

Bruce Chick Conservation Park  
**Plan of Management**

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<b>1</b>	<b>Public Land Management .....</b>	<b>1</b>
1.1	What is a Plan of Management? .....	1
1.2	What is the Statutory Context of the Plan? .....	1
1.2.1	Making the Plan .....	1
1.2.2	The Dealings Council can have in this Land .....	1
1.2.3	Granting a Lease or Licence on the Land .....	1
1.2.4	Other Statutory Provisions .....	1
1.3	Community Consultation .....	2
<b>2</b>	<b>Land Description and Site Details.....</b>	<b>3</b>
2.1	The Plan Area.....	3
2.2	Statutory Zoning of the Park .....	3
2.3	The Park .....	3
2.4	Park Facilities .....	4
<b>3</b>	<b>Critical Management Issues .....</b>	<b>6</b>
3.1	Purpose of the Park.....	6
3.1.1	Bruce Chick Memorial .....	6
3.1.2	Informal (Casual) Access for the Public .....	6
3.2	Protection of the Environment .....	7
3.3	Flooding .....	7
3.4	Condition of Park Facilities .....	7
3.4.1	Stotts Island Environment Centre .....	7
3.4.2	Public Toilets.....	8
3.4.3	Arboretum and Bridge Access .....	10
3.4.4	Internal Access Road and Parking Area .....	11
3.4.5	General Land Management .....	11
3.4.6	Signage.....	12
3.5	Drainage Union .....	13
3.6	Conclusions .....	14
<b>4</b>	<b>Open Space Management Principles.....</b>	<b>16</b>
4.1	Funding Opportunities .....	16
4.2	Use.....	16
4.3	Access .....	16
4.4	Safety and Security .....	16
4.5	Environmental Impacts .....	17
4.6	Maintenance.....	17
4.7	Animals.....	17
4.8	Signage.....	18
4.9	Easements.....	18
4.10	Leases and Licences.....	18
<b>5</b>	<b>Management Options .....</b>	<b>19</b>
5.1	Options for Critical Park Facilities and Activities .....	19
5.1.1	Stotts Island Environment Centre .....	19
5.1.2	Overnight Camping .....	19
5.1.3	The Arboretum .....	20
5.1.4	Access Road.....	20
5.2	Park Management Options .....	20

# Table of Contents



5.2.1	Option 1: Retain the Park for Casual Use with no Major Facilities (no camping)	20
5.2.2	Option 2: Retain all existing Facilities at the Park but only for casual recreational activities (no camping)	21
5.2.3	Option 3: Retain all existing Facilities and Activities at the Park (includes overnight camping)	21
5.3	<b>Preferred Management Option</b>	<b>21</b>
<b>6</b>	<b>Management Objectives, Aims, Strategies and Actions</b>	<b>23</b>
6.1	<b>Aims and Objectives</b>	<b>23</b>
6.1.1	Objective	23
6.1.2	Aims	23
6.2	<b>Preferred Management Strategy</b>	<b>23</b>
6.3	<b>Action Plan</b>	<b>24</b>
<b>7</b>	<b>Appendices</b>	<b>26</b>
7.1	<b>Appendix 1 - Extract from Tweed LEP 2014</b>	<b>26</b>
7.2	<b>Appendix 2 - Proposed Signage</b>	<b>28</b>
7.3	<b>Appendix 3 - Bruce Chick Park Rehabilitation Plan</b>	<b>30</b>



# 1 Public Land Management

## 1.1 What is a Plan of Management?

This Plan of Management (the Plan) provides a framework for the use, management, and development of Bruce Chick Conservation Park (the Park) and the means for achieving these outcomes through a series of clear strategies and detailed actions. In so doing the Plan promotes a balanced, responsible and ecologically sustainable use of the Park which meets the needs of the Tweed community.

## 1.2 What is the Statutory Context of the Plan?

### 1.2.1 Making the Plan

As the Park is located within the road reserve of the former Pacific Highway there are no statutory requirements for the preparation of the Plan pursuant to the Roads Act 1993

### 1.2.2 The Dealings Council can have in this Land

Dictated by Division 2 Roads Act

### 1.2.3 Granting a Lease or Licence on the Land

Dictated by Division 2 Roads Act

### 1.2.4 Other Statutory Provisions

Other relevant legislation, plans and policies that guide the management of the Park include, but are not limited to:

- Tweed Shire Local Environmental Plan 2014
- North Coast Regional Environmental Plans 1988
- North Coast Region Tourism Development Strategy 1987
- New South Wales Open Space Strategy 1990
- Local Government Act 1993
- Local Government (General) Regulation 1999
- Environment Protection and Biodiversity Conservation Act 1999
- Threatened Species Conservation Act 1965
- Rivers and Foreshores Improvement Act 1948
- Fisheries Management Act 1994
- Native Vegetation Conservation Act 1997
- National Parks and Wildlife Act 1974
- Noxious Weeds Act 1993
- Rural Fires Act 1997
- Environmental Planning and Assessment Act 1979
- Disability Discrimination Act 1992
- Integrated Catchment Management Plan - Northern Rivers Catchment (2002)
- NSW Flood Policy 1984

- NSW Wetlands Management Policy 1996
- NSW Floodplain Management Manual 2001

### **1.3 Community Consultation**

A community consultation process was undertaken in 2013 which provided a number of management options for consideration. 115 submissions were received but no clear preference was demonstrated. In the interim, the option of utilising the area for a farmers market was also considered but dismissed.

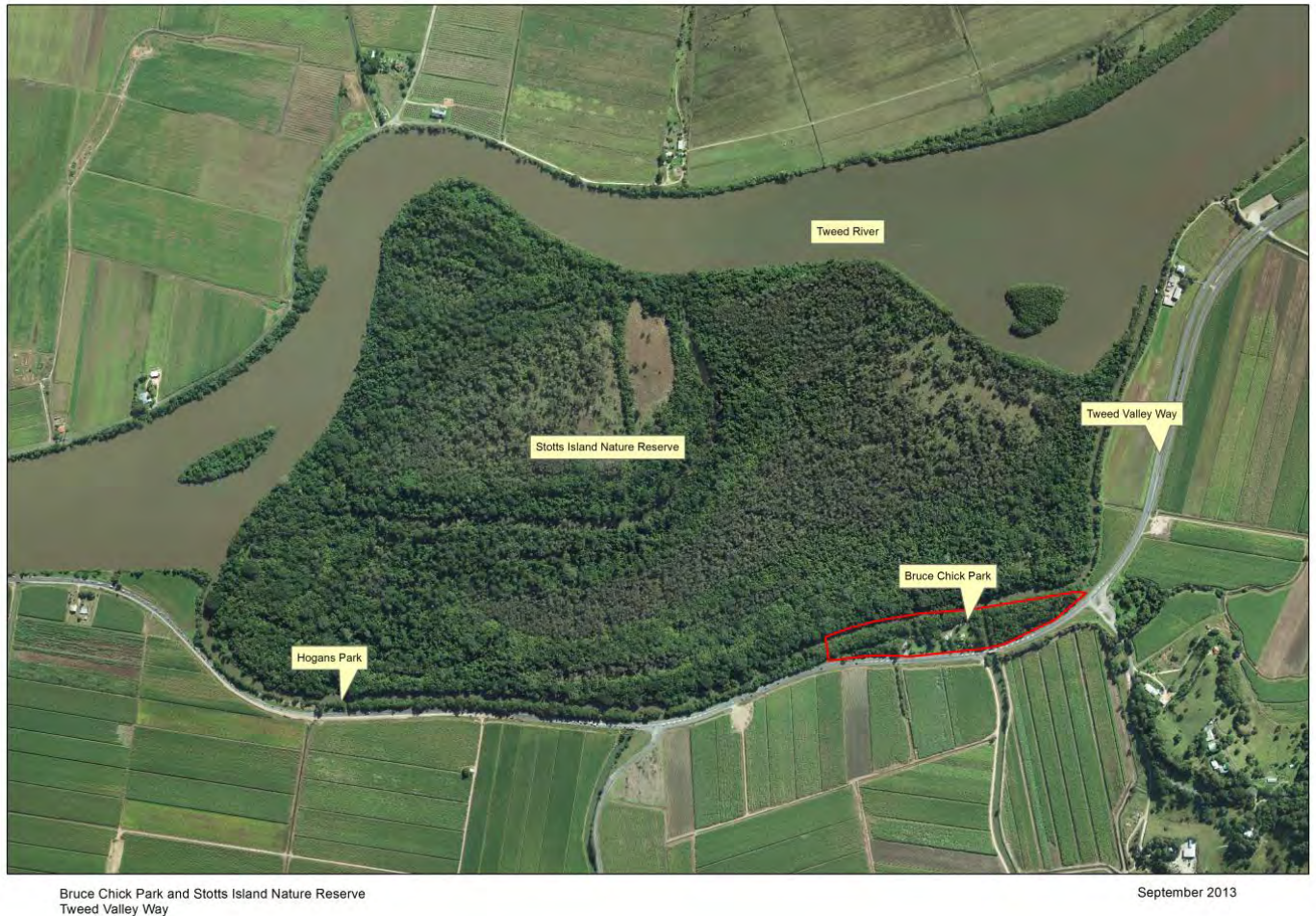
In order to ensure that the Plan meets the needs of the community and has their support, it is recognised that it is essential to obtain their input through effective community consultation. This Plan has been developed taking into consideration community wants and needs.

