

Lake Charm, Kangaroo Lake and Gunbower Creek Environs Strategy

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Gannawarra Shire Council

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Glossary

ABS	Australian Bureau of Statistics
BMO	Bushfire Management Overlay
DCP	Development Contributions Plan
DPCD	Department of Planning and Community Development
DPO	Development Plan Overlay
ESO	Environmental Significance Overlay
FZ	Farming Zone
GWAZ	Green Wedge A Zone
LDRZ	Low Density Residential Zone
LPPF	Local Planning Policy Framework
LSIO	Land Subject to Inundation Overlay
MSS	Municipal Strategic Statement
RAZ	Rural Activity Zone
RCZ	Rural Conservation Zone
RFO	Floodway Overlay
RLZ	Rural Living Zone
SPPF	State Planning Policy Framework
SWOT	Strengths, Weaknesses, Opportunities and Threats
U&RSP	Urban and Rural Strategy Plan
UDF	Urban Design Framework
VCAT	Victorian Civil and Administrative Tribunal
VPP	Victorian Planning Provisions

Executive summary

Lake Charm, Kangaroo Lake and Gunbower Creek are important assets of the Gannawarra Shire, recognised for their environmental significance and their rural-residential lifestyle that makes them attractive places for both residents and tourists. These areas present strategic opportunities for future development, which, if appropriately managed, can have benefits in the way of stimulating economic growth, improving existing services and facilities and helping to stabilise the Shire's declining population. However, given the sensitivity of these environments, it is important that the right type and form of development is taken forward, ensuring that the natural and physical attributes of these areas are protected.

In response, the Gannawarra Shire Council (Council) has commissioned the preparation of this Environs Strategy to provide guidance and set the overall direction for future growth, development and infrastructure investments within the Lakes and Creek Environs over the next 20 years. This Strategy builds upon previous work completed by Council done to identify key issues and constraints and uses this information, as well as feedback provided through consultation with the local community and key stakeholders, to identify an overall vision and key principles that will be used in the assessment of future development and subdivision proposals.

The vision developed for this study is:

'To maintain the rural character and lifestyle of the Lakes and Creek Environs while providing for future development and growth which is appropriately located, sited and designed to protect the environmental, cultural and landscape features that make these areas unique.'

This Strategy identifies nine key principles that are focused around the following themes:

- A 'Planned' and logical approach
- Natural systems, character, visual amenity and heritage
- Rural living and tourism development
- Land and environmental capability
- Utilities, infrastructure and access
- Recreational values and public access

Principles to guide development within the Lakes and Creek environs are as follows:

1. *Encourage a planned approach to development, avoiding adhoc decision.*
2. *Land use change and new developments must demonstrate how they will protect and enhance the existing natural, cultural, historic features, native vegetation and landscape values of the area and reinforce the character of the Lakes and Creek Environs.*
3. *Provide for rural-living, low-density residential and tourism development surrounding the Lakes and Creek in accordance with the Development Framework Plans which consolidates existing development areas, taking advantage of the natural Lake/Creek rural settings.*
4. *Where it is proposed to locate development outside of the areas identified for "Development Potential" on the Development Framework Plans, it must be demonstrated that:*

- i. *There is a demand for the development*
 - ii. *Infrastructural demands of the development can be provided for and met in a cost effective manner*
 - iii. *The development will not jeopardise the existing or future use of suitable agricultural land.*
 - iv. *The development proposal must meet all other development principles under this Environs Strategy.*
5. *Development should be avoided in areas known to be:*
- i. *Subject to flooding or inundation*
 - ii. *Environmentally sensitive or have significant environmental values*
 - iii. *Culturally or historically significant or have significant values*
 - iv. *Subject to wildfire risks*
6. *Avoid development of land which has been identified as being particularly suitable for agricultural land uses. Any development within the Lakes and Creek Environs will need to demonstrate that it will not compromise existing agricultural land uses on the subject site or on surrounding sites.*
7. *The wastewater, infrastructural and utility requirements of future development must be adequately met and provided for in a cost effective manner.*
8. *Developments must provide attractive, safe and functional open spaces that integrate with existing developments and enhance the recreational opportunities of the existing waterbodies.*
9. *The management of the Lakes and Creek Environs needs to be undertaken in a coordinated manner with Council, the local community, key stakeholders and visitors working collaboratively to protect the natural and physical features and to maximise the long term environmental, economic and social benefits of these areas.*

An implementation plan provided within this Strategy sets the key actions required to implement the principles and specifies immediate, short-term, medium-term and long-term targets. Actions include the following:

- Introduction of planning policy and new planning tool such as a Development Plan Overlay (DPO) to ensure coordinated development that aims to protect and enhance the natural and environmental values of the Lakes and Creeks Environs.
- Preparation of an Urban Design Framework to guide future development, particularly in terms of scale, location of buildings and landscape treatments.
- Introduce the requirement for proponents to liaise with service and utility providers such as VicRoads, electricity, potable water, gas and telecommunication companies to determine the feasibility of future development or subdivision proposals. The outcomes these discussions will need to be provided to Council to allow for a comprehensive assessment of the development and/or subdivision proposal.
- Introduce the requirement for proponents to investigate wastewater management and to identify a suitable option for the disposal of wastewater from the site.

- Preparation of a Lakes and Creek Management Plan to clearly articulate who is responsible for maintaining and enhancing the Lakes and Creek Environs.

The management plan will also need to detail how public/private land surrounding the Lakes and Creek will be managed and determine whether it is appropriate to provide public access along the entire Lakes and Creek corridor. It is envisioned that the Strategy will be updated over time through regular monitoring and review, ensuring that the Strategy is responsive and adaptable. This will include an assessment of progress in achieving and implementing the key principles and actions as well as responding to logical community aspirations and changes in trends over time.

1. Background

In 2007 the Gannawarra Shire Council completed an Urban and Rural Strategy Plan (U&RSP) which identified opportunities for land use development within the Shire while seeking to ensure agricultural industries are protected, environmental assets are preserved and the viability of existing settlements and tourist attractions are enhanced.

The U&RSP included an assessment of a number of areas within the Shire including Lake Charm, Kangaroo Lake and Gunbower Creek and considered an extensive range of factors including:

- The existing land uses and developments
- The environmental assets and qualities
- The long term land use and strategic development options available.

The key findings of the U&RSP identified the immediate surrounds of Kangaroo Lake to be potentially suitable for further low density residential land use on the western side and rural living on the eastern side. It also identified the western side of Lake Charm as being potentially suitable for additional low density residential or rural living. The U&RSP suggested that development would be subject to the appropriate management of effluent, protection of adjoining farming activities, protection of environmental and landscape values and access to infrastructure. The U&RSP also identified the opportunity to promote lake side development in these areas in order to reduce the pressure on more environmentally sensitive areas within the Shire. Similarly, land surrounding Gunbower Creek was identified as being suitable for low density residential growth, due to its attractive position adjacent to the Creek and its accessibility to the existing urban area of Cohuna.

The U&RSP concluded that additional strategic assessment is required for the Lake Charm, Kangaroo Lake and Gunbower Creek areas to examine the potential development options and to provide a long term strategic direction.

In addition, the review of the Gannawarra Planning Scheme (the Planning Scheme) undertaken in 2010 identified the need for additional strategic work to inform the policy directions underpinning the Planning Scheme. This included the need for:

“A detailed strategic study of the Kangaroo Lake, Lake Charm and Gunbower Creek precincts to identify land potentially suitable for rural living development, expanding and refining the applicable sections of the U&RSP” [Chapter 17, p.25].

As a result the Gannawarra Shire Council has commissioned the preparation of this Environs Strategy, with the purpose and objectives as detailed in the Sections below:

1.1 Purpose and objectives

Taking into account the recommendations of the U&RSP and the Planning Scheme, Council commissioned the preparation of this Environs Strategy to develop a long term strategic vision and to provide recommendations for future growth and development opportunities within the Lake Charm, Kangaroo Lake and Gunbower Creek Environs.

The main purpose of the Strategy is to provide a framework for decision making regarding the location of agricultural, residential, commercial and other land uses, which will be used as a basis of assessing development applications and future infrastructure investments. In addition to this, the Strategy will also be used for the purposes of:

- Identifying required actions to take advantage of development and recreational opportunities and to address current and future environmental issues.
- Identify infrastructural investments requirements to meet growth demands and specify a program as to how these will be met.
- Identifying initiatives and programs to be undertaken by Council, government agencies and the local community in addressing particular issues.
- Identifying funding options to undertake the initiatives and programs.

1.1.1 Vision

The overall vision for the Lakes and Creek Environs has been developed through a review of background material, policies, strategy's and community consultation. The vision statement is as follows:

'To maintain the rural character and lifestyle of the Lakes and Creek Environs while providing for future development and growth which is appropriately located, sited and designed to protect the environmental, cultural and landscape features that makes these areas unique.'



Figure 1.1 View of Lake Charm, looking north

1.2 Study Areas

The Environs Strategy applies to the Lake Charm, Kangaroo Lake and Gunbower Creek study areas as identified in Figure 1.2 to Figure 1.4 below. These study areas were

determined based on logical physical boundaries (including property boundaries, main highways or existing areas that have been developed), the topography of land (which considered view's and access to the lakes or creek) and a site visit with Council staff that provided an appreciation of local context and issues.

The study areas (including all three locations) are approximately 8500 hectares and comprise approximately 250 dwellings and a small number of commercial and community facilities.

