

Fraser Coast
REGIONAL COUNCIL

CHEELII LAGOON – LAND MANAGEMENT PLAN 2018



TABLE OF CONTENTS

1. DETAILS AND TENURE OF THE SUBJECT LAND	3
2. LEGISLATIVE AND POLICY FRAMEWORK	3
3. DESCRIPTION OF THE SUBJECT LAND	3
Description and history:	3
Locality Map:	5
Existing uses:	4
Existing interests:	5
Existing infrastructure:	5
Detailed site description:	5
Native title status:	6
4. PROPOSED USES/S OF THE SUBJECT LAND	7
Proposed use/s of the land:	7
Secondary uses:	7
Constraints and opportunities:	7
Development intended:	7
5. COMMUNITY CONSULTATION	7
6. GOALS AND ACTIONS OF THE LAND MANAGEMENT PLAN	8
Management Strategy 1: Geology, landform, hydrology and soils	8
Management Strategy 2: Native plants	8
Management Strategy 3: Native animals	9
Management Strategy 4: Pest plants and animals	10
Management Strategy 5: Fire management	11
Management Strategy 6: Cultural heritage	11
Management Strategy 7: Managing recreation	11
Management Strategy 8: Community involvement	12
7. BUDGET STATEMENT	12
8. MONITORING AND REVISION	13
Timetable:	13
Techniques:	13
Community feedback:	13
9. SUMMARY AND RECOMMENDATIONS	13
10. APPENDICES	14
Appendix A Site Map	15
Appendix B Flora species list	16
Appendix C Weed species list	18
Appendix D Bird list	19

1. DETAILS AND TENURE OF THE SUBJECT LAND

Local Government: Fraser Coast Regional Council

Area of land (in hectares): Total 8.73 Hectares

Land Manager: Fraser Coast Regional Council as trustee and owner

Lot Plan	Address	Tenure	Purpose	Area (Ha)
502SP113098	Sunrise Crescent Burrum Heads Qld 4659	Reserve	Park and Recreation	3.1420
505SP169208	Nira Court Burrum Heads Qld 4659	Reserve	Park	0.2512
504SP169208	Ivor Drive Burrum Heads Qld 4659	Reserve	Park	0.4022
80SP165540	Riverview Drive Burrum Heads Qld 4659	Reserve	Open Space	0.2007
200SP200627	Ivor Drive Burrum Heads Qld 4659	Freehold	Parks & Gardens (Environmental)	3.930

2. LEGISLATIVE AND POLICY FRAMEWORK

- Fraser Coast Regional Council, as the management authority for Cheelii Lagoon reserves has rights, powers and responsibilities derived from the Land Act 1994. It is proposed that the whole area including the reserves and the freehold lots will be managed together as a single unit.
- Fraser Coast Regional Council Local Law No.4 (Local Government Controlled Areas, Facilities and Roads) 2011 provides the basis for Council management of public use of the area and restricts and regulates certain activities.
- Council is bound by legislation in the management of the land, including the Sustainable Planning Act 2009 and the Fraser Coast Planning Scheme (2014). Other applicable legislation includes the Queensland Biosecurity Act (2014), Qld Fire and Emergency Services Act (1990), Environment Protection and Biodiversity Conservation Act (1999), Queensland Nature Conservation Act 1992, Commonwealth Native Title Act (1993) and the Queensland Aboriginal Cultural Heritage Act (2003).
- Council also has various strategies applicable to the management of this land, including the Fraser Coast Regional Council Fire Management Strategy and the Fraser Coast Regional Council Pest Management / Biosecurity Plan.
- Restoration of natural ecosystem areas within the site will be carried out according to the principles set out in the South East Queensland Ecological Restoration Framework.

3. DESCRIPTION OF THE SUBJECT LAND

Description and History of the land:

- The Butchulla people are the traditional owners of the area.
- Cheelii Lagoon is situated at Burrum Heads approximately 700 m west of Burrum Heads Road.
- Prior to the 1990's the area was a drainage line in undeveloped bushland. Housing development of this part of the township commenced in the 1990's. The lagoon area was excavated in stages with surrounding areas cleared and filled. In 2004 the lagoon was extended to its current size.
- The first of the reserves lot 502SP113098 was gazetted on 21 August 1998. Lot 80SP165540 was gazetted on 23 January 2004. Lots 504SP169208 and 505SP169208 were gazetted on 20 May 2005 and lot 200SP200627 was gazetted on 10 May 2007. The Hervey Bay City Council was appointed the trustee of all these reserves. Since local government amalgamations in 2008 the reserves have been managed by the Fraser Coast Regional Council.
- The Council listed the park as part of the voluntary Land for Wildlife program in 2009 and adopted Cheelii Lagoon as the official name in 2010.
- The Cheelii Lagoon Vegetation Management Operational Plan (Docs#2367079) and Zoning Map (Docs#2370669) were approved in 2013. These documents provide the details which guide current management activities in the area and which are broadly reflected in this Land Management Plan.

