



**WARRINGAH COUNCIL ON-SITE SEWAGE
MANAGEMENT STRATEGY 2006**
ENVIRONMENTAL HEALTH AND PROTECTION TEAM - DECEMBER 2006

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1. Introduction

It is widely acknowledged that on-site sewage management systems in New South Wales can pose significant health and environmental risks in the community. Certain areas within Warringah Council are not connected to the Sydney Water Sewer System, and are reliant on on-site sewage management systems to dispose of, store, or recycle wastewater.

In line with Council's commitment to ecologically sustainable development (ESD) and the long-term protection of Warringah's public health and the environment, Council has produced this On-site Sewage Management Strategy. This Strategy follows on from the recent adoption of the new Warringah Council Compliance and Enforcement Policy, in particular section 3.7.4: 'On-site Sewage Management Systems'.

Primary responsibility for the design and maintenance of an on-site sewage management system lies with the property owner, however, the owner is not always the user of the system. Tenants occupying premises with on-site sewage management also need to understand the operating requirements of that system.

Failing on-site sewage management systems can:

- Pollute surface and ground water resources, and affect aquatic life;
- Lead to soil contamination and have negative effects on surrounding vegetation;
- Pose health risks to children and other residents;
- Cause offensive odours and attract vermin.

The following are examples of common on-site sewage management systems:

- Septic tank and absorption trenches;
- Septic tank to pump-out;
- Aerated wastewater treatment systems;
- Composting toilets;
- Chemical toilets;

Any other system which stores, treats, and/or disposes of sewage and wastewater on-site is also classified as an on-site sewage management system.

1.1 Background

The need for Council regulation of on-site sewage management systems is well documented in New South Wales, and required by legislation. Warringah Council currently has over 500 known on-site sewage management systems registered. Since the year 2000, Council has been issuing approvals for new on-site sewage management systems, however, there was no system of inspections or approval program. This precipitated a review of policy, the development of this strategy, inspection and approval program. At present, aerated system servicing technicians service most of the aerated systems in the Council area and forward servicing reports to Council. Council has been acting on servicing reports which indicate system failure, in addition to acting on complaints regarding alleged failing systems.

Council has now appointed an Environmental Protection position within the Environmental Health and Protection Team (in Compliance Services) to focus on establishing and implementing this Strategy, including a system of approvals, inspections, compliance and education for on-site sewage management systems.

1.2 Objectives

1. To fulfil Council's regulatory responsibilities under the *Local Government Act 1993* in terms of assessment and approval of applications relating to the installation and operation of on-site sewage management systems.
2. To protect public and environmental health from the risk of sewage pollution by monitoring, education and regulation.
3. To provide a framework for an organised inspection program based on the risk of each system causing pollution, and to follow up compliance with environmental legislation and approvals issued.

1.3 Scope

This Strategy was written to provide a practical framework for Council Officers to regulate and monitor on-site sewage management systems (sewage management systems) in Warringah, so that public health and environmental risks associated with failing sewage management systems are reduced. The Strategy applies to all fixed sewage management systems in Warringah that do not discharge directly to a public sewer and are not specifically regulated under a pollution control license by the Department of Environment and Conservation (DEC). Most of these systems in Warringah are single domestic systems, however, they also include a range of public and commercial systems. These systems must be operated and maintained in accordance with relevant approvals so as to mitigate any potential adverse public health and environmental impacts.

1.4 Aim and Key Goals

The aim of this Strategy is to provide an integrated approach to on-site sewage management within a framework of community education, monitoring and where necessary, use of regulatory powers by Council. The three goals of this Strategy are:

1. Sustainability

- To ensure sustainable management of wastewater generated on all unsewered properties within Warringah, including favoured approval of systems which treat wastewater for reuse on site;
- To monitor and manage cumulative impacts from on-site sewage management systems;
- To implement and facilitate best management practice in relation to the installation and operation of on-site sewage management systems; and
- To pursue long term, viable sewage management solutions for identified high risk areas (see Figure 1).

