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Onsite Wastewater Management Plan 2026-2031

Yarriambiack Shire Council

OWMP

Version 1

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1. Introduction and context

Effective treatment and management of domestic wastewater – principally consisting of water, sewage and other human-derived wastewater – is integral to managing risks to human health and the environment. Onsite Wastewater Management Systems (OWMS) that perform poorly can have a range of negative environmental, human health and amenity related impacts. This can involve discharging nutrients and pathogens into local drainage systems, waters, and creeks, causing boggy lawns and offensive odours, as well as a risk of illness following contact with effluent. Yarriambiack Shire Council plays an instrumental role in understanding and managing risks associated with OWMS that have a sewage flow rate below 5,000 litres a day.

This Onsite Wastewater Management Plan (OWMP) is a planning and management document that focuses on Yarriambiack Shire Council's understanding of the cumulative risks that OWMS presents in our municipality and shapes Council's activities in managing those risks now and into the future.

The identification and assessment of risks identified in this OWMP supports the development and implementation of actions to protect human health and the environment.

This OWMP was developed with input from relevant stakeholders and will help developers and regulators better appreciate the risks and steps Yarriambiack Shire is taking to protect human health and the environment.

1.1. OWMP purpose

This OWMP supports Council's decision-making when issuing OWMS permits. Risks of harm to human health and the environment (including cumulative risks) will be identified, and the potential impact the OWMS poses in the municipality will be assessed. It then informs Council on what actions to take to better inform decision-making for OWMS permits.

1.2. Legislation

The Environment Protection Act 2017 (the Act) and Environment Protection Regulations 2021 (Regulations) set out the laws that apply to owners and occupiers of land with an OWMS and provide councils with a range of powers and tools to regulate OWMS, including:

- the requirement for a permit issued by Council to construct, install or alter an OWMS
- requirements for the operation and maintenance of OWMS for owners and occupiers
- General Environmental Duty (GED) powers delegated by EPA to Council to allow authorised officers to enter and inspect properties with an OWMS, request documentation, require improvements and issue infringements.

Yarriambiack Shire Council is also empowered under other legislation that has been considered when developing this OWMP and in issuing an OWMS permit. These include:

- *Local Government Act 2020*
- *Water Act 1989*
- *Catchment and Land Protection Act 1994*
- *Safe Drinking Water Act 2003 and Regulations 2015*
- *Planning and Environment Act 1987 (P&E Act)*
- *Subdivisions Act 1988.*

1.3. Guidelines

This OWMP has been developed with consideration to the following guidelines and reference documents:

- Guideline for onsite wastewater management (GOWM)
- Land Capability Assessment Framework, MAV, 2014
- Guidelines for Planning permit applications in open and potable water supply catchment areas (currently under review)
- Planning Practice Note 39: Using the Integrated Water Management Provisions of Clause 56 – Residential Subdivision

2. Risk assessment

A core component of OWMP is a risk assessment method to systematically identify and analyse the risks associated with OWMS across the municipality.

The outcomes of this risk assessment assist Council in identifying and prioritising management actions and understanding the resources necessary to address any unacceptable risks.

The risk management is consistent with

- AS/NZS 1547:2012 and ISO 31000:2018
- EPA, Onsite wastewater management plans Risk Assessment Guidance Final Report (v4.0)
- Onsite wastewater management plans: Guidelines for developing, reviewing and updating.

Figure 1 sets out the structure used to assess risks in this OWMP.

Figure 1 OWMP risk management structure



2.1. Scope

This OWMP covers the municipality but excludes the following:

- Premises with sewage flow rates above 5,000 litres a day, or
- Properties connected to reticulated sewerage, those being;
 - Warracknabeal
 - Hopetoun
 - Rupanyup
 - Murtoa
 - Minyip

Within scope are the following townships (sub-catchments):

- Brim
- Beulah
- Lascelles
- Lubeck
- Murtoa (unsewered)
- Patchewollock
- Rupanyup (unsewered)
- Speed
- Temy
- Turriff Warracknabeal (unsewered)
- Woomelang
- Yaapeet

Each location has been assessed for impacts on human health and the environment, e.g:

- groundwater
- surface water
- special environmental areas
- any downstream considerations

Risk types to be assessed include any human health and environmental impacts as they relate to the installation, operation and maintenance of an OWMS (including potential cumulative impacts of multiple OWMS).

The risk assessments are predominately based on existing OWMS, however the assessments will be used to help inform the risk of the proposed OWMS.

The risk assessments were undertaken in consultation with key stakeholders, with their concerns being considered in the actions identified in this OWMP.

This OWMP has also been developed in the context of resource capacity and financial constraints that are associated with small regional local government authorities. Priorities and actions identified in this OWMP reflect the risks to human health and the environment along with Council's capacity to resource and fund risk mitigations.

Properties outside these towns are considered rural and do not form part of this risk assessment process. They are considered lower risk and applications for onsite wastewater management are dealt with on an individual basis.