Locality Map



Existing uses:

- Cheelii Lagoon is reserved under the Land Act 1994 for various purposes. Council is required to manage the land consistent with these purposes and in the public interest. Use must be appropriate for the purpose and qualities of the land and not substantially exclusive and/or commercial in nature.
- The largest reserve (502SP113098) is set aside for park and recreation. It includes the bulk of the freshwater aquatic area and natural vegetation and is managed to maintain and enhance environmental values.
- Those reserves set aside as park (lots 504 and 505 SPSP169208) are maintained as grassy open areas with semi-formal garden bed edging at the interface with natural vegetated areas.
- Reserve lot 80SP165540 is set aside as open space and is currently undeveloped, hosting native vegetation and a grassy mowed area.
- Reserve 200SP200627 is undeveloped natural area and functions mainly to enhance the quality of water flowing through to the adjacent Burrum River estuary, and to protect natural vegetation.
- Most of the area is zoned as “Open Space” in the Fraser Coast Planning Scheme 2014. The purpose of the Open space zone is to provide for informal recreation where built form is not essential to the enjoyment of the space. The zone may also accommodate open space required for environmental protection, foreshore management, drainage or amenity purposes. This zoning broadly reflects the designation of the reserves and the current uses of the area.
- Council Local Law No. 4 includes provisions to protect health and safety and preserve natural and built features and amenity. Signage has been installed to advise visitors that camping, fires, swimming and fishing is prohibited on the land under the local law.

Existing interests:

- There are no existing interests related to the reserve.

Existing infrastructure:

The site hosts embellishments which have been installed by Council and community groups with the approval of Council:

- Bench seat (1) located near Bryan Court
- Park signs (3) on Ivor Drive, Bryan Court and Riverview Drive.
- Interpretive signs (2) with information about birds and frogs of Cheelii Lagoon.
- Land for Wildlife signs (2) on Ivor Drive and River view Drive.
- Temporary warning sign relating to rubbish dumping on Riverview Drive.
- Bollards and post and rail fencing to restrict vehicle entry to mowed areas.
- Garden bed edging in mowed areas.
- Vegetation Enhancement Area sign.
- A viewing platform and shelter located off Ivor Drive.
- Gravel paths in 200SP200627 and concrete pathways in 502Sp113098.

Detailed site description:

- Cheelii Lagoon is a man-made lacustrine freshwater wetland area surrounded by patches of original native vegetation as well as open grassy mowed park areas. The area surrounding the land includes roads and urban residential lots.
- Storm water from the surrounding area is directed through the lagoon system and from there through an adjacent foreshore park into the Burrum River estuary.
- A filter strip buffer of native vegetation at least 2 metres wide has been left along the water's edge around most of the lagoon.
- Vegetation is gradually recovering from past disturbance with regrowth managed to protect environmental and scenic amenity values.
- No remnant vegetation is mapped on the lagoon due to past disturbance and the developed nature of the area. Given the location of the area along a minor drainage line the area is likely to have previously hosted regional ecosystem 12.2.7 *Melaleuca quinquenervia* or rarely *M. dealbata* open forest on sand plains.
- A vegetation survey conducted in May 2017 revealed the presence of species typical of regional ecosystem 12.2.7. These included *Melaleuca quinquenervia*, *Eucalyptus tereticornis*, *Lophostemon suaveolens* and *Livistona decora*. The ferns *Pteridium esculentum* and *Blechnum indicum*, the grass *Imperata cylindrica* and sedge *Schoenus brevifolius* were also noted. The lagoon hosts a diverse variety of other drainage system fringing species.
- Although not present in large numbers, the most significant flora species is *Melaleuca cheelii* which is listed as Near Threatened under the Queensland Nature Conservation Act 1992.
- A breeding population of the vulnerable fauna species *Crinia tinnula* (wallum froglet) is present in the vicinity of the lagoon area. However it is unclear if current water quality in the lagoon itself is adequate for breeding.
- Vegetation in and around the lagoon is important for the protection of water quality within the drainage line and ultimately the discharge area in the Burrum River estuary. Council policy of maintaining a 2 metre native vegetation buffer around lake edges adjacent to mowed park areas has assisted in this.

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- The lagoon is a habitat area for a large number of waterbirds dependent on wetlands for habitat and breeding.
- Intensive weed control and revegetation work carried out by a local community group prior to 2013 has resulted in the presence of a healthy and diverse native ecosystem. Despite the resilience of the vegetation present there are signs that weeds are recolonising the area.
- It appears that the previously present exotic *Nymphaea caerulea* (Cape water lilly) is no longer present.
- Two weed species present are listed as restricted invasive plants under the Biosecurity Act 2014. These are *Asparagus aethiopicus* cv. *Sprengeri* (basket asparagus) and *Schinus terebinthifolius* (broad-leaved pepper tree).
- Large numbers of *Rhinella marina* (cane toads) are present in the lagoon area. This is an invasive introduced species which is harmful to many native animal species and in particular dominates the habitat of native frogs. No long term practical control measure is currently known to be effective.
- A search conducted on 29 May 2017 of the Queensland Aboriginal Cultural Heritage Register revealed that no Aboriginal cultural heritage sites were recorded on the register for the area of the reserve.
- No significant European cultural heritage is known on the reserve.

Native title status:

- The QC2009/005 Butchulla Land & Sea Claim #2 native title application covers this area. It was accepted for registration under the Commonwealth *Native Title Act 1993* on 30 June 2010.
- Before Council undertakes any activity, project or initiative on the site which has the potential to affect Native Title then further investigations should be made at the planning stage. To assist with this staff can consult the Native Title Compliance Fact Sheet Docs# 2406129 and the Native Title Compliance Checklist - Community Purpose Reserves Docs# 2842428.
- As the reserve areas were subdivided from previous freehold land and one of the lots remains freehold, native title has been effectively extinguished.