2. Effective Management Supervision

- To ensure that all sewage management systems have the required operating approval and are operating in accordance with approval conditions;
- To progressively eliminate illegal discharge of effluent from on-site sewage management systems; and
- To protect groundwater, surface water, land and vegetation, public health and community amenity from the impacts associated with on-site sewage management systems.

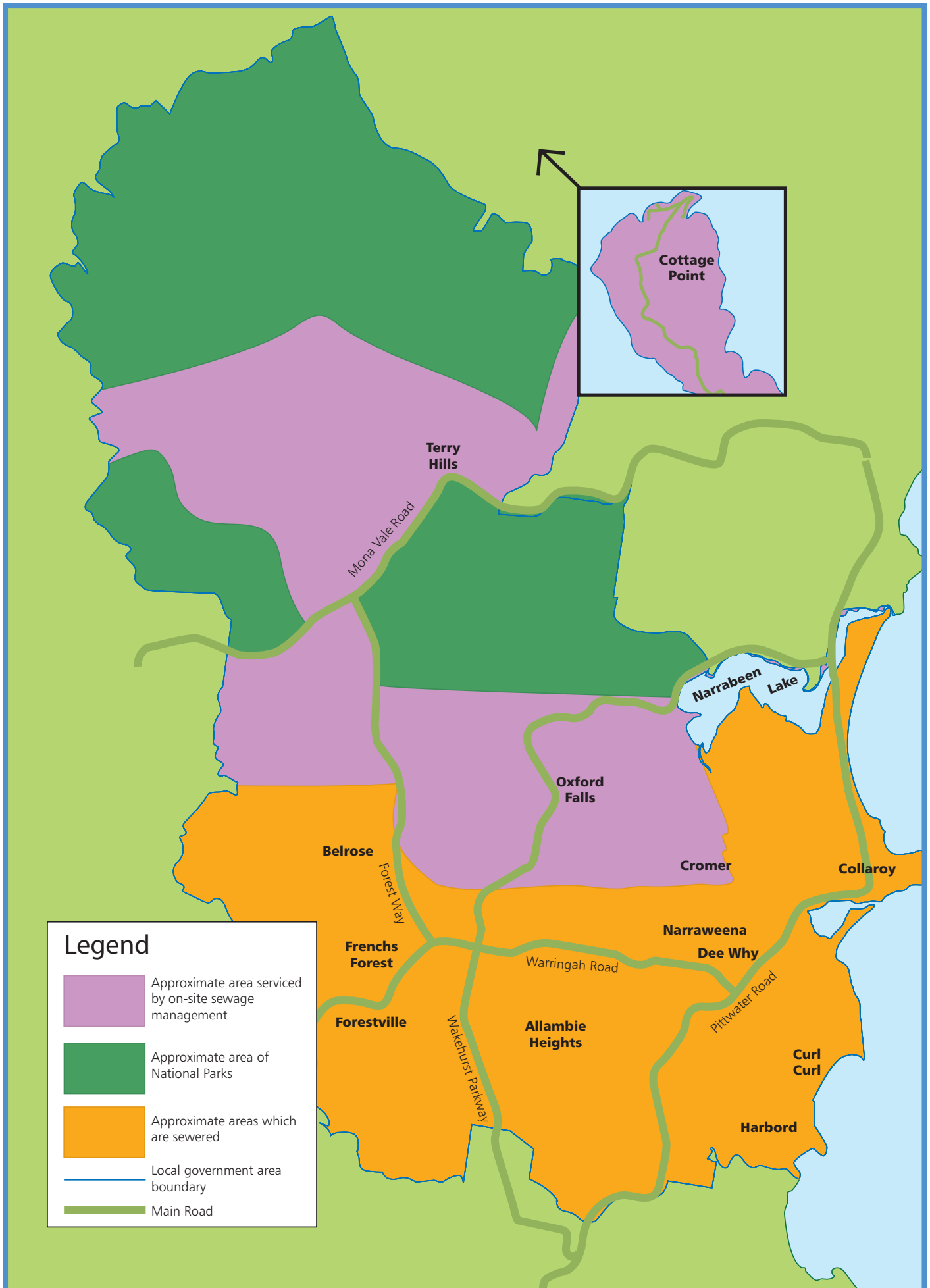
3. Education and Stakeholder Involvement

