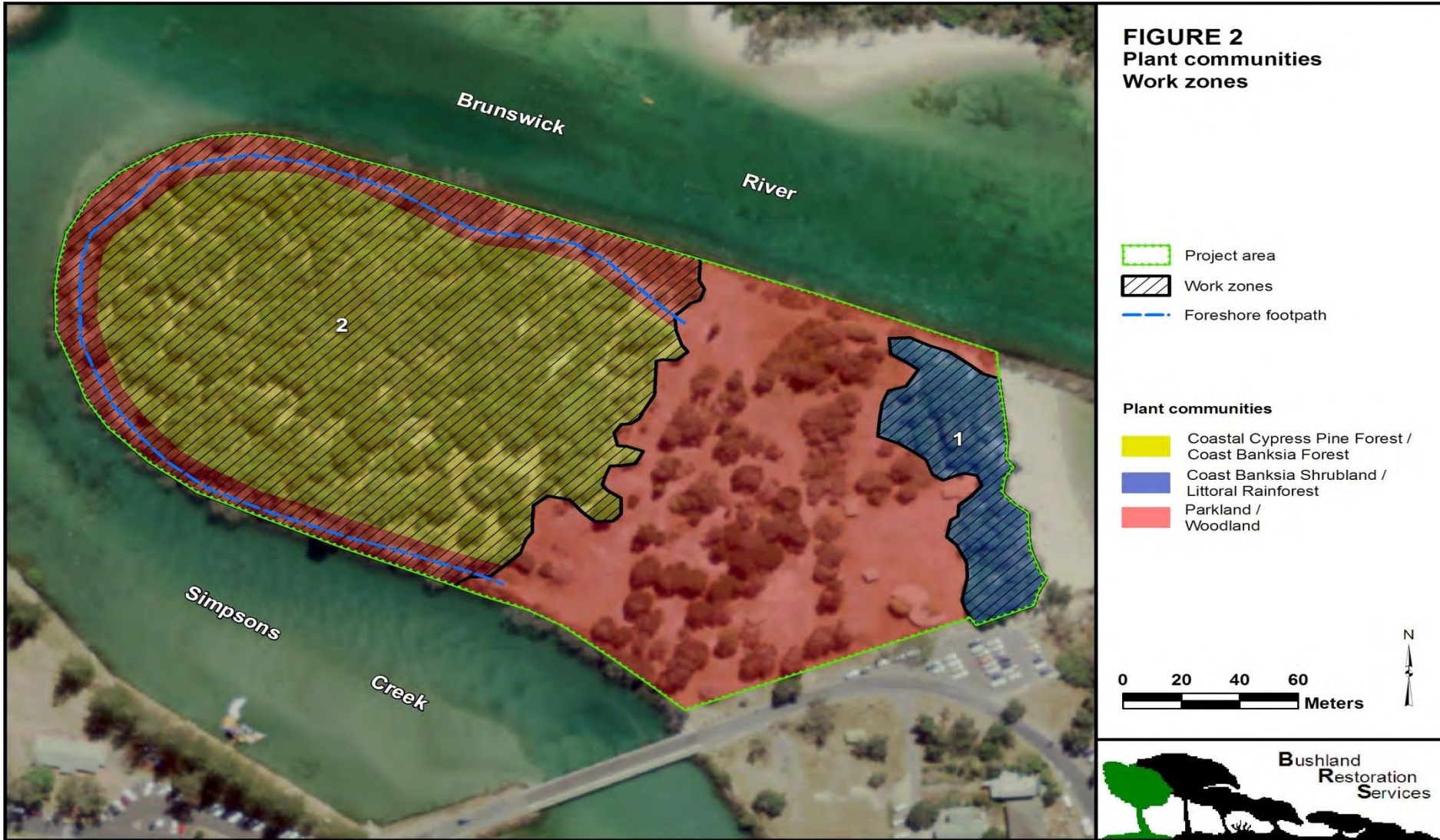
The inclusion of interpretative signage to provide information on the history of the site and environmental significance was included in community feedback.

### **Stakeholder involvement**

A preliminary stakeholder meeting was held in April 2013 as part of the preparation of this Plan. The meeting was attended by representatives from NCAT, Byron Shire Council, Brunswick Heads Chamber of Commerce, TBLALC, Brunswick Dunecare, Madhima Gulgan Community Group, Bushland Restoration Services, NRCMA Brunswick Byron Community Support Officer and Indigenous Community Support Officer and a local artist.

Feedback on the Plan was discussed and has been incorporated in this Plan.





## 7 Restoration Approach and Recommendations

### 7.1 Restoration Approach

Regeneration and restoration of native plant communities is acknowledged to be a complex, long-term process and more than just weed control or tree planting exercises. While weed control is of paramount importance, all weeds are seen as part of a dynamic, interacting ecosystem. By exploiting the natural regeneration potential of the native vegetation, weed species can be controlled in such a way that they are replaced by native species rather than by other weeds. This approach utilises the processes of natural regeneration and succession to ensure the long-term viability of the native floral and faunal communities (Joseph, 1998).

The approach proposed in this Plan is firmly based on the principle that effective and sustainable rehabilitation of native plant communities requires an integrated approach which takes into account a range of ecological factors and utilizes a variety of practical measures. Where a site has a variety of weeds an integrated approach contrasts with more traditional approaches based on weed control, which set priorities on a species by species level and selectively target individual species. If carried out in isolation from other ecological considerations, these approaches lead to increased re-infestation or to the replacement of targeted species with other weeds some of which may even be more damaging.

The restoration of the woodland and forest requires an assisted regeneration approach. The assisted regeneration approach is appropriate in relatively intact plant communities where limited intervention such as weed control is sufficient to restore the native vegetation.

Weeds must be controlled in such a way that they are replaced by native species. Weed control in this context consists of several stages: (a) primary weed control (b) follow up weed control and (c) maintenance of the site. This is very important on this site due to the density of the ground stratum weed.

#### Primary weed control

This involves initial weed control within a designated area and aims at destroying the parent weed seed source on the site. The process of primary weed control requires accurate identification of all plant species and application of the appropriate control method for individual weed species. At this site it involves techniques such as spraying large areas of the introduced grasses, cutting and painting or overspray of Lantana and other woody weeds and careful spot spray of small weed seedlings. On the other hand it may involve careful hand removal of weeds along the creekline or adjacent to native seedlings. Effective and accurate weed control at this stage is fundamental to successful restoration of plant communities.

#### Follow up control

Upon completion of primary weed control, resources for plant growth such as light, space, moisture and nutrients are made available to nearby plants and soil seed banks. Plants both native and weed will start regenerating and the aim is to remove the weeds at seedling stage so as to prevent their further spread. By controlling weeds before they flower and fruit also makes available the resources for native regenerating plants.

The follow up weed control generally involves spot spraying the emerging weed seedlings in the site after primary weed control. Accurate identification of all plants is vital at this stage as incorrect identification can result in the destruction of native species and exhaustion of the

native soil seed bank or the promotion of weed species if incorrectly identified as native species.

Follow-up weed control is essential to the long-term restoration of native vegetation. Regeneration of native species may be initiated but will be short-lived if weeds reclaim the site.

### Maintenance

Timely site maintenance which frequently involves spot spraying of weed species is ongoing. Frequency and duration will vary according to the response of the native vegetation, viability of weed seed in the soil and the proximity of weed sources for re-infestation of the site.

## **7.2 Work Zones**

The site has been divided into two work zones for implementation of on ground works (see **Figure 2**).

It is important that weed control is thorough and undertaken in a systematic manner to reduce weeds reinvading worked areas and plantings. Ideally restoration projects require ongoing maintenance to ensure that weeds do not reinvade the native vegetation and plantings.

Weed control methods and Specific control methods for the site are included in **Appendices 3 and 4** respectively.

The proposed restoration works will improve the native vegetation and habitat of native flora and fauna including threatened species. Works are to be in accordance with NSW NPWS Draft Bush Regeneration Guideline (**Appendix 6**) as the site includes two EECs and a threatened flora species.

The use of “frog friendly” herbicide is essential to minimise impacts on frogs and aquatic species.

Access to the work site is through the parkland and is generally easy as the site is flat.

### **Work Zone 1**

Work zone 1 is located on the eastern boundary of the site adjacent to the beach. The zone has an area of 0.31ha.

Work zone 1 consists entirely of Coast Banksia Forest / Littoral Rainforest. The local Brunswick Heads Dunecare group has undertaken weed control and plantings in this area for a number of years. The cover of weeds in the tallest stratum is insignificant (0 – 5%) – and consists of the non-indigenous Australian species Weeping Paperbark and Alexandra Palm planted by Dunecare. The cover of weeds in the lower strata is insignificant (0 – 5%) to minor (5 – 20%) and consists of exotic grasses (mainly Summer Grass), Bitou Bush, Asparagus Fern, Umbrella Tree, Painted Spurge, Coast Teatree and New Zealand Christmas Tree.

Prior to control of weeds in this zone discussion is required between NCAT, Dunecare and Brunswick Valley Landcare. Discussion will include prospective funding for restoration, removal of weeds particularly non-local species and infrastructure requirements such as access, fencing and signage.

Restoration to include:

Overspray of Bitou bush which is mainly on the north east of the zone. Prior to spraying undertake spray preparation by cutting back the Bitou bush from around any native plants. Leave the dead Bitou bush in situ to provide protection and stabilisation of the sand.

Spot spray all small woody weeds and groundcover weeds such as exotic grasses, Asparagus fern and Painted spurge.

Cut scrape and paint woody weeds such as smaller Bitou bush, Lantana, Umbrella tree and Coast Teatree. Umbrella tree to be scraped and painted and left in situ. Lop cut stems in to billets and leave on the ground. Do not pile.

Drill and inject Coast Teatree, New Zealand Christmas bush and other larger woody weeds. Ensure that NCAT have been consulted prior to control of any weeds trees that are likely to be a risk to the public after control.

Follow up spot spray on a regular basis to ensure that weeds do not reestablish within the zone.

## **Work Zone 2**

Work zone 2 is located in the western half of the area and is bound by the Brunswick River and Simpson's Creek. The zone has an area of 2.83ha. There is a walking track around the perimeter of the zone. Restoration will be undertaken along both sides of the walking track.

Work zone 2 consists entirely of Coastal Cypress Pine / Coast Banksia Forest to Woodland. The cover of weeds in the tallest stratum is insignificant (0 – 5%) and consists of Umbrella Tree, Weeping Paperbark, Norfolk Island Pine, Mango and Pine Trees.). The cover of weeds in the mid stratum is generally insignificant (0 – 5%) and consists mainly of Lantana and Bitou Bush. Coast Teatree, Golden Wreath Wattle, Date Palm, Umbrella Tree, Brazilian Cherry, Ochna, Guava, Strawberry Guava and Camphor Laurel are also present. The cover of weeds in the ground stratum is minor (5 – 20%) to common (20 - 50%) and consists mainly of Asparagus Fern and exotic grasses (mainly Panic Grasses but also Whisky Grass). Flaxleaf Fleabane, Rattlepod, Mother-of –millions, Brazilian Nightshade and Coral Berry are also present.

Prior to control of weeds in this zone discussion is required between NCAT, Dunecare and Brunswick Valley Landcare. Discussion will include prospective funding for restoration, removal of weeds particularly non-local species, fire protection requirements and extent of upgrade of the walking track.

Restoration to commence at the east of the work zone and work systematically through the zone. As one section is stabilised and weeds are at a manageable level move to the next section. Gradually consolidate the sections until the whole of the zone has had weeds reduced and moves to maintenance phase.

Restoration to include:

Spot spray of all small woody weeds and groundcover weeds such as the dominant exotic grasses and Asparagus fern and patches of Flaxleaf Fleabane, Rattlepod, Mother-of – millions, Brazilian Nightshade and Coral Berry.

Cut scrape and paint woody weeds such as smaller Bitou bush, Lantana, Umbrella tree, Coast Teatree, Golden Wreath Wattle, Date Palm, Umbrella Tree, Brazilian Cherry, Ochna, Guava, Strawberry Guava and Camphor Laurel. Lop cut stems in to billets and leave on the ground. Do not pile. Umbrella tree to be scraped and painted and left in situ.

When the ground and mid storey have had weeds controlled and primary work is completed then drill and inject weed trees such as Umbrella Tree, Weeping Paperbark, Norfolk Island Pine, Mango and exotic Pine trees.

Ensure that NCAT have been consulted prior to control of any weeds trees that are likely to be a risk to the public after control.

Follow spot spray on a regular basis to ensure that weeds do not reestablish within the zone.



Plate 4 Weeds growing on edge of gap in the native vegetation

The above primary works should be undertaken in the first two years from commencement of the work zone. To ensure weeds do not reinvade ongoing follow up is essential.

Follow up spot spray throughout the zone on a regular two to six monthly basis depending on the season and rate of growth of weeds.

## Additional Activities

As part of the project interested members of the community to be provided with the opportunity to gain training from the experienced bush regenerators working on the site. The training provided during the project will increase the landholder's interest, knowledge and involvement in restoration and management of native vegetation, threatened species and EECs and assist in continuing maintenance of the site.

Weed species in the adjacent parkland to be identified. Discussion to be held between NCAT, Dunecare and interested stakeholders to decide whether any of these trees and shrubs should be retained. There may be trees which hold historical significance.

**Table 4 Implementation of Work**

<b>Zone</b>	<b>Actions</b>	<b>Timing</b>	<b>Indicative Days</b>
1	Control of all weeds using spot spray, CSP and drill and inject.  Follow up on regular basis	Year 1	2 person days  4 person days
2	Primary work – eastern section using spot spray, CSP and drill and inject.  Follow up on regular basis through worked area.	Year 1	20 person days  10 person days
1	Follow up on regular basis	Year 2	6 person days
2	Primary work – western section using spot spray, CSP and drill and inject.  Follow up on regular basis through worked area.	Year 2	20 person days  10 person days
1 & 2	Maintenance	Year 3 to 5	12 person days annually

Training days and plantings have not been included in Table 4. Planting days to include Dunecare and interested local community groups and members.

## 8 General Guidelines

### 8.1 Personnel

Contractors implementing the Plan are to be listed on Byron Shire Council and/or NCAT Panel of Providers for bush regenerators. These authorities require restoration to be undertaken by qualified and experienced bush regenerators, with a current S132 licence from Office of Environment and Heritage to work in the habitat of Endangered Ecological Communities recorded on the site.

Contractors are to be fully qualified and experienced bush regenerators with a minimum of Conservation Land Management Certificate 3 or equivalent and two years experience working in coastal sclerophyll and rainforest communities. Supervising bush regenerators are to hold a minimum of Conservation Land Management Certificate 4 and four years experience working in coastal sclerophyll and rainforest communities and the habitat of threatened flora and fauna.

### 8.2 Threatened Species

Bush regenerators contracted to work on the site require a current S132 license to work in habitat of Threatened species and the two Endangered Ecological Communities. Bush

regenerators must be experienced in identification of Threatened species recorded or likely to occur within coastal plant communities. Contractors are to be experienced in working in EECs and to follow the Guidelines and Checklist for Working in Threatened species Habitat (**Appendix 6**).

### **8.3 WH&S**

Bush regenerators contracted to work on the site are required to comply with the requirements of the Workplace Health and Safety Act (2011) and WH&S Regulations (2011).

A Risk Assessment is to be prepared for each work zone (refer to **Appendix 7** for Risk Assessment Form and Matrix). Contractors are also required to provide Workcover for employees or ensure sub - contractors hold individual personal insurance for bush regeneration work.

Bush regenerators to ensure tools, equipment, clothing, boots and vehicles are cleaned and free of pathogens and weed propagules.

### **8.4 Chemical use**

The *Pesticides Regulation 2009* requires persons using pesticides, and acting for or on behalf of a public authority, documents daily use of pesticides (See Daily Record Sheet **Appendix 6**), uses only pesticides registered by the Australian Pesticides & Veterinary Medicines Authority (APVMA) that are approved for the intended situation of use (or follow off label permit), read and follow the registered label on the pesticide container, avoid risk of injury to persons, property and non-target plants and animals through the use of the pesticide and be adequately trained in the use of the pesticide.

For treatments undertaken by hand or by hand-held applicators, the supervisor of the herbicide application works is the person responsible for the record keeping.

Use of pesticides and their additives must only be carried out by personnel who hold current chemical users certificates.

It is also a requirement of the *Pesticides Regulation 2009* that any pesticide use in public places includes public notification in accordance with the relevant notification plan. Pesticide Use Notification Plans require temporary signs to be displayed during pesticide applications within roadsides, road reserves and natural areas/bushland.

### **8.6 Cultural Heritage**

It is an offence against the NSW National Parks and Wildlife Act 1974 (Section 90:1) for a person who, without obtaining the consent of the Director General, knowingly destroys, defaces or knowingly causes or permits destruction or defacement or damage to a relic or Aboriginal place. If Aboriginal sites or artifacts should be encountered during restoration works at this or adjacent sites work must stop and the NSW OEH Regional Archaeologist, Coffs Harbour or the Sites Officer OEH Alstonville be notified immediately.

## **9 Monitoring and Reporting**

### **9.1 Monitoring**

Before setting up the monitoring program refer to the objectives of the restoration project (see **Section 2**) and identify the amount and type of data necessary to monitor the objective.

This Habitat Restoration Plan includes baseline data of current condition, biodiversity values and threats in Sections 4, 5 and 6 respectively. In particular the descriptions of the vegetation communities include the dominant weeds and their percentage cover within each stratum.

The recommended monitoring program is listed below.

#### **9.1.1 Photopoints**

Prior to commencement of restoration activities the bush regeneration contractors will establish a minimum two monitoring photo points within each work zone.

The photopoints to be set up and marked with a wooden or metal stake and a metal tag identifying the photopoint number. The photopoint locations to be recorded using a hand held GPS and entered on a Daily Record Sheet (see **Appendix 5**) and separate data recording sheet.

Additional photopoints to be set up by the bush regenerators where points of interest are observed, e.g. dense weed, fauna sightings and evidence of presence of fauna.

All photopoints are to be recorded on the DRS and transferred to the data sheet with the photopoint number, date and time of day, site identifier and description including cover of weeds and natives in all strata, direction facing and GPS co-ordinates.

Photopoints are to be repeated on an annual basis.

#### **9.1.2 Restoration and revegetation**

Primary and follow up weed control to be undertaken within 3.14 ha of the site with <5% degree of weed in year 3. If planting is undertaken a 90% survival rate is required.

Daily Record Sheets to include a figure showing location and area (m<sup>2</sup>) of work.

#### **9.1.3 Fauna monitoring**

Restoration activities improve habitat for native fauna. There will usually be an increase in the native fauna after weed control as the native vegetation attracts and provides habitat for specific species.

When setting up baseline photopoints record any evidence of native fauna. This evidence can range from actual sightings of the fauna to scratches on a tree, a snake skin, tracks or scats.

Evidence of the presence of fauna to be recorded on the Daily Record Sheet (**Appendix 5**).

#### **9.1.4 Biodiversity score**

A Bush Futures Site Attribute and Habitat Assessment Data Sheet is to be completed for each work zone (refer to **Appendix 8** for Monitoring Proforma) prior to commencement of restoration works.



## Performance Indicators (Bush Futures Rapid Assessment)

The following performance indicators can be used to determine the success of the project.

### 1 Structural and Compositional Integrity

- Percentage cover of exotic plant species reduced in each stratum
- Percentage cover of native plant species increased in each stratum

### 2 Dominant Weed Assessment

- Number of dominant weeds reduced in each stratum
- Percentage cover of dominant weeds reduced in each stratum

### 3 Weed Density and Severity Scores

- Weed density and severity scores reduced

### 4 Threats

- Reduction of weeds in zones worked after one year of primary treatment and follow up as detailed in work program. Weeds to be at a level where there is nil fruiting - no mature plants present.

The success of the project will be determined by the native vegetation on the site restored to a level where weeds are minimal and native vegetation is in good condition without competition from weeds particularly vine weeds.

## 9.2 Reporting

All work activities including chemical use will be recorded on a Daily Record Sheet (**Appendix 5**). The daily reporting on the DRS will be summarised on a regular basis for inclusion in the final report.

Project contracts for bush regeneration works to be undertaken on the site will provide additional requirements for reporting.

The contractor to provide to NCAT and/or the funding body an Annual Progress Report for the property including:

- Summary of bush regeneration works, weed control undertaken, area treated, landholders engaged and volunteer hours contributed
- Before and after monitoring photographs and
- Flora and fauna records including new records of threatened species.

The purpose of regular monitoring, recording and reporting is not just to document the progress of the project, but also to provide feedback to the managers on the success or failure of the various management strategies and allow adaptation of the restoration program to achieve best practice outcomes (**Section 9.3**).

## 9.3 Adaptive Management

The management actions recommended in this Plan are intended to provide a basis for the success of the project. A key factor for success will be the ability of those implementing the

Plan to respond to changing site conditions. The purpose of regular monitoring, recording and reporting is not just to document the progress of the project, but also to respond to unanticipated circumstances, provide feedback to the managers on the success or failure of the various management strategies and allow adaptation of the rehabilitation techniques and implementation schedule to achieve maximum effectiveness in weed control and habitat management.

This adaptive management approach is especially important in relation to the control of weeds and where applicable the species selection for planting programs. Regular monitoring is to be used to assess the effectiveness of management strategies and provide the basis for adaptation of the implementation schedule.

Any amendment to this Plan will be submitted to the land manager or funding body for approval.

## References

Briggs, J.D. & Leigh, J.H. (1996) Rare or Threatened Australian Plants. CSIRO Australia

BSRLG (2000) *Subtropical Rainforest Restoration: A practical manual and data source for landcare groups, land managers and rainforest regenerators*. Big Scrub Rainforest Landcare Group, Bangalow.

Joseph, R. (2001) Course Notes from Certificate III in Bushland Regeneration. TAFE, Wollongbar.

Morand, D.T., (1996). *Soil Landscapes of the Tweed and Byron. 1:100,000 Sheet*. Department of Conservation and Land Management, Sydney.

Society for Ecological Restoration International Science & Policy Working Group (2004). *The SER International Primer on Ecological Restoration*. www.ser.org & Tucson: Society for Ecological Restoration International.

Tweed Byron Bushland Audit (2010). Tweed and Byron Shire Councils.

Wildlife Atlas (2010) The Atlas of NSW

Wildlife <http://wildlifeatlas.nationalparks.nsw.gov.au/wildlifeatlas/watlas.jsp>.

