On-Site Sewage Management Strategy

2021

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UPPER HUNTER SHIRE COUNCIL

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EXECUTIVE SUMMARY

Upper Hunter Local Government Area (LGA) covers approximately 8,100 square kilometres within the Hunter Region of New South Wales. The Upper Hunter is approximately 302 kilometres north-west of Sydney. The area has a population of 14,112 (2016 census) and contains sewered and unsewered areas. There are 2,345 registered systems within the LGA consisting of common effluent pump systems, pump-outs, aerated wastewater treatment systems, absorption trenches, reed beds and composting systems. However as many systems were installed many years ago without formal Council approval, it is estimated that up to 3,500 systems may exist.

Legislation was introduced in 1998 to create a framework for management of On-Site Sewage Management Systems (OSMS's) through Local Government and the Department of Health. The Local Government Act 1993 and the corresponding Regulations were subsequently updated. From 2003, Council has conducted system audits to ensure that registered systems were installed and operated to an adequate standard.

The On-Site Sewage Management (OSM) Strategy 2021 has been developed to ensure changes in legislation and technology are accounted for and aims to sustain high levels of on-site sewage management system performance in the Upper Hunter LGA. The Strategy aims to provide an approach to OSM through sustainability, effective management control and education.

Council has a responsibility to monitor not only individual system performance and take action in regard to defective systems where required, but also to manage the cumulative impact of small amounts of sewage from the many systems in the area. Council is committed to a process of continued improvement in on-site sewage management, sustainable development and better community awareness of OSMS issues within the Upper Hunter LGA.

INTRODUCTION

OBJECTIVES

This Strategy has been developed to provide an integrated approach to OSM within a self regulating framework of community education, local support services and environmental and public health protection. The three key objectives of this Strategy are to:

1. Promote Sustainability

- Ensure sustainable management of wastewater generated on all unsewered properties within the LGA, including best practice and the approval of systems advocating treated wastewater reuse.
- Monitor and manage cumulative impacts from OSMS's.
- Implement and facilitate best management practice in relation to the installation and operation of OSMS's.
- Pursue long term, viable sewage management solutions for identified high risk areas.

2. Effective Management of On-Site Sewage Management Systems

- Ensure that all sewage management systems have the required operating approval and are operating in accordance with approval conditions.
- Progressively eliminate illegal discharges of effluent from OSMS's.
- Protect surface water, stormwater, land and vegetation, public health and community amenity from the impacts associated with OSMS's.

3. Education & Stakeholder Involvement

- Ensure that all stakeholders are aware of their responsibilities and have access to enough appropriate information to ensure their responsibilities are met.
- Work in partnership with the community and other stakeholders to ensure sustainability of on-site sewage management in Upper Hunter LGA.
- Ensure that the community is provided with an efficient, cost effective OSM program which meets both the needs of the stakeholders and the responsibilities of Council.
- Educate and support professional service providers.

APPLICABILITY

This Strategy applies to all rezoning and development applications under the *Environmental Planning and Assessment Act 1979* and Section 68 applications under the *Local Government Act 1993.* The Strategy applies to land within the local government area of Upper Hunter Shire Council and supersedes all previous information issued by Upper Hunter Shire Council with respect to on-site sewage management.

OVERVIEW

Through the implementation of Council's audit program, OSMS's on the whole are operating at a much higher performance level than previously. The On-Site Sewage Management Inspection Program has been operational since 2003.

The Strategy relates to all fixed sewage management facilities including public, industrial and commercial systems, which do not discharge directly to a public sewer or are not licensed by the NSW Office of Environment and Heritage (OEH).

The Strategy also includes the operation of domestic grey water treatment systems and grey water diversion. On-site sewage management involves the treatment of wastewater followed by the release of liquid (treated wastewater) and solid (sludge, septage and compost) products into the environment or removal by tanker pump out.

Inappropriate use or disposal of these products can have the following adverse impacts:

- The spread of disease by bacteria, viruses, parasites and other organisms in the wastewater.
- Contamination of groundwater and surface water.
- Pollution of waterways.
- Degradation of soil and vegetation.
- Decreased community amenity, caused by odours, noise and insects.

