GANNAWARRA SHIRE

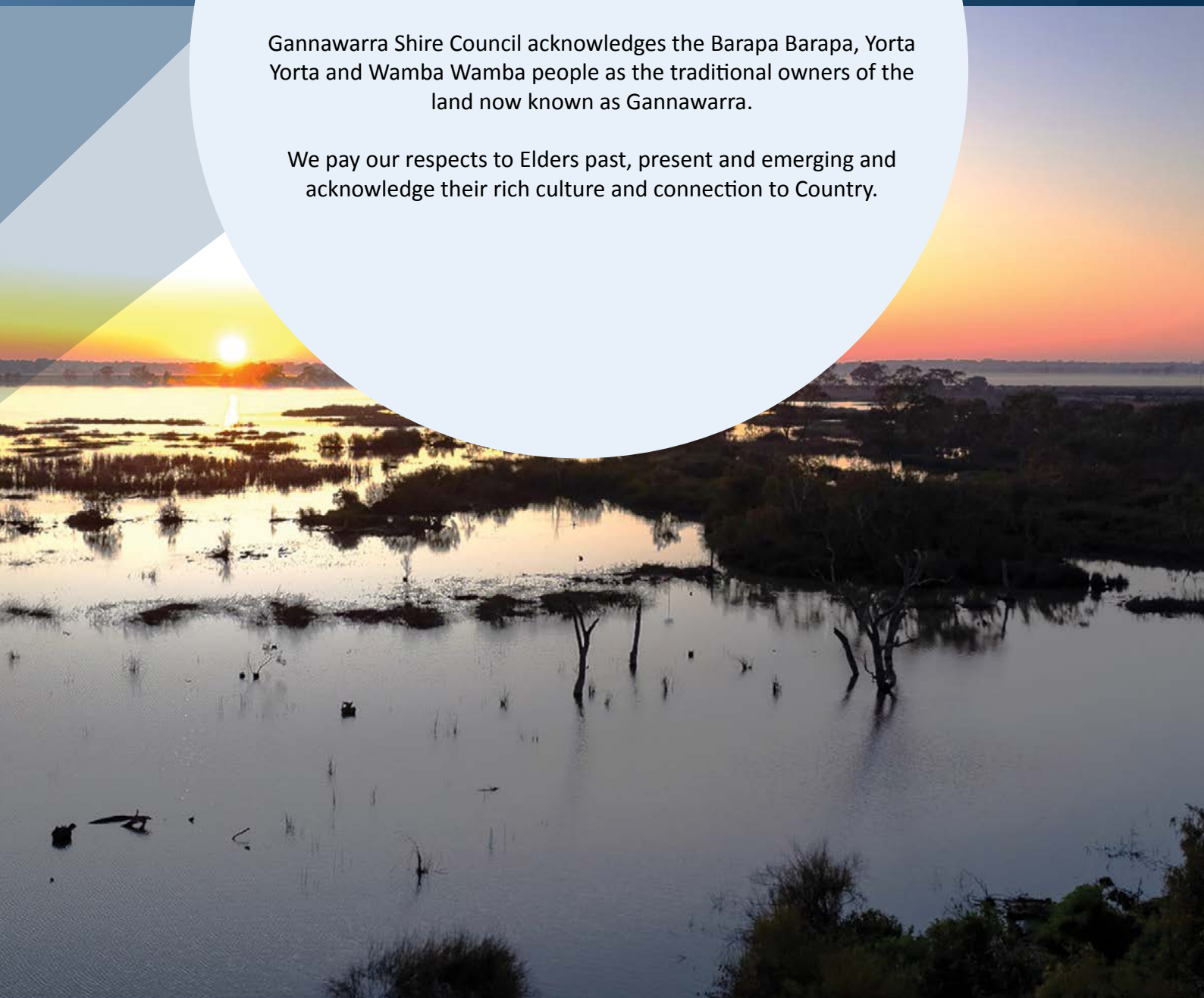
ONSITE WASTEWATER MANAGEMENT PLAN 2024 - 2029

GANNAWARRA
Shire Council

ACKNOWLEDGEMENT OF COUNTRY

Gannawarra Shire Council acknowledges the Barapa Barapa, Yorta Yorta and Wamba Wamba people as the traditional owners of the land now known as Gannawarra.

We pay our respects to Elders past, present and emerging and acknowledge their rich culture and connection to Country.



CONTENT

INTRODUCTION

Gannawarra Shire Council (Council) is responsible for the approval and ongoing oversight of onsite wastewater management systems (OWMS) within the municipality which treat up to 5,000 litres of wastewater per day.

An OWMS is an onsite system that effectively manages the sewage and other forms of wastewater on properties that are not connected to a reticulated sewerage system.

When designed and operated correctly, an OWMS provides a safe, and sustainable method of wastewater disposal.

The effective management of domestic wastewater is central to protecting the health of the community and environment.

Under the Order for Obligations of managers of land or infrastructure (onsite wastewater management) made under section 156 of the Environment Protection Act 2017 (EP Act), councils throughout Victoria are required to prepare and implement an Onsite Wastewater Management Plan (OWMP). The OWMP is to be reviewed and updated at intervals of no more than 5 years and an OWMP implementation report is to be published on Council's website.

The development of the 2024-2029 Gannawarra Shire OWMP has provided an opportunity for Council to strategically assess wastewater issues and priorities within the Shire. In addition, the OWMP is intended to be used as a reference document for Council staff, external stakeholders, and the community.

A further review will be conducted in 2029. This review will take into consideration any:

- Changes to legislation.
- New priorities of Council, stakeholders, and the community.
- Changes in local context, such as urban growth.

PURPOSE AND OBJECTIVES

This is the third revision of the Gannawarra Shire OWMP (previously known as a Domestic Wastewater Management Plan), and this plan aims to manage and reduce the environmental, public health, and economic risks associated with the management of OWMS within the Shire.

The purpose of this OWMP is to:

- Incorporate recent legislative changes, including the Environment Protection Act 2017 (EP Act), and Regulations 2021 (EP Regulations).
- Review and update the actions from the previous OWMP and set new objectives and actions to support the success of this OWMP.
- Establish a framework for Authorised Officers (AOs) applying and enforcing legislation relating to OWMS.
- Confirm the responsibilities of all stakeholders.
- Provide an opportunity to engage with the community and stakeholders regarding OWMS.

WHAT ARE OUR ONSITE WASTEWATER MANAGEMENT PLAN OBJECTIVES?

WE WILL CONTINUE TO STRENGTHEN OUR RELATIONSHIPS WITH THE COMMUNITY AND OUR STAKEHOLDERS.

WE WILL CONTINUE TO PLAN FOR THE FUTURE.

OUR AUTHORISED OFFICERS WILL HAVE THE REQUIRED SKILLS AND SUPPORT TO EFFECTIVELY PERFORM THEIR REGULATORY ROLES.

WE WILL ENSURE THAT PROCESSES AND DECISIONS COMPLY WITH CURRENT LEGISLATION.

HOW DOES THE ONSITE WASTEWATER MANAGEMENT PLAN ALIGN WITH THE GANNAWARRA SHIRE COUNCIL VALUES?

The Council's OWMP has been developed in line with our Council values.

Trust

Our OWMP complies with the framework of the laws and standards being applied. This OWMP will be a tool to provide clarity to all stakeholders for any matter relating to OWMS.

Respect

The views and objectives of Council staff, key stakeholders, and other agencies have been considered in the development of this OWMP.

Innovation

Council Authorised Officers will be adaptable to change, such as adjusting to new legislation, guidance, and directions from other agencies.

Collaboration

In developing this OWMP, stakeholders were consulted.

SCOPE

This Onsite Wastewater Management Plan (OWMS) applies to onsite wastewater management systems (OWMS) within the Gannawarra Shire which treat up to 5,000 litres of wastewater per day.

This OWMP considers and applies the following Acts, regulations, and Council plans and strategies:

- *Local Government Act 2020*
- *Public Health and Wellbeing Act 2008*
- *Catchment and Land Protection Act 1994*
- *Environment Protection Act 2017 (EP Act) and Regulations 2021(EP Regulations)*
- *Infringements Act 2006 and Regulations 2015*
- *Planning and Environment Act 1987 and the Gannawarra Shire Council Planning Scheme*
- *Safe Drinking Water Act 2003 and Regulations 2015*
- *Subdivisions Act 1988*
- *Water Act 1989*
- *Gannawarra Urban and Rural Strategy Plan 2007*
- *Kangaroo Lake Domestic Septic Tank and Groundwater Impacts Hydrogeological Assessment, Sinclair Knight Merz 2010*
- *Lake Charm, Kangaroo Lake and Gunbower Creek Environs Strategy 2013*
- *Gannawarra Environmental Sustainability Strategy 2014*
- *Gannawarra Arbovirus Plan 2017*
- *Gannawarra Shire Council, Council Plan 2021 – 2025*
- *Gannawarra Shire Council Urban Growth Strategy, 2023*

DEFINITIONS

The following terms are referred to in the Onsite Wastewater Management Plan (OWMP).

Name	Definition
Application for a Permit to Alter (PTI)	Application to amend an existing OWMS.
Application for a Permit to Install (PTI)	Application to install an OWMS.
Authorised Officers (AOs)	Environmental Health Officer, Environmental Health Technical Officer, or plumber engaged and authorised by Council.
Blackwater	Waste directly from the toilet.
Certificate to use (CTU)	A certificate issued by the Gannawarra Shire Council, permitting the use of the OWMS.
Council	Gannawarra Shire Council.
Community	Refers to residents, ratepayers, business owners, property owners, and visitors to Gannawarra Shire Council.
Onsite Wastewater Management Plan (OWMP)	OWMP outlines the Council's plan for onsite domestic wastewater activities. It is also intended to be used as a reference document for external stakeholders, and the community.
Enforcement	In this OWMP, enforcement is broadly defined to include informal education and advice to duty holders, and formal and legal directions or orders to compel compliance.
Failed OWMS with offsite discharge	Malfunctioning OWMS that is discharging effluent beyond the property boundaries.
Greywater or sullage	Domestic wastewater from bathrooms, kitchens, and laundries.
Land Capability Assessment (LCA)	The assessment of the capability of the land to support a particular use and in this case, effluent disposal.
Onsite wastewater management system (OWMS)	This means an OWMS with a design or actual flow rate of sewage not exceeding 5000 L/day and includes all trenches/beds, sewers, drains, pipes, fittings, appliances, and land used in connection with the treatment plant.
Treated effluent with onsite discharge	OWMS which satisfactorily treats waste but the distribution of the treated waste is discharging within the property boundary.
Treated effluent with offsite discharge	OWMS which satisfactorily treats waste but the distribution of the treated waste is discharging beyond the property boundaries.
Sewage	Means any waste containing human excreta or domestic wastewater.
Stormwater	Rainfall run-off carried through the stormwater system.

OUR COUNCIL, OUR COMMUNITY AND OUR ONSITE WASTEWATER MANAGEMENT PLAN

WHY DOES THE COUNCIL HAVE AN OWMP?

All 79 Victorian Local Government Authorities are required to develop and implement an OWMP. An OWMP provides a framework that will:

- Inform and guide fair and consistent decisions by Council about the approvals of OWMS and the approaches applied by Council in assessing compliance of existing OWMS.
- Support sustainable development across the Shire.
- Protect the community and the environment from risks and hazards associated with domestic wastewater.

WHAT DOES THE COMMUNITY NEED TO KNOW ABOUT THE OWMP?

The OWMP provides an opportunity for Council to communicate its plan about OWMS within the Shire. This OWMP allows Council to be transparent in processes being applied, such as the approach to compliance and enforcement management. The OWMP also informs owners and occupants of their legislative responsibilities under the General Environmental Duty (GED) of the EP Act, to reduce risk to human health and the environment.

FREQUENT REASONS WHY THE COMMUNITY MAY REFER TO THIS OWMP.

"I am interested in purchasing a property and I would like to know if the property is connected to reticulated sewer?"

"My neighbour's septic tank is overflowing into my property, can Council address this issue?"

"I am looking to build a new dwelling. What permits do I need to apply for, and do I need a Land Capability Assessment?"

WHAT IS THE CURRENT DOMESTIC WASTEWATER SITUATION?

Gannawarra Shire Council is responsible for:

- Ensuring new subdivisions in unsewered areas are provided with reticulated sewerage or that allotments can effectively treat and maintain OWMS.
- Issuing permits to install new or alter OWMS, and certificates to use (CTU) when compliant installation has been achieved.
- Assessing compliance relating to existing OWMS.

WASTEWATER MANAGEMENT CHALLENGES AND EMERGING ISSUES

The number of OWMS across the Shire is estimated at between 2,000 and 2,700. Wastewater management challenges arise due to a combination of factors, including:

- Poor land capability, which reduces the ability to support effective management of wastewater onsite.
- Small allotments and inadequate space for wastewater disposal.
- Inadequately sized disposal areas.
- Ageing and/or poorly maintained OWMS.
- Managing non-compliant OWMS.
- Increased flood frequency across the municipality.
- Increased occurrence of property owners or occupants either temporarily or permanently residing on private properties without Council approvals, such as caravans or tiny houses.

SITUATION 1

Many of the OWMS throughout the Shire which were approved prior to amalgamation of the Shires of Cohuna, Kerang and Borough of Kerang in 1995, that have not been altered or upgraded, will no longer comply with the current Standards.

This OWMP helps Council identify and manage risk.

SITUATION 2

Household fittings such as dishwashers, top load washing machines, bathtubs and spas also add load to onsite wastewater systems and disposal areas. In higher rainfall years, the impacts of poor wastewater management can be seen in street drains and runoff into neighbouring properties in non-sewered townships and rural living estates.

This OWMP helps to educate property owners on onsite wastewater management and encourages behaviour change to manage risk.

Table 1 – Current Wastewater Management by Townships

Townships	Reticulated Sewerage	OWMS in Sewered towns	OWMS in unsewered towns	OWMS in rural living estates and farming areas
Cohuna	✔	✔		✔
Kerang	✔	✔		✔
Leitchville	✔	✔		✔
Murrabit	✔	✔		✔
Koondrook	✔	✔		✔
Lalbert			✔	✔
Macorna			✔	✔
Quambatook			✔	✔
Cohuna Golf Links Estate				✔
Kerang Borough Drive				✔
Kangaroo Lake				✔
Lake Charm			✔	✔
Mystic Park			✔	✔
Farming Land				✔

AUTHORISED OFFICER CONSIDERATIONS

All Authorised Officers performing their duties relating to onsite wastewater management systems, apply the following considerations.

Public Health

- Raw sewage can carry a range of pathogens including bacteria, viruses, protozoa, intestinal worms, and moulds and fungi.
- Human diseases caused from these pathogens range from mild gastroenteritis, cholera, dysentery, and hepatitis.
- Septic overflows can cause organic rich pooling, increasing mosquito breeding and posing a public health risk due to sewage exposure.

Environment

- Contamination of groundwater by nitrate, ammonia, and faecal pathogens.
- Seepage can raise the groundwater table causing salinity in certain areas.
- Surface runoff adds nitrogen and phosphorus to water catchments, stimulating algal and weed growth and causes land degradation such as erosion.
- Effluent carries suspended solids, ammonia, and organic matter, which can affect fish, aquatic plants, and micro-organisms.
- Effluent can be carried into other bodies of water, causing further pollution.
- Risks associated with the inappropriate disposal of raw sewage by unauthorised persons.

Economic

- For homeowners, replacing failing systems or connection to reticulated sewerage can be expensive.
- Poor OWMS management decreases land amenity and economic value.
- Algal blooms or large mosquito outbreaks can impact on tourism potential.

