

# LODDON SHIRE COUNCIL

## DOMESTIC WASTEWATER MANAGEMENT PLAN 2015-2019



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# EXECUTIVE SUMMARY

This Domestic Wastewater Management plan (DWMP) has been prepared to assist in meeting Loddon Shire Council's obligations under the State Environment Protection Policy (Waters of Victoria).

During the development of this plan Council considered the requirements in order to comply with the revised Ministerial Guidelines for Planning Permit applications in open potable water supply catchments, which would allow increased intensity of development beyond the current 1 in 40 hectare guideline.

The impact of this guideline is however limited to 2% of the total geographic area of the Shire, much of which is comprised of existing developed blocks or crown land. In consideration of this, Council have determined that the associated potential cost benefit for facilitating increased levels of development within this area, is not proportional to the expected cost implications for complying with the minimum guideline requirements.

Implementation of this DWMP shall therefore be required to utilise existing resources maintained by Council.

In identification of inherent risk, specific weighting has been given to the potential impacts upon beneficial water sources which contribute to residential, commercial or recreational activity within the Shire.

The outcome of this plan provides for various actions across the following priority areas:

- *Communication* – this will include the development of a waste water communication program for existing and new residents.
- *Policy and procedures* – includes the development of policies and procedures for waste water management across the organisation
- *Reporting and reviewing* – which includes the development of a review program that includes reporting to Council.

The introduction and implementation of this DWMP will result in the development of policies and procedures to support council staff when undertaking work in the waste water management area.

## 1 PURPOSE

Victorian Councils are required to prepare a Municipal Domestic Wastewater Management Plan (DWMP) to address potential risks to public health and the environment that result from treatment and disposal of wastewater from homes and businesses in unsewered areas. The development of a DWMP is consistent with Government policy direction, including the State Environment Protection Policy (Waters of Victoria) that requires Councils to develop such plans.

In preparing this DWMP, the requirements to comply the revised Ministerial Guidelines for Planning Permit applications in open potable water supply catchment areas were considered. The Ministerial Guideline affects Declared Special Water Supply Catchment (DSWSC) areas only, which in the case of Loddon Shire is a very small section of the municipality (approximately 2% by geographic area), and has an impact on the potential intensity of development within the affected area.

## 2 BUDGET IMPLICATIONS

The adoption of this plan is expected to have no direct operational cost impact on Council's Environmental Health Department, as implementation will be reliant on the utilisation of existing resources.

There may however be future financial implications in respect of processing of planning applications which fail to comply with the ministerial guideline in respect to development intensity within the DSWSC area of the Shire. Such cost implications cannot however be quantified at this time, and predominantly relate to preparation and representation for applications which may go before VCAT.

## 3 RISK ANALYSIS

Domestic wastewater is waste generated by household activities including toilet, bathroom, clothes washing and kitchen cleaning activities, and contains high levels of micro-organisms and chemicals that are capable of causing illness.

This waste is either transported away from the property for treatment (reticulated sewerage system) or treated on-site via a domestic wastewater system such as a septic tank and effluent disposal trench.

Wastewater poses a public health, environmental, legal and economic risk. Review of the scientific literature available clearly establishes these risks including decisions made by the courts in relation to councils' responsibilities and their management of statutory duties. The risks associated with domestic wastewater have been summarised in the following table:

**Table 1: Risk Analysis**

<b>Hazard Area</b>	<b>Associated Risks</b>
Public Health	<ul style="list-style-type: none"><li>• Drinking water supplies becoming contaminated with chemicals, bacteria, protozoa and viruses from effluent as a result of poorly drained soils; small lot sizes; high usage; ageing septic tanks; and lack of proper maintenance of septic tanks. Illnesses that are contracted from effluent contaminated water include Gastroenteritis, Shigellosis, Giardiasis, Cryptosporidiosis and Hepatitis.</li><li>• Recreational Water - Statistically significant risk of illness if people come into contact with contaminated water used for recreational purposes. Illnesses include ear and eye infections and respiratory infections.</li></ul>
Environmental	<ul style="list-style-type: none"><li>• Septic tanks contribute high rates of nitrogen and phosphorous to water catchments due to surface runoff.</li><li>• Septic tanks create direct bacterial contamination of the environment with ten times the amount of E coli (a disease producing bacteria found in animal/human waste) found in catchments near residential areas compared to catchments without residential areas.</li><li>• The highest levels of faecal coliforms were found in catchments serving septic tanks compared to other disposal systems.</li><li>• A number of environmental contamination incidents have occurred in Australia and Victoria e.g. Benalla, Venus Bay.</li></ul>
Economic	<ul style="list-style-type: none"><li>• From an economic perspective trying to alleviate years of environmental contamination is costly and involves overcoming a host of practical issues. Management should be focussed on prevention.</li><li>• In the event of contamination of ground and other waters there is the cost of advising residents, visitors and tourists to the area of the risk, managing community anxiety and the indirect costs associated with the perception that the area is unsafe.</li></ul>
Legal	<ul style="list-style-type: none"><li>• Council has quite clearly established statutory duties under the provisions of the Environment Protection Act 1970 and Public Health and Wellbeing Act 2008.</li><li>• Council has a duty to exercise its enforcement powers where it knows there is a breach of the legislation and there is a likelihood of injury.</li><li>• Two court cases have determined that a failure to act will be a breach of the duty of care owed by the Council and it will be liable in negligence for any damages caused by the breach of the duty of care</li></ul>

## 4 BACKGROUND INFORMATION

### 4.1 Community profile

The Loddon Shire is located in Central Victoria adjacent to the City of Greater Bendigo. The Shire covers an area of around 6,700 square kilometres with a population of approximately 7,491 in 2012. The population is spread over eighteen towns, hamlets and localities with the major population centres being Wedderburn, Bridgewater, Inglewood, Boort and Pyramid Hill. The Shire forms part of Victoria's Goldfields Tourist Region and incorporates the majority of the world-famous Golden Triangle.

Major features of the Shire include the Loddon River, Terrick Terrick National Park, Leaghur State Park, Kooyoora State Park, Lake Boort, Major Mitchell Trail, Mount Korong, and Melville Caves.

The topography of the Shire varies from rolling hills in the south to broad flat or slightly undulating grassland to the east and north. The municipality is divided vertically by the Loddon River which flows from the catchments in the south, through to the Murray River.

In addition to the Loddon River, the Shire contains a number of important waterway systems including Serpentine, Bullock, Fenton and Bendigo creeks and the smaller tributaries of Bullabul, Seven Months, Korong and Nardoo creeks. Major water bodies in; or immediately adjacent to; the Shire include Laanecoorie Reservoir, Boort lakes, Kow Swamp and Woolshed Wetlands.