On-site sewage disposal has the potential to affect public health, the local economy, recreation, residential and business development and other aspects of everyday life.

As residents are more likely to be directly responsible for making decisions about their wastewater, it is important that they know about their system and its potential impact on public health and the environment.

STATEMENT OF COUNCIL'S COMMITMENT

This Strategy is an evolving document which allows for a process of continual improvement in OSM practices within the Upper Hunter LGA. The ongoing evaluation of the monitoring, inspection, approval and education programs will highlight the strengths and deficiencies of this Strategy and where changes may need to be made. Council is committed to improving public health and environmental outcomes by adopting ecologically sustainable development principles.

Council's commitment to the issue of on-site sewage management is demonstrated through the implementation of this Strategy. When an opportunity arises for funding assistance from external sources (for example, from the State or Federal Governments), Council will support applications for project funding. Where appropriate, Council will apply for funding for specific programs or actions outlined in this Strategy, or for special projects in on-site sewage management which will result in a demonstrable benefit to the residents and ratepayers of the unsewered areas of the LGA.

Council also encourages the adoption of innovative on-site systems at both residential and community scales that will result in long-term sustainable and system management improvements.

LEGISLATION

The preparation of an On-Site Sewage Management Strategy is encouraged in order to meet the requirements of the *Local Government Act 1993* and the *Protection of Environment Operations Act 1997* and their associated regulations. This legislation gives councils the discretion to develop service support and supervision models that provide for the management of the impact of sewage pollution.

LOCAL GOVERNMENT ACT 1993

The design, installation and operation of OSMS's are regulated under the *Local Government Act 1993* and its associated Regulations. Under Section 68 of the Act, Council approval is required prior to the installation, construction or alteration of a waste treatment device, a human waste storage facility or a drain connected to any such device or facility.

The *Local Government (General) Regulation 2005* sets out specific requirements for OSM approvals including matters for Council consideration, performance standards and circumstances where prior Council approval is not required. Part 2 of the Regulation incorporates the requirement for an Approval to Operate an on-site sewage management system.

Issues associated with the management of decentralised sewage facilities are dealt with under the *Local Government (General) Regulation 2005,* the *Environmental and Health Protection Guidelines* (DLG, 1998) and the Australian Standards 1546 & 1547. The Regulation provides for greater protection of the environment and public health through tighter control of the performance standards of OSMS's.

The Local Government Act also provides the ability to undertaken enforcement action through the orders provisions of Chapter 7 in particular sections 124(21), 124(22) and 124(22A). These orders permit Officers to stipulate the manner, in which a system is to be operated, things to be done or refrained from doing. In addition under s124 (24) Council can order an occupier or landowner to connect to the sewerage system when the property is located within 75 metres of a sewer.

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

The *Protection of the Environment Operations Act 1997* (*POEO Act*) provides local government with stronger powers to investigate complaints and to issue legally binding notices. Under the Act, local government is responsible for the regulation of activities for which it is the Appropriate Regulatory Authority (ARA). Council is the ARA for activities relating to OSMS's not regulated or licensed by the OEH.

A major component of any modern environmental protection program is efficient surveillance and enforcement to ensure compliance with Council requirements. Where a failing OSMS is detected during a compliance inspection the following actions are available to Council under the *POEO Act*:

1. Clean-up Notices

Clean-up Notices may be used in situations where a quick response to a pollution incident is required. The Clean-up Notice carries an administration fee that must be paid to Council. There is no right of merit appeal against a Clean-up Notice.

2. Prevention Notices
Prevention Notices may be issued in situations where a sewage management system is being operated in an environmentally unsatisfactory manner. The recipient of a Prevention Notice must pay an administrative fee to Council.
3. Compliance Cost Notices
The *POEO Act* allows Council to recover any reasonable costs and expenses it incurs in monitoring action taken under either a Clean-up or Prevention Notice, ensuring the Notice is complied with and any other associated matters.
4. Penalty Infringement Notices
Where an OSMS is failing or has the potential to discharge effluent to a waterway or the stormwater system, a Penalty Infringement Notice (PIN) may be issued. The recipient of a PIN must pay the fee or can elect to appeal the notice in the Local Court.