Legal

Council can be found to be liable for failure to discharge their statutory responsibilities.

WHO ARE COUNCIL'S STAKEHOLDERS?

WATER AUTHORITIES

Water Corporations lead the provision of sewerage services and enforcing connection to the sewer mains within the sewerage district. The water authorities across the Shire include:

- Coliban Water
- Lower Murray Water
- Goulburn Murray Water
- North Central Catchment Management Authority

Water Authorities have a major interest in the correct functioning of OWMS. The key area of concern is failing OWMS which may impact water quality in waterways, channels, and reservoirs, especially in special water supply catchments. This may result in increased health risks to customers and increased operational costs to manage the problems associated with additional treatment of that water. Water authorities also have responsibilities to assess and respond to all referred applications under clause 66 of Council planning schemes.

ENVIRONMENT PROTECTION AUTHORITY

The Environment Protection Authority (the EPA) is the Environmental regulator in Victoria, and they administer the EP Act and the EP Regulations. The EPA develops policies, guidelines, and training for Authorised Officers relating to OWMS.

The EPA approves and regulates systems discharging more than 5,000 L/day and is a referral authority in the case of an application for offsite discharge.

DEPARTMENT OF ENERGY, ENVIRONMENT AND CLIMATE ACTION (DEECA)

DEECA is responsible for the management of water resources, climate change, bushfires, public land, forests, and ecosystems in Victoria. DEECA may be referred to by Council for specialist advice in circumstances where OWMS may impact land or water resources.

DEPARTMENT OF HEALTH VICTORIA

The Victorian Department of Health (DH) has responsibilities under the Public Health and Wellbeing Act 2008 (PHWA) and administering the Safe Drinking Water Act 2003.

PROPERTY OWNERS AND OCCUPANTS

Landowners and occupants are responsible for:

- Complying with the General Environmental Duty.
- Obtaining the required permits and certificates before installation and use.
- Obtaining a permit to make alterations to an existing OWMS.
- Engaging with qualified plumbers and assessors.
- Complying with the conditions of the relevant permits and certificates.
- Maintaining existing OWMS as per certificate requirements.
- Connecting to a mains sewer within 3 months of it becoming available.

> "As a plumber installing onsite wastewater management systems across the Gannawarra Shire, I would like to see the standards applied consistently by Council."
>
> - Local plumber installing an OWMS during the OWMP Risk Assessment site visits.

SERVICE PROVIDERS

A range of service providers contribute to the assessment of appropriate OWMS and land capability, through the installation and maintenance of systems.

- Land Capability Assessors - undertake land capability assessments for OWMS. If a Land Capability Assessment (LCA) is required, it is the choice of the applicant to select the LCA assessor.
- Plumbers - associated pipework must be installed by a licensed or registered plumber. Only licensed plumbers can Issue a compliance certificate for plumbing work.
- Building surveyors - building surveyors ensure sites with OWMS have appropriate permits/certifications before issuing an occupancy permit or a certificate of final inspection.

SHIRE PROFILE

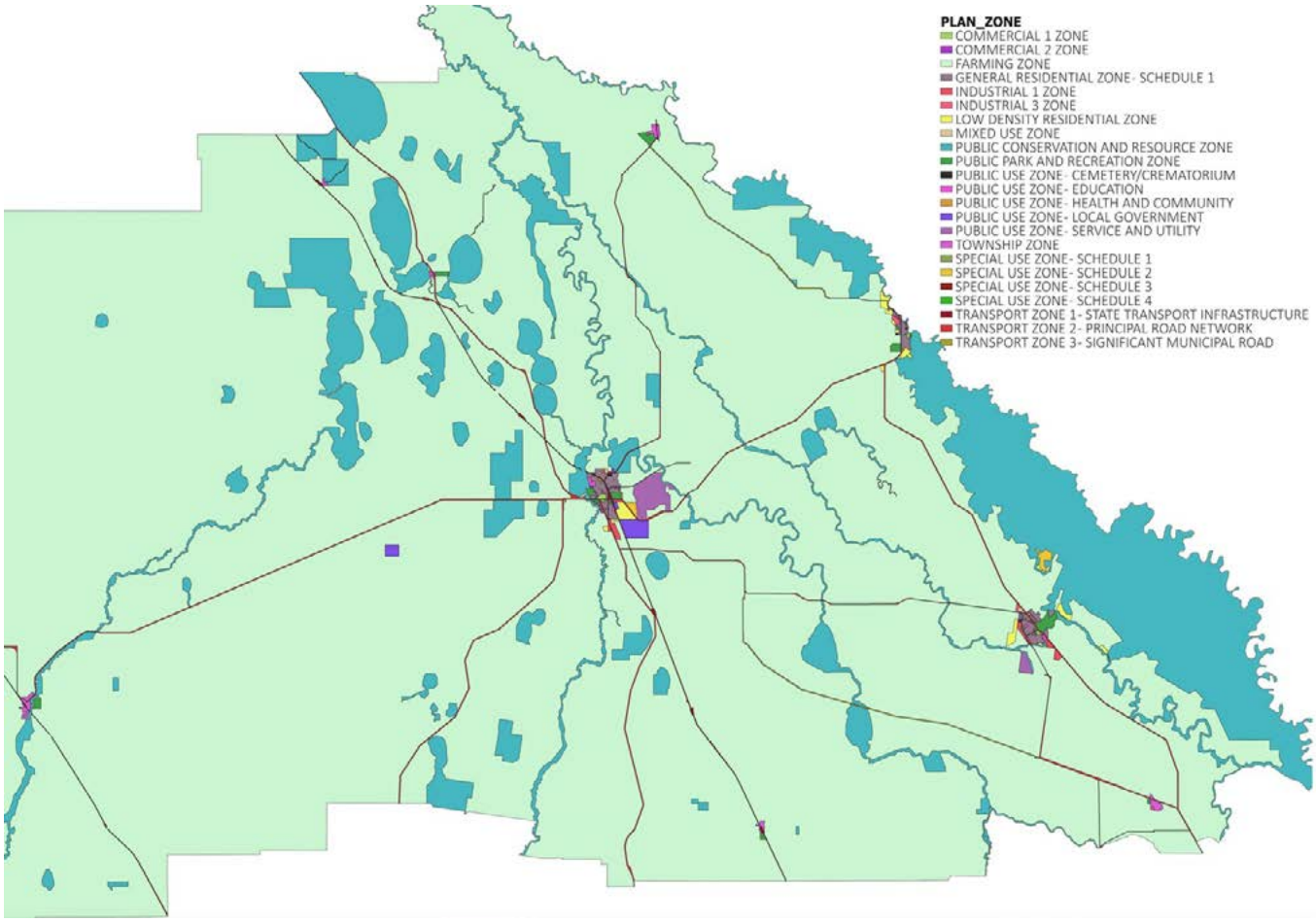
Gannawarra Shire is in northern Victoria and covers an area of 3,736 square kilometres. The primary centres are Kerang, Cohuna, and Koondrook. Smaller outlying communities include Leitchville, Quambatook, Murrabit, Lake Charm, Lalbert, Macorna, and Mystic Park. The Shire has a population of approximately 10,621 (Census 2021).

The Shire is located in a diverse agricultural region. Its economic base is primarily agriculture and tourism, with some important concentrations of manufacturing. The agricultural activities include cropping, dairying, grazing, horticulture, and viticulture.

Gannawarra is forecast to grow by an additional 317 people and 315 dwellings between 2021 and 2046.

According to the Council's Urban Growth Strategy, 2023 'there may be a need to bring forward some strategic planning projects (for new residential areas) if a large number of significant infrastructure investments and major projects are delivered and are translating into a faster growth rate than envisaged'.

Image 1 – Planning Zones of Gannawarra Shire Council.



The strategy also highlights that the potential growth rate and increase in industrial land use will have an impact on Council's planning policy frameworks, the planning scheme, developmental overlays, and structure plans for townships.

There are major opportunities for Council to collaborate and plan with local water authorities on the provision of reticulated sewerage designed to manage future population, housing, and job growth.

With 57 lakes, swamps, and marshes, the region forms one of Australia's largest and most important wetlands.

Most of the land within the Shire is land subject to inundation with the Avoca River, Loddon River, Little Murray River, and Pyramid Creek, and associated tributaries running through the municipality.

Gannawarra is bordered by the Murray River with associated tributaries, such as the Gunbower Creek, running through the Shire.

The area is characterised by a warm climate with average summer temperatures of 31°C and average winter temperatures of 14°C. The average annual rainfall is 373 millimetres.

Despite ongoing changes to irrigation and rural change, the major industry of the region remains agriculture supporting over 20 percent of local employment. Tourism is associated with the Murray River, Kerang Lakes, and Gunbower Island.

There are no declared water supply catchments located in Gannawarra Shire.

> "Gannawarra will be renowned as an Australian destination and home of choice for its liveability and unique opportunities in innovative agriculture, renewable energy and nature-based tourism."
>
> 2021-2025 Council Plan, Gannawarra Shire Council.

RISK ASSESSMENT

Risk is determined based on the likelihood of an event occurring and the consequence that results when the event does occur. In this instance, the threats are equivalent to the likelihood, and the values are equivalent to the consequence.

The OWMP needs to assess the potential threats from domestic wastewater and the values of the receiving environments within a risk assessment process that has regard for both issues. All wastewater generation and/or discharges are seen to be a threat with potential harm to human health or damage to the receiving environment. Domestic wastewater is typically high in nutrients and human pathogens.

Wastewater is a source of risk as it contains contaminants that have the potential to impact:

- Public health – through contamination of drinking water and recreational water bodies with human pathogens.
- The environment – via pollution of surface waters and groundwater, with nutrients, pathogens, and other pollutants, which can cause harm to aquatic fauna and indigenous vegetation.
- Amenity – including offensive odours and unsightly discharges leading to reduced amenity and potential impact on property values.

In relation to onsite wastewater management, these impacts can occur due to runoff or leaching of poorly treated or excess wastewater. This is more likely when onsite systems have deteriorated, are poorly maintained, are not fit for purpose (e.g. inadequately sized), and/or are not properly located. There can be uncertainty as to the extent of the impact occurring, particularly when considering the cumulative impact across a town or the Shire as a whole.

As such, there is a need to take a risk management approach in determining the actions Council should take to improve wastewater management. Once the level of risk has been determined, priority risks should be dealt with first. That is, the higher the risk the higher the priority. Also, risk is dynamic, and therefore managing risk is iterative. This risk assessment and the selected risk treatments (actions) will need to be monitored and reviewed regularly.

Best practice OWMP risk assessment involves several quantitative methods to identify the presence, likelihood, and magnitude of any risk factors associated with on-site wastewater management.

The current risk assessment was formulated using data from previous land capability reports generated in 2005, Council's OWMPs of 2007 and 2020, data sets collated by Council's Environmental Health Officer, and site visits undertaken at townships as part of this review.

This process has highlighted that Council needs to continue to obtain more detailed property data of high-risk townships to meet best practice requirements. The following opportunities exist for improvement.

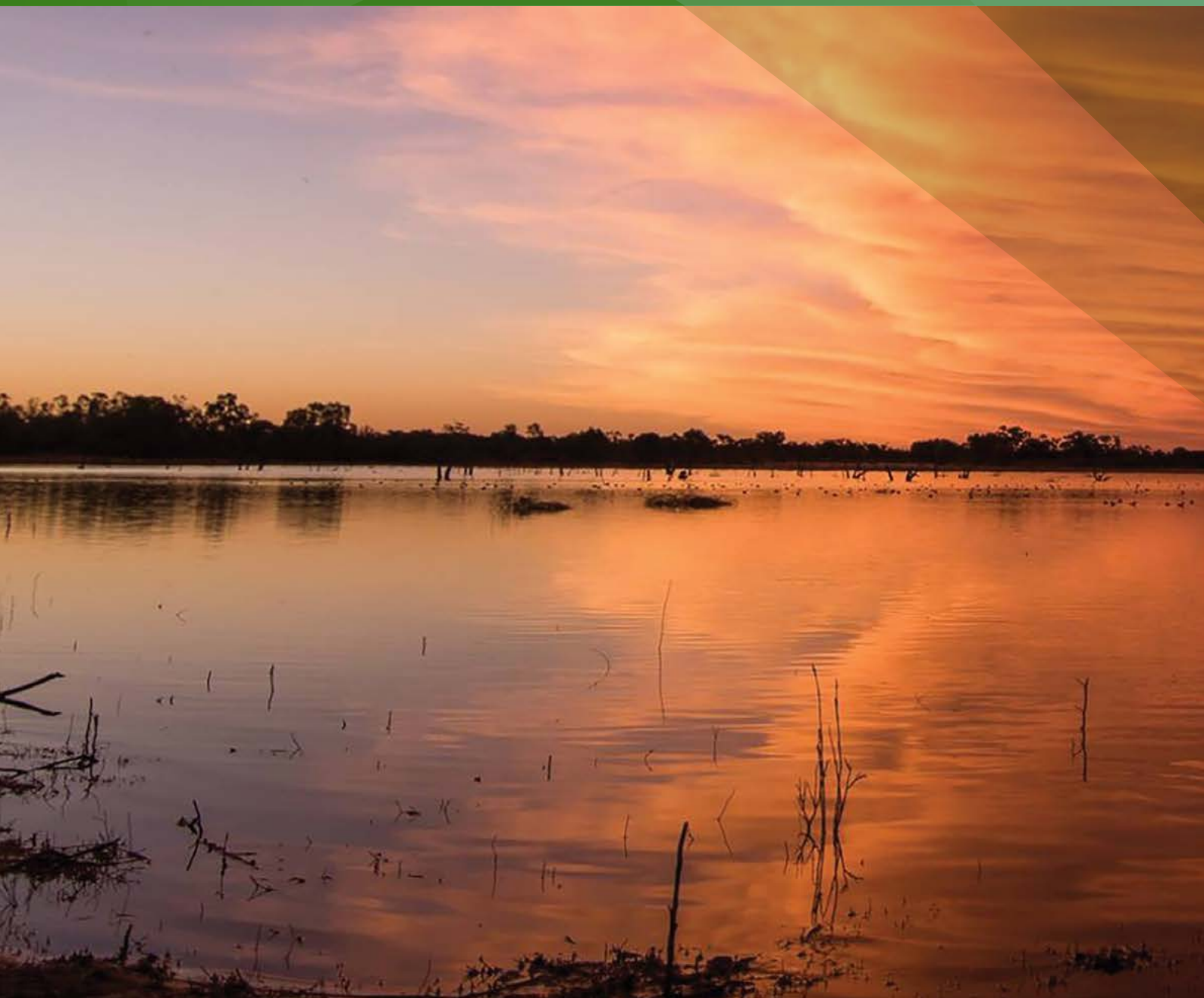
- The collation of historic septic tank permit data into the current Environmental Health and property databases.
- Undertake a comprehensive assessment of wastewater systems through audits of townships to develop a more accurate wastewater profile.
- The availability of more comprehensive Geographical Information System (GIS) data for townships. Including consideration of cumulative impacts from both existing on-site wastewater systems and potential unsewered subdivisions.

Refer to Appendix 4 for Risk Assessment undertaken as part of the development of this OWMP.

TOWN PROFILES

This section of the Onsite Wastewater Management Plan (OWMP) outlines details of townships identified as priority townships during the development of this OWMP.

