



City of Ballarat

Domestic Wastewater Management Plan - Inspection Program

Audit Report

8th October 2018

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1. Executive Summary

WDMS Pty Ltd was engaged to conduct an audit of Council's Domestic Wastewater Management Plan - Inspection Program ("the Inspection Program"). The audit examined the records covering inspections conducted within the potable water catchments and the Declared Sewerage District (DSD) of Central Highlands Water (CHW).

The scope of the Audit also allowed for additional comments/observations to be included that may be beneficial for consideration in any review of wastewater policy or management practices.

The current Domestic Wastewater Management Plan (DWMP) establishes a framework for sustainable on-site wastewater management within the municipality. The Inspection Program is one key component in the suite of management strategies forming part of the DWMP implementation plan.

The Inspection Program has also been a major influencing factor in obtaining CHW's relaxation of the 1:40ha density as level set out Minister for Water's Guidelines "Planning permit applications in open, potable water supply catchment areas - 2012" ("the Ministerial Guidelines").

The Audit of the Inspection Program concluded that:

- The information reported in respect to the septic tanks inspected within the potable water catchments and DSD of CHW was accurate, reliable and well documented.
- The management system has provision for monitoring potential risks from failing or poorly maintained septic systems and there had been demonstrated follow-up to evidence this within the potable catchments.

Observations made during the Audit, are supplementary to the Inspection Program verification process. The observations have been placed into four management categories, Information, Risk, Financial and Resource and Education and Awareness. The following observations were made:

Information Management

- In the absence of an ongoing inspection and monitoring program, the data collected to date within the potable water catchments and DSD will become obsolete and unreliable for decision making.
- The information recorded in the STWMS of septic tanks outside the inspected potable catchments and part of the DSD is seriously deficient and incomplete (2,364 or 75% of septic systems do not have any data on system type).
- Extension of the Inspection Program to complete inspections within the DSD should be undertaken as a priority to collect information for sewer option considerations.

Risk Management

- A plan and timetable for provision of reticulated sewer needs to be established to resolve the ongoing risk to public health and amenity from identified failing systems within the DSD that are not suitable for on-site wastewater treatment and disposal.
- It is likely that CHW would withdraw its conditional support for Council's DWMP as outlined in CHW's letter dated 13 Feb 2017, if it is not satisfied that the potential risks are being effectively managed.
- There is no clear mechanism in place for verifying that owners of properties that have had their system inspected, complete any identified remedial work.
- The current strategy for monitoring compliance by owners of septic tank systems of their permit conditions, where such data is available is minimalistic and requires extension for effective compliance monitoring.

- There does not appear to be a water quality monitoring program in place to measure improvement of on-site wastewater performance within the catchments.

Financial and Resource Management

- The DWMP implementation plan lacks committed ongoing funding and resources to achieve effective long-term compliance monitoring of on-site wastewater systems.

Education and Awareness

- There is opportunity to expand the awareness of septic tanks on sites and obligations to prospective/new owners.

2. Objective

The objective of the Audit was to validate the status of the Inspection Program and accuracy of reported information for both Council and stakeholders and to record observations that may be useful for consideration in future management options.

3. Audit Methodology

The Audit incorporated:

- Appraisal as to the accuracy and validity of internal reporting
- Identification of any deficiencies or opportunities for improvement in data integrity
- Observations for consideration as part of any review of the DWMP, the Inspection Program and monitoring processes

The audit was conducted by way of external review of documents and reports, personal interview and database inquiry and a pre-arranged on-site attendance at Council's Offices in Ballarat.

No on-site assessments were conducted.

4. Inspection Program

The Audit examined the accuracy and completeness of the:

- Information provided in the Domestic Wastewater Management Plan Potable Catchment Inspection Program Reports - March 2018 and July 2018; and
- Data contained in the Council's Septic Tank Wastewater Management System (STWMS).

According to Council's septic tank database there are 3,153 active septic tank systems within the municipality. The Inspection Program subject to audit, covered 388 (previously 390) of these septic tank installations located within the five potable water catchments and 153 within the DSD.

A random representative sample of 28 records were examined from the 390 reported septic tank systems inspected within the potable water catchments. The location of these septic tank sites is listed in Appendix 1.

A random representative sample of 15 records were examined from the 153 reported septic tank systems inspected within the DSD. The location of these septic tank sites is listed in Appendix 2.

The Audit also checked the information reported by council officers against the septic tank management system records to verify accuracy and pro-active management of potential risks.

Examination of records showed follow-up from the initial inspection date and evidence of septic system risk status changing as works had been undertaken by owners to improve their system.