- To ensure that all stakeholders are aware of their responsibilities and have access to appropriate information to carry them out;
- To work in partnership with the community and other stakeholders to ensure sustainable on-site sewage management in Warringah;
- To ensure that the community is provided with an efficient, cost effective on-site sewage management program which meets both the needs of the stakeholders and the responsibilities of Council; and
- To educate professional support service providers.

2. Regulatory Initiatives

Council will take both an enforcement and educational role in regulating sewage management systems. Should inspections by Council officers reveal that systems are failing, or are operating without necessary approvals, Council will utilise its regulatory tools where required to achieve compliance. These tools are outlined in the following section, and may entail the issue of Notices, Orders and Penalty Infringement Notices. Compliance procedures will be consistent with Warringah's 'minimal tolerance' approach to compliance matters, as stipulated in the 'Warringah Council Compliance and Enforcement Policy'.

WARRINGAH COUNCIL LGA - Areas with on-site sewage management systems



Legend

- Approximate area serviced by on-site sewage management
- Approximate area of National Parks
- Approximate areas which are seweraged
- Local government area boundary
- Main Road

2.1 Educational Initiatives

As part of Council's regulatory role in assessing and monitoring on-site sewage management systems in the area, a number of educational initiatives have been undertaken to date. In 2006, Council's Environmental Health and Protection team with the assistance of Environmental Education has designed and finalised the following educational materials:

- 'Keeping your sewage system safe'; a brochure outlining the operation of the common types of on-site sewage management systems, how they work and tips for operating systems efficiently. The brochure comes with a free sink strainer and will be distributed to appropriate residences throughout the implementation of the strategy until resources are depleted. A copy of the brochure is attached in the Appendices.
- Fridge magnets with '5 tips for keeping your on-site sewage management system safe'. These will also be distributed to appropriate residents until resources are depleted.
- Durable signs designed to be displayed on effluent irrigation areas with the text: 'Reclaimed effluent: Not for drinking'. The signs will be available from Council's Customer Service free of charge for residents operating on-site sewage management systems which dispose of treated wastewater via surface irrigation systems.

Council has also designed new application forms for both 'Approval to Install an On-site Wastewater Management System' and 'Approval to Operate an On-site Wastewater Management System', which will ensure that applicants are clearly informed about the information required in submitting applications, and will allow Council to receive enough information to assess applications. The new forms will improve the application process for both Council and residents. The improved process extends to internal customers, where customer service and other staff have been made aware of the approvals process. To facilitate this, a 'frequently asked questions', application checklist, and approvals process diagram have been designed and are included in the Appendices of this Strategy.

In addition to the abovementioned educational resources, a large part of Council's educational role will be delivered in the form of verbal and written advice from Council's authorised officers during the day-to-day inspections of systems and enquiries about systems.

Educational materials will be reviewed in the future depending on budgetary constraints.

3. Legislation, Guidelines and Standards

3.1 Local Government Act 1993

Councils regulate the installation and operation of systems of sewage management under the *Local Government Act 1993* ('the Act') (Section 68). Approvals to both install and operate are required for all sewage management systems under the Act. Under Section 626 of the Act it is an offence to not to comply with an approval and/or install or operate a system of sewage management without an approval.

The Local Government Act 1993 also provides regulatory tools for Council Officers to use in cases of system failure, systems without approval, or pollution events. Remedies include:

- Orders under Section 124 of the Act can be issued to require system owners to carry out works to repair defective systems, and/or prevent sewage pollution. These include Orders numbers 15, 21, 25 & 30 (which are usually preceded by Notices of Intention to Issue an Order unless where an emergency exists).