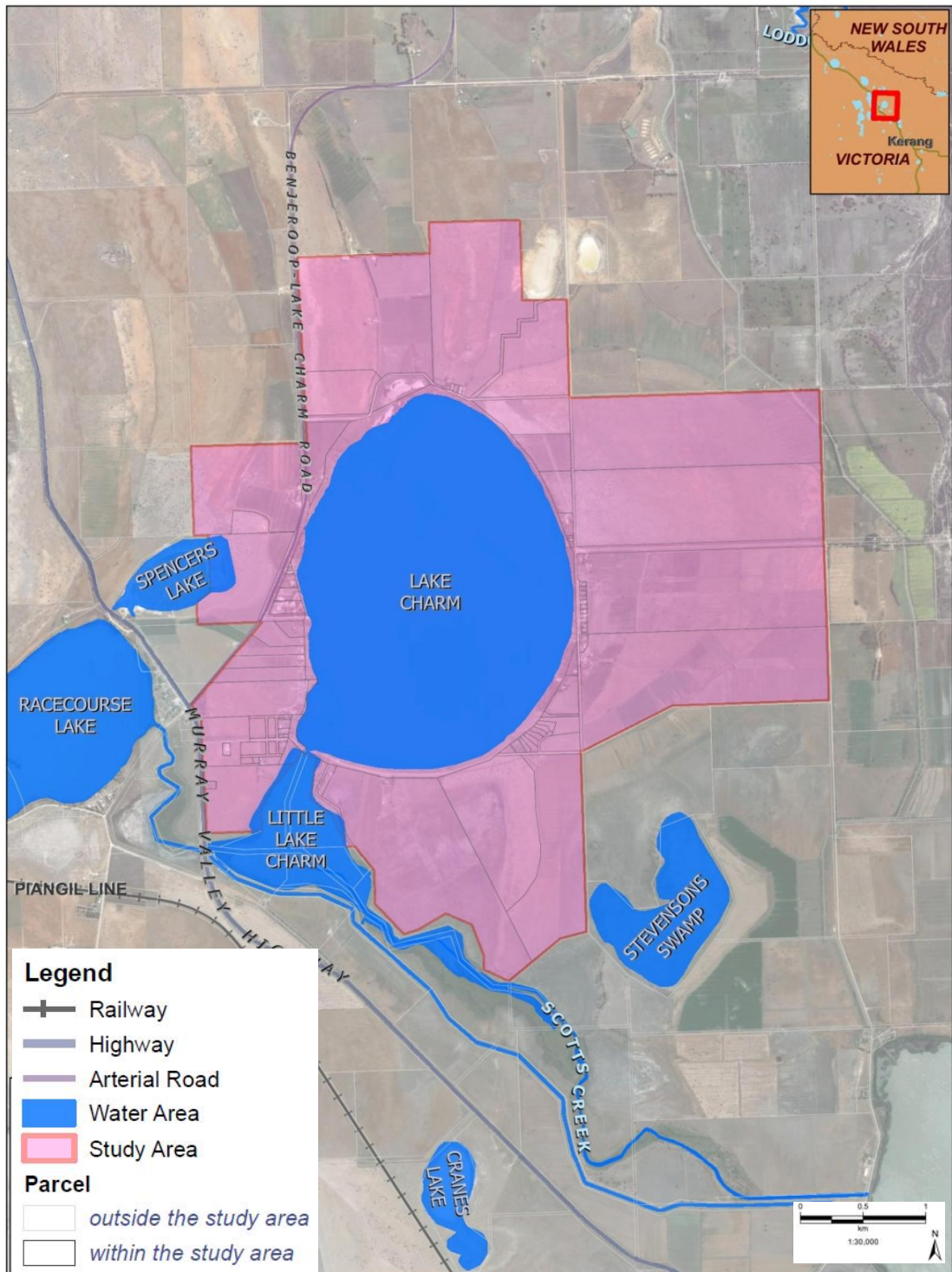


Figure 1.2 Lake Charm Study Area

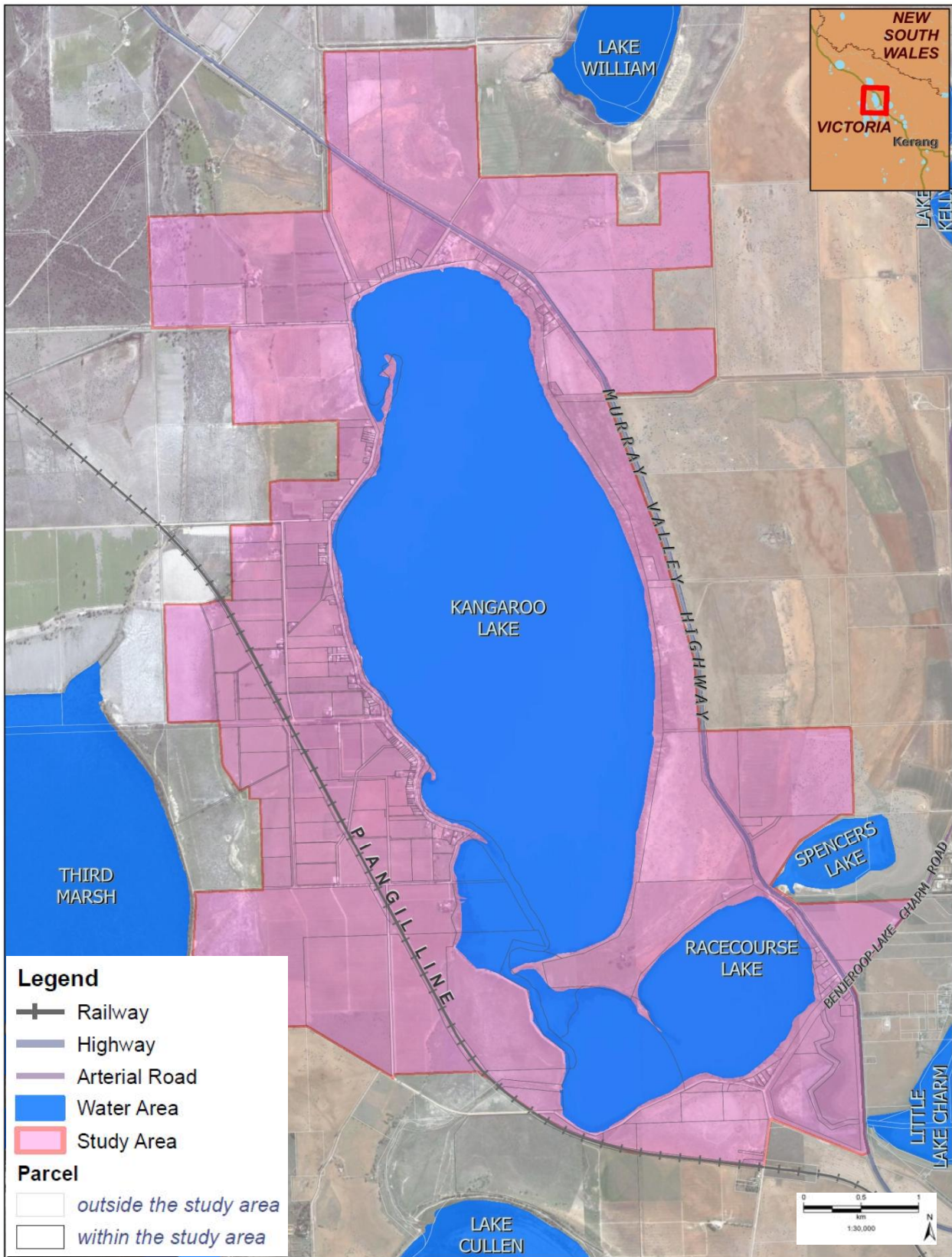


Figure 1.3 Kangaroo Lake Study Area

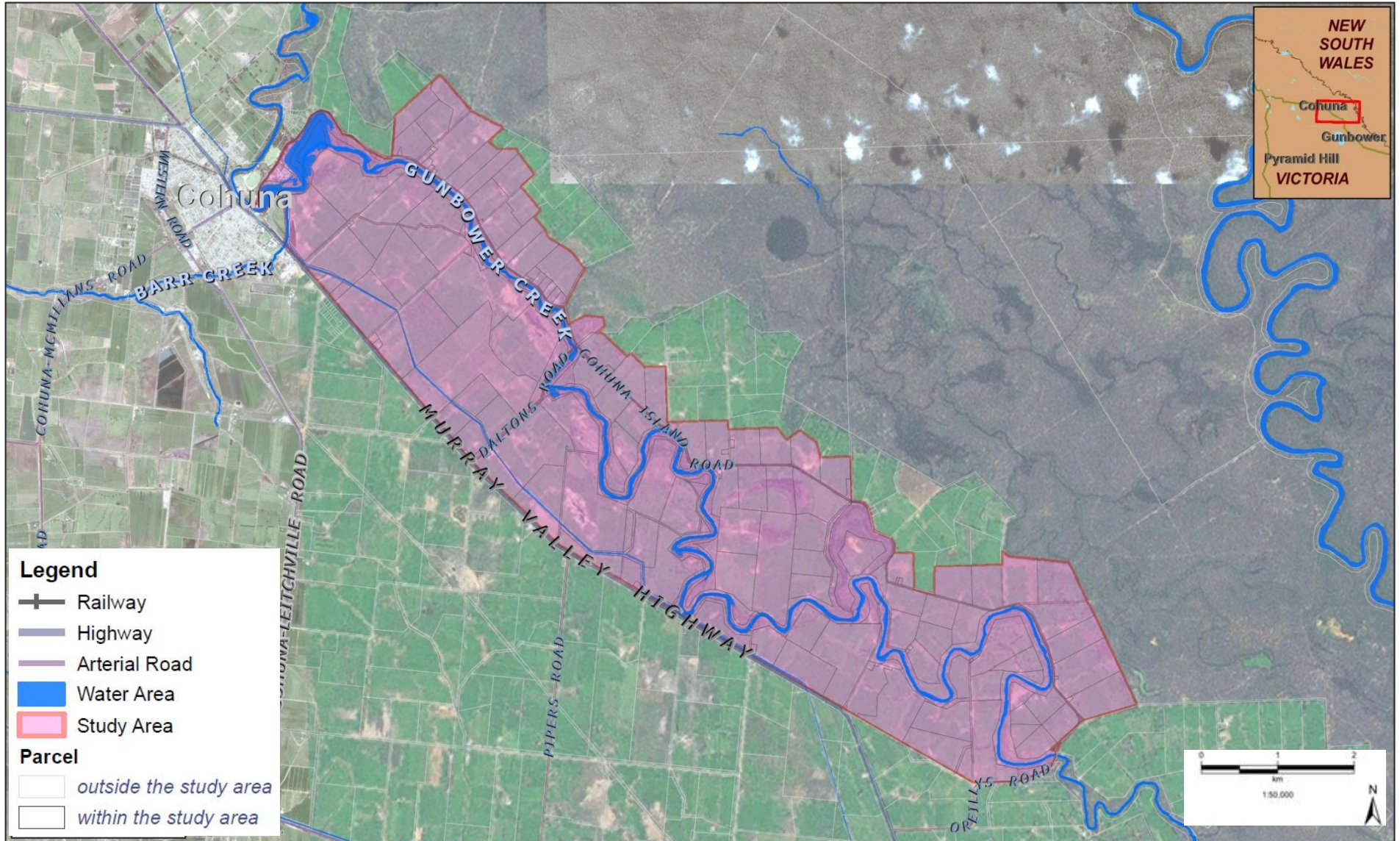


Figure 1.4 Gunbower Creek Study Area

1.3 Lake Charm/Kangaroo Lake

Lake Charm and Kangaroo Lake are located approximately 17km north west of Kerang. These two lakes are significant tourist and recreational facilities within the Shire. There are also a number of permanent residences located around the fringe of the lakes. Other land uses include a number of caravan parks, holiday homes, a public hall, a supermarket, a post office, a State school, a fuel outlet and a vineyard (to the west of Kangaroo Lake). Both lakes are classified as Ramsar wetlands and Important wetlands in Australia.

Wastewater management is currently substandard in the area and need to be considered in the context of this report. The location of the area and the relative isolation from the main settlements within the Shire (including Kerang) creates its own challenges including the cost of service provision and the impact of development on the lakes and valuable agricultural operations.

1.4 Gunbower Creek

The Gunbower Creek is located east of Cohuna, approximately 32km south east of Kerang, and it is an anabranch of the Murray River. It provides another attractive water frontage for the Shire and water body for agriculture use. Located between Gunbower Creek and the main body of the Murray River is Gunbower Island. This is also classified as a Ramsar wetland. The Gunbower Forest designation is the second largest periodically-inundated red gum forest in Victoria.

Although most of Gunbower Island is public land, there is an area of private land along the eastern side of Gunbower Creek. There is also an important agricultural area, tourist attraction and already includes some areas of residential development.

2. Methodology

The process for developing this Environs Strategy has included a number of key stages as follows:

Phase 1: Review and Analysis	Review of policy documents, strategies and studies relevant to the Lakes and Creek Environs and the surrounding region to identify key issues, trends, constraints and directions.
Phase 2: Community/ Stakeholder Consultation	<ul style="list-style-type: none"> ■ Project bulletin distributed to local residents (November 2012) ■ Stakeholder workshop with key authorities (31 January 2013) ■ One-on-one meetings with selected property developers (31 January 2013) ■ Local community workshop (31 January 2013) ■ Community survey (distributed to approximately 400 households within the three study areas. 129 surveys were returned.)
Phase 3: Draft Environs Strategy	<ul style="list-style-type: none"> ■ Preparation of a Strength, Weakness, Opportunity and Threat (SWOT) analysis based on the outcomes of Phases 1 & 2 above ■ Preparation of Draft Environs Strategy Report ■ Public display of Draft Environs Strategy
Phase 4: Final Environs Strategy	Preparation of Final Environs Strategy.