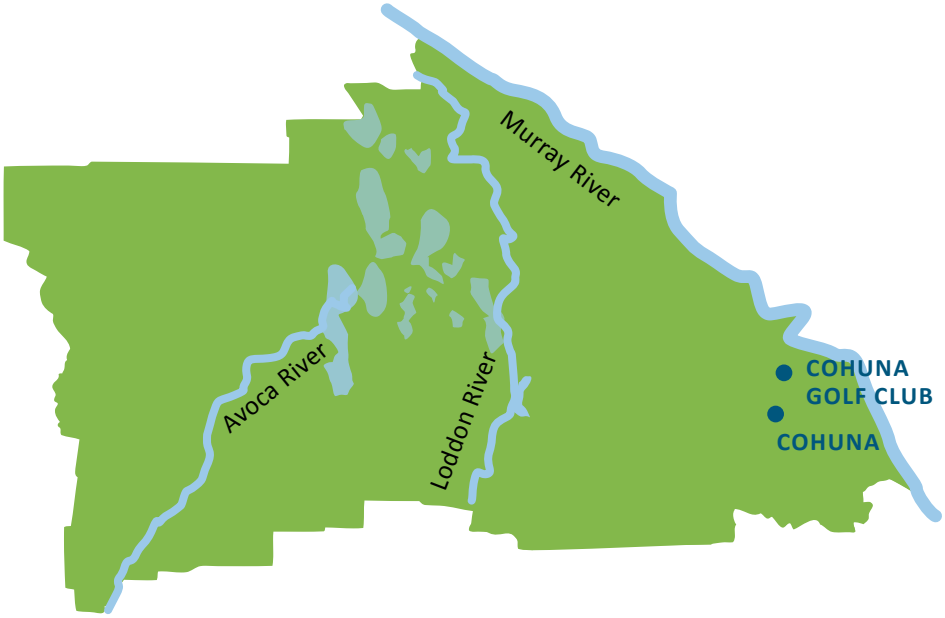
Townships are included in order of priority based on the risk assessment undertaken as part of the development of this OWMP (refer to Appendix 4).



COHUNA GOLF LINKS ESTATE

The Golf Links Estate is located north of Cohuna on the Gunbower Creek.

The estate was established in the 1970s and the water supply is a non-reticulated, non-potable supply from individual entitlements pumped from Gunbower Creek with rainwater collected in tanks for drinking purposes.



Key Wastewater Management Issues	
• Offsite discharge of greywater.	• Stormwater and runoff flow directly into the Gunbower Creek.
• Onsite ponding of surface water.	• Inadequate setback of disposal fields from the Gunbower Creek and from neighbouring properties.
• Inadequate sized, and poorly managed disposal fields.	• Poorly managed systems.
• Some vacant blocks cannot be developed due to area and location constraints.	• Deep, poorly structured clay have poor internal drainage and low capacity to treat and retain wastewater onsite.

Risk Assessment

Risk assessment tables demonstrate very high public health values and moderate to very high environmental values threatened by a range of poor wastewater management practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	0
Certificate to Use issued	0
Priority town ranking	1 - High

QUAMBATOOK

Quambatook is located 40 kilometres west of Kerang on the Avoca River.

Quambatook has a reticulated water supply from the Normanville Pipeline, managed by Grampians Wimmera Mallee Water.

The stormwater is collected in a mixture of kerb and underground pipe system and table drains, and discharged to the Avoca River.

The caravan park, golf club, and football club combined have an effluent pond for onsite wastewater management.

Key Wastewater Management Issues

- Old and poorly maintained OWMS.
- Undersized OWMS for some commercial premises and community facilities that experience intermittent high loadings.
- Heavy clay subsoils have a low capacity to treat and retain wastewater.

Risk Assessment

Risk assessment tables show that Quambatook has very high public health values and moderate environmental values threatened by a range of poor wastewater management practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	1
Certificate to Use issued	1
Priority town ranking	2 - High

KANGAROO LAKE

Kangaroo Lake is 20 kilometres northwest of Kerang. No reticulated water is available to residents. The water supply is from rainwater tanks and the lake.

Beyond the fringe of lakeside development, there are areas of irrigated horticulture, largely grapevines. Kangaroo Lake is a permanent freshwater lake and is popular for water-based recreation activities. The lake is also a water supply reserve, managed by Goulburn Murray Water as part of the Torrumbarry Irrigation System.

The Kangaroo Lake Caravan Park has an EPA licence for onsite disposal of effluent.

Key Wastewater Management Issues

- Some properties are too small to contain wastewater within the property boundary.
- Some more steeply undulating blocks have potential for wastewater to move offsite.
- Seasonal pressure on disposal fields and OWMS for properties used as holiday homes.
- Risk of effluent entering the lake directly through runoff or indirectly via subsolid intrusion, particularly on the northern and western shores where soils have high percolation rates.
- Undersized disposal fields too close to the lake.

Risk Assessment

The risk assessment tables demonstrate that Kangaroo Lake has very high public health values and very high environmental values threatened by a range of poor OWMS practices.

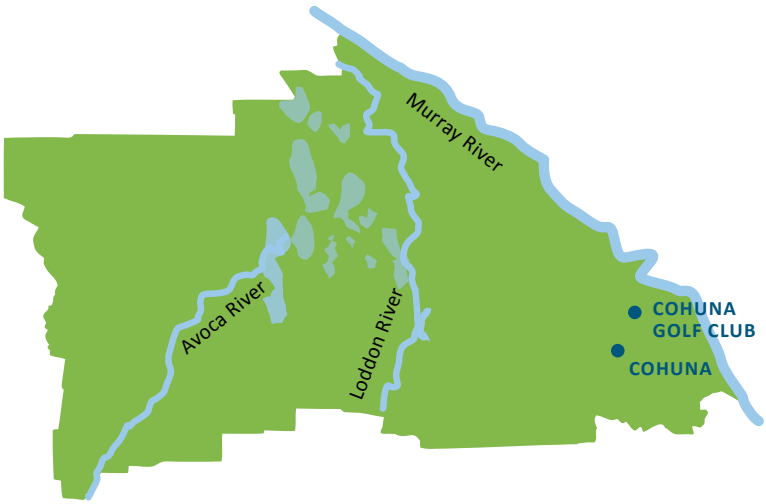
OWMS Applications (2020 – December 2023)	Number
Permit to Install	8
Certificate to Use issued	6
Priority town ranking	3 - High

COHUNA

Cohuna is located on the Gunbower Creek at the eastern end of the Shire. Cohuna supports the surrounding areas and tourism associated with the Murray River and its tributary, the Gunbower Creek, as well as Gunbower Island.

The Murray River ecosystem is a high-value economic and environmental asset, providing for irrigation of farms surrounding Cohuna as well as recreation and tourism. The river also provides important riparian habitat and supports a diversity of instream fauna.

Most homes in Cohuna were connected to reticulated sewerage in the 1990s. While newer developments have connected to the reticulated sewerage system over the years, there are homes on the town fringes that still have OWMS. Coliban Water provides water and wastewater services to Cohuna with reticulated water sourced from Gunbower Creek.



Key Wastewater Management Issues

- Stormwater outfall is to the Gunbower Creek and Barr Creek.
- Relatively flat topography and variable land capability.
- Undersized disposal fields that are too close to the Gunbower Creek.
- OWMS may be near irrigation channels.

Risk Assessment

Cohuna has very high public health values and moderate to high environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	1
Certificate to Use issued	1
Priority town ranking	4 - Moderate

LAKE CHARM AND RACECOURSE LAKE

Lake Charm and Racecourse Lake are located approximately 16 kilometres northwest of Kerang.

Development around the lake is in the southwest and southeast corners and along the eastern and northern shores and includes two caravan parks. Additional amenity blocks are located at the yacht club.

Development around Racecourse Lake is on the eastern shore and includes a caravan park, general store, service station, and a primary school, which is not operating at present. There is no reticulated water supply and residents rely on rainwater tanks and the pumping from the lake for domestic purposes.

Key Wastewater Management Issues	
• Poor Land Capability.	• Risk of effluent entering the lake directly through runoff or indirectly via subsoil intrusion.
• Undersized disposal fields within proximity to the lake.	• Some properties are low-lying, increasing the risk of the land being subject to inundation.
• Seasonal pressure on disposal fields.	

Risk Assessment

The risk assessment tables demonstrate that Lake Charm has very high public health values and low to very high environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	2
Certificate to Use issued	1
Priority town ranking	5 - Moderate

KOONDROOK

Koondrook is located on the Murray River northeast of Kerang. It is located on the Victorian side of the Murray River, opposite its NSW twin-town of Barham.

The reticulated sewerage system in Koondrook was commissioned in 2000. Several homes on the fringes of the town are not connected to the sewerage system. Most of the OWMS in use in Koondrook are split systems with sullage disposed directly to the land surface. Lower Murray Water provides wastewater and water supply services to Koondrook. The water supply is drawn from the Murray River. Council has constructed a wetland to capture and treat stormwater from part of the town before discharge to the Murray River.

Key Wastewater Management Issues

- Most of the older OWMS are split systems with sullage disposal untreated to the surface.
- Most of the land within Koondrook has poor to moderate land capability.

Risk Assessment

Koondrook has very high public health values and high environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	2
Certificate to Use issued	2
Priority town ranking	6 - Moderate

KERANG

Kerang is the main service centre for the Shire. The area is dotted with lagoons, wetlands, and lakes, many of which are protected under the Ramsar Convention.

The town has been serviced by a reticulated sewerage system since the 1930s.

Homes on the fringes of Kerang are not connected to the sewerage system. This includes high development areas to the south and south east of the town.

Key Wastewater Management Issues

- Relatively flat topography and low to very low land capability make OWMS disposal difficult.
- OWMS may be near irrigation channels that supply water for domestic purposes to rural users and following treatment, the potable supply for the town.

Risk Assessment

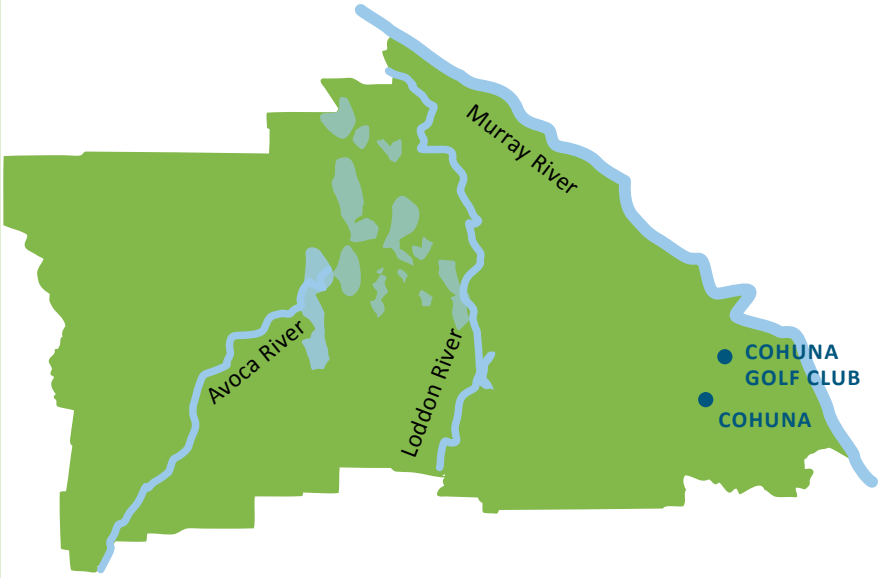
Kerang has very high public health values and high environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – September 2023)	Number
Permit to Install	12
Certificate to Use issued	11
Priority town ranking	7 - High

COHUNA ISLAND ROAD

The Cohuna Island Road area is located between Gunbower Creek and the Murray River northeast of Cohuna. It is a rural living estate set amongst farming land.

The Gunbower Creek and Murray River both have significant economic and environmental values providing for irrigation, recreation and tourism, riparian habitat, and supporting a diversity of instream fauna. Gunbower Creek is the source of Cohuna's potable water supply. The northern fringes of the locality about the Gunbower Forest Ramsar Site which is also one of the six icon sites identified by the Murray Darling Basin Commission Living Murray Initiative.



Key Wastewater Management Issues

- Some areas have sandy soils which have high percolation rates, resulting in excellent drainage but may hide problems associated with OWMS failure.
- Properties and allotment sizes are small.

Risk Assessment

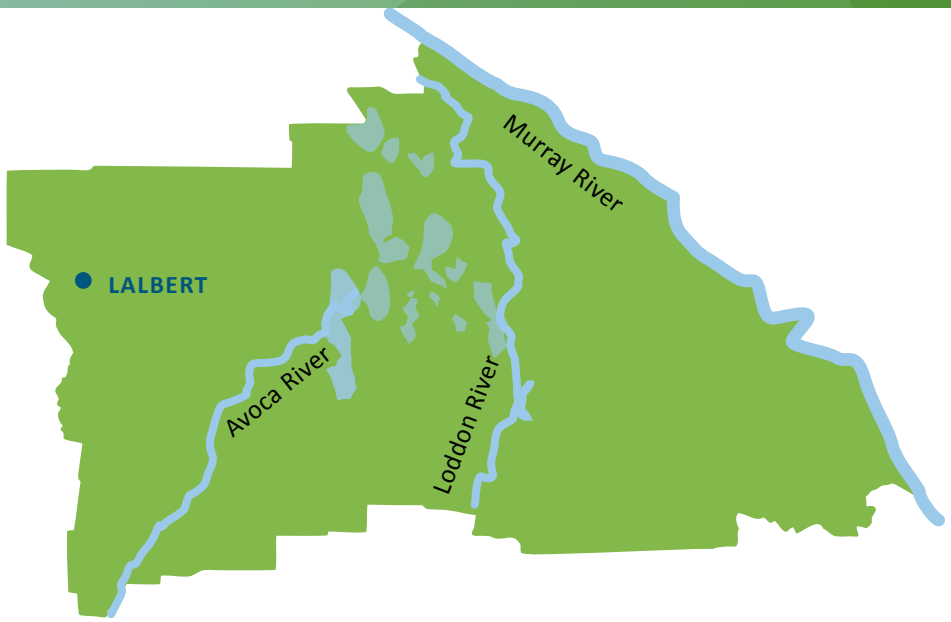
The risk assessment tables demonstrate that Cohuna Island Road has very high public health values and low environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	9
Certificate to Use issued	9
Priority town ranking	8 - Moderate

LALBERT

Lalbert is located on the western fringe of the Shire on the Donald Swan Hill Road, approximately 75 kilometres west of Kerang.

Lalbert has a water supply managed by Grampians Wimmera Mallee Water sourced from storages in the Grampians or Murray River via the Wimmera Mallee Pipeline.



Key Wastewater Management Issues

- OWMS compliance by property owners.

Risk Assessment

The risk assessment shows that Lalbert has very high public health values and low environmental values due to a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	0
Certificate to Use issued	0
Priority town ranking	9 - Low

MACORNA

Macorna is a small hamlet, 30 kilometres southeast of Kerang off the Loddon Valley Highway.

Many blocks are less than 1,000 square metres. The land is flat and has very poor land capability for effluent disposal. This, together with the small block size, has prevented the construction of a dwelling on most allotments. There are no natural waterways through or near the town.

The Macorna Recreation Reserve has an effluent pond for onsite effluent treatment and disposal.

Key Wastewater Management Issues

- Small block sizes with insufficient area for suitable OWMS.
- Heavy soils with slow infiltrations resulting in poor land capability.

Risk Assessment

The risk assessment tables show that Macorna has very high public health values and low environmental values threatened by a range of poor OWMS practices.