Figure 2 – Areas within the scope of this OWMP

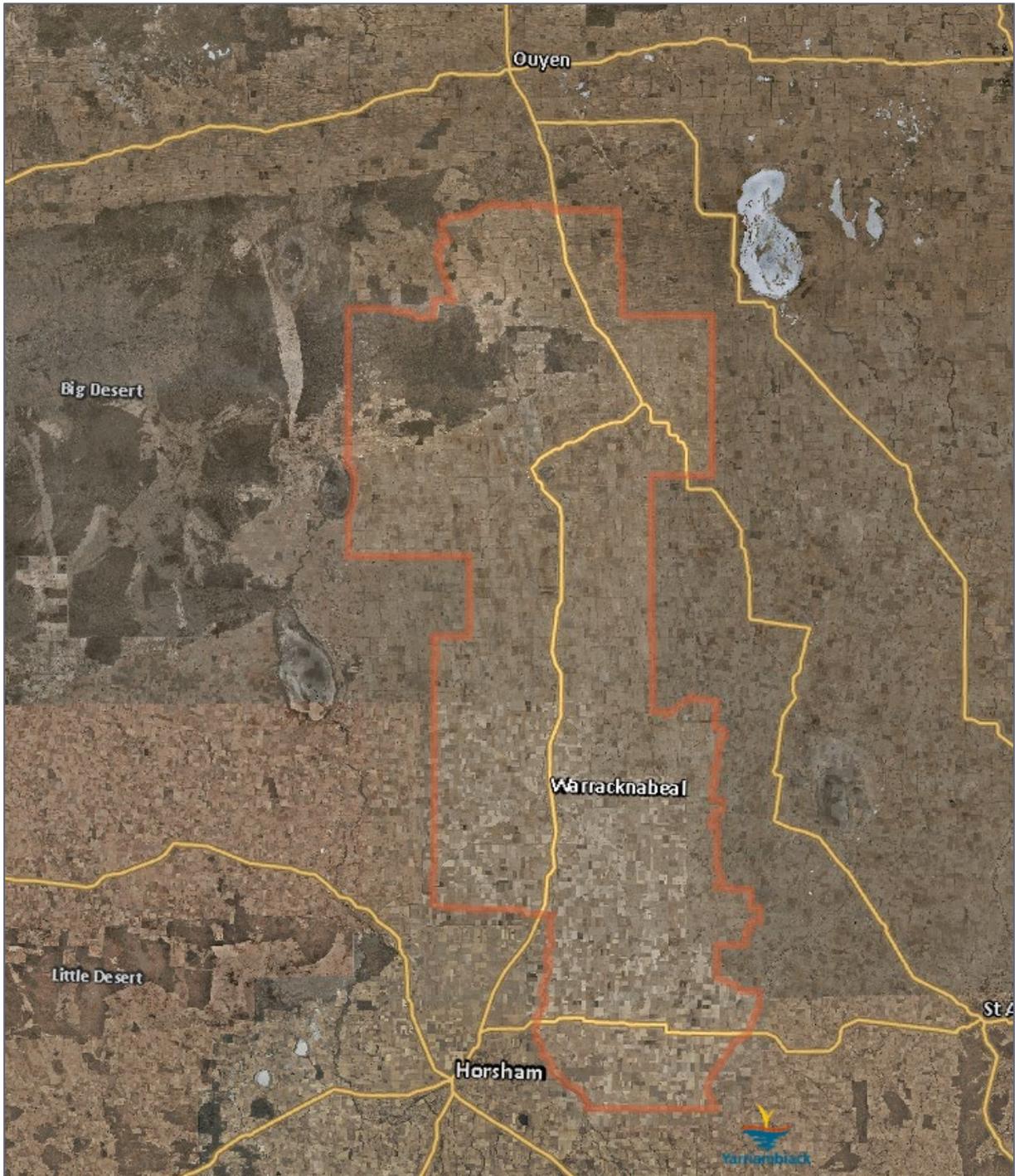


Figure 3 – Brim



Figure 4 – Beulah



Figure 5 – Lascelles



Figure 6 – Lubeck



Figure 7 – Murtoa – unsewered area



Figure 8 – Patchewollock

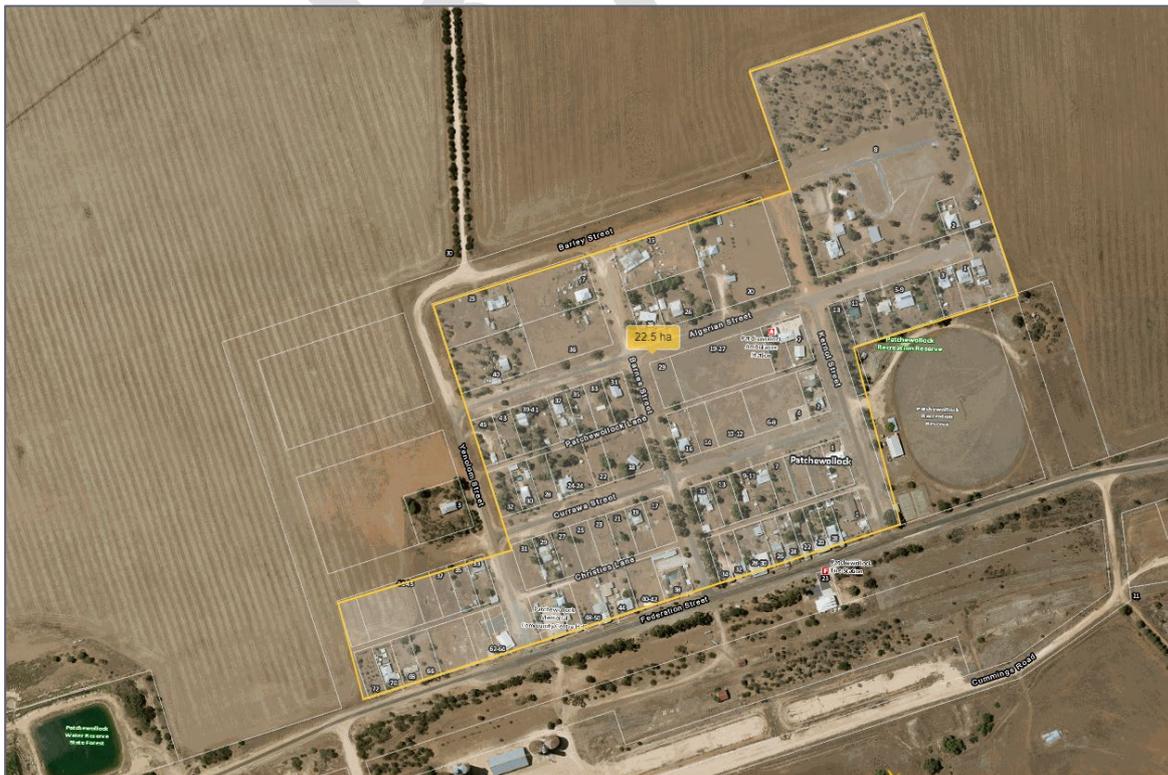


Figure 9 – Rupanyup (unsewered)