4. PROPOSED USES/S OF THE SUBJECT LAND

Proposed use/s of the land:

- It is proposed to continue to use the land for both low impact recreation while protecting environmental values. This is consistent with the designated purposes of the reserves and land zoning.
- Densely vegetated areas surrounding the lagoon will continue to be set aside exclusively for flora, fauna and land protection purposes. This area is shown on the map in Appendix B marked in blue and named "Natural Area".

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- Less densely vegetated areas adjacent to the lagoon will be retained and managed to enhance natural amenity including views of the lagoon. This area is shown on the map in Appendix B marked in purple and named “FCRC Maintained”.
- Those areas abutting residential lots may be subject to maintenance agreements between land owners and Council in order that residents can maintain their boundary fences and a mowed buffer strip between their properties and natural vegetation. This area is shown on the map in Appendix B marked in black and named “maintenance Agreement”. In the absence of a formal agreement then Council will be responsible for maintaining these areas.
- The remainder of the area will be managed as mowed parkland by Council. Current levels of maintenance including mowing, weed control and pruning will be regularly reviewed to reflect community views and available resources. The Lagoon itself as well as a minimum two metre wide buffer area will be left largely in its natural state in order to protect water quality.

Secondary uses:

- Current and proposed uses are considered to be consistent with the designated community use of the reserves. No inconsistent uses have been approved by the Department of Natural Resources and Mines.
- There are no current or proposed secondary uses i.e. uses authorised by the issue of a trustee lease or trustee permit.

Constraints and opportunities:

- Physical constraints include the lagoon and wetland areas which restrict access to certain parts of the site.
- There is an opportunity to further enhance the environmental, natural amenity and park values of the lagoon areas.

Development intended:

- Development will be consistent with the primary use of the reserves and will complement environmental values.

5. COMMUNITY CONSULTATION

- Members of the public with an interest in the management of the reserve will be invited on the Council website to make submissions on the plan for consideration during the Council adoption process.

6. GOALS AND ACTIONS OF THE LAND MANAGEMENT PLAN

Goal Statement:

Protect and enhance the significant natural features of Cheelii Lagoon while also maintaining open park areas and amenity views of the water for visitors and residents.

Management Strategy 1: Geology, landform, hydrology and soils

Desired Outcomes

- Geological and soils landscapes are protected from human disturbance.
- Water quality in the lagoon is monitored and steps taken to reduce the long term impacts of eutrophication.

Management Strategies

S1.1 Do not undertake any new works that may adversely impact on water quality or soils.

S1.2 Minimise soil disturbance when maintaining the stormwater drains into and out of the Lagoon area.

S1.3 Discourage the feeding of water birds on the lagoon edge which may result in bank erosion.

S1.4 Retain native vegetation adapted to local conditions with a minimum width of two metres to bind and stabilise the banks of the lagoon, reduce erosion and sedimentation and protect water quality.

S1.5 Assess general water quality indicators (turbidity, presence of algae, unpleasant odours) as part of annual monitoring of the lagoon area.

S1.6 Include details of measures to protect lagoon banks and water quality in a Vegetation Management Operational Plan.

Management Strategy 2: Native plants

Desired Outcomes

- The full range of native plant species found on the site is protected.
- Vegetation structure and habitat values are conserved across the site and are restored where subject to past disturbance.
- Significant plant communities are protected.
- Knowledge of significant flora and vegetation communities is increased.

Management Strategies

S2.1 Prohibit interference with native vegetation by private individuals apart from within areas subject to maintenance agreements or in an emergency situation as detailed in the Vegetation Management Operational Plan.

S2.2 Carry out weed management to ensure that native vegetation is restored and protected.

S2.3 Allow natural regeneration of native vegetation in the Natural Area and the FCRC Maintained Area.

S2.4 .Make reasonable and practical attempts to control or suppress Category 3 restricted plants and plants declared under Local Law and those environmental weeds that are a threat to native vegetation.

S2.5 Encourage and support the involvement of local community groups in vegetation monitoring and management through the Community Environment Program.

S2.6 Prohibit camp fires within the area in order to protect existing native wetland vegetation from fire and maintain signage.

S2.7 Prune vegetation in designated areas where required to retain views of the lagoon according to AS 4373—2007 Pruning of Amenity Trees.

S2.8 Retain a minimum two metre wide vegetated natural buffer between the lagoon edge and mowed areas.

S2.9 Monitor the population of *Melaleuca cheelii* present in the area in order to establish whether enrichment planting may be necessary for the species to survive.

S2.10 Carry out enrichment planting of *Melaleuca cheelii* if necessary using plants propagated from local seed, under the required permits, in order to improve the outlook for the species in the local area.

S2.11 Include details of measures to protect vegetation in a Vegetation Management Operational Plan.

Management Strategy 3: Native animals

Desired Outcomes

- There is continued protection and viability for all native animal communities in the reserve, in particular for water birds and frogs.
- No population decline or habitat loss for significant fauna will occur.
- The diversity of native animals in the area is conserved.
- Knowledge of ecology and distribution of fauna species is increased.

Management Strategies

S3.1 Monitor visitor and residents interaction with water birds and take action to ensure that bird feeding does not result in deterioration of wildlife habitat or bank stability.

S3.2 Protect and enhance the habitat of native animal populations by controlling pest animals (where practical) and careful weed removal.

S3.3 Encourage and support involvement of local community groups in fauna monitoring (including for *Crinia tinnula*), through the Community Environment Program and partnerships with other conservation organisations.