AS/NZS 1547:2012 ON-SITE DOMESTIC-WASTEWATER MANAGEMENT

This standard provides specific details for a range of domestic on-site sewage management facilities and land application areas for all persons and agencies involved with on-site sewage management in Australia and New Zealand.
The Standard provides guidance for:

- system flows up to a maximum of 14,000L/week and population equivalent of up to 10 persons; and
- site investigation, land application system design, installation, operation and maintenance to achieve sustainable outcomes and public health performance.

AS/NZS 1546 ON-SITE DOMESTIC WASTEWATER TREATMENT UNITS

AS/NZS 1546.1:1998 Septic tanks

This standard is highly relevant to manufacturers of on-site sewage management facilities, by specifying technical means of system compliance and test specifications to achieve sustainable outcomes and public health performance.

AS/NZS 1546.2:2001 Waterless composting toilets

This standard covers the requirements of waterless composting toilets that are intended primarily as stand-alone units for residential use but may be suitable for non-residential applications.

AS/NZS 1546.3:2001 Aerated wastewater treatment systems

This standard sets out performance requirements, design requirements, means of compliance, installation requirements, requirements for operation and maintenance and specifications for testing aerated wastewater treatment systems (*AWTS*) and associated fittings.

AS/NZS 3500 PLUMBING AND DRAINAGE

This standard is highly relevant to the licensed plumbers and installers who conduct repairs or alterations to existing on-site sewage management facilities or new installations. *This standard covers the requirements for the design and installation of any plumbing and drainage.*

GUIDELINES AND STANDARDS

The State Government along with other agencies have developed a number of different guidelines and standards for use in designing and assessing OSM. The following is an outline of these guidelines which are used by Council in the implementation of this Strategy.

ENVIRONMENT & HEALTH PROTECTION GUIDELINES 1998

The *Environment and Health Protection Guidelines* were developed by the Department of Local Government in 1998. These guidelines provide Council with the tools for the effective regulation of OSMS's. In order to achieve this, the Guidelines recommend that councils should:

- Develop, implement and regularly review an On-site Sewage Management Strategy.
- Develop site and system specific conditions of approval to operate on-site sewage management systems.
- Consider all relevant issues when approving the installation or operation of on-site sewage management systems, particularly environment and health issues, both within the site and on a catchment wide basis.
- Check that approval conditions are complied with by appropriate auditing and monitoring.
- Undertake ongoing householder education on issues including:
    - Statutory responsibilities of householders as operators of on-site sewage management systems.
    - Health and environmental risks associated with system use.
    - Specific issues related to the system installed.

The Guidelines also recommends that councils should implement a program of OSM audits to monitor the performance of systems and also to monitor the impact of on-site sewage management on a larger environmental scale.

AS/NZS 1547:2012 ONSITE DOMESTIC WASTEWATER MANAGEMENT

The objective of AS/NZS 1547:2012 is to provide guidance to all persons and agencies involved with on-site sewage management in Australia and New Zealand. The standard covers all matters relating to site investigation, land application system design, installation and operation and maintenance to achieve sustainable outcomes and public health performance. Council has adopted this standard as policy in order to ensure a uniform approach based on performance related outcomes.

DEPARTMENT OF ENERGY, UTILITIES AND SUSTAINABILITY: NSW GUIDELINE FOR GREYWATER REUSE IN SEWERED SINGLE HOUSEHOLD RESIDENTIAL PREMISES, 2007

These Guidelines provide direction on the use of greywater in single households and have been developed to assist property owners, system suppliers and councils in installing and approving greywater systems. The guidelines also outline the requirements for exemption from obtaining approvals from Council for installing greywater systems.

NSW HEALTH: GUIDELINES FOR ON-SITE SEWAGE MANAGEMENT

NSW Health has produced a set of guidelines for the accreditation and management of each of the different OSMS types. The guidelines can be used by Council in determining system design and approval conditions.