OWMS Applications (2020 – December 2023)	Number
Permit to Install	0
Certificate to Use issued	0
Priority town ranking	10 - Low

LEGISLATION

LEGISLATIVE FRAMEWORK AND GUIDANCE

The following is a summary of the legislation and guidelines that govern OWMS in Victoria.

Environment Protection Act 2017 and EP Regulations 2021

The EP Act and the EP Regulations are the primary legislation used by local government to regulate OWMS by way of permit upon installing, altering or using an OWMS.

Other legal obligations include:

- Operating the OWMS correctly.
- Making sure it does not overflow.
- Maintaining the OWMS in good working order.
- Notifying the local council as soon as is practical if there is a problem with the OWMS.

Guideline for Onsite Wastewater Management

The Guidelines for Onsite Wastewater Management (GOWM) is a reference document that is designed to support Victoria's environment protection framework. It outlines a risk-based approach to managing OWMS and provides links to the guidelines about onsite wastewater management. This guideline replaces the EPA Publication 891:4: Code of Practice: onsite Wastewater Management.

Effluent Dispersal and Recycling System Guidelines

The Effluent Dispersal and Recycling System Guidelines (EDRS) is a technical guideline that contains information that is considered better practice for the design and use of effluent dispersal and recycling systems. It is complementary to the GOWM.

Public Health and Wellbeing Act 2008

The PHWA enables Authorised Officers to investigate and remedy nuisances. Council must investigate all complaints relating to nuisance or the illegal management of OWMS and take action to abate the nuisance where necessary.

Water Act 1989

Section 183 of the Water Act 1989 provides a Water Corporation of a sewerage district with the power to inspect and measure existing OWMS within its sewerage district.

Local Government Act 2020

The Local Government Act outlines the provisions under which Councils operates and empowers councils to have local laws and regulations for OWMS.

Building Act 1993

Licensed plumbers must submit a compliance certificate upon completion of an OWMS installation before an Occupancy Permit can be issued for a new dwelling.

Planning and Environment Act 1987

The Planning and Environment Act 1987 sets out the planning provisions, planning schemes, and procedures for obtaining permits and enforcing compliance with planning schemes. Planning schemes set out how land may be used and developed.

The Planning and Environment Act and Council's Planning Scheme play an important role in domestic wastewater management. In making planning decisions, the Act requires Council to consider environmental issues (such as wastewater management) and formally adopted Council documents (such as this OWMP).

OUR IMPLEMENTATION OF THE REVISED LEGISLATIVE FRAMEWORK – ENVIRONMENT PROTECTION ACT 2017

This OWMP provides an opportunity for Council to apply the new legislation that has been enacted since the previous OWMP was developed. This legislation underpins the regulatory framework that Council, owners, and occupiers must comply with.

General Environmental Duty (GED) Obligations

The new EP Act introduced the GED which changed how the Environment Protection Act (EP Act) regulates pollution, waste, and contamination in Victoria.

The GED focuses on preventing harm from waste and pollution rather than managing impacts after harm has already occurred.

For OWMS, the GED requires owners and occupants to reduce risks from their OWMS. The GED is at the centre of the EP Act and applies to all Victorians. It requires the community to reduce the risk of their activities harming the environment or human health.

The GED is intended to be enduring, flexible and fill the regulatory gaps. Under the EP Act, a contravention exists if there is a failure to do any of the following, so far as reasonably practicable:

- Use and maintain plant, equipment, processes, and systems in a manner that minimises risks from pollution and waste.
- Use and maintain risk management systems.
- Handle, store, use, or transport substances in a manner that minimises risk.
- Provide training and information to persons.

> "The General Environmental Duty is central to the laws. It requires all Victorians to manage risks to human health and the environment that their activities create. Everyone must take steps to prevent or minimise those risks."
> - EPA's focus on protection and prevention.

Council has the power to act when there is a breach of the GED in relation to an OWMS. This is covered in more detail in the ongoing surveillance section of this OWMP.

Order for Obligations of managers of land and infrastructure *(onsite wastewater management) (OMLI)*

Compliance with the OMLI is mandatory. The OMLI requires:

1). Council to develop and publish an OWMP that identifies, assesses and addresses the risks of harm to human health and the environment associated with existing and future OWMS in its municipal district.

2). Water corporations to respond to Council's OWMP about their preferred sewage management solutions.

These obligations supplement and operate alongside the GED and other obligations in the EP Act.

APPLICATIONS IN ACTION

For all installation or alteration of existing OWMS with a design or actual flow rate of sewage not more than 5000 L/day, landholders must apply for a permit from their local Council.

Council can refuse a permit if the proposed OWMS does not meet the Act's requirements. This section of the OWMP provides an overview of the required steps by applicants, and Council to ensure compliance with the relevant Acts and Regulations.

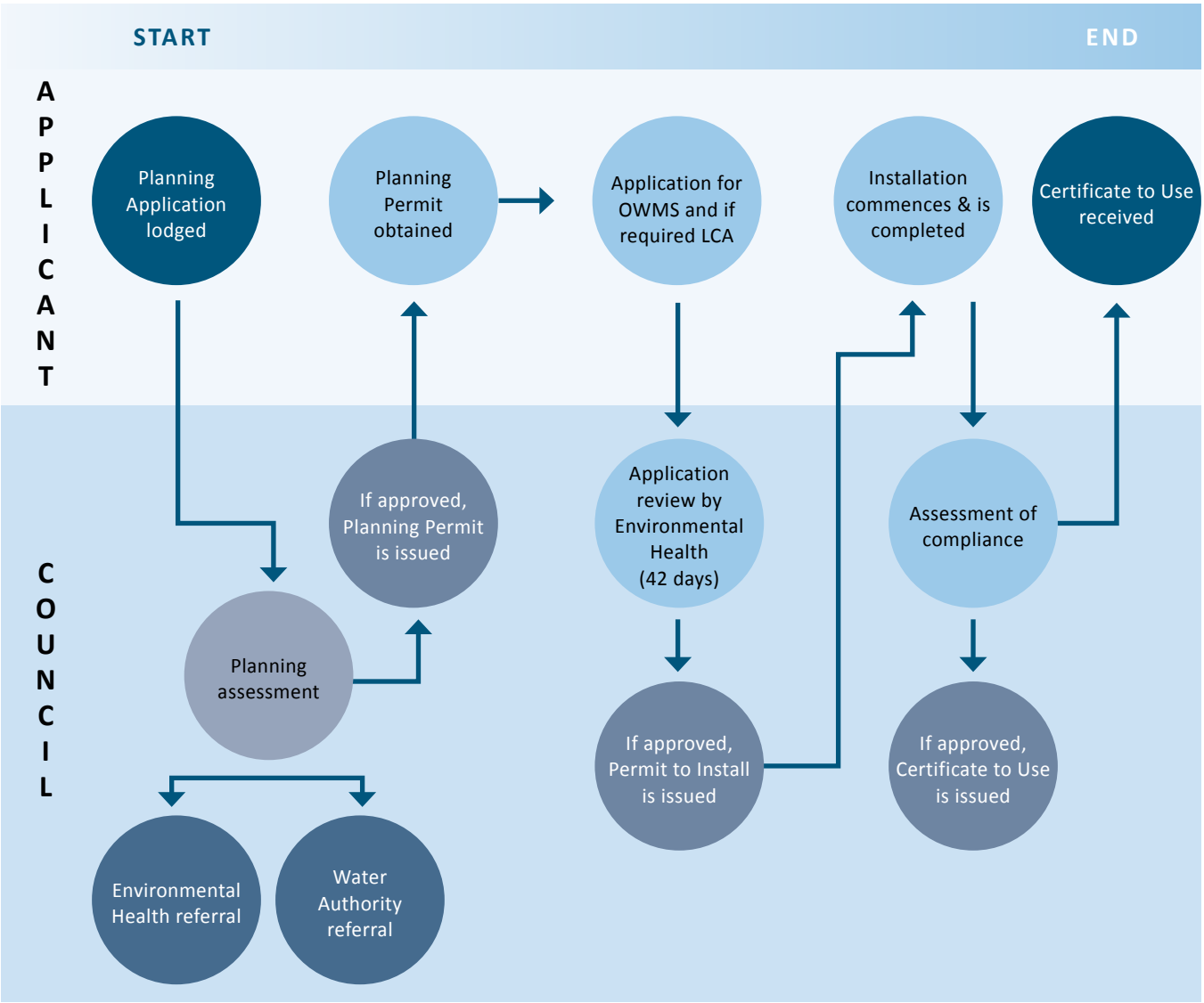
COUNCIL APPLICATION OVERVIEW

Figure 1 below provides an overview of the different applications that are lodged to Council when a property owner or developer is considering the development of land, the building of a new building, housing or accommodation, or the alteration of an existing building or dwelling.

Gannawarra Shire Council has established internal referral procedures across the relevant Departments to facilitate consistency and quicken the application process.

> "I cannot legally issue an Occupancy Permit unless a Certificate to Use is issued by our Environmental Health Officer."
>
> - Municipal Building Surveyor during the OWMP consultation.

Figure 1 – Application process for the installation or amendment of an OWMS



PLANNING APPLICATION

What are the wastewater considerations during the Planning Permit application process?

The Planning and Environment Act 1987 requires Council to consider environmental issues in decision-making. This is done via a Planning Referral to the Council's Environmental Health Officer who assesses the proposal against the requirements of the legislation.

At this point, Council's Environmental Health Officer may advise the Planning Department of any conditions that may be required on the Planning Permit.

PERMIT TO INSTALL OR ALTER OWMS

What is a Permit to Install or Alter a OWMS?

Under the EP Act, a permit is required from Council before the installation or alteration of an OWMS. This permit is a homeowner's opportunity to inform Council of their intentions, such as:

- Details of what is proposed, such as a new dwelling, building or extension of existing dwelling.
- Descriptions and details of the number of habitable rooms.
- Confirmation of OWMS proposed, and plumber details.
- Site plan, including where the OWMS will be located.

How do I lodge a Permit to Install or Alter?

Applications are available via:

- Council's website.
- Customer service.
- Phone request to Council's Environmental Health Officer.

Council must assess this application within 42 business days of the submission.

APPROVAL OF AN OWMS - CERTIFICATE TO USE

What is a Certificate to Use an OWMS?

Before using an OWMS, Council must inspect the OWMS, preferably during the installation process. If Council is satisfied that the OWMS complies with the Permit to Install, a Certificate to Use will be issued after receiving the as-installed plans of the OWMS, commissioning certificate, and plumbing compliance certificate. In some instances, electrical compliance certificate may be required.

A Certificate of Use which details the conditions of compliance will be sent to the applicant within 7 days of approval

LAND CAPABILITY ASSESSMENTS

A Land Capability Assessment (LCA) is a report that identifies the viability of onsite wastewater management on properties that are not connected to reticulated sewage. An LCA considers the risks presented to the environment, public health and local amenity.

When is an Land Capability Assessment (LCA) Required?

Onsite wastewater management planning is an important step to minimise risks from onsite wastewater. This includes identifying and assessing risks from unsewered developments and identifying actions to minimise those risks and prevent wastewater from discharging beyond allotment boundaries.

Land capability assessment (LCA) is defined under the EP Regulations and the Victorian Planning Provisions (VPP).

A LCA provides information about the site and soil conditions, including an assessment of the land's capability to sustainably manage wastewater onsite. It may also provide recommendations on proposed onsite wastewater treatment, the treatment level required, and effluent dispersal and management strategies.

The VPP requires new dwellings to be connected to reticulated sewerage where available. If reticulated sewerage is not available, all wastewater from each dwelling must be treated and retained within the lot in accordance with the EP Act and EP Regulations.

The EPA Guideline for Onsite Wastewater Management 2024 states that lots larger than 1 hectare (10,000 square metres) are generally able to retain all wastewater onsite when managed appropriately and are considered low risk in relation to lot size.

The VPP and the Gannawarra Planning Scheme requires that when subdividing land in Low Density Residential Zones that each lot must be at least 0.4 hectares (4,000 square metres) where reticulated sewerage is not connected.

In the absence of reticulated sewerage, an application for subdivision in Low Density Residential Zones and Township Zones must include a LCA on the risks to human health and the environment of an OWMS constructed, installed or altered on that lot in accordance with the EP Regulations under the EP Act 2017.

While applying a default 0.4 hectares to subdivisions in Low Density Residential Zones, achieving sustainable wastewater management on a lot of this size requires relatively restrictive controls. Any existing lots that are smaller than 0.4 hectares and unsewered are considered high risk for onsite wastewater management.

Regardless of subdivision or lot size, in unsewered areas, a LCA will be required for each allotment that requires the construction, installation or alteration of an OWMS, unless Council's Environmental Health Officer (EHO) is satisfied the site is low risk or sufficient information has already been gathered about the site.

A LCA consistent with EPA Guidelines and relevant Standards will be required for all development proposals on land smaller than 0.4 hectares or less than 1 hectare where soils are clay based or sand/gravel and primary treatment is proposed. Land that is within the Floodway Overlay (FO or RFO) or the Land Subject to Inundation Overlay (LSIO) may also require a LCA prior to approval being granted for an OWMS. This will apply regardless of planning and/or building permit requirements.

The Municipal Association of Victoria (MAV) has developed a model LCA report to assist LCA assessors and regulators.

A LCA must be conducted by a suitably qualified and experienced professional - for example, an independent soil science professional.

The provision of a LCA will not guarantee that a permit will be issued.

What information is provided in an LCA?

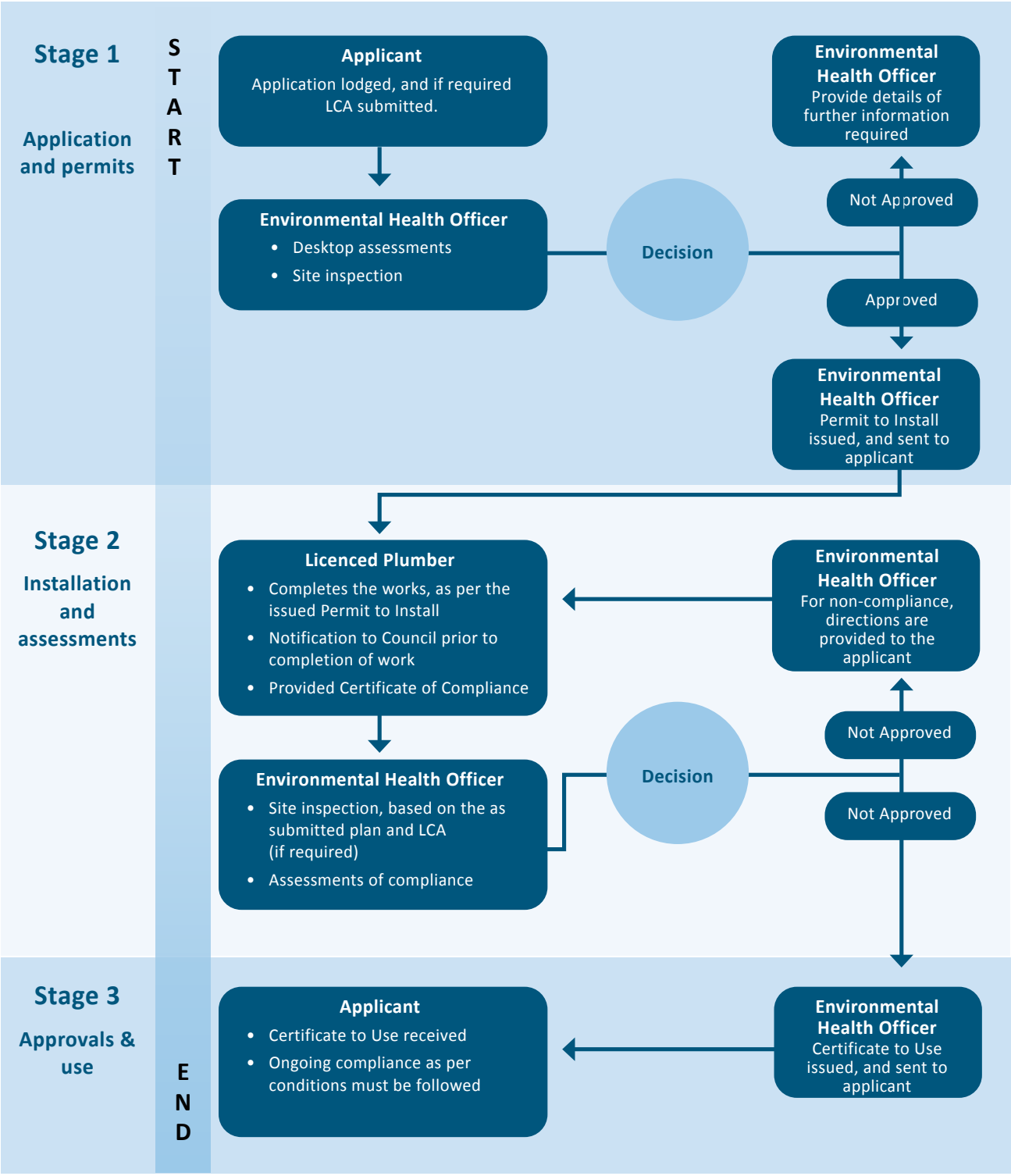
LCA assists applicants, Council, and water authorities by providing specific information based on the given property. The table below provides an overview of the topics expected to be covered in an LCA.

