



NERICON WETLANDS (RESERVE 1002930) LAKE WYANGAN

PLAN OF MANAGEMENT



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1.0 EXECUTIVE SUMMARY

The Nericon Wetlands Plan of Management has been prepared by Council to reflect the features of **Nericon Wetlands** (formerly referred to locally as Nericon Swamp), being Crown Reserve 1002930.

The Plan of Management (PoM) examines the current character, current use and future needs of the land and its relationship to the surrounding properties and communities within which it is located and establishes a clear direction for future development, planning and resource management of the land by Council. This PoM further considers future management with consideration to the Department of Environment, Climate Change and Water NSW - *NSW Wetlands Policy 2010*.

The PoM is required in accordance with Section 3.23 of the *Crown Land Management Act (CLMA) 2016* and Section 36 of the *Local Government Act (LGA) 1993*.

Nericon Wetlands is part of a collective of wetland areas in the vicinity of the Lake Wyangan Basin, including Campbell's Wetland (referred to locally as Campbell's Swamp) and Tharbogang Wetland (referred to locally as Tharbogang Swamp).

Despite Nericon (together with Campbell's and Tharbogang) Wetlands being identified as an Important Bird Area (IBA), management to date, has been undertaken by Council's Environmental Officer in consultation with the Murrumbidgee Field Naturalists (MFN) without the benefit of a formal Plan of Management. Future management should therefore be more reflective of the contribution of Nericon (and the collective Wetlands) with greater emphasis on conservation objectives and the significance that they provide as a place of refuge for migratory birds during drought years. Also, there is potential for eco-tourism in growing the wider community's understanding, appreciation and value of these areas within a broader agricultural landscape.

Wetlands generally have played a significant role in Aboriginal culture, providing sources of food, shelter, for teaching and recreation, and use for ceremonies. Wetlands also hold cultural values for non-Aboriginal communities that relate to histories of recreation, conservation and pastoralism. Both cultures play an important role in future understanding and management of the collective Wetlands in the Lake Wyangan Basin.

The PoM proposes to support improved adaptive management of Nericon Wetlands and its linkages to Campbell's and Tharbogang Wetlands within the broader Lake Wyangan Basin, and:

- To improve, maintain and protect biodiversity and ecological values and functions with regard to its hydrological environment, flora and fauna habitat;
- To potentially provide for continued restoration and regeneration of the land;
- To provide for improved access to the land;
- To increase awareness through community education, improved eco-tourism opportunities for both Griffith City Council and the broader community; and
- To increase partnership involvement of key stakeholders.

While Nericon Wetlands has its own unique PoM, there will be generic issues affecting each of the Wetlands. Current management practices differ at Nericon Wetlands due to varying water delivery systems, access and proximity to Lake Wyangan; Campbell's Wetlands having a more reliable water source and currently being a more obvious go-to site for monitoring and bird-watching particularly of wetland species.

Nericon Wetlands is categorised in this PoM, as: -

- **Natural Area - Wetland**

The categorisation of this land is consistent with the Reserve's purpose of "Environmental Protection" and the land continues to be used and managed for environmental protection and associated passive recreation, i.e. bird watching, study and education.

2.0 INTRODUCTION

Figure 1 – Locality diagram



Griffith City is a thriving regional capital with a vibrant lifestyle and diverse economy; embracing community, heritage, culture and the environment.

Located in the Riverina, Griffith is 584km from Sydney, 458 km from Melbourne and 358km from Canberra; and is the largest regional centre in the Western Riverina region. Griffith is located in the heart of Wiradjuri Nation – the largest nation of Aboriginal and Torres Strait Islander people in Australia.

The City of Griffith is unique in that it has no natural supply of surface water. Both town and irrigation water are supplied via the Main Canal from the Murrumbidgee River through a series of strategically designed and built channel systems. A series of drainage channels has diverted both stormwater and off-farm drainage water into small wetland areas and MI's larger strategic infrastructure, Barren Box Swamp. The vibrancy of Griffith's growth as a regional centre is a result of the development of the Murrumbidgee Irrigation system of the early 20th Century to create the Riverina's food bowl.

Griffith City Council is responsible for the care and control of many parcels of community land. With the introduction of the *CLMA 2016* on 1 July 2018, Council as the appointed Crown Land Manager will generally now manage Crown Reserves under the provisions of the *LGA 1993*.

2.1 Corporate Objectives

Griffith City Council has a positive future being acknowledged as a predominant major regional centre. Council's Mission Statement is –

1. To respond to the needs of the community and deliver in an economical manner those services which are the responsibility of Local Government.
2. To provide Local Government administration that is dedicated, accountable and committed to the improvement of the quality of life and the economic well-being of the citizens of the City of Griffith.

Figure 2 – Guiding Griffith 2040



The Community Strategic Plan ‘**Guiding Griffith 2040**’ adopted in February 2017 identifies the community’s priorities and aspirations for the future and provides strategies for achieving these goals. The Community Strategic Plan is made up of four themes. The four key themes are:

Figure 3 – Community Strategic Plan – Themes

- 1. Leadership –**
 - a. Developing an engaged and connected community through clear and transparent communication; acknowledging and being responsive to issues; and to be well informed on current issues that impact on the community;
 - b. Working together to achieve goals by engaging actively with State, Federal and non-government agencies to provide local advocacy; partnering and supporting local delivery service providers; sourcing opportunities for funding partnerships, projects and programs to improve quality of life for community members; and develop partnerships with industry and agricultural leaders.
 - c. Planning and leading with good governance within a clear framework of strategic planning, policies and procedures and service standards; and to ensure Council’s financial sustainability.
- 2. Love the Lifestyle –**
 - a. Griffith is a great place to live providing accessible diverse housing; a shared responsibility for the safety of its community members; promotion of reconciliation and a celebration of its social and cultural diversity and social inclusion of the varied demographic groups; providing and promoting accessibility to services and facilities; and building a community which promotes and facilitates an active and healthy lifestyle through provision of sporting and recreational facilities.
- 3. Growing our City –**
 - a. Encouraging the local community to grow with establishment of diversified industries; promoting the growth of established businesses and assist new business growth; strategic planning and consideration of land use management to encourage new investment; promotion and support of diverse agricultural industries; and the promotion of Griffith as a desirable visitor and tourism destination.
 - b. Encouraging a skilled workforce with employment opportunities locally; developing partnerships to build quality education and training opportunities; and advocate for safe work practices and employment standards.
 - c. Providing, renewing and maintaining a range of quality infrastructure, assets, services and facilities in a cost effective and sustainable manner; maintain and develop an effective transport network; improving the aesthetic of the City and its villages; and mitigating against natural disasters.
- 4. Valuing our Environment**
 - a. Enhancing the natural and built environment through respectful planning, balanced growth and good design; facilitating community involvement in caring for the natural environment; delivering projects to protect biodiversity; valuing and protecting both natural and built heritage; sustainable land use; and considering climate change issues when decision making.
 - b. Use and manage our resources wisely through management of water resources and water quality; reduction of energy consumption and greenhouse gas emissions; and providing environmentally sustainable waste management services.

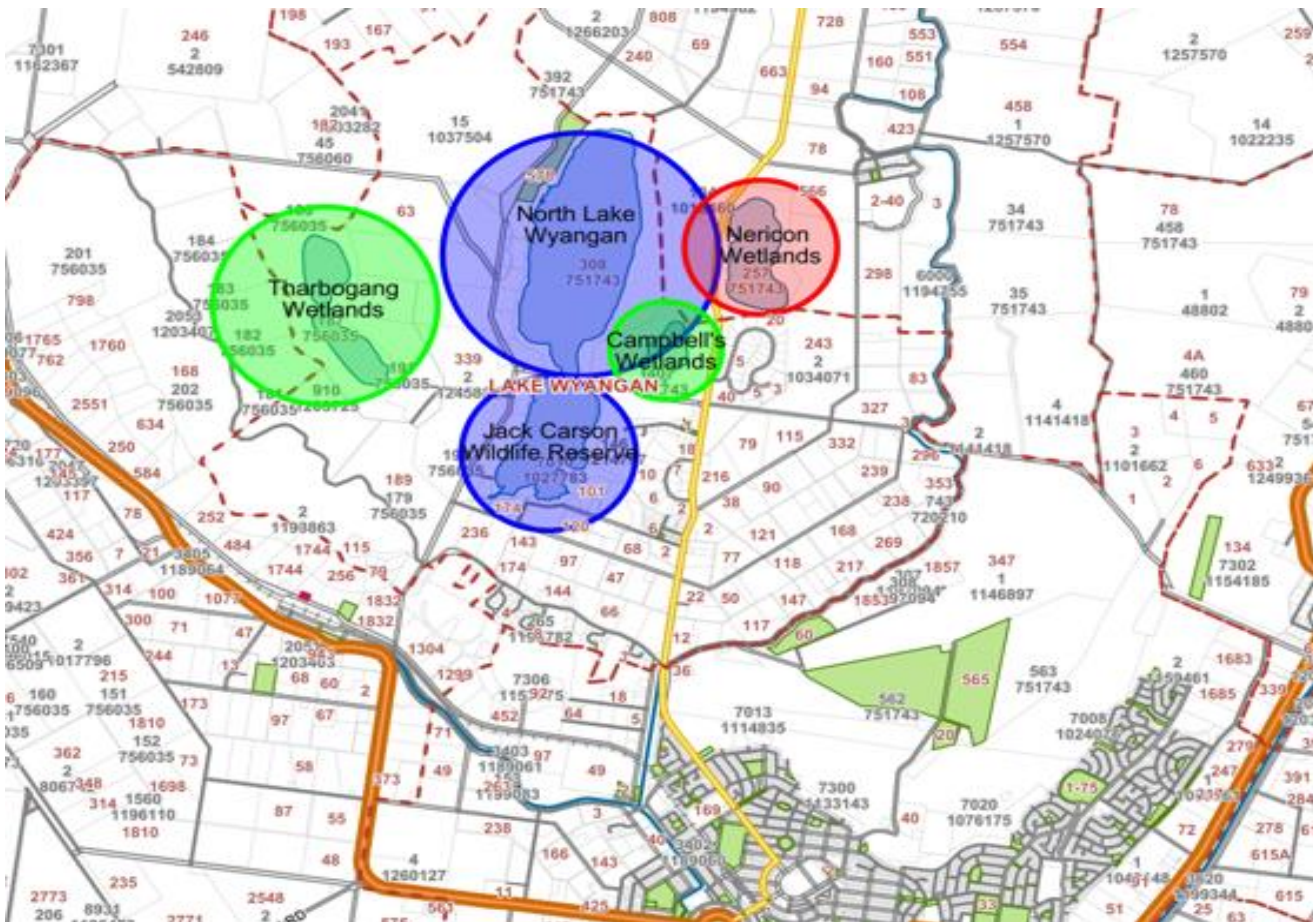
2.2 Land to which this plan applies

The land to which this PoM applies is: -

Reserve 1002930 known locally as Nericon Swamp and referred to in this PoM as **Nericon Wetlands**, comprises Lot 257 DP 751743, Parish of Wyangan, County of Cooper of 94.21 hectares. Nericon Wetlands is located north of the Village of Lake Wyangan and east of Lake Wyangan Recreation Reserve (approx. 8.8 km north of Griffith).

Nericon Wetlands (together with neighbouring Campbell's and Tharbogang Wetlands, Jack Carson Reserve and North Lake Wyangan) provides an important area for biodiversity with linkages to nearby natural bushland that supports a number of water, bushland and grassland bird species as well as other reptile, mammal, amphibian and invertebrate species.

Figure 4(a) - Collective location of Wetlands in relation to Lake Wyangan & map of Nericon Wetlands

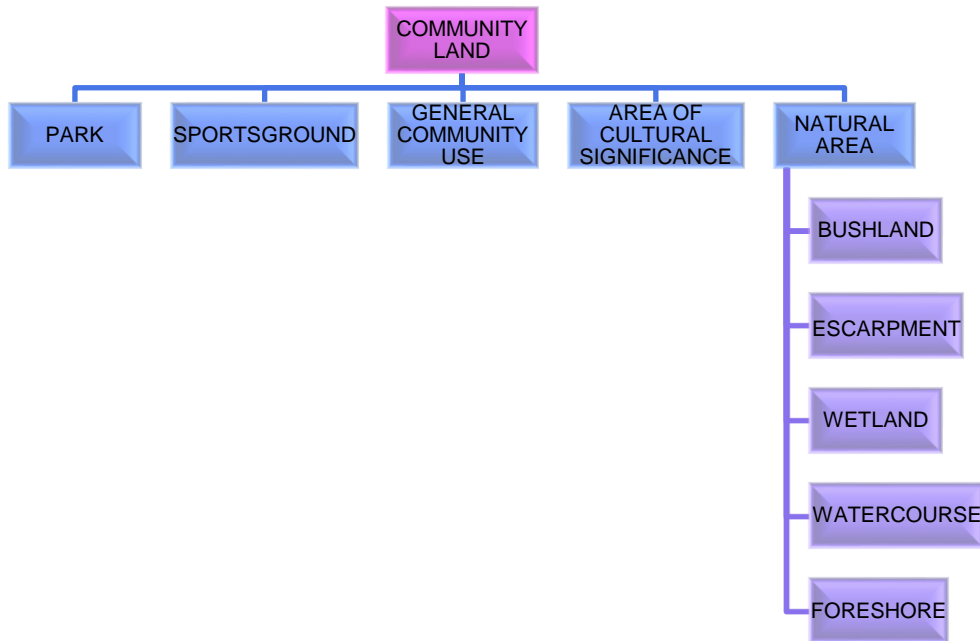


Nericon Wetlands is owned by The State of New South Wales (as Crown land) and managed by Griffith City Council as Crown Land Manager under the *CLMA 2016*.

The management and use of the land are subject to the provisions contained in the *CLMA* 2016 and is not subject to any condition, restriction or covenant imposed by the owner.