Figure 10 – Speed

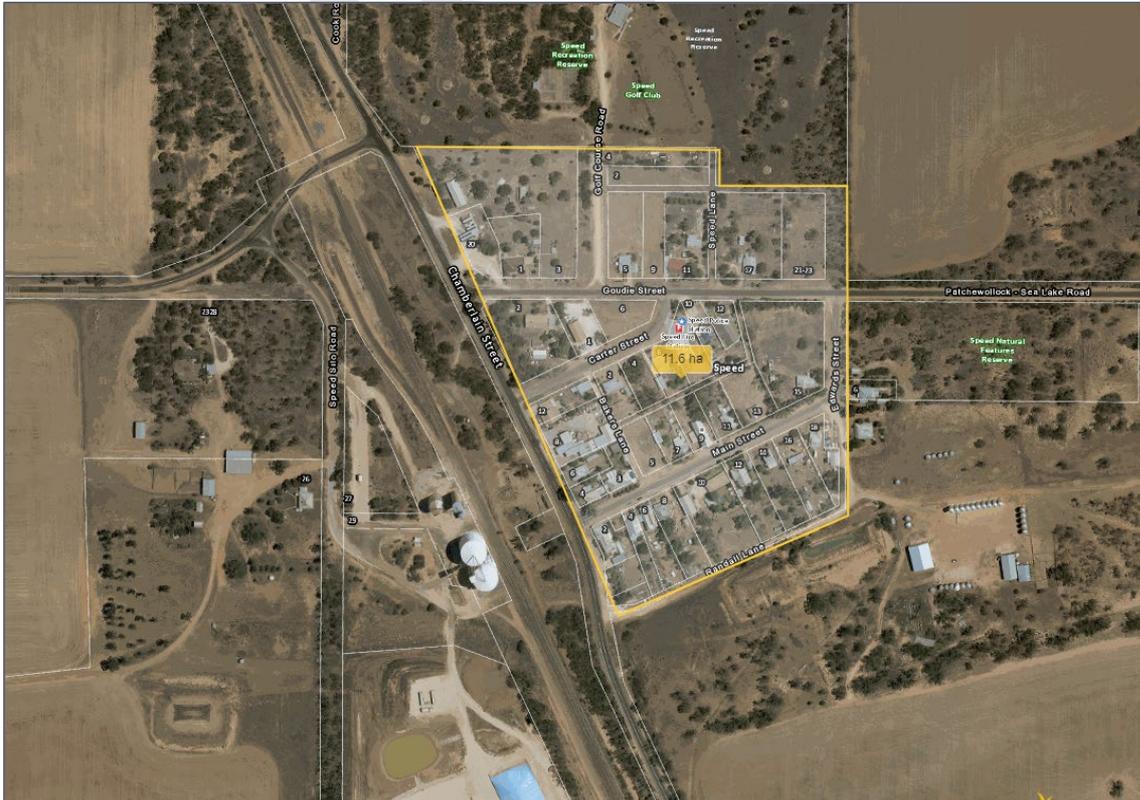


Figure 11 – Tempy



Figure 12 – Turriff

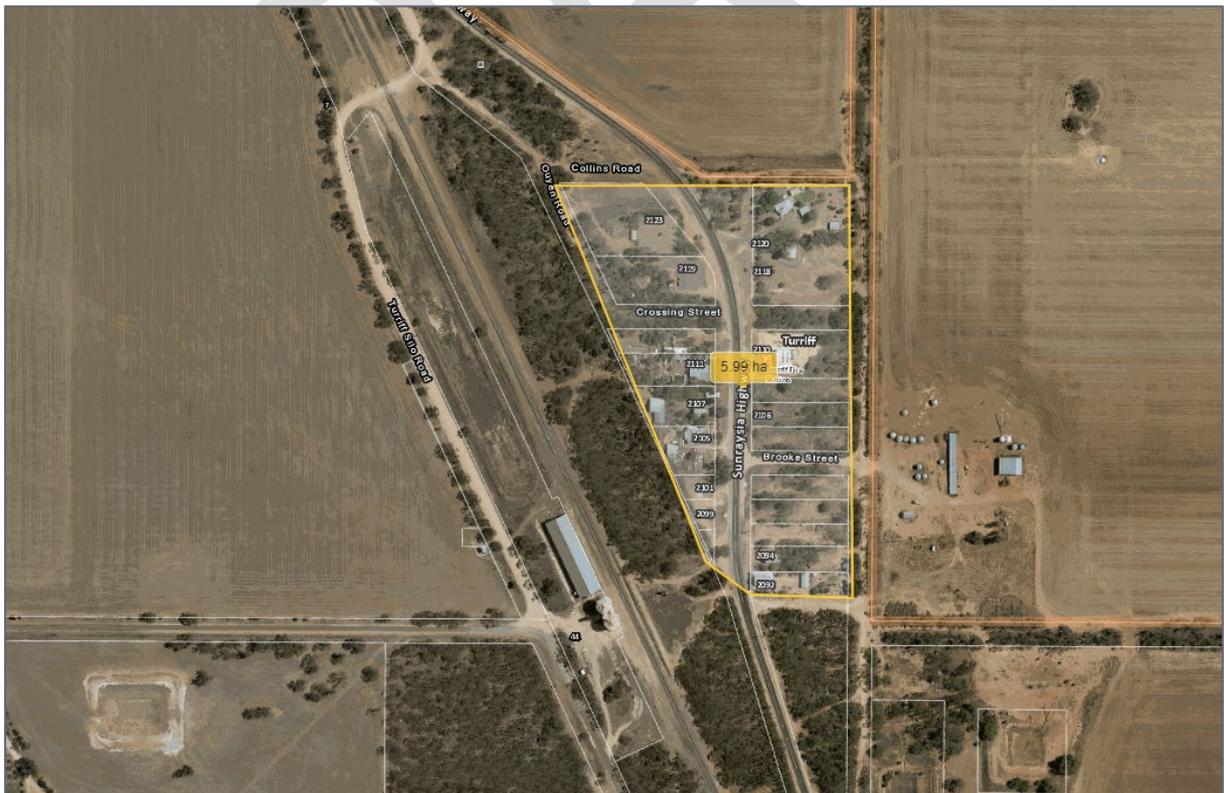


Figure 13 – Warracknabeal – unsewered areas

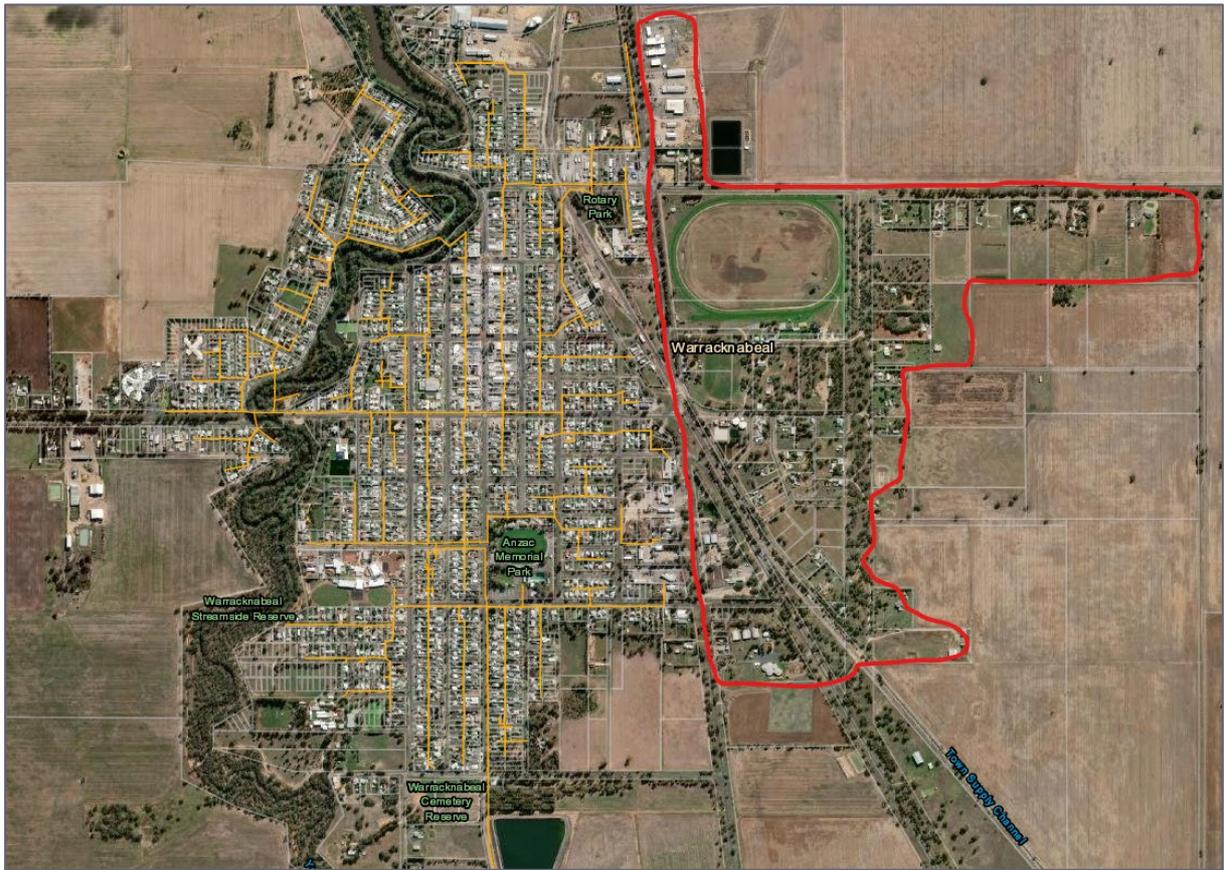
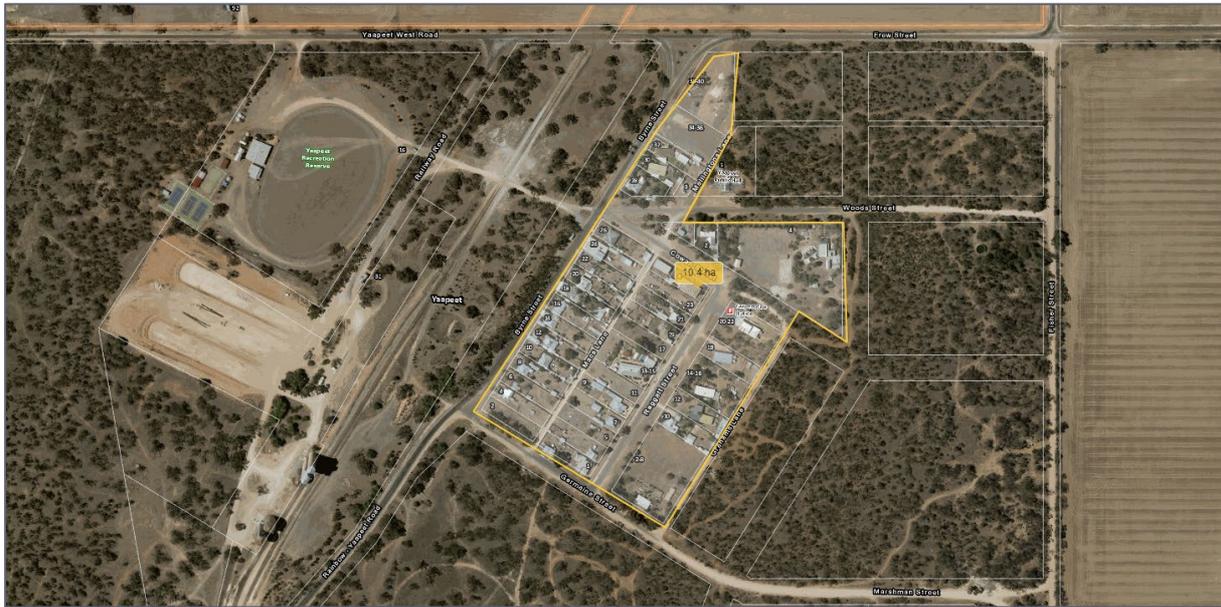


Figure 14 – Woomelang



Figure 15 - Yaapet



2.2. Risk identification

Each location has been risk assessed based on the metrics for risk factors identified in Appendix 1 and using EPA’s risk assessment tools. The risk factors are based on ‘Onsite wastewater management plans – Risk Assessment Guidance’ June 2022 and were discussed and developed in consultation with key stakeholders.

A summary of each location is provided below.

Location	Sources of wastewater threat
Brim	<ul style="list-style-type: none"> • Located near the Brim weir pool (Yarriambiack Creek) no where near any water supply catchment area • The whole town is on septic and small blocks. • Age or performance unknown. • No complaints in the past several years • Soil sandy loam • Relatively flat and subsurface irrigation • Located outside a flood plain area • No groundwater concerns • Relatively few heavy rainfall events
Beulah	<ul style="list-style-type: none"> • Located next to the Yarriambiack Creek and away from any water supply catchment area • The whole town is on septic and relatively small blocks. • Age or performance unknown. • No complaints in the past several years • Soil sandy loam • Relatively flat and subsurface irrigation • Located outside a flood plain area • No groundwater concerns • Relatively few heavy rainfall events
Murtoa	<ul style="list-style-type: none"> • Located west of town, with a small section not sewered. • A total of 7 properties and the septic tank ages or performance unknown. • No complaints in the past several years • Lots big enough • Relatively flat and subsurface irrigation • Located outside a flood plain area