LCA Topics	Examples
Background of the property and the proposal	• Overview of the proposal • Limitations and assumptions
Land features	• Topography and drainage • Soil characteristics, soil permeability, and vegetation • Average rainfall, and flooding potential • Catchment area • Bores, dams, and groundwater • Building envelope • Erosion potential • Local climate and aspect of the site
Site information	• Property location • Property title • Zoning and overlays • Land use (past and existing) • Use of surrounding areas
Infrastructure	• Available services such as power
Land capability	• Land constraints • Soil percolation • Risk rating and summary • Management protocols
Recommendations	• Recommended OWMS • OWMS design and specifications • Disposal fields and reserve area allocations
Management and maintenance	• Ongoing management, maintenance, reporting and other requirements
Supporting data and mapping	• Maps • Supporting soil classification test data

APPLICATION TO INSTALL OR ALTER AN ONSITE WASTEWATER MANAGEMENT SYSTEM

The following diagram outlines the Shire's process for approving applications related to OWMS.

Please note, this application is lodged after the Planning Permit has been obtained.



COMPLIANCE AND SURVEILLANCE ACTIVITIES

Coucil's inspection schedule includes:

- Inspections before issuing a permit to install or alter an OWMS.
- Inspections to assess compliance with the installation or alteration before issuing a Certificate to Use.
- Responding to and investigating complaints associated with OWMS.

Due to resource constraints, Council does not have an inspection schedule assessing compliance of active OWMS within the Shire. Objective 4 of this OWMP includes action items relating to locations and numbers of OWMS.

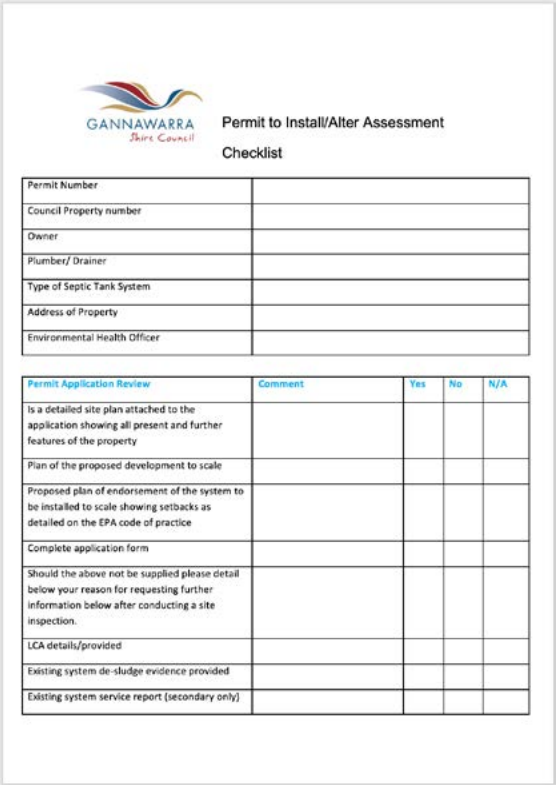
OWMS Complaints (2020 – September 2023)	Date	Status
1	18 May 2022	Resolved

> "Our focus is on ensuring onsite wastewater management systems, installed or altered, comply with the current legislation and manufacturers' instructions to manage any potential risks to human health and the environment.''
>
> - Environmental Health Officer during OWMP consultation.

OFFICER ASSESSMENT RESOURCES AND TRAINING

While applying and enforcing the laws and regulations related to this OWMP, Council is committed to ensuring AOs and related Council staff have the required tools and resources to manage risk and make fair and consistent decisions. This will be achieved by:

- Providing inspection and assessment checklists.
- Developing Policies and Procedures (Action item 3.1).
- Prioritising AO training (Action item 3.2).
- Ensuring Council is aware of any changes of Acts, Regulations, or EPA Guidelines throughout the life of this OWMP.



GANNAWARRA Shire Council

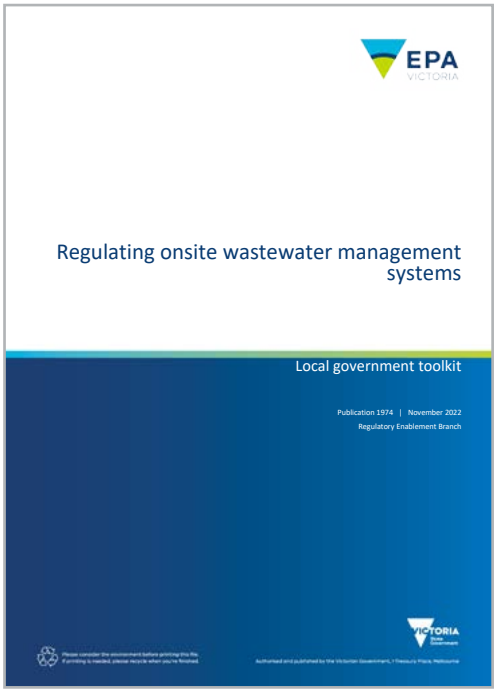
Permit to Install/Alter Assessment Checklist

Permit Number	
Council Property number	
Owner	
Plumber/ Drainer	
Type of Septic Tank System	
Address of Property	
Environmental Health Officer	

Permit Application Review	Comment	Yes	No	N/A
Is a detailed site plan attached to the application showing all present and further features of the property				
Plan of the proposed development to scale				
Proposed plan of endorsement of the system to be installed to scale showing setbacks as detailed on the EPA code of practice				
Complete application form				
Should the above not be supplied please detail below your reason for requesting further information below after conducting a site inspection.				
LCA details/provided				
Existing system de-sludge evidence provided				
Existing system service report (secondary only)				

COMPLIANCE AND ENFORCEMENT TOOLS

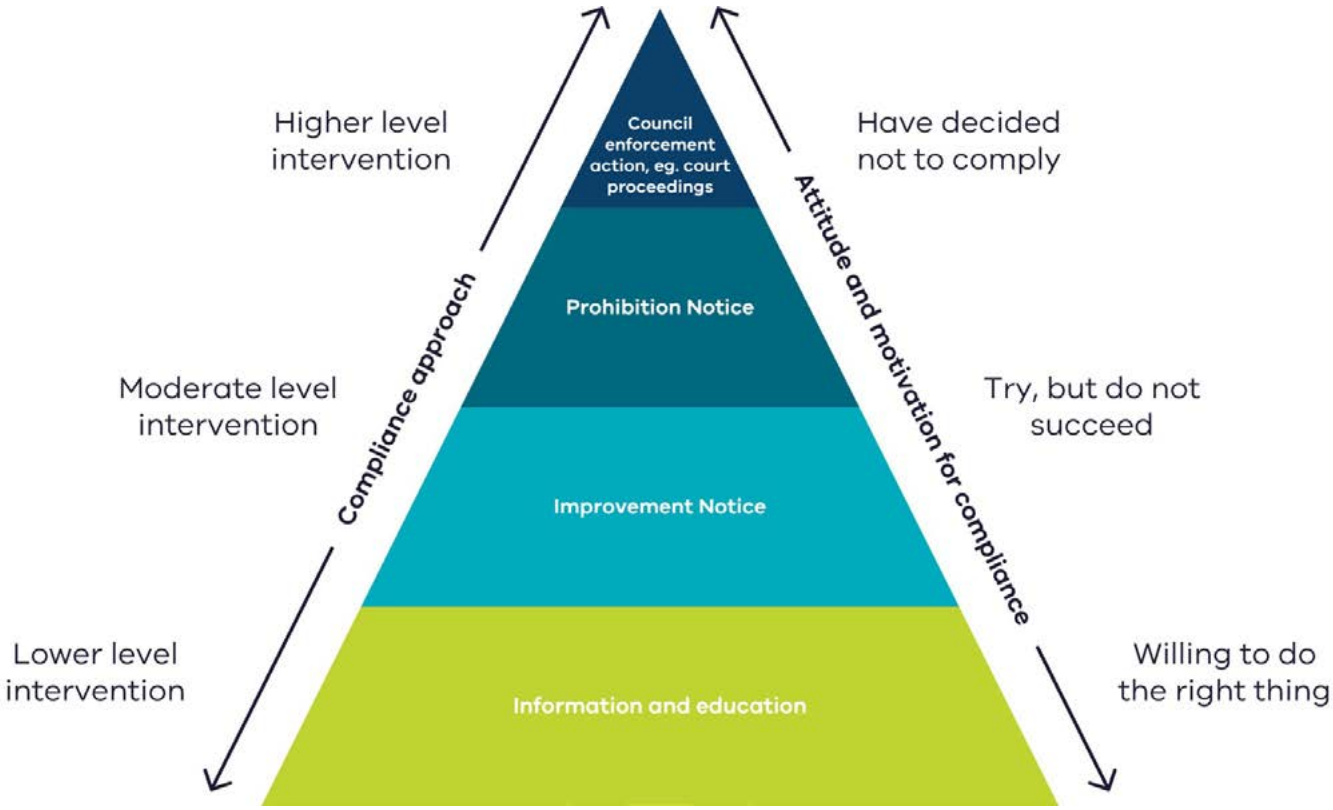
Gannawarra Shire Council is committed to fair and consistent regulation. To achieve this commitment, Authorised Officers (AOs) will make compliance and enforcement decisions in line with the guidance publication issued by the Environment Protection Authority, Regulating Onsite Wastewater Management Systems: Local Government Toolkit (EPA toolkit).



ENFORCEMENT HIERARCHY

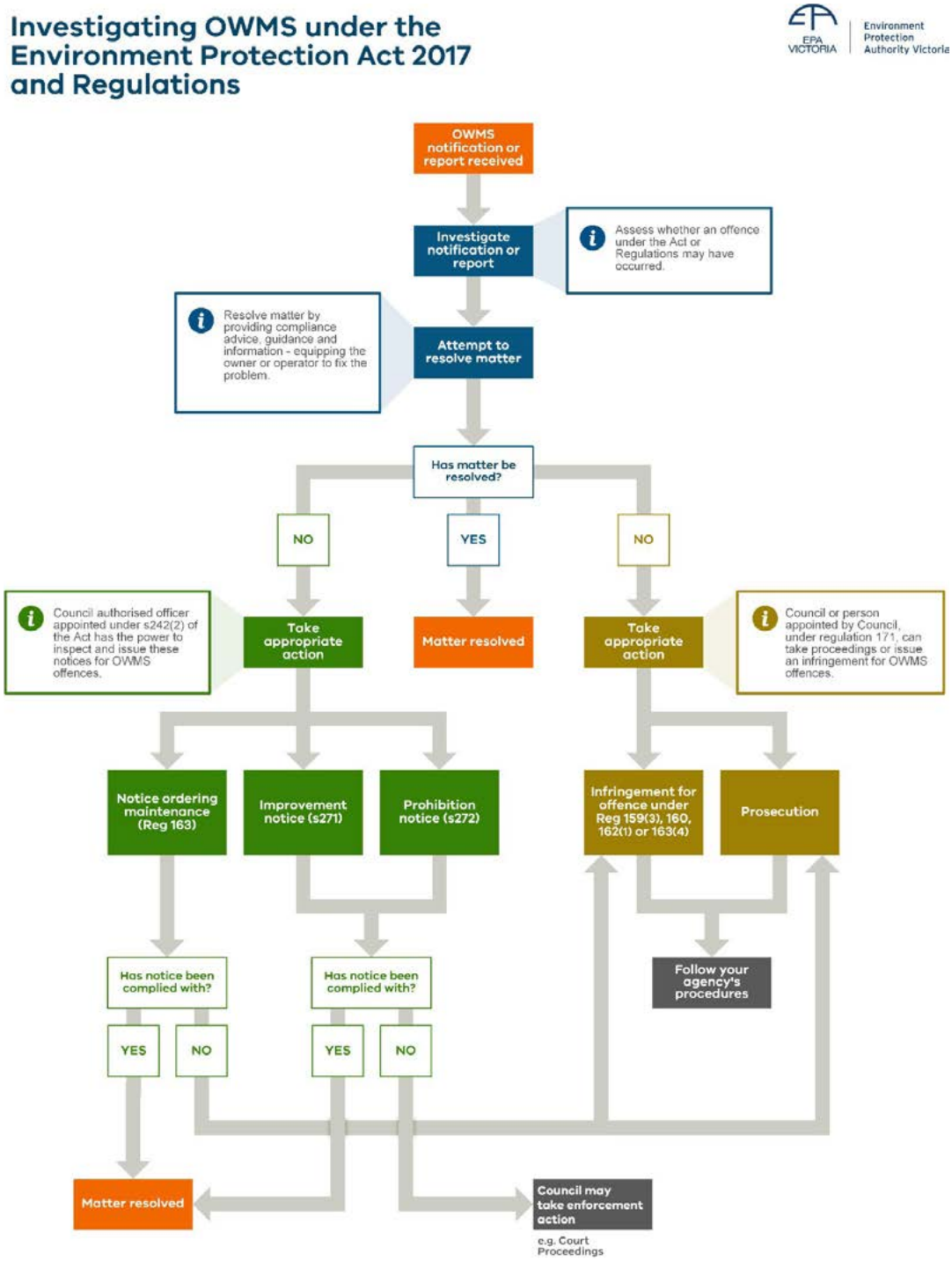
The EPA toolkit provides an enforcement framework for all councils to apply.

At Gannawarra, our AOs will consider the compliance approach against the attitude and motivation for compliance.



INVESTIGATION GUIDANCE

The EPA has provided investigation guidance to all Victorian local councils in the *Regulating Onsite Wastewater Management Systems – Local government toolkit*. Council will apply the same process as detailed below.