With the introduction of the *CLMA 2016*, Council is to manage dedicated or reserved Crown land under their control as community land under section 3.21 of the Act.

For the purpose of section 3.23 of the *CLMA 2016*, the PoM for Nericon Wetlands is a ‘first Plan’.



The *CLMA 2016* provides a new regime for the management of Crown land and Council is now responsible for compliance with Native Title legislation for the Crown land it manages. Council must obtain Native Title Manager advice as to the validity of any act or activity that it wishes to undertake on Crown Reserves (or Crown land) prior to dealing with the land, i.e., authorised through *Part 2 Division 3 of the NTA (C'th) 1993*.

Both the *Aboriginal Land Rights Act (ALR) 1983* and the *Commonwealth Native Title Act (NTA (C'th)) 1993* recognises the intent of the original reserve purpose of the land so that a complying activity can be considered lawful or validated, under the *NTA (C'th) 1993*.

On Crown land, Native Title rights and interest must be considered unless:

- Native Title has been extinguished; or
- Native Title has been surrendered; or
- Determined by a court to no longer exist.

Examples of acts which may affect Native title on Crown land reserves managed by Council include: -

- The construction of new buildings and other facilities such as toilet blocks, walking tracks, tennis courts, grandstands and barbeques,
- The construction of extensions to existing buildings,
- The construction of new roads or tracks,
- Installation of infrastructure such as powerlines, sewerage pipes, etc.,
- The issue of a lease or licence,
- The undertaking of earthworks.

Council applied for the categorisation of Nericon Wetlands as '**Natural Area – Wetland**' which closely relates to the reserve's purpose of Environmental Protection. This category was approved by the Minister administering the *CLMA 2016* in relation to the reserve, and Council does not propose to alter the category of the Reserve by this Plan of Management.

Activities on the Council Managed Crown Reserves will need to reflect the intent of the public purpose and will be assessed for compliance with relevant Local Government and Crown Lands legislation, including assessment of the activity under the *NTA 1993 (C'th)* and registered claims under the *ALRA 1983*.

3.0 PLANNING INSTRUMENTS, LEGISLATION and POLICIES

3.1 Local Government Act 1993 & Local Government (General) Regulations 2021

Under the *LGA 1993*, Section 36(1) Council must prepare a Plan of Management for all community land under their control. A Plan of Management may apply to one or more areas of community land.

Council must also consider the guidelines under Clause 101 of the Local Government (General) Regulations 2021 for categorisation of community land when preparing Plans of Management.

Clause 108 of the guidelines states that the land should be further categorised as a wetland under Section 36(5) of the Act if the land includes marshes, mangroves, backwaters, billabongs, swamps, sedgelands, wet meadows or wet heathlands that form a waterbody that is inundated cyclically, intermittently or permanently with fresh, brackish or salt water, whether slow moving or stationary.

This Plan of Management has been prepared in accordance with the *LGA 1993* using the land categories approved by the Minister administering the *CLMA 2016* where lands are Council Managed Crown Reserves.

The minimum requirements for a Plan of Management for community land is set out in Section 36(3) of the *LGA 1993* and must identify the following:

- (a) the category of the land,
- (b) the objectives and performance targets of the plan with respect to the land,
- (c) the means by which the council proposes to achieve the plan's objectives and performance targets,
- (d) the manner in which the council proposes to assess its performance with respect to the plan's objectives and performance targets, and may require the prior approval of the council to the carrying out of any specified activity on the land.

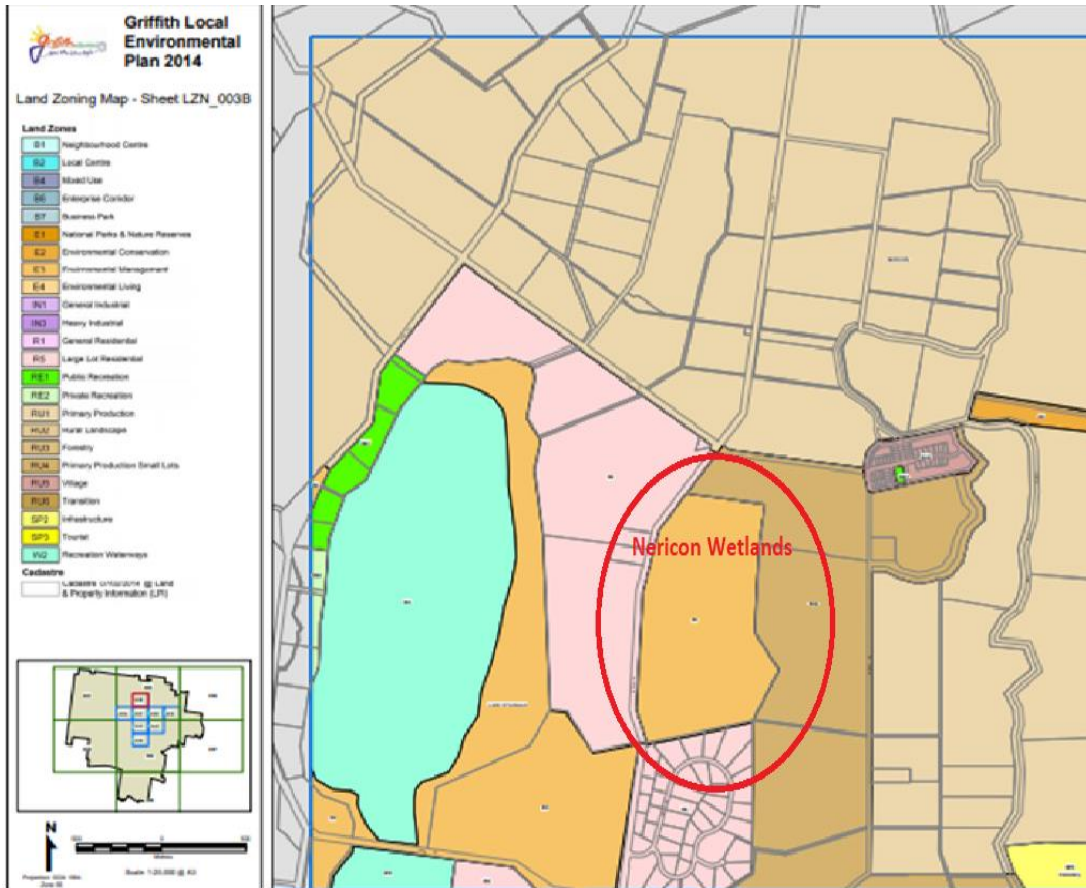
Section 36(2) specifies that a Plan of Management may apply to one or more areas of community land, except as provided by this Division.

Sections 36E – 36N of the *LGA 1993* specifies the core objectives for the management of each category of community land.

3.2 Land Zoning

The proximity of Nericon (and Campbell's) Wetland in relation to North Lake Wyangan and the Jack Carson Wildlife Reserve (known locally as South Lake Wyangan), together with the more westerly Tharbogang Wetland (situated off map in Figure 5 below), confirm the connectedness of each waterbody, whether permanent or ephemeral, and the collective important values they contain within an area that is broadly used for 'Primary Production – RU1', 'Rural Small Lot Holdings – RU4' and 'Large Lot Residential – R5'.

Figure 5 - Planning Zone – Nericon Wetlands – C2 – Environmental Conservation (this map includes the location of North Lake Wyangan and part Jack Carson Wildlife Reserve which is currently zoned W2 – Recreation Waterways. The easterly foreshore of Lake Wyangan is zoned as for Nericon and Campbell's Wetlands as E2 – Environmental Conservation)



Zone C2 Environmental Conservation

1. The objectives of the C2 – Environmental Conservation are:

- To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.
- To prevent development that could destroy, damage or otherwise have an adverse effect on those values.
- To ensure the long term viability of populations of threatened species and ecological communities by protecting and improving the condition of wildlife habitats.

- Development that may be carried out within the zone without the need for development consent

2. Permitted without consent

- Water reticulation systems.
- Development that may not be carried out within the zone except with development consent

3. Permitted with consent

Boat launching ramps; Boat sheds; Community facilities; Eco-tourist facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Information and education facilities; Jetties; Oyster aquaculture; Recreation areas; Research stations; Roads; Water recycling facilities; Water supply systems.

- **Development that is prohibited within the zone**

4. Prohibited

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

The GLEP (2014) also provides Additional local provisions as follows: -

7.6 Wetlands

- (1) The objective of this clause is to ensure that wetlands are preserved and protected from the impacts of development.
- (2) This clause applies to land identified as “Wetlands” on the Wetlands Map.
- (3) In deciding whether to grant development consent for development on land to which this clause applies, the consent authority must consider:
 - (a) whether or not the development is likely to have any significant adverse impact on the following:
 - (i) the condition and significance of the existing native fauna and flora on the land,
 - (ii) the provision and quality of habitats on the land for indigenous and migratory species,
 - (iii) the surface and groundwater characteristics of the land, including water quality, natural water flows and salinity; and
 - (b) any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.
- (4) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:
 - (a) the development is designed, sited and will be managed to avoid any significant adverse environmental impact, or
 - (b) if that impact cannot be reasonably avoided – the development is designed, sited and will be managed to minimize that impact, or
 - (c) if that impact cannot be minimized – the development will be managed to mitigate that impact.

Figure 6 – GLEP (2014) Wetlands Map – Sheet WET_003 (this shows Nericon and Campbell's Wetlands, Jack Carson Wildlife Reserve and North Lake Wyangan. Note: currently Tharbogang Wetlands is not included)



3.3 Council Plans, Strategies, Policies and Procedures

This PoM is to be used in conjunction with the appropriate Council plans, policies and procedures that govern the use and management of community land and any facilities located on the lands.

Additional Council policies, plans and strategies adopted after the date of this plan that have relevance to the planning, use and management of community land will apply as though they were in force at the date of adoption of the PoM, i.e. State of the Environment Report initially prepared in 2016 and to be prepared in conjunction with subsequent LGA elections.

3.4 State Environmental Planning Policies

The State Environmental Planning Policies outline Complying and Exempt Development and Infrastructure that should be referred to in relation to development on the reserve. (*Refer to [Appendix 2 pg.52-53](#)*).

3.5 Review of this Plan

The use and management of Nericon Wetlands is regulated by this PoM.

Whilst the guidelines and principles outlined in the plan may be suitable at present, the Plan should be reviewed from time to time, to confirm its relevance.

The review should take place within 5 years of adoption of this plan.

3.6 Community Consultation

Consultation with the community is an important part of the preparation of this PoM. Consultation gives Council a better understanding of the range of local issues affecting the use and enjoyment of the land to which this PoM applies and gives all sectors of the community the chance to have an input into the direction of policy development being undertaken by Council.

Initial consultation has occurred with members of the Murrumbidgee Field Naturalists (MFN), Office of Environment and Heritage (OEH), Riverina Local Lands Services (LLS) and Murrumbidgee Irrigation (MI) together with Environmental staff, Griffith City Council.

All stakeholders are given the opportunity to express their opinions and provide relevant information in relation to the planned management of the land, however as the land is Crown land, final approval for the PoM rests with the Minister administering the *Crown Land Management Act 2016* as owner of the land.

Council is required to submit the draft PoM to NSW Department of Planning, Industry & Environment, as representative of the owner of the land under section 39 of the *LGA 1993*. This process occurs prior to public exhibition and community consultation of the Plan of Management. Refer to the “[*Process for Consultation and Approval of an Initial Plan of Management*](#)” (Figure 7 below).

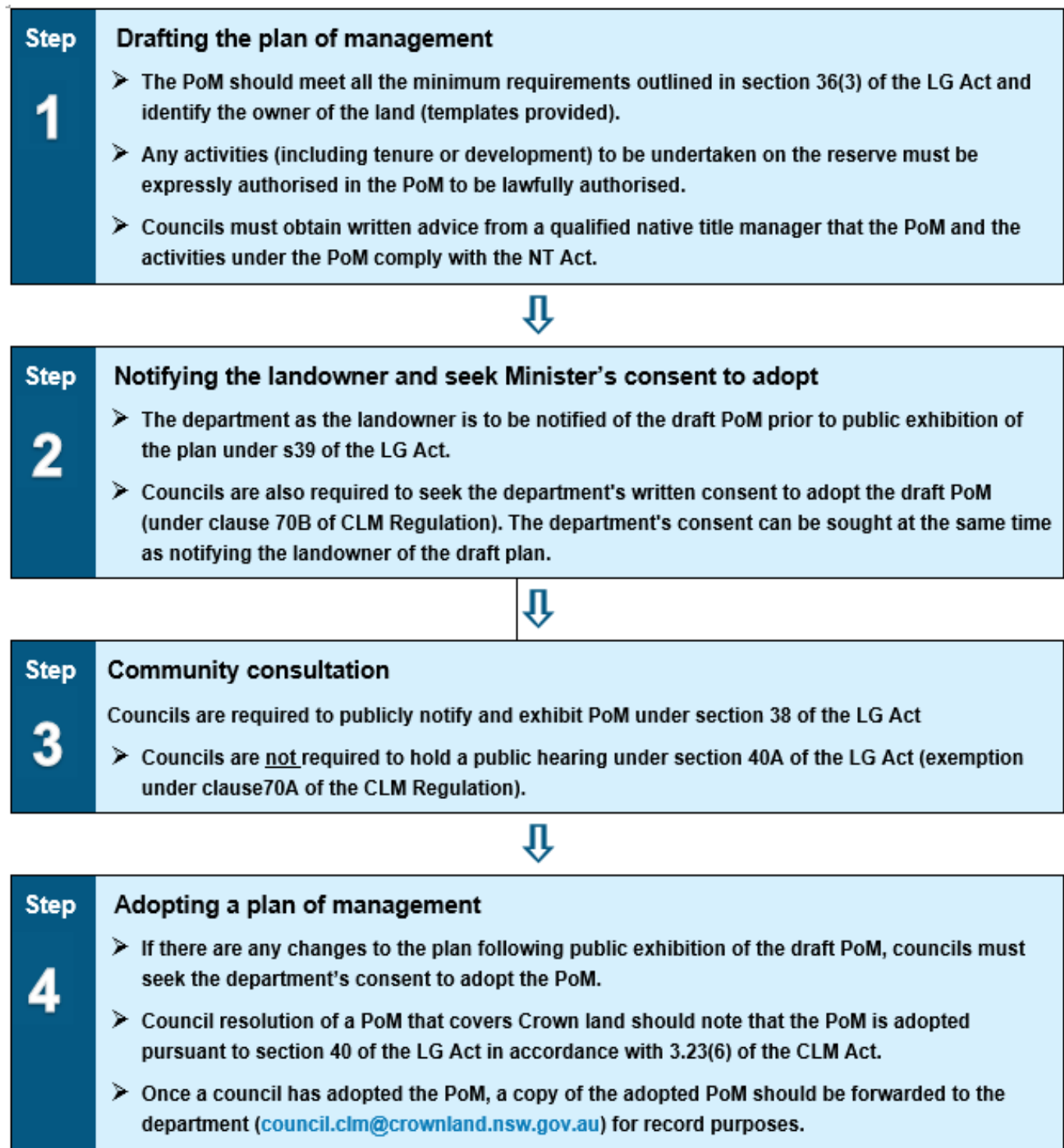
If after public consultation there is no change to the categorisation and no additional purpose is required to be added to the reserve, no additional ministerial consent is required. Council can then proceed to adopt the Plan of Management.