To facilitate community input, the draft Plan will be placed on public exhibition in a number of locations for a period of 28 days.

## 2 Land Description and Site Details

### 2.1 The Plan Area

Bruce Chick Conservation Park (the Park) is located on Tweed Valley Way north of Tumbulgum at Stott's Island (Figure 1). The area covered by this Plan covers approximately 4.2ha.



**Figure 1: Location of Bruce Chick Conservation Park**

### 2.2 Statutory Zoning of the Park

The Park is part zoned RU1 Primary Production and part zoned Natural Waterways in the Tweed Local Environmental Plan 2014 (TLEP 2014), which limits any development or activity at the Park to those which are normally associated with agricultural and waterway activities. Relevant extracts from TLEP 2014 are set out in Appendix 1.

In accordance with the Environmental Planning and Assessment Act 1979, Tweed Shire Council as the consent authority, controls development and the use of land on parks and reserves in the Tweed Shire Council local government area. Consistency with Council's TLEP 2014 and the principles of community land management is important.

### 2.3 The Park

The Park is located within the road reserve of the former Pacific Highway. The northern boundary of the Park is Stotts Creek, a tributary of the Tweed River; and beyond that is Stotts Island Nature

Reserve which is managed by the NSW National Parks and Wildlife Service (NPWS). The Park is bordered on the south by the Tweed Valley Way.

The western boundary of the Park is approximately 150 metres west of the entry road, before the road reserve narrows and the eastern boundary opposite the Cudgen Road entry.

The Park is dedicated to the memory of Bruce Chick as an environmental interpretative and recreation area. It includes the Stott's Island Environment Centre, which was built as a Bicentenary project in 1988 in conjunction with the NPWS as a buffer to the Stotts Island Nature Reserve, which was experiencing significant impact from visitors, in particular from overnight camping. The vision of Bruce Chick was to offer visitors a taste of Stott's Island and to provide a vegetative buffer to Stott's Island from the highway.

Subsequently the Park has become popular with recreational vehicle (RV) travellers and other campers as a 'free' site.

In 2000 the NPWS in consultation with Council updated the interpretation information in the Centre and constructed new information boards.

The Park is crossed by Leddys Creek and McLeods Creek, which flow into Stotts Creek on the northern boundary of the Park. These creeks drain the cane land to the south.

The Park, being located alongside the Tweed River, is subjected to regular and significant inundation.

## **2.4 Park Facilities**

Facilities at the Park include:

- Stotts Island Environment Centre, a substantial timber shelter in the centre of the Park and raised above flood levels in the Park with toilets, water and information/interpretation boards displaying information about Stotts Island and Bruce Chick,
- access to the Tweed Valley Way (which incorporates de-acceleration lanes into the Park)
- an internal access road (partly unsealed and partly the old concrete Pacific Highway) alongside Stotts Creek and an unsealed parking area alongside the Centre,
- an Arboretum at the eastern end of the Park, with accessible rainforest walks and individual tree species identified. Because it is bounded by Tweed Valley Way, an arm of the Tweed River and McLeods Creek, it can only be safely accessed via a bridge across this Creek. The bridge has been condemned and therefore there is currently no access to the Arboretum for either visitors or Council maintenance.

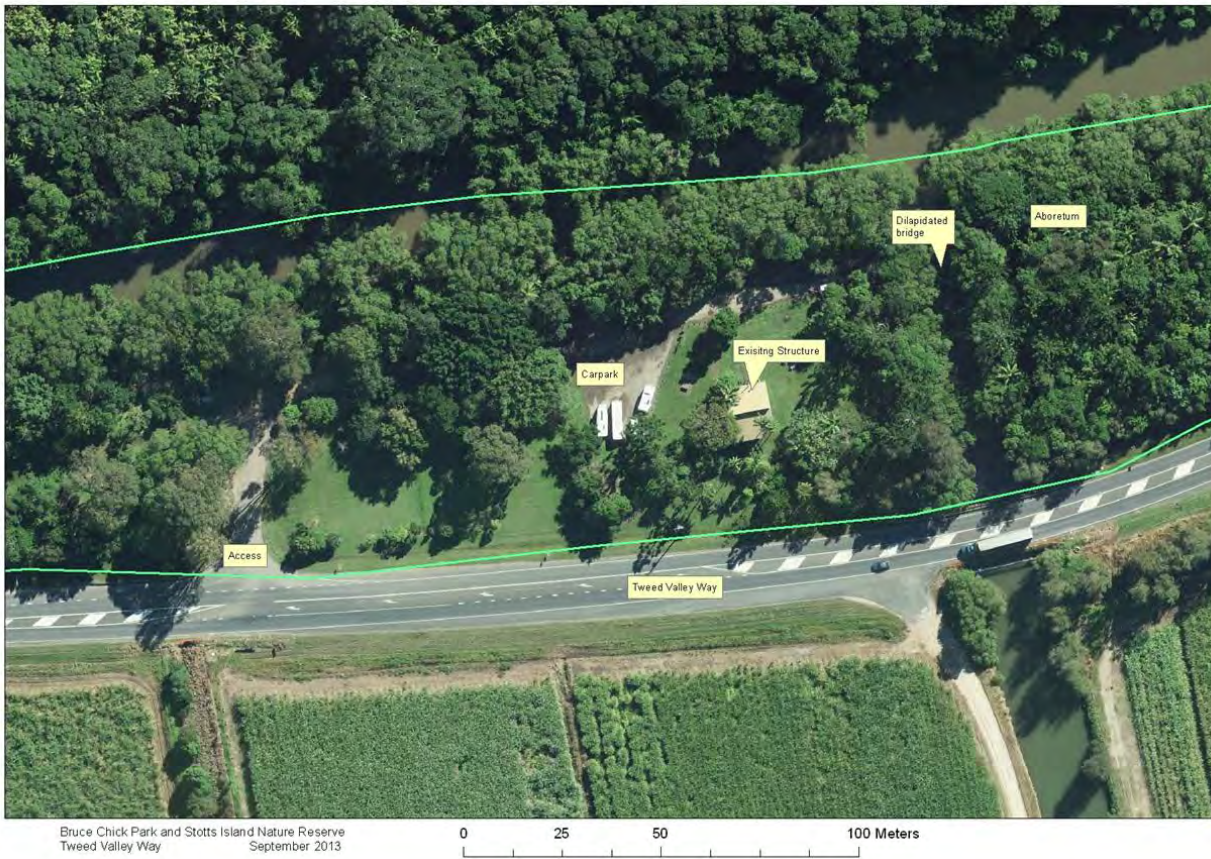
There are extensive grassed areas around the entrance to the Park and the shelter shed which provide not only an attractive setting to the Park, but also clear visibility of the most used parts of the Park. There are scattered trees within this grassed area, some of which are either dead or dying.