The Audit of the Inspection Program concluded that:

- The information reported in respect to the septic tanks inspected within the potable water catchments and DSD of CHW was accurate, reliable and well documented.
- The management system has provision for monitoring potential risks from failing or poorly maintained septic systems and there had been demonstrated follow-up to evidence this within the potable catchments.

5. Observations/Recommendations

5.1 Information Management

Observation In the absence of an ongoing inspection and monitoring program, the data collected to date within the potable water catchments will become obsolete and unreliable for decision making.

The usefulness of data is its currency. There does not appear to be a longer-term strategy in place to use the collected data to deliver resolution of the identified issues within a meaningful timeframe. The risks have been identified but there is no financially supported action plan to remedy.

The process of communicating the Inspection Program results to owners is informative and well documented. The problem is that there is no check to see whether remedial work is in fact carried out by the owner.

Recommendation:

That an Action Plan be developed with the aim of resolving fixing any identified issues.

Observation The information available on the remainder of septic tanks outside the inspected potable catchments and DSD is seriously deficient and incomplete.

2,364 (75%) of septic tanks do not have any data on system type and or therefore method of disposal for wastewater. In the absence of this data, it is extremely difficult to establish a credible risk-based compliance monitoring regime.

Recommendation:

Develop a strategy that will establish a comprehensive register of septic tank systems within the municipality including using AWTs service reports to check and populate the STWMS with system type.

Observation Extension of the Inspection Program to complete inspections within the DSD should be undertaken as a priority to collect information for sewer option considerations.

The DWMP has a strategy to pursue rectification of identified high risk infill areas and completion of these inspections will support this objective.

Recommendation:

That funds and resources be allocated to complete this Inspection Program as a priority.

5.2 Risk Management

Observation A plan and timetable for provision of reticulated sewer needs to be established to resolve the ongoing risk to public health and amenity from identified failing systems within the DSD that are not suitable for on-site wastewater treatment and disposal.

Management reported that inspections of septic tank systems within the Declared Sewerage District (DSD) identified 24% of systems failing (major and medium issues) compared to 6.4% within the potable catchments and an estimated 10% across the municipality.

Inspections carried out over 12 months ago in the DSD identified that reticulated sewer was the solution to rectify many failing systems due to site limitations for achieving sustainable on-site wastewater.

The ongoing risk to public health and amenity needs to be addressed with CHW for provision of reticulated sewer as part of the overall wastewater strategy for the municipality. As a priority, the inspections and evidence gathering should be completed for the remaining 397 sites. This data can be used for assessing wastewater options including any need for reticulated sewer.

Recommendations:

That:

- (i) Inspections of the remaining septic tank systems within the DSD be undertaken for completeness of the risk assessment process and evidence gathering for determination of wastewater management options; and
- (ii) CHW, being the responsible authority, be requested to provide details of its strategy for planned extensions of reticulated sewerage within the DSD and targeted growth areas, including solutions for the already communicated problem areas/clusters.

Observation It is likely that CHW would withdraw its conditional support for Council's DWMP as outlined in its letter dated 13 Feb 2017, if it is not satisfied that the potential risks are being effectively managed.

Guideline 1 of the Ministerial Guidelines sets out certain requirements that must be provided for in a DWMP to allow a water authority to relax the density requirement including:

- the 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 results 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 (water corporation approved) of implementation of the DWMP, including of monitoring and enforcement, every 3 years;
- the results of 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.

Any withdrawal of support would adversely impact development of allotments where the density was less than 1:40ha within the potable water catchments. Enquiries indicate that approximately 30% of the municipality could be impacted.

Recommendation:

Ensure that there is an ongoing risk-based inspection and monitoring program in place for septic tanks in at least the potable catchments.

Observation There was no evidence of any definitive commitment to continue or extend the inspection program to septic tank systems outside the potable water catchments.

The DWMP recognises the responsibilities of Council to manage septic tank installations within its municipality. Council has completed a comprehensive inspection of septic systems within the potable catchments and part of the DSD by allocation of dedicated resources.

Future decision making on the need for reticulated sewer or sustainable on-site wastewater systems need to be supported by evidence. It is understood that inspection evidence has been presented to relevant stakeholders to support this course of action.

Inspections may also conclude that there is no real risk and this information is as equally important to be evidenced.

Recommendation:

That septic tank inspections be undertaken on all other sites that are within the DSD and any other targeted growth areas.

Observation There was no clear mechanism in place for verifying that owners of properties that have had their system inspected complete any identified remedial work.