Source: Publication 1974: Regulating onsite wastewater management systems

APPLICATION OF THIS LEGISLATION AT GANNAWARRA SHIRE COUNCIL

Compliance and Enforcement tools	Scenario
Education	"I called the owner of the property and reminded them that the quarterly reports are required to be submitted."
Notice ordering maintenance	"After notification of an OWMS overflow, a Notice ordering maintenance was issued providing a direction for desludging."
Official Warning	"As the permit condition was breached, Council issued an Official Warning to the property owner."
Improvement Notice	"As the permit condition was breached, Council issued an Improvement Notice on the property owner."
Prohibition Notice	"Due to the public health risk, a Prohibition Notice has been issued. This means the OWMS cannot be used until compliance has been achieved."
Infringement Notice	"Due to the owner of the property not complying with the Improvement Notice, Council is issuing an Infringement Notice under the EP Regulation 163(4) - Comply with Council notice requiring maintenance."
Prosecution	"The occupier continued to use the OWMS after the Prohibition Notice had been issued. Council has decided to support a prosecution."

APPENDIX 1 - OUR ACTIONS FOR THIS OWMP

No.	Action	Complete by	Evaluation
OBJECTIVE 1: WE WILL CONTINUE TO STRENGTHEN OUR RELATIONSHIPS WITH THE COMMUNITY AND OUR STAKEHOLDERS			
1.1	Develop communication materials and guidelines for the community and stakeholders.	2024	• Educational material developed to support property owners to better understand wastewater management.
1.2	Use this Plan to advocate for funding, such as continual collaboration with the water authorities to support the installation and expansion of reticulated sewerage systems in high-priority growth areas, and high risk areas.	2026	• Continual engagement with stakeholders and the community. • Assess high-priority growth areas, and high risk areas, identified in this OWMP for future advocacy and funding opportunities. • While this action item is important to Council, it is to be noted that there are a range of external factors that may impact future development such as lack of appetite from the community and economic restrictions.
OBJECTIVE 2: WE WILL CONTINUE TO PLAN FOR THE FUTURE			
2.1	Review risk assessment of Cohuna Island Road, Cohuna.	2026	• Project developed, commenced, and completed.
2.2	Provide opportunities for continual review and feedback of this OWMP, to ensure it remains relevant.	Ongoing	• Ensure stakeholders have opportunities to provide feedback.
2.3	Develop and commence the implementation of an OWMS mapping program.	2027	• Program developed and commenced. • Improved GIS data relating to existing OWMS is available.

No.	Action	Complete by	Evaluation
OBJECTIVE 3: OUR AUTHORISED OFFICERS WILL HAVE THE REQUIRED TRAINING AND SUPPORT TO EFFECTIVELY PERFORM THEIR REGULATORY ROLE			
3.1	Develop and implement policies and procedures to support AOs making compliance decisions relating to OWMS, including: • Compliance and Enforcement Policy. • Procedures relating to approvals, assessments, and compliance management.	2025	• Council endorsement of policies and procedures. • Implementation of relevant adopted policies and procedures.
3.2	Identify minimum training requirements and develop a training schedule for all AOs.	Annually	• For all new staff, incorporate the training schedule into each AO probation plan. • For all existing staff, the training schedule is annually monitored during professional development plans.
3.3	Develop and implement an inspection program that balances cost, risk to the community and environment, and legislative requirements.	Ongoing	• Successful implementation of an inspection program relating to OWMS.
OBJECTIVE 4: WE WILL ENSURE THAT PROCESSES AND DECISIONS COMPLY WITH LEGISLATION			
4.1	Determine the number and location of OWMS in the Shire.	2025	• Develop a project and seek funding for resources to enable details of systems that have not been captured to be collected and collated.
4.2	Assess the performance of the various OWMS to inform future decisions related to domestic wastewater.	Ongoing	• Assess that compliance inspections are conducted. and • Information relating to performance of OWMS is captured within Council records to inform future planning.
4.3	Investigate alternative disposal methods for raw sewage from the desludging of OWMS.	Ongoing	• Continue to engage with relevant authorities to seek solutions for disposal methods for raw sewage from the desludging of OWMS.

APPENDIX 2 - ACTION ITEM UPDATE FROM PREVIOUS PLANS

The table below provides a status update of the Actions identified in the 2020 – 2023 OWMP.

Action No.	What	How	Status Completed Outstanding – to be completed in this OWMP
1.1	Use Council's current Onsite Wastewater Management System database to input data relating to current installations and alterations.	Accurately record all data relating to current and new installations and alterations throughout the installation or alteration process.	Completed.
1.2	Use Council's current onsite wastewater management system database to input data relating to past or historic installations or alterations.	Through the process of a complaint investigation, gather data relating to existing systems and input it into a database.	Completed.
1.3	Implement a management system to monitor compliance with existing system requirements.	Investigate opportunities to incorporate a database into the Health Manager system. Maintain a register of odour and septic complaints to identify poor-performing systems.	Completed.
1.4	Determine the number and location of septic tanks in the Gannawarra Shire.	Develop a project and seek funding for resources to enable details to be collected and collated.	Outstanding- to be completed in this OWMP.
2.1	Investigate all wastewater complaints.	When a complaint is received, information will be recorded in Council's onsite wastewater management system database and investigated.	Completed.
2.2	Undertake Compliance Inspections for all new installations and alterations.	Assess applications according to legislation, attend on-site and issue permits where appropriate.	Completed.
2.3	Assess planning referrals for proposed developments and building permits for alterations to existing buildings.	When referrals are received from the planning and building department, make assessments of compliance, or otherwise of existing septic tank system.	Completed.

Action No.	What	How	Status Completed Outstanding – to be completed in this OWMP
2.4	Develop an appropriate financial model to adequately resource the implementation, system inspection, and monitoring of the domestic wastewater systems.	Develop a proposal for consideration by Council as part of the budget process.	Outstanding- to be completed in this OWMP.
3.1	Educational documents are to be distributed to applicants with a permit to install or alter an onsite wastewater management system.	Update and promote Council's Septic Tank Owners Operation and Maintenance Guidelines and make this available from Council's website.	Completed.
3.2	Communication to the community.	Develop a communication strategy relating to onsite wastewater management systems.	Outstanding- to be completed in this OWMP.
4.1	Ensure that the Minimum Lot Size Guidelines are adopted as a reference document.	Promote a high level of understanding of the Guidelines across Council so that they are implemented.	Completed
4.2	Use this OWMP for advocacy or supporting documents for funding to support the installation and expansion of reticulated sewerage systems in high-priority growth areas.	Assess high-priority growth areas identified in this OWMP for future advocacy and funding opportunities.	Outstanding- to be completed in this OWMP.
4.3	Investigate alternative disposal methods for raw sewage from the desludging of domestic wastewater systems.	Work with the EPA and other authorities as necessary to develop a solution.	Outstanding- to be completed in this OWMP.
4.4	Review risk assessment of Cohuna Island Road, Cohuna.	Develop a project and seek funding to support a review of the risk rating of Cohuna Island Road.	Outstanding- to be completed in this OWMP.
4.5	Assess the performance of the various systems to inform future decisions related to the approval of septic waste treatment systems.	Investigate the development of a project and seek funding for a system-based sampling and testing of the effluent of the treatment systems.	Outstanding- to be completed in this OWMP.
4.6	Ensure that this OWMP remains relevant.	Review legislation changes relating to the OWMP.	Completed.

APPENDIX 3 - COMMUNITY RESOURCES

Resource	Location
Requirements for owners and occupiers of land with an OWMS	https://www.epa.vic.gov.au/for-community/environmental-information/water/about-wastewater/onsite-wastewater-regulatory-framework
Standards for onsite wastewater treatment plants Appropriate standard is: An onsite wastewater treatment plant type must be assessed by a body accredited under the Joint Accreditation System of Australia and New Zealand or any other accreditation body approved by the Authority (assessment body). The assessment body must certify the treatment plant as conforming with the relevant Australian and New Zealand standards (appropriate standards).	https://www.epa.vic.gov.au/for-community/environmental-information/water/about-wastewater/standards-for-onsite-wastewater-treatment-plants
Guidance for owners and occupiers of land with an OWMS ≤ 5000 litres on any day (including septic tank systems) The Environment Protection Act 2017 (EP Act) creates a GED that applies to all Victorians from 1 July 2021. The GED requires anyone conducting an activity that poses risks to human health and the environment from pollution and waste, to minimise those risks. If you own or use an onsite wastewater management system (OWMS), including septic tank systems and secondary treatment systems, the GED applies to you. It also applies to how you construct, install, alter, operate, and maintain the system, deal with faults or system failures, and manage your waste.	https://www.epa.vic.gov.au/about-epa/publications/1976

Resource	Location
Regulating onsite wastewater management systems: local government toolkit Environment Protection Authority Victoria (EPA) has developed this toolkit to support local government (council) officers in Victoria to understand and enforce the laws under the Environment Protection Act 2017 (the Act) and the Environment Protection Regulations 2021 (the Regulations). This toolkit sets out the laws for on-site wastewater management systems (OWMS) with a daily design or actual flow rate of sewage capacity of 5000 litres (L) or less that councils can enforce.	Regulating onsite wastewater management systems: local government toolkit | Environment Protection Authority Victoria (epa.vic.gov.au).
Planning Practice Note: 39: Using the Integrated Water Management Provisions of Clause 56 – Residential Subdivision Clause 56 provides sustainable water management requirements that aim to integrate the use of all water resources – including rainwater, reused water, recycled water, and stormwater – and reduce the use of potable water.	https://www.planning.vic.gov.au/guides-and-resources/guides/planning-practice-notes
Australian and New Zealand Standards The following standards are relevant to the design, construction, and installation of onsite wastewater management systems.	AS/NZS 1546.1:2008 Onsite Domestic Wastewater Treatment Units – Septic Tanks. AS/NZS 1546.2:2008 Onsite Domestic Wastewater Treatment Units – Waterless Composting Toilets. AS/NZS 1546.3:2008 Onsite Domestic Wastewater Treatment Units – Aerated Wastewater. AS/NZS 1547:2000 Onsite Domestic Wastewater Management. AS/NZS 3500 National Plumbing and Drainage – Domestic Installations.
Guideline for onsite wastewater management A reference document that is designed to support Victoria's environment protection framework. These guidelines have replaced the EPA publication 891.4: Code of Practice: Onsite Wastewater Management.	
Effluent Dispersal and Recycling Systems Guidelines A technical guide that contains information that is considered better practice for the design and use of OWMS. This guidance is targeted at wastewater practitioners and duty holders with a reasonable level of technical knowledge of OWMS	

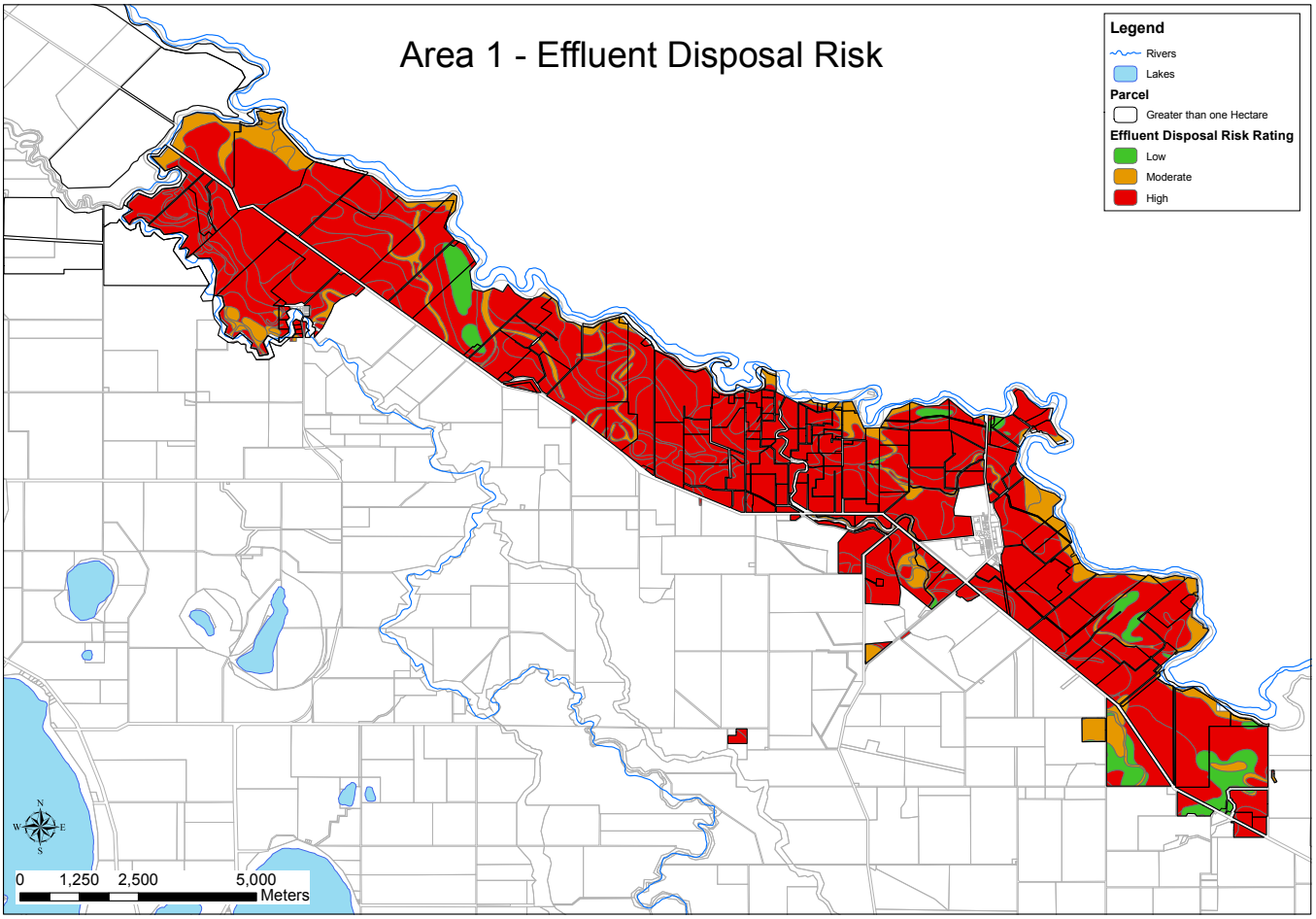
APPENDIX 4
RISK ASSESSMENT

Permanent or long-term serious environmental harm / life threatening or long-term harm to health and wellbeing.	Consequence	Severe	Medium	High	High	Extreme	Extreme
Serious environment harm / high-level harm to health and wellbeing		Major	Medium	Medium	High	High	Extreme
Medium level of harm to health and wellbeing or the environment over an extended period of time.		Moderate	Low	Medium	Medium	High	High
Low environmental impact / low potential for health and wellbeing impacts.		Minor	Low	Low	Medium	Medium	High
No or minimal environmental impact, or no health and wellbeing impacts.		Low	Low	Low	Low	Medium	Medium
			Rare	Unlikely	Possible	Likely	Certain
			Likelihood				
			Could happen but probably never will	Not likely to happen in normal circumstances	May happen at some time	Expected to happen at some time	Expected to happen regularly under normal circumstances