The remainder of the Park is vegetated as follows and as illustrated in Figure 2:

- alongside Stotts Creek there are patches of remnant vegetation amongst recent re-vegetation
- alongside the former Pacific Highway there are patches of mature trees



- the Arboretum as noted above
- mangrove regeneration in the creeks traversing the Park
- significant and on-going strategic planting of local rainforest vegetation over recent years alongside Tweed Valley Way as well as Stott's Creek.



**Figure 2: Bruce Chick Conservation Park indicating main features**

## 3 Critical Management Issues

This Section discusses the various management issues Council faces at the Park and possible solutions.

### 3.1 Purpose of the Park

There are currently significant conflicts in the purpose of the Park between the various recreational, conservation and tourist activities at the Park.

#### 3.1.1 Bruce Chick Memorial

The Park is dedicated to the memory of Bruce Chick who was not only responsible for the rehabilitation of the land that makes up this Park, but was also instrumental in the recognition of the environmental importance of the Tweed Valley.

The Park is located alongside a unique remnant vegetation community and therefore offers significant educational and recreational opportunities.

#### 3.1.2 Informal (Casual) Access for the Public

The primary intended use of the park is for casual recreation

The facilities for casual recreational use of the Park are in a poor state of repair (as detailed in section 3.4). The poor condition of these facilities does not encourage casual recreational use of the park or present a positive image for Council or the Tweed.

#### 3.1.3 Overnight Rest Area

The Park from its inception has been used as a free overnight stop for travellers:

- to discourage camping on the adjoining Stotts Island Nature Reserve; and
- to provide somewhere for motorists, in the interests of highway safety, to take a break.

The acceptability of this use is based on the status of the Park as a Road Reserve. Camping in a roadside rest area may be permitted, unless a 'no camping' or 'no overnight stays' sign has been placed there by Council.

The Park features in publications identifying free overnight camp sites and its popularity has also spread through word of mouth.

This use of the Park has had a significant impact through the use and misuse of the toilet facilities, the use of the shelter shed for accommodation, parking of vehicles in vegetated areas and illegal dumping around the Park. These impacts require greater Council resources to maintain the Park than other parks in the Shire where overnight stays are not permitted.

Bollards have been erected alongside the internal access road to keep parking and camping away from the vegetation alongside the creek and the road. To the detriment of this vegetation some of the bollards have been illegally removed to provide access for camping.

To ensure that camping is restricted to bone fide overnight travellers, and hence reduce the impact of camping, in August 2006 Council prohibited stays at the Park for periods longer than 24 hours.

Council Rangers undertake a daily drive through the Park and record details of vehicles parked at the site. This enables Council to issue a Penalty Notice - Offence Code 8646. Failure to comply with the terms of the Notice erected by Council (driving/parking/use of vehicle) can result in a fine of \$110).

### 3.2 Protection of the Environment

The Park not only contains a significant and sensitive riparian environment but also adjoins the Stotts Island Nature Reserve. This Nature Reserve is managed by the NPWS. Due to its fragile nature as one of the least disturbed areas of vegetation in the lower Tweed Valley floodplain, public access to the Nature Reserve is prohibited. The Nature Reserve is also the habitat of the endangered Mitchells Rainforest Snail (*Thersites mitchellae*).

The environmental impact from the Park's use for casual recreation and overnight camping is exacerbated by the dumping of roosters and chickens with accompanying adverse impacts on vegetation and habitat. Council resources are required to periodically relocate the birds.

Any use of the park should be managed so as to minimise impacts of the environmental values of the park and the adjoining Stotts Island nature Reserve

### 3.3 Flooding

The Park is located alongside Stotts Creek, and the ground level is around 1.0m AHD. Consequently, significant and frequent flooding occurs, with depths in excess of 1m commonly occurring during 1 in 5 year flood events.. Peak flood levels have been estimated as follows:

- 20% or 1 in 5 year flood - 2.2m AHD
- 5% or 1 in 20 year flood - 2.7m AHD
- 1% or 1 in 100 year flood - 3.7m AHD

This degree of inundation has serious consequences for:

- The design and construction of facilities that are raised above flood levels. The floor level of the shelter shed has been constructed at 3.3m AHD, which creates the need for ramps to meet disability access requirements.
- The design and construction of other facilities to withstand the impact of flooding (such as the internal access road, and toilets)
- The cost of clean-up and any repair work following flooding; and
- The supervision of the Park in flood events to ensure public safety.

The cost of cleaning up after a single flood event is estimated at \$4,000. Flood events regularly occur more than once in any one year.

### 3.4 Condition of Park Facilities

#### 3.4.1 Stotts Island Environment Centre

Stotts Island Environment Centre is a timber building which consists of an open main area containing toilets, picnic tables and information boards. The specific issues concerning the toilet facilities are discussed in Section 3.4.2 below.

The building was designed aesthetically and practically to fit with the Conservation Park. It is elevated approximately 1.9m above ground level with one access ramp facing the car park. Due to

its location it is subject to vandalism and deterioration from the elements. On the east and west corner of the building there are exposed rafter sections with palms and trees growing through.

Whilst the sub-structure is in good condition, overall the building shows a fair to poor condition across a number of building elements. The Centre is in need of repair/modernisation to bring it up to current Building Code of Australia (BCA) and Disability Access Act (DDA) standards, as follows

1. Access ramp and hand rails replaced to comply with BCA, and DDA.
2. Rotted sections of flooring replaced
3. All barrage board replaced and painted
4. External vertical boards sanded, sealed and repainted
5. External rafters replaced or cut back and supported
6. Alsynite panels between roof levels replaced
7. Clean and paint roof, roof screws replaced
8. Presumed ACM sheeting removed in male and female toilets including sheeting underneath tile floor
9. Sand and paint internal and external toilet vertical boards

The cost of rehabilitating the Centre is conservatively estimated at \$75,540.

**Table 1: Cost estimates to rehabilitate Stotts Island Environment Centre**

Item	Cost – high estimate (\$)	Cost – low estimate (\$)
Handrails and balustrades	30,800	28,400
Decking	4,750	4,750
Ramps and steps	27,200	27,200
Roofing	1,500	1,500
Toilet block (excluding effluent disposal)	16,830	13,690
<b>Total</b>	<b>81,080</b>	<b>75,540</b>

Servicing and maintenance of the Shelter Shed is estimated at \$16,000 pa.

### 3.4.2 Public Toilets

The toilets within the Centre have presented a number of challenges over the life of the facility.

A wet compost toilet system was installed in about 2000, which failed to function adequately due to contamination from foreign matter, general garbage waste and chemical additives (RV / caravan chemical toilet waste).