If Council proposes a change in the categorisation of the land following public consultation, the plan must be referred again to the Minister administering the *CLMA 2016* for consent to adopt the Plan of Management.

The purpose of this Plan of Management is **not** to change the categorisation or to add a purpose to the Crown Reserve as currently stands.

Community consultation is also offered as a result of the development application process in line with Council's Griffith Community Participation Plan of 16 December 2019 (in response to Section 2.23 of the *Environmental Planning and Assessment Act 1979*).

Figure 7 -Process for Consultation and Approval of an Initial Plan of Management”



4.0 THE PHYSICAL ENVIRONMENT

Nericon Wetlands is bounded to its west by Boorga Road; and surrounded to the north and east by farming properties; and to the south by a large lot residential subdivision. Tree planting has been undertaken on the northern, eastern and southern boundaries to provide buffer zones from the adjoining agricultural and large-lot residential lands and create greater habitat connectivity to neighbouring Wetlands within the Lake Wyangan Basin.

In Murrumbidgee Irrigation's (MI) "Audit of Wetlands in the eastern MI (2005)", Nericon Wetlands (together with Campbell's and Tharbogang Wetlands) were regarded as "Wyangan Basin Wetlands"; a distinctive group of wetlands within the MIA due to their natural characteristics (bioregion, i.e., Cobar Peneplain, shallow soils) and proximity to urban fringe and intensive development within a small enclosed catchment (**Roberts** et al. 2005).

4.1 The Site – History including past Studies

Nericon Wetlands is a shallow depression within the Lake Wyangan Basin, likely to have historically been highly ephemeral, potentially supporting stands of Black Box (*Eucalyptus largiflorens*), Boree (*Acacia pendula*), Lignum (*Muehlenbeckia cunninghamii*) and Belah (*Casuarina cristata*) (CSU Report No. 140 further referred to below). As the irrigation area evolved and farming in the vicinity of Nericon Wetlands was more intensely cultivated, the area was used for detention of water discharge from neighbouring farms. This would most certainly have impacted on water table levels; soil composition; and native flora predominate at the time (**Taylor** et al. 2000).

The original survey Plan (1921) of Portion 257 DP 751743 shows the existence of a Tank, and thick stands of box trees within the natural depression area surrounded by stands of Yarran, Box and Pine species. The Portion Plan also shows the location of MI's drainage channels that would have fed water discharge into the Wetland (albeit less likely in the current improved environment of water delivery, on-farm management and wise water-use practices). [Refer Appendix 3 \(pg. 54\)](#).

Observations by members of the MFN and surveys undertaken for the Royal Australasian Ornithologists Union (RAOU) (Birds Australia) Murray-Darling Basin Waterbird Survey assisted in the national and international recognition of both Nericon (and Campbell's) Wetlands as important habitat for migratory waders.

The Department of Land and Water Conservation (DLWC) undertook a formal Land Assessment of the Lake Wyangan area including Portion 257 (Nericon Swamp) and Portion 407 (Campbell's Swamp), Parish of Wyangan in March / April 1996 to determine the suitable forms of land use for these parcels of land. The initial findings were published in 1997 and recommended that the areas be reserved for the "purposes of study and conservation of native flora and fauna" (**Taylor** et al. 2000).

Furthermore, in response to recommendations made in the Environmental Research and Information Consortium (IREC) Report on the Lake Wyangan Area (1999), Council proposed to change the status of Nericon (and Campbell's) Swamps to 7(w), environmental protection (wetlands). It is also noted that an application was lodged to change the use of the land immediately south of Nericon Wetlands to "rural residential properties" to support a proposed farm subdivision.

Prior to Nericon Wetlands' reservation for 'Environmental Protection' in April 2000, the area was extensively Licenced by Department of Lands entity of the time for the purpose of 'grazing and dry cropping'. The CSU

Report states that the last Licence in respect of Nericon Wetlands was terminated in 1999. Use at the time accorded with GLEP 1994 with the area zoned as 1(a) rural (general).

Griffith City Council Crown Reserves (R.1002930) Trust was appointed to manage the land for 'Environmental Protection' as a result of the reservation of Nericon Wetlands - Reserve 1002930.

Charles Sturt University (CSU - Johnstone Centre of Parks Recreation and Heritage) prepared its Report (Report No. 140) in 2000, incorporating both Nericon and Campbell's Swamps. At that time, Nericon Wetlands was more significantly affected by irrigated horticultural use to the east and south of the area tending to an excess of water run-off through associated tile drainage pipes from farms. Water accordingly contained dissolved materials and was considered to be a significant contributor to salinity levels in Nericon (Wetlands) (**Taylor** et al. 2000).

The impacts of salinity are likely to have changed both since the CSU Report and the development of the large lot residential subdivision contained within DP 285693 which adjoins the southern boundary of Nericon Wetlands together with variations in climatic conditions. That is to say, the CSU Report was prepared during a period of extended drought that commenced in 1996. There have also been two significant 1:100-year flood events since that time being in 2012 and 2016 along with the initial drought breaking rain in 2010. The reduction of on-farm water discharge and channel escapes will also have affected the soil composition.

MI also prepared reports in 2005 essentially as background preparation for a program to monitor wetland conditions within the eastern MIA and surrounds. This linked to responsibilities of MI towards wetlands as required under its water supply licence; and under its own and State Biodiversity Policies. The study area incorporated a total of 38 wetland areas (former Floodplain Channels; Depression Wetlands; the Wyangan Basin (Lake Wyangan, Nericon, Campbell's and Tharbogang Swamps); Deflation Basins and Impounded Basins.

The subsequent Reports were: -

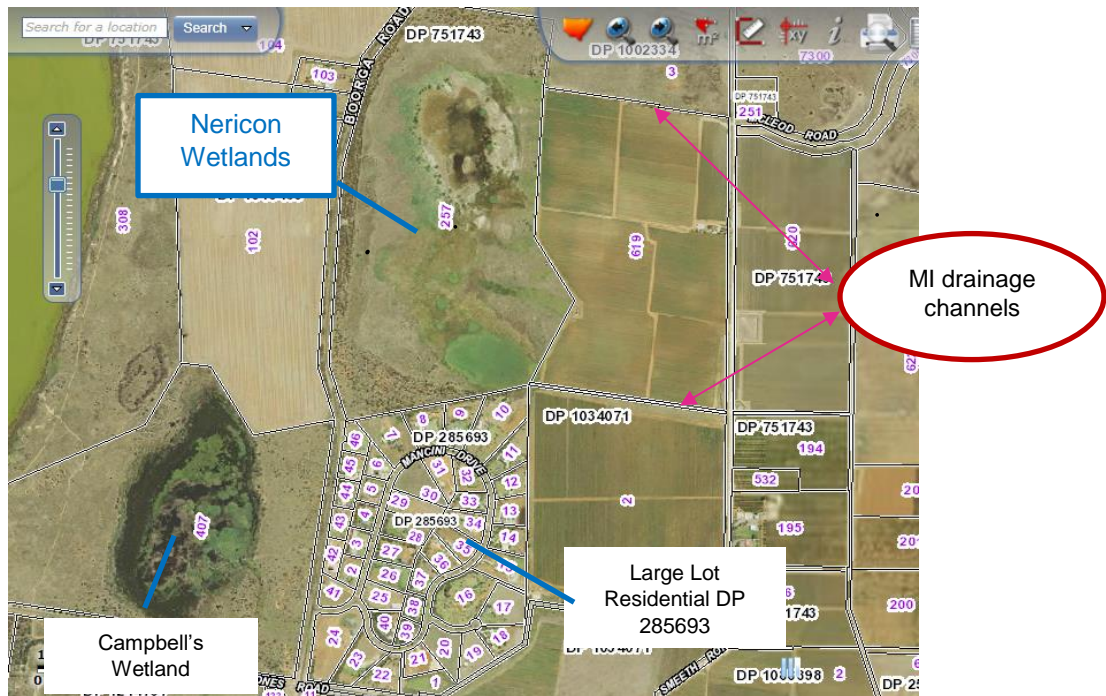
- *Inventory of Wetlands in the eastern MIA (May 2005)* (L Harrison and J Roberts)
- *An Audit of Wetlands in the eastern MIA (September 2005)* (J Roberts)

Although the Wyangan Basin Wetlands were treated as one type in the Report, it reflected Lake Wyangan and Nericon Swamp (each comprising 2 water regimes); and the collective areas comprising of 1 x Ephemeral; 2 x Seasonal; and 1 x Permanent areas with ecological values largely tied to their respective water regimes (**Roberts** et al. 2005).

The Report (at the time) provided a Condition Assessment of Nericon Wetlands.

The condition of Nericon Wetlands is likely to have substantially varied since this Report, due in part to reduced water inflow from MI drainage and off-farm drainage maintaining the wetland area to previously attract migratory and other waterbird species; and also, due to increased re-vegetation that has improved habitat for grass and woodland species.

Figure 8 – Aerial imagery showing development of land adjacent to Nericon Wetlands and proximity to Campbell's Wetlands



4.2 The Site – Recent and Current

Nericon Wetlands has been developed with assistance of the MFN, a locally based community group whose aim is to facilitate the knowledge of natural history, and to encourage the preservation and protection of the Australian natural environment, especially that of the Murrumbidgee River Valley.

The MFN lodged **DA B473/1999** for 'On-Ground works component of the NHT funded project "Nericon & Campbell's Swamps Wetlands Conservation Plan"; the MFN having been successful in attaining a total of \$180,000 from the National Heritage Trust in 1998 for a 3 1/2-year funding program (March 1999 to September 2003).

MFN's "Nericon & Campbell's Swamps Wetlands Conservation Plan" proposed to: -

- Provide a Management Plan to guide all future activities in the Wetlands and adjacent lands.
- Register the Wetlands as both Nationally and Internationally important Wetlands in the relevant forums.
- Carry out rehabilitation and re-vegetation works to maintain and enhance current ecological diversity
- Provide protected breeding and roosting habitat for native fauna.
- Raise community awareness of the importance of Wetlands generally and of these Wetlands in particular.
- Provide educational, interpretive and monitoring structures and facilities close to a major inland centre that will have a wide-reaching impact on raising community awareness of the importance, conservation, recreational and ecotourism values of wetlands.

Through MFN's Project, the members were able to: -

- Have a Survey undertaken in 1999 by local Surveyors, Polkinghorne, Budd & Longhurst (PHL)
- Engage Green Corp to install fencing.

- Arrange for combined direct seeding and seedling planting (by Green Corp and members of the MFN).
- Obtain additional funding (\$77,947) for works at Nericon (and Campbell's) Swamps.
- A further 2800 seedlings planted by Green Corp (total number 3600).
- Lodgement of Development Application(s) associated with works at Nericon (and Campbell's) Swamps, i.e. bird hide(s) and boardwalk(s) (2001).
- Installation of interpretive signage (2001).
- Nericon (and Campbell's) Swamps bird hide(s) and boardwalk(s) completed by MFN (2002).
- Additional tree planting along track to Nericon bird hide (2004).

Following completion of the Project, it was proposed that the MFN would, within its capacity as a volunteer organisation, provide minor maintenance for the structures erected at both sites; carry out regular inspections of the site and arrange working-bees to maintain the site(s) in a tidy manner (extract of undated letter from Bill Moller to Brent McAlister, Director of Environmental Services, Griffith City Council (GCC).

It was identified that Council would arrange to set up a 'Management Committee' to assume the role of ongoing management of the Lake Wyangan Wetlands (for environmental purposes). It was further proposed that the Management Committee would be responsible for the development of a Management Plan for the Wetland reserves under the Trusteeship of Council (extract of undated letter from Bill Moller following meeting of 7 August 1999 with Council representatives).