Punitive measures include:

- Penalty Infringement Notices, or 'on-the-spot fines' may be issued for 'Operate sewage management system without approval (Sec 626-3)', 'Operate sewage management system otherwise than as approved (Sec 627-3)', & 'Not comply order – human waste storage facility (Sec 628-2)'. The penalty is \$330 on the spot.

In addition, in serious cases of non-compliance, Council may prosecute offenders in accordance with Council's Compliance and Enforcement Policy and Prosecution Policy.

3.2 The Local Government (General) Regulation 2005:

- Applies to all fixed sewage management systems that do not discharge directly to a public sewer and are not specifically regulated under a pollution control licence by the Department of Environment and Conservation (DEC);
- States that Council approval is required under Section 68 of the *Local Government Act 1993* for the installation, construction or alteration of a sewage management facility, as well as its ongoing operation;
- Stipulates environment and health matters to be taken into consideration in determining applications for approval to install, construct or alter sewage management facilities;
- Provides general performance standards for sewage management facilities;
- Provides further conditions of approval in relation to operation of system of sewage management;
- Specifies the accreditation role of NSW Health. This relates to the types of systems which may be installed.

3.3 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* ('POEO Act') provides Council with powers to take timely and effective regulatory action where sewage management systems are failing and/or causing pollution. The following tools are available for Council Officers to use where breaches of the POEO Act are revealed:

Remedies include:

- Clean-up Notices under Section 91 of the POEO Act where a pollution incident is being caused. Clean-up Notices incur a \$320 administration fee, and are non-appealable.
- Pollution Prevention Notices under Section 96 of the POEO Act where a system is being operated in an environmentally unsatisfactory manner. Prevention Notices incur a \$320 administration fee.
- Compliance Cost Notices under Section 104 of the POEO Act where Council is seeking to recover expenses for extensive time and money spent on monitoring compliance of Clean-up and Prevention Notices.

Punitive measures include:

- Penalty Infringement Notices or 'on-the-spot fines' under Section 120 of the POEO Act (Pollute waters, \$750 individual/\$1,500 corporation), Section 91 (Fail to comply with a clean up notice, \$750 individual/\$1,500 corporation), Section 97 (Fail to comply with a prevention notice, \$750 individual/\$1,500 corporation), Section 94 (Fail to pay clean up notice fee, \$500 individual/\$1,000 corporation), Section 100 (Fail to pay prevention notice fee, \$500 individual/\$1,000 corporation).

3.4 Environment & Health Protection Guidelines On-site Sewage Management for Single Households 1998

The Guidelines, developed by the Department of Local Government in conjunction with NSW Health, the EPA and other relevant State Government stakeholders, maintain that effective Council regulation of sewage management systems requires a planned risk management approach. The Guidelines address issues such as regulatory frameworks, the development of strategies (such as this document), administration and operational issues, site assessment principles and principles for selection and operation of sewage management systems.

The guidelines are specified guidelines for the purposes of Clauses 29, 44 & 45 of the *Local Government (General) Regulation 2005*. The Guidelines are a matter for consideration by the Council in relation to applications for approval to install and approval to operate a sewage management system.

3.5 Other Standards/Guidelines

There are further standards and guidelines utilised by Council officers to assess applications and conduct inspections, which include:

- AS/NZS 1547:2000 Onsite Domestic Wastewater Management;
- NSW Guidelines for Urban & Residential Use of Reclaimed Water (NSW Recycled Water Coordination Committee);

- Environmental Guidelines for the Reuse of Effluent in Irrigation (Department of Environment and Conservation);
- NSW Health's Greywater Reuse in Sewered Single Domestic Premises.

3.6 Links to other Council Strategies/Plans

The objectives and goals of this Strategy are in line with the goals of the following Warringah documents:

- The Warringah Plan 2005-2008 (environmental and water quality goals) (Management Plan).
- 'Warringah's Environmental Strategy-towards a sustainable community (May 2001)'. This Strategy outlines Council's water quality monitoring program of the four lagoons to meet the DEC (EPA) interim water quality objectives for the state's rivers and estuaries.
- Compliance Services Operational Plan 2006-2007.