ENVIRONMENTAL AND PUBLIC HEALTH ISSUES

In protecting public health and the environment, the *Local Government (General) Regulation 2005* specifies that an OSMS must be operated in accordance with the following performance standards:

- The prevention of the spread of disease by micro-organism.
- The prevention of the spread of foul odours.
- The prevention of the contamination of water.
- The prevention of the degradation of soil and vegetation.
- The discouragement of insects and vermin.
- Ensuring that persons do not come in contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned.
- The minimisation of any adverse impacts on the amenity of the premises and surrounding lands.

Public health protection requires Council attention to specific system failures, while the protection of the environment also requires attention to the cumulative impact of sewage pollution in the area.

Managing cumulative impacts is a difficult but core responsibility of Council's On-Site Sewage Management Strategy. It is particularly important to protect the natural waterways in the Upper Hunter LGA from pollution, including that caused by inefficient effluent disposal. In this regard, it is important to appreciate that many waterways suffer environmental degradation and public health risks as a result of small incremental increases in pollution from many different sources and not necessarily from large individual point sources.

Within the local environment pollution is a sensitive issue which can cause unnecessary stress, therefore careful control of OSMS's is essential. Any disposal of on-site sewage effluent may contribute pathogens, opportunistic microbes and nutrients to local waterways unless reduction measures are used on site.

An understanding of the presence of pathogens in wastewater systems is also important because of the risks they pose to public health. The degree of risk is dependent on the nature of the wastewater system, its treatment, and the infectious dose of any pathogen present and the ability of an individual body to fight the organism.

PROGRAMS

APPROVAL PROGRAM

The approval process establishes an accountability relationship between the property owner and the Council and will enable Council to ensure that householders and property owners are aware of the maintenance and operating requirements of their system.

Approval to Install Onsite Sewage Management System

Section 68 of the *Local Government Act 1993* requires that property owners obtain an approval from Council to install, construct or alter a waste treatment device or a human waste storage facility, including an effluent disposal area.

Where an OSMS is to be located in a sensitive location, best practice on-site sewerage management is to be implemented. Sensitive locations include blocks under 4000m^2, where a standard system may not meet Council requirements.

Best practice on-site sewage management is the sustainable disposal of household sewage in a manner which meets the requirements of NSW Health, Council, the requirements of the *Environment & Health Protection Guidelines Onsite Sewage Management for Single Households,* and the *Australian Standard 1547:2012 – Disposal Systems for Effluent from Domestic Premises.* In order for an on-site sewage management system to be considered as meeting best practice the following standards are to be met at a minimum:

- Household plumbing must be certified by a licensed plumber to meet the requirements of the *National Plumbing Code AS3500:2006* and a certificate of compliance must be submitted to council from a licensed plumber.
- Sufficient land must be available for the disposal of treated sewage, ensuring that the requirements of *The Environment & Health Protection Guidelines Onsite Sewage Management for Single Households* prepared by the NSW Department of Local Government 1998 and the *Australian Standard 1547:2012 – Disposal Systems for Effluent from Domestic Premises* are met.
- The site must not be restricted by size, rock, bushland, waterways, or built structures to prevent the likelihood of significant environmental impacts from occurring.
- The irrigation area must not be used for recreational activities, growing of fruit or vegetables, vehicle movements or the keeping of agricultural animals.
- Tanks are to be in good working order and are to be fitted with baffles and an outlet filter.

Council's role in the approval process for on-site sewage management application is that of the assessing/approving authority. Through this role Council's objective is to ensure that the application/approval process adequately satisfies the objectives of the legislative framework, companion guidelines and this Strategy. Council's role is not that of applicant, designer or installer and as such does not take on the responsibilities associated with these roles. Council will review designs through the assessment/approval process to ensure the objectives, goals, guiding principles and design parameters of legislative and/or guidelines frameworks are adequately satisfied.

All Applications for OSMS's are to be lodged through the NSW Planning Portal.