	<ul style="list-style-type: none"> No groundwater concerns Relatively few heavy rainfall events
Warracknabeal	<ul style="list-style-type: none"> East of Henty Highway. A total of 37 properties and the septic tank ages or performance unknown. No complaints in the past several years Only few on smaller lots Relatively flat and subsurface irrigation Located outside a flood plain area No groundwater concerns Relatively few heavy rainfall events
Smaller towns <ul style="list-style-type: none"> - Woomelang - Yaapeet - Speed - Tempy - Lubeck - Turriff - Patchewollock - Lascelles - Rupanyup (unsewered) 	<ul style="list-style-type: none"> Isolated towns away from waterways. Septic tank ages and performance largely unknown. No complaints in the past several years Soil is generally fine sand/loam Relatively flat and subsurface irrigation Located outside a flood plain areas No groundwater concerns Relatively few heavy rainfall events

2.3. Risk analysis

The risk analysis tool provided by the EPA has been used for this assessment. The assessment process calculates the likelihood and consequence of each risk factor resulting in a negative health or environmental outcome and an assessment of the cumulative impacts.

The guidance provided in the EPA OWMP risk assessment guidance has been used to establish environmental and human health criteria.

The results of the risk assessment are provided in Appendix 2.

3. Risk evaluation and treatment

The following Risk Matrix was used based on the Risk Assessment Guideline and the assessment toolkit provided by the EPA.

Table 2 Risk evaluation

Likelihood	Consequence				
	Insignificant	Minor	Moderate	Major	Catastrophic
Rare	Low	Low	Low	Moderate	High
Unlikely	Low	Low	Moderate	High	High
Possible	Low	Moderate	Moderate	High	Very High
Likely	Low	Moderate	High	High	Very High
Almost certain	Low	Moderate	High	Very High	Very High

A summary of the Risk Assessment is provided in Appendix 3. No location had risk of human or environmental contamination with an overall rating of high or very high.

Only moderate and low levels of risk were identified across each of the locations. For low risk outcomes, no further actions are being considered.

For moderate risk levels, mitigation actions should be planned and implemented to reduce the level of risk.

The table below summarises specific risks identified as greater than low risk. the locations and moderate risks levels, mitigating controls in place and whether they are deemed acceptable.

Table 3 Risk evaluation criteria

Risk Level	Risk treatment required
Low	No further actions needed to eliminate risks. Existing controls must be maintained and monitored appropriately
Moderate	Risk mitigation actions should be planned and implemented to reduce the level of risk. Timelines may be longer term. Existing controls must be maintained and monitored appropriately.
High	Implement relevant controls as soon as possible to mitigate the level of risk. High priority timeframes should be implemented (planned and budgeted for within the current or next financial year). Existing controls must be maintained and implementation reviewed on an ongoing basis. .
Very High	Implement relevant controls to reduce risk as soon as possible to mitigate the level of risk. Immediate priority timeframes should be set. Existing controls must be maintained and implementation reviewed on an ongoing basis.

A summary of the Risk Assessment is provided in Appendix 3. No location had risk of human or environmental contamination with an overall rating of high or very high.

Only moderate and low levels of risk were identified across each of the locations. For low risk outcomes, no further actions are being considered.

For moderate risk levels, mitigation actions should be planned and implemented to reduce the level of risk.

Table 4 Specific areas identified as greater than low risk

Risk	Risk component	Location	Cause
Risk of contamination of nearest watercourse	Human health	Brim, Beulah, Woomelang,	Predominately due to size of area, unknown condition and age of septic systems and soil types
	Environment	Woomelang	Predominately due to size of area and condition and age of septic systems
Risk of contamination of groundwater	Human health	Woomelang	Size of catchment
	Environment	Woomelang	Size of catchment

Smaller locations were not assessed as the number of sites and systems were considered too small. Very few OWMS applications are received from these locations and therefore likely to be considered low risks.

Cumulative risks within or across locations and sub catchments have been assessed and considered for further action where demonstrated environmental or human health risk has increased.

3.1. Actions

Locations and risks with unacceptable controls required further treatment. These unacceptable risks, along with an action plan to reduce the risk to an acceptable level, are detailed in Appendix 4.

4. Monitoring and Review

This OWMP will be used to feed into annual budget and programming cycles of the Council. It will be reviewed at a minimum annually to remain up to date and whenever required to:

- reflect changes in the organisation, resources or policies

- identify and address emerging risks
- ensure that identified actions are current and effective in reducing the identified and emerging risks.

Specific risks that require additional monitoring, inspections or review are listed in the action plan in Appendix 3.

5. Consultation

Council has directly consulted with the following agencies as part of this review:

- Grampians Wimmera Mallee Water
- Wimmera Catchment Management Authority
- Neighbouring Councils

Grampians Wimmera Mallee Water has been consulted regarding their plans for wastewater infrastructure, risks related to water catchments and their approach to development approval processes.

Regional strategies, mapping and Wimmera Catchment Management Authority plans were used to provide guidance on surface and groundwater management in the region.

Yarriambiack Shire Council worked alongside neighbouring Councils that resulted in a consistent approach to risk assessments in the region and supporting material to help developers, plumbers and homeowners approach OWMS in a consistent and transparent manner.

The OWMP is now available as a draft for further stakeholder and public comment. Local plumbers, developers and businesses are being invited to comment on the draft and these will be considered before the OWMP is finalised and considered by Council for adoption.