4. Risk Management

When considering what action is appropriate to ensure that on-site sewage management systems do not impact on public health or the environment, it is important to consider Council's duty of care and statutory obligations in respect of risk management.

The *Local Government Act 1993* sets out a charter for Councils which comprises a set of principles to guide a Council in the carrying out of its functions. In relation to the environment, Councils are required:

- to properly manage, develop, protect, restore, enhance and conserve the environment of the area for which it is responsible, in a manner that is consistent with and promotes the principles of ecologically sustainable development; and
- to have regard to the long term and cumulative effects of its decisions

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. This Regulation requires that Councils deal with sewage management as a principal activity in the Council Management Plan. Warringah Council also has a responsibility to achieve its goals set out in the Warringah Plan 2005-2008 and the 'Warringah's Environmental Strategy-towards a sustainable community (May 2001)'.

This strategy provides a risk management approach in accordance with the legal requirements as described above.

4.1 Environmental and Public Health Issues

Warringah's local environment is sensitive to pollution, and careful control of on-site sewage management systems is essential. Any on-site sewage disposal method has potential to contribute pathogens, opportunistic microbes and nutrients to local waterways unless the site is managed to reduce, contain and treat these organisms and nutrients.

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. Because 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.

An understanding of the presence of pathogens in wastewater streams is also important because of the risks they pose to public health. The degree of risk is dependant on the nature of the wastewater stream, its treatment, the infectious dose of any pathogen present and the ability of a person's body to fight the organism. In relation to protecting public health and the environment, the Local Government (General) Regulation 2005 specifies that an on-site sewage management system must be operated in accordance with the following performance standards:

- (a) the prevention of the spread of disease by micro-organisms,

- (b) the prevention of the spread of foul odours,
- (c) the prevention of contamination of water,
- (d) the prevention of degradation of soil and vegetation,
- (e) the discouragement of insects and vermin,
- (f) ensuring that persons do not come into contact with untreated sewage or effluent (whether treated or not) in their ordinary activities on the premises concerned,
- (g) the minimisation of any adverse impacts on the amenity of the premises and surrounding lands,
- (h) if appropriate, provision for the re-use of resources (including nutrients, organic matter and water).

Public health protection requires Council attention to specific system failures, while the protection of the environment requires attention to both specific system failures and the cumulative impact of sewage pollution in the area. Managing cumulative impacts is a difficult but core responsibility of Councils in relation to on-site sewage management.

It is particularly important to protect the natural waterways in Warringah 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.

4.2 Irrigation of Treated Wastewater

In assessing new approvals, Council discourages the installation of surface spray irrigation. Use of spray irrigation can lead to human and animal contact, and can result in runoff of effluent, and also be subject to damage by lawn mowers and vehicles. Where irrigation of wastewater is proposed for new installations, sub-surface irrigation lines will be encouraged and required wherever possible.

5. Greywater Treatment Systems

With current water restrictions and the increasing popularity of water recycling devices, Council recognises increasing community interest about greywater treatment systems. In accordance with Council's policy of ESD, water reuse on site is encouraged, however, it must be conducted in a safe and environmentally sustainable manner.

Greywater is defined as wastewater generated by the use of a handbasin, shower, bath, spa bath, clothes washing machine or laundry tub, dishwasher or kitchen sink (p.3-4, NSW Health), and is different to 'blackwater' which refers primarily to water contaminated with urine and faeces. Greywater treatment systems fall under the definition of a "sewage management facility" under the Local Government (General) Regulation 2005, and therefore require the same approvals as other sewage management systems.

However, greywater diversion devices (the kind which can be purchased from most hardware stores) do not require Council approval, as long as they are operated appropriately. Operation must be in accordance with Section 4.1 of this Strategy, and water must be irrigated via sub-surface irrigation.