The region has a distinct rural character with farming and agriculture playing a major role. More recently crops consisting of wine grapes, tomato growing, olives, oil seeds, and fodder crops have replaced the traditional grains, sheep, beef cattle, dairy, pigs, and poultry.

The southern and south west parts of the Shire still have large areas of natural bushland and Box Ironbark forests, while the central areas have been cleared for grain and prime lamb/wool production. The northern and north central areas are irrigated and used for farming purposes.

The Shire has a Mediterranean style climate with dry warm summers and wet cool to mild winters.

Some key economic and social issues within the Shire are as follows:

- The municipality is in the bottom 5 local government areas in the state for relative social disadvantage.
- The median age for the Shire is 50yrs and the greatest demographic growth is in the older age groups (significantly higher than the regional and state median ages).
- The median weekly income is \$686 which is two-thirds of the regional median and almost half of state median weekly incomes.
- The municipality has a significant amount of very low cost housing both for purchase and rent compared to the regional and state average prices.

### 4.2 Domestic wastewater profile

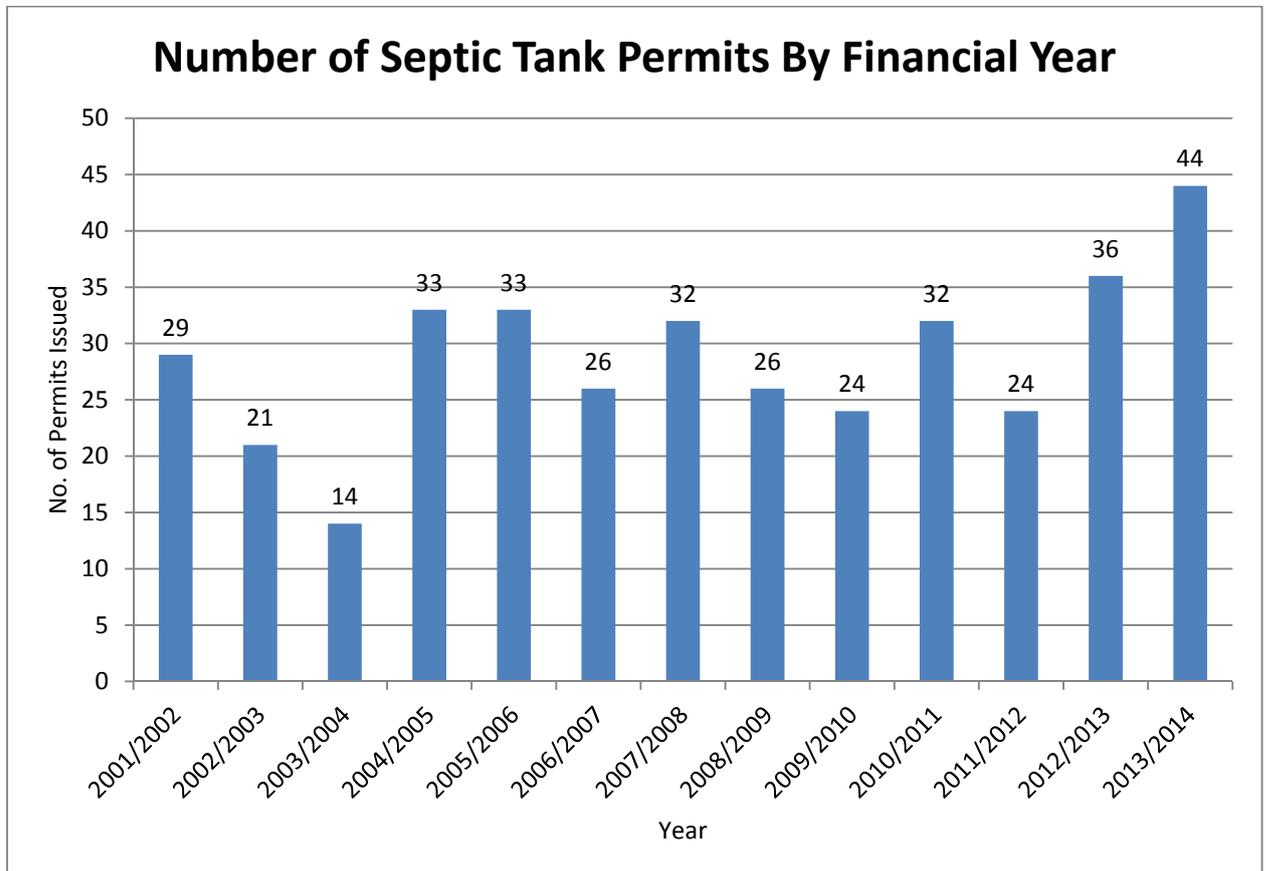
The five major townships within Loddon Shire are all serviced by a reticulated sewer system operated by Coliban water. Within the remaining areas of the Shire there are an unknown number of septic tank systems. Up to 85% of the septic systems are located in unsewered townships and most are more than 20 years old.

There is currently one township in the Shire where the majority of properties discharge their grey water beyond their property boundaries. This practice is no longer permitted in Victoria for new

systems or existing systems being upgraded. Many of these properties have been connected to a community grey water disposal system.

The number of permits issued to install new systems in the Shire from June 2001 to June 2014 was 374 with an average of approximately 29 permits per year. In recent years the number of permits issued has been steadily increasing.

**Figure 1: No. of Septic Permits Issued June 2001 to June 2014**



Typical issues associated with domestic wastewater within the Shire include:

- Poor land capability for effluent disposal.
- Small allotments in townships that limit the potential for development.
- Limitations with existing septic systems that have:
  - Small disposal areas based on historic standards.
  - Non-baffled, septic tanks built on site.
  - Off-site grey water disposal.
- Poorly maintained systems that owners are not having desludged.
- Inadequately sized disposal areas.
- Household behaviours that result in the system becoming less efficient.
- Non maintenance and servicing of systems that require regular maintenance.
- Houses within sewerred areas that have not connected to the sewer; and utilise aging domestic wastewater systems.

On site wastewater management issues are exacerbated in unsewered towns and those areas serviced by reticulated water supplies or a license to extract water from waterways. Provision of reticulated water reduces the imperative to conserve water, compared to rainwater-only supply. This tends to result in greater household water use, leading to larger volumes of wastewater being discharged, beyond the intended capacity of the system and disposal area.

The visible impact of poor on-site wastewater management has been masked in recent years due to the dry conditions. However, in average and higher rainfall years, the impacts of poor wastewater management can be seen in street drains and runoff into neighbouring properties.