## Appendix 1 Native Species

Scientific name	Common name
<i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i>	Currahbah
<i>Acacia longifolia</i> subsp. <i>sophorae</i>	Coastal Wattle
<i>Acmena smithii</i>	Lilly Pilly
<i>Acronychia imperforata</i>	Beach Acronychia
<i>Acrotriche aggregata</i>	Tall Groundberry
<i>Alectryon coriaceus</i>	Beach Alectryon
<i>Archontophoenix cunninghamiana</i>	Bangalow Palm
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	Coast Banksia
<i>Callistemon salignus</i>	Willow Bottlebrush
<i>Callitris columellaris</i>	Coastal Cypress Pine
<i>Carpobrotus glaucescens</i>	Pigface
<i>Casuarina equisetifolia</i> subsp. <i>incana</i>	Horsetail She-oak
<i>Celtis paniculata</i>	Native Celtis
<i>Crinum pedunculatum</i>	Swamp Lily
<i>Cryptocarya foetida</i>	Stinking Cryptocarya
<i>Cryptocarya triplinervis</i> var. <i>triplinervis</i>	Three-veined Cryptocarya
<i>Cupaniopsis anacardioides</i>	Tuckeroo
<i>Dianella species</i>	A Blue Flax-lily
<i>Digitaria didactyla</i>	Queensland Blue Couch
<i>Dysoxylum mollissimum</i> subsp. <i>molle</i>	Red Bean
<i>Einadia hastata</i>	Berry Saltbush
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Euroschinus falcatus</i> var. <i>falcatus</i>	Ribbonwood
<i>Glochidion ferdinandi</i>	Cheese Tree
<i>Hibbertia scandens</i>	Twining Guinea Flower
<i>Hibiscus tiliaceus</i>	Cottonwood Hibiscus
<i>Imperata cylindrica</i>	Blady Grass
<i>Litsea australis</i>	Brown Bolly Gum
<i>Livistona australis</i>	Cabbage or Fan Palm
<i>Lomandra species</i>	A Mat-rush
<i>Macaranga tanarius</i>	Macaranga
<i>Melaleuca quinquenervia</i>	Paperbark
<i>Monotoca elliptica</i>	Prickly Broom Heath
<i>Nephrolepis cordifolia</i>	Fishbone Fern
<i>Notolaea longifolia</i>	Large Mock-olive
<i>Pandanus tectorius</i>	Screw Pine
<i>Persoonia adenantha</i>	A Geebung
<i>Pittosporum undulatum</i>	Sweet Pittosporum
<i>Polyscias elegans</i>	Celery Wood or Silver Basswood
<i>Psydrax lamprophylla</i>	Large-leaved Canthium
<i>Smilax australis</i>	Austral Sarsaparilla or Barbed-wire Vine
<i>Sphagneticola trilobata</i>	Singapore Daisy
<i>Stephania japonica</i> var. <i>disclor</i>	Snake Vine
<i>Sterculia quadrifida</i>	Red-fruited Kurrajong or Peanut Tree
<i>Syzygium oleosum</i>	Blue Lilly Pilly

<b>Scientific name</b>	<b>Common name</b>
<i>Tristaniopsis laurina</i>	Water Gum
<i>Zoysia macrantha</i>	Prickly Couch

## Appendix 2 Weed Species

Scientific name	Common name	Noxious weed status
<i>Acacia saligna</i>	Golden Wreath Wattle	
<i>Ageratina riparia</i>	Mistflower	4
<i>Andropogon virginicus</i>	Whisky Grass	
<i>Araucaria heterophylla</i>	Norfolk Island Pine	
<i>Asparagus aethiopicus</i>	Asparagus Fern	
<i>Baccharis halimifolia</i>	Groundsel Bush	3
<i>Bidens pilosa</i>	Farmer's Friends or Cobbler's Pegs	
<i>Bryophyllum delagoense</i>	Mother-of -millions	
<i>Chrysanthemoides monilifera</i> subsp. <i>rotundata</i>	Bitou Bush	4
<i>Cinnamomum camphora</i>	Camphor Laurel	4
<i>Conyza bonariensis</i>	Flaxleaf Fleabane	
<i>Crotalaria species</i>	A Rattlepod	
<i>Digitaria ciliaris</i>	Summer Grass	
<i>Eugenia uniflora</i>	Brazilian Cherry	
<i>Euphorbia cyathophora</i>	Painted Spurge	
<i>Lantana camara</i>	Lantana	4
<i>Leptospermum laevigatum</i>	Coast Teatree	
<i>Mangifera indica</i>	Mango	
<i>Melaleuca leucadendron</i>	Weeping Paperbark	
<i>Metrosideros excelsa</i>	New Zealand Christmas Tree	
<i>Ochna serrulata</i>	Ochna	
<i>Panicum species</i>	A Panic Grass	
<i>Phoenix dactylifera</i>	Date Palm	
<i>Pinus species</i>	A Pine Tree	
<i>Psidium cattleianum</i> var. <i>cattleianum</i>	Strawberry Guava	
<i>Psidium guajava</i>	Guava	
<i>Rivina humilis</i>	Coral Berry	
<i>Schefflera actinophylla</i>	Umbrella Tree	
<i>Sida rhombifolia</i>	Paddy's Lucerne	
<i>Solanum seaforthianum</i>	Brazilian or Climbing Nightshade	

## Appendix 3 Weed Control Techniques

Current best practice methods for weed control are described below.

Please note: (1) It is the responsibility of the herbicide user to hold an off-label permit (obtained from the National Registration Authority for Agricultural and Veterinary Chemicals) for herbicide use that is not consistent with conditions specified on the label; and (2) The methods and herbicide use rates provided below are current best practice methods. It is the responsibility of the operator to ensure methods used are current best practice and are suitable for the site and any environmental constraints experienced at the site.

### Cut-scrape-paint

This weed control method applies to all woody shrubs, trees and some vines.

Cut plant low to the ground at an angle.

Apply Glyphosate immediately at the rate of 1 part Glyphosate to 1.5 parts water, with a paintbrush approximately 1.5 centimetres wide.

Scrape sides lightly to reveal green tissue and apply the herbicide to the scraped area.

Take care that the brush is not contaminated with soil.

Note - all seed that has high viability and longevity, e.g. *Senna spp.* and other members of the Fabaceae family, or plants with a high invasive potential, such as Umbrella Tree *Schefflera actinophylla*, must be removed from the parent and either composted on site or removed from the site.

### Gouge-paint

This weed control method applies to those plant species that have a fleshy root system, such as rhizomes or large bulbs. It is particularly appropriate for the treatment of *Asparagus spp.*

Gouge out sections of the fleshy base with a knife (if using on Asparagus, first cut the stems at shoulder height and also at the base).

Apply 1 part Glyphosate to 1.5 parts water immediately, with a paint brush approximately 1.5 centimetres wide.

### Stem Injection

This weed control method applies to all woody trees and shrubs with a diameter of about six to ten centimetres or greater.

Drill a hole at an angle into the sap wood using an 8-10mm drill bit angle, Holes to be no >than 10cm apart.

Apply herbicide (approx 4ml) immediately into the hole using a tree-injecting device (if using Glyphosate, apply undiluted or at the rate of 1 part Glyphosate to 1.5 parts water).

Repeat this procedure at intervals around the circumference of the tree, as close to the ground as possible. Where the presence of a crotch angle makes this difficult, drill a hole above it. Note – one row of drill holes will be sufficient for trees with trunks of six to ten centimetres; larger trunk diameters will need correspondingly more.

Treat all visible lateral roots as per dot point 1.

### Scrape-ditch-paint

This weed control method is applicable to many species of vines where it is desirable to treat the vines intact, particularly those with aerial tubers such as Madeira Vine *Anredera cordifolia* or those which will propagate from segments, e.g. Cape Ivy *Delairia odorata*.

Scrape the stem tissue on one side of the stem only for at least 20-30 centimetres if possible. Note - on Madeira Vine, it is necessary to scrape heavily. Scrape as many sections of the stem as possible.

Apply undiluted Glyphosate with a paintbrush.

On stems that are thicker or horizontal, make a ditch into the stem with a knife and apply herbicide. Tubers and side roots should be treated the same way. Note - care must be taken not to sever the stem.

### Spraying

This weed control method is carried out using a 15 litre backpack spray unit with a modified spray nozzle that gives a solid spray pattern. Glyphosate is the main herbicide used with the addition of a marker dye. For plants that show some resistance (e.g. Madeira Vine) or where growing conditions are not optimal, an acidifying agent, LI700®, is added. Metsulfuron methyl can also be used for resistant species and grasses. It should be used with a surfactant, such as Agral® or Pulse®.

Where both Glyphosate and Metsulfuron methyl it is important to mix the chemicals as recommended e.g. MM must be well mixed with water prior to adding to backpack.

Dilution rates for Glyphosate and Metsulfuron methyl are in accordance with the manufacturer's recommendations and any variation requires a permit from the National Registration Authority.

Dilution rates for Glyphosate to water for treatment of some weed species are provided below:

Plants with more or less succulent leaves, e.g. Wandering Jew *Tradescantia fluminensis*, Madeira Vine *Anredera cordifolia* (autumn to winter is the suggested time for spraying these plants), Spider/Ribbon Plants *Chlorophytum spp.* etc - 1 part Glyphosate to 50 parts water plus 1.5g Metsulfuron methyl to 10 litres water + 2 ml Agral® or 20ml Pulse® to 10 litres water.

Lantana *Lantana camara* - 1 part Glyphosate to 100 parts water

Other soft-leaved plants, annuals and grasses - 1 part Glyphosate to 100 parts water

Bitou Bush *Chrysanthemoides monilifera subsp. rotundata* - 1 part Glyphosate to 150 parts water to 1 part Glyphosate to 400 parts water

Typical dilution rates for Metsulfuron methyl to water are - 1.5g Metsulfuron methyl to 10 litres water + 2 ml Agral® or 20ml Pulse® to 10 litres water.

### Overspray

This weed control method is applicable to large, dense infestations of such plants as *Lantana camara*, where it is desirable to leave the dead plants intact to prevent erosion and over-exposure of large areas, protect native seedlings from predators such as wallabies, and avoid trampling by humans.

Spray over the top of the infestation, using a weak solution of Glyphosate.

Any native plants that may be under the weed will be protected by the foliage cover of the weed.

Leave the sprayed plants intact so that native seedlings can establish under the shelter provided.



The rate for overspraying of Lantana is 1 part Glyphosate to 100 parts water.

Alternatively, weeds can be cut and flattened with bush-hooks or loppers and the subsequent regrowth sprayed with Glyphosate. In many cases it is preferable to overspray wherever practicable as this will cause less erosion and trampling of suppressed native plants, such as ferns and seedlings. However, handwork will be necessary to cut-scrape-paint any unsprayed Bitou Bush or Lantana that surrounds native plants.

### **Crowning**

This weed control method is applicable to weeds which have their growing points below the surface of the ground (corms, bulbs, rhizomes, clumped or fibrous root systems, etc. e.g. *Asparagus* spp., and introduced grasses).

Grasp the leaves or stems and hold them tightly so that the base of the plant is visible. Plants with sharp leaves or stems should be cut back first.

Insert the knife close to the base of the plant at a slight angle, with the tip well under the root system.

Cut through the roots close to the base. Depending on the size of the plant, two or more cuts may be needed to sever all the roots.

Remove the plant. Make sure that the base of the plant where the roots begin is completely removed.

Adapted from Joseph (2001)

## Appendix 4 Specific Treatment Methods for Common Weeds

Dilution ratios for application of a mix of herbicide (Glyphosate based herbicide) and water are provided. For example, 1:100 is one part by volume of herbicide is mixed with 100 parts by volume of water (100ml Glyphosate to 10 litres water). All cut, scrape and paint at 1:1.5 refers to Glyphosate.

For some weeds a combination of Glyphosate and Metsulfuron methyl is recommended, an off label permit is required from the National Registration Authority for any combination of herbicides or for rates not described on the product labels.

Additives such as Agral® or Pulse® are required with use of Metsulfuron methyl. Additives can increase the efficiency of Glyphosate on difficult to control weed species.

### Trees and Shrubs

Scientific Name	Common Name	Control Method
<i>Cinnamomum camphora</i>	Camphor Laurel	Stem inject straight Glyphosate for larger trees, cut scrape and paint 1:1.5 small plants. Spray seedlings <i>Glyphosate</i> 1:50 + additive
<i>Erythrina X skyesii</i>	Coral Tree	Stem inject 1:1.5. Do not leave cut pieces on the ground.
<i>Lantana camara</i>	Lantana	Lopper and cut, scrape and paint base 1:1.5. Spray regrowth <i>glyphosate</i> 1:100 + additive. Drill and inject.
<i>Ligustrum lucidum</i>	Large-leaved Privet	Stem inject 1:1 larger trees. Cut scrape and paint 1:1.5 small plants. Spray seedlings <i>glyphosate</i> 1:50 + additive.
<i>Ligustrum sinense</i>	Small-leaved Privet	Stem inject 1:1.5 larger trees. Cut scrape and paint 1:1.5 small plants. Spray seedlings <i>glyphosate</i> 1:50 + additive
<i>Ochna serrulata</i>	Mickey Mouse Bush	Cut, scrape and paint 1:1.5. Spray seedlings Glyphosate 1:50 + Additive. Difficult to pull will regrow from broken root.
<i>Schefflera actinophylla</i>	Umbrella Tree	Hand pull seedlings and bag. Cut, scrape and paint, scrape and paint or stem inject 1:1.5. Cut sections, can regrow if left on the ground
<i>Senna pendula</i> var. <i>glabrata</i>	Winter Senna + Smooth Senna	Hand pull young plants or spray seedlings Glyphosate 1:50 + additive. ® Cut, scrape and paint 1:1.5. Stem inject large specimens 1:1.5, bag seeds.
<i>Solanum mauritianum</i> <i>Solanum chrysotrichum</i>	Tobacco Bush Giant Devil's Fig	Stem inject 1:1 larger trees. Cut scrape and paint 1:1.5 small plants. Spray seedlings less than 150mm high with Glyphosate 1:100 + additive

### Vines and Scramblers (Groundcovers)

Scientific Name	Common Name	Control Method
<i>Anredera cordifolia</i>	Madeira Vine	Ascending vines stems: Scrape and paint (100% Glyphosate), tubers gouge, scrape and paint (100% Glyphosate); Ground infestation spray Glyphosate 1:50 plus Metsulphuron 1.5grams/10L + additive. Hand-weed tubers and small vines: bag and compost under black plastic.
<i>Passiflora edulis</i> , <i>P. suberosa</i> , <i>P. subpeltata</i>	Edible Passionfruit, Corky and White Passionflower	Stems- Cut climbing stems at head height. Scrape and paint the base. Seedlings and regrowth: spray Glyphosate 1:100 + Metsulphuron methyl 1.5g to 10L water plus additive.
<i>Tradescantia fluminensis</i>	Wandering Jew	Plants: Collect and bag or roll and rake carefully, then compost or place in bin or spray Glyphosate 1:50 + Metsulphuron methyl 1.5g to 10L water plus additive.

### Herbs, Ferns and Grasses

Scientific Name	Common Name	Control Method
<i>Ageratina adenophora</i>	Crofton Weed	Spray Glyphosate 1:100 + additive. Hand pull and hang up.
<i>Ageratina riparia</i>	Mist Weed	Spray Glyphosate 1:100 + additive. Hand pull and hang up.
<i>Ageratum houstonianum</i>	Billy Goat Weed	Spray Glyphosate 1:100 + additive. Hand pull and hang up.
<i>Setaria sphacelata</i>	Setaria + Introduced grasses	Spray Glyphosate 1:100 + additive

Adapted from Big Scrub Landcare

**Appendix 5 Daily Record Sheet**

**Site Name / Location:** .....

**Date:** ...../...../..... **Time:** .....am/pm to .....am/pm... **Total hours**.....

**Staff:** .....

**Work Zone:** ..... **Photopoint:**.....

Growing Conditions	Temperature	Weather Conditions	Wind Direction
<input type="checkbox"/> Very Good	<input type="checkbox"/> Cool < 20°	<input type="checkbox"/> Showers	<input type="checkbox"/> Calm /
<input type="checkbox"/> Good	<input type="checkbox"/> Warm 21 - 25°	<input type="checkbox"/> Overcast	<input type="checkbox"/> L.Air /
<input type="checkbox"/> Poor	<input type="checkbox"/> V.Warm 26 - 30°	<input type="checkbox"/> Clear Sky	<input type="checkbox"/> L.Breeze /
<input type="checkbox"/> Very Poor	<input type="checkbox"/> Hot > 30°	<input type="checkbox"/> Variable	<input type="checkbox"/> G.Breeze /

**Work Undertaken:** (Work location and direction, main weed species, control methods used)

**Chemicals Used:**

Herbicide	Batch Number	Dilution Rate	Total Chemical	Operator Initials	Equipment
<b>Additives</b>					

**Further Observations (Evidence of fauna,** photographs, results of previous work, plantings, flowering & fruiting times of weeds & natives; natural regeneration, WH&S)

**Maps / Notes over page**

Map to show location and area (m2) of work



**Appendix 6 Checklist For Bush Regeneration Activities In The Habitat Of Threatened Species, Endangered Populations And Endangered Ecological Communities**

Management Planning:	yes	no	more info attached
The proposed activities will be in accordance with a management plan or site plan (map). Please attach the plan or relevant sections of the plan or strategy to the licence application.	√		See Section 7
The project has been discussed with the relevant Landcare coordinator. If not, provide details of any other professional advice you have sought, e.g. from a qualified bush regenerator.	√		
A NPWS Wildlife Atlas database search of a 5km radius of the site has been undertaken to identify threatened flora/fauna species known or likely to occur on the site. <i>The Wildlife Atlas is accessible on the NPWS Web Site <a href="http://www.nationalparks.nsw.gov.au">www.nationalparks.nsw.gov.au</a>.</i>	√		
Prior to commencing any works on site, a permit or permission will be obtained from the relevant landowner(s) or land manager(s).	√		
Training and supervision:			
All workers carrying out bush regeneration and associated works will be supervised by a trained and experienced co-ordinator who has completed a recognised bush regeneration course (e.g. the Certificate of Bushland Regeneration) or a minimum of 2 years bush regeneration experience. <i>If 'yes', please provide below the name and qualifications of the co-ordinator.</i> Name: ..... Qualifications/experience:.....	√		
Other members of the group that have bush regeneration training or experience. Name: ..... Qualifications/experience: ..... Name: ..... Qualifications/experience:..... Name: ..... Qualifications/experience:..... Name: ..... Qualifications/experience:..... Name: ..... Qualifications/experience:.....			
All activities by workers will be regularly checked and approved by the co-ordinator.	√		
All workers will be informed of any threatened species or endangered ecological communities in the area or which may occur in the area and the potential impacts of activities on these species/communities. <i>e.g. vines on the edge of a littoral rainforest remnant may protect the remnant from salt-bearing winds.</i>	√		
	yes	no	more info attached
All workers have adequate weed and native plant identification skills. i.e. all workers can identify and differentiate between weeds and native plants that occur on the site.	√		

Workers will be familiar with the identifying features of threatened flora that are known or likely to occur in the project area. Where threatened species known from the area are similar to weed species, the distinguishing features between these will be understood prior to commencing the work.	√		
<b>Access to sites</b>			
All vehicular access to sites will be restricted to formed roads.	√		
Unnecessary damage to sites will be avoided. e.g. avoid working in wet weather to lessen soil compaction.	√		
<b>Impacts on flora:</b>			
Prior to any works being undertaken, the presence or absence of threatened flora will be determined by a thorough walking search of the area.	√		
All threatened flora will be tagged with highly visible flagging tape before work commences. If a number of individuals occur in a clump, that area should be marked out with flagging tape.	√		
Cutting or damaging of threatened flora will be avoided.	√		
All plants will be positively identified before they are removed (pulled, cut, poisoned etc).	√		
Weed removal within 2m of a threatened species will be undertaken by hand.	√		
To reduce the possibility of introducing plant diseases and weeds the following measures will be applied: 1. Secateurs will be sharp and cleaned with methylated spirits. 2. Footwear will be cleaned of loose soil and preferably treated with bleach between sites.	√		
<b>Impacts on fauna:</b>			
All workers will be aware of any threatened fauna that are known or likely to occur on site, and the potential impacts of the proposed activities on those species.	√		
The habitat and refuge potential of weeds and rubbish will be considered prior to removal. e.g. Lantana can provide cover for threatened fauna such as the Bush-hen. Dead Lantana and poisoned Camphor Laurels should, where possible, be left in situ.	√		
Weeds will be removed gradually in areas where an infestation is extensive. Ideally, 50% of weeds that may provide habitat should be left until native plant species have re-established and provide alternative refuge.	√		
Disturbance to, and removal of rocks, logs and other potential refuge sites will be avoided.	√		
A herbicide registered for use near waterways will be used within 5m of waterways.	√		
Herbicide spraying will be prohibited within 5 metres from watercourses where threatened frogs are known or likely to occur and within a 10m radius of records of threatened frogs.	√		
A buffer of 1m along other watercourses will be maintained in which no herbicide will be sprayed.	√		
Care will be taken to minimise disturbance to shy or cryptic species. e.g. <i>the Marbled Frogmouth roosts in vine 'curtains'</i> .	√		
Care will be taken to minimise disturbance to the leaf litter layer.	√		
<b>Reconstruction through revegetation:</b> This section does <b>not</b> address propagation or planting of threatened species – this activity would need to			

be separately addressed.			
Seed collection or cuttings will be from species, populations or ecological communities other than those listed as threatened (unless licensed by NPWS).		N/A	No seed collection
Prior to collecting any seed or cuttings permission will be obtained from the relevant landholder or manager of the site. <i>e.g. a licence is required to collect native plants on National Parks estate.</i>		N/A	
Seed collection from any one species will be limited to less than 10% of the available crop at that site.		N/A	
Seed collection from any individual plant will be limited to less than 10% of the available crop.			
If your seed source is used by other seed collectors, has consideration been given to minimising any cumulative impacts to the source plants? <i>Some individual plants are known as a reliable seed source and their seed is collected extensively. This may result in – (i) a reduction in genetic diversity; (ii) an impediment to the individual's natural ability to regenerate.</i>			
When collecting propagation material from a wild population, collection will be random from as many individuals as possible across the population to ensure a representative range of genetic material is collected. Collectors will avoid selection of propagation material on the basis of physical attributes. <i>e.g. tallest, most attractive, greatest amount of seed or flowers.</i>			
Plantings will be sourced from stock of local provenance.*			
	yes	no	more info attached
Propagated plants will be used only at the subject site. i.e. excess material will only be used at other sites if it meets the provenance criteria.		N/A	No Planting
A buffer of 5 metres will be maintained around all threatened plant specimens. Planting will only be undertaken outside this buffer. <i>This requirement is intended to protect the roots of the threatened plant from damage, introduction of disease or impacts of herbicide.</i>			
Care will be taken to ensure that mulch does not introduce weeds or impede natural regeneration at the site.			
Care will be taken to ensure that weeds and/or phytophthora are not introduced to a site from any plantings.			
Consideration will be given to the possible impacts of plantings on the ecological requirements of threatened species at the site <i>e.g. reduced light, competition, etc.</i>			
Species will be planted within their natural habitat and range. Plantings will be guided by the plants' local habitat preferences. <i>e.g. the species used for plantings along watercourses should be those that naturally occur in that habitat in your local area.</i>			
<b>Herbicide use:</b> A permit from the National Registration Authority for Agricultural and Veterinary Chemicals PO Box E240, Kingston ACT 2604 may be required for herbicide use that is not consistent with conditions specified on the label.	Yes	No	
A buffer of 2m will be maintained around all threatened plant specimens. Herbicide use will only be undertaken outside this buffer.	√		

Herbicide use will cease where there are any signs of threatened species being affected by herbicide. <i>e.g. browning off, wilting, deformed growth.</i>	√		
All herbicide spray operators will be capable of undertaking precise and effective weed control.	√		
Spray will be directed away from threatened flora.	√		
Herbicide will only be sprayed in suitable weather conditions when the impact of spray drift (windy) or run-off (wet) on threatened flora is minimised.	√		
Marker dyes e.g. 'white field marker' will be mixed with herbicide before use. <i>Marker dye enables the worker to see where the spray is landing.</i>	√		
<b>Reporting and data records:</b>			
Any new records of threatened species will be provided within three months to NPWS. These records will be in a format appropriate for entry into the Wildlife Atlas, once identification of a threatened species is confirmed by a recognised authority. <i>Wildlife Atlas cards available on request.</i>	√		

\*Local provenance species should be regarded as those species propagated from material that has been collected from a natural wild population as close as possible to a site. For example, within the local catchment – which may be based on a local creek.

Please sign below, keep a copy for your records and attach all original pages of checklist, and any additional information, to your application form.

I, the undersigned, agree that the proposed bush regeneration activities are in accordance with all items checked above, additional information attached and the licence application form.