2.1 Literature Review

A number of background reports were reviewed to inform the development of the Environs Strategy. Refer to Appendix A for a comprehensive summary. The following documents were reviewed:

- RMCG (2007) Domestic Wastewater Management Plan (DWMP) Shire of Gannawarra
- Parsons Brinckerhoff (2007) Gannawarra Urban and Rural Strategy Plan. Gannawarra Shire Council
- SKM (2010) Hydrological Assessment of Kangaroo Lake Domestic Septic Tank and Groundwater Impacts
- Gannawarra Shire Council (not dated) Guidelines for eligibility to apply for rezoning to allow subdivision to create nodal rural residential settlements close to water frontage.
- Gannawarra Shire Council (October 2010) Gannawarra Future Scan – Ganna 0503
- Gannawarra Shire Council (December 2010) Gannawarra 2025. Taking up the challenge
- Gannawarra Shire Council (2009-2013) Council Plan and Strategic Resource Plan
- Gannawarra Shire Council (2010) Review of the Gannawarra Planning Scheme

- RMCG (2010) Impacts of Sales of Permanent Water Entitlements and Land Use Options for New Dryland Gannawarra Shire
- Department of Planning and Community Development (2012) Practice Note 37. Rural Residential Development
- Mark Reilly Landscape Architects (2002) Kangaroo Lake Management Plan. Gannawarra Shire Council
- RMCG (2011) Analysis and Mapping of Irrigated Land. Final Report

The review identified a number of key themes relevant to the Lakes and Creek Environs. In particular,

- The Lakes and Creek are recognised as being important recreation and tourism assets and are classified as significant environmental and landscape features.
- The significance of the culture heritage of the localities needs to be recognised on protected.
- Wastewater management is of particular importance and there is a need to consider the management of individual septic tanks and the capability of the wastewater system.
- There is a need to maintain buffer zones and setbacks from the waterways to protect and enhance the landscape and visual features.

2.2 Consultation

2.2.1 Overview

This Environs Strategy has been prepared with input from key stakeholders, the local community and prospective developers. This has involved a consultation process involving one-on-one meetings with landholders/developers, workshops with the community, stakeholder and government agencies and consultation with service providers. Consultation was undertaken in a phased manner, consisting of early consultation to identify opportunities, constraints and further consultation as the Strategy was developed. Figure 2.1 below illustrates the consultation undertaken at various stages of the process.



Figure 2.1 Community and stakeholder consultation process

2.2.2 Key messages

A consultation summary report was prepared following the outcomes of the community workshop, survey and stakeholder meetings. This report is attached in Appendix B.

2.3 SWOT Analysis

The literature review and consultation summary were used as a bases for the identification of the Strengths/ Weaknesses/ Opportunities and Threats (SWOT) for the Lakes and Creek environs. The SWOT analysis which was developed is contained in Appendix C.

The SWOT analysis identified a number of factors that need to be considered and addressed throughout the Environs Strategy. Most importantly, the Environs Strategy should recognise the Lakes and Creek existing character and environmental values, and also the natural attributes which make the areas attractive places to live and visit.

The allocation of land for future opportunities needs to recognise other aspects including the existing constraints of the area (as identified in the mapping attached in Attachment C); the existing environmental values context, including cultural heritage considerations; the ability of existing services (including road infrastructure) to accommodate future growth; and the costs of required upgrades versus the benefits of providing for this growth.

While it was noted, through the community consultation, that there are differing views across the community in regards to the future land use/development of Lake Charm, Kangaroo Lake and Gunbower Creek, there was a general consensus that development, at some level, is inevitable and that it has the potential to bring positive change to the local communities.

3. Strategic Framework

The State Planning Policy Framework (SPPF) and the Local Planning Policy Framework (LPPF) set the direction for future growth and development of the region. These documents are contained within the Gannawarra Shire Planning Scheme (the Planning Scheme), which outlines the planning controls and determines the future direction for development within the Shire.

Analysis of the various development objectives under the SPPF and LPPF has identified key themes relevant to the type, form and spatial objectives for the Lake Charm, Kangaroo Lake and Gunbower Creek Environs. These are outlined below with discussion provided as to how these apply to this Environs Strategy.

3.1 State Planning Policy Framework

Settlement	
11.03-1 SPPF	<p>To assist the creation of a diverse and integrated network of public open space commensurate with the needs of the community.</p> <ul style="list-style-type: none"> ▪ Plan for regional and local open space networks for both recreation and conservation of natural and cultural environments.
11.05-1 SPPF	<p>To promote the sustainable growth and development of regional Victoria through a network of settlements identified in the Regional Victoria Settlement Framework plan.</p> <ul style="list-style-type: none"> ▪ Developing networks of settlements that will support resilient communities and the ability to adapt and change. ▪ Preserving and protecting features of rural land and natural resources and features to enhance their contribution to settlements and landscapes. ▪ Providing for appropriately located supplies of residential, commercial, and industrial land across a region, sufficient to meet community needs.
11.05-3 SPPF	<p>To manage land use change and development in rural areas to promote agriculture and rural production.</p>
11.05-4 SPPF	<p>To develop regions and settlements which have a strong identity, are prosperous and are environmental sustainable.</p> <ul style="list-style-type: none"> ▪ Maintain and provide for the enhancement of environmental health and productivity of rural and hinterland landscapes by: <ul style="list-style-type: none"> ▸ Managing the impacts of settlement growth and development to deliver positive land use and natural resource management outcomes. ▸ Avoiding development impacts on land that contains high biodiversity values, landscape amenity, water conservation values, food production and energy production capacity, extractable resources and minerals, cultural heritage and recreation values, assets and recognised uses.

Relevance to this Strategy

The objectives and strategies under the SPPF relating to settlements seek to manage future growth in a sustainable way, by directing development into existing urban areas. In particular, the SPPF seeks to ensure that future development appropriately balances growth while ensuring that the features of rural land, resources and agricultural activities are protected. The SPPF also seeks to avoid development on land with high biodiversity values, landscape amenity, conversation values and recreational values.

The Lakes and Creek Environs contain a mix of rural living and rural land uses with some small scale tourism development. There is an opportunity to build on the existing strengths of the areas, such as the rural environment and natural landscapes while providing for development in appropriate locations that can assist in stimulating economic growth, provide increased opportunities for the local community and grow the rate base, providing for future infrastructure and service investment.

It will be important to ensure that growth is directed to locations where utility and infrastructure requirements, including the management of wastewater, can be provided in an effective manner, avoiding impacts on the biodiversity values, landscape amenity and natural resources.

Environment and Landscape Values	
12.01-1 SPPF	To assist the protection and conservation of biodiversity, including native vegetation retention and provision of habitats for native plants and animals and control of pest plants and animals.
12.01-3 SPPF	To protect native habitat and areas of important biodiversity through appropriate land-use planning.
12.04-1 SPPF	To protect and conserve environmentally sensitive areas.
12.04-2 SPPF	To protect landscapes and significant open spaces that contribute to character, identity and sustainable environments.

Relevance to this Strategy

The SPPF contains objectives and strategies which specifically seek to protect the natural environmental and landscape features of sensitive areas through appropriate land use planning. This includes the protection of biodiversity, native vegetation, habitats, landscape features and the character of the area. The Lakes and Creek Environs in particular are recognised for their significant natural features and the Lakes and Gunbower State Forest are classified as Ramsar wetlands and important Wetlands in Australia. It will be important to ensure that these features are protected through the appropriate siting and design of future development.

Environmental Risks	
13.02-1 SPPF	<p>To assist the protection of:</p> <ul style="list-style-type: none"> ▪ Life, property and community infrastructure from flood hazard. ▪ The natural flood carrying capacity of rivers, streams and floodways. ▪ The flood storage function of floodplains and waterways. ▪ Floodplain areas of environmental significance or of importance to river health.
13.05-1 SPPF	<p>Ensure that strategic and settlement planning assists with strengthening community resilience to bushfire.</p>

Relevance to this Strategy

Flooding risks occur to the south of Lake Charm and to the north of Kangaroo Lake and this presents a potential threat to life and property if development is inappropriately located. The Environs Strategy will need to consider the degree of risk of this flooding and identify measures to avoid and minimise such risks. Specific development controls outlined in the Planning Scheme will apply to development in flood prone areas and this includes the need for a planning permit to be obtained from Council at which time the susceptibility of the development to flooding and flood damage will be determined.

The marshes and significant vegetation to the south-west of Lake Charm and Kangaroo Lake have been identified as being fire prone, even when the marsh areas are wet. Consequently this presents a threat to any type of development and the planning for these areas will need to take this into account to increase community resilience and safety.

Built Environment and Heritage	
15.01-3 SPPF	<p>To ensure the design of subdivisions achieves attractive, liveable, walkable, cyclable, diverse and sustainable neighbourhoods.</p>
15.03-1 SPPF	<p>To ensure the conservation of places of heritage significance.</p>
15.03-2 SPPF	<p>To ensure the protection and conservation of places of Aboriginal cultural heritage significance.</p>

Relevance to this Strategy

As the Lakes and Creek Environs develop over time it will be important to ensure that future growth is not only appropriate to the context, but also reinforces the key attributes that make these areas unique. With this in mind, development within these areas should demonstrate how they will enhance the environmental, cultural features or recreational attributes that are already there.

Significant cultural and heritage values and features have been identified within and in close proximity to the Lakes and the Creek Environs. It will be important to ensure these values are protected as development occurs.

Economic Development

17.03-1

To encourage tourism development to maximise the employment and long-term economic, social and cultural benefits of developing the State as a competitive domestic and international tourist destination.

Relevance to this Strategy

Tourism opportunities have been identified within the Lakes and Creek Environs, taking advantage of the recreational and natural values of the area. Such development has the potential to stimulate growth and provide positive spin-off effects to the local community and the Shire as a whole. These opportunities should be considered and provided for as appropriate within the Environs Strategy.

3.2 Local Planning Policy Framework

3.2.1 MSS

The Municipal Strategic Statement (MSS) is the local policy to guide growth and development within the Gannawarra Shire. The MSS is presented in the Planning Scheme as part of the LPPF and includes the following objectives relevant to the Shire as whole:

- Support growth and development of the agriculture sector
- Encourage value adding industries
- Protect and improve the condition of the natural environment
- Grow and consolidate existing towns
- Further develop the local tourism industry based on existing features and assets
- Maintain and enhance existing infrastructure

In regards to the Lakes and Creek Environs in particular, Clause 21.04 identifies the following strategies in meeting the Shire's objectives:

- Future low-density residential or rural development could be provided on the east side of Lake Charm, subject to demand, the provision of a suitable wastewater management system and the maintenance of environmental and landscapes values and rural aesthetics.
- Future low-density residential development is to be consolidated with existing development on the west side of Kangaroo Lake, subject to the provision of suitable wastewater management system, access to services and the maintenance of environmental landscape values and rural aesthetics.
- Future low-density residential development (in the next 10 to 15 years) is to be focussed in two areas; to the north east of the residential expansion area and west of Wilsons Road on Gunbower Island.

- Development of Cohuna as a tourist stopover destination will be encouraged by streetscape enhancement of the town centre precinct adjacent to the riverside park, establishing the Gunbower walking trail, identifying tourist development sites near Gunbower Creek and the town centre, and improving the visual image of highway entrances.

The review of the Gannawarra Planning Scheme undertaken by Council in 2010 proposes new items of strategic work which are recommended to strengthen the Planning Scheme which includes the need to undertake:

“A detailed strategic study of the Kangaroo Lake, Lake Charm and Gunbower Creek precincts to identify land potentially suitable for rural living development, expanding and refining the applicable sections of the U&RSP” (page 25).

Relevance to this Strategy

The Environs Strategy needs to identify land potentially suitable for rural living development that expands and refines the applicable sections of the U&RSP. It is assumed therefore that the candidate sites identified within the Environs Strategy should be identified within the areas considered in the U&RSP. Alternative locations for rural residential or rural living development would need to demonstrate why these locations are more suitable than those designated in the U&RSP, the way in which all potential development impacts are to be mitigated, and how these developments will provide improvements in the environmental values of the Lakes and Creek Environs.

This Environs Strategy has considered the suitability of future development within the areas identified above, as outlined in Section 5 of this report.