Compost Toilet systems at roadside rest stop facilities are problematic and fail due to the variable behaviour of persons who use the facilities. Once compost toilets malfunction foul odour and unhygienic conditions result in travellers using surrounding bushland for ablution and urination rather than the toilet. There is evidence of campers using the bushland areas at the Park rather than the existing toilet.

This compost system has been decommissioned and the primary collection chamber utilised as a pump out system. The integrity of the collection well is unknown and may have become compromised with leaching of sewage into ground waters. Whilst no evidence of leaching has been established, anecdotal reports indicate the volume of liquid waste collected appears to be less than the expected volume generated by the activity at the site.

As a consequence the existing toilets are grossly inadequate.

The constraints for any on-site waste disposal at the Park include;

1. Proximity to the Tweed River,
2. High volume seasonal rainfall
3. High ground water table,
4. Low soil permeability
5. Acid Sulphate soils,
6. Lack of any available land considered as suitable for use as an effluent land application area (when assessed under NSW Regulations and Australian Standards),
7. Flooding events,

The preferred option would be a connection to a Treatment Plant, which would require

- a rising main connection to Tumbulgum (the nearest Plant)
- pump station(s) because of the length of the line; and
- some form of preliminary treatment at the Park because of the limited amount of liquid material and the danger of septicity.

Preliminary estimates for a connection to the Tumbulgum Treatment Plant are in excess of \$570,000 with an annual operating and maintenance budget of \$8000. Consequently HMC Pty Ltd were engaged to undertake a preliminary site feasibility and capacity assessment for On-site Sewage Management at the Park<sup>1</sup>.

The consultants have concluded that the relatively low input of carbonaceous material in the wastewater stream, combined with the dumping of chemical toilet waste and foreign objects into the toilet pedestals has resulted in unsatisfactory effluent treatment occurring within the composting chamber.

This inadequate usage and effluent treatment has resulted in the need for a pump-out by a liquid waste contractor of the compost chamber approximately every 2 months.

The site constraints, including insufficient setback to the Tweed River, and a high water table, presented on balance a significantly high risk, even allowing for a high microbiological effluent quality being provided in an upgraded sewage treatment plant.

It is estimated that peak usage event during school holidays will require an irrigation area of 2600m<sup>2</sup>, with off-peak average loads requiring 1300m<sup>2</sup>. The available effluent land application area is 1300m<sup>2</sup> on the site, but is constrained by flood hazard, high ground water tables and proximity to the Tweed River.

The site is expected to be inundated to a depth of 1.2m in a 1 in 5 year flood event. The volume of fill material required to achieve a satisfactory elevation of the effluent distribution system is 2.7m above the 1 in 20 year peak flood level. This volume of fill is considered a practical limitation for the site. Chemical toilet waste from recreational vehicles requires a separate dump point, associated wastewater storage and pump-out facilities to be provided on site as part of the upgraded toilet facilities.

The consultants consider that the upgrade of toilet facilities at Bruce Chick Park will create an unacceptable risk of environmental impact.

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<sup>1</sup> Preliminary Site Feasibility & Capacity Assessment for Wastewater Management for Upgrade of the Toilet Facility in Bruce Chick Conservation Park. HMC Pty Ltd, Report No HMC2014.113, November 2014

They recommend that if a toilet facility is to remain at Bruce Chick Park, on-site land application of the effluent is not a suitable method of effluent disposal. Should the toilet facility remain, the following actions are recommended:

- The existing waterless composting toilets should be replaced with low volume, dual flush cisterns.
- The existing wash hand basins should be replaced with smaller bowls and spring loaded, aerator taps.
- Replace the existing composting chamber with an effluent storage pumpwell with the necessary hose coupling mechanisms in place for ease of pump out. Such equipment is to be designed to prevent the dumping of sullage/chemical waste into the cisterns.

The estimated cost to upgrade the toilet facility is \$67,000. Approximate costs per pump out are \$370 using a 10KL tanker. Frequency will be determined by usage with an expected range of between 2000l to 4000l/day. The toilets are cleaned daily Monday to Friday.

### **3.4.3 Arboretum and Bridge Access**

The Arboretum represents a unique and significant local asset. Considerations include:

- countless hours of volunteer work over 30 years to develop which cannot be replicated elsewhere in the short term
- whilst it may require some species rationalisation it is at a point where understorey specie may be introduced and 'layering' encouraged to enhance its structural development;
- as a community asset it is a key component for interpretation of Lowland Subtropical Rainforest in Tweed; and
- the adjoining Stott's Island Nature Reserve is the largest remnant of such rainforest left in NSW and it is Critical Habitat for Mitchell's Rainforest snail. The continued accessibility of the Arboretum would sustain this message to the community.

With a small outlay the Arboretum could provide an outdoor classroom for schools, researchers and environmental education officers and change the focus of usage of the Park back to that intended. To achieve this, the following are required:

- Identification of vegetation to enhance the interpretation of the site.
- Assessment of vegetation for structural soundness and safety.
- Pruning vegetation along the edge of the pathway to allow clear access.
- Refurbish the pathways as required.
- Installation of interpretive signage to identify selected species.
- Continued maintenance.

The bridge to the arboretum across McLeods Creek presents the greatest impediment to the rehabilitation of the asset as it provides the only access. As it has been closed for many years not only has public access been denied to the Arboretum, but also no maintenance has been undertaken. Reconstruction of the footbridge is estimated to cost between \$156,000 (galvanised steel) and \$219,000 (aluminium), together with \$7,500 to remove the existing bridge. In addition to this direct cost, other financial implications of replacing the bridge include:

- regular asset inspection costs,

- specialist personnel required to maintain the asset
- potential damage arising from the high incidence of flooding at the park.

#### 3.4.4 Internal Access Road and Parking Area

The park is serviced by an internal concrete access road alongside Stotts Creek and an unpaved small parking area alongside the Centre. This road was originally part of the Pacific Highway until local improvements made it redundant. Parts of the access road are screened from the Highway by mature trees. The gravel parking area accommodates about 8 cars.

The road and car park experience flooding as noted in section 3.3. As a consequence they are regularly washed out leaving large pot holes and layers of silt which require regular maintenance. The surface of the access road is badly cracked and uneven; and the edges broken and rutted.

For safety reasons the repair of flood damage after each incidence is treated as a priority. The cost of cleaning up after a single flood event is estimated at \$4,000. Flood events regularly occur more than once a year.

The existing roadway is no longer serviceable and therefore two options have been examined (Figure 3):

1. Re-construction of existing concrete access road estimated cost \$213,700
2. Re-alignment of the road estimated cost \$226,300

Both options would require a similar investment and the latter also allows for removal of camping from sensitive environmental areas, and increase the surveillance of activities along the access road. Clear-up costs following a flood would remain although at a lower level due to the improved road surface and associated drainage.

Bollards have been erected along the road to keep parking and camping away from the vegetation along the creek and highway. Some of the bollards have been removed to the detriment of this vegetation. Any increase in the volume of campers, recreational vehicles and caravans would exacerbate these problems. The cost of re-bollarding the access road is estimated to be from \$19,000 to \$24,000.

#### 3.4.5 General Land Management

The park includes significant areas of grass which require regular mowing, particularly during peak tourist season. In addition to the resources required for mowing, additional costs arise from changes to Workplace Health and Safety regulations which have placed restrictions on the range of plant that can be driven along the Tweed Valley Way. Consequently, all machinery used at the park must now be transported by trailer.