\_\_\_\_\_  
Name (please print)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



## Appendix 7 Risk Assessment Form and Matrix

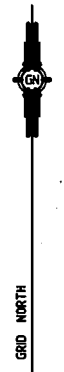
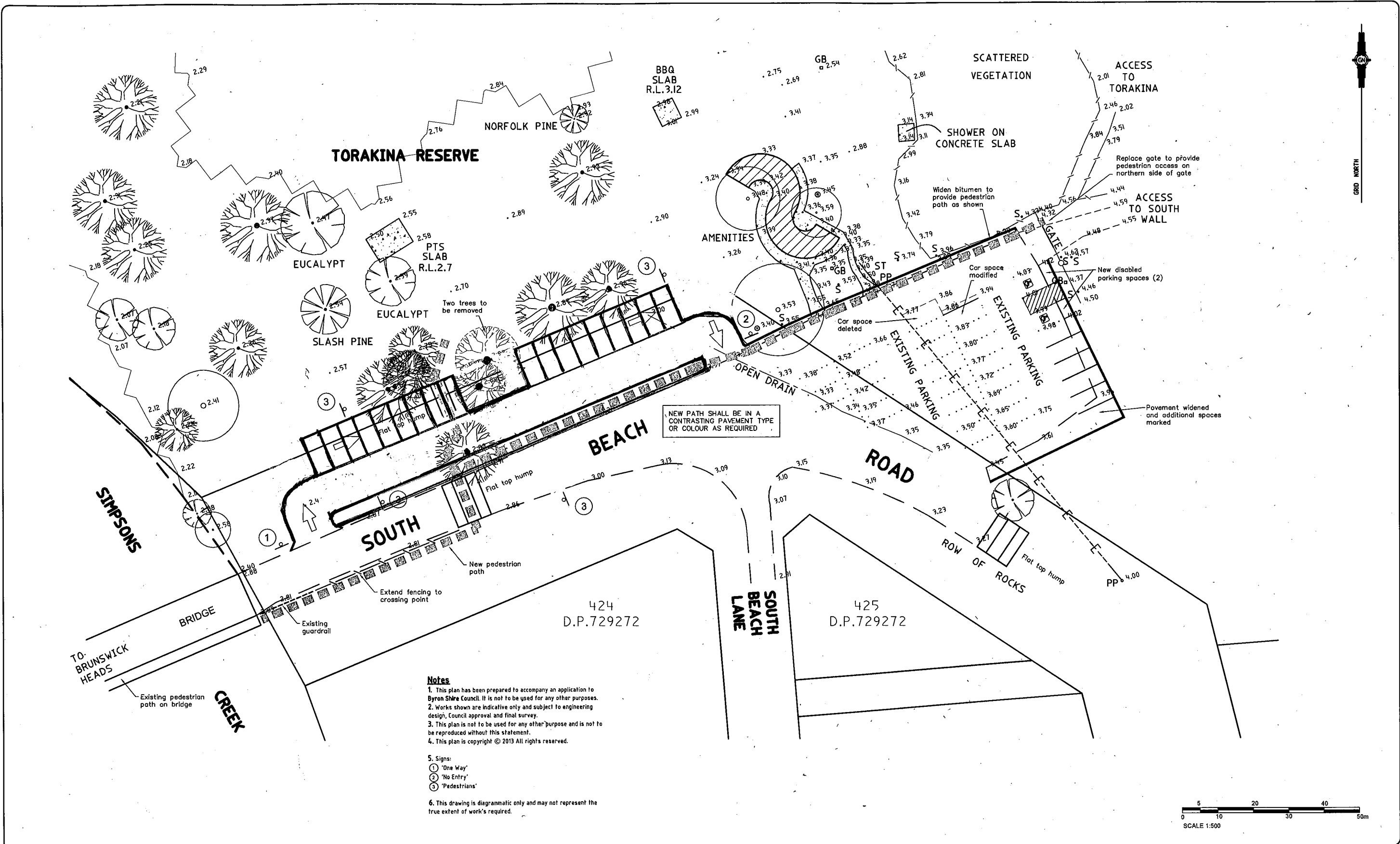
HAZARD IDENTIFIED	RISK RATING	CONTROL MEASURE RISK ASSESSMENT
<b>Traffic Hazard</b> Working in close proximity to roads		<input type="checkbox"/> Use traffic controller <input type="checkbox"/> Use of safety signs <input type="checkbox"/> Use of woggles hats or temporary barrier <input type="checkbox"/> High visibility clothing
<b>Sun Exposure</b> Hot conditions		<input type="checkbox"/> Reduce exposure time – rest breaks <input type="checkbox"/> Provide ample water <input type="checkbox"/> Protective clothing and sunscreen
<b>Working With Chemicals</b>		<input type="checkbox"/> Current MSDS held <input type="checkbox"/> Adequate washing facilities <input type="checkbox"/> Hazardous substances stored and labelled correctly <input type="checkbox"/> Use of personal protective clothing <input type="checkbox"/> Rotate tasks to avoid prolonged exposure
<b>Biological Hazard</b> Needle stick injury		<input type="checkbox"/> Inspect site before work commences <input type="checkbox"/> Provide appropriate waste disposal container <input type="checkbox"/> Personal protective equipment
<b>Manual Handling</b> Handling heavy objects		<input type="checkbox"/> Use correct lifting and carrying techniques <input type="checkbox"/> Use lifting aids <input type="checkbox"/> Use wheelbarrow etc wherever possible <input type="checkbox"/> Ensure clear area before lifting <input type="checkbox"/> Share the load <input type="checkbox"/> Rotate activities or rest breaks <input type="checkbox"/> Appropriate personal protective clothing
<b>Crush Impact</b> Cut, crush and impact		<input type="checkbox"/> Knowledge and correct use of tools <input type="checkbox"/> Appropriate personal protective clothing <input type="checkbox"/> Correct tool for job
<b>Slips, Trips and Falls</b>		<input type="checkbox"/> Avoid carrying awkward or heavy objects on uneven ground <input type="checkbox"/> Remove all potential hazards if possible or mark with coloured tape <input type="checkbox"/> Do not leave tools lying in pathways <input type="checkbox"/> Do not run <input type="checkbox"/> Ensure boots are firmly laced
<b>Hazardous Plants</b> Plants that may cause allergic reaction		<input type="checkbox"/> Identify plants which may cause allergic reactions <input type="checkbox"/> Mark area with coloured tape
<b>Bites and Stings</b>		<input type="checkbox"/> Create disturbance on site before beginning work <input type="checkbox"/> Apply insect repellent <input type="checkbox"/> Wear appropriate personal protective equipment

**Sample Risk Assessment Matrix**

<b>How severely could it hurt someone</b> Or How ill could it make someone	<b>Very likely - could happen anytime</b>	<b>Likely - could happen sometime</b>	<b>Unlikely - could happen, but very rarely</b>	<b>Very unlikely could happen, but probably never will</b>
Kill or cause permanent disability or ill health	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>
Long term illness or serious injury	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Medical attention and several days off work	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
First aid needed	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>

## **APPENDIX C**

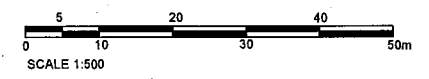
**Torakina Reserve, Proposed New Pedestrian Pathway and Parking, Ardill Payne and Partners**



**Notes**  
 1. This plan has been prepared to accompany an application to Byron Shire Council. It is not to be used for any other purposes.  
 2. Works shown are indicative only and subject to engineering design, Council approval and final survey.  
 3. This plan is not to be used for any other purpose and is not to be reproduced without this statement.  
 4. This plan is copyright © 2013 All rights reserved.

5. Signs:  
 ① 'One Way'  
 ② 'No Entry'  
 ③ 'Pedestrians'

6. This drawing is diagrammatic only and may not represent the true extent of work's required.



Project: **TORAKINA RESERVE  
 PROPOSED NEW PEDESTRIAN  
 PATHWAY AND PARKING**

Do not scale drawing. Use written dimensions only

Client: **NORTH COAST HOLIDAY PARKS**  
 Title: **CONCEPT PLAN  
 NEW PATHWAY AND PARKING**

**ARDILL PAYNE  
 & PARTNERS**  
 Consulting Civil & Structural Engineers Project Managers  
 Town Planners & Surveyors  
 Telephone: 02 6686 3280  
 Facsimile: 02 6686 7920  
 Email: info@ardillpayne.com.au

Design	TJC	Scale at A3	500
Drawn	TJC	Datum	-
Date	SEPT. '13	Filename	7578 Torakina parking
Checked		Approved	
Job No.	<b>7578</b>	Dwg. No.	<b>SK.02</b>
		Issue	

## **APPENDIX D**

**Minutes from Meeting Stakeholders in relation to Banner and Terrace Parks**

**North Coast Holiday Parks**  
**Notes from Consultation Session**  
**Banner and Terrace Parks**

**In Attendance:**

Allison Rogers (All abilities Playground)  
Kim Rosen (Brunswick Chamber Of Commerce & Under 10 bike track)  
Joy Slater (Brunswick Valley Woodchop)  
Glen & Andy McGregor (McGregor's Family Carnival)  
Russell Siwicki (ARL Carnival Committee Inc)  
NCHP – Nev Green and Russell Chaplin

**Date:** Monday 23rd April, 2012  
**Time:** 6pm – 7.30pm  
**Location:** Brunswick Surf Lifesaving Club (upstairs)

**Notes:**

1. The path from the sound shell to the road bridge should wind around so as to avoid dissecting this open space as it is a useful open space.
2. Provide access to the beach in the corner immediately upstream of the road bridge including works to repair and retain the collapsed bank. Integrate this access with the proposed path network. (Note that some or all of this work may be on land under Council control so their concurrence would be required)
3. Reference was made to the Twin Towns disabled access to the waterfront as being a great example.
4. Suggestion that specific parking for mothers with prams be provided convenient to the Terrace Playground.
5. Check existing disabled kerb crossover and tactile indicators near Terrace Playground against location of proposed path in this area.
6. Look at the Park in Pottsville opposite the sports ground as a good example of public space.
7. Consider timber boardwalk as opposed to the proposed hailstone pathway. This was further discussed and compromise reached was a feature timber boardwalk / area at the focal point around the central river access, integrated with the path network and the playground.
8. No landscaping or seating centrally as proposed as the woodchop Log Store and waste removal set up is impeded. Compromise was to have a strengthened concrete path in this area to match existing, and to revisit potential seating and landscaping options if playground location and shape is changed.
9. Natural lighting is required in the Housie Shed
10. Macgregor's advise that they currently have an area that starts 3m from the top of the rock wall and that basically all of this space is required. Consider this in the alignment of the path in the vicinity of the carnival. Also consider this in the alignment of the path as it transitions from Banner to Memorial Park.
11. Narrow up the playground to maintain a 5 metre corridor between the car park and playground to have room for market stalls and a thoroughfare.
12. Integrate seating for parents adjacent to the car parks.
13. Consider ambient lighting options for pathway.
14. Consult with School / Lilli Pilli Preschool on playground equipment.
15. Keep the Shed
16. The potential for co-location of an Under 10's bike track in memorial park with the market operation was raised. This requires further discussion with the market operators and Council who manage the land.
17. The proposed all abilities playground was discussed, along with the fitness and sculpture trails. No potential for location of these facilities in Banner or Terrace Parks. There was a wider discussion about the potential for location of facilities in Torakina and South Beach Parks. The trust agreed to pass on representations made regarding these reserves to the relevant staff in Crown Lands.

## **APPENDIX E**

**Vegetation Management Plan for Terrace Reserve Holiday Park, Idyll Spaces Environmental Consultants, 2011**

Vegetation Management Plan  
for  
Terrace Reserve Holiday Park



Prepared for the  
North Coast Accommodation Trust

by

*Idyll Spaces Environmental Consultants*

21 Titans Close, Bonville 2441

02 6653 4190

[gregelks@bigpond.com](mailto:gregelks@bigpond.com)

21 January 2011



# Executive Summary

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Idyll Spaces Environmental Consultants have been engaged by the North Coast Accommodation Trust to undertake a survey of vegetation and fauna habitat and prepare a Vegetation Management Plan for native vegetation remnants in Terrace Reserve, which is located in the Byron Shire Local Government Area on the north-coast of NSW. The Trust has resolved to prepare a Vegetation Management Plan for the Terrace Reserve in conjunction with the preparation of a comprehensive Plan of Management.

Remnants of three native vegetation communities - Mangrove, Coastal Cypress Forest and Woodland and Remnant Littoral Rainforest Trees - occupy parts of the Reserve. There is also an artificial community of Lawns, Shrubberies and Specimen Trees which includes some native trees and shrubs.

These vegetation communities provide habitat elements for numerous fauna including the threatened native plant *Cryptocarya foetida* and the threatened fauna Osprey, Collared Kingfisher, Black Bittern, Beach Stone Curlew, Black-necked Stork, Rose-crowned Fruit Dove, Mangrove Honeyeater, Osprey, Koala, Eastern Tube-nosed Bat, Grey-headed Flying Fox, Greater Broad-nosed Bat and Little Bentwing Bat.

The Coastal Cypress and Littoral Rainforest Tree communities are listed as Endangered Ecological Communities (EECs) under the Threatened Species Conservation Act 1995 (TSC Act). Littoral Rainforest in Banner Park has also been identified as part of a Critically Endangered Community (CEC) under the Federal Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

There are ongoing impacts from current usage of the Coastal Cypress and Littoral Rainforest communities. There are also impacts on the Coastal Cypress community from foreshore erosion.

There are proposals to address foreshore erosion in the Reserve and evidence that other impacts on Coastal Cypress can be appropriately managed in the Holiday Park landscape.

This Vegetation Management Plan has been prepared to facilitate long-term planning for vegetation in the Reserve, assist the Trust to allocate resources for conservation of the Coastal Cypress and Littoral Rainforest communities and to guide the selection and management of suitable areas of the Reserve for assisted regeneration of those communities..

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# 1. Introduction

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## 1.1. Background

The North Coast Accommodation Trust has engaged Idyll Spaces Environmental Consultants to prepare a **Vegetation Management Plan** (VMP) for native vegetation remnants in Terrace Reserve. The VMP has been prepared to complement a **Landscape Masterplan** and a comprehensive **Plan of Management** for Terrace Reserve that are currently in preparation.

## 1.2. Previous documents

The Plan of Management and Landscape Masterplan are outcomes of the **Brunswick Heads Foreshore Reserves Strategic Plan** prepared by the Department of Lands in 2008. The major strategic actions in the Plan that are relevant to native vegetation are to:

- Prepare a Landscape Masterplan for the foreshore public parkland areas which addresses all major issues identified, and brings together the actions outlined for the public open space precincts.
- Prepare a Plan of Management for Terrace Reserve Holiday Park following resolution of the park boundaries through the road closure process

The Brunswick Heads Foreshore Reserves Strategic Plan is informed by previous documents including the statement of principles of crown land management outlined in the **Crown Lands Act 1989**, the strategic goals of the **Brunswick Heads Foreshore Parklands Draft Plan of Management 2002** and the 'Taking Care of Brunswick' **Brunswick Heads Community and Economic Development Strategy 2004-2009**.

The principles of crown land management provide the basis for management and administration of Crown Land in New South Wales and include:

- That environmental protection principles be observed in relation to the management and administration of Crown land;
- That the natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;
- That public use and enjoyment of appropriate Crown Land be encouraged;
- Where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity.

The main principles of the 2002 draft Plan of Management are to reinforce a theme of 'simple pleasures' and to retain the sense of openness and natural beauty of the parklands.

The strategic goals of the Development Strategy 2004-2009 are to improve both the built and natural environment of Brunswick Heads to ensure that it is both functional and in keeping with the character of our low key coastal village, and to support the

needs of the community in an environmentally sustainable way in order to protect the natural ecosystems, particularly those vulnerable coastal and estuarine environs.

## 2. Description of Terrace Reserve

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### 2.1. Assessment Methodology

Formal assessment of the conservation significance of vegetation in the Reserve included:

- A review of threatened species, population and ecological community records in the locality;
- A review of other relevant documents including aerial imagery and geomorphological mapping;
- A general terrestrial vegetation survey and list of plant species;
- Targeted searches for plant species of conservation significance area including Species listed as Threatened under New South Wales Threatened Species Conservation Act 1995 (TSC Act) or the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) and Rare or Threatened Australian Plants;
- Review of TSC Act preliminary and final determinations;
- A description of vegetation communities and fauna habitats;
- A map of terrestrial vegetation communities, and
- A determination of the conservation status of those vegetation communities under the TSC Act and the EPBC Act.

The preparation of this report also involved:

- A review of previous planning documents pertaining to the Reserve;
- A review of the arborist's tree hazard assessment report, and
- A review of the Simpson's Creek Rehabilitation Plan and the associated Review of Environmental Factors.

### 2.2. Location & character

Terrace Reserve occupies a narrow strip of land located between the eastern edge of the town of Brunswick Heads and the estuarine south arm of the Brunswick River, known as Simpson's Creek. It is located on an old beach ridge of Pleistocene sand, elevated several metres above Simpson's Creek.

The Reserve is zoned 6(a) Open Space. It extends from just north of the Brunswick Heads Bowling Club in the south to Mullumbimbi Street in the north. There are four areas, each with different vegetation and usage. From north to south they are **Banner Park**, **Terrace Park**, **Terrace Reserve Holiday Park** and a relatively undeveloped area I refer to in this report as **Terrace Reserve South** (Figure 1).

Banner Park is a public park with amenities blocks, a row of mature Norfolk Pines along the water's edge and a stand of remnant littoral rainforest trees. Banner Park also has several large overmature eucalypts including two located on the road reserve.

Terrace Park is a public park containing some play equipment, an amenities block and sound shell. Native vegetation is limited to a few smaller fig trees, and there is a row of larger Norfolk Pines and fig trees located on the road reserve.

The Terrace Reserve Holiday Park has been divided into three more or less distinct precincts for management purposes. The **northern precinct**, north of about Booyun Street, has been cleared of most native vegetation and is at slightly lower elevation than the central and southern precincts. The area is mostly given over to short-term van sites, holiday cabins, and infrastructure such as roads, amenities blocks and the office, garage and residence. It also contains some large Figs that may have been planted as well as some other native and introduced trees and exotic shrubberies. The **central precinct** is less intensively developed and retains some native trees including Coastal Cypress. It contains long-term residents and short-term van sites. The **southern precinct**, south of about Nana Street, retains good stands of mature Coastal Cypress. It contains mostly unpowered sites used for short-term caravan and tent camping.

Terrace Reserve South is south of about Short Street and adjacent to the Old Pacific Highway and Tweed Street. It is not part of the Holiday Park. On higher ground it retains well-developed stands of Coastal Cypress amongst extensive areas of mowed grass, which is traversed by a hailstone gravel path and lighting. A large stand of mangrove occupies low-lying land to the east that is subject to tidal inundation.

Tyagarah Nature Reserve adjoins the Reserve to the east of Simpson's Creek and Brunswick Nature Reserve adjoins Terrace Reserve South to the west of Tweed Street.



Figure 1. Map showing areas, precincts and vegetation communities of Terrace Reserve

## 2.3. Biodiversity context

- The Reserve is located in a biogeographical region with internationally recognised biodiversity values.
- The region supports a high diversity of endemic species, threatened species, endangered ecological communities and species at their distributional limits.
- Although it has been substantially modified the vegetation of the Holiday Park contains environmentally and culturally significant remnant and regrowth vegetation providing potential habitat for various threatened fauna and contributing to the natural beauty of Brunswick Heads.

## 2.4. Endangered Ecological Communities

- The Coastal Cypress and Littoral Rainforest communities in the Reserve are listed as Endangered Ecological Communities (EECs) under the TSC Act.
- The stand of littoral rainforest in Banner Park also meets the size and condition thresholds for a Littoral Rainforest Critically Endangered Community (CEC) under the EPBC Act.

## 2.5. Fauna habitat resources

- There are at least 7 species of figs as well as other rainforest fruits within the Reserve that are important for frugivores (fruit eaters) including fruit pigeons & mega-chiropteran bats (grey headed and little black flying fox).
- There are at least four important nectar-producing tree species in the reserve providing nectar for nectivorous birds and bats (Forest Red Gum, Swamp Mahogany, Paperbark, Coast Banksia).
- Koala feed trees (Forest Red Gum and Swamp Mahogany) occur in the Reserve.
- A number of older rainforest, coastal cypress and eucalypt trees in the Reserve have hollows suitable for fauna.
- There is a variety of tree canopies providing foraging for insectivorous birds and bats.
- There are mudflats, sand flats and mangroves supporting abundant invertebrate fauna that is forage for fish and waterbirds.

## 2.6. Threatened species habitat

Plant communities in the Reserve are habitat for the threatened native plant *Cryptocarya foetida* and provide habitat elements (foraging, roosting or breeding) for threatened fauna including Osprey, Collared Kingfisher, Black Bittern, Beach Stone Curlew, Black-necked Stork, Rose-crowned Fruit Dove, Mangrove Honeyeater, Osprey, Koala, Eastern Tube-nosed Bat, Grey-headed Flying Fox, Greater Broad-nosed Bat and Little Bentwing Bat.

Assessments of the likelihood of occurrence of threatened Flora and Fauna are included in Tables 1 & 2.



**Table 1. Likelihood of occurrence of Threatened Flora in Terrace Reserve Holiday Park**

<b>Scientific name</b>	<b>No of records</b>	<b>TSC Status</b>	<b>Detectability</b>	<b>Essential Habitat</b>	<b>Likelihood of occurrence</b>
<i>Acacia bakeri</i>	352	Vulnerable	All year	Lowland rainforest or adjacent eucalypt forest	Unlikely - habitat requirements not met
<i>Acronychia littoralis</i>	39	Endangered	Fruit (May to August) but leaf characters indicative	littoral rainforest and adjacent open forest	Unlikely – not detected in Community 3
<i>Archidendron hendersonii</i>	75	Vulnerable	All year	Riverine and lowland subtropical rainforest and littoral rainforest	Unlikely – not detected in Community 3
<i>Corokia whiteana</i>	2	Vulnerable	All year	Boundaries between wet eucalypt forest and warm temperate rainforest up to 800m	Unlikely - habitat requirements not met
<i>Cryptocarya foetida</i>	770	Vulnerable	All year	Littoral rainforest	Possible in Community 2
<i>Davidsonia jerseyana</i>	87	Endangered	All year	rainforest, eucalypt forest and regrowth on metasediments below about 300m altitude	Unlikely - habitat requirements not met
<i>Drynaria rigidula</i>	2	Endangered	All year	rainforest, moist eucalypt or swamp forest	Unlikely - habitat requirements not met
<i>Elaeocarpus williamsianus</i>	1	Endangered	All year	subtropical or warm temperate rainforest, including regrowth and small remnants	Unlikely - habitat requirements not met
<i>Endiandra floydii</i>	85	Endangered	All year	warm temperate or subtropical rainforest with Brush Box overstorey, or in rainforest or Camphor Laurel regrowth	Unlikely - habitat requirements not met
<i>Endiandra hayesii</i>	22	Vulnerable	All year	moist gullies in lowland subtropical or warm temperate rainforest	Unlikely - habitat requirements not met
<i>Endiandra muelleri</i> subsp. <i>bracteata</i>	125	Endangered	All year	rainforest or moist eucalypt forest, usually at lower altitudes	Unlikely - habitat requirements not met
<i>Grevillea hilliana</i>	107	Endangered	All year	Subtropical rainforest	Unlikely - habitat requirements not met
<i>Harnieria hygrophiloides</i>	61	Endangered	All year	rainforest or moist open forest	Unlikely - habitat requirements not met
<i>Macadamia tetraphylla</i>	9	Vulnerable	All year	subtropical rainforest, regrowth rainforest or remnant rainforest, north of Coraki	Unlikely - habitat requirements not met
<i>Marsdenia longiloba</i>	12	Endangered	Flowering (Summer) but leaf characters indicative	Subtropical and warm temperate rainforest, adjoining moist eucalypt forest rainforest and rock outcrops	Unlikely - habitat requirements not met
<i>Randia moorei</i>	254	Endangered	All year	Subtropical, riverine, littoral and dry rainforest	Unlikely – not detected in Community 3
<i>Syzygium hodgkinsoniae</i>	13	Vulnerable	All year	Riverine and subtropical rainforest	Unlikely - habitat requirements not met
<i>Syzygium moorei</i>	99	Vulnerable	All year	Subtropical and riverine rainforest	Unlikely - habitat requirements not met
<i>Tinospora tinosporoides</i>	22	Vulnerable	All year	Wetter subtropical rainforest, including littoral rainforest	Unlikely – not detected in Community 3
<i>Xylosma terrae-reginae</i>	38	Endangered	All year	Littoral and subtropical rainforest	Unlikely – not detected in Community 3

**Table 2. Likelihood of occurrence of Threatened Fauna habitat in Terrace Reserve Holiday Park (marine species excluded)**