3.2.2 Local Planning Policy Framework

22.01 LPPF Catchment and Land Protection	<ul style="list-style-type: none"> To ensure the sustainable development of natural resources of soil, water, groundwater, flora, fauna, air and ecosystems. To recognise that wetland areas in the Gannawarra Shire provide important functions including: flora and fauna habitat; recreation area; landscape features; water filtration; and water storage and drainage.
22.07 LPPF Agriculture	<ul style="list-style-type: none"> To protect the natural and physical resources upon which agricultural industries rely. To promote agricultural industries which are ecologically sustainable and incorporate best management practices. To prevent land use conflicts between agricultural uses and other land uses and ensure that use and development in the Municipality is not prejudicial to agricultural industries or the productive capacity of the land.
22.08 LPPF Rural Subdivision	<ul style="list-style-type: none"> To ensure that the excisions of dwellings and creation of lots smaller than that specified in the Schedule to the Farming Zone is consistent with the purposes of the zone. To limit the subdivision of land that will be incompatible with the utilisation of the land for sustainable resource use.
22.12 LPPF Building Lines and Height	<ul style="list-style-type: none"> To ensure that rural development is sited so as not to prejudice the landscape features and environmental attributes of the surrounding area.

Relevance to this Strategy

The Lakes and Creek Environs have been identified as suitable locations for future residential growth and tourism development. However, there are multiple constraints including: natural flora and fauna; landscape values; flooding, bushfire risk; existing development and heritage protections that limit where and to what extent this growth can occur. Consequently, development within and in close proximity to existing rural living areas should be promoted to ensure that growth can occur without impacting on the natural values and prevent conflicts between the agricultural land uses of the region.

In terms of rural subdivision, the LPPF seeks to ensure that the creation of lots is consistent with the overall purpose of the zone (ie, the creation of lots smaller than that specified in the Farming Zone must demonstrate why it is suitable to do so).

3.3 Practice Note 37. Rural Residential Development

The Department of Planning and Community Development (DPCD) Practice Note No.37 supplements/replaces the information provided in the Ministerial Direction No. 6 *'Rural Residential Development'*. It sets out the required justification to seek an amendment to provide for rural residential land use. This applies to the Low Density Residential Zone (LDRZ) and the Rural Living Zone (RLZ) and the Green Wedge A Zone (GWAZ).

Relevance to this Strategy

Of specific relevance to the consideration of development within the Gannawarra Lakes area is the need to confirm the need for housing based on forecast demand, changes in household structure and composition. This is to specify the type of required accommodation over a 10 year period.

Generally the delivery of rural residential development needs to protect agricultural land capability, the objectives and strategies of the MSS and other relevant regional strategies. Development promoted through this Environs Strategy needs to demonstrate that the rural residential development relates to, or is supported by existing urban development. Development should be located in areas where any impact on the environment, native vegetation and biodiversity is avoided. Any proposal must be supported by an assessment of the localities environmental features, and how these features could affect, and be affected by the development.

The Practice Note identifies the requirement for a land management plan to show how the impact of development can be remediated or minimised and the localities' features protected. A proposal will need to demonstrate how the costs of infrastructure, such as improvements to access roads are to be met by the proponent.

The Practice Note emphasises that the design of the overall subdivision and the individual allotments needs to respond to the physical features of the land, the environmental, landscape, infrastructure and servicing features and constraints of the land. This requires a sensitive approach to the overall site design, and a comprehensive explanation of how this will be achieved.

4. Trends, Issues and Strategic Response

The key drivers of rural land use change present both threats and opportunities to the sustainable management of rural land. The following sections provide a contextual understanding of the changes impacting on rural land in the Shire and in particular in the Lakes and Creek Environs.

The trends that are currently impacting on land use and communities within the Lakes and Creek Environs can be summarised under the following themes:

- Regional context
- Population
- Environmental values
- Low density and rural living
- Agriculture and farming activity
- Tourism and recreation
- Infrastructure

4.1 Regional context

Lake Charm and Kangaroo Lake are located to the north of the Gannawarra Shire, approximately 17km north-west of Kerang. The two Lakes are significant tourist and recreational facilities, popular for water-based recreation. Beyond this, land surrounding the lakes has historically been used for agricultural activities such as broad acre farming and viticulture. Access to the Lakes is provided via the Murray Valley Highway, passing to the south of Lake Charm and to the east of Kangaroo Lake. Figure 4.1 on page 20 shows the location of the Lake Charm and Kangaroo Creek study areas within the regional context of the Shire.

Gunbower Creek, situated to the east of the Murray Valley Highway, between Cohuna and Leitchville, is an attractive location for residents and tourists and this area has over the years seen an increase in rural living and tourism development. Refer to Figure 4.1 for the location of the Gunbower Creek study area.

The Shire's natural and physical resources play an important role in the economic and social well-being of the Shire. The Shire is recognised for its significant natural features, ecological, landscape and heritage resources and it will be important to ensure that any new development responds to the existing environment.

Farming and agriculture, mainly dairy and grain production, are also important contributors to the Shire's economy, supported by the value adding processing industry, manufacturing, retail, tourism and health services. Agriculture in Gannawarra is estimated to be worth around \$283 million annually¹, however, over recent years there has been a steady decline in this industry and this trend is expected to continue as: remaining farms become bigger

¹ *Environmental Sustainability Strategy 2013-2016, Gannawarra Shire Council*

and more labour efficient; farmers continue to sell water rights outside of farming areas; and people choose to pursue opportunities outside of the agricultural industry. As a result, documents such as *Gannawarra Future Scan (2010)* seek to continue to support the agricultural industry while also exploring other options to revitalise the economy. The tourism industry is an example, which has the opportunity to create more jobs and develop a career path for young workers.



Figure 4.1 Regional context

Source: <http://www.gannawarra.vic.gov.au/play/maps>

Over the past years the Gannawarra Shire has seen a decline in the total population from 12,055 people in 2001 to 10,366 in 2011². This is generally attributed to the loss of young people seeking work and study opportunities and the relocation of people from the Shire following the recent droughts and flooding. The population of Gannawarra is forecast to continue to steadily decline and to age significantly (47% of residents in the Gannawarra Shire are over the age of 50 years) over the coming years. The growth in retirees is expected to increase demand for health services.

The loss of population has been identified as a key concern by the Council and also residents of the Shire. Rural residential and tourism opportunities (as detailed further in Section 4.4 and Section 4.6) have been identified within the Lakes and Creek Environs, which may assist in stimulating future growth and create additional jobs in the area. It is important that such opportunities are realised as this will be a key factor in helping to stabilise the declining population base and stimulate economic growth.

² *Environmental Sustainability Strategy 2013-2016, Gannawarra Shire Council, page 6*

4.2 Population

The Lakes and Creek Environs are small settlements with varying lot sizes. As there are no statistics available on the Australian Bureau of Statistics (ABS) in relation to the specific study areas, population estimates for the study areas have been developed based on dwelling numbers and the assumption that there is approximately 2.7 people per household³. On this basis, it is estimated the study area includes approximately:

- 205 people at Lake Charm
- 305 people at Kangaroo Lake
- 185 people at Gunbower Creek

It is anticipated that the demographic profile of the Lakes and Creek Environs is similar to that of the Shire, as previously outlined in Section 4.1.

4.3 Environmental values

The Lakes and Creek Environs are recognised as having a number of key attributes that make them attractive locations to residents and tourists, being the main reasons why people choose to live and holiday in these areas. Residents have highlighted the importance of the peaceful, rural-lifestyle, with landholders expressing a desire to maintain this character.

Ramsar sites

These areas are also recognised for their significant natural features and wildlife habitats, and as such, Kangaroo Lake, Lake Charm and the Gunbower State Forest are all classified as Ramsar wetlands and Important Wetlands in Australia (refer to Appendix D for mapping information). The Ramsar Convention encourages the designation of sites containing representative, rare or unique wetlands that are important for conserving biological diversity. In designating a wetland as a Ramsar site, countries agree to establish and oversee a management framework aimed at conserving the wetland and ensuring its 'wise use'. Wise use is broadly defined under the convention as maintaining ecological character of the wetland.

The Kerang Wetlands designation contains a system of 22 lakes (including Lake Charm and Kangaroo Lake) and swamps. In the lower river reaches, the wetlands have variations in permanence, depth, salinity and aquatic vegetation. The site includes freshwater lakes and marshes, and brackish or saline lakes and marshes. The most diverse vegetation is exhibited in the seasonal, freshwater marshes. The area is of great importance to waterbirds, supporting large numbers of endemic and migratory species, and serves as a drought refuge. The area supports rare or vulnerable plant species. Human activities include recreation and regulated duck hunting. The lake system provides an important source of irrigation water.

The Gunbower Forest designation is the second largest periodically-inundated red gum forest in Victoria. Plant distribution is a result of elevation differences that determine

³ Note that the 2.7 people per household is based on the ABS Census Data (2011) for the Gannawarra Shire. For the Lakes and Creek Environs the average number of persons per dwelling may actually be lower than this given that many of the households or used for holidays houses or are occupied by retirees. However, as this data is not available the average for the Shire has been used.

frequency and duration of flooding. During flood periods, the forest becomes a major breeding area for waterbirds, including the egrets, *Egretta alba*, *E. intermedia* (the only known breeding site in Victoria), *E. garzetta* and *Nycticorax caledonicus*. Various species of reptiles and plants are scarce, rare or endangered and are therefore of conservation importance. Human activities include recreational fishing, camping, hunting, silviculture and grazing.

Ramsar wetlands are also a matter of national significance, as defined by the Commonwealth's EPBC Act. Approval is required for any action occurring within or outside a declared Ramsar wetland if the action has, will have, or is likely to have a significant impact on the ecological character of the Ramsar wetland.

The key risks which threaten the environmental values of Ramsar wetlands include altered water regimes; salinity; pollution; pest plants and animals; resource utilisation; recreation and erosion. These risks result from activities in the site wetlands, on land adjacent and in the wetlands' catchments. Protection of the sites therefore requires an integrated approach which takes into account all of these factors. Any development application should therefore consider and address the risks identified above.

Outside of the Ramsar considerations, the Lakes and Creek Environs also have significant environmental, landscape and heritage values. It is important to ensure that any new development responds to the existing environmental features and assists in protecting and enhancing the environmental, landscape and cultural heritage values. All developments must therefore assess the associated impacts on the environmental values and hydrology of the adjacent Ramsar site and Gunbower Creek and identify relevant control measures to mitigate any impacts.

Measures to respond to the existing environmental values may include: appropriate scale (including size of allotments) and type of development; appropriate building location (ie, setbacks); and appropriate design of buildings (form and colours). Any land use change or new developments must demonstrate how they will reinforce the 'identity' ensuring that the development does not detract from the natural environmental values and landscape character.

Building design, form and scale should be considered within the context of the surrounding environment and developments should complement existing features. Developments which are significantly large or which lack any substantial screening have the potential to become an eyesore and may detract from the existing visual features of the area. There is a need to ensure appropriate development controls are introduced which maintain and enhance the natural and physical features of the Lakes and Creek.

Inadequate on-site wastewater management or developments which are inappropriately located or designed may jeopardise the environmental, historical and/or visual attributes which contributed to the overall character of these areas. Appropriate Lake and Creek setback distances will need to be maintained for wastewater management systems (ie, septic tanks) to avoid the risk of effluent entering the waterways.



Figure 4.2 View north of Lake Charm



Figure 4.3 View of Kangaroo Lake, looking south-east

4.4 Low Density and Rural living

Previous studies have identified a number of opportunities within the Lakes and Creek Environs, with these areas being attractive for future low density/rural living or tourism development. A number of private landholders⁴ have expressed an interest in developing

⁴ 36% of respondents from the community survey indicated that they would anticipate subdividing/developing their land if the planning controls were modified to make it possible.

land and two specific development proposals have been put forward to Council for consideration.⁵

The large vacant and flat parcels of land immediately surrounding the Lakes and Creek provide opportunities for future development, however the suitability of developing this land is dependent upon a number of factors including: impacts of the development on the natural and physical features of the area; land capability to provide on-site wastewater treatment; potential flooding impacts; potential bushfire impacts; and potential impacts on cultural heritage. Further investigations will need to be carried out on a site specific basis to confirm land suitability.

It will also be important to consider the scale and form of development within the Lakes and Creek Environs. Consultation with the local community has identified divergent views with respect to the location, scale (ie, size of allotments) and form that development should take. Some people have identified the need for smaller allotments (for retirees and visitors) while others seek to maintain the 'rural' character by retaining large allotment sizes. Overall, the key message provided by the local community is that change, at some level can bring positive outcomes, but there is a need to ensure that the 'right' type of development is undertaken which suits the character of the area and protects the natural attributes.