Whilst the area around the existing Centre and parking area should remain grass, three other grass areas have the potential for tree planting, which would reduce long term maintenance costs and improve the appearance of the Park:

- An area of about 2,500m<sup>2</sup> at the western end of the park, which is part of the former Pacific Highway (Area A in Appendix 3)
- An area of about 250m<sup>2</sup> at the entrance to the Park, which includes large eucalyptus trees in poor health (Area C in Appendix 3)

- An area of about 250m<sup>2</sup> between the Arboretum and McLeods Creek (Area D in Appendix 3).

In addition

- there is a small number of trees in the Park which are showing signs of stress and in need of either surgery or removal
- there is scope for protecting and strengthening the existing vegetation along the banks of Stotts Creek
- there is potential to accommodate a re-located Arboretum in the event that the bridge to the existing facility is not to be replaced.

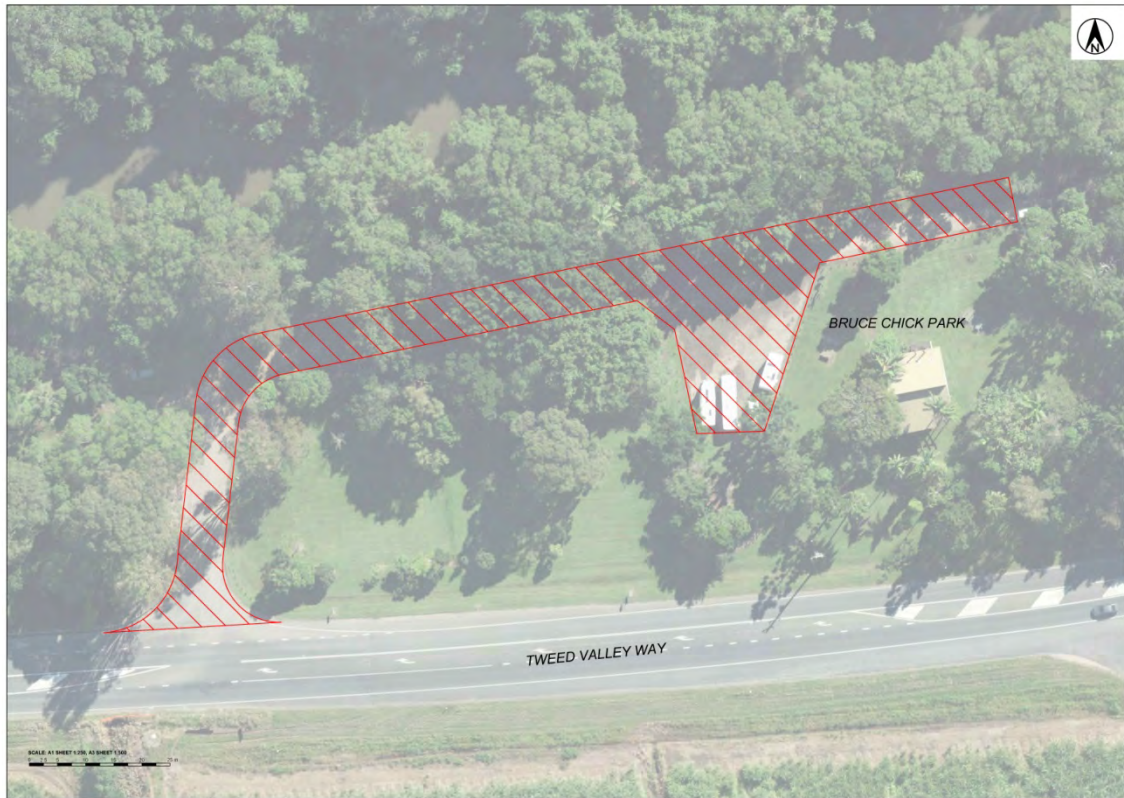
Based on a cost of planting at \$6-\$7/m<sup>2</sup> the estimate for the rehabilitation of areas A, C and D above is \$18,000 - \$21,000. The additional costs for protecting and strengthening the existing vegetation along the banks of Stotts Creek could only be assessed after a detailed site investigation.

A detailed Rehabilitation Plan for the Park is set out in Appendix 3. It is essential that all dumped roosters and chickens are removed as soon as they are made known to Council, and the site kept free of these birds prior to and during establishment of plants on site.

### **3.4.6 Signage**

Existing signage has deteriorated and requires replacement, at a cost estimate of \$5,000. Details are set out in Appendix 2.





**Figure 3: Road alignment options 1 and 2**

### **3.5 Drainage Union**

Stotts Creek, Leddys Creek and McLeods Creek are considered to be critical by the adjoining cane farmers and the Duranbah Swamp Drainage Union in the management of adjoining cane land. None of these water courses fall within the ambit of the Union.

Cane growers have expressed concern that these water courses create impediments to the effective dispersal of flood waters due to sedimentation, falling trees and branches; and vegetation regrowth (particularly mangroves). The adjoining cane land needs a rapid dispersal of water to minimise any adverse impact of flooding on the cane crop. This requires the water courses to be kept clean and free of impediments.

As noted in Section 2.4 there is significant vegetation alongside these water courses which not only contribute to the environmental values of the Park, but also its overall ambience and setting. Drainage works may adversely impact on these values.

The immediate issues are

- the legal entitlements of landowners/Union in respect of access to these water courses; incorporating any such entitlements into the design and use of the Park; and managing any impacts of drainage works.
- The legal liabilities for Council as a consequence of the drains being through Council land.

### **3.6 Conclusions**

The Bruce Chick Conservation Park and Stott's Island Environment Centre were developed with the intention of providing information and interpretation about Stott's Island Nature Reserve and to rehabilitate the area to offer visitors a sample of vegetation growing on Stott's Island.

Over the years these goals have been realised, but the infrastructure is at the end of its life cycle and the use of the Park has evolved in unintended directions. This presents an opportune time to review the current and preferred use of the site and plan accordingly.

The cost estimates for the improvements detailed in this section together with typical annual maintenance costs are summarised in Table 3.

**Table 3 Cost estimates for the rehabilitation of the Park**

<b>Item</b>	<b>Cost – high (\$)</b>	<b>Cost – low (\$)</b>
<b>Shelter Shed</b>		
Handrails and balustrades	30,800	28,400
Decking	4,750	4,750
Ramps and steps	27,200	27,200
Roofing	1,500	1,500
Toilet block	16,830	13,690
<b>Total</b>	<b>81,080</b>	<b>75,540</b>
<b>Toilet – pump-out system</b>	<b>67,000</b>	<b>67,000</b>
<b>Bridge replacement</b>		
Remove existing bridge	7,400	7,400
PML Bridge	219,000	
K1105 Bridge		156,000
<b>Total</b>	<b>226,400</b>	<b>163,400</b>
<b>Access road</b>		
Rebuild existing access	226,300	
Alternate access		213,700
<b>Total</b>	<b>226,300</b>	<b>213,700</b>
<b>Landscape rehabilitation</b>		
Bollards	19,500	24,750
Planting	18,000+	21,000+
<b>Total</b>	<b>37,500</b>	<b>45,750</b>
<b>Signage</b>	<b>5,000</b>	<b>5,000</b>
<b>TOTAL</b>	<b>643,280</b>	<b>570,390</b>

## 4 Open Space Management Principles

This Section outlines Council's general management principles related to the planning, management and maintenance of open space in the Tweed. Any strategies and actions proposed in this Plan must be generally consistent with the principles listed.

### 4.1 Funding Opportunities

The development, embellishment and maintenance of open space within the Tweed Shire requires allocation of financial resources commensurate with the agreed service levels. Funding is allocated primarily from rate revenue through the Council's integrated planning process. NSW Local Governments are currently working through the State Government *Fit for the Future* process that requires Council's to critically review their sustainability and the sustainability of the services they provide

Consequently, investment in the Park must be determined in the context of the value of the Park as an overall service and asset in Council's open space portfolio.