Approval to Operate a System of Sewage Management
The *Local Government (General) Regulation 2005* requires that an owner of an OSMS obtain Council approval to operate the sewage management system in addition to any approval required for the installation of the system.

An annual fee for the Approval to Operate (ATO) an OSMS will be charged and disclosed on the rate notice issued to the relevant property. The annual fee to be charged is related to the application for or renewal of approval to operate an OSMS and covers the costs associated with inspecting, monitoring and maintaining records. There will be no fee attributable to initial inspections of OSMS's carried out, however a fee will be charged if a further inspection is required to be undertaken.

Except for new installations, change of ownership, or revocation of approvals, Council will issue Approvals to Operate on an annual basis.

In accordance with Section 68 of the Local Government Act 1993, a system of sewage management cannot be operated lawfully without an Approval to Operate from the local Council.

Approval for Greywater Reuse
A greywater treatment system requires Council approval to install and operate under the *Local Government Act 1993*

A greywater diversion device does not require installation approval or an approval to operate if the system meets the following requirements:

- The property is in a sewered area.
- Installation in accordance with the NSW *Plumbing and Drainage Code of Practise,* 2006.
- Installation in accordance with the requirements of NSW Health, *Grey water Reuse in Sewered Single Domestic Premises*, April 2000.
- The following performance standards are achieved:

    - Prevention of the spread of disease by microorganisms
    - Prevention of the spread of foul odours
    - Prevention of contamination of water
    - Prevention of degradation of soil and vegetation
    - Ensuring that people do not come into contact with untreated sewerage or effluent in ordinary activities on the premises concerned
    - The minimisation of any adverse impacts on the amenity of the property and surrounding lands.

If a property has an existing OSMS, an Approval to Operate from Council is required under the *Local Government Act 1993* and its Regulations for a greywater diversion device.

Commercial Systems
A Commercial Sewage Management Facility or a 'Package Wastewater Treatment Plant' can be described as any pre-fabricated or pre-engineered treatment system designed to accept and treat small to medium wastewater flows independent of a reticulated sewage system.

Any proposal not of a domestic nature, or expected to receive an equivalent daily wastewater volume between 10 EP and 2500 EP is typically regarded as a commercial sewage management facility, or a package wastewater treatment plant.

Any commercial sewage management facility or package wastewater treatment plant is required to be designed by a suitably qualified and experienced environmental engineer or wastewater consultant. The system must be certified in writing by the qualified environmental engineer or wastewater consultant based on both the design and performance parameters.

The tank(s) must be certified in writing by a structural engineer. This certification must be provided as a supporting document to the Application to Install submitted to Council. The construction and installation of the system is required to be certified in writing by the installer, and must be provided in writing to Council prior to Council issuing an Approval to Operate for the system.

NOTE: In the interest of public health all commercial systems shall be fenced to prevent access from the public (fencing shall include lockable gates for maintenance access).

Revoking an Approval
Council reserves the right to revoke or modify any approval issued for the operation of a sewage management system. This may include reducing the duration of time an approval is valid for and/or placing additional conditions on the approval where a problem with a system is identified.

Failure to Obtain Approval to Operate a System of Sewage Management
It is an offence under section 626 of the *Local Government Act 1993* to operate a system of sewage management without local government approval. Penalty Infringement Notices can be issued for either operating a sewage management system without approval or in a manner other than what was approved. In addition, the penalty for failing to apply to Council for an approval to operate a system of sewage management is a maximum of 20 penalty units.

MAKING AN APPLICATION

Applications must be made through the NSW Planning Portal. Applications will only be accepted with the applicable fee. Any incomplete applications may be rejected. Applications must comply with the Local Government (General) Regulation 2005 for matters to accompany application for approval to install or construct sewage management facilities. The following matters are required:

(1) Plan
The application must be accompanied by a plan, drawn to scale, showing the location of:
(a) The sewage management facility proposed to be installed or constructed on the premises, and
(b) Any related effluent application areas, and
(c) Any buildings or facilities existing on, and any environmentally sensitive areas of, any land located within 100 metres of the sewage management facility or related effluent application areas, and
(d) Any related drainage lines or pipework (whether natural or constructed).