To-date, neither the *Management Committee* has been created, or a *Management Plan* developed. Council's Environmental Planner, has however undertaken strategic management actions in consultation with members of the MFN since Council's appointment as Trust Manager in 2000, relating to: -

- ❖ Direct seeding of 13.4ha of wattles and mid-storey species in-fill to earlier MFN plantings in the northern and southern ends, and centrally near the bird hide (destroyed 2011). Project undertaken via 'Urban Salinity' from Murrumbidgee Catchment Management Authority (MCMA) funding (2007-2009). Forty tube stock were also planted by a local School group.
- ❖ Removal of environmental weeds (African Boxthorn – (*Lycium ferocissimum*)) as part of the "Nericon Swamp Boxthorn Removal Project" funded through Local Lands Service (LLS) at a cost of \$10,000 (2014/2015).
- ❖ Liaison with NSW Rural Fire Service to undertake hazard reduction (HR) works on the southern end of Nericon Wetlands adjacent to the large lot residential subdivision (Mancini Estate) (2015 & 2017).
- ❖ Promotional days including "Bushcare's Biggest Day Out" and "Clean-up Australia Day" assisted by MFN members (2014).
- ❖ Consent to environmental water delivery (2010 and 2015).

There is a primary dam on site and two ephemeral wetland areas, one adjacent to the dam and the larger being in the south-eastern corner of this site.

Re-vegetation works on the northern, eastern and southern boundaries are evidenced in the aerial imagery.

While Nericon Wetlands provides an opportunity for birdwatching, study and eco-tourism, this site has generally become a poor cousin to the more accessible and closer, Campbell's Wetlands. Due to difficulty in supply of environmental water to Nericon Wetlands, it is now generally dry excepting in times of high rainfall events or diversion of water from flooded channel systems. The reduced water in-flow from off-farm drainage and MI's channel escape has added to longer and drier periods of the former wet areas.

The Wyangan Rural Fire Service (RFS) Brigade extinguished a fire at the bird hide at Nericon on 28 December 2011 as a result of a 000 call; a campfire having got out of control. The remnants of the infrastructure were later removed due to safety issues (**Personal Comment** Max O'Sullivan, MFN 10 July 2020).

Figure 9 - Remains of Bird Hide (photo Neil Palframan)



Unauthorised rubbish dumping and use of the carpark area for itinerant camping has also rendered this site less desirable by bird watching enthusiasts. (**Personal Comment** Keith Hutton, MFN 12 August 2020).

Council's *State of the Environment Report (2016)* identifies strategies including to: -

- 'Improve sustainable land use' by measures including the protection of landscapes that are environmentally sensitive; determining the extent of soil salinity and reduce impact where possible; and enhance compliance with applicable environmental codes and standards.
- 'Plan effectively and consider health issues within planning and sustainable development frameworks' by measures including to encourage nature-based recreation at levels that are compatible with existing conservation values.
- 'Improve biodiversity by preserving and protecting existing biodiversity' by measures including developing and implementing a Biodiversity Strategy and Offset Strategy to identify appropriate land for revegetation and protection; development of a 'Sustainable Living Guide' to inform the community on biodiversity related issues; and compile detailed management plans for all parks and reserves.
- 'Ensure and maintain the conservation of the natural environment' by measures including developing a 'Noxious Weeds' Guide for the Griffith LGA; avoid development in areas of environmental significance; improving education and promotional resources to assist in the conservation and promotion of biodiversity; and continuing noxious weeds management.
- 'Preserve our built and natural heritage for future generations' by measures including increasing awareness of local indigenous heritage.

4.3 Topography, Hydrology and Drainage

The area of Nericon Wetlands is generally flat with a variation of height above sea level between 105m and 115m as per the below map.

The Wetland's sources of water include rainfall; stormwater runoff from surrounding catchments; irrigation run-off from cropping which may vary according to annual water allocation and time of year; and deliberate release

of excess drainage water by MI from the contour drain following extreme rainfall events (**Taylor et al. 2000**), or prolonged heavy rainfall (i.e. 2012 and 2016 flood events).

Previous water escape from irrigation supply delivery is likely to have decreased in recent years due to MI's improved technology and delivery systems together with improvements in on-farm water management and farming practices. Water management will be mentioned further within this PoM.

Figure 10 – Topographic imagery of Nericon Wetlands and the Lake Wyangan Basin



4.4 Soils and Geology

The sediments of the Riverina plain are relatively young compared to those of the Lake Wyangan basin, with the surface aged in the tens of thousands of years, whereas the landscape of the Lake Wyangan basin is aged in the hundreds of thousands of years. The material in the Macpherson Range is from the Cocopara Group formed in the late Devonian (400 million years old), and comprises sandstones, siltstones, pebbly conglomerate and quartzite sandstones (ERIC 1999). Much of the surface material within the depressions in the basin consists of weathered products derived from these sedimentary rocks (**Taylor et al. 2000**). The processes of erosion and eluviation of these materials have produced a range of soils and recent geological formations such as lunettes, gypsum deposits and heavy clay soils (ERIC 1999).

Occurrences of summer rainfall events of high intensity and magnitude have caused significant erosion and hence deposition of finer soils into the swamps. Recent deposition material is more finely textured, but is still closely associated with the Cocopara Group (ERIC 1999). The pH of Nericon (and Campbell's) Wetland soils is lower than that of the surrounding landscape. *Refer Table 1 below* (Extract from CSU Report 140).

Table 1 – Soil properties of Nericon Swamp (data from ERIC 1999)

Property	Soil Horizons			
	A1	A2	B1	B2
Profile thickness	10	20	20	50+
pH	6.1	7.1	7.6	8.0
Oxidation/reduction – Potential (pe)	165	155	135	130
Specific conductivity	20	20	20	60
Texture	Light clay	Light clay	Light clay	Medium clay
Overall class	Silty clay loam			

Light soils in the Lake Wyangan catchment are prone to percolation and leaching.

The groundwater table is too low to have a direct influence on the salt levels in Nericon (and Campbell's) Wetlands themselves. However due to the heavy nature of subsoil horizons beneath the lunette formation, percolation of rainfall and irrigation water has most likely caused the development of a perched saline water table, i.e., the source of salt in the Wetlands is most likely derived from the shallow water table and surface runoff (Taylor et al. 2000).

No recent soil studies have been undertaken since the CSU Report and MI Audits respectively.

4.5 Biodiversity

Under the *LGA 1993*, Council has obligations for conservation issues as determined by the *Biodiversity Conservation Act 2016*, and the *Fisheries Management Act 1994*.

Griffith City Council's Planning Certificate under Section 10.7(2) and 10.7(5) *Environmental Planning and Assessment Act 1979* dated 14 August 2020 indicates the following: -

- The subject site has been mapped in Griffith Local Environmental Plan for its terrestrial biodiversity and may include remnant vegetation.
- The site is not subject to any conservation area.
- The site is not biodiversity certified land within the meaning of Part 7AA of the *Threatened Species Conservation Act 1995*.
- The land is not subject to any bio-banking agreement under Part 5 of the *Biodiversity Conservation Act 2016*.
- The land is not subject to any set aside areas under Section 60ZC of the *Local Lands Services act 2013*.
- Griffith City Council's Tree Preservation Order applies, i.e. trees must not be ringbarked, cut down, top, lop, remove, injure or wilfully destroy any tree or other vegetation without the authority conferred by development consent or a permit granted by Council.

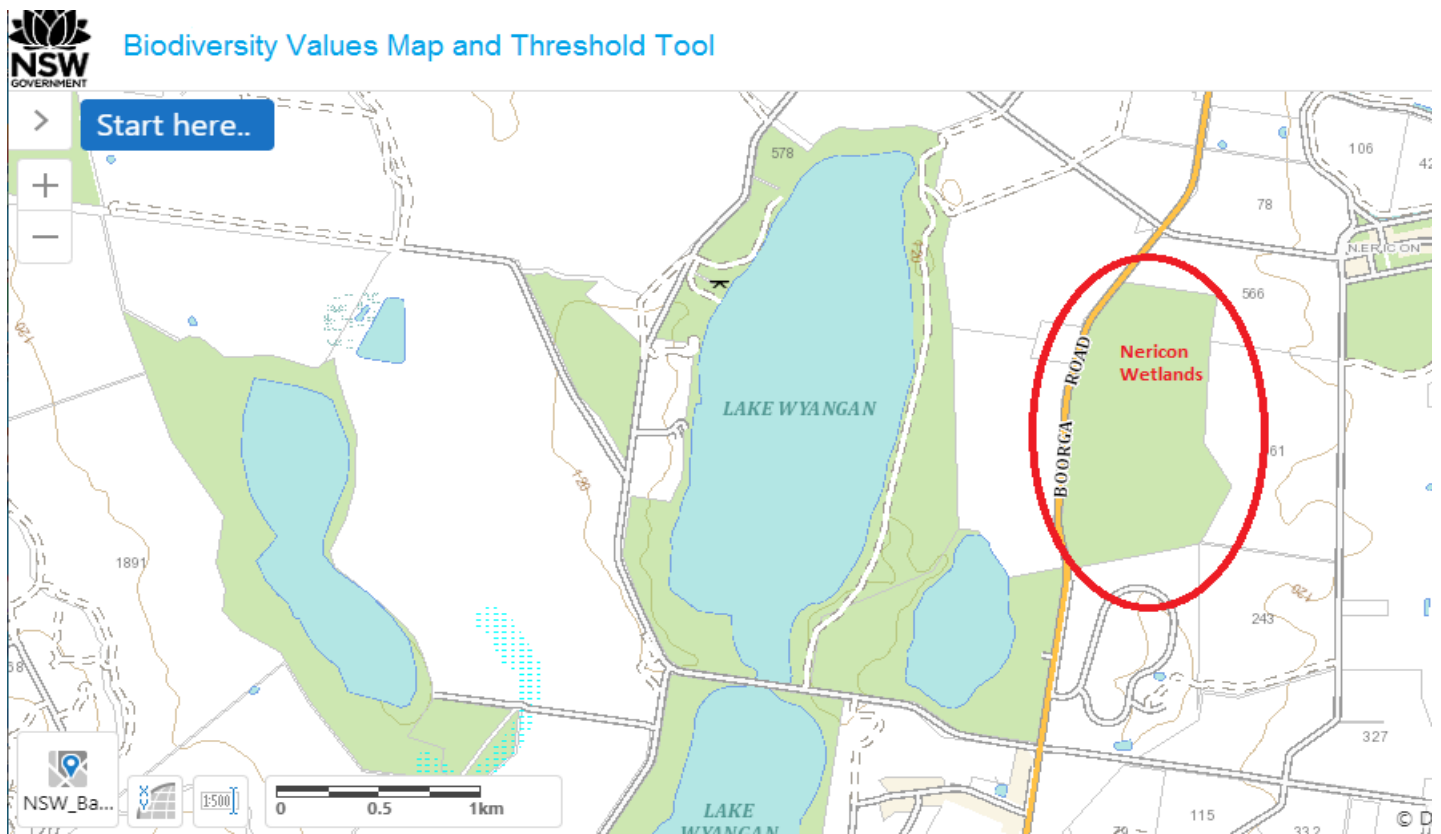
Council considers the land to be below the Flood Planning Level (FPL) and therefore subject to flood related development controls. Restrictions on development apply to this land.

Note: Flood planning level means the level of a 1:100 ARI (average recurrent interval) flood event plus 0.5 metres freeboard.

The NSW Government Biodiversity Values Map and Threshold Tool indicates that there is no land of biodiversity value within the Lot 257 DP 751743 as per Figure 11 below.

Any future work will be subject to detailed assessment in accordance with the legislation prior to the removal of any native vegetation.

Figure 11 Biodiversity Values Map and Threshold Tool – Lot 257 DP 751743



4.6 Riparian Land and Watercourses

There are no named rivers or creeks in the vicinity of Nericon Wetlands. Griffith LEP however identifies both North Lake Wyangan and Jack Carson Wildlife Reserve as Riparian Lands and Watercourses in Map – Sheet RLW_003 below.

A waterbody as defined in the Griffith LEP 2014 states –

Waterbody (artificial) or artificial waterbody means an artificial body of water, including any constructed waterway, canal, inlet, bay, channel, dam, pond, lake or artificial wetland, but does not include a dry detention basin or other stormwater management construction that is only intended to hold water intermittently.

Figure 12 – Griffith LEP Riparian Lands and Watercourses Map – Sheet RLW_003



5.0 THE SOCIAL ENVIRONMENT

5.1 Aboriginal Significance

A search of the Office of Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) dated 24 August 2020 indicates that.

- There are two (2) Aboriginal sites recorded in or near Lot 257 DP 751743 (200 metres buffer); and
- No Aboriginal places have been declared in or near Lot 257 DP 751743 (200 metres buffer).

Council will undertake due diligence in accordance with the *NSW National Parks and Wildlife Act 1974 (NPW Act)* and the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*.

It may be necessary to apply for an Aboriginal Heritage Impact Permit (AHIP) prior to undertaking any development at the site should further investigation indicate that proposed works are likely to impact on either of the two (2) recorded sites.

5.2 Heritage Significance

The relevant 10.7 Certificate indicates that no environmental items and controls exist at this site.

6.0 KEY ISSUES

Although identified previously, to-date, no formal management guidelines (Plan and / or Committee) have been in place.

Key issues affecting Nericon Wetlands include: -

- ❖ future management;
- ❖ protecting, restoring and improving the condition of wildlife habitats of the wetlands to ensure long-term biodiversity of the environment (either individually or collectively);
- ❖ ensuring adequate receipt of environmental water (when available);
- ❖ the prevention of development that could potentially destroy, damage or otherwise adversely affect the values of the wetlands (individually and collectively); and
- ❖ improving opportunities for education, study and eco-tourism to promote the site's special features within the broader Lake Wyangan Basin.

The growth of Griffith and its surrounding area has been key to its success as an agricultural food bowl, however it has also caused significant pressure on the local environment.

Since settlement in the early 1900's, over 94% of the land has been cleared with the remaining 6% of native vegetation existing in pockets. Significantly, Nericon and neighbouring Wetlands (and other pockets of native vegetation) have been under threat of grazing, weed invasion and isolation. Conversely, it is also probable that farm-water run-off and channel escape water has also assisted the development of biodiversity of the wetlands following the initial post settlement land-clearing.