### 4.2 Use

Open space is utilised for a variety of informal uses. Changing usage patterns will influence the demand for certain types of facilities (eg the increased demand at the Park for roadside camping over recent years). The provision of multi-purpose facilities allows for changes in use to be catered for with minimum cost or disruption.

### 4.3 Access

Open space should be accessible to the whole community, regardless of age, gender or ability. Council should improve opportunities for groups within the community that traditionally face difficulties in accessing facilities. In this regard, they need to be appropriately named and signposted to be recognisable and accessible to the local community.

There is a need to ensure an appropriate balance of parking without compromising the aesthetics or recreational function of the land. Safe access in and through car parking areas is a major community concern.

### 4.4 Safety and Security

The safety of the community is an important consideration in the design, management and maintenance of open space. Park and facility design should be undertaken with reference to the Crime Prevention Through Environmental Design (CPTED) principles

Vandalism of facilities, actual and perceived threat from anti-social behaviour, particularly discarded needles and general litter are a major focus of concern.

Vandalism of facilities, such as amenity blocks, means they are sometimes unusable, with toilet facilities remaining locked from time to time. Security fencing and increased lighting levels can improve security, however this is not always appropriate as well as being costly and create problems such as lighting overspill, decreased visual appeal, reduced interface amenity and restrictions on access.

## 4.5 Environmental Impacts

Council adheres to the principles of Ecologically Sustainable Development. Consequently, the design and management of open space needs to consider environmental sustainability principles in areas including water quality control, erosion, storm water management, vegetation protection and conservation.

Emphasis on maintaining a mown and tidy appearance may compromise the park's natural values and native vegetation regeneration. However a balance should be met given the need for appropriate passive recreation opportunities and casual surveillance.

The control of noxious weeds and the maintenance of existing vegetation upon the site shall remain with Council. This may involve the use of herbicides or mechanical methods as well as minimum disturbance methods where appropriate.

## 4.6 Maintenance

Maintenance is an essential aspect of the management of open space. It is one of Council's core business areas and accordingly service standards should be developed, to ensure appropriate levels of maintenance for any area of open space. These service standards should be consistent with Council's Asset Management Plans and available resources

Council is concerned with ensuring the safety of all users of the Park. To this end, Council will carry out regular inspections so as to address risk management and maintenance concerns regarding the safety of built structures and access arrangements. All Council inspections are to be consistent with Council's Strategic Asset Management Program, whilst maintenance is to be carried out in accord with resource availability.

The community is encouraged to report any safety concerns immediately to Council to minimise the risk of injury and litigation.

## 4.7 Animals

Existing Acts and Regulations regarding the prohibition of animals such as dogs and horses on community land including a public place or part thereof, without prior Council approval, must be enforced to keep these areas free of animals and excrement. Council will enforce the Companion Animals Act 1998 and Regulations or equivalent which states that the owner of a dog found in a prohibited place is in breach of the law.

In general, without prior approval of Council a dog is not permitted in the following places (whether or not they are leashed or otherwise controlled):

- Within 10 metres of any playing apparatus provided or part for the use of children;
- Within 10 metres of any apparatus provided for the preparation or consumption of food by humans;
- Public bathing areas including a beach that Council has ordered that dogs are prohibited and upon which there are signs notifying the Council order of prohibition;

Any areas provided or set apart for public recreation or the playing of games that Council has ordered that dogs are prohibited and upon which there are signs notifying the Council order of prohibition.

## **4.8 Signage**

Council uses signs to regulate the activities carried out on open space and to provide educational information so as to provide a safe and enjoyable place for recreational pursuits.

Whilst signs are a crucial source of information, they have a significant impact on the aesthetics of open space. All signs must meet a design standard and be approved by the General Manager. All signs must be sympathetic to their environment in their design, construction and location.

All Council signs erected under Section 632 of the Local Government Act plus reserve name signs and traffic and safety signs, are permissible. Council must approve all other signs before erection.

## **4.9 Easements**

Council reserves the right to grant easements as required for utilities and access, bearing in mind the impact of such easements / agreements on the site.

## **4.10 Leases and Licences**

Council may authorise the lease, licence or grant of any other estate over part or all of the areas in open space for the purpose of public recreation or the physical, cultural, social and intellectual welfare or development of members of the public.

Such leases and licences at the Park will only be granted if authorised by this Plan

## 5 Management Options

Having regard to the issues identified in Section 3 and the key management considerations detailed in Section 4, options have been devised for the critical facilities and activities at the Park, before articulating a set of comprehensive options for the Park as a whole.

### 5.1 Options for Critical Park Facilities and Activities

#### 5.1.1 Stotts Island Environment Centre

The Centre and associated facilities are totally inadequate. To all practical purposes the fundamental options are quite simple – remove the facility entirely or rehabilitate it to current standards. In respect of the latter, any rehabilitation;

- must comply with the requirements of the DDA; and
- if it is to include toilets the only feasible option is to provide a pump-out facility.

#### 5.1.2 Overnight Camping

The reasons for the establishment of overnight camping at the Park are detailed in Section 3.1.3. With the growth of camping and accompanying impacts; the cost of up-grading facilities to meet the needs of these campers, and the associated management costs, it is appropriate to review if those reasons remain valid:

- Illegal camping at the adjoining Nature Reserve has ceased.
- There is no longer any justification for the continuation of camping here for road safety reasons
  - the Park is no longer on a state highway with the greater majority of inter-state traffic using the Pacific Motorway
  - There are existing commercial sites in the close vicinity which offer overnight accommodation for travellers
  - The Chinderah Service facilities provide toilet and rest facilities

In addition

- The Park is not the most desirable location for such a camping area in respect of campers or the Tweed community
- There would be no direct income from any investment in appropriate facilities, and any indirect community benefit through increased local expenditure by travellers is debatable.

The benefits of the Park to Council and the broader Tweed community as an overnight stop are limited in terms of the resources required to up-grade the park.

Nevertheless there is widespread community support for this type of free overnight accommodation. Furthermore, any improved facilities to meet the casual recreational and educational use of the Park would continue to be an attraction for campers.

The options for Council in respect of overnight camping are:

1. Facilitate longer stay camping by seeking approval to function as a *primitive campground*.

2. Control the amount and duration of camping through the creation of specific but limited areas for camping, and retain current parking restrictions and on-going supervision to enforce controls.
3. Remove all camping.

### **5.1.3 The Arboretum**

The Arboretum is currently inaccessible because of the dangerous state of the existing access bridge. The options for this element of the Park are:

1. Abandon the feature on the grounds of cost of the replacement bridge, which would represent a considerable loss of a community asset.
2. Replace the bridge and re-establish the use of the Arboretum.
3. Establish a new Arboretum as part of the rehabilitation of the grassed areas of the Park which would take years to establish.

### **5.1.4 Access Road**

The existing internal access road is in a very poor state of repair and is no longer serviceable. Two options have been examined (Figure 3):

1. Re-construction of existing concrete access road
2. Re-alignment of the road.

## **5.2 Park Management Options**

Three broadly based options for the future use of the Park have been generated in response to the identified issues.

### **5.2.1 Option 1: Retain the Park for Casual Use with no Major Facilities (no camping)**

Rehabilitation of the centre, up-graded toilets, improvement to the internal access road and the replacement bridge to the Arboretum are major costs items, which this option considers are not justified.