Recommendation:

That Council continue to work with owners to resolve outstanding works and include a letter to the owner requesting confirmation that works have been attended to.

Observation The current strategy for monitoring compliance by owners of septic tank systems of their permit conditions, where such data is available is minimalistic and requires extension for effective compliance monitoring.

It is acknowledged that this is a minefield for any Council to address, particularly as historical permits had very few conditions that would meet today's standards and community expectations.

To do nothing is also not meeting with legislative requirements and community expectations.

Inquiries showed that any compliance monitoring was minimalistic and generally reactionary emanating from a complaint or reported failure.

Council receives maintenance reports from contractors that service an aerated wastewater treatment system (AWTS's). Evidence shows that after the first 12 months of the maintenance contract, owners become complacent and not keen to continue with the quarterly inspection cost.

These are high risk systems if not properly maintained. The local service contractors would be supportive of any enforcement of compliance with permit conditions. It may be worthwhile discussing the issues with one or two local contractors.

This may well be a good place to start by focussing on AWTS's, utilising the information provided as a basis for populating the STWMS and establishing a monitoring program for these higher risk operating systems.

Recommendations:

That a tracking system be implemented for monitoring permit conditions on installations where requirements can be identified

That priority be given to sites which have an aerated wastewater treatment system (AWTS) and are located within the potable catchments, DSD, targeted growth areas or deemed higher risk areas. These systems have been specifically installed to achieve a higher level of wastewater treatment and any system failure presents considerable risk.

That an initial random audit program of say 5%-10% per annum be considered for AWTS's commencing in the above areas.

That required owner maintenance for AWTS's be enforced as the start of an overall compliance monitoring program.

That an assessment of the remaining installations not covered above be undertaken to determine what may be done to promote owner compliance with permit conditions and/or minimise potential risk of failure.

Observation There does not appear to be a water quality monitoring program in place to measure improvement of on-site wastewater performance within the catchments.

Audit was unable to determine what bench marks (if any) were being used by CHW or Goulburn Murray Water Corporation (GMWC) to evidence of the impact of septic tank discharges on water quality. If wastewater discharges from septic tanks is causing environmental and public health or amenity issues, there needs to be evidence collected to demonstrate it.

This data should be used for determining risk management and investment strategies, particularly in projected growth areas.

Recommendation:

That CHW and GMWC be requested to provide this input to assist Council in establishing its risk management practices for the whole of the municipality.

5.3 Financial & Resource Management

Observation The DWMP implementation plan lacks committed ongoing funding and resources to achieve effective long-term compliance monitoring of on-site wastewater systems.

The need for commitment of funds and resources for compliance monitoring and ongoing community education is identified in the DWMP.

At some stage there will be a need to adequately fund and resource an ongoing risk-based monitoring system for effective septic tank compliance management.

The initial once up permit fees do not provide a source for ongoing monitoring and compliance management.

It is understood that Council officers are examining what funding options may be available to it.

The City of Ballarat is certainly not alone with this problem.

Maybe the solution needs to be addressed at a State level to ensure a consistent approach and a “Model” developed with support from the water authorities and MAV at a political level.

One possible solution to fixing failing septic systems is at the point of sale of the property and a disclosure forming part of the mandatory Section 32 Statement under the Sale of Land Act.

There are already disclosures for building works, notices etc. Obviously, a vendor would not be keen to disclose the potential liability to a purchaser, so there will be resistance to this concept.

The issue at present is that unless the Contract Note stipulates that the purchase is subject to a certification of the septic tank system, then it is too late to add to the Contract documents later. A binding contract already exists with the signing and deposit payment to the Estate Agent.

The dilemma is how to let a prospective purchaser know of a potential liability and whose responsibility is it?

Recommendation:

That officers to continue to consider available funding and resourcing options for both the short and long-term solutions.

5.4 Education & Awareness Management

Observation There is opportunity to provide owners and prospective purchasers with information on their responsibilities and potential liability if the system is failing.

The rate/billing system could contain a flag (if it doesn’t already) to indicate if the property has a septic tank system so that information can be generated to either conveyancers, real estate agents or owners.

This will no doubt require some administrative work to achieve and interaction between departments. Although the STWMS has limited data, the sites with some type of on-site wastewater system are known.

Recommendation:

That a system be implemented that would provide for:

- (i) A “Statement” to be provided to conveyancers advising that a septic tank is located on the property and that the purchasers should satisfy themselves as to the operational performance of the system to avoid potential liability for remedial works; and
- (ii) Advice be sent to new owners of properties with a septic system on their responsibilities for care and maintenance of their system and Council’s audit/inspection program.