### **4.3 2013 - 2015 Audit Project**

Utilising the funds that remained from the Korong Vale Stormwater / Greywater project; which was part of the state governments Country Towns Water Supply and Sewerage Upgrade Program; a Wastewater Audit Project was commenced in July 2013. The aim of this project was to visit established dwellings within the Shires unsewered towns and hamlets and within 100 meters of the Loddon River, Serpentine Creek, Bears Lagoon and Bullabul creek.

The primary purpose of the project was to obtain a clear picture of the issues associated with wastewater disposal within the Shire and in particular within the audited areas which would provide clear guidance for the development of this document.

It should be noted that the project has been carried out in a period of below average rainfall and off site discharge by properties significantly decreases in drier periods. As smaller allotments have a greater capacity in drier periods to retain wastewater that is generated on site, it also means that failing systems are not readily visible.

The project has found that of the 429 number of systems inspected to date:

- 89.5% of properties were keeping their wastewater on their properties
- 70% of properties are lived in by permanent residents with an additional 14.3% being semi or irregular residents
- 71.2% of people had some kind of water saving device (mostly dual flush toilets)
- The majority of properties use a combination of tank and reticulated water supply.
- 68.4% had all purpose systems, 8.7% had a Greywater system and 9.2% of systems required pump wells and most systems are older than 20 years
- Aerated Wastewater Treatment Systems (AWTS) comprised of 3.5% the systems audited.
  - 35% of the AWTS were being serviced in accordance with EPA requirements
  - many of the systems were old and their disposal fields were not well looked after.
  - The percentage of AWTS systems included within the Audit underrepresents the number of AWTS systems that are installed across the Shire. Most of the homes included in the Audit were in well-established townships and hamlets where the number of newly built homes over the past 20 years is low. AWTS systems were first introduced into Victoria approximately 20 years ago and Council records indicate that they represent approximately 25% of installations since the late 90's.
- septic tank condition
  - 56% were given a medium risk rating – which usually indicated that the tank had not been pumped out within the last 3 years.
  - 42% were given a low risk rating
  - 2% were high risk with the tank leaking or badly damaged.
- disposal methods
  - 97% of properties audited used trenches
  - Trenches were not visible in most cases and were therefore rated as low risk
- grey water handling
  - 130 properties had a separate grey water system
  - 65.4% of these had no issues
  - 11.5% were directing to the street
  - 16.9% were directing off site (to neighbouring properties)
  - 6.2% were staying on site but were ponding/pooling

Overall the project rated 9.8% of the systems as high risk due to issues with their tanks, disposal fields or both; with the remaining systems determined to be either medium (53%) or low risk (37%).

With the project nearing its completion the issues that have been identified can be summarised as follows:

- A lack of knowledge and understanding by owners of systems; ranging from the type of system that they have, to associated maintenance requirements including frequency.
- Traditional systems not being pumped out at the required intervals.
- AWTs not being serviced; combined with deteriorated and/or insufficient disposal fields; resulting in untreated water being discharged on the ground, garden beds and lawns.

#### **4.4 Wastewater issues in sewerred towns**

Whilst the result of the recent audit as discussed within 4.3 reflects the situation for wastewater management in non sewerred areas, the situation of wastewater management within the sewerred towns remains a significant issue that needs to be further addressed by both Coliban Water and Council.

The townships of Wedderburn, Boort, Pyramid Hill, Inglewood and Bridgewater were all sewerred over a decade ago, yet with the exception of Bridgewater the full environmental and health benefits of this service to the community have not been realised, due to the number of properties that remain unconnected to the service over decade later.

It is unfortunate that the disposal of wastewater; be it black water, grey water or all wastewater; to the local stormwater systems and in some cases on to vacant land has readily been accepted as the 'norm' by the community.

The perception that the non-connection to the sewer is acceptable is further enhanced by the lack of direct action by both Coliban Water and Council in addressing this issue. For the community to accept that it is reasonable for their wastewater to be discharge into the stormwater system and not the sewer in the 21<sup>st</sup> century is a sad situation. The impact from discharging wastewater to the stormwater system is not fully understood by the community as many people believe that 'grey' water in particular is harmless. This belief has come about due to the promotion of grey water reuse during times of drought.

The number of complaints that Council is receiving regarding wastewater disposal in sewerred towns is increasing. The need for proactive work to be undertaken in this area is going to be critical in changing the community's current perception and to address the increasing number of complaints that are being made by members of the community that are being impacted by the incorrect disposal of wastewater by neighbours.

#### **4.5 Key Council plans and strategic documents**

Council Plan 2013-2017:

One of Councils' key strategic platforms is to make towns in the Shire more liveable and memorable. This includes improving wastewater management through:

- Partnering in Sewer Connections Project with Coliban Water and Department of Health to increase the number of properties connected to township sewer schemes.
- Investigating opportunities to implement sewer extension schemes throughout the Shire.

Environmental Sustainability Strategy 2013-2018:

This plan identifies a number of key themes related to sustainability within the Shire which includes water management. Key issues identified under the water theme are the need to explore alternative wastewater management systems and the need to review and update Councils existing DWMP.

The action to explore alternative wastewater systems specifically relates to a requirement for Council to continue advocacy for the expansion of reticulated wastewater systems throughout various townships within the Shire (e.g. Newbridge).

Loddon Planning Scheme:

- a. *The Loddon planning Scheme* identifies key issues, influences and responsibilities regarding potential contamination of the Shires waterways. These waterways are vitally important to residential and agricultural users and consequently need to be protected from contamination from a range of mechanisms including offsite discharge of household effluent.
- b. *Planning and Environment Act 1987* provides a framework to assist with the planning and management of land use, development and environment protection in Victoria. This Act includes requirements for dwellings and other buildings to have approved onsite wastewater management systems that comply with the requirements of the SEPP (Waters of Victoria) if constructed within a non-reticulated sewer area.
- c. *State Environment Planning Policy (Waters of Victoria)* protects and supports the rehabilitation of beneficial uses of water environments (e.g. human consumption and agricultural uses), setting environmental water quality objectives, and providing a framework identifying clear roles and responsibilities and providing strategic actions. The SEPP provides a requirement and framework for strategic planning for wastewater and requirements for houses to either connect to reticulated sewer systems or install an approved onsite wastewater management system.

Municipal Public Health Plan 2013-2017:

This plan looks at a range of activities to improve public health and environmental health outcomes within the Shire. One of the key goals is to minimise environmental health risks with better management of wastewater being highlighted. The action identified is to support and partner in Sewer Connections Project with Coliban Water and Department of Health to increase the number of properties connected to township sewer schemes.