Council's *State of the Environment Report (2012 / 2016)* indicates that there are 802 species of flora currently recorded within the Griffith LGA on the NSW Wildlife Atlas database. Of these, 22 endangered plants listed under the *NSW Threatened Species Conservation Act 1995 (TSC Act)* (now the *Biodiversity Conservation (BC) Act 2016*) are known or predicted to occur within the Griffith LGA.

To date, 271 birds, 28 mammals, 20 bats, 41 reptiles and 9 amphibians are currently recorded within the Griffith LGA on the NSW Wildlife Atlas database. Of those recorded, 15 species are classified as endangered and 50 are classified as vulnerable under the *BC Act 2016*. Sixteen fauna species are listed as endangered under the *Commonwealth Environmental Protection and Biodiversity Conservation (EPBC) Act 1999*; and sixteen migratory water bird species are protected under international treaties with China, Japan and the Republic of Korea. Seven endangered ecological communities also listed under the *BC Act 2016* are also known to occur in the Griffith LGA.

Bird Surveys undertaken at Nericon since 1996 indicate a total number of 61 species; Magpie Goose, Freckled Duck, Blue-billed Duck and Brolga being Vulnerable species (*NSW BC Act 2016*) and the Australasian Bittern being an Endangered species (*NSW BC Act 2016 and EPBC Act 1999*). Furthermore, 6 of the sighted species are also listed under the Japan-Australia Migratory Bird Agreement (JAMBA); China-Australia Migratory Bird Agreement (CAMBA) and / or Republic of Korea-Australia Migratory Bird Agreement (ROKAMBA) [See Appendix 4 \(pgs. 55-56\)](#).

The CSU Report noted that there had not been any formal quantitative plant studies undertaken at Nericon, and its report was specific to the wet area (not the whole site). The CSU Flora Study was therefore restrictive in area covering a length of approx. 850m x a width of approx. 500m using a transect method and recorded

only 6 families (Cyperaceae, Poaceae, Typhaceae, Asteraceae, Boraginaceae and Chenopodiaceae) of flora with a total of 10 species.

A plant study previously undertaken by Eric Whiting, MFN (1996) noted 17 families (Cyperaceae, Caryophyllaceae, Poaceae, Amaranthaceae, Asteraceae, Boraginaceae, Chenopodiaceae, Cucurbitaceae, Euphorbiaceae, Fabaceae, Lamiaceae, Loranthaceae, Malvaceae, Mimosaceae, Polygonaceae, Sapinodaceae and Zygophyllaceae) of flora with a total of 50 species. Significant tree plantings have been undertaken since both plant listings and additional natural regeneration is also likely to have occurred. [See Appendix 5 \(pg. 57\).](#)

No further formal plant studies have been undertaken since that time. Further studies of vegetation and water requirements will assist to better manage the site to meet wetland bird habitats and support the species previously sighted, specifically at Nericon and more broadly across the Lake Wyangan Basin. The re-vegetated areas of woodland have been noted to support a variety of honeyeaters, thornbills, wrens and mistletoe bird (**noted** Joanne Tarbit 2017).

Key threatening processes are the things that could impact the survival or evolutionary development of species, populations, or ecological communities. They are listed in the *BC Act 2016* and include pest animals, weeds, diseases and habitat loss / change. With a total of 33 Key threatening processes identified within the Griffith LGA (Council's *State of the Environment Report (2016)*), those most threatening to the local Wetlands are: -

- Invasion of Environmental Weeds
- Predation by European Red Fox (*Vulpes Vulpes*) and Feral Cat (*Felis catus*)
- Anthropogenic Climate Change
- Removal of dead wood and dead trees
- Loss of hollow-bearing trees

During early agricultural years, the Wetlands' sources of water included stormwater runoff from surrounding catchments; irrigation run-off from cropping (varying seasonally due to water allocation and time of the year); and deliberate release of excess drainage water by MI from the contour drain following extreme rainfall events.

These sources of water supply over more recent decades have been greatly reduced due to improved technology in water delivery mechanisms and monitoring by MI of its unpaid water losses; together with improved on-farm management practices and a requirement of farmers to retain drainage water on-farm. The extremely severe weather patterns and high rainfall events of 2012 and 2016 are exceptions.

In recent years, the Office of Environment and Heritage (OEH) has made allocations of environmental water (e-water) available to Nericon Wetlands. The Murrumbidgee Environmental Water Advisory Group (EWAG) that includes two representatives of the MFN, determines e-water allocations across the collective of Murrumbidgee Wetlands. GCC should also be represented on this Committee given its management of Nericon Wetlands individually (and the collective of Wetlands).

Water delivery to Nericon has been difficult due to delivery infrastructure and suspected interception prior to reaching its destination. Improvements to water delivery and associated infrastructure together with enhanced monitoring may assist the current impediments of water availability and the Wetlands' biodiversity overall.

Notes from MFN meetings advised that there was an environmental water delivery in 2005 / 2006 indicating a delivery of [230ML for Nericon](#) and 235ML for Campbell's however as supply delivery to Nericon was difficult, all water was delivered to Campbell's Swamp.

Council's Environmental Planning Officer noted environmental water delivery in 2010 as: -

215ML delivered to Nericon in July and 230ML delivered to Campbell's in May/June.

Information from Murrumbidgee Irrigation's Annual Compliance Reports provides the following information in relation to the delivery of e-water in more recent years. Noting comments from the MFN, it is uncertain whether delivery was actually received at Nericon or redirected in total to Campbell's despite site specific e-water requests as no specific monitoring has been undertaken.

E-water delivery has not been further confirmed by OEH at the time of preparing this Draft PoM.

Table 2 – Environmental Water delivery (Recent MI Annual Compliance Reports data)

Murrumbidgee Irrigation Environmental Protection Licence (EPL) 4651				
Reporting Year	E-water - Nericon	E-water – Campbell's	Date	Total E-water delivered in MIA
2015 / 2016	138ML 102ML	206ML	November 2015 December 2015	1857ML
2016 / 2017	126ML 108ML	292ML 77ML	April 2017 May 2017	986ML
2017 / 2018	-	-	-	600ML
2018 / 2019	-	263ML 136ML	October 2018 November 2018	2996ML

Cultural water delivery is also available through LLS, which can be a further alternative for receipt of water for Nericon (and Campbell's) Wetlands subject to suitable infrastructure as in the case for e-water delivery.

It has been recognised that climatic variations are occurring with human-induced build-up of greenhouse gases in the atmosphere known as 'enhanced' greenhouse or anthropogenic climate change. This is expected to change many of the basic weather patterns that make up our climate including wind and rainfall patterns; and the incidence and intensity of storms.

In NSW, the average temperatures have been steadily rising since the 1960s. The decade from 2008 to 2017 was the hottest on record. Accordingly, climate change will increasingly affect the environment and society across the State.

Figure 13a – Climatic modelling Murray – Murrumbidgee Change in days over 35° 2020-2039

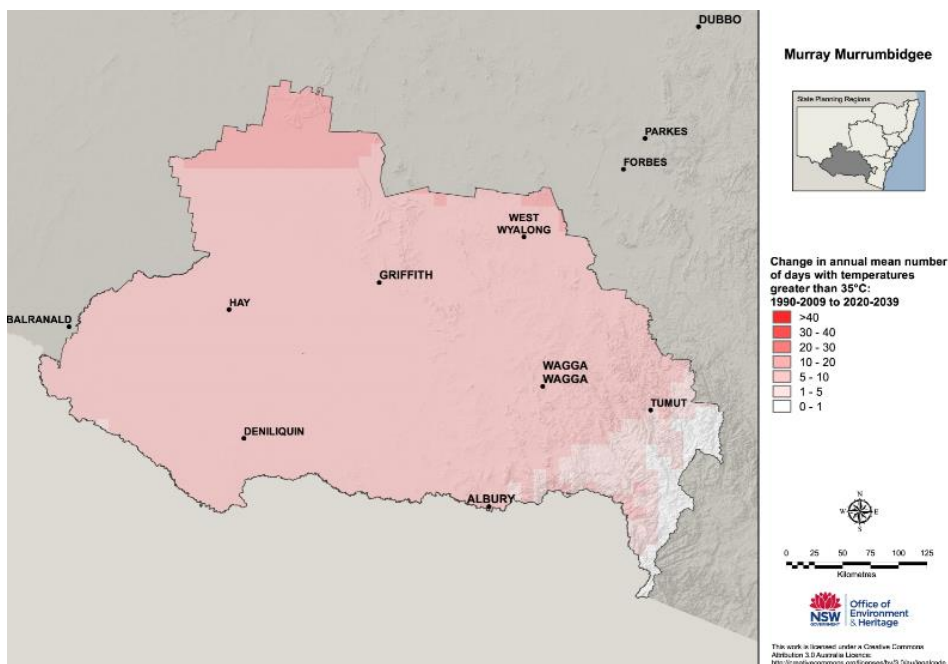
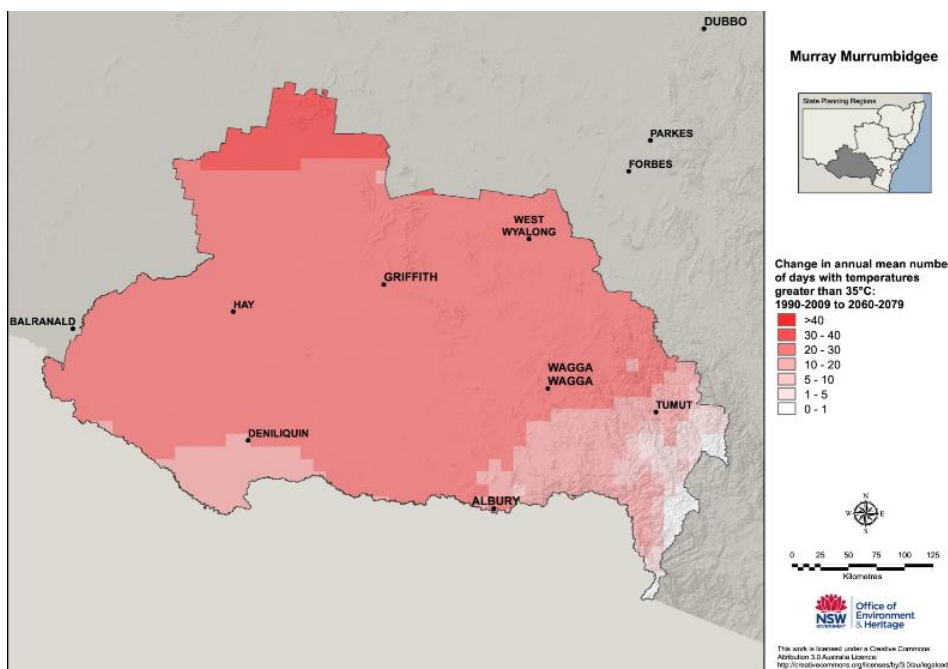


Figure 13b – Climatic modelling Murray – Murrumbidgee Change in days over 35° 2060-2079



Understanding the potential for impact of climatic variations on our environment, particularly wetland areas and building resilience to these changes will assist in protecting their biodiversity and preventing further fragmentation of habitat.

Council will continue to maintain the land in relation to fire management and consult with the NSW RFS.

Environmental and other weeds also compete with native vegetation causing imbalances to biodiversity. While significant infestation of African Boxthorn (*Lycium ferocissimum*) has been removed from nearby Campbell's Wetlands, this species still exists at both sites, currently in isolated stands.

Additional threats from nearby large-lot residential subdivisions also have potential to impact on the site, particularly in regards to indiscriminate and illegal dumping of rubbish; predation by cats; and other unauthorised activities, i.e., shooting (as evidenced by damage to signs etc.).





7.0 DEVELOPMENT AND USE

7.1 Current Use of Land and Structures at date of Adoption of Plan of Management

While Nericon Wetlands continues to be used for environmental protection, previously built infrastructure in part, no longer exists i.e. bird hide; while walking tracks and interpretive signage remains in situ.

It is noted that walking tracks have not been maintained; much of the signage has been damaged; and weed management practices have not been annually undertaken. As previously stated, Campbell's Wetlands being closer (to Griffith and adjacent Lake Wyangan) with better infrastructure in place, is more predominantly utilised for both bird watching and monitoring practices.

The lack of adequate infrastructure has also determined that environmental water releases are not currently being applied to the site, in favour of Campbell's Wetlands. Nericon as an ephemeral wetland, still provides a unique habitat area for wildlife species, with capacity for restoration and / or improvement supporting linkages to nearby native vegetation in a more broadly modified landscape.

Guidance through a Plan of Management and a specific Management (or Advisory) Committee in respect of Nericon and other environmentally sensitive areas generally, will provide more appropriately for improved management outcomes and support Council in future decision making.

Figure 14 – Lack of management indicators

Signage obscured by vegetation



Damage to signs (bullet holes)



Illegal Dumping of rubbish



7.2 Strategic Objectives

The aim of this Plan of Management is to guide Council in future development of the land in accordance with the legislative requirements under both the *LGA 1993* and the *CLMA 2016*.

This PoM will assist Council to: -

- Identify and assess the reserves' current uses, condition and potential future uses.
- Potentially form a Management or Advisory Committee to oversee future long-term management.
- Provide guidelines for the effective and ongoing management and budget forecasting for Nericon Wetlands, individually (and Campbell's and Tharbogang Wetlands collectively).
- Provide facilities that support use of the wetlands for ecological, scientific and cultural studies and aesthetic values supporting birdwatching and walking (as considered appropriate)
- Manage the lands for environmental protection, management and restoration of the wetlands; and protecting and improving the condition of wildlife habitats of the wetlands.

- Provide for public safety with the framework for on-going maintenance and improvements to the facility at an appropriate standard.
- Collate all information in a single document.

7.3 Permitted and future use

The notified purpose of Nericon Wetlands is 'Environmental Protection' and the assigned category is **Natural Area – Wetland** which aligns with the reserve's past and current use and values identified in this Plan.