S3.4 Avoid rapid, large scale control of pest plants to ensure that there are no abrupt changes in the availability of fauna habitat such as habitat for small birds (See Pest plants and animals).

S3.5 Promote public understanding and appreciation of native animals to increase awareness of local fauna conservation issues.

Management Strategy 4: Pest plants and animals

Desired Outcomes

- Adverse impacts of pest plants and animals on native flora and fauna are prevented or minimised.
- Pests are eradicated using methods that minimise disturbance and maximise benefits to natural systems and conservation values.
- No new pests become established in the reserve.
- Meet the obligations of pest control under the Queensland Biosecurity Act 2014 and Fraser Coast Regional Council Local Law No 3 (Community and Environmental Management) 2011.

Management Strategies

S4.1 Eradicate *Peltophorum pterocarpum* (yellow poinciana) from the reserve area as a priority and monitor the site for new infestations.

S4.2 Undertake control of other weed species, particularly the Biosecurity Act 2014 category 3 restricted invasive plants *Schinus terebinthfolius* (broad-leaved pepper tree) and *Asparagus aethiopicus* cv. *Sprengeri* (basket asparagus), exotic invasive grasses and vines and *Schefflera actinophylla* (umbrella tree).

S4.3 Avoid the use of weed control chemicals in and around the lagoon area if possible in order to avoid damage to aquatic ecosystems.

S4.4 Undertake any essential chemical weed control using the least toxic products such as "frog friendly" roundup in compliance with current legislation governing the application of weed control chemicals.

S4.5 Record pest species and populations in the Council Pest Central spatial database. Make information from the database accessible to all Council officers via the Geographic Information System (GIS).

S4.6 Avoid rapid, large scale control of pest plants to ensure that there are no abrupt changes in the availability of fauna habitat such as habitat for small birds.

S4.7 Monitor for the appearance of pest animals and undertake a control program when required.

S7.8 Maintain signage which warns against the dumping of rubbish including green waste.

S7.9 Monitor current research into the control of cane toads with a view to implementing a control program if the opportunity arises.

Management Strategy 5: Fire management

Desired Outcomes

- Fire is excluded from the area.
- Unplanned fires are prevented.

S5.1 Maintain the fire resistant natural vegetation surrounding the lagoon.

S5.2 Prohibit camp fires within the area and maintain signs which inform the public.

S5.3 Maintain cleared areas of a minimum 3 metres in width adjacent to residential lots to facilitate access in case of wildfire.

Management Strategy 6: Cultural heritage

Desired Outcomes

- Aboriginal sites, places and landscapes of significance are conserved and protected from damage.
- There is cooperative and integrated management of Aboriginal places and relics with the Aboriginal community and relevant agencies.

Management Strategies

S6.1 Consult Aboriginal people who have a traditional association with the land and relevant State and Commonwealth Aboriginal heritage authorities, in decisions regarding the management of Aboriginal cultural heritage, including identification of sites and actions to protect sites and landscape features.

S6.2 Undertake cultural heritage assessments prior to any major new works and developments likely to impact on Aboriginal heritage values in accordance with the requirements of the Aboriginal Cultural Heritage Act 2003.

S6.3 Conduct a search of the Queensland Aboriginal Cultural Heritage Register as part of any new cultural heritage assessment.

S6.4 Undertake further investigations before undertaking any activity, project or initiative on the site which has the potential to affect native title. When planning works on the site then staff to consult the Native Title Compliance Fact Sheet Docs# 2406129 and the Native Title Compliance Checklist - Community Purpose Reserves Docs# 2842428.

Management Strategy 7: Managing recreation

Desired Outcomes

- Informal recreation opportunities and nature based activities are facilitated.
- Facilities and allowed activities are designed and managed to provide a satisfying and safe visitor experience while minimising negative environmental and social impacts.

Management Strategies

S7.1 Maintain the area so that facilities, visitor use and management actions do not adversely impact on significant environmental features and park amenity.

S7.2 Continue to maintain mowed areas at current levels of service.

S7.3 Retain seating already installed.

S7.4 Maintain interpretive signage which informs visitors about fauna and wetland values.

S7.5 Maintain signage which prohibits fishing, camping, fires and swimming.

Management Strategy 8: Community involvement

Desired Outcomes

- To engender appreciation, enjoyment and understanding of the reserves values and support for their ongoing protection.
- To encourage community and visitor involvement in the conservation and management of the area.
- Partnerships with organisations and statutory bodies that assist with the management of the area.

Management Strategies

Cheelii Lagoon Vegetation Management Operational Plan

S8.1 Include details of areas which may be managed by adjoining property owners under maintenance agreements in a Vegetation Management Operational Plan.

S8.2 Maintain up to date park signage which ensures that relevant and informative information is provided to visitors.

S8.3 Provide visitor information including interpretive signage which promotes the natural values of the lagoon.

S8.4 Encourage and facilitate the involvement of community volunteers in reserve management through the Community Environment Program and partnerships with conservation organisations.

7. BUDGET STATEMENT

Actions relating to the approved Land Management Plan will be considered in the annual budget process.

8. MONITORING AND REVISION

Timetable:

Annual monitoring of reserve area will be undertaken. This plan will be reviewed after five years (2022).

Techniques:

Walk around the lagoon area and photograph areas designated as Natural Area, FCRC Maintained and Maintenance Agreement. Check general health of vegetation including for the level of weed infestation and the presence of new weeds. Check for the presence of rubbish and in particular green waste. Use the results of the inspection to determine management actions for the coming year. Note any changes that may be required to this management plan when it is reviewed.