4.5 Agriculture and farming activity

Traditionally the economic strength of the region has been based on the agricultural market, primarily the dairy and grain industry supported by horticulture. The majority of land surrounding Lake Charm, Kangaroo Lake and Gunbower Creek is included within the Farming Zone under the Planning Scheme and has historically been used for broadacre farming with some viticulture to the west of Kangaroo Lake. Within the Farming Zone the Planning Scheme seeks to protect productive agricultural land, which contributes to, or which may contribute to in the future, the economic activity of the region. While land immediately surrounding the Lakes is not considered to have high agricultural value, suitable agricultural land has been identified in the general area surrounding the Lakes and it will be important to ensure that non-agricultural land uses do not adversely affect the productivity of this land. Soil quality surrounding Gunbower Creek is considered to be high and these areas have been identified as being suitable for agricultural land uses. There may be an opportunity for increased agricultural activities while also providing for other uses in appropriate locations that are compatible with agricultural land use.

A study undertaken by RMCG on behalf of the Gannawarra Shire Council in 2010 '*Gannawarra Shire Impacts of Sales of Permanent Water Entitlements and Land Use Planning Options for New Dryland*' identified a number of opportunities within the Shire to support productive and sustainable use of agricultural land. The report notes that Gannawarra Shire has over recent years experienced reductions in irrigation water availability as a result of: significant permanent and temporary water trade; dry conditions; Federal and State Government program to ensure water for the environment; and industry and population demands. Water availability under climate change is expected to reduce with estimates forecasting reductions in availability of 11% by 2030, with forecasts of a 5% increase and a 20% decrease by 2030 under low and high climate change scenarios

⁵ These proposals include: 1) 9ha development on the southern side of Lake Charm (proposal to provide 9 allotments which range between 7385 – 8000 sq metres; and 2) 35ha development on the eastern side of Kangaroo Lake (initial proposal for 70 allotments between 2500 sq metres to 800 sq metres).

respectively.⁶ The RMCG report highlights the importance of maximising the potential for irrigated agriculture and the returns from the available water. The Study goes on to make recommendations in terms of the planning options (ie, the use of the Farming Zone, the Rural Activity Zone, the Rural Conservation Zone and the Rural Living Zone) available to maximise the potential for irrigated agriculture and the protection of land for agricultural uses while also providing for other uses in appropriate locations. The Study does not however go as far as identifying the specific zoning of land but rather identifies a planning framework for the rural areas.

Subsequently, a report prepared by RMCG in 2011 titled “*Analysis and Mapping of Irrigated Land*” was undertaken to identify land particularly suited to the application of the ‘Rural Activity Zone (RAZ)’. The main purpose of this zone as set out in the Victorian Planning Provisions (VPP) is to:

- *Provide for the use of land for agriculture*
- *To provide for other uses and development, in appropriate locations, which are compatible with agriculture and the environmental and landscape characteristics of the area.*

RMCG undertook an assessment of land using the following criteria for identifying areas suitable for the RAZ:

- Proximity to existing townships
- Accessibility to New South Wales townships
- Proximity to existing tourism uses
- Proximity to the Murray River
- Proximity to National and State Reserves
- Current planning controls and settlement strategies
- Proximity to irrigation backbone
- Soil suitability for irrigation
- Existing settlement pattern (dwellings and lot sizes).

The analysis of land identified the area east of Cohuna as being particularly suitable for the RAZ zoning, which includes a significant area as part of the ‘Gunbower Creek Study Area’. However, as noted in the report, the analysis was not of sufficient detail to provide justification for individual developments or rezoning of land. Therefore, further strategic assessment is required to provide justification for any rezoning proposal.

It is important that this Environs Strategy protects this land from future development which may jeopardise or limit the ability of the land to be used for agricultural purposes now or into the future.

⁶ RMCG (2010) *Gannawarra Shire Impacts of Sales of Permanent Water Entitlements and Land Use Planning Options for New Dryland*, pg. 11.

4.6 Tourism and recreation

Tourism in the Shire is based on the natural and cultural attractions which includes the Lakes and Creek and their associated uses (boating, fishing, camping, shooting, bird watching). It will be important that these features are maintained so that these activities can continue into the future.

Previous studies have identified the Lakes and Creek as having opportunities for future growth in the tourism market through the provision of additional recreational facilities and tourist accommodation.



Figure 4.4 Lake Charm Caravan Park

4.6.1 Public Access

The management of the riparian margin around Lake Charm and Kangaroo Lake has been identified as a particular issue by the local community. Land immediately surrounding the Lakes and the Creek is owned by the Crown (refer maps provided in Appendix E), however, in some instances there is the ‘perception’ that this land is privately owned, with some landholders even constructing buildings and structures (ie, jetties, pergolas, boatsheds) within the riparian margin. This is likely to have resulted from a lack of formal direction as to who is responsible for this area and the fact that the land is often sold by agents as being “lakeside”. Despite there being differing views amongst community as to who should be responsible for maintaining this area (ie, Council, Goulburn Murray Water, local residents) there is a general agreement that a detailed management strategy should be developed to manage this land. Feedback provided from respondents at the community workshop also indicated general support to maintain public access along the Lakes edge.

In the case of Gunbower Creek, there are differing views amongst the community in regards to the provision for public access along the Creek. Some people believe public access along the Creek to be important while others believe that the land should be privately owned. However, as shown in the land ownership plans attached in Appendix E, all land immediately surrounding the Creek is owned by the Crown. The management of

this land will need to be further investigated as part of a coordinated strategy for the Creek Environs.

There is also a need to recognise the value of the riparian zone and the contribution that this land makes, and can make in the recreational, visual and environmental context of the area. Opportunities for additional recreational activities (ie, walking/cycling tracks along the Lakes and Creek edge) should be considered and detailed in a management strategy for the Lakes and Creek surrounds.

4.7 Infrastructure

4.7.1 Wastewater, stormwater, roading and utilities

The management of wastewater is a major constraint for the future development of land within the Lakes and Creek Environs. As there is no reticulated sewerage within these areas dwellings must rely on on-site management through septic tanks. Existing inadequate and failing sewerage systems have led to problems with runoff to the Lakes and the Creek in the past and there is a risk of pollution of the Lakes and the Creek if wastewater is not appropriately managed. As noted in the Hydrological Assessment prepared by SKM in 2010, past investigations have found detectable concentrations of *E.coli* in water samples taken from the western side of Kangaroo Lake. Further field work completed as part of the study also found *E.coli*, which indicates that there may be some septic contamination. Developers must demonstrate how their proposal will access groundwater, what risk any proposed septic system would have on groundwater quality and an advanced land capability assessment should be carried out to establish the level of risk to water quality.

Residents have identified that some of the local roads surrounding Lake Charm and Gunbower Creek are in poor condition and in need of repair. Most of these are unsealed gravel roads and if development did occur in the future these would need to be upgraded to accommodate the increase in traffic. No specific issues have been identified for the roads surrounding Kangaroo Lake. The local road network should be developed in such a way so as to provide local traffic with connections that reduce reliance on the arterial road network. Combined access points may need to be considered for future developments requiring access off the Murray Valley Highway. This will limit the number of Highway intersections and avoid potential safety issues with cars entering/exiting the highway.

There are no known impediments to the provision of power for future development within the Lakes or Creek Environs. Potable water is supplied through private companies and stored in holding tanks.

4.7.2 Community and social infrastructure

Services within the Lake Charm/Kangaroo Lake vicinity include: a local shop, primary school, public hall, petrol station and campgrounds. This allows residents and visitors to obtain basic services while still maintaining a 'rural' feel. Other facilities such as medical facilities, a secondary school and local businesses are provided in Kerang, approximately 17km south-east of Lake Charm and Kangaroo Lake.

Likewise, residents and visitors to Gunbower Creek are able to access shops, facilities and community infrastructure within Cohuna, located approximately 11km from the southernmost point of the Gunbower Creek study area.

As these facilities are in relatively close proximity to the three study areas, it is considered that additional facilities will not be specifically required in the Lakes and Creeks Environs themselves if the scale of future development is minimal. However, as development occurs over time additional recreational or community facilities may be necessary to meet the needs of the future population. The Environs Strategy seeks to take a flexible approach to community/social facility infrastructure provision through the principles outlined in Section 5.

4.7.3 Flooding and bushfire

Land to the south of Lake Charm and to the north of Kangaroo Lake is known to be subject to flooding. This is identified on the constraint mapping provided in Appendix E, which shows the areas subject to flooding and or inundation (noted as the Land Subject to Inundation (LSIO), the Floodway Overlay (RFO) and the Environmental Significant Overlay 4(ESO4)⁷. It is important to note that although flooding/potential inundation is identified as a constraint, under the Planning Scheme, development can occur where the potential impacts can be mitigated (eg, through raised floor levels). In addition, the areas included within the RFO, LSIO and ESO4 may be reconsidered and possibly revised during future strategic work. This Strategy will need to be reviewed in the event that these areas do change.

In addition, the marshes and significant vegetation to the south-west of Lake Charm and Kangaroo Lake have been identified as fire hazards, even when the marsh areas are wet. Although there is no Bushfire Management Overlay applying to this area in the Planning Scheme, it will be important to assess the potential impacts of bushfire on future development within this area.

4.8 Summary

The 'rural-lifestyle' and relatively small population base has been identified as a key strength of the area by many of the local community. However, this can also be considered a constraint as the small population base limits the economic potential and restricts opportunities. The key challenge will be to ensure that development promoted through the Environs Strategy is suited to the area by maintaining a rural feel, builds upon the strengths, and that the infrastructure can adequately accommodate development requirements without resulting in unreasonable cost burdens on the local community and the Council.

There are a number of key opportunities within the Lakes and Creeks Environs that, if appropriately located, could have benefits to the local community as well as the Shire as a whole by helping to stimulate growth and stabilise the declining population.

⁷ The purpose of this overlay is to identify areas of poor drainage or land potentially subject to inundation.

5. Strategic Vision

5.1 Environs Strategy Vision

The methodology for developing the vision for this Environs Strategy has involved an iterative process; whereby key themes and 'big picture' ideas have been explored at length.

The steps in this process, as outlined in Figure 5.1 below included:

- understanding the context
- defining the real problem(s)
- stimulating ideas to solve the problem(s)
- assessing and prioritising those ideas to identify the best solution.

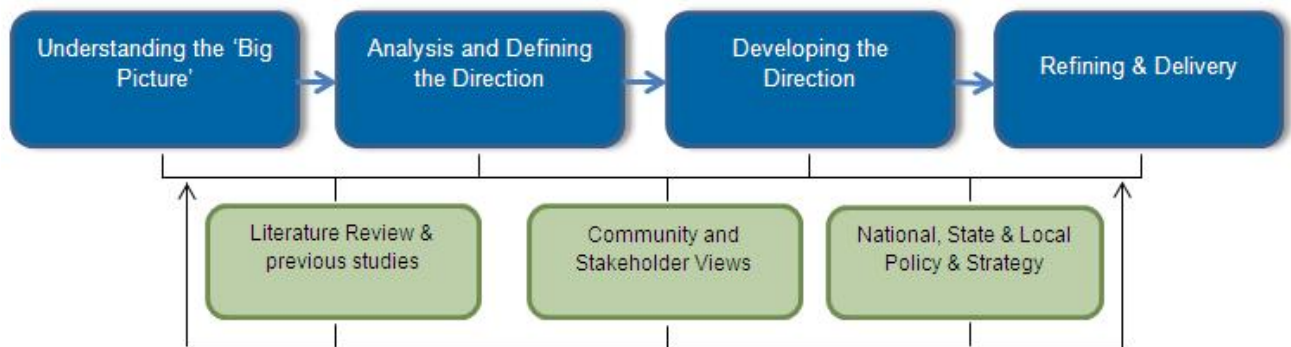


Figure 5.1 Methodology for developing the vision for the Lakes and Creek Environs

On this basis the following Vision statement has been developed for the Lake Charm, Kangaroo Lake and Gunbower Creek Environs:

To maintain the rural character and lifestyle of the Lakes and Creek Environs while providing for future development and growth which is appropriately located, sited and designed to protect the environmental, cultural and landscape features that make these areas unique.