While future use is unlikely to change, the Wetlands are likely to require further development when a Management or Advisory Committee is in place, i.e.

- Current plant species listing and assessment of condition of Nericon Wetlands generally;
- Potential hydrology study of the wetlands to allow for improvements to infrastructure to facilitate efficiencies in water delivery (in-house engineers or MI could support out-sourced study if required);
- Improvements to / or addition of further walking tracks to enhance visitation and aid access for monitoring and study;
- Replacement of existing damaged signage and installation of additional interpretive signage (flora, fauna, cultural features);
- Additional re-vegetation programs (potentially by Greening Australia, National Tree Day and / or School Tree-planting days etc.);
- Potential replacement of previously destroyed bird hide;
- Improvements to Nericon Wetlands entry and car-park area (levelling and gravel and on-going monitoring for unauthorised activities, i.e. illegal rubbish dumping).

Possible development may not occur during the term of this PoM however it is considered important for a Management or Advisory Committee be created for over-sight of Nericon (Campbell's and Tharbogang) Wetlands in the first instance. A priority for management can then be set in place.

Future development of the land will be consistent with the reserve purpose, available funding and budget allocations, and relevant legislation, i.e., *LGA 1993*, *CLMA 2016*, *NTA 1993 (C'th)*, *ALRA 1983* Griffith LEP 2014 and SEPP (Infrastructure) 2007.

The adoption of the Nericon Wetlands PoM does not authorise any additional use of the land other than as prescribed in the initial notification of the Reserve at the time.

These works will not affect native title as it complies with the applicable provisions of the Native Title Act 1993, being valid future acts under Section 233.

7.4 Express Authorisation – Natural Area – Wetland

While it is unlikely that Leases will be issued in respect of Nericon Wetlands, this Plan of Management expressly authorises the issue of licences and other estates over the land categorised as Natural Area – Wetland listed in Table 3 below. The opportunity for the issue of Short-Term crash-grazing Licences for weed management practices and reduction of fuel load; or Licences for One-off Events, i.e., Tree Planting Days, World Wetlands Day excursions etc.

There are currently no Leases, Licences or other estates issued by Council in respect of this Reserve.

Table 3 - Licences and other estates and purposes for which they may be granted for community land categorised as Natural Area – Wetland

Type of tenure arrangement	Maximum term	Purpose for which tenure may be granted
Licence	5 years (tenures greater than 5 years will be subject to tendering process under the LGA unless it is granted to a non-profit organisation)	<ul style="list-style-type: none"> • Third party constructing infrastructure compatible to purpose, categorisation and zoning of land, e.g., storage sheds required in connection with the maintenance of the land, observation platform, walkways, pathways (or similar) • Scientific studies, i.e., University Studies
Short-term Licence	1 year	<ul style="list-style-type: none"> • Field Days, Tree-planting Days etc. • Bicycle hire • Temporary erection or use of any building or structure necessary to enable a filming project to be carried out
Other estates	21 years (tenures greater than 5 years will be subject to tendering process under the LGA unless it is granted to a non-profit organisation)	This PoM allows the Council to grant 'an estate' over community land for the provision of public utilities and works associated with or ancillary to public utilities and provision of services, or connections for premises adjoining the community land to a facility of the council or public utility provider on the community land in accordance with the LG Act.

Licences and other estates formalise the use and occupation of community land and can generally only be permitted if consistent with the purpose for which the reserve was dedicated or reserved, or on a short-term basis as prescribed in the Local Government (General) Regulation 2021.

The issue of any licence granted by Council must have consideration to Section 47B of the LGA.

This PoM authorises a Tenure to be issued:

- For any permissible use as detailed.
- For purposes consistent with the Reserve's:
 - Categorisation (see Section 2.4), and
 - Zoning (see Section 3.2), and
 - Reserve purpose of Environmental Protection as required under the *CLMA*.

A tenure on Crown land may impact native title rights and interests.

Any use agreements issued on Crown land must be issued in accordance with the future act provisions of the *Native Title Act 1993* and in accordance with Part 8 of the *Crown Land Management Act 2016*, unless native title is extinguished and be consistent with the Reserve's categorization, zoning, reserve purpose and consistent with the *LG Act 1993*. The authorised leases, licences and other estates will or may affect native title, however, they will comply with the applicable provisions of the *Native Title Act 1993*, being valid future acts under Section 233.

The authorisation is subject to obtaining further native title manager's advice, where the land remains relevant land and is not excluded land.

Direction of Funds

Income produced from the Reserve, i.e., as per any approved Tenure, will be distributed to manage other community land in a fashion determined by Council.

7.5 Native Title Assessment

Further to *Section 2.4 – Categorisation of the Reserve* and reference to Native Title Assessment, Council is required under the provisions of the *CLMA 2016*, to undertake steps to identify whether the activity proposed on Crown land will affect Native Title. Council must further consider what provisions of the *NTA 1993 (C'th)* will validate the activity; and what procedures should be taken in relation to a particular activity prior to its commencement.

The activity must be authorised through *Part 2 Division 3 of the NTA 1993 (C'th)*.

Examples of acts which may affect native title on Crown land or Crown reserves managed by Council include:

- The construction of new building and other facilities such as toilet blocks, walking tracks, tennis courts, grandstands and barbeques
- The construction of new roads and tracks
- Installation of infrastructure such as power lines, sewerage pipes, etc.
- The issue of a lease or licence
- The undertaking of major earthworks

Accordingly, Council must obtain written advice from its Native Title Manager in relation to certain activities and acts carried out on Crown land where the land is not excluded land, in accordance with native title legislation and applicable to works and activities to be undertaken at Nericon Wetlands.

7.6 Easements

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

The granting of easements over Crown land will be subject to the provisions of the *NTA 1993 (C'th)* and Division 8.3 of the *CLMA 2016*.

A copy of Certificate of Title Identifier 257/751743 confirms that no Easement has been registered impacting on the land within the Reserve area.

8.0 MANAGEMENT FRAMEWORK FOR NATURAL AREAS CATEGORISED AS WETLANDS

8.1 Biodiversity Conservation

Biodiversity conservation provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places including species and ecosystem diversity that supports both aesthetic values and ecological balances.

While not recognised under the Ramsar convention, Nericon (and Campbell's) Wetlands in particular, have been recognised as Important Bird Areas (IBA's) and support the mosaic of wetlands of inland NSW, particularly within the broader Riverina Region and locally within the MIA, as being sites offering refuge during drought years for migratory and other bird species as initially identified by the MFN and the CSU Report.

Historical land-use and more recent changes to water management practices reducing water inflow to Nericon, has altered the biodiversity of flora and fauna prevalent at the site, albeit that monitoring in recent years has been redirected to Campbell's Wetland.

The Commonwealth Department of Agriculture, Water and Environment has identified Australia's Strategy for Nature including the following goals: -

1. Connect all Australians with nature
2. Care for nature in all its diversity
3. Share and build knowledge

Council through its *State of the Environment Report (2012 / 2016)* has initially identified strategies to enhance biodiversity of land within its area of management. This PoM further supports endeavours for Council to manage Nericon Wetlands (together with Campbell's and Tharbogang Wetlands) individually (and collectively) to -

- ❖ connect the local community and visitors with nature (#see Note below);
- ❖ care for the natural environment within the wetlands in all its diversity and variance;
- ❖ to share and build knowledge (both within Council as Crown Land Manager and more broadly to share and build knowledge through stakeholder engagement and partnerships; and
- ❖ provide potential eco-tourism opportunities of the broader Lake Wyangan Basin.

Note: Tharbogang Wetland is not readily accessible to members of the public however remains valuable in terms of connectivity and biodiversity within the Lake Wyangan Basin.

8.2 Wetland Management

Management of the land must take into consideration the reserve's purpose and the purpose for which the land is classified and categorised.

In broad terms, Council will need to determine the priority of development (if any), it proposes to undertake and the linkages to be made within the area to negate any further loss of ecological communities

There are several factors of consideration for future Management of Nericon Wetlands (together with Campbell's and Tharbogang Wetlands) which ideally would be managed collectively for optimum outcomes. Management of these Wetlands will differ to Lake Wyangan (North Lake Wyangan and Jack Carson Wildlife Reserve) which are zoned as a Recreational Waterway and have more site-specific management issues.

With support of Council, a Management or Advisory Committee comprising of key stakeholder agencies and community groups could discuss and plan management outcomes and seek funding opportunities. Committee members may be better placed to undertake specific monitoring to support Council's achievement of objectives.

The formation of a Management or Advisory Committee will better assist Council to: -

1. Manage a suitable water regime to maintain and restore the ecological resilience of the wetlands. Nericon is now a predominantly dry wetland receiving water through high rainfall events and / or channel escape via MI control mechanisms; however strategic environmental water delivery could enhance current biodiversity and support connectivity between neighbouring Wetlands both within the Lake Wyangan Basin and more broadly across the region including the Ramsar listed sites of Fivebough & Tuckerbil Wetlands (Leeton); Narrandera Wetlands; Marrambidya Wetlands (Wagga Wagga); Doodle Swamp Nature Reserve (Henty); and the Wonga Wetlands (Splitters Creek). Improvements to current water delivery infrastructure may be a consideration for future management (subject to funding and planning).
2. Implement land management practices to improve the wetlands' habitats, ecosystem services and cultural values. Management of weeds and pests and continued maintenance of existing vegetated buffer zones will assist Council to improve the various habitats within the Wetlands both for wetland and bushland species of flora and fauna. Recent inspections have identified isolated pockets of weed species which should not be allowed to grow and impact further on native vegetation, i.e. African Boxthorn, Bathurst Burr, Noogoora Burr and Thistles. Beside potential feral cat predation from neighbouring large-lot residential lands, foxes and feral pigs have potential to degrade the sights and impact on breeding activities of a range of species.
3. Recognise the importance of Wetlands for their cultural values in particular, their importance to Country for Aboriginal peoples. Wetlands have been an important part of Aboriginal culture and heritage as a source of food, shelter, water and natural resources, and for cultural ceremonies. The cultural values of wetlands also extend to non-Aboriginal communities through their historical use for recreation including fishing, hunting and camping and conservation of habitats. Education of these values has potential to share and build knowledge and allow for a broader range of community members to care for and appreciate nature and the biodiversity of the wetlands.
4. Rehabilitate degraded areas of the Wetlands and their habitats (collectively) as far as is practicable. Rehabilitation will be guided by Council's overall planning and funding capacity however community engagement may facilitate greater outcomes.
5. Consider potential impacts of climate change in planning management and conservation outcomes. That is to say, improved water allocation delivery infrastructure could improve the capacity of the Wetlands to receive environmental and / or cultural water when available and at critical times to best support required vegetation for key species; the reduction of non-hydrological pressures, i.e. weed invasion and sedimentation; and increasing the protected area network and linking corridors to allow for migration of organisms.
6. Engage in research and studies into the wetlands to support water and land use planning and management through regular monitoring and reporting of wetland extent and condition. It is acknowledged that further research and studies may be a longer-term outcome for management of the wetlands (individually and collectively) as there has been a number of change factors since the earlier observations by the MFN and the undertaking of Reports by both CSU (2000) and MI (2005). Engagement of local MFN and other community interested parties will be key to support Council's future management. There is also potential for local schools to undertake curriculum-based education and studies.

Table 4 – Management Issues and Guidelines

Management Oversight	Management or Advisory Committee formed, comprising Council staff (as appropriate) together with key stakeholders (including representatives of OEH, MI, MFN, Griffith Local Aboriginal Land Council (GLALC) or interested community member(s)) to assist in future planning i.e. water delivery, monitoring, maintenance. This Committee would only be providing advice to Council who would ultimately give its approval for various works (re-vegetation, signage, installation of water delivery infrastructure etc.).
Car Park (and Entry)	May require grading or gravel as part of general maintenance in accordance with approvals, manuals or schedules as required; and improved entry and associated signage, i.e. Nericon Wetlands 200m (with arrow symbol) as this section of Boorga Road is 100km/hr.
Watering	Environmental water delivery (liaison with MFN, OEH, LLS and MI for timing and MI for advice as to potential upgrade / costing of infrastructure to facilitate improved delivery). Potential for external funding opportunity.
Vandalism	Vandalism will be addressed at the time of occurrence and may include issues such as unauthorised vehicle access; the riding of horses; illegal dumping of rubbish; or other damage resultant from unauthorised activities referred to in Council's Policy "Vandalism, Graffiti and Rubbish Dumping – Reward – GC-CP-314"; Litter Reduction and Clean up Campaigns (Public Policy) – EH-CP-204; and Prohibited Activities on Council Active & Passive Recreation Areas – PG-CP-310.
Feral Animals	Monitoring and appropriate pest control measures should be undertaken so as not to impact on native fauna (i.e. domesticated and feral cats; and foxes) or impact on native flora (rabbit or pigs) (as per Protection of the Environment Operations Act 1997 and the National Parks and Wildlife Act, 1974 and GCC – Keeping of Animals (Public Policy) CO-CP-703
Trees	Trees should not be removed with tree-planting to be undertaken in accordance with GCC Tree Preservation Order – PG-CP-401 (Local Policy) in relation to the provision of environmental corridors for native fauna and flora
Weeds	Weed management practices will be undertaken in accordance with guidelines to ensure protection of the wetland area from environmental weeds / weeds of National significance (as per GCC Biosecurity – Weeds and Legislation and PG-CP-401)
Fire	Monitoring of fire risk and the undertaking of management practices in consultation with the NSW RFS to ensure protection of both the wetland area and adjacent residential lands and respective assets.
Fencing & Gates	Fencing and gates should adequately exclude unauthorised entry however provide access to undertake works, i.e. Hazard reduction works.

Figure 15 – Existing entry Signage (parallel to Boorga Road)



8.3 Community Access and Education

Community access is integral to education and gaining both appreciation and an understanding of the value of wetlands to the broader community.