(2) Specifications

The application must be accompanied by full specifications of the sewage management facility proposed to be installed or constructed on the premises concerned.

(3) Site assessment

The application must be accompanied by details of the climate, geology, hydrogeology, topography, soil composition and vegetation of any related effluent application areas together with an assessment of the site in the light of those details.

(4) Statement

The application must be accompanied by a statement of:

(a) The number bedrooms contained within the associated dwelling; or the number of persons residing, or probable number of persons to reside, on the premises, and

(b) Such other factors as are relevant to the capacity of the proposed sewage management facility.

(5) Operation and Maintenance

The application must be accompanied by details of:

(a) The operation and maintenance requirements for the proposed sewage management facility, and

(b) The proposed operation, maintenance and servicing arrangements intended to meet those requirements, and

(c) The action to be take in the event of a breakdown, or other interference with its operation.

Applications may be made by any person, however they must have the owner's consent. Site assessments must be carried out by, or with the assistance of, suitably qualified persons. This includes the appropriate determination of soil characteristics.

Types of Treatment Systems

The following treatment systems will be considered for installation or construction:

Septic tanks AS/NZ 1546.1.1998
Wet composting toilets
Waterless composting toilets AS/NZ 1546.2:2001
Incinerating toilets
Aerated Wastewater Treatment Systems (AWTS) AS/NZ 1546.3:2001
Bio filters
Reed beds or constructed wetlands
Sand filters
Greywater treatment systems

Pump out systems and chemical closets will be permitted under special circumstances and assessed on a case by case basis. Cesspits and long drop toilets will not be approved.

New and innovative systems will be considered by Council, however fully documented performance and effluent quality information must be provided. Compliance with relevant legislative requirements must be met in order for alternative systems to be considered.

Types of Disposal Systems
The following disposal systems will be considered for installation or construction:

Absorption trenches
Evapo-transpiration absorption (ETA) beds as per AS/NZ 1547:2012
Sub surface irrigation >100mm below ground level
Sub surface disposal >300mm below ground level
Mound systems
Surface irrigation (*see note)

*Note: Surface irrigation systems will not be permitted for new systems on blocks less than 4000m^2 in area or in sensitive locations.

Surface irrigation installations are required to strictly comply with the guideline buffer distances. The spray system is to distribute the effluent evenly. Spray heads shall not produce fine mist or aerosols and not exceed a spray height greater than 500mm above finished surface level nor have a wetted diameter of greater than 2000mm. Surface spray irrigation systems shall have pipe laterals connecting spray heads buried to a depth of at least 150mm.

INSPECTION PROGRAM

To ensure each on-site sewage management system in the Upper Hunter LGA is operated so as to protect public health and the environment, Council undertakes regular inspections of systems. Under the *Local Government (General) Regulation 2005*, all Councils have a duty to monitor the performance of existing systems and take action in relation to defective systems or systems which pose a risk to public health or the environment. Through implementation of corrective works, system replacement or simple changes in system operation, there has been a significant improvement in overall performance.

This Strategy outlines the performance based inspection program currently in operation. A compliance approach for the inspection of OSMS's is consistent with Council's approach to its other environmental protection duties, and is considered the most equitable and effective method for ensuring that OSMS's do not pose a risk to the environment or to public health.

Through the inspection program Council can ensure that individual property owners and occupiers are acting responsibly and managing their sewage systems correctly. For this reason this Strategy makes a distinction between high, medium and low risk systems. Failing systems are not acceptable and must be upgraded. High risk systems have been determined from a desktop study, however, failing systems can only be identified through the inspection of individual sewage management systems.

Inspection costs
An annual fee for the Approval to Operate (ATO) an On-site Sewage Management System (OSMS) will be charged and disclosed on the rate notice issued to the relevant property. The annual fee to be charged is related to the application for or renewal of approval to operate an Onsite Sewer Management System and covers the costs associated with inspecting, monitoring and maintaining records. There will be no fee attributable to initial inspections of OSMS's carried out, however a fee will be charged if a further inspection is required. Second and subsequent systems on a property are charged an inspection fee in accordance with Council's Fees and Charges.