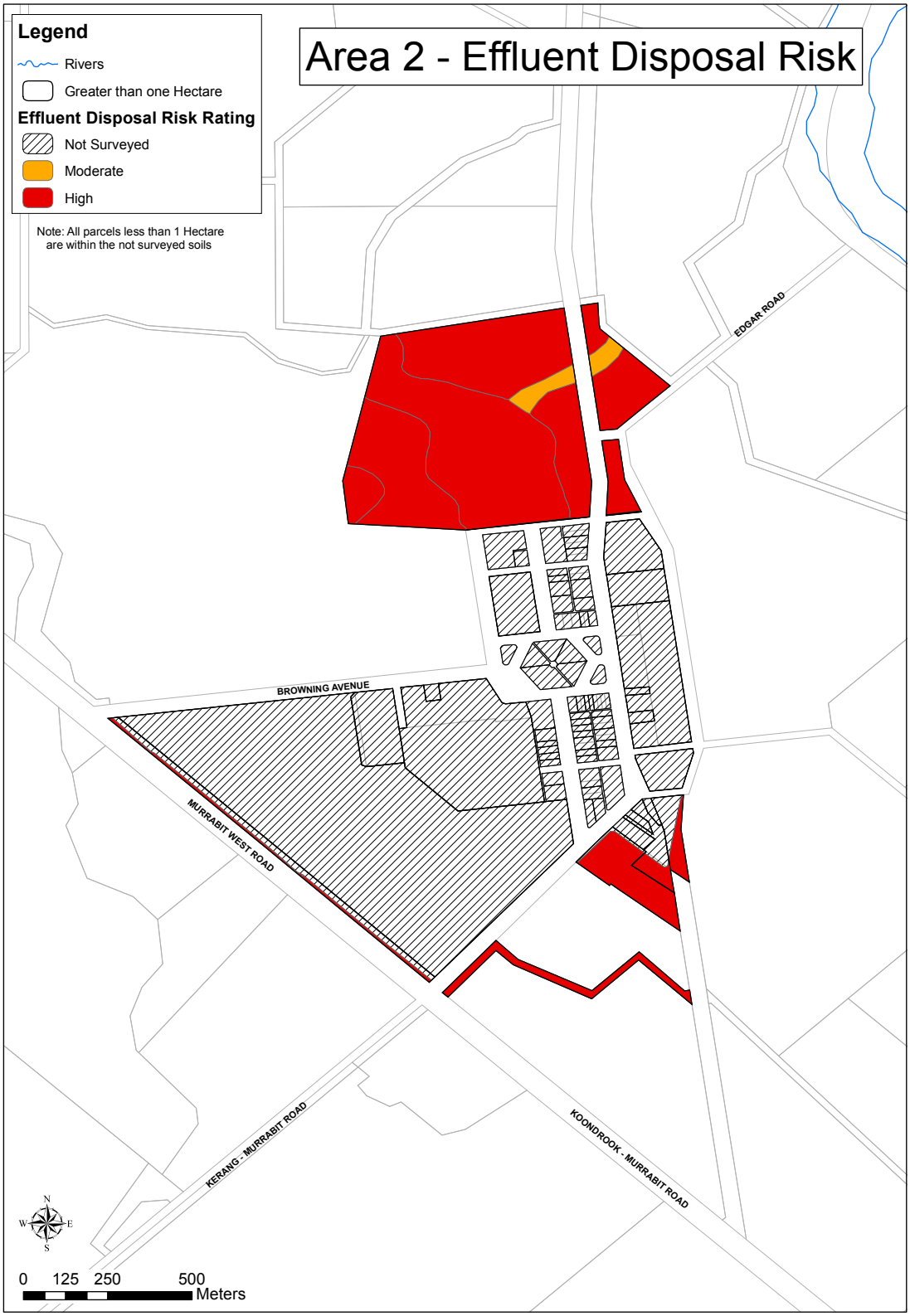
Risk Criteria	**High - 3**	**Moderate - 2**	**Low - 1**
Density of onsite systems	Greater than 40 houses/km²	20 - 40 houses/km²	Less than 20 houses/km²
Allotment Size	Less than 4000m²	4,000 - 10,000m²	Greater than 10,000m²
Age of systems	<20 years	10 to 20 years	>10 years
Proximity to watercourse and flooding overlays	<60 m from a watercourse, or within flooding overlay	60m - 100m from a watercourse	<100m from a watercourse or not in flooding overlay
Public Health Risk (known wastewater issues)	<40	>40 - <15	<15