Community feedback:

Information about the reserve and management will be made available on the FCRC website along with an invitation to the public to provide ongoing input.

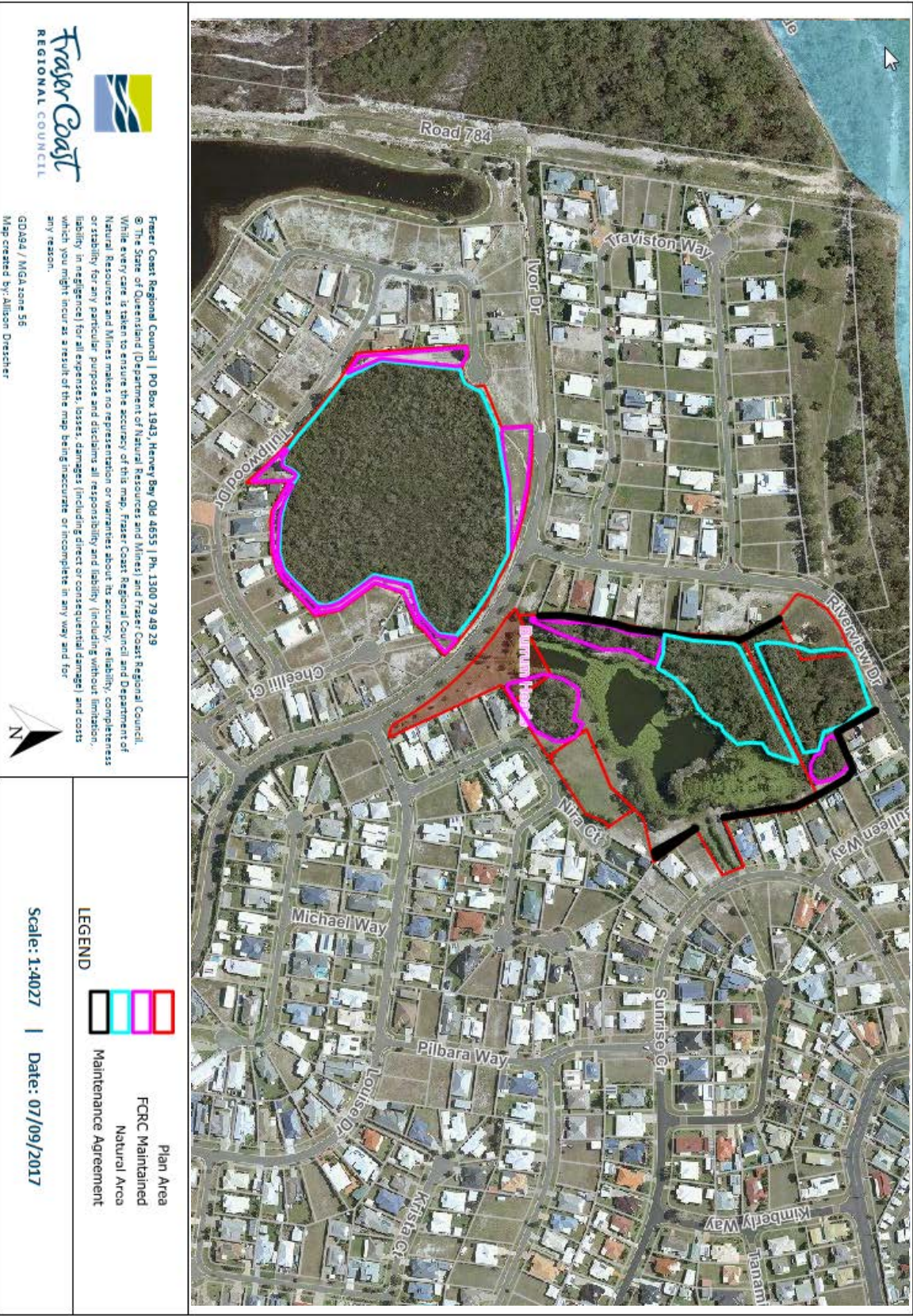
9. SUMMARY AND RECOMMENDATIONS

The reserve will be managed for low impact recreation while protecting environmental and natural amenity values. The footprint of existing designated areas will be maintained. The current level of park maintenance and vegetation management will continue. Weed monitoring and control within areas of native vegetation should be undertaken to ensure that the levels of problem environmental weeds are kept low and no new invasive species become established.

Where further embellishments or development is proposed, details of those works will be included in a Parks Masterplan which will be placed on public exhibition and considered by Council.

10. APPENDICES

Appendix A Site Map



Appendix B Flora species list

Cheelii Lagoon Wetlands Ivor Drive to Riverview Drive

Regional ecosystem: 12.2.7

AMG 56J 460141E 7214179N MGA94

Collector/s: Greg Smyrell and Tony van Kampen

Survey Date: 15/01/2012

Notes: Compiled by Indigeaflora - Greg Smyrell (2012) with additional species added by Tony van Kampen (2017).