Class	Scientific name	Common name	Status	Habitat type	Habitat description	Occurrence in study area (Community)
Amphibia	<i>Litoria olongburensis</i>	Olongburra Frog	V	Breeding habitat	Ephemeral areas, or mirror lakes or marsh or swampy areas amongst emergent vegetation and reeds of wallum habitat (acidic tannin stained water) or adjacent to wallum habitat.	no
				Foraging habitat	Emergent low vegetation, or areas of sedges or rushes, or low foliage, adjacent to breeding habitat.	no
Amphibia	<i>Crinia tinnula</i>	Wallum Froglet	V	Shelter/roosting/refuge	Emergent vegetation of areas of breeding habitat	no
				Breeding habitat	Moist microhabitats in swamps, or wet or dry heaths, or sedge grasslands or swamps	no
Aves	<i>Pandion haliaetus</i>	Osprey	V	Shelter/roosting/refuge	As per breeding habitat	no
				Breeding habitat	Emergent living or dead trees or artificial towers within 3 km of foraging habitat	Yes (2)
Aves	<i>Todiramphus chloris</i>	Collared Kingfisher	V	Foraging habitat	Open protected water	adjoins study area
				Shelter/roosting/refuge	Structures on shorelines as vantage points for hunting and for resting	Yes (2)
Aves	<i>Botaurus poiciloptilus</i>	Australasian Bittern	E1	Breeding habitat	Usually hollows in large mangrove trees, sometimes in hollows or arboreal termite nests in <i>Eucalyptus</i> or <i>Melaleuca</i> adjacent to mangroves or estuarine foraging habitat.	Possible (1)
				Foraging habitat	Mangrove associations and other associated littoral estuarine habitats.	Yes (1)
Aves	<i>Ixobrychus flavicollis</i>	Black Bittern	V	Shelter/roosting/refuge	As breeding and foraging habitat	Yes (1)
				Breeding habitat	Emergent vegetation (eg, Phragmites, Typha) in freshwater or brackish wetlands	no
Aves	<i>Esacus neglectus</i>	Beach Stone-curlew	E4A	Foraging habitat	Freshwater or brackish wetlands, tussocky wet paddocks or drains	no
				Breeding habitat	Vegetation bordering water bodies or watercourses including Mangroves	Yes (1)
Aves	<i>Esacus neglectus</i>	Beach Stone-curlew	E4A	Foraging habitat	as per breeding habitat	Yes (1)
				Shelter/roosting/refuge	as per breeding habitat	Yes (1)
Aves	<i>Esacus neglectus</i>	Beach Stone-curlew	E4A	Breeding habitat	Marine supralittoral zone, at backs of beaches, or on sandbanks and islands, of varying substrate, among low vegetation of grass, scattered shrubs or low trees. Also among open mangroves.	Yes (1)
				Foraging habitat	Intertidal zone of beaches and estuaries, on flats, banks and spits of sand, mud or gravel; also at edges of or among mangroves.	Yes (1)

Class	Scientific name	Common name	Status	Habitat type	Habitat description	Occurrence in study area
				Shelter/roosting/refuge	During day, seen to roost in shade of trees, shrubs, fallen or beachcast timber or at edges of mangrove vegetation; on beaches, and on islands in or shores of estuaries.	Yes (1)
Aves	<i>Ephippiorhynchus asiaticus</i>	Black-necked Stork	E1	Breeding habitat	Live or dead tree within or near foraging habitat. Usually isolated, live, paddock trees in NSW, but also in paperbarks and occasionally low shrubs within wetlands.	Yes (1)
				Foraging habitat	Shallow open freshwater or saline wetlands and estuarine habitats, including swamps, floodplains, watercourses, wet heathland, wet meadows, farm dams, saltmarsh, mud- and sand-flats, mangroves.	Yes (1)
Aves	<i>Ptilinopus regina</i>	Rose-crowned Fruit-Dove	V	Shelter/roosting/refuge	As foraging and breeding habitat combined.	Yes (1)
				Breeding habitat	Wet sclerophyll forest or rainforest including remnants dominated by camphor laurel. Requires foraging habitat nearby.	no
				Foraging habitat	Fruiting plants, including introduced species, within vegetation types. Fruit between 5-25 mm diameter	Yes (3,4)
Aves	<i>Lichenostomus fasciocularis</i>	Mangrove Honeyeater	V	Shelter/roosting/refuge	As per breeding	no
				Breeding habitat	Mangrove vegetation associations of coasts, estuaries and offshore islands.	Yes (1)
				Foraging habitat	Mangrove vegetation associations and adjacent coastal vegetation or, occasionally, coastal parks and gardens.	Yes (1)
Aves	<i>Monarcha leucotis</i>	White-eared Monarch	V	Shelter/roosting/refuge	Not known.	
				Breeding habitat	Large patches of rainforest, especially drier types; wet and dry sclerophyll forests; ecotone between rainforest and other open vegetation types or edges of rainforest; regrowth forest.	no
				Foraging habitat	As breeding habitat.	no
Aves	<i>Amaurornis olivaceus</i>	Bush-hen	V	Shelter/roosting/refuge	Unknown, but almost certainly as breeding habitat.	no
				Breeding habitat	Dense vegetation >2 m tall on edges or in shallows of wetlands, streams or dams	no
				Foraging habitat	As per breeding habitat	no
				Shelter/roosting/refuge habitat	As per breeding habitat	no
Mammalia	<i>Planigale maculata</i>	Common Planigale	V	Breeding habitat	Hollow logs, under bark, rocks, cracks in soil, grass tussocks or building debris	no
				Foraging habitat	Coastal heaths, scrubs, woodlands, open forests and rainforests providing cover in the form of dense ground layers	no

Class	Scientific name	Common name	Status	Habitat type	Habitat description	Occurrence in study area
				Shelter/roosting/refuge	Hollow logs, under bark, rocks, cracks in soil, grass tussocks or building debris	no
Mammalia	<i>Phascolarctos cinereus</i>	Koala	V	Breeding habitat	eucalypt woodlands and forests	no
				Foraging habitat	Feed on the foliage of more than 70 eucalypt species and 30 non-eucalypt species; in any one area will select preferred browse species	Possible (2)
				Shelter/roosting/refuge habitat	n/a	
Mammalia	<i>Potorous tridactylus</i>	Long-nosed Potoroo	V	Breeding habitat	Rainforest or vegetation with dense understorey	no
				Foraging habitat	as per breeding habitat	no
				Shelter/roosting/refuge	as per breeding habitat	no
Mammalia	<i>Syconycteris australis</i>	Common Blossom-bat	V	Breeding habitat	Rainforest or vine thickets within proximity to foraging habitat.	no
				Foraging habitat	heathland and paperbark swamps	no
				Shelter/roosting/refuge habitat	Rainforest or vine thickets within 4km of foraging habitat.	no
Mammalia	<i>Nyctimene robinsoni</i>	Eastern Tube-nosed Bat	V	Breeding habitat	Rainforest, wet sclerophyll forest & heathlands	no
				Foraging habitat	Canopy and understorey rainforest, wet sclerophyll forest, heathland and orchards. Feeds on fleshy fruit and flowers of rainforest species Eucalypts, Banksias and other heathland species.	Yes (2, 4)
				Shelter/roosting/refuge	Tropical and subtropical rainforest, gallery forest and wet sclerophyll forest. Favours streamside habitats within coastal rainforest and moist eucalypt forests with rainforest understorey.	no
Mammalia	<i>Pteropus poliocephalus</i>	Grey-headed Flying-fox	V	Breeding habitat	Canopy trees associated with rainforest, or coastal scrub or riparian or estuarine communities and with sufficient forage resources available within 40km.	no
				Foraging habitat	Most	Yes (2, 4)
				Shelter/roosting/refuge habitat	Patches of forest with canopy trees within 40 kilometres of forage resource.	no
Mammalia	<i>Nyctophilus bifax</i>	Eastern Long-eared Bat	V	Breeding habitat	Rainforest	no
				Foraging habitat	Lowland subtropical rainforest and wet and swamp eucalypt forest, extending into adjacent moist eucalypt forest	no

Class	Scientific name	Common name	Status	Habitat type	Habitat description	Occurrence in study area
				Shelter/roosting/refuge habitat	roosts in dense tree foliage or under bark in tree hollows	no
Mammalia	<i>Scoteanax rueppellii</i>	Greater Broad-nosed Bat	V	Breeding habitat	Likely to be as per roosting habitat	Yes (2,3)
				Foraging habitat	Forests woodlands and wetlands	Yes (1,2,3)
Mammalia	<i>Miniopterus australis</i>	Little Bentwing-bat	V	Shelter/roosting/refuge habitat	Live or dead hollow-bearing trees, under exfoliating bark, or in buildings	Yes (2,3)
				Breeding habitat	Caves	no
				Foraging habitat	Moist eucalypt forest, rainforest or dense coastal banksia scrub	no
Mammalia	<i>Myotis macropus</i>	Southern Myotis	V	Shelter/roosting/refuge habitat	Caves, tunnels or tree hollows	Yes (2,3)
				Breeding habitat	Likely to be as per roosting habitat	no
				Foraging habitat	waterbodies (including streams, or lakes or reservoirs) and fringing areas of vegetation	no
				Shelter/roosting/refuge habitat	Live and dead hollow-bearing trees, under bridges or other artificial structures, in caves, or in dense foliage	no

## 2.7. Vegetation Communities

### 2.7.1. Mangrove.

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#### *Structure & Composition*

Open to dense canopy dominated by Grey Mangrove *Avicennia marina* to about 8m tall. Stands of Cottonwood *Hibiscus tiliaceus* commonly occur along the upper edge of the mangrove. No detailed survey of the mangrove community was undertaken for this report.

#### *Habitat, Ecology & Dynamics*

Grey Mangrove is confined to the intertidal zone. In the Reserve the largest stand occurs on estuarine interbarrier deposits in South Terrace Reserve (Figure 2) but elsewhere in the Reserve it is confined to a narrow strip along the edge of Simpsons Creek.

Mangroves are highly productive environments that support an abundant but not very diverse assemblage of invertebrate fauna including crustaceans, molluscs and insects. This makes them important feeding areas for vertebrate animals, particularly fish and waterbirds.

#### *Classification, Mapping & Conservation status*

The community is within the vegetation class Mangrove Swamp (Keith 2004). The Biometric Vegetation Type is 'Mangrove - Grey Mangrove low closed forest of the NSW Coastal Bioregions'.

The community is mapped (Byron LES 2008) as Grey Mangrove/River Mangrove Forest & Woodland.

The community provides habitat elements for the following threatened fauna species: Osprey, Collared Kingfisher, Black Bittern, Beach Stone Curlew, Black-necked Stork, Mangrove Honeyeater, Greater Broadnosed Bat, Little Bentwing Bat.

NSW DPI is responsible for the management of fish and marine vegetation, including mangroves, under the *Fisheries Management Act 1994* (FM Act). Any development or activity that may harm mangroves must be referred to NSW DPI for approval.

#### *Impacts*

The draft Plan of Management refers to past clearing of mangroves for access to the estuary and proposes to avoid further impacts by providing pedestrian access to appropriate access points. Access is already constrained by fencing in the southern precinct of the Holiday Park.

### *Threats*

Apart from clearing for access, threats to the mangrove community appear to be limited to minor trampling associated with occasional human access and the potential for invasion of the mangrove canopy from adjoining higher land by vines and scramblers.

## 2.7.2. Coastal Cypress Pine Forest/Woodland

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### *Structure & Composition*

The dominant species is Coastal Cypress Pine *Callitris columellaris*. Relatively intact stands form a more or less closed forest with a canopy to about 15m tall but in most areas the trees are more widely spaced and appear as a woodland.

Occasional other species present are typical of Coastal Dune Dry Sclerophyll Forests (*Acacia disparrima*, *Banksia integrifolia*, *Corymbia intermedia*, *Eucalyptus signata*, *Leucopogon lanceolatus*) or Littoral Rainforest (*Ficus spp*, *Acronychia imperforata*, *Cryptocarya triplinervis*, *Cupaniopsis anacardioides*, *Euroschinus falcata*, *Polyscias elegans*). Many of the dry sclerophyll forest trees are old emergent trees, whereas nearly all rainforest trees are young and confined to the understorey.

The midstratum is very sparse to absent, except in South Terrace Reserve where existing stands have been underplanted with rainforest trees. Similarly the ground layer is sparse and mostly consists of mown exotic grasses, but there are occasional grasses and herbs in unmown areas.

### *Habitat, Ecology & Dynamics*

The community occurs on elevated areas of Pleistocene sands, which are generally of relatively low fertility but obtain some nutrient input from ocean salt spray.

Coast Cypress is absent from Terrace & Banner Parks and there are only 3 in the northern precinct of the Holiday Park. There are about 10 Coast Cypress in the central precinct of which at least three, evenly spaced in a line beside the amenities block, have been planted. There are numerous Coast Cypress in the southern precinct, many of which have also been planted evenly spaced in lines (Photos 1, 2). These trees are estimated as being around 50-70 years old. The most extensive natural stands are located in South Terrace Reserve.

Most Coast Cypress in the Reserve are mature and of substantial size, but there are occasional stands of younger trees along the creek bank. Many of the larger trees are approaching the end of their useful life. Recent tree hazard assessment of the Holiday Park (Finlayson 2009) identified 12 Coast Cypress requiring immediate removal because of extreme decay and threat to the public.

There is no evidence of recent regeneration of Coast Cypress in the Holiday Park, but regeneration is occurring in the more natural environment of South Terrace Reserve (Photo 3).

Seedling recruitment of Coast Cypress is thought to be a response to gaps created by small-scale disturbance (Scientific Committee 2008) and such disturbances in South Terrace reserve include erosion, construction and maintenance activities. Similar activities occur in the Holiday Park but have not resulted in regeneration, possibly because of frequent mowing, intensive foot traffic and/or the ground cover of exotic grasses.

The presence of large old eucalypts and related trees that require fire for establishment indicate that the Reserve was once subjected to bushfires. The presence of basal fire scars on some Cypress suggest that these have occurred up until the last 30-50 years or so. The presence of young fire-prone rainforest trees indicates that bushfires have not occurred since around that time. Although high-frequency fires are likely to be detrimental to the community, infrequent fires may be necessary to create the gaps required for seedling recruitment (Scientific Committee 2008).

#### *Classification & Conservation status*

The community is classified as the vegetation class Coastal Dune Dry Sclerophyll Forest (Keith 2004) and meets the criteria for the Endangered Ecological Community 'Coastal Cypress Pine Forest in the NSW North Coast Bioregion' (Scientific Committee 2008) under the provisions of the *TSC Act*.

Most of the community is mapped as 'Cypress Pine' (Byron LES 2008) but in southern parts of the Reserve it is mapped as 'Forest Red Gum', presumably because of the presence of Forest Red Gum and because Coast Cypress had not been listed as an EEC at the time mapping was undertaken.

The community provides habitat elements for the Osprey, Koala, Eastern Tubenosed Bat, Grey-headed Flying Fox, Greater Broad-nosed Bat and Little Bentwing Bat. The understorey of Community 2 is potential habitat for the threatened flora species *Cryptocarya foetida*, which is recorded from within 1km of the Reserve and common in the locality.

#### *Impacts*

In the central precinct of the Holiday Park the community has been reduced to isolated trees. Impacts have arisen because the trees that make up this community are being lost as they become old and dangerous, but in the Holiday Park there are no new trees to replace them.

Understorey vegetation in the Holiday Park has been reduced to mown lawns except on the sloping bank of Simpson's Creek, where there is some understorey regenerating following treatment of weed infestations that previously dominated this area.



Much of South Terrace Reserve has been fenced to exclude vehicles, but well-meaning persons are planting rainforest plants in areas that would have been occupied by Coastal Cypress (Photo 4).

### *Threats*

The DECC Threatened Species Profile for the Coastal Cypress EEC lists a number of threats to the community including encroachment, trampling, weed invasion and inappropriate fire regimes.

All of these threats are evident in the Reserve. Actions identified to address these threats include using defined walking tracks and fencing to avoid encroachment and trampling, undertaking weed management, and avoiding fire in this community but undertaking ecological burning where assessed as necessary for regeneration.

Some actions have already been taken in the Reserve and could be extended (fencing, weed management) and others may not be practical (fire).

## 2.7.3. Remnant Littoral Rainforest Trees

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### *Structure & Composition*

Two stands of this community occur in the study area: one small stand located in Banner Park, to about 10m tall and dominated by Hard Quandong *Elaeocarpus obovatus* together with some Tuckerroo *Cupaniopsis anacardioides* and a White Kamala *Mallotus discolor*, and a very small stand of mature trees in Terrace Park consisting of Deciduous Fig *Ficus superba*, Rusty Fig *Ficus rubiginosa* and Tuckerroo. The large Forest Red Gums adjoining the stands are included as part of the community.

Understorey vegetation is absent and ground layer consists of mowed exotic grass.

### *Habitat, Ecology & Dynamics*

The stands are apparently growing on infertile Pleistocene sands, which is unusual as littoral rainforest is usually found on the more fertile Holocene sands or soils developed on bedrock. Because of this, individual trees are smaller, slower growing and therefore more vulnerable to damage and disturbance than similar stands on more fertile soils.

Many of the trees are overmature, with five trees in Banner Park identified as in decline and requiring remedial work (Finlayson 2009). There is no recent regeneration and given the nature of existing management regeneration is unlikely.

### *Classification & Conservation status*

Classified as a littoral rainforest but not readily attributable to a sub-alliance because of the small size and depauperate nature. Littoral rainforest is listed as the EEC 'Littoral Rainforest in the NSW North Coast, Sydney Basin and South East Corner Bioregions' under the *TSC Act* and as a Critically Endangered Community (CEC)

under the *EPBC Act*. The very small stand in Terrace Park is not considered to be part of the CEC as it does not meet size and condition thresholds (Threatened Species Scientific Committee undated).

Littoral rainforest is not mapped in the Reserve (Byron LES 2008).

The community provides habitat elements for the Rose-crowned Fruit Dove, Greater Broadnosed Bat and Little Bentwing Bat.

### *Impacts*

Many of the trees are overmature and in decline. There is no recent regeneration.

The native understorey is absent from both stands and the ground layer consists of mowed exotic grass or infrastructure such as playgrounds.

Much of the stand is subject to frequent use by vehicles and pedestrians.

### *Threats*

The DECC Threatened Species Profile for the littoral rainforest EEC lists a number of threats to the community including weed invasion, clearing and fragmentation of stands, clearing or physical disturbance to the understorey and human visitation.

These threats are evident in the Reserve. Actions identified to address these threats are currently limited to undertaking weed management. Except for regulating visitor access and raising visitor awareness, published recovery strategies such as controlling feral animals and protecting from burning and grazing are irrelevant in Terrace and Banner Parks.

## 2.7.4. Lawns, shrubberies and specimen trees

Lawns in the Reserve consist mainly of exotic grasses known for their salt tolerance, resistance to wear and ability to grow on sand. They form the ground layer to most other vegetation communities in the Reserve. Lawns are the most extensive form of vegetation throughout the Reserve.

Shrubberies are common in the Holiday Park, where they are used to screen buildings and demarcate various areas. Typical species are the exotics Golden Cane Palms and Murraya. There are also some native species such as Bottlebrush *Callistemon sp* and various rainforest trees.

Specimen trees range from the grand avenue of Norfolk Pines in Banner Park to eucalypts, paperbarks, bottlebrush, Silky Oak and native and introduced Figs.

Although they may have landscape conservation values, many of these trees have little intrinsic conservation value. The exceptions include the Figs, Paperbarks and Eucalypts, which are known to be utilised for foraging and roosting by a wide range

of mobile fauna including the threatened species Rose-crowned Fruit Dove, Eastern Tubenosed Bat and Grey-headed Flying Fox.

*Impacts*

Lawns in the Reserve are a major impediment to natural regeneration in the Coastal Cypress forest and the remnant stands of Littoral Rainforest trees.

The impact of shrubberies ranges from exacerbation of weed invasion to missed opportunities for provision of habitat attractive to native birds. The planting of Grevilleas and Bottlebrushes is also contributing to dominance of the bird fauna by the Noisy Miner, which is an aggressive bird that drives away other small birds.

The impact of the specimen trees is generally positive, although the Norfolk Pines in confined areas are contributing to soil erosion, which needs to be addressed to reduce ongoing impacts to the health and longevity of the Pines.

## 3. Vegetation management

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### 3.1. Strategic assessment

The following assessment is a summary of the issues to be considered in the management of the Reserve. It provides the basis for identifying and prioritising actions required to ensure that native vegetation in the Reserve is managed sustainably. The list is derived from this and other studies. The issues are not ranked and do not indicate priority.

#### STRENGTHS

- Natural beauty of existing mature native vegetation
- Shade and protection offered by native vegetation
- Occurrence in the Reserve of the Endangered Ecological Communities (EECs) Coastal Cypress Pine and Littoral Rainforest and habitat for threatened flora and fauna
- Existing bushland weed control program
- Existing seed collection and propagation program

#### WEAKNESSES

- Coastal Cypress EEC in the Holiday Park not regenerating
- Littoral Rainforest EEC remnants in Terrace and Banner Parks not regenerating
- Many Coastal Cypress and Littoral Rainforest trees approaching the end of their life
- Little or no native understorey vegetation
- Established environmental weeds and garden escapes
- No planting controls on residents

#### OPPORTUNITIES

- Map Critical Root Zones (CRZ)
- Map areas suitable for assisted regeneration of Coastal Cypress
- Utilise native plants characteristic of Coastal Cypress or Littoral Rainforest in landscape plans
- Undertake systematic tree replacement
- Work with adjoining landowners to control weeds
- Manage impacts of public access to native vegetation
- Manage location and duration of campers in Coastal Cypress EEC
- Arboricultural intervention to manage impacts of Reserve operation and use on trees
- Bank stabilisation works along estuary
- Public boardwalk access along the foreshore
- Removal of non-essential mown grass lawns and regeneration to native vegetation
- Apply the hierarchy of avoid, minimise and mitigate to impacts on native vegetation

## THREATS

- Piecemeal loss of native vegetation cover
- Impacts on vegetation from inappropriate use and overuse of vegetated areas
- Ongoing impacts on native vegetation resulting from capital works and maintenance
- Weed invasion from adjoining property
- Aging and decaying trees
- Trampling of native vegetation
- Mowing of understorey
- Erosion of banks of estuary

### 3.2. Laws affecting vegetation management

Clearing of native vegetation in urban areas of NSW is regulated under the *Environment Planning and Assessment Act 1979* (EPA Act) through the use of development consents and tree preservation orders.

In Byron Shire a Tree Preservation Order applies to any species of tree, palm or fern exceeding three (3) metres in height, and to any species of native plant within a community described as heath, mangrove, saltmarsh or sedgeland.

If the clearing affects a matter of national environmental significance, such as a nationally listed threatened species or a migratory species, the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) applies.

The *EPA Act* requires that, where an activity is likely to significantly affect threatened species, populations or ecological communities, or their habitats, or critical habitat, a species impact statement must be prepared. In deciding whether there is likely to be a significant effect on threatened species, populations or ecological communities, the seven-part test of significance must be applied as set out in the *EPA Act*.

Under the *National Parks and Wildlife Act* it is an offence to *harm* any animal or *pick* any plant that is a threatened species, or which is part of an endangered population or an endangered ecological community, or its habitat. Picking includes cutting or harming any part of the plant.

There are many native species of flora and fauna which, although not threatened, still have some degree of legal protection under the (*NPW Act*).

Mangroves, seagrasses and other types of marine vegetation are protected under the *Fisheries Management Act 1994* (FM Act).

Other relevant acts include the *Noxious Weeds Act 1993*.

### 3.3. Future vegetation management

#### 3.3.1. Best practise and community expectations

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The initial stages of best practise management of native vegetation include Inventory, Data Collection, Mapping, and Status Assessment. These stages have been undertaken for this Vegetation Management Plan.

A further stage includes field investigations and ecological research into individual vegetation communities. This stage may be undertaken to collect information relevant to current management issues and impacts of proposals where these are located. The outcomes for the Coastal Cypress and Littoral Rainforest vegetation communities of the Reserve are outlined below.

In the case of vegetation that is a threatened species, or which is part of an endangered population or an endangered ecological community, or habitat for a threatened plant or animal species, best practise requires that a survey and assessment be undertaken to meet DECCW guidelines.