Stormwater Management Plan:

This plan identifies urban activities that may adversely impact on water quality and beneficial uses and provides strategies to protect these from stormwater runoff. This plan identifies the infiltration and overflow from septic systems as high to very high threats to waterways within the Loddon Shire. The plan highlights problems associated with grey water and to a lesser extent black water, lying in drains within urban areas and being discharged to creeks. Implementing this DWMP will assist in reducing this threat to waterways in the Shire.

## 5 RISK MAPPING

In developing the domestic wastewater management plan a risk analysis of the Shire was carried out, the risk analysis did not extend to individual lots but focused on localities. It looked at the Shire as a whole including sewerred and unsewerred towns as well as surrounding rural areas. Sewerred towns

were included, given the significant risk posed by the number of non-connected properties. Appendix 1 provides a spatial representation of identified risks across the municipality.

In determining an areas risk classification; being high, medium or low; the following factors were considered:

- located in a declared special water supply catchment area
- distance to beneficial water sources (includes those surface waters which provide either domestic, commercial or recreational benefits through availability and supply).
- average allotment size
- known wastewater issues.

**Table 2: Wastewater Risk Classification Score Matrix**

Township/Area		Score
Located in a Declared Special Water Supply Catchment Area		5
Distance to beneficial water source		
>300m		0
150-300m		2
<150m		5
Average Allotment Size		
2000m <sup>2</sup> = 0.2 ha or 0.5 acre	<2000m <sup>2</sup>	5
4000m <sup>2</sup> = 0.4 ha or 1 acre	2000m <sup>2</sup> <>4000m <sup>2</sup>	2
>4000m <sup>2</sup>		0
Known wastewater issues		5
Reticulated Sewer System Available		
<80% connection compliance		-4
>80% connection compliance		-8

Score	Risk Classification
0 – 4	Low Risk
4 – 8	Medium Risk
8+	High Risk

#### Risk Classification

Risk Classification	Description
High risk	<p>A high risk classification indicates that allotments within this township/area are affected by several individual risk factors.</p> <p>In unsewered areas - Existing allotments in high risk townships / areas are a priority of the DWMP for compliance monitoring. An extensive LCA would need to be performed to address the constraints posed on the allotment to determine if undeveloped land could be further developed and the most appropriate type of treatment.</p> <p>In sewerred areas – the off-site discharge will have a direct impact on the environment and or public health. Time frames and actions for forced connections to the sewer need to reflect the higher risk of off-site discharge.</p>
Medium risk	<p>A medium risk classification indicates that allotments within this township/area are affected by at least one of the individual risk factors. An LCA may be required to determine the most appropriate domestic wastewater treatments system for any proposed developments</p> <p>In unsewered areas - Existing allotments in medium risk townships / areas will be included in the DWMP for compliance monitoring. An LCA may be required to address the constraints posed on the allotment to determine if undeveloped land could be further developed and the most appropriate type of treatment</p> <p>In sewerred areas – the off-site discharge will have an impact on the environment and or health. Time frames and actions for forced connections to the sewer need to reflect the higher risk of off-site discharge.</p>
Low risk	<p>A low risk classification indicates that no individual risk factors are present in the township/area; or alternatively are considered to be at a level that is unlikely to negatively affect domestic wastewater treatment on the allotment.</p>

## 6 MINISTERIAL GUIDELINES & DECLARED SPECIAL CATCHMENT

The far southern section of Loddon Shire is part of the declared Loddon River (Laanecoorie) catchment area (see appendix 2 for mapping); it is this part of the Shire that is affected by the 1 in 40 hectare guideline. The Minister for Water released guidelines in November 2012 that allowed for a reduction of the 1 in 40 hectare dwelling density, where certain conditions are met. One of these conditions is if the water corporation is satisfied that the relevant Council has prepared, adopted and is implementing a DWMP in accordance with the DWMP guidelines.

The DWMP must provide for:

- effective monitoring of the condition and management of onsite treatment systems, including but not limited to compliance by permit holders with permit conditions and the Code;

- the result of monitoring being provided to stakeholders as agreed by the relevant stakeholders
- enforcement action where non-compliance is identified;
- a process of review and updating (if necessary) of the DWMP every 5 years;
- independent audit by an accredited auditor (wastewater corporation approved) of implementation of the DWMP including monitoring and enforcement every 3 years;
- the results of the audit being provided to stakeholders as soon as possible after the relevant assessment; and
- councils are required to demonstrate that suitable resourcing for implementation, including monitoring, enforcement, review and audit is in place.

At this point in time we believe that there are approximately 200 developed allotments within the DSWSC area. The number of allotments which may lend themselves to future development is at this point in time unknown, however it is also acknowledged that a large proportion of the DSWSC area is comprised of agricultural or crown land.

In consideration of this, Council have determined that the associated potential cost benefit for facilitating increased levels of development within the relevant DSWSC area is not proportional to the expected cost implications for complying with the minimum guideline requirements.

## **7 AUDITOR GENERAL'S REPORT**

The Auditor General of Victoria released a performance audit report on Protecting our environment and community from failing septic tanks in June 2006.

It was hoped that it would act as further stimulus in reducing the number of failing septic tanks in metropolitan and regional Victoria.

The report identifies a number of aspects relating to the management of domestic wastewater including:

- Incomplete and/or inaccurate location, age and condition of septic tanks in use.
- Failings within the current septic tank legislative framework; and its interpretation; contributing to local government's inability to fulfil its legislative responsibilities.
- Local governments were reactive rather than proactive in requiring property owners to address failing septic tanks;
- The inconsistent application of planning controls by local governments has resulted in a number of property developments being approved even though it is likely that septic tanks will fail.

Some of the recommendations made in the Auditor General's report included:

- That local government ensure that property owners and/or tenants understand that they have an existing septic tank system and that the owner has specific maintenance responsibilities for this system.
- That local government reassess the resourcing levels needed to fulfil their legislative responsibilities for septic tanks.
- That the EPA seeks to establish a mechanism to assure the quality of land capability assessments.

## 8 LAND CAPABILITY ASSESSMENTS

Land Capability Assessments (LCAs) are required to support septic tank applications in high risk localities, on difficult sites and when requested by Council's Environmental Health staff.

Whilst a number of documents have been developed in recent times to provide a standard guideline or criteria for the content of an LCA; the application/use of the guideline by consultants is inconsistent. As a result, the type, quality and level of detail provided by consultants in LCA reports vary considerably. This variation and uncertainty regarding the technical capabilities of consultant authors introduces an element of risk when determining whether or not to grant approval for domestic wastewater disposal.