Public access would continue to be provided and therefore this Option would continue to fulfil the original intent of the Park, namely public access to a significant environmental attribute of the Tweed and the associated educational and cultural benefits, albeit without toilet facilities and the bridge. The Park would still function as a passive recreation area with limited car parking, perhaps a small shelter shed, and interpretation boards.

As a consequence of this option overnight camping at the Park would no longer be available but would require on-going supervision, at least in the short term the attraction of the Park without toilets would be diminished and the abandonment of the Arboretum would be a loss of significant community investment unless replaced elsewhere.

Whilst this Option would avoid the cost of major up-grading of the Park, there would be other costs:

- the removal of the existing facilities (including closure of the access from the Highway),
- the rehabilitation of the site of the removed facilities together existing grassed areas, and



- on-going supervision, at least in the short term, to prevent continued use for over-night camping.

### 5.2.2 Option 2: Retain all existing Facilities at the Park but only for casual recreational activities (no camping)

In recognition of the importance of the Park to the local community and the value of its continued passive recreational use, all existing casual recreational facilities are retained and facilities are up-graded.

Toilet facilities would be reduced, no need to re-locate the road, although flood clean-up would continue, on-going supervision to prevent over-night camping.

### 5.2.3 Option 3: Retain all existing Facilities and Activities at the Park (includes overnight camping)

In recognition of the importance of the Park to the local community and the value of its continued passive recreational use, all existing uses are retained and facilities are up-graded.

With regard to overnight camping, in the absence of similar facilities elsewhere in the Tweed, but having regard to the original intent of the Park, it should be retained but limited to the area of the existing car park and adjoining existing internal access road as indicated by Figure 4.

## 5.3 Preferred Management Option

Option 3 is preferred as the basis of the Plan having regard to the original intent of the Park and its value to the community. The estimated capital costs for this preferred option are detailed in Table 3 at between \$570,000 and \$643,000. On-going management costs are estimated as follows

Item	Estimated cost
Toilet cleaning (daily Monday – Friday)	\$7,800
Pump-out (based \$370/pump out and daily usage between 200l and 4000l)	\$4,400
Park Maintenance	\$12,300
General maintenance of shelter shed	\$16,000
Camping compliance (daily)	\$5,460
Access road and car park	\$5,500
<b>Total</b>	<b>\$51,460</b>



**Figure 4: Area where overnight stays will be allowed.**

## 6 Management Objectives, Aims, Strategies and Actions

### 6.1 Aims and Objectives

The Objective, and Aims of this Plan are as follows:

#### 6.1.1 Objective

1. To maintain and enhance the environmental values of the park as a memorial to Bruce Chick.

#### 6.1.2 Aims

1. To encourage, promote and facilitate increased day usage of the Park with facilities commensurate with the environmental values of the Park
2. To ensure that all existing and future facilities and land are maintained to a suitable standard
3. To ensure that facilities are provided having regard to any adverse impact on the environment and the needs of the community.
4. To provide for overnight use of the Park by travellers in those areas already used for such purposes

### 6.2 Preferred Management Strategy

To retain all existing facilities and activities at the park requires:

- rebuilding and managing existing facilities and activities at the Park in accordance with the environmental constraints of the land;
- rehabilitating the shelter shed, including
  - the disability access ramp and car parking, to meet DDA requirements;
  - managing the toilets through a pump-out system
- replacing existing interpretation signage;
- re-locating the internal access road and re-surfacing the car park;
- constructing a new bridge to the Arboretum and rehabilitating the Arboretum (in accordance with the appendix 3);
- re-vegetating grassed areas in accordance with details in Appendix 3;
- restricting overnight camping to the area indicated by Figure 4; and
- providing regular daily site supervision to ensure conformity with camping restrictions

The capital cost estimates for these improvements are summarised in Table 3 in Section 3.6 for which a priority time frame for implementation is nominated in table 4 based on the following:

- High - commence within the next 2 years.
- Medium - commence in 2 - 5 years.
- Low - commence after 5 years.
- Ongoing – self explanatory

**Table 4 Prioritisation of Improvements**

<b>Item</b>	<b>Priority</b>
<b>Shelter Shed rehabilitation</b>	Medium
<b>Toilet pump-out system</b>	High
<b>Arboretum</b>	
Remove existing bridge	High
Construction of replacement bridge	Low
Rehabilitation of Arboretum	Low
Signage	Low
<b>Access road rehabilitation</b>	Low
<b>Landscape rehabilitation</b>	
Planting	Low
Bollarding	High
<b>Signage</b>	High

### 6.3 Action Plan

<b>Management Aims</b>	<b>Management strategies performance targets</b>	<b>Actions (Means of achieving targets)</b>	<b>Performance evaluation (how they will be assessed)</b>
Encourage, promote and facilitate increased day usage of the Park with facilities commensurate with the environmental values of the Park	Up-grade Park assets as detailed in Table 3 at a safe and acceptable level as Council funds permit.	Allocate funding in Council's budget for the maintenance and development of the Park  Seek external funding for development of Park facilities.  Wherever possible provide safe and convenient access to facilities for people with disabilities.	Receipt of funding.  Provision of access for people with disabilities (within reason).
Ensure that facilities are provided having regard to any adverse impact on the environment and the needs of the community.	Obtain development consent for any works as required under Council's LEP 2014.  Ensure that those uses / works that are permitted without consent do not impact upon the environment.  Activities and uses to be in accordance with Section 3 of this Plan or in accordance with those permitted under	Prepare suitable plans and submit development applications as required.  Manage facilities in accordance with development consent.  Council to approve only those Development applications lodged for works as required.  Compliance with	Development application lodged for works as required.  Compliance with development consent.  Compliance with Section 3 of this plan and the LEP.

	<p>the zoning of Council's LEP.</p> <p>Maintain a suitable level of access within the Park for all persons.</p>	<p>development consent.</p> <p>Consultation with community</p>	
<p>To ensure the Park is maintained to a suitable standard</p>	<p>Minimise adverse impacts associated with litter.</p> <p>Maintain a suitable level of access within the reserve for all persons.</p> <p>Provide and maintain suitable facilities within the Park such as seating and toilet amenities</p>	<p>Develop infrastructure and vegetation maintenance plans that are commensurate with casual recreational uses and available resources.</p>	<p>Implement mowing program and toilet maintenance/cleaning.</p> <p>Park litter free and no overflowing bins</p> <p>No broken signs, no missing bolts and clean surfaces</p>
<p>Provision for overnight use of the Park by travellers in those areas already used for such purposes</p>	<p>Restrict the camping area to the existing car park and adjoining internal access road</p> <p>Restrict camping to overnight only</p>	<p>Daily inspections of the park</p>	<p>Number of infringement notices</p>

## 7 Appendices

### 7.1 Appendix 1 - Extract from Tweed LEP 2014

#### Zone RU1 Primary Production

##### 1 Objectives of zone

- To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.
- To encourage diversity in primary industry enterprises and systems appropriate for the area.
- To minimise the fragmentation and alienation of resource lands.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.
- To protect prime agricultural land from the economic pressure of competing land uses.

##### 2 Permitted without consent

Environmental protection works; Extensive agriculture; Home occupations; Intensive plant agriculture

##### 3 Permitted with consent

Agricultural produce industries; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Boat launching ramps; Boat sheds; Cellar door premises; Dual occupancies (attached); Dwelling houses; Environmental facilities; Extractive industries; Farm buildings; Farm stay accommodation; Flood mitigation works; Forestry; Group homes; Helipads; Home-based child care; Home businesses; Home industries; Industrial retail outlets; Intensive livestock agriculture; Jetties; Open cut mining; Plant nurseries; Roads; Roadside stalls; Rural workers' dwellings; Turf farming; Water recreation structures; Water storage facilities

##### 4 Prohibited

Any 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 facilities; Environmental protection works

##### 3 Permitted with consent

Aquaculture; Boat launching ramps; Boat sheds; Community facilities; Emergency services facilities; Flood mitigation works; Jetties; Mooring pens; Moorings; Research stations; Roads; Water recreation structures; Water storage facilities; Wharf or boating facilities

##### 4 Prohibited

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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.