This vision has been used as a basis of developing this Environs Strategy and the setting of the principles and relevant actions, as detailed in the following sections.

5.2 Principles

A set of guiding principles have been developed and will be used as a basis of determining the appropriateness of development and for directing future infrastructure and service investments within the Lake Charm, Kangaroo Lake and Gunbower Creek Environs. These principles are focused on the following six themes.

1. A 'Planned' and logical approach
2. Natural systems, character, visual amenity and heritage
3. Rural living and tourism development
4. Land and environmental capability
5. Utilities, infrastructure and access
6. Recreational values and public access

These principles are to apply to all new development and subdivision within the Lakes and Creek Environs.

5.2.1 A 'planned' approach to development

The overall objective of this Strategy seeks to achieve the following principle:

Principle 1:

Encourage a planned approach to development, avoiding ad hoc decisions.

It is important that land use decisions are made in a comprehensive manner, ensuring that outcomes are consistent with the overall objectives of the area. Failure to do so can lead to ad-hoc decisions, where matters such as cumulative impacts are not adequately considered.

The Gannawarra Shire Council has identified the need to encourage further low density/rural-living and tourism development to stimulate the local economy and to avoid further population decline. Consultation undertaken with the local community in preparation of this Environs Strategy has identified that there is a general support for future development where this is undertaken in a logical manner and which protects the natural and physical features of the area.

An integrated approach where there is an overall plan guiding land use decisions is likely to produce more desirable outcomes to manage the future growth and development of the Lakes and Creek Environs. This will also give greater assurance to residents who occupy allotments within the Lakes and Creek localities which areas will be/are likely to be affected by future changes in land use.

Locations for future development

The Development Framework Plans attached in Appendix F identifies the preferred location for future low density/rural-living/tourism development while recognising the ecological, heritage and visual features of the area and the infrastructural constraints. However, it is important to note that these plans will only be used as a guide in terms of

areas that may be suitable for future development and further land capability assessments, as discussed in Principle 5, will need to be undertaken prior to the release of land for future development.

It is also important to note that the mapping provided in Appendix F does not preclude the development of land outside of those areas identified as being '*potential development areas*'. Where a proponent seeks to rezone/develop land outside of these areas then a case by case assessment of the proposal against the principles under this Environs Strategy and the Planning Scheme will need to be undertaken. During this assessment it will be important to understand the reasons why the land has not been identified as being particularly suitable (ie, the area is located within a floodplain) and a comprehensive assessment as to how these matters will be adequately addressed will need to be provided as part of the rezoning/development application. This is further discussed in Section 5.2.2 below.



Figure 5.2 Future development – a planned approach is required

5.2.2 Natural systems, character, visual amenity and heritage

Principle 2:

Land use change and new developments must demonstrate how they will protect and enhance the existing natural, cultural, historic features, native vegetation and landscape values of the area and reinforce the character of the Lakes and Creek Environs.

As previously noted, the Lakes and Creek Environs are recognised for their significant environmental, cultural heritage and landscape values. This is demonstrated by being designated as Ramsar sites. Figure 5.3 identifies some of the natural character of Lake Charm. It is important that these values are protected and enhanced in the future and are not compromised as a result of future development.

To achieve this principle, prior to any land being developed, proposals must assess the associated risks and impacts of the proposal on the environmental values and hydrology of

the site and the adjacent Ramsar sites and Gunbower Creek. They must also identify any relevant control measures to mitigate any impacts.

As the Shire develops over time it will be important to ensure that future growth is not only appropriate to the context, but also reinforces the key attributes that make these places unique. With this in mind, it is not enough to simply say that development should not 'detract' from exiting features, but rather should enhance what is already there.

Form and scale of development

Any future development must be of a form and scale compatible with the existing character of adjoining and nearby areas and developments must demonstrate how they will not impact the existing environmental, cultural heritage or amenity values of the area.

Development controls must therefore also be established to control the design and scale of development within the Lakes and Creek Environs. These will be additional to the comprehensive land use and environmental assessments that will be required to meet Principle 5 below.

The scale and form of developments will be particularly important to consider when viewing developments from surrounding areas. As shown in Figure 5.3 to Figure 5.5, the existing development is dispersed and generally low-scale. Future proposals should be consistent with this context.



Figure 5.3 View of Lake Charm, looking east



Figure 5.4 View of Lake Charm, looking south-east



Figure 5.5 View of Gunbower Creek, looking north

As noted in Table 6.1 in Section 6 of this Environs Strategy, it is recommended that Council prepare a set of design principles or an Urban Design Framework (UDF) to guide new developments, which should include consideration of:

- Appropriate building locations (setbacks)
- Appropriate design of buildings (form and colours)
- Landscape treatments.

Examples of some illustrated guidelines are provided in Figure 5.6 and Figure 5.7 below.

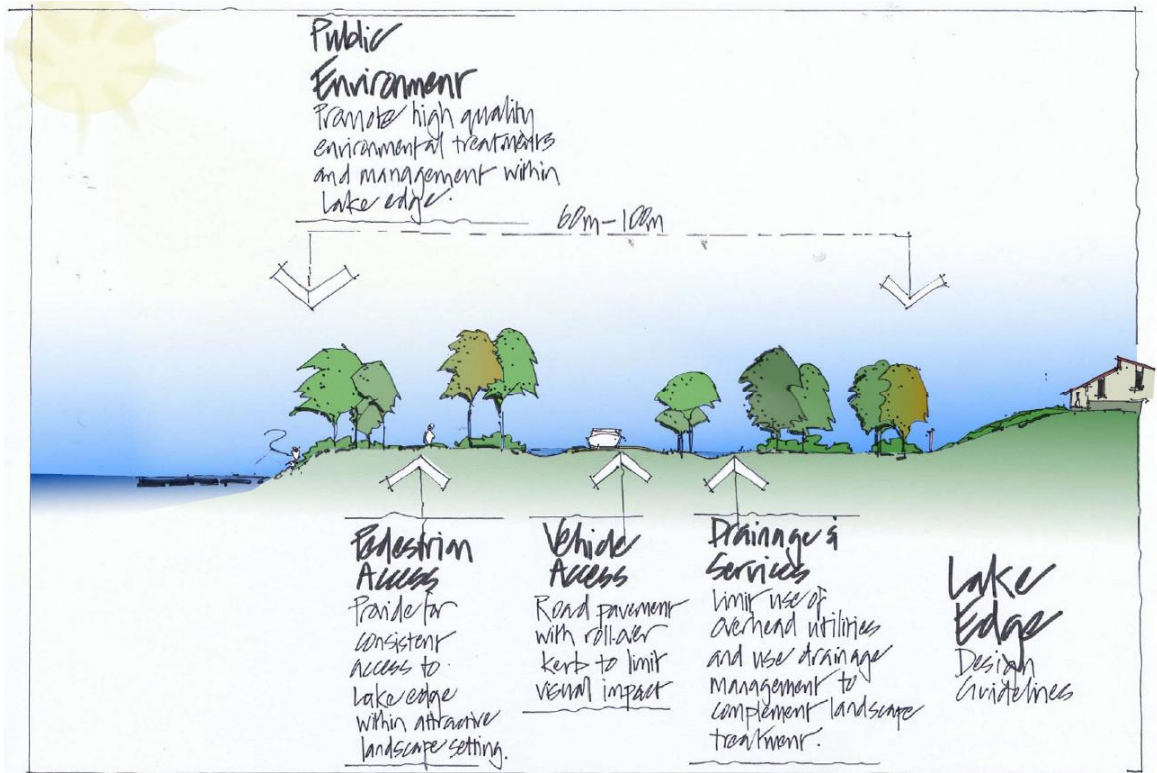


Figure 5.6 Example design guideline for Lakes Edge

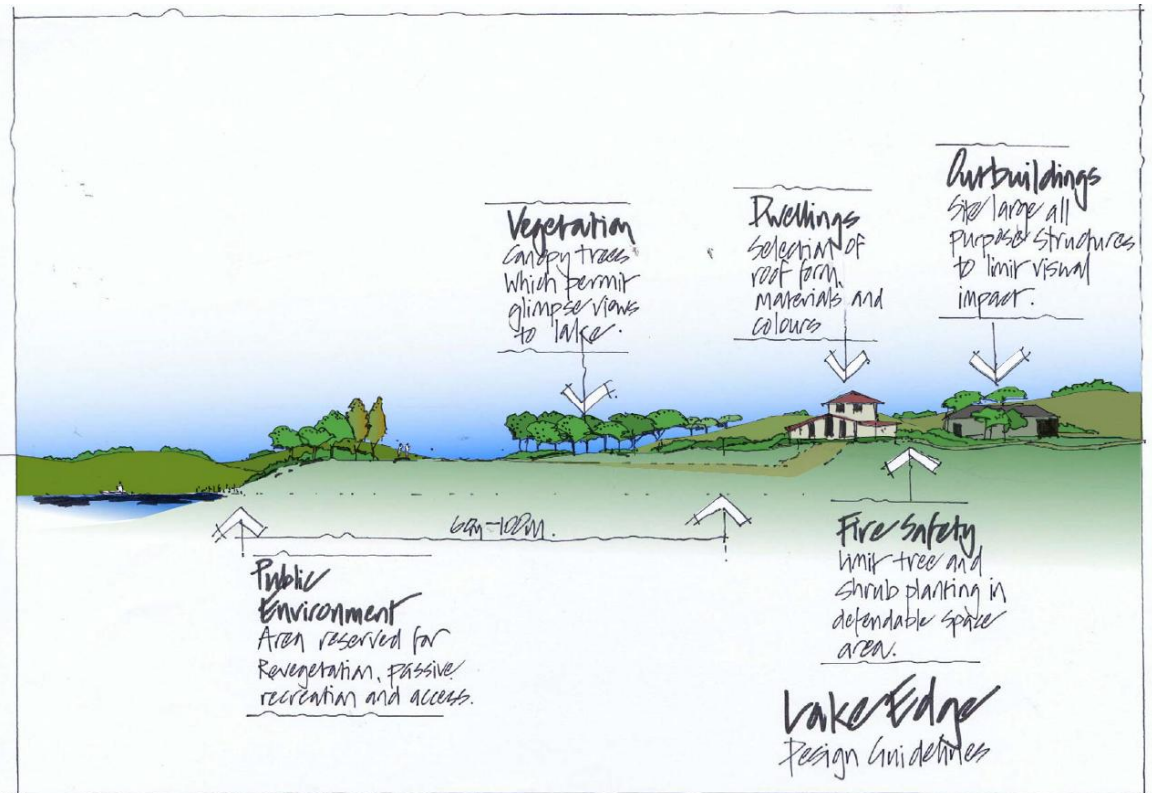


Figure 5.7 Example design guideline for Lakes Edge

5.2.3 Rural living and tourism development

Principle 3:

Provide for rural-living, low-density residential and tourism development surrounding the Lakes and Creek in accordance with the Development Framework Plans which consolidates existing development areas, taking advantage of the natural Lake/Creek rural settings.

The ongoing function of the Lakes environs as residential and tourist locations is supported within this Environs Strategy. These areas are attractive places for people to visit and reside and therefore, if developed appropriately, are suited to future rural-living or low-density development. While the areas directly surrounding the Lakes edge have significant amenity values, they are not considered to be particularly suited to agricultural activities. On this basis development located along the Lakes edge and which takes advantage of the natural attributes of the area (ie, the Lake views) is supported.

Development Framework Plans

The Development Framework Plans prepared as part of this Strategy, and included in Appendix F, have been developed based on an assessment of the known constraints of the Environs Strategy study areas including flooding, environmental significance overlays and vegetation protection overlays. Areas with limited constraints and which already contain some form of low density/rural living or tourist development have been identified as 'Potential Development Areas' on the Development Framework Plans.