The need for improved LCAs has been identified as a common problem by many municipalities; with a working group having been established in this region to address and review associated issues.

## 9 COMPLIANCE

Local government is responsible for ensuring domestic wastewater systems operate effectively and that property owners comply with the condition on septic tank permits and that any nuisance conditions arising from domestic wastewater systems are abated.

While the Loddon Shire is capable of enforcing compliance for installation of new systems (as copies of permits and certificates are available), monitoring and enforcement of older wastewater systems is significantly hampered by poor historic records and unclear legislative powers. As a result of the poor historical records the exact number and type of wastewater systems and location of disposal fields throughout the Shire is unknown.

Aerated Wastewater Treatment System's (AWTS) require regular servicing and subsequent notification to Council. Incomplete records for older AWTS installations; coupled with an inadequate reminder system; means many AWTS's are not serviced according to the manufacturer's standards. This results in a significant environmental and health risk to the owners of the system

It is therefore difficult for Council to implement an adequate compliance regime unless there is an obvious breach resulting in visible off-site discharge of effluent. A clear non-compliant situation exists in the case of split systems where grey water is discharged directly to street drains. These systems no longer comply with existing legislative requirements; however previous permits remain valid until such time that the system is modified or redevelopment or refurbishment/extension works are conducted upon the associated dwelling/site.

## 10 EPA CERTIFICATE OF APPROVALS

In late 2014 the EPA announced impending changes to the certificate of approval process. The current certificate of approval process requires manufacturers to apply to the EPA for approval to install a non-traditional system (e.g. septic tank) in Victoria. Under the current process a manufacturer is granted a certificate of approval from the EPA usually accompanied by a suite of conditions. Most council's include either a full copy of the certificate of approval which was issued by the EPA; and/or the accompanying conditions; in any permits that are issued for the installation of a specific system.

In June 2015 this system is being removed; and instead of granting a certificate of approval to a specific system, the EPA will be approving system types. The system types will most likely include composting toilets, grey water systems, reed beds and aerated wastewater treatment plants.

Whilst the full impact of this change is still unclear at this time it is anticipated that the change will require Council to review applications to determine if the specific system is suitable for installation, including its compliance with the Australian Standard. Council will then need to determine the conditions for installation of the system including maintenance and servicing frequency. The liability that this change will place on Council; along with the impact that the change will have in respect to internal resource demands; is unclear at this time.

## 11 ACTION PLANNING

Strategic priorities	Action steps	Budget	Council role	Part of council responsible for implementation	Partners - internal and external	Timeline	Performance indicators
Priority 1 - Communication	Develop and implement a domestic wastewater management communication program including connection to sewer requirements	Existing	Partner	Environmental Health	Coliban Water Media Officer	Commence Year 1	Communication program developed and implemented  <ul style="list-style-type: none"> <li>- Council Web page posted</li> <li>- Mayoral Column</li> <li>- Joint Council/Coliban program for connection of unsewered properties</li> </ul>
	Review the information sheets that were developed as part of the DSE Wastewater Management Project	Existing	Lead	Environmental Health	N.A	Commence Year 3	Information Sheets Reviewed
	Establish a procedure to inform homeowners of domestic wastewater requirements when a property changes ownership	Existing	Lead	Environmental Health	Rates	Commence Year 2	Procedure established and implemented
	Generation of reminder notices and letters for properties that have systems installed; requiring regular maintenance; who have failed to submit the required maintenance reports	Existing	Lead	Environmental Health	N.A	Commence Year 1	Number of maintenance reports being received.  Template letter preparation  Number of letters being sent.

<b>Strategic priorities</b>	<b>Action steps</b>	<b>Budget</b>	<b>Council role</b>	<b>Part of council responsible for implementation</b>	<b>Partners - internal and external</b>	<b>Timeline</b>	<b>Performance indicators</b>
Priority 2  Review of policy and procedures	Ensure that onsite wastewater management compliance is incorporated into all appropriate Council operational and statutory activities; including project planning/delivery and operational/asset management plans.	Existing	Lead	Environmental Health	Planning and Local Laws. Building. LSC Facilities Management Staff. Recreation Management staff. Community Planning & Economic Development.	Commence Year 1	Number of referrals for assessment of wastewater.  Inclusion of wastewater considerations in capital works project checklist
	Develop a process for ensuring that Planning/Building applications in non sewered areas (including on the edge of sewered towns) are referred to the Environmental Health Department for assessment	Existing	Lead	Planning Department	Environmental Health  Building Department	Commence Year 1	Process / procedure developed and implemented  Number of planning and building referrals being received.
	Development of policies and procedures for wastewater including but not limited to – 1. application process 2. handling of complaints including non-sewer connections 3. non-compliance with permit conditions 4. Land Capability Assessments	Existing	Partner	Environmental Health	Coliban water (for sewered areas only)	Commence Year 1	Procedures developed and implemented

<b>Strategic priorities</b>	<b>Action steps</b>	<b>Budget</b>	<b>Council role</b>	<b>Part of council responsible for implementation</b>	<b>Partners - internal and external</b>	<b>Timeline</b>	<b>Performance indicators</b>
Priority 3  Reporting and reviewing	Review progress of DWMP Actions	Existing	Lead	Environmental Health	Responsible Officers / Agencies (action items assigned)	Yearly	Review completed annually
	Report on the progress of DWMP to stakeholders	Existing	Lead	Environmental Health	Council	Yearly	Report presented to Council
	Review and update DWMP. Can be done internal or via a consultant	Existing or approx. \$15,000 – for consultant	Lead	Environmental Health	Consultant?	Year 4	Review of DWMP completed