In the case of individual trees in the Reserve, best practise management focuses on tree protection measures as outlined in Australian Standard (AS) 4970.

The ultimate best practise outcome is incorporation into the Regional Vegetation Management Planning process. Meanwhile, the Community has a role to:

- sustainably manage native vegetation on land for which they and individual land managers are responsible;
- coordinate local group development and action on native vegetation management issues;
- encourage local involvement in the management of public land;
- communicate to government the native vegetation management issues of their local area;
- communicate to government the solutions to native vegetation management issues they believe are appropriate to their local area;
- participate in local and regional native vegetation management planning and programs;
- raise awareness and improve education regarding native vegetation management issues; and
- form partnerships to increase investment in local native vegetation management issues.

Local government has a responsibility for the development and implementation of locally relevant and applicable environmental policies within its jurisdiction in cooperation with other levels of government and the local community

State Governments have primary responsibility for native vegetation management, in recognition of the constitutional responsibility of the States for land use decisions

and their ownership of large areas of native vegetation. The management of parks and protected areas is largely a function of the States.

### 3.3.2. Additional information on management of Coastal Cypress and Littoral Rainforest

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#### *Coastal Cypress Pine Forest*

##### **Growth characteristics**

Coastal Cypress is easily grown from seed. It has many similar growth characteristics to White Cypress, to which it is closely related (Thompson & Eldridge 2005). The following characteristics are relevant to management of Coastal Cypress in the Reserve:

1. Cypress usually grow on soils of low nutrient status, particularly as regards Nitrogen and Phosphorous;
2. In stands containing a range of stem sizes, the smaller stems get more than their "fair share";
3. Cypress is easily grown from seed;
4. Cypress lacks the ability to self-thin, meaning that growth halts and trees can remain in this condition for considerable periods.

Characteristic 1 suggests that application of fertilisers containing N or P is not required and should be avoided. Characteristic 2 indicates that young Coastal Cypress will grow under older Coastal Cypress trees. This, in conjunction with Characteristic 3, suggests that assisted regeneration in Coastal Cypress communities should not be difficult. Characteristic 4 is of interest as it indicates that Coastal Cypress can be planted in dense stands as an effective screen or 'green fence', without ill effect.

These characteristics together make Coastal Cypress an ideal tree for use in the Holiday Park landscape. As of December 2010 following actions have been or are proposed to be undertaken to ensure the conservation, management of impacts and regeneration of the Coastal Cypress community in the Holiday Park.

##### **Seed collection and propagation**

Seed of Coastal Cypress was collected from tree in the Reserve in December 2010 and is being propagated in a local nursery for replanting into the Reserve.

##### **Mapping of critical root zones**

The location of all trees in the Holiday Park have been surveyed and mapped, and an arborist has undertaken an inspection to characterise critical root zones for Coastal Cypress trees in the Holiday Park (Izard 2010). This information will be used to identify areas where the presence of Coastal Cypress root systems are significant constraints to developments such as installation of in-ground services and construction of buildings and infrastructure in the Holiday Park.

### **Assessment and management of development impacts**

A hierarchy of measures will be applied to minimise the likelihood of significant impact on Coastal Cypress trees. A plan of the location of critical root zones will allow project planners to avoid installation or construction in critical root zones. Where critical root zones cannot be avoided the affected area of critical root zone will be minimised, and the impacts mitigated by selection of suitable construction methods and appropriate arboricultural interventions. Once impacts are assessed they will be offset by assisted regeneration of the Coastal Cypress community at suitable locations elsewhere in the Reserve.

### **Tree replacement**

Trees removed because they have become hazardous will also be replaced at suitable locations in the Reserve. Preferably a clump of seedling trees would be established near the tree well before its scheduled removal. These clumps can be progressively thinned as required to retain trees of best form and vigour.

### **Landscaping**

The mapping of critical root zones will allow landscape planners to identify those areas not required for development and therefore available for planting of new Coastal Cypress trees, which can be planted under existing trees, established in clumps that can be progressively thinned as required to meet management requirements or select for specimen trees, or established in dense linear plantings as screens and barriers.

### **Defined walking tracks**

It is proposed in the Brunswick Heads Foreshore Reserves Strategic Plan and elsewhere that defined walking tracks be constructed to provide access to and along the foreshore. This will reduce current impacts from trampling of vegetation.

### **Weed control**

Weeds listed in the Threatened Species Profile as threats to the community and occurring in the Reserve include *Asparagus aethiopicus*, *Bryophyllum delagoense*, *Lantana camara*, *Ochna serrulata* and *Schefflera actinophylla*. These and other weeds and garden escapes have already been treated and are currently under control in the Reserve, however extensive populations of those weeds still exist in proximity to the Reserve.

Management of weeds must therefore be provided for as an ongoing commitment. In those areas not required for day to day operations of the Holiday Park they must incorporate the established principles and practices of bushland regeneration, including the removal and regeneration of any areas of non-essential mown grass lawns.



### *Remnant Littoral Rainforest Trees*

Management of littoral rainforest remnant trees in Banner Park stand will eventually require tree replacement if the stand is to be retained. To maintain the character of the stand the replacement trees must be of the same species as those they are replacing.

Meanwhile to maximise the lifespan of existing trees, mulch could be applied to the critical root zone to decrease competition from grasses and maintain soil moisture and fertility, and human and other traffic excluded to reduce the impacts on soil and surface roots.

In Terrace Park any major changes to existing paved areas should be avoided, mulch applied to the critical root zone to decrease competition from grasses and maintain soil moisture and fertility, and playground activities in the critical root zone limited to the current regime.

## 3.4. Action Plan for vegetation communities in Terrace Reserve

### 3.4.1. Coastal Cypress Pine Forest and Woodland

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#### *General:*

1. Maximise the lifespan of remnant trees by providing annual arboricultural inspection, reporting and intervention as required.
2. Incorporate Coastal Cypress trees into landscaping areas and identify suitable areas for planting replacement Coastal Cypress trees to develop mixed-age stands of trees.
3. Maintain an up to date plan showing locations of existing Coastal Cypress trees and critical root zones.
4. Maintain a collection of seed and seedling plants of Coastal Cypress trees for landscaping and assisted regeneration.
5. Undertake only routine maintenance activities within the critical root zone (taken to be 5 metres from the trunk) of established Coastal Cypress. Routine activities include mowing, brush cutting, weed removal, camping etc, where there is no disturbance to the soil surface.
6. Provide suitable access down the foreshore embankment to minimise erosion and damage to Coastal Cypress understorey vegetation.

#### *Bush Regeneration, Weed Control and Landscaping:*

7. Continue control of understorey weeds and exotic grass cover, specifically targeting difficult to control weeds such as Glory Lily and Madeira Vine, to favour natural recruitment of Coastal Cypress vegetation along the creek embankment.

8. Use local native plant species which are characteristic of the Coastal Cypress vegetation community (listed in Appendix 1) for assisted regeneration and landscaping.
9. Remove non-essential lawn areas and replace with a local native species.
10. Undertake an ongoing program of removing exotics and environmental weeds from landscaped areas and replacing with native species selected from the species list in Appendix 1.
11. Minimise incursion of vehicles and pedestrians into areas of native understorey vegetation.
12. Implement planting controls on residents eg: exotics to be confined to pots.
13. Work with adjoining landowners to control weeds
14. Avoid damaging basal bark and exposed roots with brush cutters and mowers.
15. Ensure that the impact of tree pruning is appropriately assessed and that pruning is undertaken by a suitably qualified arborist.
16. Do not fertilise lawns.

*New developments:*

17. Examine alternatives to avoid or minimise impacts on Coastal Cypress trees when planning new developments.
18. Mitigate impacts of new developments by means of offsets and appropriate arboricultural interventions.
19. Prepare a Review of Environmental Factors for any non routine works which involve removal of native trees or disturbance to the soil within the critical root zone (5 metres) of any existing Coastal Cypress tree. Non routine works include any activity that involves soil disturbance such as road construction, trenching, excavation, materials storage, construction traffic, paving, new structures etc.

### 3.4.2. Lawns, shrubberies and specimen trees with remnant littoral rainforest and coast cypress trees

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20. Maximise the lifespan of remnant vegetation and mature specimen trees by providing annual arboricultural inspection, reporting and intervention as required.
21. Identify critical root zones around remnant trees and undertake no soil disturbance in this zone.
22. Remove non-essential lawn areas from critical root zones of remnant trees and replace with local native species understorey (Appendix 1).
23. Where possible apply mulch, exclude vehicular traffic and impervious paving and reduce pedestrian traffic within critical root zones of remnant trees.
24. Replace dead or dying trees in remnant littoral rainforest with the same species.
25. Use local native plant species (Appendix 1) rather than exotics wherever the native species can perform the required role in the landscape.
26. Avoid damaging basal bark and exposed roots with brush cutters and mowers.
27. Ensure ropes for tents and annexes are not secured to established trees.
28. Ensure all tree pruning is undertaken by a suitably qualified arborist.

### 3.4.3. Mangrove

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29. Provide suitable access from holiday park sites to the mangrove zone to minimise erosion and damage to mangrove vegetation.
30. Undertake weed control and bush regeneration including assisted regeneration where required.

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## 5. Appendices

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### Appendix 1. Recommended native plant species for assisted regeneration and landscaping

The following list of plant species is derived from lists published in the EEC determination for the Coastal Cypress Pine Forest (Scientific Committee 2008), Appendix 1 of Byron Shire Council Development Control Plan No.6, and the Bush Regeneration Action Plan for Brunswick River Foreshore Parcel Number 239431 (Byron Shire Bush Regeneration Team 2008). Species not known to occur in the locality have been removed from the list.

Species listed in Cypress EEC determination are shown as 'Cypress' in the Community column of the table, and species known to occur in local littoral rainforest communities are shown as 'Littoral Rf'. The remaining species are shown as 'local'. The 'Symbol' column refers to the symbols used in Wrigley & Fagg (1996).

It is strongly recommended that:

1. within areas mapped as Community 2 Coastal Cypress Pine Forest or Community 3 Littoral Rainforest, plant species used for assisted regeneration and landscaping be drawn from the appropriate community in this list;
2. within the remainder of the Reserve, no exotic or introduced native plant species be planted if there is a local native plant species that will perform the required role in the landscape, and
3. all such plant species be propagated from plant material (seeds or cuttings) sourced from coastal sands in the locality (between approximately Ballina and Kingscliff).

**Table 3. List of native plants for assisted regeneration and landscaping of Coastal Cypress and Littoral Rainforest vegetation communities in Terrace Reserve**

<b>Scientific name</b>	<b>life form</b>	<b>common name</b>	<b>Community</b>	<b>Symbols*</b>	<b>comments</b>
<i>Corymbia intermedia</i>	large tree	pink bloodwood	Cypress	PV	
<i>Eucalyptus pilularis</i>	large tree	blackbutt	Cypress	XZ	
<i>Eucalyptus resinifera</i> subsp. <i>hemilampra</i>	large tree	red mahogany	Cypress		
<i>Eucalyptus signata</i>	large tree	scribbly gum	Cypress		
<i>Acacia disparrima</i> subsp. <i>disparrima</i>	tree	brush ironbark wattle	Cypress		
<i>Allocasuarina littoralis</i>	tree	black oak	Cypress	HLVY	
<i>Araucaria cunninghamii</i>	tree	hoop pine	Cypress	LPSWZ	
<i>Banksia integrifolia</i> subsp. <i>integrifolia</i>	tree	coast banksia	Cypress	(AB)HLQVWY(Z)	
<i>Callitris columellaris</i>	tree	coastal cypress	Cypress	HLP(Z)	
<i>Cryptocarya triplinervis</i>	rainforest tree	three-veined laurel	Littoral Rf	LOW	
<i>Elaeocarpus obovatus</i>	rainforest tree	hard quandong	Littoral Rf	FLPVZ	
<i>Euroschinus falcata</i>	rainforest tree	ribbonwood	Cypress	Z	
<i>Halfordia kendack</i>	rainforest tree	saffron heart	Cypress		
<i>Syzygium leuhmanii</i>	rainforest tree	riberry	Littoral Rf	LOPUVYZ	edible fruits
<i>Callistemon salignus</i>	small tree	willow bottlebrush	local	E(H)LOQYZ	
<i>Elaeocarpus reticulatus</i>	small tree	blueberry ash	local	FHPQV	
<i>Myoporum acuminatum</i>	small tree	mangrove boobialla	local	HUWZ	
<i>Persoonia stradbrokeensis</i>	small tree	geebung	Cypress		
<i>Syzygium oleosum</i>	small tree	blue lillypilly	Littoral Rf	LOPVZ	edible fruits
<i>Acronychia imperforata</i>	small rainforest tree	logan apple	Cypress	LUWZ	
<i>Cupaniopsis anacardioides</i>	small rainforest tree	tuckeroo	Littoral Rf	LVWYZ	
<i>Cyclophyllum longipetalum</i>	small rainforest tree	coast canthium	Cypress	FLOWWZ	aka <i>Canthium coprosmoides</i>
<i>Macaranga tanarius</i>	small rainforest tree	macaranga	local	LSZ	
<i>Mallotus discolor</i>	small rainforest tree	white kamala	Littoral Rf	LWVZ	
<i>Syzygium australe</i>	small rainforest tree	brush cherry	Littoral Rf	LOPSUVWYZ	edible fruits
<i>Banksia robur</i>	large shrub	large-leaved banksia	local	EHLOPQVZ	
<i>Hibiscus tiliaceus</i>	large shrub	cottonwood	local	WYZ	
<i>Leptospermum polygalifolium</i>	large shrub	tantoon	Cypress	HPQUZ	
<i>Notelaea longifolia</i>	large shrub	large mock-olive	Cypress	FHLUV	
<i>Synoum glandulosum</i>	large shrub	scentless rosewood	local	FLVWZ	
<i>Oxylobium robustum</i>	large shrub	tree shaggy-pea	Cypress	H	
<i>Alyxia ruscifolia</i>	medium shrub	prickly alyxia	Cypress	FHLPSVZ	
<i>Banksia aemula</i>	medium shrub			HLOPQVWZ	
<i>Breynia oblongifolia</i>	medium shrub	coffee bush	local	OZ	
<i>Leucopogon margarodes</i>	medium shrub	a beard heath	Cypress	H	
<i>Acacia ulicifolia</i>	small shrub	prickly mooses	Cypress	GHLU	
<i>Acrotriche aggregata</i>	small shrub	red cluster heath	Cypress		
<i>Austromyrtus dulcis</i>	small shrub	midyim	Cypress	CFHLZ	edible fruits
<i>Enchylaena tomentosa</i>	small shrub	ruby saltbush	local		edible fruits
<i>Leucopogon ericoides</i>	small shrub	pink beard-heath	Cypress	H	
<i>Leucopogon leptospermoides</i>	small shrub	a beard heath	Cypress	H	
<i>Zieria smithii</i>	small shrub	sandfly zieria	Cypress	HL	
<i>Hibbertia scandens</i>	twiner	guinea flower	local	AWZ	
<i>Hoya australis</i> subsp. <i>australis</i>	twiner	native hoyo	Cypress	LSWZ	
<i>Pandorea jasminoides</i>	twiner	bower vine	local	AFLPUZ	
<i>Pandorea pandorana</i>	twiner	wonga vine	local	FHLPUZ	
<i>Abildgaardia vaginata</i>	rush		Cypress		
<i>Baloskion tetraphyllum</i> subsp. <i>meiostachyum</i>	rush	plume rush	Cypress	EKLQPS	aka <i>Restio tetraphyllum</i>
<i>Isolepis nodosa</i>	rush	knobby club-rush	local	LW	
<i>Juncus kraussii</i>	rush	sea rush	local		
<i>Lomandra filiformis</i>	rush	wattle mat-rush	local		
<i>Lomandra longifolia</i>	rush	spiny-headed rush	mat Cypress	EFGHLZ	

<i>Cyperus stradbokensis</i>	sedge		Cypress		
<i>Gahnia aspera</i>	sedge	sawsedge	local	EFHLPQ	
<i>Dianella caerulea</i>	lily	flax lily	Cypress	EFHKL(VZ)	
<i>Platycerium bifurcatum</i>	epiphyte	staghorn fern	Cypress	FLPSZ	
<i>Pteridium esculentum</i>	fern	bracken fern	Cypress		
<i>Aristida calycina</i> var. <i>calycina</i>	grass	wire grass	Cypress		
<i>Cymbopogon refractus</i> var. <i>refractus</i>	grass	barbedwire grass	Cypress	KLZ	
<i>Eragrostis brownii</i>	grass	Brown's lovegrass	Cypress		
<i>Imperata cylindrica</i> var. <i>major</i>	grass	blady grass	Cypress		
<i>Paspalidium distans</i>	grass		Cypress		
<i>Commelina cyanea</i>	ground herb	blue wandering jew	Cypress	ABEFGZ	
<i>Pomax umbellata</i>	ground herb	pomax	Cypress		
<i>Tetragonia tetragonoides</i>	ground herb	native spinach	local	ABGW	edible leaves
<i>Chiloglottis</i> sp.	terrestrial orchid		Cypress		
<i>Pterostylis pedunculata</i>	terrestrial orchid	maroonhood	Cypress		

Key to Symbols  
(after Wrigley & Fagg  
1996)

Landscape role

A	ground cover in areas without trees or shrubs
B	ground cover in areas with occasional trees
C	taller ground covers
D	small ground covers
E	suitable for poor drainage
F	suitable for heavy shade
G	low maintenance
H	frost hardy
I	small rockery plant
J	spreading rockery plant
K	larger rockery plant
L	attractive foliage
M	die back to bulb or tuber
N	alpine
O	bird attracting
P	feature plant
Q	cur flower, foliage or fruit
R	aquatic
S	indoor /potted
T	aquarium
U	hedge or screen
V	attractive fruits
W	salt spray resistant
X	attractive bark
Y	street trees
Z	tropical areas



## Appendix 2. Photographs



Photo 1 (top) 2 (bottom) Mature Coast Cypress trees planted in rows in the southern precinct of Terrace Reserve Holiday Park



Photo 3. Coast Cypress decline vs regeneration – South Terrace reserve. One reduced to a stump, one marked for removal, two small regenerating trees.



Photo 4. Rainforest plantings in Coast Cypress habitat, South Terrace Reserve.

## Appendix 3. Plant species inventory, Terrace Reserve

Scientific name	Common name	Status	Community: 1	2	3	4
<i>Acacia disparrima</i> subsp. <i>disparrima</i>	Salwood			x		
<i>Acronychia imperforata</i>	Green Tree				x	
<i>Aegiceras corniculatus</i>	River Mangrove		x			
<i>Araucaria cunninghamii</i>	Hoop Pine					
<i>Araucaria heterophylla</i>	Norfolk Pine	Exotic				x
<i>Austromyrtus dulcis</i>	Midyim			x		
<i>Avicennia marina</i>	Grey Mangrove		x			
<i>Banksia integrifolia</i>	Coast Banksia			x		x
<i>Breynia oblongifolia</i>	Dwarves Apple			x		
<i>Callitris columellaris</i>	Coast Cypress			x		x
<i>Callsitemon salignus</i>	White Bottlebrush					x
<i>Casuarina glauca</i>	Swamp Oak		x			
<i>Cryptocarya triplinervis</i>	Three-veined Laurel					
<i>Cupaniopsis anacardioides</i>	Tuckeroo			x	x	x
<i>Dianella</i> sp	Flax Lily			x		
<i>Dodonaea triquetra</i>	Hop Bush			x		
<i>Elaeocarpus obovatus</i>	Hard Quandong				x	
<i>Elaeocarpus reticulatus</i>	Blueberry Ash			x		
<i>Eucalyptus intermedia</i>	Pink Bloodwood			x		
<i>Eucalyptus robusta</i>	Swamp Mahogany					x
<i>Eucalyptus robusta x tereticornis</i>						x
<i>Eucalyptus signata</i>	Scribbly Gum			x		
<i>Eucalyptus tereticornis</i>	Forest Red Gum			x		
<i>Euroschinus falcatus</i> var. <i>falcatus</i>	Ribbonwood			x		
<i>Ficus fraseri</i>	Sandpaper Fig					
<i>Ficus hillii</i>	Hills Fig	Introduced Native				x
<i>Ficus macrocarpa</i>	Moreton Bay Fig					x
<i>Ficus obliqua</i>	Small-leaved Fig			x		x
<i>Ficus rubiginosa</i>	Rusty Fig				x	x
<i>Ficus virens</i>	White Fig			x		
<i>Ficus superba</i>	Deciduous fig				x	
<i>Glochidion sumatranum</i>	Umbrella Cheese Tree			x		x
<i>Guioa semiglauca</i>				x		
<i>Hibiscus tiliaceus</i>	Cottonwood		x			
<i>Jagera pseudorhus</i> var. <i>pseudorhus</i>	Foambark			x		
<i>Leucopogon lanceolatus</i>	Sand Heath			x		
<i>Leucopogon leptospermoides</i>				x		
<i>Leucopogon margarodes</i>				x		
<i>Lomandra longifolia</i>	Mat Rush			x		
<i>Lophostemon confertus</i>	Brush Box			x		x
<i>Lophostemon suaveolens</i>	Swamp Box			x		
<i>Macaranga tanarius</i>						
<i>Mallotus discolor</i>	White Kamala				x	
<i>Melalauca quinquenervia</i>	Broadleaved Paperbark					x
<i>Ottochloa gracillima</i>	Soft Grass			x		
<i>Polyscias elegans</i>	Silver Basswood			x		
<i>Rhodomyrtus psidiodes</i>	Native Guava			x		
<i>Smilax australis</i>	Prickly Smilax			x		
<i>Syzygium australe</i>	Lillypilly					x

**Weeds:**

<i>Ageratina adenophora</i>	Crofton Weed	Noxious Weed W4	x	
<i>Anredera cordifolia</i>	Madeira Vine	Environmental Weed	x	
<i>Bryophyllum sp</i>	Mother of Millions	Environmental Weed	x	
<i>Callisia spp</i>	Striped Inch Plant	Environmental Weed	x	
<i>Cinnamomum camphora</i>	Camphor Laurel	Noxious Weed W4	x	
<i>Commelina benghalensis</i>	Hairy Commelina	Environmental Weed	x	
<i>Gloriosa superba</i>	Glory Lily	Environmental Weed	x	
<i>Ipomoea sp</i>	Morning Glory	Environmental Weed	x	
<i>Lantana camara</i>	Lantana	Noxious Weed W4	x	
<i>Ligustrum lucidum</i>	Small-leaved Privet	Environmental Weed	x	
<i>Megaskepasma erythrochlamys</i>	Brazilian Cloak	Environmental Weed	x	
<i>Murraya paniculata</i>	Murraya	Environmental Weed	x	x
<i>Nephrolepis cordifolia</i>	Fishbone Fern	Environmental Weed	x	
<i>Ochna serrulata</i>	Mickey Mouse Plant	Environmental Weed	x	
<i>Philodendron sp</i>		Environmental Weed	x	
<i>Protasparagus aethiopicus</i>	Asparagus Fern	Environmental Weed	x	
<i>Sansevieria trifasciata</i>	Mother-in-laws Tongue	Environmental Weed	x	
<i>Schefflera actinophylla</i>	Umbrella Tree	Environmental Weed	x	x
<i>Syngonium sp</i>		Environmental Weed	x	

## **APPENDIX F**

### **Summary of Amendments from 2010 Exhibition of Draft Plans of Management**

## Summary of Amendments from 2010 Exhibition of Brunswick Heads Plans of Management

### Background

Draft Plans of Management for the Massy Green Holiday Park and Terrace Reserve Holiday Park (including Banner and Terrace Parks) were exhibited for 8 weeks in 2010. A total of 280 submissions were received, in addition to feedback from a community forum attended by representatives from 35 community organizations, Byron Shire Council, Crown Lands and the Trust.

### Banner and Terrace Park Submissions

A total of 13 amendments to the draft Plans for Banner and Terrace Park were recommended at the community forum. The Trust made 10 changes to the draft Plans of Management, however did not support 3 of the recommendations.

5 key issues were raised via the public exhibition process. The Trust made 5 changes to the draft in response to these recommendations.

The key issues raised and addressed by the Trust are detailed below.