Status: C = Least Concern N = Near Threatened

Total native species = 77

1/06/2017

Status	Scientific Name	Common Name
C	<i>Acacia disparrima</i> subsp. <i>disparrima</i>	hickory wattle
C	<i>Acacia hubbardiana</i>	triangle wattle
C	<i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i>	early flowering black wattle
C	<i>Acacia penninervis</i> var. <i>penninervis</i>	mountain hickory
C	<i>Alphitonia excelsa</i>	soap tree
C	<i>Aristida calycina</i> var. <i>calycina</i>	dark wiregrass
C	<i>Bacopa monnieri</i>	bacopa
C	<i>Baumea articulata</i>	jointed twigrush
C	<i>Baumea juncea</i>	bare twigrush
C	<i>Blechnum indicum</i>	swamp water fern
C	<i>Callitris columellaris</i>	white cypress pine
C	<i>Canavalia rosea</i>	coastal jack bean
C	<i>Cassytha filiformis</i>	devil's twine
C	<i>Casuarina glauca</i>	swamp oak
C	<i>Centipeda minima</i> subsp. <i>minima</i>	spreading sneezeweed
C	<i>Cyperus difformis</i>	rice sedge
C	<i>Cyperus haspan</i> subsp. <i>haspan</i>	sharp edge sedge
C	<i>Cyperus haspan</i> subsp. <i>juncoides</i>	sharp edge sedge
C	<i>Cyperus polystachyos</i> var. <i>polystachyos</i>	bunchy sedge
C	<i>Dianella caerulea</i> var. <i>caerulea</i>	blue flax lily
C	<i>Dianella longifolia</i>	smooth flax lily
C	<i>Drosera spatulata</i> var. <i>spatulata</i>	sundew
C	<i>Eleocharis equisetina</i>	spikerush
C	<i>Entolasia stricta</i>	wiry panic
C	<i>Eragrostis brownii</i>	Brown's lovegrass
C	<i>Eragrostis sororia</i>	love grass
C	<i>Eragrostis spartinoides</i>	love grass
C	<i>Eremochloa bimaclata</i>	poverty grass
C	<i>Eriochloa crebra</i>	spring grass
C	<i>Eucalyptus exserta</i>	Queensland peppermint
C	<i>Eucalyptus moluccana</i>	gum-topped box
C	<i>Eucalyptus tereticornis</i> subsp. <i>tereticornis</i>	Queensland blue gum
C	<i>Eucalyptus robusta</i>	swamp mahogany
C	<i>Ficus opposita</i>	sandpaper fig
C	<i>Fimbristylis dichotoma</i>	common fringe-rush
C	<i>Fimbristylis ferruginea</i>	rusty fringe-rush
C	<i>Fuirena ciliaris</i>	umbrella grass

Cheelii Lagoon Land Management Plan 2018 – Fraser Coast Regional Council

C	<i>Fuirena incrassata</i>	fuirena
C	<i>Gahnia clarkei</i>	tall sawsedge
C	<i>Gonocarpus tetragynus</i>	poverty raspwort
C	<i>Goodenia rotundifolia</i>	round-leaved goodenia
C	<i>Hibiscus splendens</i>	pink hibiscus
C	<i>Homoranthus virgatus</i>	twiggy homoranthus
C	<i>Imperata cylindrica</i>	blady grass
C	<i>Juncus kraussii</i>	sea rush
C	<i>Juncus polyanthemus</i>	common rush
C	<i>Juncus usitatus</i>	common rush
C	<i>Kennedia rubicunda</i>	dusky coral pea
C	<i>Leersia hexandra</i>	swamp rice grass
C	<i>Leptospermum polygalifolium</i>	wild may
C	<i>Livistona decora</i>	weeping cabbage palm
C	<i>Lomandra confertifolia</i> subsp. <i>pallida</i>	slender mat-rush
C	<i>Lomandra longifolia</i>	spinyhead matrush
C	<i>Lophostemon suaveolens</i>	swamp box
C	<i>Lycopodiella cernua</i>	coral fern
N	<i>Melaleuca cheelii</i>	Cheel's paperbark
C	<i>Melaleuca quinquenervia</i>	swamp paperbark
C	<i>Melaleuca styphelioides</i>	prickly paperbark
C	<i>Melaleuca viminalis</i>	weeping bottlebrush
C	<i>Myoporum acuminatum</i>	boobialla
C	<i>Nymphoides indica</i>	water snowflake
C	<i>Oldenlandia galioides</i>	oldenlandia
C	<i>Panicum simile</i>	two colored panic
C	<i>Parsonsia straminea</i>	monkey rope
C	<i>Paspalidium caespitosum</i>	brigalow grass
C	<i>Paspalidium distans</i>	shotgrass
C	<i>Paspalidium gaustum</i>	sago grass
C	<i>Paspalum distichum</i>	water couch
C	<i>Paspalum scrobiculatum</i>	ditch millet
C	<i>Persicaria attenuata</i>	white smartweed
C	<i>Philydrum lanuginosum</i>	frogsmouth
C	<i>Pteridium esculentum</i>	common bracken
C	<i>Pultenaea rariflora</i>	bush-pea
C	<i>Schizachyrium fragile</i>	firegrass
C	<i>Schoenoplectiella mucronata</i>	star club rush
C	<i>Schoenoplectus tabernaemontani</i>	grey club-rush
C	<i>Schoenus brevifolius</i>	zig-zag bogsedge
C	<i>Sesuvium portulacastrum</i>	sea purslane
C	<i>Typha domingensis</i>	cumbungi, bulrush
C	<i>Xyris juncea</i>	little yellow-eye

Appendix C Weed species list

Cheelii Lagoon Wetlands Ivor Drive to Riverview Drive

Regional ecosystem: 12.2.7

AMG 56J 460141E 7214179N MGA94

Collector/s: Greg Smyrell and Tony van Kampen

Survey Date: 15/01/2012

Notes: Compiled by Indigeaflora - Greg Smyrell (2012) with additional species added by Tony van Kampen (2017). *Peltophorum pterocarpum* present at Ivor Drive end of reserve in wetland near street trees in 2017.