APPENDIX 5 - LAND CAPABILITY FOR EFFLUENT DISPOSAL MAPS

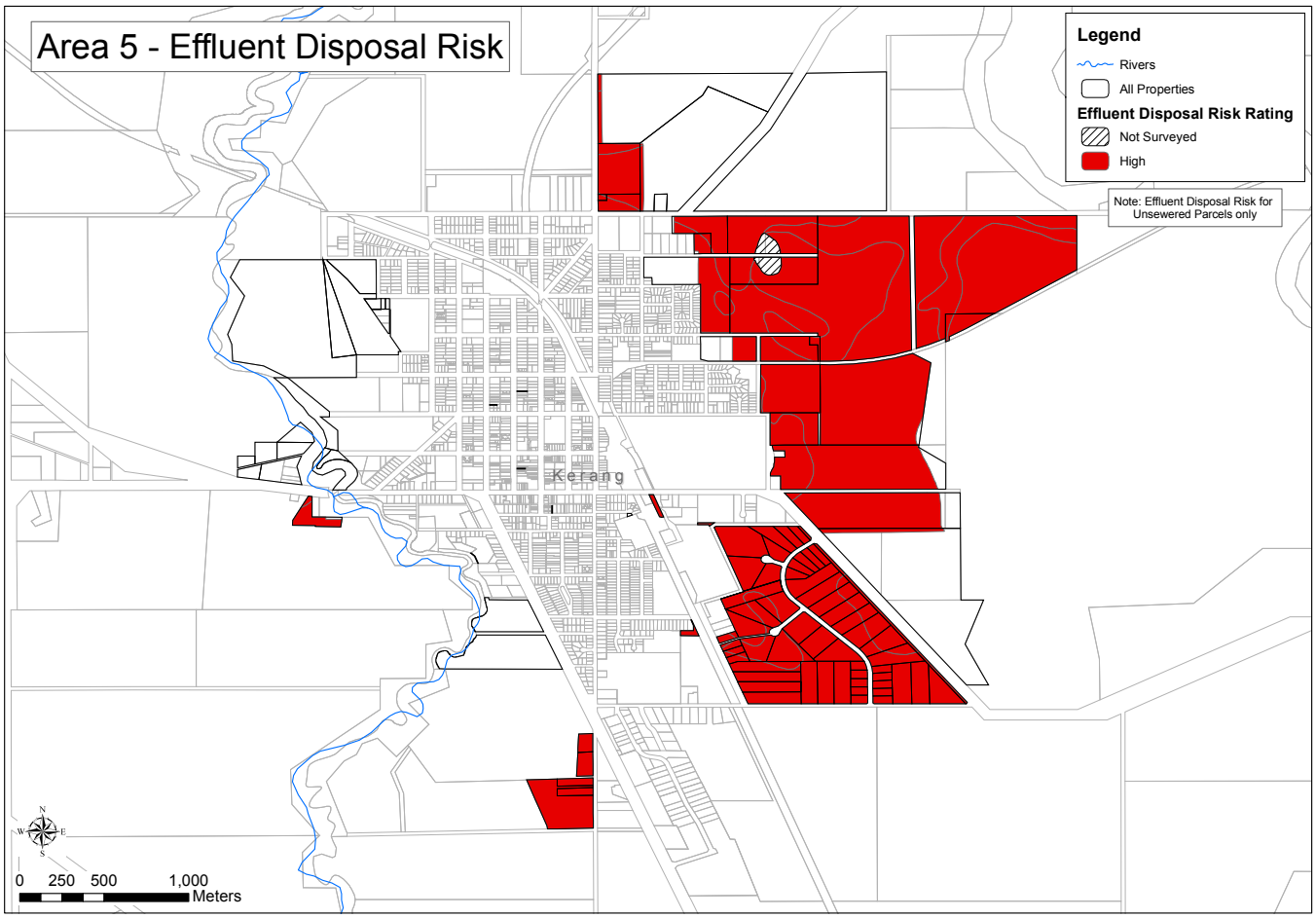
AREA 1 - EFFLUENT DISPOSAL RISK



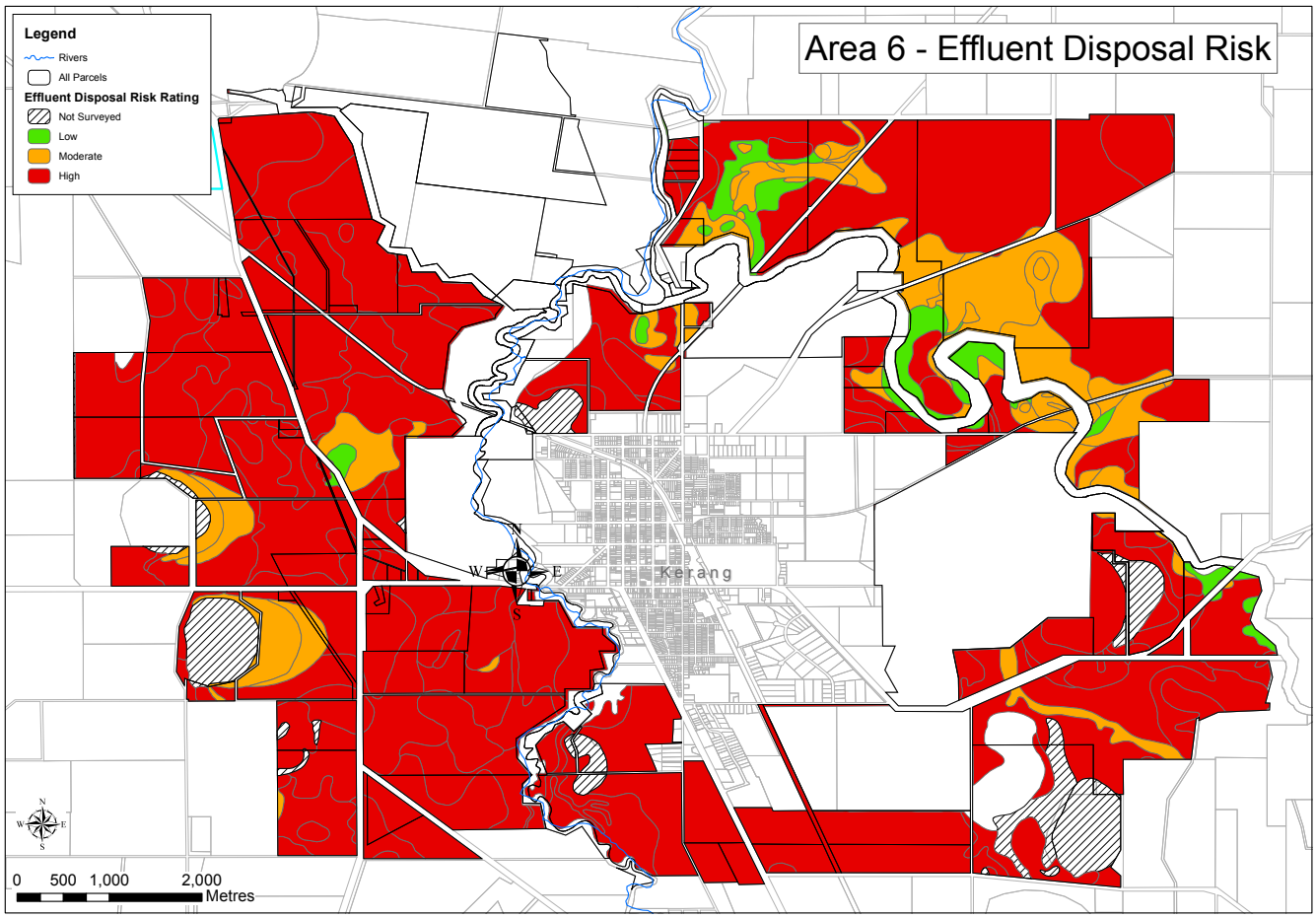
AREA 2 - EFFLUENT DISPOSAL RISK



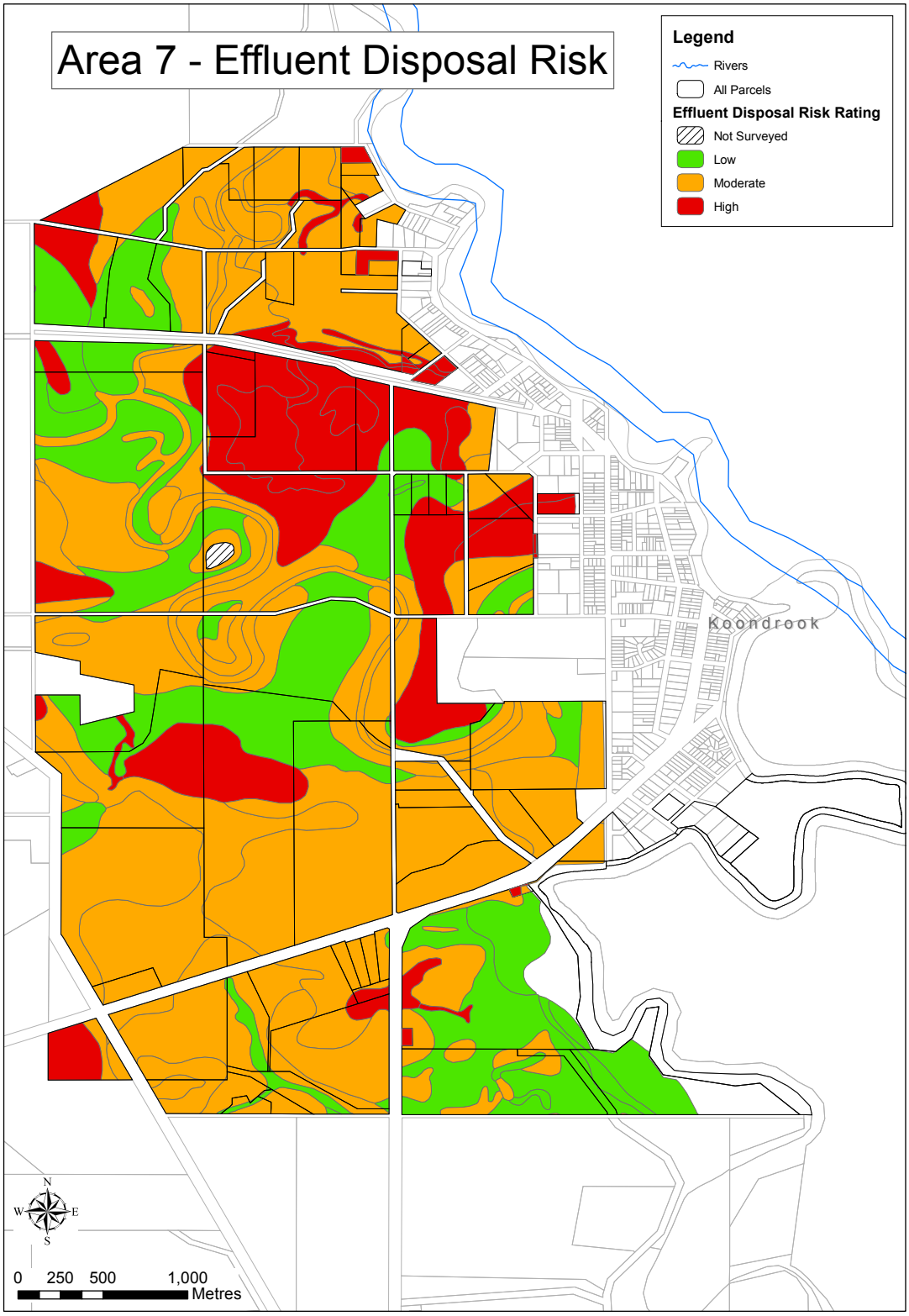
AREA 5 - EFFLUENT DISPOSAL RISK



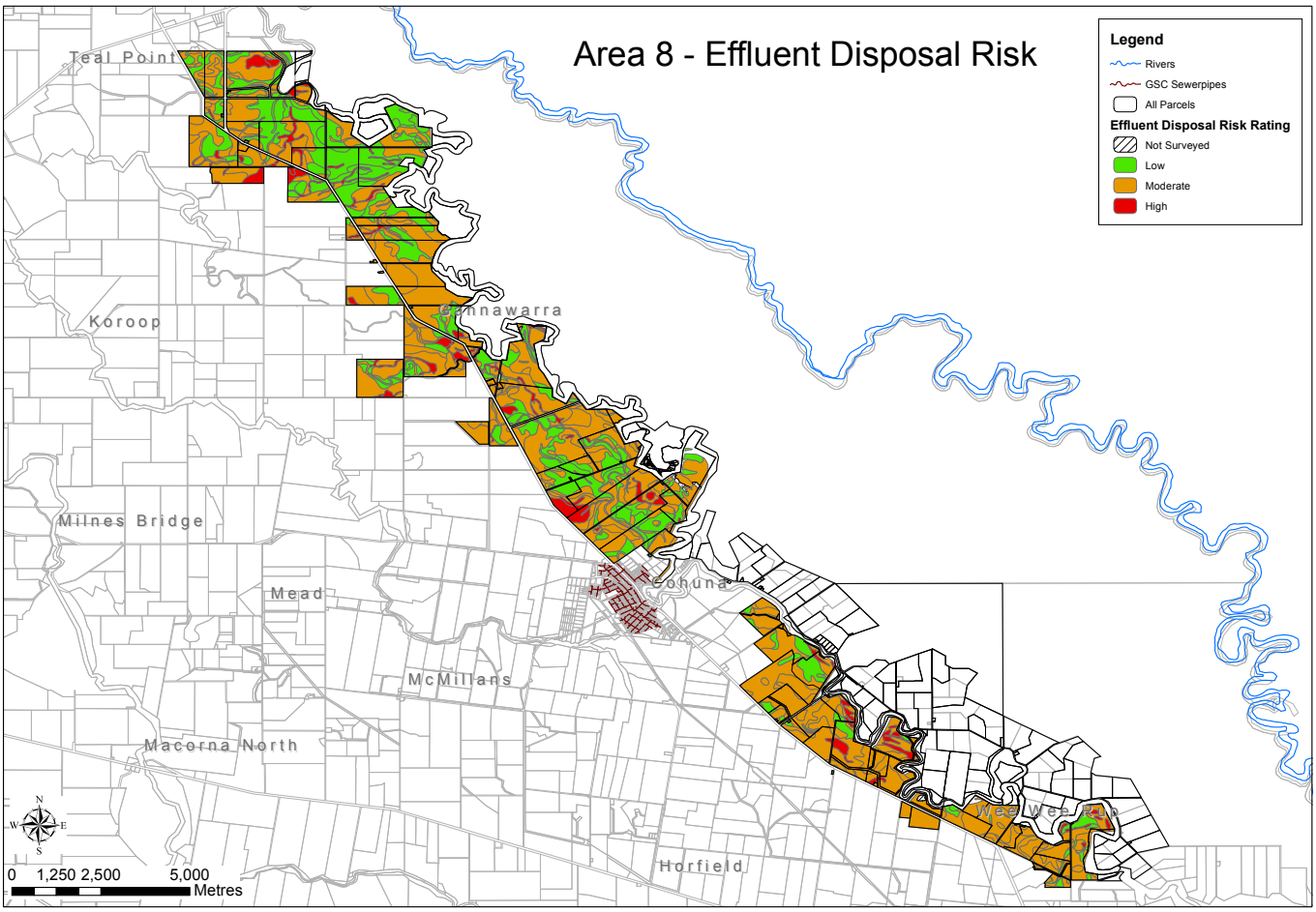
AREA 6 - EFFLUENT DISPOSAL RISK



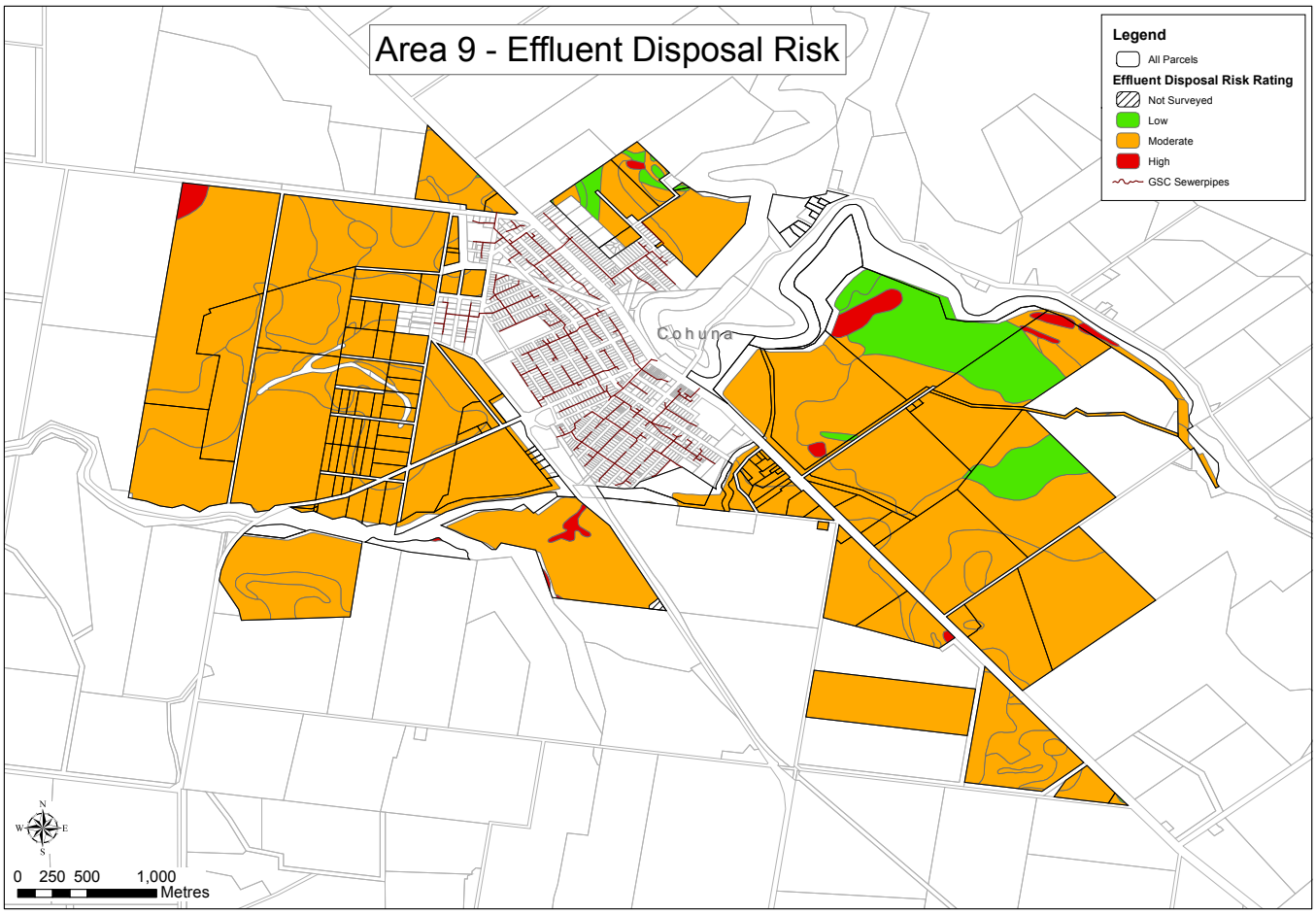
AREA 7 - EFFLUENT DISPOSAL RISK



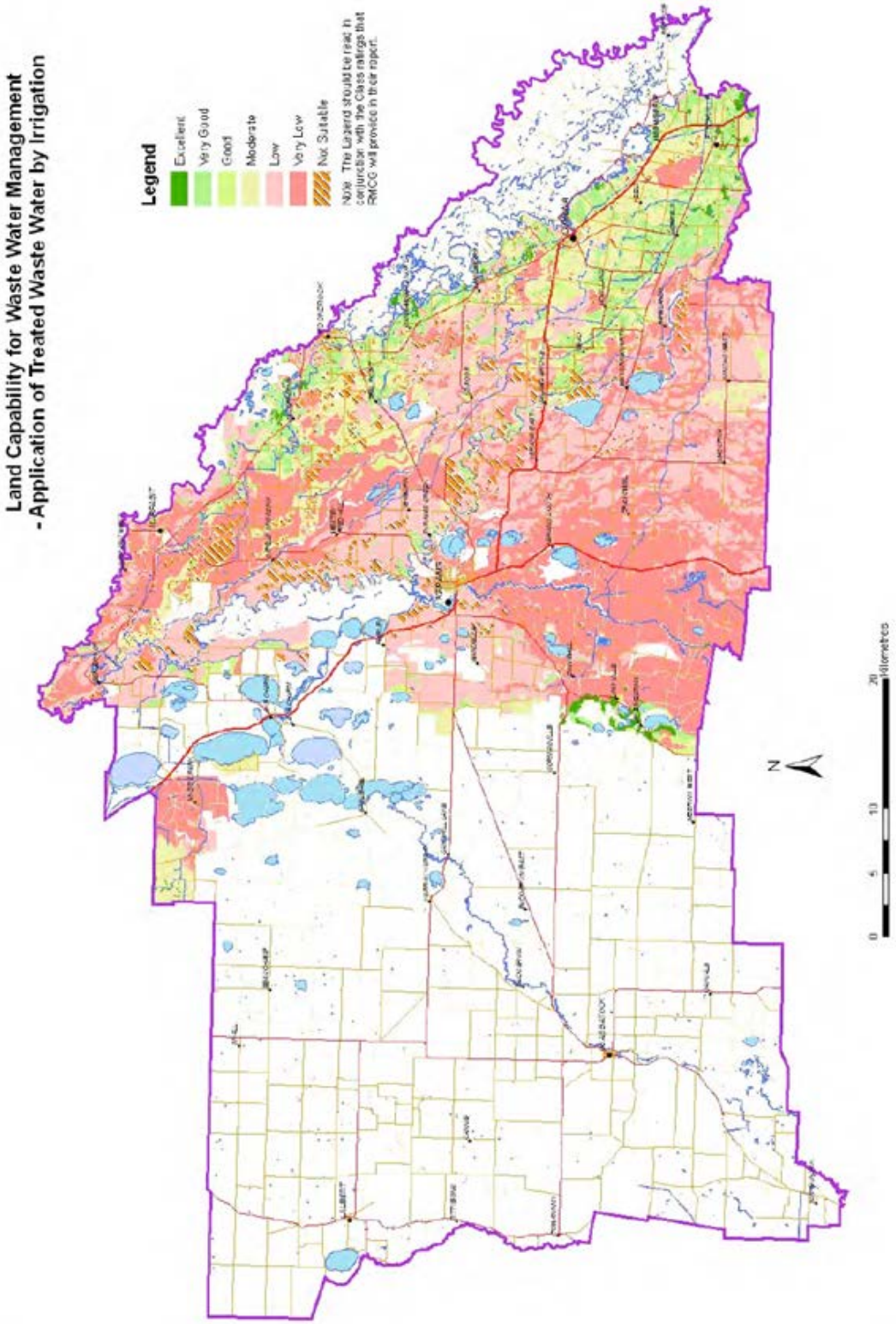
AREA 8 - EFFLUENT DISPOSAL RISK



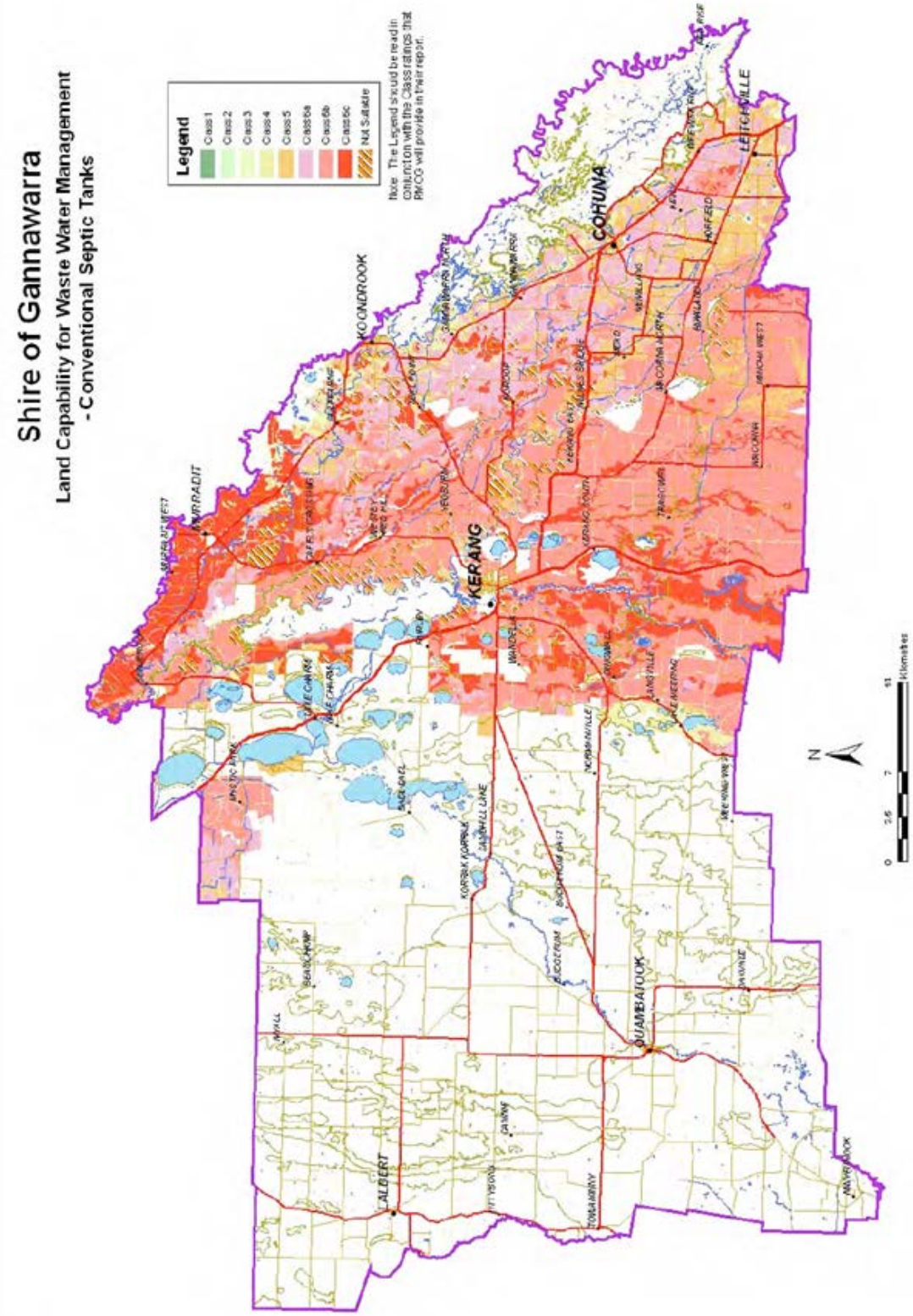
AREA 9 - EFFLUENT DISPOSAL RISK



LAND CAPABILITY FOR WASTE WATER MANAGEMENT - APPLICATION OF TREATED WASTE WATER BY IRRIGATION



LAND CAPABILITY FOR WASTE WATER MANAGEMENT - CONVENTIONAL SEPTIC TANKS



GANNAWARRA
Shire Council