The U&RSP identified the potential for further low-density residential development on the western side of Kangaroo Lake. This Environs Strategy supports this position on the basis that there is already existing development within this area and there are limited constraints in terms of flooding, environmental planning overlays, vegetation protection overlays or known heritage values. There is also some existing development on the eastern side of Kangaroo Lake and this area could also be potentially suitable on the basis that there are limited constraints. However, the main concern within the eastern area is the need to ensure that safe and adequate access can be provided off the Murray Valley Highway and there is adequate service provision, as further discussed in Section 5.2.4. This will need to be assessed and discussed with VicRoads and any other relevant service providers prior to any rezoning or approval of any development proposals.

Additional low density residential or rural living development could also be provided to the east and south of Lake Charm in areas shown as having limited constraints, refer to the constraint mapping provided in Appendix E. While land to the west of Lake Charm is affected by an Environmental Significance Overlay (ESO4), with the purpose of this overlay being to identify areas of poor drainage and subject to inundation, there is already substantial development on this western side of the Lake. Therefore, in accordance with Principle 3 above, it may be appropriate for future rural living or tourism development to occur in this area, taking advantage of the Lake setting and consolidating already developed areas. The Development Framework Plans identifies this by noting this area as:

"Area of poor drainage/subject to inundation: development potential for low density/rural-living/tourism development if this is addressed".

However, development will need to demonstrate how the potential risks of flooding will be addressed and assessment of the proposal under the requirements of the planning overlay will need to be undertaken, in accordance with Principle 5. This includes an assessment of

the flood hazard and potential drainage conditions that may cause significant rise in flood level or flow velocity.

In the case of Gunbower Creek, the area to the north of Murray Valley Highway has been identified as being particularly suitable for agricultural activities and the application of the RAZ to land within this area may be more suitable, rather than providing for future rural living or tourism development. This Environs Strategy recommends further strategic investigation be undertaken to confirm/provide justification for any rezoning, as discussed under Principle 6. Some rural living may be appropriate in locations to the north of Gunbower Creek (as identified on the Development Framework Plans) taking advantage of the Creek setting.

In addition, tourism development such as short stay accommodation facilities which are of a small scale may be appropriate in certain locations within the Lakes and Creek Environs. Recognising that there is already a caravan park to the north of Kangaroo Lake, three caravan parks to the west of Lake Charm, and one to the east of Cohuna, it is considered appropriate to consolidate development within and in close proximity to already developed areas. Access to existing facilities such as the local supermarket to the west of Lake Charm should be considered when determining appropriate locations for tourism development.

Land demand

Rural living and tourism development within the Lakes and Creek Environs will be dependent on the demand and in some cases it will not be enough for the land to simply be rezoned, there must be a particular demand for that land use in order for development to occur.

As noted in the U&RSP, the amount of land required to reasonably respond to demand around the Lakes is difficult to calculate as there is limited historical data and a recent lack of substantial supply. The U&RSP estimated the residential demand around the Lakes as approximately 2 dwellings per year at Kangaroo Lake (1 on the western side and 1 on the eastern side) and 1 dwelling per year at Lake Charm. Table 1 below provides the demand analysis as originally provided in the U&RSP.

Note that no demand information was provided in the U&RSP in regards to land surrounding Gunbower Creek

Table 1 Kangaroo Lake and Lake Charm Estimated Residential Demand (as provided in the U&RSP, 2007).

	Annual average demand	10 year demand	Approximate maximum area
West side of Kangaroo Lake (LDRZ)	1	10	4ha
East side of Kangaroo Lake (RLZ – 2ha)	1	10	20ha
Lake Charm (LDRZ/RLZ)	1	10	15ha

The estimates were based on the assumption that land to the west of Kangaroo Lake would be zoned LDRZ with an approximate area of 0.4ha per lot and land on the eastern side would be zoned RLZ with an approximate area of 2ha. The demand for Lake Charm was based on the assumption that land would be zoned either LDRZ or RLZ. The total maximum area required to meet the expected demand is identified in Table 1 above.

Since this time there has been a total of:

- 6 new dwellings approved by Council adjacent to Kangaroo Lake, located on the western side of Kangaroo Lake.
- 3 new dwellings approved by Council adjacent to Lake Charm.

All dwellings were constructed on existing lots and no new subdivisions have been approved during this time. It is also noted that no new rezoning has occurred, which may affect the demand analysis.

What this means is that since the analysis provided in 2007, the demand for new dwellings has been approximately half that which was originally predicted in the U&RSP. Without any substantial trend data it is difficult to predict what the future demand will be, however, taking into account the recent approvals data, it is considered that the future long term demand (ie, the next 15 years) will be less than what was originally predicted.

Using the current statistics the future residential demand at Kangaroo Lake and Lake Charm is outlined in Table 2 below.

Table 2 Kangaroo Lake and Lake Charm Estimated Residential Demand (based on recent statistics)

	Demand over a 2 yearly period	10 year demand	Approximate maximum area of land required in current zoning
West side of Kangaroo Lake (FZ)	1	5	200ha
East side of Kangaroo Lake (FZ)	1	5	200ha
Lake Charm (FZ)	1	5	200ha

The demand analysis in Table 2 is based on historical data and assumes land will remain in the FZ. As there is currently no land zoned within the LDRZ or RLZ, it is difficult to predict what the future demand would be for these types of zoned land at these locations. It is considered that that the demand would likely be different based on different zonings. It is therefore recommended that prior to any rezoning applications being approved that a comprehensive supply and demand analysis is completed by the proponent based on similar developments at similar locations. The actual development uptake will depend on a number of factors such as property/land prices, lot sizes, utility provision and population migration trends. All these factors should be considered by both the Council and the proponent prior to releasing land for future rezoning.

The U&RSP estimated that 20 lots (0-2ha) were vacant in 2006. Since this time 9 lots have been built on leaving 11 vacant lots, with no more lots created. Using the demand estimate in Table 2 and assuming that no subdivision is undertaken, this only provides a 7-8 year supply. Therefore, in order to meet future demands over the next 15 years (1 dwelling per 2 years) an additional 8 lots are required at Kangaroo Lake and 4 lots at Lake Charm.

While this Environs Strategy does not specifically recommend rezoning of lots, it does envisage future rezoning of land initiated by proponents, assuming the subdivision or development proposal meets the Principles of this Strategy. Table 3 below identifies the

extent of land included within the ‘Potential Development Areas’ on the Development Framework Plans.

Table 3 Extent of land included within the ‘Potential Development Areas’ (refer Appendix F)

Area	Extent of land
Lake Charm	168.64 ha An additional 111.93ha of land is provided in the area identified as ‘areas of poor drainage/subject to development potential’.
Kangaroo Lake	303.18 ha
Gunbower Creek	168.64 ha

This Strategy seeks to provide a flexible approach whereby landholders are provided with the opportunity to develop or subdivide their land if the Principles of this Strategy can be met and where the demand is sufficient.

As noted above, a demand analysis will need to be completed as part of any Planning Scheme Amendment process (to rezone land) to demonstrate the feasibility of the proposal. It is in the interests of the proponent to complete this analysis to reduce the level of risk before proceeding with any form of development. For any rezoning proposals proponents will need to demonstrate, among other things:

- What zone(s) to use
- What lot sizes would be appropriate for the development
- What markets are being catered to (e.g. retirement, holiday house, permanent living)
- Justification in terms of demand/supply.

In situations where supply exceeds demand, then there will be significant financial burdens on the developer. This Strategy seeks to avoid such situations, ensuring the efficient use of land in a manner which meets market demands.



Figure 5.8 Existing development surrounding Kangaroo Lake

Lot sizes and sequencing

Appropriate lot sizes will be determined by the various assessments as required by this Strategy (see Principles 2, 5 and 6). It is anticipated that over time a range of lot sizes will be provided within the Lakes and Creek Environs, catering for different peoples' needs. As a general guide residential lots within the LDRZ should be approximately 1-2ha and lots within the RLZ should be over 2ha. However, as noted in Section 5.2.5, the size of each allotment will be dependent upon, among other things, any buffer requirements, the land capability and/or soil suitability and the lands capacity to accommodate onsite waste disposal. In addition, the scale or density of development should be reflective of the existing landscape/built form around the Lakes/Creek in the Shire. It is not appropriate for this Strategy to identify lot sizes, prior to further detailed assessments being undertaken, as this would not be based on any substantial evidence. Such an approach would also limit flexibility in providing for a range of lot sizes. The Planning Scheme can also provide for a range of lot sizes specified in the schedules to the LDRZ or the RLZ.

In regards to sequencing, this Environs Strategy and associated Development Framework Plans do not recommend the priority or sequencing in which areas should be developed within the 'Potential Development Areas'. Sequencing will ultimately be driven by the market and landowners willingness to develop. The demand analysis completed by proponents will also help justify sequencing. Notwithstanding this, when determining the suitability of developing certain areas, priority should be given to areas which meet the principles of this Strategy (ie, areas with good views of the water, good road access to the highway and limited constraints).

Location of development

This Strategy seeks to encourage development, firstly within the 'Potential Development Areas', However development proposals may be considered suitable where they can demonstrate that:

- There is a demand for the proposed type of development located outside of the 'Potential Development Areas';
- The necessary utilities and services can be provided;
- The costs of the provision of relevant infrastructure can be met by the developer; and
- The development will not result in conflicts between existing agricultural uses.

This is reflected in Principle 4.

Principle 4:

Where it is proposed to locate development outside of the "Potential Development Areas" on the Development Framework Plans, it must be demonstrated that:

- (i) There is a demand for the development***
- (ii) Infrastructural demands of the development can be provided for and met in a cost effective manner***
- (iii) The development will not jeopardise the existing or future use of suitable agricultural land.***

- (iv) ***The development proposal must meet all other development principles under this Environs Strategy.***

5.2.4 Land and environmental capability

Principle 5:

Development should be avoided in areas known to be:

- ***Subject to flooding or inundation***
- ***Environmentally sensitive or have significant environmental values***
- ***Culturally or historically significant or have significant values***
- ***Subject to wildfire risks***

There are a number of constraints which limit the development potential of the Lakes and Creek Environs. These include factors such as: flooding, bushfire risk, infrastructural requirements, ecological and cultural heritage values, and agricultural land uses. The maps included within Appendix E show some of these constraints.⁸ Development within these constraint areas should be avoided to reduce potential risks to life and property, to avoid adverse impacts on the natural and physical features of the area and to protect the resources upon which the agricultural industry relies. Any development within these areas will need to demonstrate the extent of the potential impacts and the degree to which mitigation measures can reduce these impacts.

Agricultural activities

Furthermore, as noted in Section 4.5, agricultural activities are important contributors to the local economy and these land uses will need to be protected, and where possible opportunities for new or increased agricultural uses should be encouraged. Land surrounding Gunbower Creek in particular, an area to the east of Cohuna and part of the Gunbower study area, has been identified as being potentially suitable for agricultural activities⁹. Extensive development within this area would be inconsistent with the objectives of the SPPF, the MSS and the LFFP, all of which seek to protect agriculturally productive land. There may however, be an opportunity to provide some small scale rural living development in certain locations where it can be demonstrated that the agricultural potential will not be compromised. In addition, agricultural opportunities have been identified beyond the immediate Lakes environments, particularly on the western side of Kangaroo Lake. Again, any future development must demonstrate that it will not compromise the agricultural values or potential use of productive agricultural land.

⁸ *Note: agricultural land use and bush fire risk have not been mapped. This is because there has been no comprehensive study on the agricultural capability of land within the Lakes and Creek Environs. This is suggested as an Action in Section 6.3. Also, while the Planning Scheme maps do not identify fire risks in these areas, consultation with local authorities has identified potential risks in the marshes and significant vegetation areas to the south-west of Lake Charm and Kangaroo Lake.*

⁹ *RMCG (2011) Analysis and Mapping of Irrigated Land.*

As such, this Strategy seeks to achieve the following principle:

Principle 6:

Avoid development of land which has been identified as being particularly suitable for agricultural land uses. Any development within the Lakes and Creek environs will need to demonstrate that it will not compromise existing agricultural land uses on the subject site or on surroundings sites.