Status: * = weed species 3 = Category 3 restricted invasive plant under the Biosecurity Act 2014.

Total weed species = 31

1/06/2017

Status	Scientific Name	Common Name
*	<i>Ageratum houstonianum</i>	blue billygoat weed
3	<i>Asparagus aethiopicus</i> cv. <i>Sprengeri</i>	basket asparagus
*	<i>Axonopus fissifolius</i>	narrow-leaved carpet grass
*	<i>Bidens pilosa</i>	cobbler's pegs
*	<i>Chloris gayana</i>	Rhodes grass
*	<i>Crotalaria lanceolata</i> subsp. <i>lanceolata</i>	rattlepod
*	<i>Cyperus brevifolius</i>	Mullumbimby couch
*	<i>Desmodium incanum</i>	creeping beggar weed
*	<i>Desmodium triflorum</i>	creeping tick trefoil
*	<i>Digitaria didactyla</i>	Queensland blue couch
*	<i>Digitaria violascens</i>	bastard summergrass
*	<i>Eclipta prostrata</i>	white eclipta
*	<i>Eleocharis minuta</i>	spikerush
*	<i>Emilia sonchifolia</i> var. <i>sonchifolia</i>	purple emilia
*	<i>Eragrostis bahiensis</i>	bahia lovegrass
*	<i>Euphorbia hirta</i>	asthma plant
*	<i>Euphorbia hyssopifolia</i>	leafy spurge
*	<i>Macroptilium lathyroides</i> var. <i>semierectum</i>	phasey bean
*	<i>Nymphaea caerulea</i>	Cape waterlily
*	<i>Melinis repens</i>	red natal grass
*	<i>Paspalum urvillei</i>	vasey grass
*	<i>Passiflora foetida</i>	stinking passionflower
*	<i>Passiflora suberosa</i>	corky passion flower
*	<i>Peltophorum pterocarpum</i>	yellow poinciana
*	<i>Praxelis clematidea</i>	praxelis weed
*	<i>Schefflera actinophylla</i>	umbrella tree
3	<i>Schinus terebinthifolius</i>	broad-leaved pepper tree
*	<i>Setaria pumila</i> subsp. <i>pumila</i>	pale pigeon grass
*	<i>Solanum nodiflorum</i>	blackberry nightshade
*	<i>Stylosanthes scabra</i>	shrubby stylo
*	<i>Symphotrichum subulatum</i>	wild aster

Appendix D Bird species list

Cheelii Lagoon Wetlands Ivor Drive to Riverview Drive

AMG 56J 460141E 7214179N MGA94

Collector/s:

Bird watchers of Hervey Bay: Survey dates: Various

Notes: Compiled by the members of Bird Watchers of Hervey Bay up to 2017.

Total bird species = 122

8/06/2017

Common Name	Scientific Name	Notes
Australasian grebe	<i>Tachybaptus novaehollandiae</i>	
Australian hobby	<i>Falco longipennis</i>	
Australian king-parrot	<i>Alisterus scapularis</i>	
Australian magpie	<i>Gymnorhina tibicen</i>	
Australian pelican	<i>Pelecanus conspicillatus</i>	
Australian white ibis	<i>Threskiornis molucca</i>	
Australian wood duck	<i>Chenonetta jubata</i>	
azure kingfisher	<i>Alcedo azurea</i>	
Baillon's crane	<i>Porzana pusilla</i>	
bar-shouldered dove	<i>Geopelia humeralis</i>	
black-faced cuckoo-shrike	<i>Coracina novaehollandiae</i>	
blue-faced honeyeater	<i>Entomyzon cyanotis</i>	
brahminy kite	<i>Haliastur indus</i>	
brown goshawk	<i>Accipiter fasciatus</i>	
brown honeyeater	<i>Lichmera indistincta</i>	
brown thornbill	<i>Acanthiza pusilla</i>	
buff-banded rail	<i>Gallirallus philippensis</i>	
channel-billed cuckoo	<i>Scythrops novaehollandiae</i>	
chestnut teal	<i>Anas castanea</i>	
cicadabird	<i>Coracina tenuirostris</i>	
collared kingfisher	<i>Todiramphus chloris</i>	
common bronzewing	<i>Phaps chalcoptera</i>	
common koel	<i>Eudynamys scolopacea</i>	
cotton pygmy-goose	<i>Nettapus coromandelianus</i>	
crested pigeon	<i>Ocyphaps lophotes</i>	
darter	<i>Anhinga melanogaster</i>	
dollarbird	<i>Eurystomus orientalis</i>	
double-barred finch	<i>Taeniopygia bichenovii</i>	
dusky honeyeater	<i>Myzomela obscura</i>	
dusky moorhen	<i>Gallinula tenebrosa</i>	
eastern whipbird	<i>Psophodes olivaceus</i>	
eastern yellow robin	<i>Eopsaltria australis</i>	
Eurasian coot	<i>Fulica atra</i>	
fairy gerygone	<i>Gerygone palpebrosa</i>	
fairy martin	<i>Hirundo ariel</i>	
fan-tailed cuckoo	<i>Cacomantis flabelliformis</i>	
figbird	<i>Sphecotheres viridis</i>	
forest kingfisher	<i>Todiramphus macleayii</i>	
fuscous honeyeater	<i>Lichenostomus fuscus</i>	
galah	<i>Cacatua roseicapilla</i>	
golden whistler	<i>Pachycephala pectoralis</i>	