### Land use definitions

Tweed LEP 2014 provides the following definitions:

**Roadside stall** means a place or temporary structure used for the retail sale of agricultural produce or hand crafted goods (or both) produced from the property on which the stall is situated or from an adjacent property.

Roadside stalls are a type of **retail premises**—see below.

**Retail premises** means a building or place used for the purpose of selling items by retail, or hiring or displaying items for the purpose of selling them or hiring them out, whether the items are goods or materials (or whether also sold by wholesale), and includes any of the following:

- (a) bulky goods premises,
- (b) cellar door premises,
- (c) food and drink premises,
- (d) garden centres,
- (e) hardware and building supplies,
- (f) kiosks,
- (g) landscaping material supplies,
- (h) markets,
- (i) plant nurseries,
- (j) roadside stalls,
- (k) rural supplies,
- (l) shops,
- (m) timber yards,
- (n) vehicle sales or hire premises,

but does not include highway service centres, service stations, industrial retail outlets or restricted premises.

Retail premises are a type of **commercial premises**.

## 7.2 Appendix 2 - Proposed Signage



### Existing Signs



### Signs upstairs inside building







50mm aluminium frame 600mm x 600mm - 1.5m high  
\$270 installed, anti graffiti covering



50mm aluminium frame 1200mm x 600mm - 1.5m high  
\$380 installed, anti graffiti covering  
50mm aluminium frame 1800mm x 1200mm - 2.1m high  
\$270 installed, anti graffiti covering



ORDINANCE SIGN - aluminium Composite 600mm X 600mm on 3.6m post  
\$340 installed, anti graffiti covering



Prints for displays using existing frames 1m x 1m, new acrylic cover  
\$140 each

## 7.3 Appendix 3 - Bruce Chick Park Rehabilitation Plan

### Vegetation Works

Consideration will be given to the following works with the upgrade of Bruce Chick Park:

1. broad area and in-fill planting,
2. weed control,
3. assessment of the vegetation in the arboretum and,
4. long-term maintenance of any planting undertaken.

### Planting Sites

Four areas for planting have been identified, which are detailed in Figure 1 and below.

#### Area A

- Area A is a grassed area of approximately 2500m<sup>2</sup> at the western end of the park. It will be the subject of broad-scale planting with species known to occur on Stott's Island, (Telecom line?);
- Planting densities are recommended for 2m centres or less equating to 2,500 - 3,000 stems/ha or approximately 800 - 1000 stems for this location;
- Mulch should be used to facilitate establishment of plants and restrict weed growth adjacent to planted stems. Consideration will be given to sheet mulching the entire planting site until the planted stems provide a closed canopy.

#### Area B

- Area B is approximately (1900 m<sup>2</sup>) - in-fill planting, pathway and exclusion;
- This site may be retained as the access to the Interpretive Hut and car park, alternatively if a new access is installed this may require enhancement plantings along the edge of the concrete roadway which could be retained as a path.
- It is recommended that:
  - the line of bollards on the northern side of this access is reinforced to prevent access to the bank of the back-channel (the bollards are not cemented in and as the soil here is often wet for long periods they are easily removed or pushed over by reversing vehicles) to protect the bank and the vegetation at this location;
  - the area between the bollards and the back channel benefit from enhancement plantings to infill bare areas and restrict its use for camping; and
  - that the extent of this access if retained be reduced at both its eastern and western ends to limit the number of vehicles and the impact on the channel bank which becomes progressively closer to the access towards the eastern end.
- It is not possible to estimate the quantity of plants needed for this site until a decision is made in regard to access. It is expected that at least 150 plants could be required to undertake the in-fill planting between the bollards and the back-channel bank.

#### Area C (approx 250 m<sup>2</sup>) - in-fill planting and tree assessment

- This location includes two large eucalypt trees that appear to be in poor health; an arborist inspection is recommended to determine their health status. If recommended for removal lower growing replacement plantings are recommended to enhance sight lines at this existing entrance.
- As many as 150 plants could be required at this location

#### Area D

- Area D comprises approximately 250 m<sup>2</sup> between the Arboretum and the drainage channel at the eastern end of the Park. It has been mown in the past to facilitate access but this may no longer be necessary and it is recommended that this area is also planted to reduce the need to mow.

- Up to 250 plants may be required at this location but as this site has not been inspected it could be an underestimate.

### **Planting Works**

Preparation of all planting sites should include two spray events, one 2-3 weeks after the initial spray run to ensure complete control of existing groundcover. This work may be undertaken by Council staff.

It is anticipated that Council will be able to supply at least half of the plants needed for the site (unless pre-ordered); those species available from the TSC nursery can be sourced locally for approximately \$5.00 - 6.00 per stem.

Recreation Services and/or NRM Unit outdoor staff are capable of undertaking site preparation tasks, assist with the planting, and the mulching and on-going maintenance components. It is also likely that they can undertake ongoing weed control and watering while needed.

There is scope to enlist and engage community involvement at Area A, to engender community ownership and to promote the project.

### **Weed Control**

Weed control works are likely to be required along the edge of the riparian area near the back channel from the eastern end of the Arboretum to beyond the western end of Area A to limit infestation by weeds into newly planted sites.

Weed control will also be required within the Arboretum.

Weed control in these areas should be undertaken by a professional bushland restoration contractor to ensure no off-target damage.

Council may choose to contract out weed control and maintenance works for:

- all the planted areas;
- the areas adjoining the back-channel bank from the eastern to western ends of the site; and
- the Arboretum.

### **Arboretum Upgrade**

As the general public will be encouraged to walk through the Arboretum all vegetation occurring in this location will be identified to enhance the interpretation of the site and assessed for structural soundness and safety by an arborist.

Species located along the edge of the pathway may need to be pruned or potentially removed to allow for clear access, and suitable replacement species identified. Replacement species should be known to occur in *Lowland Sub-tropical Rainforest on floodplain* in particular those recorded for Stott's Island.

The pathway surface will be refurbished as required with hard wearing materials such as gravel/cracker dust or similar. Hard edging may be required to contain the material used.

To enhance the interpretive value of the Arboretum signage will be installed to identify selected species along the pathway.

- Signs prepared by Council's sign writers for DuneCare groups on the coast have been successfully produced and installed using 220mm x 150mm aluminium signs on 300mm aluminium stands for approximately \$70 each.
- Larger signs such as those proposed for the Interpretive Hut e.g. at 600mm x 600mm, would cost in the vicinity of \$250 each.

### **Other Issues**

Water will be made available on site either from the reticulated supply or in portable tanks.

There are a number of nest boxes installed in trees at the site the majority of which are in disrepair and will be removed provided they are not in use by fauna. They also pose a WHS safety risk. A decision at that time will be made as to the value of replacing these boxes.

At least 12 Richmond Birdwing Butterfly vines will be planted to compliment those already planted on site to ensure suitable forage for any butterflies that may utilise the site. 100+ Arrowhead Violets will be replanted after an earlier planting was destroyed by dumped roosters. This species is the food plant for the *Endangered* (TSC Act) Australian Fritillary Butterfly.



Figure 1 Planting and works sites - Bruce Chick Park



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