6. Review and update

This OWMP will be reviewed annually by internal staff and actions reviewed in line with progress made and any emerging risks.

The OWMP review will form part of the annual budget and planning cycle.

It is recommended that the full OWMP is to be reviewed in five years.

7. Funding and budget allocation

This OWMP will require the allocation of budget and resources throughout the full 5-year implementation. The majority of actions will be absorbed into the existing Environmental Health budget. Where there are specific projects, funding in the form of grants may be applied for from the State Government and other peak associations. Additional funding may also be sought in the respective budgets for each year of the plan.

8. References

- EPA, Onsite wastewater management plans, Guidelines for developing, reviewing and updating
- Regulating onsite wastewater management systems: local government toolkit, 2021
- Victorian water sources online
- Land capability assessments
- Council held GIS databases, Council records (permits, LCA)
- Data Vic (vic.gov.au) – flood mapping, groundwater depths
- Flood studies

- WMIS Database (<https://data.water.vic.gov.au/>) bore sites, groundwater catchments
- Bureau of Meteorology: Climate Data Online - Map search (bom.gov.au)
- VIC Department of Agriculture Soil Surveys
- Vicmap Elevation DEMs
- Atom Consulting (2022) *Onsite wastewater management plans risk assessment guidance*.
- EPA Victoria (2023) *Guideline for onsite wastewater management (under development)*.
- Department of Sustainability and Environment (2012) *Planning permit applications in open, potable water supply catchment areas*.
- Municipal Association of Victoria, Department of Environment and Primary Industries and EPA Victoria (2014) *Victorian Land Capability Assessment Framework*.
- Standards Australia 2012, AS/NZS 1547: *Onsite domestic-wastewater management*

9. Appendices

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APPENDIX 1: Risk factors

The following table lists the risk factors used to assess the risk of each catchment. Results are shown in Appendix 2.

Risk Factor
Number of onsite systems in the location
Performance of existing systems (type and age of systems)
Lot size
Topography
Soil type
Proximity to water courses (surface water and Special Water Supply Catchments)
Proximity to flood plains
Proximity to / density of groundwater bores
Groundwater depth and quality
Weather conditions (rainfall)

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APPENDIX 2: Risk Assessment Results (major towns)

Risk	Risk component	Brim	Beulah	Murtoa	Warracknabeal	Woomelang
Risk of contamination of nearest watercourse	Likelihood - treatment failure	Almost certain				
	Likelihood - transfer offsite	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Likelihood - offsite to end point	Unlikely	Unlikely	Unlikely	Rare	Unlikely
	Likelihood - contamination of water course	Possible	Possible	Possible	Possible	Possible
	Consequence (Human health)	Minor	Minor	Minor	Insignificant	Insignificant
	Consequence (Environment)	Insignificant	Insignificant	Minor	Insignificant	Insignificant
	Risk (Human health)	Moderate	Moderate	Moderate	Low	Low
	Risk (Environment)	Low	Low	Moderate	Low	Low
Cumulative risk	Cumulative - likelihood	Possible				
	Cumulative - consequence (health)	Minor				
	Cumulative - consequence (environment)	Minor				
	Human Health (recreation)	Moderate				
	Environment (sensitive end point)	Moderate				
Risk of contamination of SWSC potable water offtake	Likelihood - treatment failure	Almost certain				
	Likelihood - transfer offsite	Unlikely	Unlikely	Unlikely	Unlikely	Unlikely
	Likelihood - offsite to end point	Unlikely	Unlikely	Unlikely	Rare	Unlikely
	Likelihood - contamination of water course	Possible	Possible	Possible	Possible	Possible
	Consequence (Human health)	Minor	Minor	Minor	Insignificant	Insignificant
	Risk (Human health)	Moderate	Moderate	Moderate	Low	Low

Cumulative risk	Cumulative - likelihood	Possible				
	Cumulative - consequence (health)	Minor				
	Risk (Human health)	Moderate				
Risk of groundwater contamination	Likelihood - treatment failure	Almost certain				
	Likelihood - groundwater contamination from infiltration	Rare	Rare	Unlikely	Rare	Rare
	Likelihood - groundwater contamination from bore ingress (runoff)	Rare	Rare	Rare	Rare	Rare
	Likelihood - groundwater contamination	Unlikely	Unlikely	Possible	Unlikely	Unlikely
	Consequence (Human health)	Minor	Minor	Minor	Insignificant	Insignificant
	Consequence (Environment)	Insignificant	Insignificant	Minor	Insignificant	Insignificant
	Risk (Human health)	Low	Low	Moderate	Low	Low
	Risk (Environment)	Low	Low	Moderate	Low	Low
Risk of catastrophic failure (Flooding)	Likelihood - flooding	Rare	Rare	Rare	Rare	Rare
	Consequence (Human health)	Minor	Minor	Minor	Insignificant	Insignificant
	Consequence (Environment)	Insignificant	Insignificant	Minor	Insignificant	Insignificant
	Risk (Human health)	Low	Low	Low	Low	Low
	Risk (Environment)	Low	Low	Low	Low	Low