Where an owner or tenant fails to maintain their sewage management system in an environmentally acceptable or healthy manner, Council can use the legislative tools previously outlined to require remediation works to be undertaken and an additional reinspection fee will be charged. (For Council's schedule of Fees and Charges, go to www.upperhunter.nsw.gov.au)

Notification of inspection
A property owner will be given notification of Council's intention to inspect their sewage management system. Notification is by letter, which specifies the date range when the system will be inspected. This is usually within a 30 day period. If a property owner wishes to be present at the time of inspection they will be given an opportunity to contact Council and arrange a mutually agreeable time for the inspection to take place.

If the Council Officer attends the property on the nominated date but is unable to either gain access to the sewage management system or complete the inspection, the property owner will be contacted by letter and a suitable time will be arranged for the inspection to be completed.

In circumstances where Council Officers are investigating complaints related to the inefficient or unsafe operation of OSMS's Council Officers will attempt to contact system owners to arrange an agreeable time for an inspection. Inspections may be undertaken without notification to the property owner where Council believes that a system is failing and the officer reasonable suspects that pollution has been, is being, or is likely to be caused.

Assigning a risk-rating to the system

Following an inspection of a system by Council Officers the system will be given a risk-rating. Risk-ratings will be assigned by considering the limiting factors and features of the property, not the actual performance of the system at the time of the inspection.

Specific site limitations include slope, landform, exposure, distance to water bodies and man-made features, run-off/seepage from upslope, flooding potential, site drainage, vegetation, surface condition, fill, erosion/mass movement, soil category, coarse fragments, field pH, dispersiveness and soil depth.

SITE LIMITATIONS

DEGREE OF LIMITATION	RISK CATEGORY
No limiting site factors	Low risk
Some limiting site factors	Medium risk
Very limiting site factors	High risk

NOTE: *Site Limitations used to assess the risk category of a system are outlined in tables 4 and 5 of The Environment & Health Protection Guidelines Onsite Sewage Management for Single Households prepared by the NSW Department of Local Government 1998.*

Frequency of inspections

The inspection program for OSMS's will be implemented with the least intrusion on residents and landowners. The risk of the system to the environment and to public health, not the type of system, will determine the frequency of inspections.

Reinspections of failing systems will be required until the system meets the current health and environmental performance standards. Council Officers will determine what follow-up action is required for failing systems and will negotiate with the owner a suitable schedule for upgrade work.

STAFF REQUIREMENTS

There is currently one EFT staff employed in the implementation of the OSM program for Upper Hunter Shire Council. Employees from within the Health, Building and Compliance team carry out the functions outlined in this Strategy.

Staff perform the following core functions relevant to the Strategy:

1. Complete programmed inspections;
2. Initiate action for upgrading and maintenance of OSMS's;
3. Ensure all owners of OSMS's obtain and maintain approvals to Operate;
4. Provide education and guidance on OSM matters to the community, staff and Council;
5. Assess applications for the installation of new OSMS's;
6. Carry out installation inspections of new systems;
7. Monitor figures and reports for Aerated Wastewater Treated Systems to ensure proper servicing;

The current staffing levels need to be reviewed annually to ensure resources are adequate to successfully undertake the OSM program in accordance with this Strategy.

Staff will participate in ongoing training to ensure they maintain the capacity to effectively implement Council's program. Upper Hunter Shire Council is an active member of the Hunter and Central Coast Septic Tank Action Group which meets quarterly to develop guidelines and share information to promote consistency in programs across the region.

EDUCATION PROGRAM

This Strategy recognises the importance of continuing community involvement in the management of on-site sewage issues in the Upper Hunter LGA. The education program outlined in this Strategy is fundamentally linked to the other programs and will be implemented in conjunction with the inspection and approval programs.

Ongoing education is of great importance and assists individuals to meet regulatory requirements, improve their outlook on achieving sustainability and minimise health and environmental risks associated with the operation of OSMS's. Education plays a key role in achieving beneficial and visible outcomes. Reviews of OSMS's enable Council to assist system owners to better understand how their system works and how they can improve their actions to move towards sustainability over time.