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great egret	<i>Ardea alba</i>	
grey butcherbird	<i>Cracticus torquatus</i>	
grey fantail	<i>Rhipidura fuliginosa</i>	
grey shrike-thrush	<i>Colluricincla harmonica</i>	
grey teal	<i>Anas gracilis</i>	
hardhead	<i>Aythya australis</i>	
intermediate egret	<i>Ardea intermedia</i>	
large-billed scrubwren	<i>Sericornis magnirostris</i>	
laughing kookaburra	<i>Dacelo novaeguineae</i>	
leaden flycatcher	<i>Myiagra rubecula</i>	
Lewin's honeyeater	<i>Meliphaga lewinii</i>	
little black cormorant	<i>Phalacrocorax sulcirostris</i>	
little corella	<i>Cacatua sanguinea</i>	
little egret	<i>Egretta garzetta</i>	
little friarbird	<i>Philemon citreogularis</i>	
little pied cormorant	<i>Phalacrocorax melanoleucos</i>	
little shrike-thrush	<i>Colluricincla megarhyncha</i>	
little wattlebird	<i>Anthochaera chrysoptera</i>	
magpie goose	<i>Anseranas semipalmata</i>	
magpie-lark	<i>Grallina cyanoleuca</i>	
mangrove gerygone	<i>Gerygone levigaster</i>	
mangrove honeyeater	<i>Lichenostomus fasciogularis</i>	
masked lapwing	<i>Vanellus miles</i>	
nankeen kestrel	<i>Falco cenchroides</i>	
noisy friarbird	<i>Philemon corniculatus</i>	
noisy miner	<i>Manorina melanocephala</i>	
olive-backed oriole	<i>Oriolus sagittatus</i>	
osprey	<i>Pandion haliaetus</i>	
Pacific baza	<i>Aviceda subcristata</i>	
Pacific black duck	<i>Anas superciliosa</i>	
pale-headed rosella	<i>Platycercus adscitus</i>	
peaceful dove	<i>Geopelia striata</i>	
pheasant coucal	<i>Centropus phasianinus</i>	
pied butcherbird	<i>Cracticus nigrogularis</i>	
pied cormorant	<i>Phalacrocorax varius</i>	
pied currawong	<i>Strepera graculina</i>	
purple swamphen	<i>Porphyrio porphyrio</i>	
rainbow bee-eater	<i>Merops ornatus</i>	
rainbow lorikeet	<i>Trichoglossus haematodus</i>	
red-backed fairy-wren	<i>Malurus melanocephalus</i>	
red-browed finch	<i>Neochmia temporalis</i>	
red-tailed black-cockatoo	<i>Calyptorhynchus banksii</i>	
rose robin	<i>Petroica rosea</i>	
royal spoonbill	<i>Platalea regia</i>	
rufous fantail	<i>Rhipidura rufifrons</i>	
rufous whistler	<i>Pachycephala rufiventris</i>	
sacred kingfisher	<i>Todiramphus sanctus</i>	
scaly-breasted lorikeet	<i>Trichoglossus chlorolepidotus</i>	
scarlet honeyeater	<i>Myzomela sanguinolenta</i>	
shining bronze-cuckoo	<i>Chrysococcyx lucidus</i>	

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shining flycatcher	<i>Myiagra alecto</i>	
silver gull	<i>Larus novaehollandiae</i>	
silveryeye	<i>Zosterops lateralis</i>	
spangled drongo	<i>Dicrurus bracteatus</i>	
spotted turtle-dove	<i>Streptopelia chinensis</i>	
straw-necked ibis	<i>Threskiornis spinicollis</i>	
striated heron	<i>Butorides striatus</i>	
striated pardalote	<i>Pardalotus striatus</i>	
tawny frogmouth	<i>Podargus strigoides</i>	
tawny grassbird	<i>Megalurus timoriensis</i>	
Torresian crow	<i>Corvus orru</i>	
tree martin	<i>Hirundo nigricans</i>	
varied triller	<i>Lalage leucomela</i>	
variegated fairy-wren	<i>Malurus lamberti</i>	
wandering whistling-duck	<i>Dendrocygna arcuata</i>	
welcome swallow	<i>Hirundo neoxena</i>	
whistling kite	<i>Haliastur sphenurus</i>	
white-bellied cuckoo-shrike	<i>Coracina papuensis</i>	
white-bellied sea-eagle	<i>Haliaeetus leucogaster</i>	
white-breasted woodswallow	<i>Artamus leucorhynchus</i>	
white-browed scrubwren	<i>Sericornis frontalis</i>	
white-cheeked honeyeater	<i>Phylidonyris nigra</i>	
white-faced heron	<i>Egretta novaehollandiae</i>	
white-necked heron	<i>Ardea pacifica</i>	
white-throated gerygone	<i>Gerygone olivacea</i>	
white-throated honeyeater	<i>Melithreptus albogularis</i>	
white-throated needletail	<i>Hirundapus caudacutus</i>	
willie wagtail	<i>Rhipidura leucophrys</i>	
yellow-faced honeyeater	<i>Lichenostomus chrysops</i>	
yellow-tailed black-cockatoo	<i>Calyptorhynchus funereus</i>	
yellow-tufted honeyeater	<i>Lichenostomus melanops</i>	