Reserve	Source	Issue	Addressed
Foreshores	2010 Exhibition	Ongoing Public Access to Foreshore (creeks, rivers, footbridge etc).	✓
Foreshores	2010 Exhibition	The affect of development on laidback 'fishing village' and the 'simple pleasures' theme of the town which is not like Byron Bay.	✓
Foreshores	2010 Exhibition	Have regard to development within proximity of Marine Parks.	✓
Foreshores	2010 Exhibition	Footpath (for and against), but not straight through parks.	✓
Foreshores	2010 Exhibition	Amenity of parks need to be upgraded (BBQs, seating, toilets).	✓
Foreshores	2010 Forum	Others support hailstone path to provide equity of access	✓
Foreshores	2010 Forum	Crown Land principles – involve giving access of public land to the public – not to developers	✓
Foreshores	2010 Forum	Compromise suggested - path from Banner to co-op, but no paths in Terrace Park which is smaller.	✓
Foreshores	2010 Forum	Infrastructure already in ground for woodchop, carnival & housie tent.	✓
Foreshores	2010 Forum	The nose-in parking close proximity to the playground in Banner Park causing safety issues.	✓
Foreshores	2010 Forum	Poor footpath access near footbridge and Terrace Office.	✓
Foreshores	2010 Forum	Woodchop C'tee proposed a timber path (industry to provide cheaply) – and community working bees to build them.	✓
Foreshores	2010 Forum	BARCO & others would like dog access for unleashed dogs and permission for leashed dogs to enter parks.	✓
Foreshores	2010 Forum	Woodchop has money for new BBQ's but has been waiting for permission to have them built	✓
Foreshores	2010 Forum	Permission granted for installation of BBQ in Banner Park	✓
Foreshores	2010 Forum	Pathway to be on riverside of trees	✗
Foreshores	2010 Forum	Some groups don't want paths - Council previously knocked back bike & pedestrian path around foreshore.	✗
Foreshores	2010 Forum	Missing Pine trees to be replaced	✗

## **APPENDIX G**

**Submissions Report, Draft Plans of Management, March 2014.**



# **Submissions Report**

## **DRAFT PLANS OF MANAGEMENT**

**Massy Greene Holiday Park  
Terrace Reserve Holiday Park  
Ferry Reserve Holiday Park  
Brunswick Heads Foreshore Public Reserves**

**March 2014**



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## **1 Background**

At the Board Meeting 27 November 2013, the Board resolved to recommend that the Minister approve the public exhibition of the Draft Plans of Management for the Brunswick Heads Holiday Parks and Foreshore Reserves.

The Minister for Trade and Investment authorised the exhibition of the draft plans on 17 December 2013.

### **1.1 Exhibition Requirements under the Crown Lands Act and Reserve Trust Handbook**

The draft plan of management must be exhibited for at least 28 days and notified in the Government Gazette and a newspaper with local or state circulation, to give people the opportunity to submit their views on its form and content.

The Trust elected to place the draft Plans of Management on exhibition for two months to provide the community and visitors with adequate time to review the plans and make submissions.

### **1.2 Advertising**

Notices advising of the public exhibition of the plans of management were placed in the following publications:

- NSW Government Gazette 20 December 2013
- Northern Star Saturday 21 December 2013
- Byron Shire Echo 31 December 2013
- Byron Shire News 26 December 2013

### **1.3 Media Releases**

Media releases were provided as follows:

- Notification of commencement of public exhibition 31 December 2013
- Notification of Information sessions 9 January 2014

### **1.4 NSWCHPT Website**

- Draft Plans of Management were placed on the NSWCHPT web-site via a link to the NCHP web-site on 21 December 2013.
- The following information was included on the web-site:
  - Draft Plans of Management for each holiday park and one for the combined community reserves
  - Trust responses to Byron Shire Council enquiries and media coverage
  - Frequently asked questions and information

### **1.5 Stakeholder Notification**

- Individual letters were sent to major stakeholders advising them of the exhibition of the documents. The letter contained information on the Trust and advised the timing of public

information sessions. Stakeholders were advised of the process for making submissions and seeking further information from the Trust.

### **1.6 Public Information Sessions**

- Public Information sessions were held on the 15<sup>th</sup> of January and 1<sup>st</sup> of February. The information sessions were aligned with community events to ensure high participation rates. Both information sessions were well attended with media reporting hundreds in attendance.
- Parts of the public information sessions were recorded by the Echo Newspaper with coverage released on their web-site. An interview of Jim Bolger, General Manager North Coast Holiday Parks, was also performed and included on the web-site.

### **1.7 Byron Shire Council Briefing**

- A briefing was provided to Byron Shire Council on 30 January 2014. This briefing allowed councillors and senior staff to ask questions regarding content to enable an informed submission to be prepared.

### **1.8 Briefing – Don Page MP**

- A meeting was held with the Local Member and Local Government Minister Don Page. The Minister was provided with an update on the progress of the exhibition and an overview of where the Trust was proceeding to completion.

## **2 Media Coverage and Publicity**

### **2.1 Television**

- Television coverage was performed by the NBN network. This included filming of the reserves and draft concept plans, and an interview with the General Manager North Coast Holiday Parks.

### **2.2 Print Media**

- There was significant media coverage by the Byron Shire Echo with a general negative theme regarding the draft plans. Significant misinformation was included in both articles and letters to the editor. The Trust responded to articles but not all were printed. All responses were included on the Trust web-site.
- Articles were also included in other local papers and the Sydney Morning Herald.

## **3 NSW CHPT Communication Strategy**

The NSWCHPT Communications Strategy for Brunswick Heads was adopted by the Trust Board on 27 November 2013. The strategy identified the major stakeholders and issues which were expected to arise during the exhibition period. A number of consultation strategies were included to ensure that the local community and visitors to the area were able to view the plans and make comment.

These included public information sessions, media releases, meeting with Council, letters to major stakeholders and interviews with the media. The Trust web-site was continually updated to provide responses to the media articles and misinformation that was being encouraged by sections of the community and media.

#### 4 Submissions Data

A total of 158 submissions were received raising 1425 individual issues . The issues raised have been summarised into 173 categories.

There is some duplication of issues across different reserves. It is noted that several issue categories apply to two or more reserves. As each Plan of Management is a stand alone document, there has been some duplication of issue categories resulting in a total of 206 issues being recorded. The breakdown of issues raised by reserve is provided below, including general issues.

Reserve	Number of Issues Raised
Foreshore Reserves	52
Terrace Reserve HP	48
Massy Greene HP	44
Ferry Reserve HP	27
General Submissions	35
<b>Total</b>	<b>206</b>

##### 4.1 Petitions

Two petitions were received.

##### **Foreshore Protection Group.**

The petition comprised 156 signatures from people who *support the retention and maintenance of our grassed parklands and do not support the construction of NCHP's proposed timber deck on the riverbank in Banner Park or the proposed 2m wide all weather pathways through our public parklands.* It also include 151 signatures from people who *support Byron Shire Council's proposed Caravan Park Boundaries detailed in August 2012 Licence agreements and do not support the proposed boundaries in NCHP draft POMs.*

These matters are addressed in the submissions assessment.

##### **Mr Jim Dodd (Change.org petition )**

The petition had 2095 supporters as at 25 February 2014. The petition included the following objections

*We strongly object to and reject NSWCHPT and NCHP's plans because they:*

1. Refuse to re-instate the foreshore walkway along Simpson’s Creek adjoining the Terrace caravan park. Management has allowed this to be blocked/barricaded by caravans and 12 moveable dwellings that could all be relocated within the park. Instead they want to take the whole length of the foreshore into the caravan park and fence it off for the exclusive use of their clientele.
2. Plan to expand caravan park activities onto the foreshore land at Ferry Reserve and restrict access to the public boat ramp.
3. Refuse to get off illegally occupied land at Massy Greene caravan park, zoned for Maritime Purposes for use by the wider community. This is prime foreshore land adjoining the Brunswick Boat Harbour.
4. Refuse to develop their caravan parks within the boundaries set by our local Council. Those boundaries have been set to keep the foreshores in the public interest and not for the exclusive use of caravan park clientele.

These matters are addressed in the submissions assessment.

## 5 Assessment of Submissions

A detailed summary of submissions received is provided in Appendix 1. For each issue raised, the submissions summary :

- Includes a specific reference number
- Identifies whether the submission relates to a specific reserve or is a general comment
- Identifies the relevant issue category
- Provides a summary of the issue
- Provides the Trust’s comments
- Provides a recommendation for amendment of the draft Plans of Management. If no amendment is proposed, a recommendation of “No Change” is provided.

### 5.1 Issues Raised in General Submissions

Thirty-five general issues were raised in relation to the Trust’s proposals across the draft Plans of Management. Five recommendations are made with respect to the general issues raised.

Where the Trust has recommended a change, the issue is highlighted in the following table. Issues that are not highlighted are those where the recommendation is that no change is made to the exhibited plans.

Where a recommendation is indicated for a particular issue, it does not necessarily mean that the claim or request in the submission is supported.

Issue Number	Issue Categories – General	Number of Submissions
17	Comply with Council licence conditions and regulations	40
43	Maintain public access to and along the foreshore	35
140	Retain 30% of sites for permanent residents	27
75	No restriction on public access though holiday parks	12
59	No fencing of holiday parks or reserves	9
92	Privatisation of foreshore	7
48	Maintenance and presentation of foreshore reserves	6
38	Lack of pedestrian connectivity	4
41	Locate pathways away from foreshore	4
97	Provide additional car parking within holiday parks	3
132	Restrict access for large vans and fifth wheelers	3

16	Community space within holiday parks	2
21	Protect and enhance Aboriginal cultural values	2
31	General Criticism of the Trust and its proposals	2
86	Overdevelopment	2
94	Protection of Vegetation in Reserves	2
96	Provide accessible pathways	2
109	Provide sullage for sites for wastewater disposal	2
145	Safety Audit Out of Date	2
158	Support upgrade of Banner Park	2
12	Provide buffer zones and setbacks from boundaries	1
55	No cabins on the foreshore	1
67	No pathways in reserves	1
89	POM should not authorise leases and licences	1
93	Protection and enhancement of sensitive environments	1
32	General Support	1
35	Improve lighting in reserves	1
49	Make provision for Primitive Camping	1
88	Petition in support of "Pirate Ship" hire business	1
134	Restrict number of cabins	1
143	Retain natural areas for passive recreation	1
146	Screen and landscape holiday park boundaries	1
151	Support foreshore pathways	1
156	Support reduction in cabin numbers from 2010 draft plans	1
159	Support application of sustainability measures	1

## 5.2 Issues Raised in Submissions for Terrace Reserve Holiday Park

Forty-eight issues were raised in relation to the Trust's proposals for the draft Plan of Management for Terrace Reserve. Nine recommendations are made with respect to the issues raised.

Issue Number	Issue Categories – Terrace Reserve Holiday Park	Number of Submissions
108	Provide public access to and along the foreshore at Terrace Reserve	78
47	Maintain public access to the car park and footbridge at the entry to Terrace Reserve Holiday Park	33
52	Natural attrition for vacating long term sites at Terrace	29
59	No fencing of holiday parks or reserves	29
131	Restore Simpsons Creek Foreshore	29
17	Comply with Council licence conditions and regulations	24
125	Remove structures from Terrace Reserve foreshore sites	22
22	Demolish and rebuild main amenities in southern precinct away from private residences	15
75	No restriction on public access through holiday parks	14
136	Restrict use of Terrace Southern Precinct to soft camping during Christmas and Easter only	14
94	Protection of Vegetation in Reserves	13
99	Provide additional parking within Terrace Reserve holiday park	10
110	Provide traffic calming at junction of The Terrace and Nana Street	9

117	Relocate Terrace Southern Camp Kitchen	9
149	Soft camping only in Terrace Southern Precinct	8
40	Locate new relocatable amenities in Terrace Southern precinct further from residences	6
140	Retain 30% of sites for permanent residents	6
132	Restrict access for large vans and fifth wheelers	5
173	Widen the Brunswick Terrace road reserve	5
19	Consult on Terrace Reserve Fence	4
73	No reduction in number of sites at TRHP	4
82	Object to Proposed Waste Compound at Terrace Reserve	4
135	Restrict use of Terrace Southern Precinct to soft camping	3
166	Use land made available by removal of encroachments on the Terrace for parking, bike track etc	3
9	Allow small groups and families only at Terrace Reserve HP	2
12	Provide buffer zones and setbacks from boundaries	2
30	Formalise existing creek / beach access near site 122 Terrace Reserve	2
87	Park entry /exit Terrace	2
118	Remove amenities blocks from Terrace Reserve Southern precinct	2
134	Restrict number of cabins	2
20	Convert disused Simpsons Creek Park tennis courts for another public use or revegetation	1
62	No increase to size of sites at Terrace Reserve	1
71	No reduction in number of amenities buildings at TRHP	1
74	No removal of Holiday Vans	1
81	Object to development of Terrace Reserve Southern precinct on environmental grounds	1
84	Oppose upgrade of Simpsons Creek beach access	1
91	Private Matter	1
116	Relocate Terrace Reserve residence and reception	1
127	Renovate Terrace Reserve Managers residence	1
137	Restrict use of Terrace Southern Precinct to soft camping during Christmas and Easter, and NSW public School holidays only	1
151	Support foreshore pathways	1
153	Support increase size of sites at Terrace Reserve	1
159	Support application of sustainability measures	1
161	The impact on the Cape Byron Marine Park has not been assessed	1
164	Two additional cabins at Terrace Reserve are accessible	1
168	Use of southern precinct at Terrace Reserve	1
170	Use southern precinct at Terrace Reserve Holiday Park for public recreation	1
172	Widen foreshore pathways	1

### 5.3 Issues Raised in Submissions for Massy Greene Holiday Park

Forty-four issues were raised in relation to the Trust's proposals for the draft Plan of Management for Massy Greene. Six recommendations are made with respect to the issues raised.

Issue Number	Issue Categories – Massy Greene Holiday Park	Number of Submissions
85	Oppose use of all or part of Lot 7005 at Massy Greene for Holiday Park Purposes	47
1	Access and parking Boat Harbour foreshore	27
56	No cabins on the foreshore at Massy Greene	18
72	No reduction in number of sites at Massy Greene	15
17	Comply with Council licence conditions and regulations	13
113	Relocate Massy Greene sewer pump station	13
98	Provide additional parking within Massy Greene holiday park	11
29	Extend hailstone pathway around eastern end of Massy Greene	10
70	No power heads on the foreshore.	10
77	No Two Storey Buildings	8
101	Provide community facilities in Boat Harbour	7
45	Maintain public access to and along the foreshore at Massy Greene	6
140	Retain 30% of sites for permanent residents	6
111	Redesign western end of holiday park and boat harbour precinct to provide additional public open space, parking, public toilets, boat/kayak storage, and public pathway	5
114	Relocate Massy Greene waste storage area	4
4	Additional public parking at Massey	3
33	Improve access and community facilities in Boat Harbour	3
58	No fencing of foreshore sites at Massy Greene	2
65	No new internal road for waterfront sites at Massy Greene	2
66	No on site Managers residence at Massy Greene	2
74	No removal of Holiday Vans	2
86	Overdevelopment	2
90	Prefer western entry option Massy Greene	2
142	Retain eastern entry to Massy Greene	2
7	Allow boats on the foreshore	1
10	Bin storage area must be set back 10m from road	1
11	Boundary fencing at Massy Greene	1
12	Provide buffer zones and setbacks from boundaries	1
14	Camp Kitchen/BBQ facility closer to sites at Massy Greene	1
15	Clarify plans for boat harbour precinct	1
39	Less cabins on the foreshore at Massy Greene	1
50	Massy-Greene was bequeathed for community use	1
75	No restriction on public access though holiday parks	1
76	No structures within 10 of foreshore including slabs and BBQs	1
79	No upgrade of Massy Greene HP	1
120	Remove holiday vans	1
121	Remove infrastructure from road reserve at Massy Greene	1
132	Restrict access for large vans and fifth wheelers	1
134	Restrict number of cabins	1



139	Retain 3 amenities blocks at Massy Greene	1
141	Retain eastern entry and exit in addition to new western intersection and Massy Greene	1
150	Spelling of Massy Greene	1
162	Too much pavement	1
165	Use foreshore sites for camping only	1

#### 5.4 Issues Raised in Submissions for Ferry Reserve Holiday Park

Twenty-seven issues were raised in relation to the Trust's proposals for the draft Plan of Management for Ferry Reserve. Seven recommendations are made with respect to the issues raised.

Issue Number	Issue Categories – Ferry Reserve Holiday Park	Number of Submissions
46	Maintain public access to Ferry Reserve boat ramp	34
119	Remove foreshore sites and internal road from Ferry Reserve Holiday Park and provide for public access and recreation	29
169	Use of the former Fins Restaurant building	15
112	Relocate Ferry Reserve sewer pump station	13
5	Address foreshore bank erosion at Ferry Reserve	10
155	Support provision of accessible sites and facilities at Ferry Reserve	10
133	Restrict access to Riverside Crescent foreshore	6
94	Protection of Vegetation in Reserves	4
13	Build accessibility into Ferry Reserve Recreational area	3
54	No Bowling Green in Ferry Reserve	3
132	Restrict access for large vans and fifth wheelers	3
140	Retain 30% of sites for permanent residents	3
69	No pool	2
104	Provide path along Ferry Reserve foreshore	2
106	Provide primitive camping on Old Pacific Highway site	2
122	Remove power heads from foreshore sites at Ferry Reserve	2
148	Soft camping on Ferry foreshore sites	2
160	The 4 proposed new cabins all be accessible cabins.	2
23	Develop additional short term sites on old Pacific Highway	1
28	Exclude holiday park from land zoned E2 Environmental Conservation	1
42	Maintain emergency access through Ferry Reserve for flood evacuation	1
44	Maintain public access to and along the foreshore at Ferry Reserve	1
51	Move sites back from the foreshore at Ferry Reserve	1
83	Open playing fields at Ferry Reserve. No recreation area	1
89	POM should not authorise leases and licences	1
95	Provide a car wash facility	1
107	Provide public access through Ferry Reserve Holiday Park	1

## 5.5 Issues Raised Submissions for Brunswick Heads Foreshore Public Reserves

Fifty-two issues were raised in relation to the Trust's proposals for the draft Plan of Management for the Foreshore Public Reserves. Twenty-one recommendations are made with respect to the issues raised.

Issue Number	Issue Category	Number of Submissions
53	No boardwalk and deck in Banner Park	35
57	No car park at Torakina Park	29
144	Retain Terrace Park playground in its current location	27
36	Improvements to Memorial Park	21
37	Keep Torakina as natural as possible	21
126	Renovate Terrace Park Amenities and Facilities	21
128	Renovate Torakina Amenities	19
24	Do not expand the Banner Park playground	18
64	No lighting or security cameras	18
67	No pathways in reserves	18
94	Protection of Vegetation in Reserves	18
6	Address foreshore erosion and sea wall problems	17
18	Construct pathways from natural materials	15
48	Maintenance and presentation of foreshore reserves	13
123	Remove Simpsons Creek Park tennis courts and revegetate	13
43	Maintain public access to and along the foreshore	12
34	Improve accessibility to Simpsons Creek via stairs and ramps	11
68	No playground in Torakina	11
138	Restrict vehicle access to Simpsons Creek Park	11
41	Locate pathways away from foreshore	10
103	Provide kayak / canoe launching facility at Simpsons Creek Park	10
129	Replace missing Norfolk pines in Banner Park	8
78	No upgrade of foreshore public reserves	7
60	No Foreshore Pathway Mona Lane Foreshore	4
105	Provide play / sport equipment in Torakina Park	4
130	Replace Torakina amenities	4
145	Safety Audit Out of Date	4
157	Support Torakina Foreshore pathway	4
3	Additional parking at Torakina	3
100	Provide all abilities playground	3
152	Support habitat restoration plan at Torakina Reserve	3
2	Additional lighting in Banner Park	2
20	Convert disused Simpsons Creek Park tennis courts for another public use or revegetation	2
25	Do not replace missing Norfolk Pines Banner Park	2
38	Lack of pedestrian connectivity	2
63	No kiosk at Torakina Park	2
102	Provide drinking fountains and bike racks in reserves	2
147	Sculpture walk for foreshore reserves	2
154	Support proposed boardwalk and Deck at Banner Park	2
158	Support upgrade of Banner Park	2
8	Allow public art on the Torakina Amenities	1

26	Ensure appropriate emergency access to Torakina Beach and southern rock wall	1
27	Ensure appropriate pedestrian access to Torakina Beach and southern rock wall	1
35	Improve lighting in reserves	1
61	No hard surfacing around playground	1
80	NSW CHPT take over responsibility for management and maintenance of the Simpsons Creek footbridge	1
96	Provide accessible pathways	1
115	Relocate Pirate boat and Jetty	1
124	Remove storage shed from Banner Park	1
163	Tourist coach parking Simpsons Creek Reserve	1
167	Use natural rock paving and stepping stones for pathways	1
171	Water theme playground	1

## 6 Recommendations

Reserve	Issue No.	Issue Category	Comment	Recommendation
TRHP	20	Convert disused Simpsons Creek Park tennis courts for another public use or revegetation	Larger sites will provide more room for on site parking of guests vehicles than currently exists. Also number of sites reducing from 198 to 167. The removal of 18 sites from the southern precinct to remedy a road encroachment will provide the capacity for 60 additional public car parking spaces to be available on The Terrace road reserve. The disused tennis courts may be an option for overflow parking, however other submissions support public recreation / revegetation of this space.	Ensure that the POM authorises the use of the disused tennis courts to the south of the TRHP for car parking, revegetation and other public recreation uses pending the Trusts future consideration of the best use of this space
TRHP	22	Demolish and rebuild main amenities in southern precinct away from private residences	The existing main amenities is structurally sound and replacement in another location would cost in the order of \$500,000. Measures to screen the building and reduce amenity impacts on residents can be included in the POM	Include measures to screen the main amenities in Terrace Reserve Southern Precinct from residents and reduce amenity impacts
TRHP	30	Formalise existing creek / beach access near site 122 Terrace Reserve	The POM could authorise the investigation of formalising the existing canoe / kayak launching facility near site 122 Simpsons Creek in conjunction with the foreshore restoration project	The POM authorise the investigation of formalising the existing canoe / kayak launching facility near site 122 Simpsons Creek in conjunction with the foreshore restoration project
TRHP	40	Locate new relocatable amenities in Terrace Southern precinct further from residences	The amenities could be relocated to the southern most part of the site which would have some visual screening from existing vegetation. The change would result in the net loss of 1-2 sites due to the minimum buffer required between the building and sites, and would require extension of water sewer and power	Locate the new southern relocatable amenities building in the southernmost section of the holiday park

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TRHP	47	Maintain public access to the car park and footbridge at the entry to Terrace Reserve Holiday Park	There will be no change to the current public access to either the footbridge or the adjacent car park. The car park will continue to be part of the holiday park allocation of visitor parking while also having no restriction on use by the general public. No changes to this arrangement are proposed and the POM specifically authorises the use of this area for both public and visitor parking. The trust is proposing to construct a footpath from the town side of the footbridge past the Terrace Park playground to the crossing at The Terrace. This path will provide a safer alternative route for pedestrians wanting to avoid walking through the car park	Provide additional emphasis in the POM document and drawings to clearly indicate that the car park is available for parking by the general public and pedestrian access to and from the footbridge
TRHP	59	No fencing of holiday parks or reserves	Measures such as landscaping and continued use of security cameras are proposed to improve security. Access restrictions will only occur if and when it becomes necessary to fence to park for safety or security reasons - as a last resort. Continued unfettered access for the general public to Simpsons Creek via the holiday park can not be guaranteed. The Trust could relax restrictions while retaining the ability to impose restrictions if required.	Provide a landscape design to show the intended treatment of the boundary that will be provided in preference to fencing. More clearly describe measures other than fencing that will be implemented in preference to fencing. Specify in the POM that fencing will only occur as a last resort. Modify access protocol to relax restrictions and allow public access for longer hours throughout the entire year while retaining the ability to apply reasonable restrictions if required.
TRHP	82	Object to Proposed Waste Compound at Terrace Reserve	The proposed relocation of the waste storage area will impact guests who have not previously been affected. An alternative location at the rear of the central section of the park adjacent to the primary school bins has been identified that will not impact neighbours.	Investigate relocation of waste storage / collection area to the central precinct with access directly from Booyun Street. Retain current waste storage / collection area if Booyun St option can not be implemented.