## APPENDIX 1: RISK MAPPING

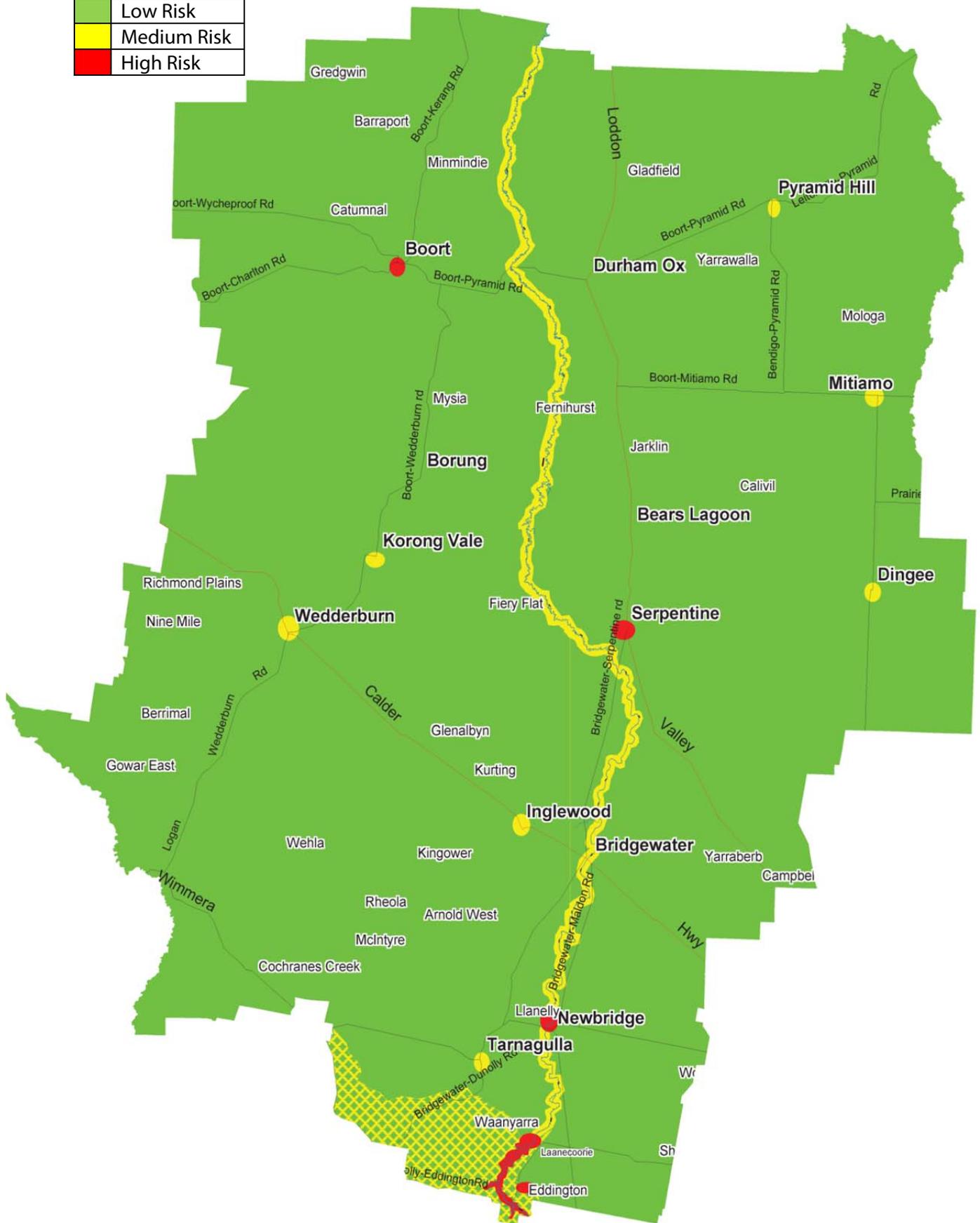
Township/area	Risk factor					Score
	Located in Declared Catchment Area	Distance to beneficial water source	Average Allotment Size	Known Wastewater Issues	Reticulated Sewer Available	
Dingee	0	0	5	0	0	5
Eddington	5	5	5	0	0	15
Korong Vale	0	0	5	0	0	5
Laanecoorie	5	5	5	0	0	15
Mitiamo	0	0	5	0	0	5
Newbridge	0	5	5	0	0	10
Serpentine	0	5	5	0	0	10
Tarnagulla	0	0	5	0	0	5
Sewered Townships						
Boort	0	5	5	5	-4	11
Bridgewater	0	5	5	0	-8	2
Inglewood	0	0	5	5	-4	6
Pyramid Hill	0	0	5	5	-4	6
Wedderburn	0	8	5	5	-4	6
Properties in non-township locations along beneficial water sources (i.e. Laanecoorie reservoir, Loddon River, Serpentine Creek, Bears Lagoon)						
*Distance to Beneficial Water Source <150m	0	5	0	0	0	5
*Distance to Beneficial Water Source 150 – 300 m	0	2	0	0	0	2
*Distance to Beneficial Water Source > 300m	0	0	0	0	0	0
Special Catchment Areas (non- township location)						
*Distance to Beneficial Water Source <150m	5	5	0	0	0	10
*Distance to Beneficial Water Source 150 – 300 m	5	2	0	0	0	7

*Distance to Beneficial Water Source > 300m	5	0	0	0	0	5
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\* - Assumes that rural properties in these locations exceed a total area of 4,000 m<sup>2</sup>