Wetlands vary widely due to the local and regional differences in topography, hydrology, vegetation and other factors including human involvement. A wetland need only be wet for long enough for its plants and animals to be adapted to, or dependent on the wet conditions for at least part of their life cycle.

The historical context of Nericon Wetlands is valuable in educating locals and the wider community to the importance of biodiversity and connectivity to habitat within the localised Lake Wyangan Basin and the wider Riverina network of wetlands especially for migratory bird species during periods of drought.

Whether Nericon Wetlands continues to receive periodic environmental water, and to a lesser extent relies on sufficient rainfall to change the area to a natural wet phase, its value remains pertinent within an environment that has largely been modified due to surrounding agricultural practices.

Community access is available to Nericon Wetlands directly off Boorga Road, albeit that signage is not obviously visible. Improved signage would assist in potential increased visitation of the site.

The MFN through its previous funding has provided on-site interpretive signage that could be further increased, providing visitors with greater information and knowledge of species, both flora and fauna, prevalent at the site. Maintenance of existing walking tracks also has potential to encourage further exploration and study of the site. Liaison with aboriginal community members could assist in the provision of cultural interpretive signage (where appropriate).

Opportunities for education can be enhanced by brochures available to visitors; acknowledging World Wetlands Day, or undertaking tree-planting programs with school students and / or the wider community, to encourage ownership in the value of the site and its offerings.

8.4 Plan Implementation

The following action plan sets out the requirements under Section 36(3) of the LGA 1993 with respect to: -

- The category of the land
- The objectives and performance targets of the plan
- The proposed means in which to achieve the objectives and performance targets
- The proposed manner in which the objectives and performance targets are assessed for performance and may require the prior approval of the Council to the carrying out of any specified activity on the land.

Responsibility: Griffith City Council (GCC)

Table 5 - Objectives and Performance Targets of this Plan of Management (PoM)

Performance Target	Actions	Priority	Performance Indicator
LEGISLATIVE			
To ensure that relevant legislation is complied with in relation to	1. The Plan is prepared in accordance with Native Title Manager advice, the	High	<ul style="list-style-type: none">• The Plan is reviewed by Council's Native Title Manager and approved by Department of Industry – Crown Lands.

preparation of the PoM.	LGA 1993, the CLMA 2016 and NTA 1993 (C'th)		<ul style="list-style-type: none"> Council exhibits and adopts the PoM subject to community comments being addressed. (Where significant changes to the PoM are required, the PoM will be re-referred to the Department).
MANAGEMENT			
To provide over-arching management of wetland areas	2. Form a Management or Advisory Committee with key stakeholders to support Council's management for Environmental Protection	High	<ul style="list-style-type: none"> Management or Advisory Committee is formed and the Committee forms a strategy for management in alignment with the adopted PoM Management or Advisory Committee meets regularly (i.e. quarterly) and reports to Council Funding opportunities sourced (internal or external)
To assess the current infrastructure, assets, and condition where applicable	3. Audit of existing infrastructure and assets 4. Ensure appropriate tenure arrangement (where applicable)	On-going	<ul style="list-style-type: none"> Assets (current and future) are managed in accordance with prescribed Council standards, relevant State Wetland Policies and community expectations Consultation with relevant Agencies and key stakeholders in regards to receipt of environmental water Reporting as appropriate to relevant Agencies in regards to Wetlands outcomes (as appropriate) Review of tenure conditions (where appropriate)
To address illegal dumping of rubbish and vandalism	5. Program regular inspections (i.e. monthly)	On-going	<ul style="list-style-type: none"> Regular inspection and prompt removal of rubbish Repair signs subject of vandalism and address other acts of vandalism (as appropriate) Reduced illegal dumping of rubbish and vandalism with installation of Report Illegal Dumping (RID) signage Feedback from community is positive and negative feedback acted upon as necessary
INFRASTRUCTURE			
To upgrade & install any new infrastructure aligned	6. Ensure on-going inspection and assessment of infrastructure	On-going	<ul style="list-style-type: none"> Management or Advisory Committee to discuss potential of

with Environmental Protection	7. Plan and renewal of infrastructure in accordance with Environmental Protection outcomes, Asset Management guidelines and budgetary constraints		<p>water delivery improvements with relevant Agency experts</p> <ul style="list-style-type: none"> • Future works are carried out as approved by Council and in accordance with the PoM; budget availability; and required development processes (as applicable)
To manage the areas to provide clearly defined access	8. Audit of existing walking tracks 9. Plan and renewal of walking tracks and install directional signage to improve available access	On-going	<ul style="list-style-type: none"> • Walking tracks are defined and identified with directional signage for clarity of users • Feedback from community is positive and negative feedback acted upon as necessary
ENVIRONMENT			
To provide quality passive recreational facilities	10. Maintain the site for specific passive recreational use (i.e. renew bird hide as appropriate)	On-going	<ul style="list-style-type: none"> • Relevant infrastructure is well maintained • Community feedback is positive and negative feedback acted upon as necessary
To monitor and assess environmental biodiversity outcomes	11. Develop appropriate monitoring requirements	On-going	<ul style="list-style-type: none"> • Engage with relevant key stakeholders to undertake up-to-date audit of flora and fauna • Plan and appropriately budget for relevant studies to support environmental outcomes in accordance with Council and State Environmental Policies (as relative to Wetland management) • Report key findings as appropriate to relevant agencies
To manage environmental and user safety	12. On-going inspection and assessment of infrastructure in accordance with Council and Government OHS legislation 13. Consider the safety of the community in the maintenance of the passive recreational areas 14. Carefully consider use of chemicals and pest control measures within the respective remnant vegetation and wetland areas	On-going	<ul style="list-style-type: none"> • Audit process for safety reporting working well • Staff are appropriately trained in safe handling and use of appropriate chemicals for the land • External contractors (if used) for pest animal control measures hold relevant up-to-date certification • NSW RFS are contracted or other strategies undertaken annually to reduce fire risks • No unauthorised use of facilities • Feedback from the community is positive and negative feedback is acted upon where necessary

	15. Protect the assets within the wetlands and adjoining residential lands in relation to fire management practices		
USE OF THE RESERVES			
Signs	16. Review signs and follow guidelines provided by Statewide Mutual Signs as Remote Supervision	On-going	<ul style="list-style-type: none"> Continually monitor all signs are legible and current and renew as required Install improved roadside signage Update existing interpretive signage and install new directional signage along walking track(s) Feedback from the community is positive and negative feedback is acted upon where necessary
Access	17. Vegetation is cleared from walking tracks and obscured signage	On-going	<ul style="list-style-type: none"> On-going inspection to ensure appropriate access by users of the Reserve Feedback from the community is positive and negative feedback is acted upon where necessary
Parking	18. Provide adequate parking and ensure amenability for users	On-going	<ul style="list-style-type: none"> Grade or in-fill holes within parking area Promptly remove dumped rubbish from parking area Community feedback is positive and negative feedback acted upon as necessary

8.5 Communication in Management of the Reserve

Communication between Council and members of a Management (or Advisory) Committee and Tenure Holders is important to the success of this Plan. Council will establish and maintain clear lines of communication.

Other community communications may be appropriate in terms of education and improved brochures available through Council's Tourist Information Center.

8.5.1 Information and Monitoring

Monitoring and collection of information relating to the Nericon Wetlands Plan of Management are important tools to enable good management outcomes.

Current records are held individually by a variety of parties, i.e. the MFN, OEH and MI. Better collation of information and data by Council would be of benefit to long-term management of the Wetlands to enhance future management and source funding opportunities where applicable.

Monitoring of associated tenure agreements by Council (where applicable), will also be undertaken to ensure users and user groups comply with tenure conditions.

Surveys of visitation and / or satisfaction with the facilities may be undertaken to facilitate improved management and use of the land. Longer-term, the installation of a 'track counter' might be valuable information for potential tourism promotion and preparation of brochures to further support broader community information and education.

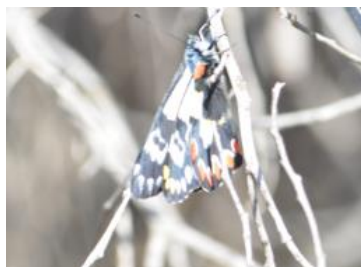
8.5.2 Infrastructure

Any infrastructure to further service the purpose of the land may be constructed provided that, a Native Title Assessment has been carried out by Council's Native Title Manager; the land is not subject to a Claim under the *ALRA 1983*; and the provisions of the *LGA 1993* and the *CLMA 2016* have been complied with.

Subsequent development activities shall be undertaken in a way that minimises the area, degree and duration of disturbance; and the area is to be restored to the greatest extent practicable to ensure management is undertaken in accordance with the Reserve purpose of 'Environmental Protection'.

8.5.3 Public Liability

Council will continue to maintain public liability insurance in respect of Nericon Wetlands.



9 REFERENCES

Biodiversity Conservation Act 2016

(The) Butterfly fauna of the Griffith district, a fragmented semi-arid landscape in inland southern NSW (MF Braby & TD Edwards)

<https://www.researchgate.net/publication/283471075> The butterfly fauna of the Griffith district a fragmented semi-arid landscape in inland southern New South Wales

Commonwealth Native Title Act 1993

<https://www.legislation.gov.au/Details/C2017C00178>

Crown Land Management Act 2016

http://www.austlii.edu.au/au/legis/nsw/num_act/clma2016n58226.pdf

<https://www.industry.nsw.gov.au/lands/what-we-do/legislation-policies>

Commonwealth Department of Agriculture, Water and the Environment

<https://www.environment.gov.au/biodiversity/conservation>

DPI website

https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0007/164374/irrigation-profile-murrumbidgee.pdf

<https://climatechange.environment.nsw.gov.au/About-climate-change-in-NSW>

Environment website

<https://www.environment.nsw.gov.au/bioregions/Riverina-Landform.htm>

NSW Wetlands Policy (2010) - <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Wetlands/nsw-wetlands-policy-100039.pdf>

<http://www.environment.gov.au/cgi-bin/sprat/public/publicshowmigratory.pl>

Griffith City Council Website – Publications and Policies

Griffith Community Participation Plan

file:///C:/Users/Melva/Downloads/GRIFFITH_COMMUNITY_PARTICIPATION_PLAN_ENDORSED_17_DECEMBER_2019.pdf

Guiding Griffith 2040

https://www.griffith.nsw.gov.au/cp_themes/default/page.asp?p=DOC-OIW-24-18-70

Council Policies

https://www.griffith.nsw.gov.au/cp_themes/default/page.asp?p=DOC-ECH-80-74-45

Griffith Local Environmental Plan 2014 (GLEP 2014)

<https://www.legislation.nsw.gov.au/#/view/EPI/2014/137/maps#LZN>

State of the Environment Report 2012/16

https://issuu.com/griffithcitycouncil/docs/2016_state_of_the_environment_report

Local Government Act 1993

<https://www.legislation.nsw.gov.au/#/view/act/1993/30>

Local Government Regulations

<https://www.legislation.nsw.gov.au/#/view/regulation/2005/487>

Murrumbidgee Field Naturalists

<https://mf.n.org.au/>

Murrumbidgee Irrigation

<https://www.mirrigration.com.au/water/annual-compliance-report>

NSW Land Registry Services

<https://www.nswlrs.com.au/Historical-Records-Online#Historical%20Maps>

Plants of Western New South Wales (Cunningham, Mulham, Milthorpe, Leigh)

Other Sources

CSU Report No. 140 (2000) – Nericon and Campbell's Swamps (*Taylor, Croft and O'Connell*)

MI 'Inventory of Wetlands in the eastern MIA' (2005) – (*Harrison and Roberts*)

MI 'An Audit of Wetlands in the eastern MIA' (2005) – (*Roberts*)

Trove

<https://trove.nla.gov.au/gazette>

10 APPENDICES

- 1) Core Objectives for Categories of Community Land – Wetland
- 2) Relevant State Environmental Planning Policies
- 3) Portion Plan – 257 (amended 1921)
- 4) Bird Survey Report – Nericon Wetlands
- 5) Plant Species List – Nericon Wetlands

APPENDIX 1

CORE OBJECTIVES FOR MANAGEMENT OF COMMUNITY LAND CATEGORISED AS WETLAND (*Local Government Act 1993*)

36K Core objectives for management of community land categorised as a wetland

The core objectives for management of community land categorised as a wetland are –

- (a) To protect the biodiversity and ecological values of wetlands, with particular reference to their hydrological environment (including water quality and water flow), and to the flora, fauna and habitat values of the wetlands, and
- (b) To restore and regenerate degraded wetlands, and
- (c) To facilitate community education in relation to wetlands, and the community use of wetlands, without compromising the ecological values of wetlands.

APPENDIX 2

State Environmental Planning Policy (Infrastructure) 2007

Division 12 Parks and other public reserves

65 Development permitted without consent

(2) Development for any purpose may be carried out without consent—

- (a) on Trust lands within the meaning of the [Centennial Park and Moore Park Trust Act 1983](#), by or on behalf of the Centennial Park and Moore Park Trust, or
- (b) on trust lands within the meaning of the [Parramatta Park Trust Act 2001](#), by or on behalf of the Parramatta Park Trust, or
- (c) (Repealed)
- (d) on Crown managed land, by or on behalf of—
 - (i) the Secretary, or
 - (ii) a Crown land manager of the land (or an administrator of the manager), or
 - (iii) the Ministerial Corporation, or
 - (iv) the Minister administering the [Crown Land Management Act 2016](#),

if the development is for the purposes of implementing a plan of management adopted for the land under the Act referred to above in relation to the land or in accordance with the [Local Government Act 1993](#) in relation to Crown managed land managed by a council.