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TRHP	108	Provide public access to and along the foreshore at Terrace Reserve	The Trust has considered the impact that creation of a foreshore access corridor would have with regard to park operations, site constraints, significant vegetation, and permanent residents. The Trust has made provision for ongoing public access through the holiday park as currently exists, subject to reasonable conditions. Conditional access through TRHP and to Simpsons Creek is provided subject to reasonable conditions. Those conditions are likely to be relaxed from those contained in the draft POM	Specify in the POM that fencing will only occur as a last resort. Modify access protocol to relax restrictions and allow public access for longer hours throughout the entire year while retaining the ability to apply reasonable restrictions if required.
MGHP	1	Access and parking Boat Harbour foreshore	The larger sites will provide more room for on site parking of guests vehicles than currently exists. Also number of sites reducing from 133 to 103. Additional visitor car parking inside park to achieve compliance with Regs. The proposed upgrade will improve public access to the foreshore and not limit access for emergency vehicles	Provide additional car parking capacity in the boat harbour by not constructing a formal car park to the relevant standards and leaving the space available as an open area with no marked spaces.
MGHP	7	Allow boats on the foreshore	The Trust does not propose to change anything regarding the mooring of boats on the beach.	Specifically authorise temporary mooring or anchoring of boats on the foreshore outside the swimming area.
MGHP	11	Boundary fencing at Massy Greene	A timber paling fence is proposed along the boundary of the park commencing at the waste storage area, then along the boundary with old Pacific Highway and around the Managers residence. In all other areas, low rail fencing is proposed. The drawings can be modified to more clearly show the location and style of proposed fencing.	Modify the Massy Greene drawings to more clearly show the location and style of proposed fencing.

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MGHP	29	Extend hailstone pathway around eastern end of Massy Greene	This area is road reserve under the control of Council. The extension of the hailstone pathway would require Council approval, however could be undertaken as part of the rehabilitation of the camping sites that are to be vacated at the eastern end of the park	Investigate with Council the provision of a hailstone pathway in the road reserve at the eastern end of Massy Greene as part of the rehabilitation of the camp site area that is to be vacated
MGHP	58	No fencing of foreshore sites at Massy Greene	The draft POM proposes replacement of existing low post and rail fencing with similar fencing in order to delineate the extent of sites and the separation between holiday park and the foreshore public accesses.	More clearly identify and describe the proposed low fencing along the foreshore sites at Massy Greene
MGHP	111	Redesign western end of holiday park and boat harbour precinct to provide additional public open space, parking, public toilets, boat/kayak storage, and public pathway	The area in question is currently part of the operational area of the licenced holiday park. The trust has reviewed the proposed plans and can accommodate the provision of a public pedestrian access through the holiday park via a redesign of the western precinct. This will achieve separation between pedestrians and vehicles accessing the foreshore while providing an important link between the boat harbour and the foreshore in front of the holiday park.	Modify the design of the western precinct at Massy Greene to provide a separate pedestrian access from the Boat Harbour to the foreshore inside the operational boundary of the park, by revising the layout and design of cabins and sites.
General	21	Cultural heritage	Searches of the Aboriginal Heritage Information Management System (AHIMS) sites do not indicate the presence of Aboriginal objects and sites. However anecdotal evidence has been presented via submissions and the POM will be modified to include provisions addressing the protection of aboriginal cultural values and objects.	Modify POMs to include provisions addressing the protection of aboriginal cultural values and objects.
FRHP	5	Address foreshore bank erosion at Ferry Reserve	The POM proposes that the Trust investigate and implement strategies to address erosion and protect and restore the foreshore, and has allocated \$200,000 towards this project in the forward capital works program.	More clearly define the proposed foreshore restoration program including concept drawings from the 2007 Geolink study, and the allocation of funds in the forward capital works program.

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FRHP	13	Build accessibility into Ferry Reserve Recreational area	This is a matter for consideration in the detailed design stage, however provision can be made in the POM to facilitate this.	Include provision for the swimming pool and recreation area design at Ferry reserve to include accessibility as a key design consideration
FRHP	44	Maintain public access to and along the foreshore at Ferry Reserve	Permanent public access is authorised in the POM. Operational issue - however all requests can be complied with. Better location of lighting and picnic tables can be provided to create a better use of the space and more inviting public thoroughfare	Amend the plans for the foreshore management and access precinct at Ferry Reserve to show relocation/upgrade of lighting and picnic tables to provide better use of the space and a more inviting public thoroughfare. Create a 1 metre landscaped corridor on the park side of the boundary to provide an additional setback to ensure campers do not intrude outside the park
FRHP	46	Maintain public access to Ferry Reserve boat ramp	Ongoing public access to the boat ramp is specifically authorised in the draft POM, subject to a protocol that is required to ensure that the safety, security and welfare of guests and other users is protected. The existing ramp has very limited capacity, and can not meet the demand for boat launching in Brunswick Heads.	Relax restrictions on public access while retaining the ability to apply reasonable conditions of use if required. Consider options for contributing to the upgrade of the Sonny Coles boat ramp.
FRHP	94	Protection of Vegetation in Reserves	Vegetation management within the reserves and holiday parks will continue to be undertaken in accordance with Council's Tree Preservation Order and the Native Vegetation Act, informed by the Vegetation Management Plan appended to the POM	The trust will continue to undertake seed collection, compensatory planting and bush regeneration activities to offset any impact from the removal or lopping of native vegetation for safety reasons
FRHP	95	Provide a car wash facility	Provision for a wash bay could be incorporated into the back of house storage/maintenance areas	Investigate potential to locate a car wash bay near the maintenance shed



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FRHP	169	Use of the former Fins Restaurant building	The building can only be used for a purpose that is authorised by the POM. There are no plans to operate group accommodation for backpackers and the POM can specifically prohibit that activity. Group accommodation is intended to be used by schools and other groups and will be sold as rooms, not individual beds. The wording in the recommendation is taken from the definition of backpacker accommodation in the NSW Standard LEP Instrument	Specifically prohibit the use of the Fins Building for backpacker accommodation by prohibiting the provision of accommodation on a bed or dormitory-style basis (rather than by room).
Foreshore Reserves	2	Additional lighting in Banner Park	The trust understands that the Woodchop Committee has been gifted lighting that may be suitable for permanent lighting for Banner Park. The impact on neighbouring properties and on the marine park would need to be considered and assessed in consultation with relevant agencies, however provision should be made in the POM for installation of suitable permanent lighting to be undertaken given that the lighting is available free of charge.	Make provision in the POM to specifically authorised installation of permanent lighting in Banner park at the discretion of the trust subject to relevant approval requirements
Foreshore Reserves	8	Allow public art on the Torakina Amenities	The trust will consider allowing placement of artwork on the Torakina amenities, subject to a number of conditions being met relating to the consistency with the natural them adopted for the reserve, and the proponents undertaking to install, protect and maintain and replace artwork. The Trust has significant concerns about vandalism, and the artists would need to understand and agree that the artwork is placed in the public domain at their own risk.	The trust will consider allowing placement of public artwork on the Torakina amenities, subject to a number of conditions being met by the proponents.

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Foreshore Reserves	24	Do not expand the Banner Park playground	A large playground is proposed due to the high level of use of the reserve by families with younger children. The final design will be determined in consultation with the local school and pre-school. While some play equipment may be accessible for children with limited abilities, a complete all-abilities playground is not proposed	Consult with the local school and pre-school on playground design. Investigate incorporating play equipment that can be used by children with limited abilities
Foreshore Reserves	25	Do not replace missing Norfolk Pines Banner Park	Norfolks are an introduced species. There is no justification from an environmental or planning perspective to plant replacement trees. The marginal improvement in visual amenity that could be achieved over time does not warrant the significant impact that it would have on the carnival, which has been operating continuously over the xmas -new year period since 1956 and is part of the fabric of the town.	Amend the plan for Banner park to delete the replacement of missing Norfolk Pines from the foreshore.
Foreshore Reserves	26	Ensure appropriate emergency access to Torakina Beach and southern rock wall	Relocation of the gate is proposed to provide a continuous pedestrian thoroughfare to the southern rock wall and Torakina beach. The Trusts view is that this can occur without compromising access or safety. Relocation of the gate would only occur with the agreement of Marine Rescue NSW, Crown Lands and emergency services.	The POM clarifies that the relocation of the emergency access gate to the Brunswick River southern rock wall only occur with the concurrence of Marine Rescue NSW, DPI Crown Lands and emergency services.
Foreshore Reserves	27	Ensure appropriate pedestrian access to Torakina Beach and southern rock wall	The car park design provides for a pathway delineated along the northern side of the Torakina beach car park to the beach access and southern rock wall. This is not clearly shown in the drawings.	Amend plans to clearly show the proposed pathway leading from Torakina reserve to the beach access and south wall
Foreshore Reserves	34	Improve accessibility to Simpsons Creek via stairs and ramps	There is an existing ramp access to Simpsons Creek. An upgrade could be considered at design stage for Banner Park and Simpsons Creek upgrade projects. Oyster growth is a concern - so any design would need to take that issue into account along with liability issues	Investigate options for upgrade of ramp and stair access points to Simpsons creek to improve accessibility for people with limited abilities

Version 2 – Post Audit

Foreshore Reserves	41	Locate pathways away from foreshore	Paths are designed to provide universal access to reserves for people of all abilities. They are also provided on commonly used pedestrian thoroughfares where grass could not withstand the amount of foot traffic. The proposed pathway locations address both of these design criteria. Formal paths are required in Banner Park and Torakina Park to achieve this outcome, however paths may not be required initially in Terrace Park as there is reasonable grass cover and gentle grades.	The POM authorise the Trust to monitor the accessibility of Terrace Park and install paths if considered necessary to provide access for people with limited abilities, or to provide a surface capable of withstanding the amount of foot traffic.
Foreshore Reserves	60	No Foreshore Pathway Mona Lane Foreshore / Improvements to Memorial Park	Not on land under the control of the trust. Was included in POM to show a concept for the overall network of public pathways to give context to the trusts proposals	Delete drawings and concepts for all reserves not managed by the Trust
Foreshore Reserves	64	No lighting or security cameras	There is no specific plan to install additional lighting Installation of lighting will occur if required for safety and security. The location of lighting would have to consider the impact on residential properties and the marine park. Consultation with relevant agencies would be required.	Installation of lighting if required to be undertaken in consultation with relevant agencies having regard to potential impacts on the Marine park and residential properties
Foreshore Reserves	78	No upgrade of foreshore public reserves	No coffee shops or similar are proposed. The proposed upgrades provides universal access to picnic tables, seating, and the foreshore including for people with limited abilities while minimising the impact on vegetation. The designs compliment the natural setting. Other improvements such as work on amenities, BBQs and park furniture are meeting the basic needs of users of the reserves	Specifically exclude or prohibit commercial activities such as café's kiosks or restaurants from being undertaken in the foreshore reserves
Foreshore Reserves	102	Provide drinking fountains and bike racks in reserves	Will be addressed in detailed design	Include provision for well designed drinking fountains / water stations and bike racks in foreshore reserves POM

## Version 2 – Post Audit

Foreshore Reserves	103	Provide kayak / canoe launching facility at Simpsons Creek Park	The foreshore area is environmentally sensitive and agencies may be reluctant to approve a new launching facility. However, this is a matter that can be considered in the design of the foreshore restoration project.	The POM authorise the investigation of a new canoe/kayak launching facility at Simpsons Creek park in conjunction with the foreshore restoration project
Foreshore Reserves	115	Relocate Pirate boat and Jetty	The location of the pirate boat (or any similar activity) will be determined in consultation with the Marine Park Authority and Fisheries when the matter of the licence is reviewed by the Trust	Amend the draft POM to indicate that the location of the any hire businesses will be determined in consultation with the Marine Park Authority and Fisheries when the matter of the licence is reviewed by the Trust
Foreshore Reserves	126	Renovate Terrace Park Amenities and Facilities	The POMS provides for an upgrade to occur. Feedback suggests a preference to separate change rooms rather than using showers or toilets for changing. Provision of additional changing rooms and showers requires further consideration	Consider the addition of change rooms and shower to the Terrace Park amenities
Foreshore Reserves	128	Renovate Torakina Amenities	The design provided in the draft POM is a concept design only. The trust will review contemporary designs that are in keeping with the natural setting and meet the functional requirements of the users of the reserves	Review the design of the Torakina amenities to ensure it is keeping with the natural setting and meet the functional requirements of the users of the reserves
Foreshore Reserves	130	Replace Torakina amenities	Submissions support renovation of the amenities in favour of a new building. The trust will authorise replacement and renovation and undertake further investigations to determine the best option.	The POM authorise the renovation or replacement of the Torakina amenities at the discretion of the trust following a review of the cost of renovation compared to the cost of replacement for revised designs.
Foreshore Reserves	144	Retain Terrace Park playground in its current location	The layout and location of the playground accommodates existing annual events. The playground can be kept in its current location. Active management of tree health to ensure safety will continue.	Keep the playground in its existing location to take advantage of natural shade and maximise open space for recreation and community events

Version 2 – Post Audit

Foreshore Reserves	145	Safety Audit Out of Date	Advice from NSW Police confirms that the findings and recommendations of the safety audit are still relevant.	Provide a commitment that any issues that arise from any future community safety audit will be considered
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- Draft Byron Local Environment Plan 2013*
- Crown Lands Act 1989*
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## **DRAWINGS**

**R – 01 - Reserve Locations and Pedestrian Access**

**R – 02 - Simpsons Creek Reserve – Proposed Management**

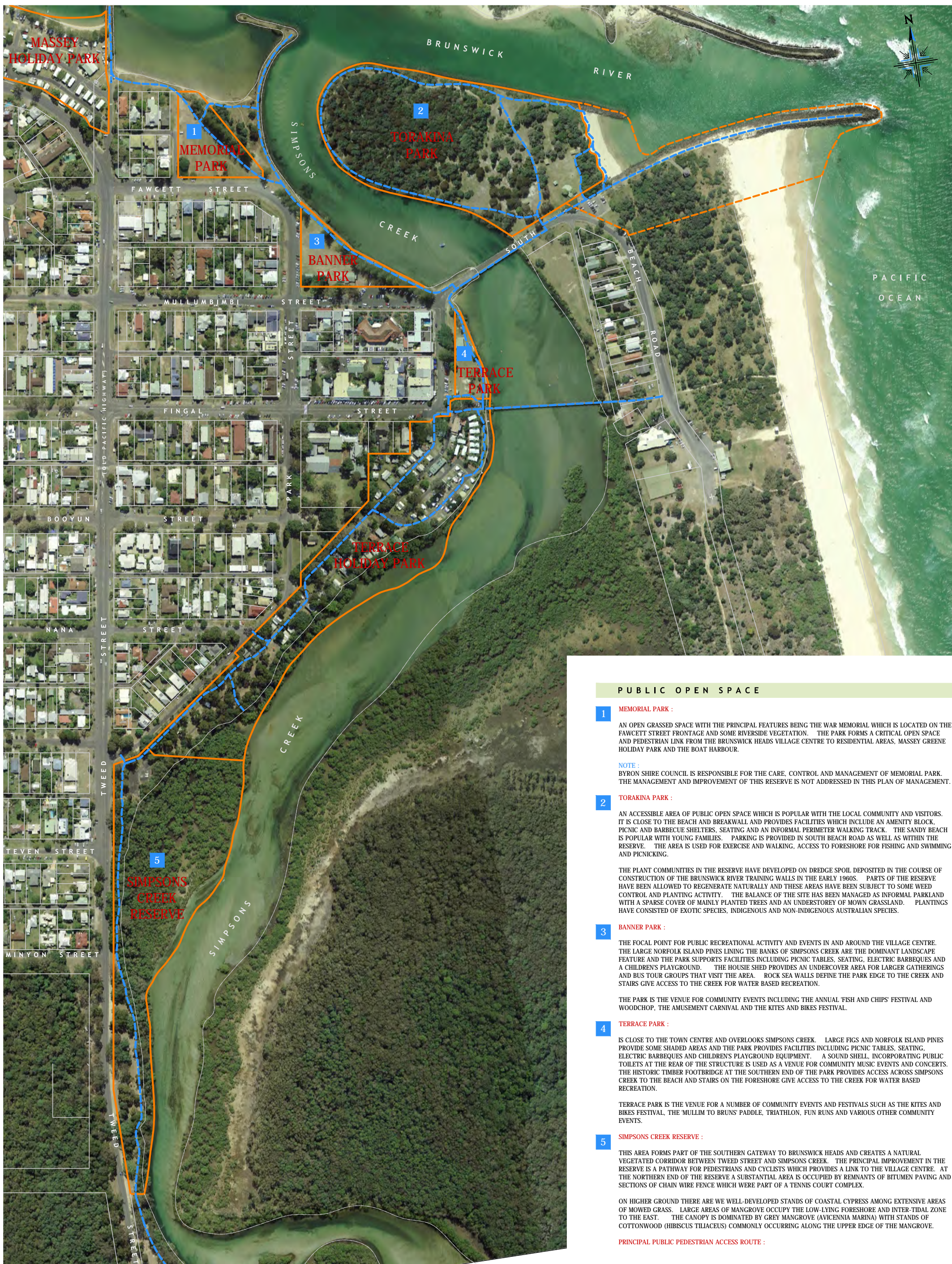
**R – 03 - Torakina Park – Proposed Improvements**

**R – 04 - Torakina Park – Proposed Parking Layout, Amenities Plans and Elevations**

**R – 05 – Terrace and Banner Parks – Proposed Improvements**

**R – 06 – Banner Park – Concepts for Foreshore Improvements**





**PUBLIC OPEN SPACE**

- 1 MEMORIAL PARK :**

AN OPEN GRASSED SPACE WITH THE PRINCIPAL FEATURES BEING THE WAR MEMORIAL WHICH IS LOCATED ON THE FAWCETT STREET FRONTAGE AND SOME RIVERSIDE VEGETATION. THE PARK FORMS A CRITICAL OPEN SPACE AND PEDESTRIAN LINK FROM THE BRUNSWICK HEADS VILLAGE CENTRE TO RESIDENTIAL AREAS, MASSEY GREENE HOLIDAY PARK AND THE BOAT HARBOUR.

**NOTE :**  
 BYRON SHIRE COUNCIL IS RESPONSIBLE FOR THE CARE, CONTROL AND MANAGEMENT OF MEMORIAL PARK. THE MANAGEMENT AND IMPROVEMENT OF THIS RESERVE IS NOT ADDRESSED IN THIS PLAN OF MANAGEMENT.
- 2 TORAKINA PARK :**

AN ACCESSIBLE AREA OF PUBLIC OPEN SPACE WHICH IS POPULAR WITH THE LOCAL COMMUNITY AND VISITORS. IT IS CLOSE TO THE BEACH AND BREAKWALL AND PROVIDES FACILITIES WHICH INCLUDE AN AMENITY BLOCK, PICNIC AND BARBECUE SHELTERS, SEATING AND AN INFORMAL PERIMETER WALKING TRACK. THE SANDY BEACH IS POPULAR WITH YOUNG FAMILIES. PARKING IS PROVIDED IN SOUTH BEACH ROAD AS WELL AS WITHIN THE RESERVE. THE AREA IS USED FOR EXERCISE AND WALKING. ACCESS TO FORESHORE FOR FISHING AND SWIMMING AND PICNICKING.

THE PLANT COMMUNITIES IN THE RESERVE HAVE DEVELOPED ON DREDGE SPOIL DEPOSITED IN THE COURSE OF CONSTRUCTION OF THE BRUNSWICK RIVER TRAINING WALLS IN THE EARLY 1960S. PARTS OF THE RESERVE HAVE BEEN ALLOWED TO REGENERATE NATURALLY AND THESE AREAS HAVE BEEN SUBJECT TO SOME WEED CONTROL AND PLANTING ACTIVITY. THE BALANCE OF THE SITE HAS BEEN MANAGED AS INFORMAL PARKLAND WITH A SPARSE COVER OF MAINLY PLANTED TREES AND AN UNDERSTOREY OF MOWN GRASSLAND. PLANTINGS HAVE CONSISTED OF EXOTIC SPECIES, INDIGENOUS AND NON-INDIGENOUS AUSTRALIAN SPECIES.
- 3 BANNER PARK :**

THE FOCAL POINT FOR PUBLIC RECREATIONAL ACTIVITY AND EVENTS IN AND AROUND THE VILLAGE CENTRE. THE LARGE NORFOLK ISLAND PINES LINING THE BANKS OF SIMPSONS CREEK ARE THE DOMINANT LANDSCAPE FEATURE AND THE PARK SUPPORTS FACILITIES INCLUDING PICNIC TABLES, SEATING, ELECTRIC BARBECUES AND A CHILDREN'S PLAYGROUND. THE HOUSE SHED PROVIDES AN UNDERCOVER AREA FOR LARGER GATHERINGS AND BUS TOUR GROUPS THAT VISIT THE AREA. ROCK SEA WALLS DEFINE THE PARK EDGE TO THE CREEK AND STAIRS GIVE ACCESS TO THE CREEK FOR WATER BASED RECREATION.

THE PARK IS THE VENUE FOR COMMUNITY EVENTS INCLUDING THE ANNUAL 'FISH AND CHIPS' FESTIVAL AND WOODCHOP, THE AMUSEMENT CARNIVAL AND THE KITES AND BIKES FESTIVAL.
- 4 TERRACE PARK :**

IS CLOSE TO THE TOWN CENTRE AND OVERLOOKS SIMPSONS CREEK. LARGE FIGS AND NORFOLK ISLAND PINES PROVIDE SOME SHADED AREAS AND THE PARK PROVIDES FACILITIES INCLUDING PICNIC TABLES, SEATING, ELECTRIC BARBECUES AND CHILDREN'S PLAYGROUND EQUIPMENT. A SOUND SHELL, INCORPORATING PUBLIC TOILETS AT THE REAR OF THE STRUCTURE IS USED AS A VENUE FOR COMMUNITY MUSIC EVENTS AND CONCERTS. THE HISTORIC TIMBER FOOTBRIDGE AT THE SOUTHERN END OF THE PARK PROVIDES ACCESS ACROSS SIMPSONS CREEK TO THE BEACH AND STAIRS ON THE FORESHORE GIVE ACCESS TO THE CREEK FOR WATER BASED RECREATION.