Council has been proactive in implementing education programs within the community. The actions outlined in this Strategy relating to community education aim to satisfy the basic knowledge and awareness requirements of householders and land owners. The knowledge and awareness required of property owners and occupiers in relation to the operation and maintenance of OSMS's includes:

- Health risks and how to manage them.
- Managing the environmental impact of wastewater.
- System operation and maintenance.
- Waste minimisation principles.
- Where to access information.
- Performance standards of OSMS's.

Property owners and householders need to take an active role in the management of their on-site system. In order to do this it is essential that property owners and householders are aware of their responsibilities and have access to appropriate information and other resources to carry them out.

Council will be undertaking the following to raise property owner's and householder's awareness of these issues:

- Updating the UHSC website with information and relevant forms relating to on-site sewage management;
- Launching a newspaper advertising campaign to highlight local and current issues relating to on-site sewage management;
- Reviewing the forms and letters sent to property owners with a view to making the information disseminated as clear and concise as possible;
- Ongoing education with owners during inspection program.

CASSILIS SEWERAGE PROJECT

Upper Hunter Shire Council is introducing a village sewerage system in Cassilis, with financial assistance from the NSW Government's Regional Water and Waste Water Program. The village contains around 50 houses and several community or commercial premises including a bowling club, caravan park and Cassilis Memorial Park. Almost all have individual septic tank-based systems with on-site effluent disposal in absorption trenches. The new system would include gravity reticulation, a pumping station and a sewerage treatment plant. The project is scheduled to be completed in 2022.

Any application for a system that is in the identified area under the Cassilis sewerage project shall be referred to Water and Waste for comment on specific likelihood of future sewer availability. Where sewer is anticipated to be available to the specific site within five years, variations of relevant aspects of the Development Control Plan or Policy may be considered.

STRATEGY REVIEW

It is proposed that a review of this Strategy will be undertaken within two (2) years of its implementation and then every two (2) years on an ongoing basis. The review is intended to assess the information gathered over the inspection program to build a clearer picture of the state of Upper Hunter Shire Council's on-site sewage management systems.

CONCLUSION

This Strategy seeks to develop appropriate OSM operation and maintenance techniques with system owners. It is expected that this will be achieved through one-on-one consultation, inspection programs and delivery of educational material.

Through effective use of this Strategy, the number of failing systems in the Upper Hunter LGA should be reduced, thus reducing public health and environmental impacts associated with the use of on-site sewage management systems.

REFERENCES

- Department of Local Government (1998) Environment and Health Protection Guidelines: Onsite Sewage Management for Single Households, Department of Local Government.
- Department of Environment and Climate Change and Water (DECCW)
- Department of Health (2000) Greywater Reuse in Sewered Single Domestic Premises, Department of Health.
- Department of Health (2001) Septic Tank and Collection Well Accreditation Guideline.
- Department of Health (2005) Sewage Management Facility, Sewage Treatment Accreditation Guideline.

- Department of Health (2005) Waterless Composting Toilet Accreditation Guideline.
- Local Government Act 1993 (Copies can be searched or downloaded from http://www.austlii.edu.au/databases.html#nsw)
- Local Government (General) Regulation 2005 (Copies can be searched or downloaded from http://www.austlii.edu.au/databases.html#nsw)
- Local Government (General) Amendment (Domestic Greywater Diversion) Regulation 2006 (Copies can be searched or downloaded from http://www.austlii.edu.au/databases.html#nsw)
- Protection of the Environment Operations Act 1997 (Copies can be searched or downloaded from http://www.austlii.edu.au/databases.html#nsw)

FURTHER INFORMATION:

Upper Hunter Shire Council at http://www.upperhunter.nsw.gov.au

NSW Department of Health at http://www.health.nsw.gov.au/publichealth/environment/water/waste_water.asp

NSW Division of Local Government at http://www.dlg.nsw.gov.au

NSW Office of Water at http://www.water.nsw.gov.au