(2A) (Repealed)

(3) Any of the following development may be carried out by or on behalf of a council without consent on a public reserve under the control of or vested in the council—

- (a) development for any of the following purposes—
 - (i) roads, pedestrian pathways, cycleways, single storey car parks, ticketing facilities, viewing platforms and pedestrian bridges,
 - (ii) recreation areas and recreation facilities (outdoor), but not including grandstands,
 - (iii) visitor information centres, information boards and other information facilities,
 - (iv) lighting, if light spill and artificial sky glow is minimised in accordance with the Lighting for Roads and Public Spaces Standard,
 - (v) landscaping, including landscape structures or features (such as art work) and irrigation systems,
 - (vi) amenities for people using the reserve, include toilets and change rooms,
 - (vii) food preparation and related facilities for people using the reserve,
 - (viii) maintenance depots,
 - (ix) portable lifeguard towers,
- (b) Environmental management works,
- (c) Demolition of buildings (other than any building that is, or is part of, a State or local heritage item or is within a heritage conservation area).

Note: **environmental management works** means –

- (a) Works for the purpose of avoiding, reducing, minimising or managing the environmental effects of development (including effects on water, soil, air, biodiversity, traffic or amenity), and

- (b) Environmental protection works which are defined as: works associated with the rehabilitation of land towards its natural state or any work to protect land from environmental degradation, and includes bush regeneration works, wetland protection works, erosion protection works, dune restoration works and the like, but does not include coastal protection works.

66 Exempt development

- (1) Development for any of the following purposes that is carried out in the prescribed circumstances is exempt development –
 - (a) Construction or maintenance of –
 - (i) walking tracks, raised walking paths (including boardwalks), ramps, stairways or gates, or
 - (ii) bicycle-related storage facilities, including bicycle racks and other bicycle parking facilities (except for bicycle paths), or
 - (iii) handrail barriers or vehicle barriers, or
 - (iv) ticketing machines or park entry booths, or
 - (v) viewing platforms with an area not exceeding 100m², or
 - (vi) sporting facilities, including goal posts, sight screens and fences, if the visual impact of the development on surrounding land uses is minimal, or
 - (vii) play equipment if adequate safety measures (including soft landing surfaces) are provided and, in the case of the construction of such equipment, so long as the equipment is situated at 1.2m away from any fence, or
 - (viii) seats, picnic tables, barbecues, bins (including frames and screening), shelters or shade structures, or
 - (ix) portable lifeguard towers if the footprint of the tower covers an area no greater than 20 square metres,
 - (b) Routine maintenance of playing fields and other infrastructure, including landscaping,
 - (c) Routine maintenance of roads that provide access to or within those playing fields, including landscaping,
- (2) Development is carried out in the **prescribed circumstances** if the development is carried out –
 - (a) on land referred to in clause 65(1) by or on behalf of a public authority, or
 - (b) on land referred to in clause 65(2)(a) or (b) by or on behalf of the Centennial Park and Moore Park Trust or the Parramatta Trust, as the case may be, or
 - (c) in connection with a public reserve (other than Crown managed land) by or on behalf of a public authority, or
 - (d) on Crown managed land, by or on behalf of –
 - (i) the Secretary, or
 - (ii) a Crown land manager of the land (or an administrator of the manager), or the Ministerial Corporation, or
 - (iii) a Council having control of the Crown Land Management Act 2016.
- (3) Development is exempt development under this clause only if the development –
 - (a) Complies with Clause 20, and
 - (b) Involves no greater disturbance of native vegetation than necessary, and
 - (c) Does not result in an increase in stormwater run-off or erosion.

Portion Plan 257 DP 751743



APPENDIX 4

BIRD SURVEY - NERICON WETLANDS (list taken from initial Report - CSU Report No. 140 (2000) - no numbers given

Additional Bird Survey Observers: Max O'Sullivan (MO); Neil Palframan (NP) (MFN) - No numbers given

SPECIES NAME	SCIENTIFIC NAME	THREATENED SPECIES STATUS (#)	MO & NP November 2016 NUMBER
1 Magpie Goose	<i>Anseranum semipalmata</i>	V	✓
2 Blue-billed Duck	<i>Oxyura australis</i>	V	
3 Musk Duck	<i>Biziura lobata</i>		
4 Black Swan	<i>Cygnus atratus</i>		✓
5 Australian Shelduck	<i>Tadorna tadornoides</i>		
6 Australian Wood Duck	<i>Chenonetta jubata</i>		
7 Pacific Black Duck	<i>Anas superciliosa</i>		✓
8 Australian Shoveler	<i>Anas rhynchotis</i>		
9 Grey Teal	<i>Anas gracilis</i>		
10 Chestnut Teal	<i>Anas castanea</i>		
11 Pink-eared Duck	<i>Malacorhynchus membranaceus</i>		
12 Hardhead	<i>Aythya australis</i>		
13 Australasian Grebe	<i>Tachybaptus novaehollandiae</i>		
14 Hoary-headed Grebe	<i>Poliocephalus poliocephalus</i>		
15 Little Pied Cormorant	<i>Phalacrocorax melanoleucos</i>		
16 Great Cormorant	<i>Phalacrocorax carbo</i>		
17 Australian Pelican	<i>Pelecanus conspicillatus</i>		
18 White-faced Heron	<i>Egretta novaehollandiae</i>		✓
19 Little Egret	<i>Egretta garzetta</i>		
20 White-necked Heron	<i>Ardea pacifica</i>		
21 Cattle Egret	<i>Ardea ibis</i>		
22 Glossy Ibis	<i>Plegadis falcinellus</i>		
23 Australian White Ibis	<i>Threskiornis molucca</i>		✓
24 Straw-necked Ibis	<i>Threskiornis spinicollis</i>		✓
25 Royal Spoonbill	<i>Platalea regia</i>		
26 Yellow-billed Spoonbill	<i>Platalea flavipes</i>		
27 Whistling Kite	<i>Haliastur sphenurus</i>		✓
28 Swamp Harrier	<i>Circus approximans</i>		✓
29 Black Kite	<i>Milvus migrans</i>		
30 Peregrine Falcon	<i>Falco peregrinus</i>		
31 Brolga	<i>Grus rubicunda</i>	V	
32 Ballion's Crake	<i>Porzana pusilla</i>		
33 Australian Spotted Crake	<i>Porzana fluminea</i>		
34 Spotless Crake	<i>Porzana tabuensis</i>		
35 Purple Swamphen	<i>Porphyrio porphyrio</i>		✓

36	Black-tailed Native-hen	<i>Gallinula ventralis</i>	
37	Eurasian Coot	<i>Fulica atra</i>	
38	Marsh Sandpiper	<i>Tringa stagnatilis</i>	
39	Common Greenshank	<i>Tringa nebularia</i>	
40	Red-necked Stint	<i>Calidris ruficollis</i>	
41	Pectoral Sandpiper	<i>Calidris melanotos</i>	
42	Sharp-tailed Sandpiper	<i>Calidris acuminata</i>	
43	Black-winged Stilt	<i>Himantopus himantopus</i>	V
44	Red-necked Avocet	<i>Recurvirostra novaehollandiae</i>	
45	Red-capped Plover	<i>Charadrius ruficapillus</i>	
46	Black-fronted Dotterel	<i>Elseya melanops</i>	
47	Red-kneed Dotterel	<i>Erythrogonys cinctus</i>	
48	Masked Lapwing	<i>Vanellus miles</i>	
49	Silver Gull	<i>Larus novaehollandiae</i>	
50	Caspian Tern	<i>Sterna caspia</i>	
51	Whiskered Tern	<i>Chlidonias hybridus</i>	V
52	Clamorous Reed-Warbler	<i>Acrocephalus stentoreus</i>	
53	Little Grassbird	<i>Megalurus gramineus</i>	

Threatened Species Status - V = Vulnerable; E = Endangered

Additional species sited in in November 2016 Bird Survey by Max O'Sullivan & Neil Palframan

Australian Magpie	<i>Cracticus (Gymnorhina) tibicen</i>		V
Australia Reed-Warbler	<i>Acrocephalus australis</i>		V
Common Starling	<i>Sturnus vulgaris</i>		V
Magpie-Lark	<i>Grallina cyanoleuca</i>		V
Tree Martin	<i>Petrochelidon nigricans</i>		V
Wedge-tailed Eagle	<i>Aquila audax</i>		V
Welcome Swallow	<i>Hirundo neoxena</i>		V
White-winged Fairy -wren	<i>Malurus leucopterus</i>		V
Australasian Bittern	<i>Botaurus poiciloptilus</i>	E	V

APPENDIX 5

1	PLANTS AT NERICON WETLANDS				
2	Noted by Eric Whiting (EW - 14/04/1996), MFN; CSU Report (Taylor, Croft & O'Connel (btw 11-15/11/1999)				
3	FAMILY	SCIENTIFICA NAME	COMMON NAME	DATE	Introduced Species
4	Amaranthaceae	<i>Alternanthera nana</i>	Hairy Joyweed	14/04/1996	11-15/11/1999
5	Asteraceae	<i>Aster subulatus</i>	Aster Weed	14/04/1996	#
6		<i>Carthamus lanatus</i>	Saffron Thistle	14/04/1996	#
7		<i>Conyza bonariensis</i>	Flax-leaf Fleabane	14/04/1996	#
8		<i>Cotula coronopifolia</i>	Waterbuttons		11-15/11/1999
9		<i>Lactuca serriola</i>	Prickly Lettuce	14/04/1996	#
10		<i>Leontodon taraxacoides</i>	Hairy Hawkbit	14/04/1996	#
11		<i>Vittadinia gracilis</i>	Fuzzweed	14/04/1996	
12		<i>Xanthium spinosum</i>	Bathurst Burr	14/04/1996	#
13	Boraginaceae	<i>Echium plantagineum</i>	Paterson's Curse	14/04/1996	# 11-15/11/1999
14		<i>Heliotropium curassavicum</i>	Smooth Heliotrope	14/04/1996	
15		<i>Heliotropium europaeum</i>	Common Heliotrope	14/04/1996	#
16	Caryophyllaceae	<i>Spergularia marina</i>		14/04/1996	#
17	Chenopodiaceae	<i>Atriplex semibaccata</i>	Creeping Saltbush	14/04/1996	
18		<i>Atriplex spinibractea</i>	Spiny-fruit Saltbush	14/04/1996	
19		<i>Atriplex suberecta</i>	Lagoon Saltbush	14/04/1996	
20		<i>Chenopodium murale</i>	Nettle-leaf Goosefoot	14/04/1996	# 11-15/11/1999
21		<i>Einadia nutans</i>	Climbing Saltbush	14/04/1996	
22		<i>Enchylaena tomentosa</i>	Ruby Saltbush	14/04/1996	
23		<i>Salsola kali</i>	Buckbush	14/04/1996	
24		<i>Sclerolaena birchii</i>	Galvanised Burr	14/04/1996	#
25		<i>Suaeda baccifera</i>	Seablite	14/04/1996	#
26	Cucurbitaceae	<i>Cucumis myriocarpus</i>	Paddy Melon	14/04/1996	#
27	Cyperaceae	<i>Bolboschoenus caldwellii</i>		14/04/1996	
28	Euphorbiaceae	<i>Chamaesyce drummondii</i>	Caustic Weed	14/04/1996	
29	Fabaceae	<i>Trifolium glomeratum</i>	Clustered Clover	14/04/1996	#
30	Lamiaceae	<i>Marrubium vulgare</i>	Horehound	14/04/1996	#
31		<i>Salvia verbenaca</i>	Wild Sage	14/04/1996	#
32	Loranthaceae	<i>Amyema quandang</i>	Grey Mistletoe	14/04/1996	
33	Malvaceae	<i>Sida corrugata</i>	Corrugated Sida	14/04/1996	#
34		<i>Sida cunninghamii</i>	Ridge Sida	14/04/1996	
35	Mimosaceae	<i>Acacia homalophylla</i>	Yarran	14/04/1996	
36		<i>Acacia oswaldii</i>	Miljee	14/04/1996	
37		<i>Acacia pendula</i>	Weeping Myall	14/04/1996	
38	Poaceae	<i>Agrostis avenacea</i>	Blown Grass		11-15/11/1999
39		<i>Bothriochloa macra</i>	Red Leg Grass	14/04/1996	
40		<i>Chloris truncata</i>	Windmill Grass	14/04/1996	
41		<i>Chloris virgata</i>	Feathertop Rhodes Grass	14/04/1996	#
42		<i>Cynodon dactylon</i>	Couch Grass	14/04/1996	11-15/11/1999
43		<i>Enteropogon acicularis</i>	Curly Windmill Grass	14/04/1996	
44		<i>Eragrostis ciliensis</i>	Stink Grass	14/04/1996	#
45		<i>Eragrostis parviflora</i>	Weeping Lovegrass	14/04/1996	
46		<i>Eriochloa pseudo-acrotricha</i>	Early Spring Grass	14/04/1996	
47		<i>Hordeum marinum</i>	Sea Barley	14/04/1996	# 11-15/11/1999
48		<i>Lamarckia aurea</i>	Golden-top	14/04/1996	#
49		<i>Lolium spp.</i>	Rye Grass		# 11-15/11/1999
50		<i>Paspalum dilatatum</i>	Paspalum	14/04/1996	#
51		<i>Polypogon monspeliensis</i>	Annual Beardgrass		# 11-15/11/1999
52		<i>Stipa scabra var scabra</i>	Rough Speargrass	14/04/1996	
53		<i>Tragus australianus</i>	Small Burr Grass	14/04/1996	
54		<i>Lepidium africanum</i>	Peppergrass	14/04/1996	#
55	Polygonaceae	<i>Polygonum arenastrum</i>	Wireweed	14/04/1996	#
56	Sapindaceae	<i>Dodoneae viscosa angustissima</i>	Narrow-leaf Hopbush	14/04/1996	
57	Typhaceae	<i>Typha spp.</i>	Cumbungi		11-15/11/1999
58	Zygophyllaceae	<i>Tribulus terrestris</i>	Cat-head	14/04/1996	
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