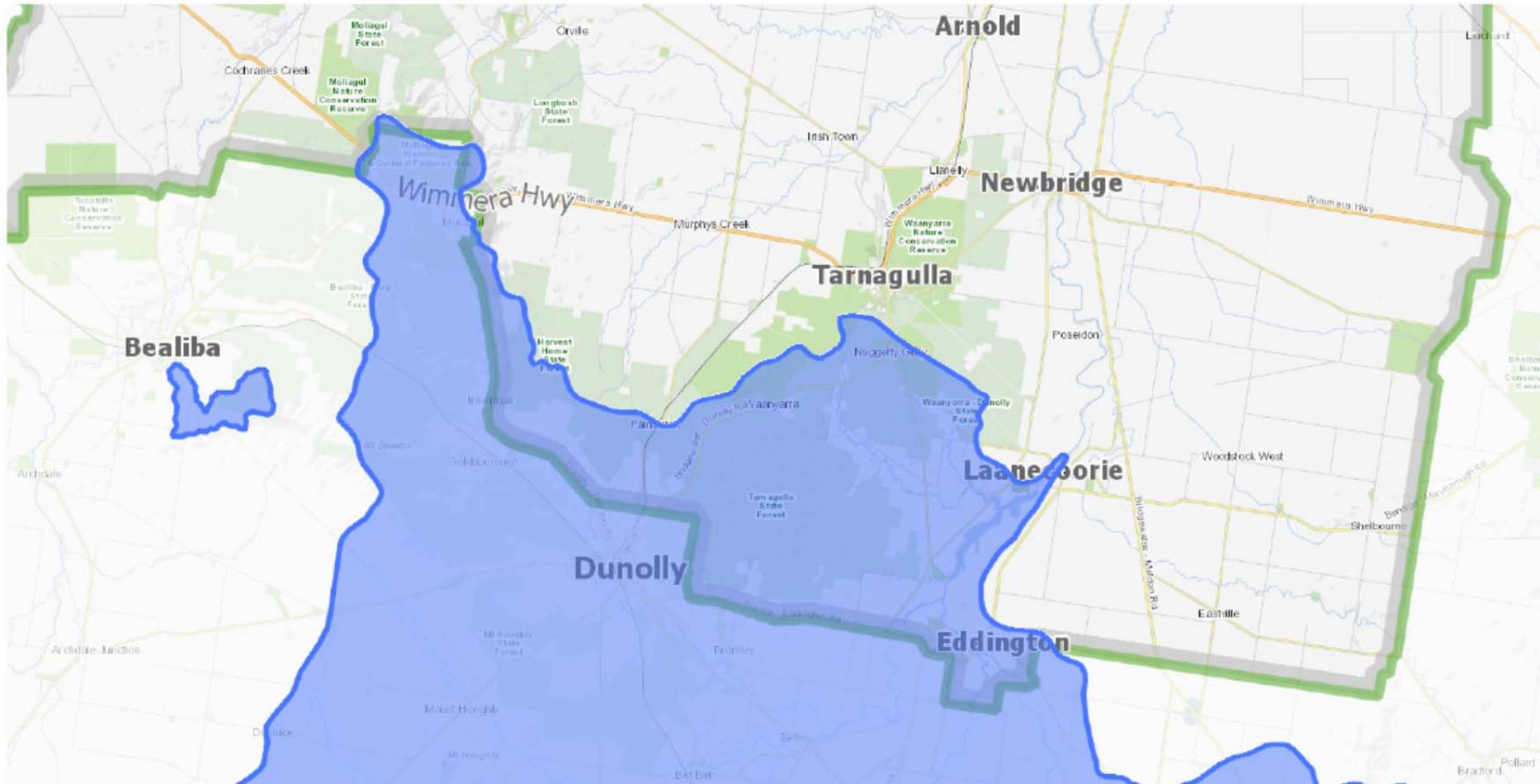
# RISK MAP OF SHIRE

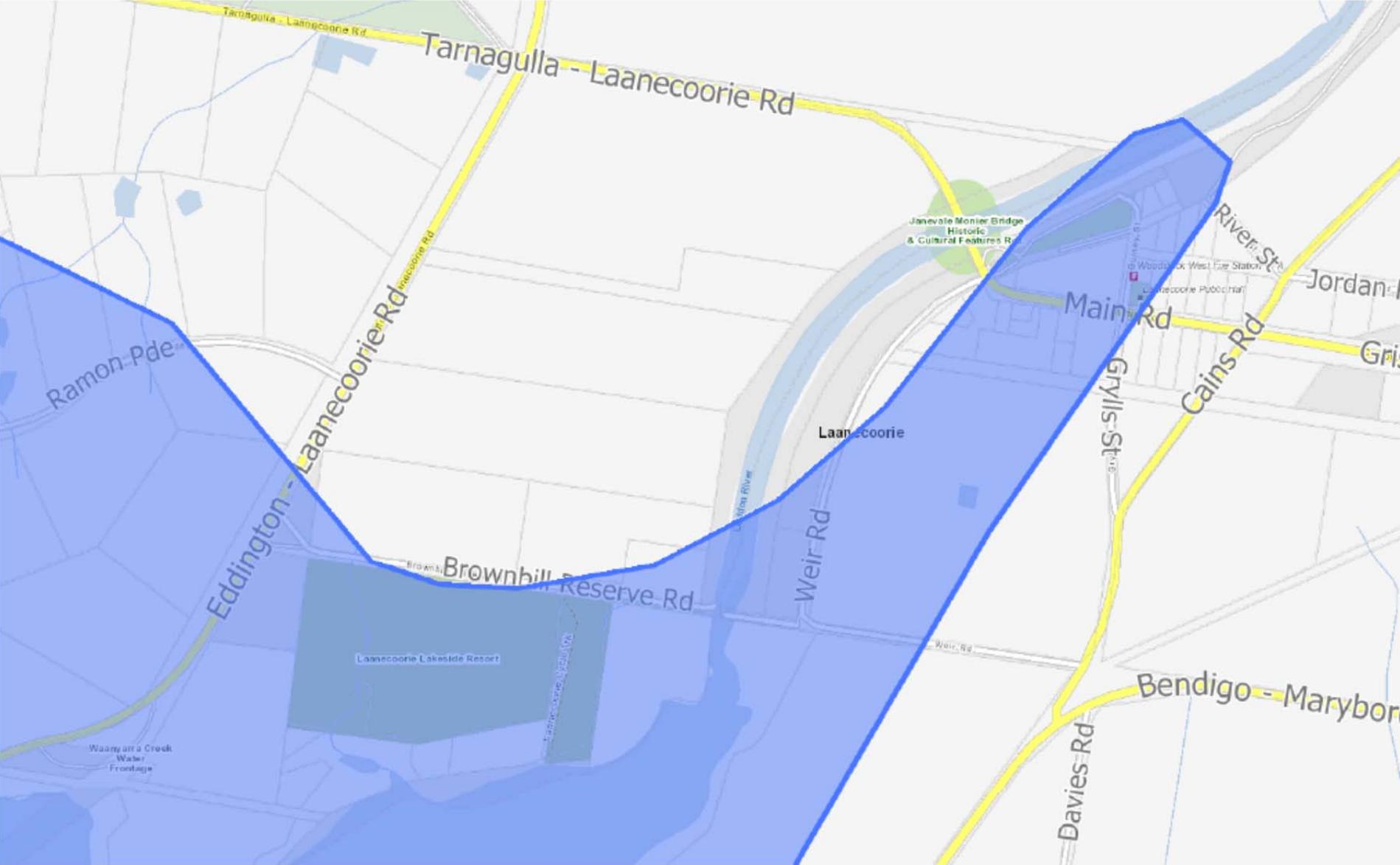
Key	
	Low Risk
	Medium Risk
	High Risk



## APPENDIX 2: SPECIAL CATCHMENT - LODDON SHIRE COUNCIL

- In the maps that follow, the blue area is the declared special catchment area the green line is the Council boundary.





# APPENDIX 3: STATUTORY CONTROLS, GUIDANCE INFORMATION, ROLES AND RESPONSIBILITIES

Relevant legislation and guidance information

The list of key documents regarding domestic wastewater management are summarised below.

Environment Protection Act 1970:

This Act is the principal statutory document controlling septic tank systems. It outlines municipal responsibilities for approving the installation, modification and use of septic tank systems that are designed to discharge up to 5,000 litres of effluent per day. Treatment systems that are designed for and/or produce more than 5,000 litres are regulated by the EPA.

Environmental Protection Authority State Environment Protection Policy (Waters of Victoria):

This policy ensures that residential subdivisions outside designated sewer areas are capable of managing domestic wastewater within the boundaries of the proposed allotments.