TERRACE PARK IS THE VENUE FOR A NUMBER OF COMMUNITY EVENTS AND FESTIVALS SUCH AS THE KITES AND BIKES FESTIVAL, THE 'MULLIM TO BRUNS' PADDLE, TRIATHLON, FUN RUNS AND VARIOUS OTHER COMMUNITY EVENTS.
- 5 SIMPSONS CREEK RESERVE :**

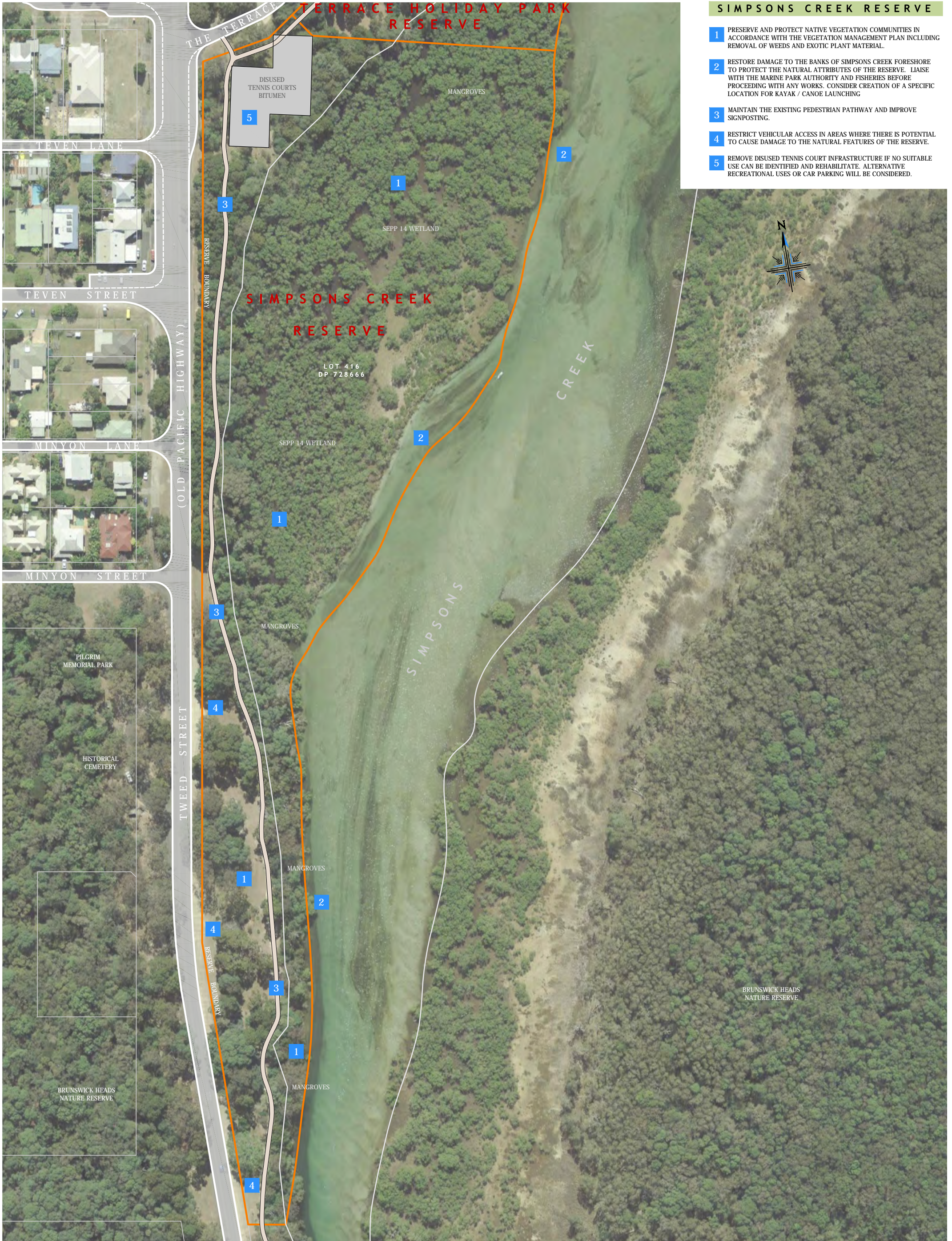
THIS AREA FORMS PART OF THE SOUTHERN GATEWAY TO BRUNSWICK HEADS AND CREATES A NATURAL VEGETATED CORRIDOR BETWEEN TWEED STREET AND SIMPSONS CREEK. THE PRINCIPAL IMPROVEMENT IN THE RESERVE IS A PATHWAY FOR PEDESTRIANS AND CYCLISTS WHICH PROVIDES A LINK TO THE VILLAGE CENTRE. AT THE NORTHERN END OF THE RESERVE A SUBSTANTIAL AREA IS OCCUPIED BY REMNANTS OF BITUMEN PAVING AND SECTIONS OF CHAIN WIRE FENCE WHICH WERE PART OF A TENNIS COURT COMPLEX.

ON HIGHER GROUND THERE ARE WELL-DEVELOPED STANDS OF COASTAL CYPRESS AMONG EXTENSIVE AREAS OF MOWED GRASS. LARGE AREAS OF MANGROVE OCCUPY THE LOW-LYING FORESHORE AND INTER-TIDAL ZONE TO THE EAST. THE CANOPY IS DOMINATED BY GREY MANGROVE (AVICENNIA MARINA) WITH STANDS OF COTTONWOOD (HIBISCUS TILIACEUS) COMMONLY OCCURRING ALONG THE UPPER EDGE OF THE MANGROVE.

**PRINCIPAL PUBLIC PEDESTRIAN ACCESS ROUTE :**



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**SIMPSONS CREEK RESERVE**

- 1** PRESERVE AND PROTECT NATIVE VEGETATION COMMUNITIES IN ACCORDANCE WITH THE VEGETATION MANAGEMENT PLAN INCLUDING REMOVAL OF WEEDS AND EXOTIC PLANT MATERIAL.
- 2** RESTORE DAMAGE TO THE BANKS OF SIMPSONS CREEK FORESHORE TO PROTECT THE NATURAL ATTRIBUTES OF THE RESERVE. LIAISE WITH THE MARINE PARK AUTHORITY AND FISHERIES BEFORE PROCEEDING WITH ANY WORKS. CONSIDER CREATION OF A SPECIFIC LOCATION FOR KAYAK / CANOE LAUNCHING
- 3** MAINTAIN THE EXISTING PEDESTRIAN PATHWAY AND IMPROVE SIGNPOSTING.
- 4** RESTRICT VEHICULAR ACCESS IN AREAS WHERE THERE IS POTENTIAL TO CAUSE DAMAGE TO THE NATURAL FEATURES OF THE RESERVE.
- 5** REMOVE DISUSED TENNIS COURT INFRASTRUCTURE IF NO SUITABLE USE CAN BE IDENTIFIED AND REHABILITATE. ALTERNATIVE RECREATIONAL USES OR CAR PARKING WILL BE CONSIDERED.



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**TORAKINA PARK**

- 1 IMPLEMENT TORAKINA HABITAT RESTORATION PLAN - REMOVE WEEDS AND RUBBISH, PROTECT AND RESTORE NATIVE VEGETATION.
- 2 INSTALL CLEAR SIGNPOSTING TO IDENTIFY ACTIVITIES THAT ARE PROHIBITED IN THE RESERVE, EG CAMPING AND LIGHTING OF FIRES.
- 3 PROGRESSIVELY ESTABLISH A FORMALISED ROUTE FOR THE FORESHORE PATHWAY - SURFACE TO BE HAILSTONE AND DETAILED LOCATION TO TAKE ACCOUNT OF THE LOCATION OF SIGNIFICANT VEGETATION AND ENVIRONMENTAL FEATURES. PROVIDE APPROPRIATE SIGNPOSTING. INSTALL SEATING AND PICNIC BENCHES AT SUITABLE LOCATIONS.
- 4 UPGRADE EXISTING PASSIVE RECREATION FACILITIES AND PROVIDE ADDITIONAL BARBECUES, PICNIC TABLES AND SHELTERS. REMOVE UNDERSTOREY AND LOWER LIMBS IN SELECTED LOCATIONS TO PROVIDE MORE OPEN SAFE SPACES.
- 5 PROTECT AND PRESERVE SENSITIVE VEGETATION COMMUNITY IN ACCORDANCE WITH THE TORAKINA HABITAT RESTORATION PLAN.
- 6 REPLACE EXISTING GATE AND PROVIDE CLEARLY SIGNPOSTED PEDESTRIAN ACCESS TO SOUTHERN ROCK WALL SEPARATE TO VEHICULAR ACCESS.
- 7 RENOVATE OR REPLACE EXISTING AMENITY BLOCK AND REPLACE WITH A NEW BUILDING OF SIMPLE DESIGN.
- 8 CONSTRUCT NEW CAR PARKING AREA FOR 18 VEHICLES.
- 9 DEVELOP A CLEARLY DEFINED PEDESTRIAN ACCESS ROUTE FROM TERRACE PARK AND THE VILLAGE CENTRE.

**PARK IMPROVEMENT PRECINCTS :**

- COASTAL CYPRESS PINE FOREST / COASTAL BANKSIA FOREST PRECINCT
- PARKLAND / WOODLAND PRECINCT
- COAST BANKSIA SHRUBLAND / LITTORAL RAINFOREST PRECINCT

**NOTE :**  
 BOUNDARY OF THE PART OF THE RESERVE THAT IS UNDER THE CARE, CONTROL AND MANAGEMENT OF THE N.S.W CROWN HOLIDAY PARKS TRUST

**NOTE :**  
 BOUNDARY OF THE PART OF THE RESERVE THAT IS NOT UNDER THE CARE, CONTROL AND MANAGEMENT OF THE N.S.W CROWN HOLIDAY PARKS TRUST

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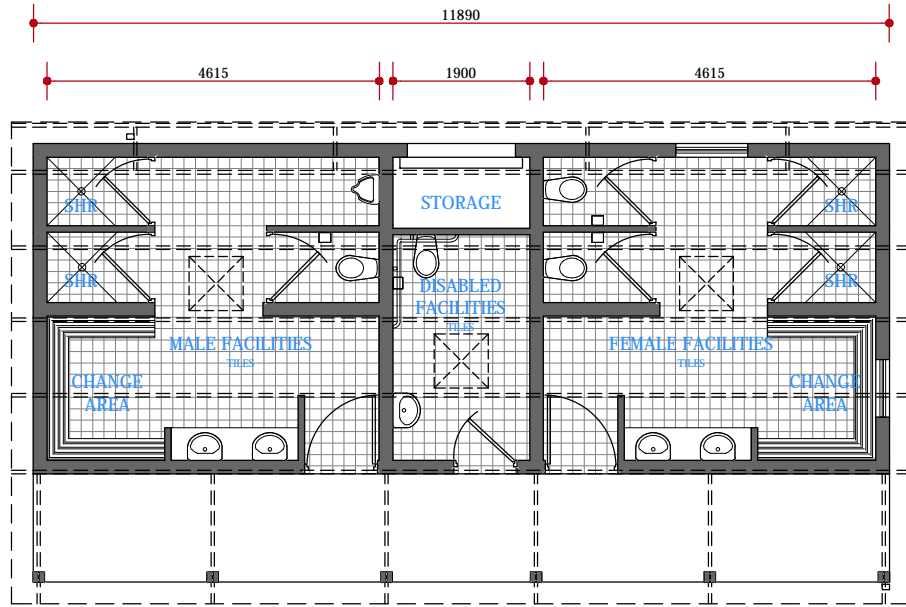
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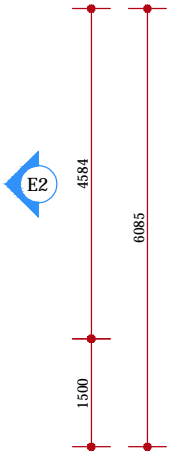
**TORAKINA PARK IMPROVEMENTS**

**PROPOSED PARK AMENITIES DESIGN CONCEPT**

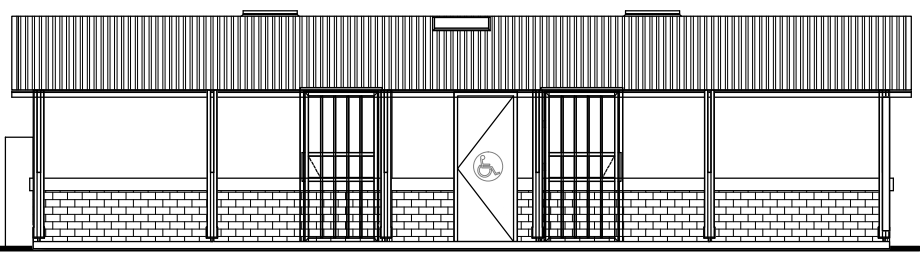
- THE TRUST WILL ASSESS THE COST TO ALTER AND RENOVATE THE EXISTING BUILDING TO ADDRESS MAINTENANCE AND VADALISM ISSUES.
- IF COST IS PROHIBITIVE, THE EXISTING BUILDING WILL BE REPLACED.
- THIS DRAWING IS INDICATIVE ONLY OF THE SCALE AND LOCATION OF ANY NEW AMENITY.
- FINAL DESIGN WILL INVOLVE DETAILED CONSIDERATION WITH RESPECT TO LAYOUT, AESTHETICS, MATERIALS ETC.



**FLOOR PLAN**

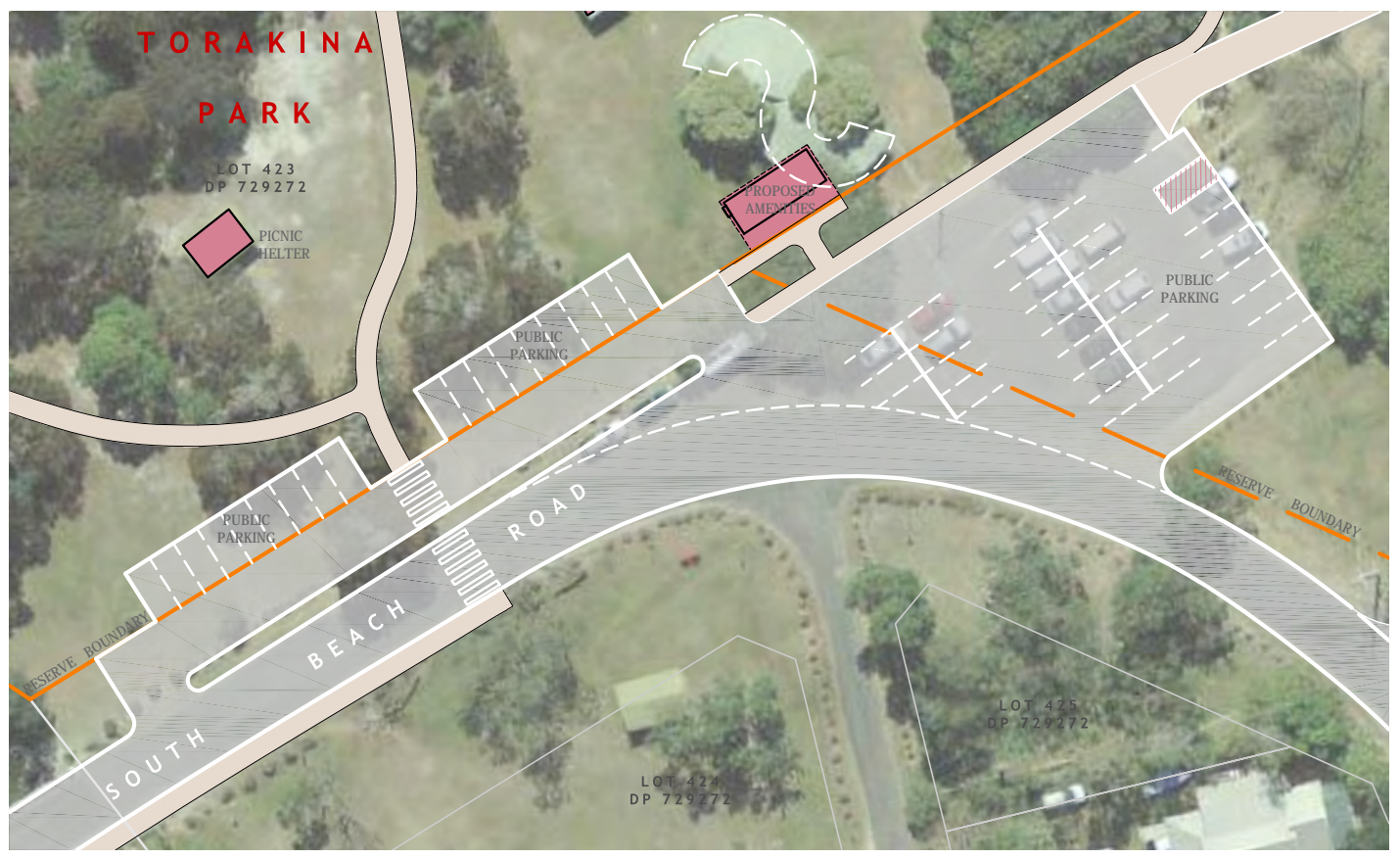
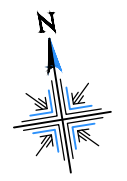


**ELEVATION E-2**



**ELEVATION E-1**

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**PROPOSED PARKING LAYOUT & AMENITIES SITING**



PROPOSED CONCEPT FOR DECK AND PLAYGROUND

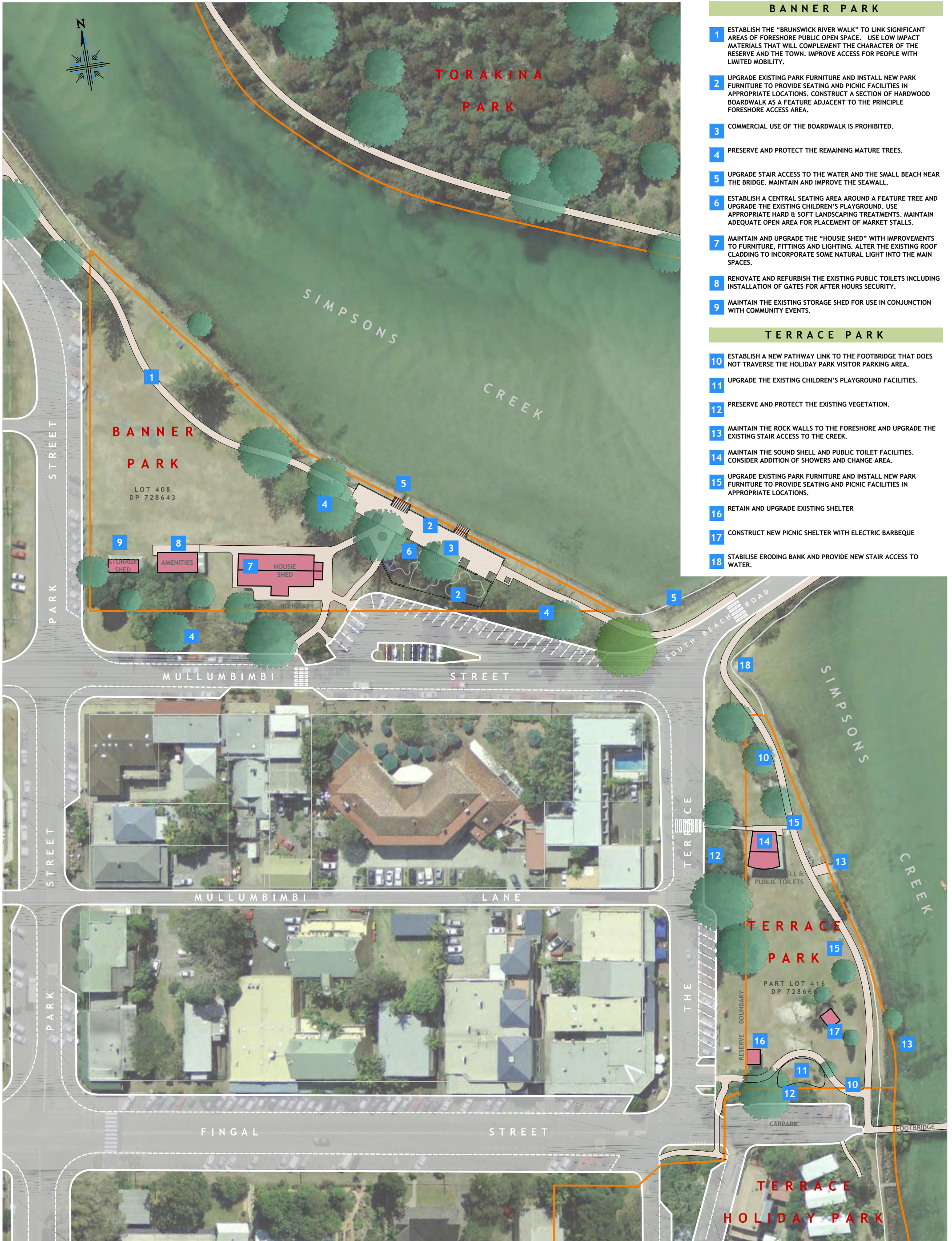
THE PROPOSED IMPROVEMENTS TO BANNER PARK WILL CREATE A FOCAL POINT FOR ACCESS TO AND ENJOYMENT OF THE FORESHORE. THE CONCEPT INCLUDES AN AREA OF RAISED DECK CONSTRUCTED FROM TIMBER SOURCED FROM THE REGION WITH SEATING AND PICNIC SETTINGS ALSO CONSTRUCTED FROM LOCAL HARDWOODS. THE DESIGN WILL:

- RETAIN CLEAR ACCESS AND SPACE FOR MARKETS AND EVENTS;
- PROTECT THE ROOTS OF NORFOLK PINES IN A HIGH TRAFFIC AREA AND PROVIDE SAFE PEDESTRIAN ACCESS;
- UPGRADE THE PLAYGROUND AND PROVIDE INTEGRATED SEATING TO ALLOW PARENTS TO SUPERVISE CHILDREN AND PROVIDE PHYSICAL SEPARATION BETWEEN THE PLAYGROUND AND SIMPSONS CREEK; AND
- PROVIDE LINKS TO THE BRUNSWICK RIVER AND SIMPSONS CREEK FORESHORE PATHWAYS WITH PEDESTRIAN CONNECTIONS TO TORAKINA PARK AND BEYOND.
- COMMERCIAL ACTIVITIES INCLUDING CAFES AND KIOSKS TO BE PROHIBITED ON THE BOARDWALK



DESIGN CONCEPT

FROM SIMPSONS CREEK



### BANNER PARK

- 1 ESTABLISH THE "BRUNSWICK RIVER WALK" TO LINK SIGNIFICANT AREAS OF FORESHORE PUBLIC OPEN SPACE. USE LOW IMPACT MATERIALS THAT WILL COMPLEMENT THE CHARACTER OF THE RESERVE AND THE TOWN. IMPROVE ACCESS FOR PEOPLE WITH LIMITED MOBILITY.
- 2 UPGRADE EXISTING PARK FURNITURE AND INSTALL NEW PARK FURNITURE TO PROVIDE SEATING AND PICNIC FACILITIES IN APPROPRIATE LOCATIONS. CONSTRUCT A SECTION OF HARDWOOD BOARDWALK AS A FEATURE ADJACENT TO THE PRINCIPLE FORESHORE ACCESS AREA.
- 3 COMMERCIAL USE OF THE BOARDWALK IS PROHIBITED.
- 4 PRESERVE AND PROTECT THE REMAINING MATURE TREES.
- 5 UPGRADE STAIR ACCESS TO THE WATER AND THE SMALL BEACH NEAR THE BRIDGE. MAINTAIN AND IMPROVE THE SEAWALL.
- 6 ESTABLISH A CENTRAL SEATING AREA AROUND A FEATURE TREE AND UPGRADE THE EXISTING CHILDREN'S PLAYGROUND. USE APPROPRIATE HARD & SOFT LANDSCAPING TREATMENTS. MAINTAIN ADEQUATE OPEN AREA FOR PLACEMENT OF MARKET STALLS.
- 7 MAINTAIN AND UPGRADE THE "HOUSE SHED" WITH IMPROVEMENTS TO FURNITURE, FITTINGS AND LIGHTING. ALTER THE EXISTING ROOF CLADDING TO INCORPORATE SOME NATURAL LIGHT INTO THE MAIN SPACES.
- 8 RENOVATE AND REFURBISH THE EXISTING PUBLIC TOILETS INCLUDING INSTALLATION OF GATES FOR AFTER HOURS SECURITY.
- 9 MAINTAIN THE EXISTING STORAGE SHED FOR USE IN CONJUNCTION WITH COMMUNITY EVENTS.

### TERRACE PARK

- 10 ESTABLISH A NEW PATHWAY LINK TO THE FOOTBRIDGE THAT DOES NOT TRAVERSE THE HOLIDAY PARK VISITOR PARKING AREA.
- 11 UPGRADE THE EXISTING CHILDREN'S PLAYGROUND FACILITIES.
- 12 PRESERVE AND PROTECT THE EXISTING VEGETATION.
- 13 MAINTAIN THE ROCK WALLS TO THE FORESHORE AND UPGRADE THE EXISTING STAIR ACCESS TO THE CREEK.
- 14 MAINTAIN THE SOUND SHELL AND PUBLIC TOILET FACILITIES. CONSIDER ADDITION OF SHOWERS AND CHANGE AREA.
- 15 UPGRADE EXISTING PARK FURNITURE AND INSTALL NEW PARK FURNITURE TO PROVIDE SEATING AND PICNIC FACILITIES IN APPROPRIATE LOCATIONS.
- 16 RETAIN AND UPGRADE EXISTING SHELTER
- 17 CONSTRUCT NEW PICNIC SHELTER WITH ELECTRIC BARBEQUE
- 18 STABILISE ERODING BANK AND PROVIDE NEW STAIR ACCESS TO WATER.

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