5.2.5 Utilities, infrastructure, services and access

Principle 7:

Wastewater infrastructure and utility requirements of future development must be adequately met and provided for in a cost effective manner.

There are a number of infrastructural and service constraints which limit the development potential of sites within the Lakes and Creek Environs. This includes wastewater management, stormwater management, transport and road access, power and potable water reticulation.

The management of wastewater is of particular importance in the Lakes and Creek Environs and any future development will be dependent on the ability of the land to adequately dispose of wastewater. Each development will need to demonstrate how the wastewater will be managed so that there will be no potential runoff or impacts on the quality of nearby waterways, ensuring that the ecological values and recreational values are maintained and that there are no adverse impacts on irrigation schemes.

The size of allotments and the buffer requirements will be dependent upon the soil and land capability to accommodate this waste. Comprehensive assessments will need to be provided with any future rezoning or development proposal prior to determining if the proposal is feasible.



Figure 5.9 Lake Charm Pump Station

In addition, any future development will need to demonstrate how the necessary utilities and services can be provided and how the costs of the provision can be met. This assessment will also need to consider the impacts of the provision of services and infrastructure (ie, traffic impacts, stormwater runoff etc). The costs of infrastructure provision can be provided for either through direct contributions (ie, through planning permit conditions) or through a Development Contributions Process (as outlined further in Section 6.1.2).

5.2.6 Recreational values and public access

Principle 8:

Developments must provide attractive, safe and functional open spaces that integrate with existing developments and enhance the recreational opportunities of the existing waterbodies.

The environmental and heritage values of the Lakes and Creek play a significant role in establishing the character of the area and they provide for a number of recreational activities. There is an opportunity to enhance these areas by making them more attractive and encouraging further residential and tourist development, better integrating them with existing land uses. A pedestrian and cycling path along the Lake and Creek edge is one example of how recreational activities can be enhanced. All future development should contribute to the recreational values and provide opportunities for additional activities.

The community has identified the need to clearly define the roles and responsibilities for the management of land immediately surrounding the Lakes and Creek. This Strategy supports this view and seeks to achieve the following principle:

Principle 9:

The management of the Lakes and Creek Environs needs to be undertaken in a coordinated manner with Council, the local community, key stakeholders and visitors working collaboratively to protect the natural and physical features and to maximise the long term environmental, economic and social benefits of these areas.

6. Recommendations, Implementation & Monitoring

6.1 Implementation Actions

This section identifies implementation provisions and key Planning Scheme amendments or supporting strategic work, necessary to attain the principles and directions identified in this Environs Strategy including:

- Introduction of planning policy
- Further strategic work required to assess the suitability of sites
- Further liaison with key authorities and infrastructure providers
- Other actions critical to attaining key principles and directions.

6.1.1 Planning Scheme Amendments

The primary planning instrument or statutory process to implement this Environs Strategy is through the Gannawarra Planning Scheme. This will ensure that any future development and/or subdivision proposals meet the long term vision and that the principles outlined in this Strategy have a statutory standing. The specific Planning Scheme amendment changes to implement this Environs Strategy are detailed within Table 1 below.

6.1.2 Developer contributions

It is anticipated that new rural-residential, rural-living and tourist development will occur over time within the Lakes and Creek Environs. There is an opportunity to seek developer contributions in the form of payments or in-kind works for civic infrastructure improvements. This may include roads, bicycle or pedestrian paths, lighting, stormwater infrastructure and open space and community facilities. There are principally two methods whereby Council may recoup costs from landholders to offset the costs of urban development and associated infrastructure provision:

- Developer Contributions Plan (DCP) – A DCP sets out the levies required for new developments to fund planned infrastructure investments. A DCP is binding to both the Council and landholders (developers) and monies must be spent by Council on items for which the money was collected for. The DCP sets out a framework of what projects are required, the costs of each project, when it will be delivered and what is Council's contribution and the landholder/developer contribution.

The DCP in practice is used to charge new development for its share of infrastructure cost. On this basis, existing development is not charged through this funding tool but is used in the calculation of charges. In most cases existing development will benefit from the infrastructure project. A DCP also has the advantage of providing for funding infrastructure which may not be directly part of the development. For example where a development affects land outside of the immediate subdivision area (ie, road or intersection upgrades), Council can justify the request for the developer to contribute

to pay for such an upgrade when a nexus is proven between the proposed development and the required improvement.

- Section 173 Agreements – Council may enter into individual Section 173 Agreements under the Planning and Environment Act 1987 instead of using a DCP to recoup costs for infrastructure provision. Section 173 Agreements appear as conditions on subdivision or development permits and are registered on the land title.

Whilst a DCP is the preferred mechanism for securing contributions, this option is both costly and time consuming. In addition Council would need a clear understanding of how the land is to be used and developed to complete a DCP. The Environs Strategy identifies area of land for potential development however is not specific about how the land will be used and does not propose to rezone land. Council therefore has an opportunity to consider necessary contributions, associated upgrades, service connections and costs at the time a rezoning application is made. There is also greater opportunity to enter into a Section 173 Agreement with the landowner at the time of rezoning than at the Planning Permit stage.

It is understood that Council is wishing to pursue the development of a DCP for the entire municipality once the Minister for Planning releases a standard model. At this time further consideration may be given to the Lakes and Creek Environs.

6.2 Monitoring and review

In order to ensure the effectiveness and future relevance of this Environs Strategy it is necessary for regular monitoring to be undertaken to assess its performance against the overall vision and to determine progress against the action identified in the implementation table.

This Environs Strategy has been prepared with a 20 year horizon, while acknowledging that changes in demand are likely to occur and that the Strategy must be responsive and adaptable over time. Therefore, it is necessary that several forms of monitoring are carried out during the implementation of this Plan. This includes:

- Review and updating of the Environs Strategy initially after 3 years time as the majority of the actions identified in the implementation table have an immediate to short-term timeframe. The review should include an examination of trends and the uptake of land for development opportunities. Following this, a review should typically occur once every 5 years.
- Review of the planning scheme policies, overlays and zones to ensure that the desired outcomes of the Environs Strategy are being successfully implemented. This will include an assessment of the recent planning applications and approvals, discussions with Council's Senior Statutory Planners and include a review of Victorian Civil and Administrative Tribunal (VCAT) decisions.
- Community survey to assist with identify new/emerging trends that may be specific to community needs/values.

Outcomes of the review should be used to review/update the Strategy as required.

3 Implementation table

The actions required to implement this Environs Strategy are detailed in the table below, with timing, responsibilities and priorities.

Timeframes

Immediate	within <1 year
Short-term	within 1-5 years
Medium term	within 5 -10 years
Long-term	within 10+ years

Table 6.1 Implementation Table

Action	Statutory Instrument	Non-Statutory Instrument	Commencement date	Duration	Party/organisation(s) responsible
<p>1. Introduce a MSS reference (or clause) and a Local Policy into the Gannawarra Planning Scheme in which the Environs Strategy is referenced.</p> <p>The local planning policy should require subdivision and development applications to:</p> <ul style="list-style-type: none"> ▪ Demonstrate response to the principles of the Environs Strategy ▪ Demonstrate compliance with the Development Framework Plans. ▪ Provide land capability assessments that assess the suitability of the land for development and identifies (through a site analysis) the minimum lot sizes for adequate on-site wastewater management. ▪ Provide site specific environmental investigations which include an assessment of the proposal and the potential impacts in relation to: flooding; 	Planning Scheme Amendment	Lake Charm, Kangaroo Lake and Gunbower Creek Environs Strategy	Immediate	12-18 months	<ul style="list-style-type: none"> ▪ Gannawarra Shire Council, DPCD

Action	Statutory Instrument	Non-Statutory Instrument	Commencement date	Duration	Party/organisation(s) responsible
<p>environmental values, cultural heritage values, wildfire risks.</p> <ul style="list-style-type: none"> Provide agricultural land capability assessments that demonstrate that there will be no adverse impacts on agriculturally productive land. Provide open space areas as part of any substantial developments/subdivisions. 					
<p>2. Prepare a set of Design Principles or an Urban Design Framework (UDF) to guide new developments. This should include:</p> <ul style="list-style-type: none"> Appropriate building location (setbacks) Appropriate design of buildings (form and colours) Landscape treatments <p>A Planning Scheme Amendment should be prepared to incorporate reference to the design principles or UDF. This may include the introduction of policy to the MSS or an Overlay into the Planning Scheme.</p>	Planning Scheme Amendment	Design Principles or Urban Design Framework	Short – Medium Term	12-18 months (design principles or UDF) PSA following	<ul style="list-style-type: none"> Gannawarra Shire Council
<p>3. Developers must investigate the potential traffic access issues as a result of any future subdivision and/ or development proposals. Engage with VicRoads and the local Council to identify and demonstrate impacts.</p> <p>Provide details to Council as part of any subdivision/development proposal.</p>	Nil	Nil	Immediate	Ongoing	<ul style="list-style-type: none"> Developers, utility operators, service providers
<p>4. Developers must investigate utility requirements for future subdivisions/and or development proposals including provision of electricity, potable water, gas, telecommunications. Engage with relevant utility providers as part of this process.</p> <p>Provide details to Council as part of any subdivision/development proposal</p>	Nil	Nil	Immediate	Ongoing	<ul style="list-style-type: none"> Developers, utility operators, service providers
<p>5. Developers must investigate wastewater management and identify a suitable option for the disposal of wastewater from the site. As part of process</p>	Nil	Nil	Immediate	Ongoing	<ul style="list-style-type: none"> Developers, utility operators, service providers

Action	Statutory Instrument	Non-Statutory Instrument	Commencement date	Duration	Party/organisation(s) responsible
<p>discussions should be undertaken with Goulburn Murray Water.</p> <p>Provide details to Council as part of the subdivision/development proposal.</p>					
<p>6. Develop a Lakes and Creek Management Plan which clearly articulates who is responsible for maintaining/enhancing the Lakes and Creek environs and the timeframes for doing so.</p> <p>The management strategy will need to include how public/private land surrounding the Lakes and Creek will be managed (ie, is it feasible to provide public access around all the Lakes/along the whole Creek corridor).</p>	<p>Nil</p>	<p>Lakes and Creek Management Plan</p>	<p>Short-term</p>	<p>12-18 months</p>	<ul style="list-style-type: none"> ▪ Gannawarra Shire Council working with the local community, key authorities and community groups

7. References

The following documents and strategies were used in the preparation of this Strategy:

- RMCG (2007) Domestic Wastewater Management Plan (DWMP) Shire of Gannawarra
- Parsons Brinckerhoff (2007) Gannawarra Urban and Rural Strategy Plan. Gannawarra Shire Council
- SKM (2010) Hydrological Assessment of Kangaroo Lake Domestic Septic Tank and Groundwater Impacts (2010)
- Gannawarra Shire Council (April 2011) Waterfront Development Guidelines: Guidelines for eligibility to apply for rezoning to allow subdivision to create nodal rural residential settlements close to water frontage.
- Gannawarra Shire Council (October 2010) Gannawarra Future Scan – Ganna 0503
- Gannawarra Shire Council (December 2010) Gannawarra 2025. Taking up the challenge
- Gannawarra Shire Council (2009-2013) Council Plan and Strategic Resource Plan
- Gannawarra Shire Council (2010) Review of the Gannawarra Planning Scheme
- RNCG (2010) Impacts of Sales of Permanent Water Entitlements and Land Use Planning Options for New Dryland Gannawarra Shire
- Department of Planning and Community Development (2012) Practice Note 37. Rural Residential Development
- Mark Reilly Landscape Architects (2002) Kangaroo Lake Management Plan. Gannawarra Shire Council
- RMCG (2011) Analysis and Mapping of Irrigated Land. Final Report
- Gannawarra Shire Planning Scheme