Environmental Protection Authority Code of Practice for Onsite Wastewater Management:

This Code is the manual for the design, construction, selection, installation and maintenance of septic tank systems. It contains information on land capability assessment, treatment and disposal options, the permit process, septic tank design, construction and maintenance and effluent management.

Public Health and Wellbeing Act 2008:

The *Public Health and Wellbeing Act 2008* states that it is the function of a Council to seek to protect, improve and promote public health and wellbeing in the municipal district. This Act provides a framework for Councils to address local public health nuisances and this provides a mechanism to resolve problems associated with older septic systems that fall outside of the regulatory requirements of the *Environmental Protection Act 1970*.

Water Act 1989 (Part 9 Section 180 Septic tank permit applications only):

The *Water Act 1989* requires referral of septic permit applications to the appropriate water authorities if septic systems are proposed within an Authority's sewerage district, special catchments or an area of interest. There is also the power under this Act for water authorities to require an upgrade or maintenance at any time to septic tanks.

Local Government Act 1989:

The Local Government Act empowers municipalities to enact local laws and set special charges for local government activities. Municipalities can use these powers to develop local regulations for wastewater management as long as these regulations are consistent with State policy and legislation and to raise revenue for its wastewater management programs.

Australian and New Zealand Standards:

There are standards which have relevance to the construction and design of domestic wastewater disposal systems.

The main standards relating to domestic wastewater are:

AS/NZS 1546.1:2008	Onsite domestic wastewater treatment units – Septic tanks
AS/NZS 1546.2:2008 composting toilets	Onsite domestic wastewater treatment units - Waterless
AS/NZS 1546.3:2008 wastewater	Onsite domestic wastewater treatment units – Aerated

EPA Land Capability Assessment for Onsite Domestic Wastewater Management Document No. 746  
This document provides a framework to ensure that properties requiring domestic wastewater systems can manage their waste sustainably within the property boundaries and identify a management program that will minimise public health and environmental impacts.

Roles, responsibilities and key documents of stakeholders

A list of the relevant stakeholders and their roles and responsibilities are outlined below.

Environment Protection Authority:

The Environment Protection Authority (EPA) has a statutory responsibility to oversee the protection of the environment and is the principal authority in the management of domestic wastewater management. The EPA sets the regulatory framework for management domestic wastewater in Victoria. The EPA provides advice and guidance to support this regulatory framework however Councils have the responsibility of implementing it at the local level. Only EPA approved domestic wastewater systems can be installed in Victoria.

Loddon Shire Council:

Loddon Shire Council is responsible for approving the installation or alteration of septic systems, ensuring that permit conditions are met and that these systems are not causing public health nuisances or environmental harm.

Loddon Shire Council is responsible for collating maintenance records for all types of on-site domestic wastewater systems and forwarding the results to the EPA on an annual basis as stipulated within the *Environmental Protection Act 1970*.

The Loddon Shire Planning Scheme requires that land use and development proposals in unsewered areas demonstrate that all wastewater generated from the site can be treated and contained within the property boundaries.

Department of Environment, Land, Water and Planning

The Department of Environment, Land, Water and Planning (DELWP) is responsible for management of Victoria's natural resources. DELWP managed the County Towns Water Supply and Sewerage Program which funded the community greywater management system in Korong Vale and the septic audits across the Shire. DELWP is a referral authority for planning and development proposals that have potential significant environmental implications.

Department of Health:

The Department of Health (DoH) administers the *Public Health and Wellbeing Act 2008*. DoH is responsible for providing advice to EPA and Local Government about public health policy related to domestic wastewater management.

Municipal Association of Victoria (MAV):

The MAV has undertaken works in partnership with Victorian councils, EPA Victoria, DEPI, Water Authorities and other stake holders to develop a range of planning and management tools to assist council's with the management of domestic wastewater.

The Victorian Land Capability Assessment Framework (MAV, 2014) that includes an example of a land capability assessment (LCA) has been developed to assist land capability assessment professionals in undertaking LCAs for a range of development types. This is only a guideline and does not replace or supersede any existing EPA legislation or guidance documents.

#### North Central Catchment Management Authority:

The North Central Catchment Management Authority (NCCMA) is responsible for the sustainable development of catchments, floodplains and waterways. The NCCMA's core business function is the delivery of the North Central Regional Catchment Strategy (2013-2019) and has a role in administering aspects of the Environmental Water Reserve created under the *Water Act 1989*.

#### Goulburn Murray Water:

Goulburn Murray Water is rural water authority with key responsibilities including:

- Managing the delivery of water to its irrigation and water districts and maintaining the infrastructure for these districts
- Implementing Government's regulations and policy for groundwater and surface water resource management in accordance with delegated powers
- Harvesting, storing and maintaining water in its reservoirs and dams

Planning applications are referred to GMW if triggered by an overlay or if the land is in a Special Water Supply Catchment area as defined by the Catchment and Land Protection Act, 1994. Approximately 2% of the shire is in the Special Water Supply Catchment of Laanecoorie Reservoir.

#### Coliban Water:

Coliban Water provides potable water and wastewater services to rural and urban customers.

Planning proposals for subdivisions are referred to Coliban Water in areas where reticulated sewer is available or where extensions to the existing mains will be required.

#### Landholders:

Those land holders with domestic wastewater treatment systems are responsible for:

- connecting to a sewerage system where it is available (unless otherwise exempted)
- obtaining a Permit to Install for a new septic system prior to its installation
- obtaining a Certificate to Use once the septic system has been installed
- obtaining a permit to make alterations to an existing septic system
- ensuring system installers are licensed plumbers who have specialist knowledge to install the nominated system
- maintaining existing systems, including de-sludging at least every three to five years and any other specified monitoring conditions
- ensuring effluent disposal areas are maintained clear from development, unsuitable vegetation, and impermeable surfaces.

#### Land Capability Assessors:

Land Capability Assessors need to have appropriate qualifications, experience and indemnity to undertake their work. They should be able to produce a report that is unbiased and assesses the capability of the land in regards to wastewater disposal, rather than supporting the proposal of a land developer.

#### Building Surveyors and Private Certifiers:

Municipal building surveyor and private certifiers must obtain a copy of the Certificate to Use before issuing an occupancy permit for a new house.

#### Domestic wastewater system installers:

Onsite wastewater systems must be installed by licenced plumbing practitioners. These licensed plumbing contractors must ensure that the systems they are installing complies with the relevant EPA Certificate of Approval, all the conditions in the Permit to Install, manufacturer's specifications and *Victorian Plumbing Regulations 2008*.