APPENDIX 3: Summary of Risk Ratings

Risk	Risk component	Brim	Beulah	Murtoa	Warracknabeal	Woomelang
Risk of contamination of nearest watercourse	Human health	Moderate	Moderate	Moderate	Low	Low
	Risk (Environment)	Low	Low	Moderate	Low	Low
Cumulative risk	Human Health (recreation)	Moderate				
	Environment (sensitive end point)	Moderate				
Risk of contamination of SWSC potable water offtake	Human health	Moderate	Moderate	Moderate	Low	Low
Cumulative risk	Human health	Moderate				
Risk of groundwater contamination	Human health	Low	Low	Moderate	Low	Low
	Environment	Low	Low	Moderate	Low	Low
Risk of catastrophic failure (Flooding)	Human health	Low	Low	Low	Low	Low
	Environment	Low	Low	Low	Low	Low

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APPENDIX 4: OWMP ACTION PLAN

Action steps	Team/ partners	Responsible person	Constraints and Risks	Monitoring indicators
Information and data collection				
All wastewater information is readily accessible in a single database and enables identification of areas of critical concern and confirm number of unsewered properties	YSC	EHO	Budgeting / Resources / Time / technology	Up date database
Electronic database fully up to date and linked to property numbers and GIS	YSC	EHO	Budgeting / Resources / Time / technology	Up date database
Digitalise all records for wastewater systems onto a single database - historic hardcopy information verified and uploaded to Council database and linked to properties.	YSC	EHO	Budgeting / Resources / Time / technology	Up date database
Conduct onsite inspections of properties without records to confirm onsite wastewater management method Maintain accurate database of properties sewerred	YSC	EHO	Budgeting / Resources / Time / technology	Up date database
Develop a regional tool for use with the GPS soil mapping layers to provide conservative estimates for appropriately sized wastewater disposal areas (in accordance with EPA Certificates of Approval and AS1547).	YSC	EHO	Budgeting / Resources / Time / technology	Mapping established

Action steps	Team/ partners	Responsible person	Constraints and Risks	Monitoring indicators
Establish process for GPS mapping for 'as constructed' on-site sewage systems	YSC	EHO	Budgeting / Resources / Time / technology	Process established
Education and Awareness				
Establish Land Capability Assessment Standardisation	YSC	EHO	Budget/ resources/ time	Standardisation complete
Clearly define the planning permit and referrals process including standard conditions	YSC	EHO / planning	Budget/ resources/ time	Planning referral standard conditions provided
Develop standard condition requirements relating to developments in unsewered areas	YSC	EHO	Budget/ resources/ time	Standardisation complete
Increase distribution of Council education publications to new wastewater system owners, new residents/owners and real estate agents	YSC	EHO	Budget/ resources/ time	Updated education materials publicly available
Ensure wastewater management information on Council's website is relevant and easy to understand Focus area: Sewer Connection and Community Sewerage Program Objectives Strategies Advocacy into Grampians Wimmera Mallee Water's Community Sewerage Program	YSC	EHO	Budget/ resources/ time	Updated education materials on website

Action steps	Team/ partners	Responsible person	Constraints and Risks	Monitoring indicators
Collaboration meetings between Water Corporation and Council regarding implementation of mandatory connection to sewer for new developments within Shire.	YSC / GMMWater	EHO	Budget/ resources/ time	Meeting outcomes
In conjunction with Water Corporation, provide communications to properties that have sewer available but have no connection record	YSC / GMMWater	EHO	Budget/ resources/ time	Updated education materials
Ensure retention of any secondary treatment systems at a declared property is based on evidence of compliance with EPA requirements (EPA Publication: 891.4) 3. Ensure declared properties that cannot show evidence of compliance are connected to sewer.	YSC	EHO	Budget/ resources/ time	Process adopted and records provided
Regulation and Enforcement				
Develop Policy for sub-division and development.	YSC	EHO	Budget/ resources/ time	Policy adopted / guidelines developed
Reticulated sewer extension to priority areas.	YSC / GMMWater	GMMWater	Budgeting / justification	Justification supported for sewer extension

Action steps	Team/ partners	Responsible person	Constraints and Risks	Monitoring indicators
All unsewered site developments are capable of adequately treating and containing all effluent on site prior to Planning approval.	YSC	EHO / Planning dept	Resources / Time	Process established
Maintain up to date and relevant wastewater specifications and standard conditions for planning permits	YSC	EHO / Planning dept	Resources / Time	Permit approvals
EHOs undertake specialist training in wastewater management	YSC	EHO	Budgeting / justification / timing	Training delivered
Collaboration and review				
Regular review of plan as per legislation requirements	YSC	EHO	Resources / Time	Review conducted
Review and update the plan every five years	YSC	EHO	Budget / Resources / Time	Plan updated
Provide input into proposed legislation and standards pertaining to onsite wastewater management or reticulated sewer	YSC	EHO	Resources / Time	Input / submissions
Establish ongoing process for monitoring receiving environments	YSC	EHO	Budget / Resources / Time	Process adopted

Action steps	Team/ partners	Responsible person	Constraints and Risks	Monitoring indicators
Regularly update and upload property connection data to GIS	YSC	EHO	Budget / Resources / Time / technology	GIS up to date
Conduct regular water sampling of waterways to assist with evidence-based risk assessment.	YSC	EHO	Budget / Resources / Time	Samples collected

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