Council is currently updating a greywater information brochure for Warringah residents. Council is awaiting the release of the NSW Guideline for Single Households Greywater Reuse (Department of Energy, Utilities and Sustainability). The Guideline, when released, will prescribe the approval and use of greywater systems in NSW.

Further information regarding greywater systems can be obtained by speaking to the Environmental Health and Protection Team at Council.

6. Sewer Availability

Premises currently operating sewage management systems where the Sydney Water sewer main is located within 75 metres of the premises may be required to connect to the sewer. Connection to the sewer is generally considered to be the better practice for sewage management in Warringah to prevent pollution and health risks. This is due to the large population and close proximity to recreational waterways meaning more people are at risk. Under the *Local Government Act 1993* Orders Table, Order no. 24 can be issued by Council to require a property owner or occupier to connect to the sewer. Representations may be made to Council in the standard procedure outlined in the Act and section 3.4.3 of the Compliance and Enforcement Policy.

7. Complaints

Complaints regarding failing sewage management systems, or operation of sewage management systems not in accordance with approval, will be investigated in accordance with the Section 3.1 of Council's Compliance and Enforcement Policy. Legitimate complaints are treated very seriously and in confidence to comply with privacy laws and policies.

8. Approval Program

8.1 New Systems

All new systems must obtain an 'Approval to Install an On-site Sewage Management System'. The application process begins with the submission of an 'Application for Approval to Install an On-site Sewage Management System' form at Council's Customer Service, which will be assessed by Council's Environmental Protection Officer or Environmental Health Officers. Council officers will then conduct the necessary inspections to ensure the system was installed in accordance with the approval. If Approval to Install is granted, the applicant must submit an 'Application for Approval to Operate an On-site Sewage Management System', prior to commissioning the system. At this time, a risk category will be assigned to the approval.

8.2 Existing Systems

It is acknowledged that many systems in Warringah are operating without an Approval to Operate. Those systems which do not have Approval to Operate will be required by Council to obtain this approval, as required under Section 68 of the *Local Government Act 1993*. Approvals to Operate will be assigned a risk-based renewal period, and will be incorporated into Council's inspection program, as outlined in the following section of this Strategy. (As indicated previously, educational and regulatory tools will be used in this regard.)

Revoking an Approval to Operate

Council may under the legislation 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. Such circumstances would only be considered in repeated instances of non-compliance, where previous remedies and punitive measures were also taken but non-compliance continues.

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 of \$330 can be issued in lieu of prosecution 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 approval to operate a system of sewage management is a maximum of 20 penalty units (\$2,200). Alternatively, non-compliance may result in commencement of legal proceedings.

9. Inspection Program

Council will implement a strategic inspection program, to ensure a systematic and ongoing management and monitoring of sewage management systems. Inspections will be conducted on a risk-based assessment. See Section 9.3 of this Strategy.

All on-site systems will be inspected once initially. Areas identified by Council as a high-risk or a high priority will be inspected first, however, all systems will eventually be subject to an initial inspection. This is expected to occur in the first year following the adoption of the Strategy. The initial inspection is required to assign a risk rating to each individual system, to issue the appropriate approvals, and to update Council's records (which at present are incomplete).

The on-site sewage systems in the following areas have been identified as high priority at this stage:

- The Narrabeen Lagoon Catchment (areas such as Cromer, Oxford Falls & Belrose). This area has been identified as a priority to fulfil a component of a grant funded project by the Department of Natural Resources.
- Cottage Point. This area has been identified as a priority by Council, due to the location of properties operating on-site systems in very close proximity to Coal and Cradle Creek, and thin, highly dispersive soils.

It must be acknowledged that even a system that is achieving optimal performance may pose a potential risk to public health and the environment if it is located in an extremely sensitive environment. For this reason, this Strategy makes a distinction between high-risk areas and high-risk systems. Although high-risk areas for on-site sewage disposal are common in Warringah, high-risk systems are not acceptable and must be upgraded. High-risk areas have been determined by a desktop study, however, high-risk systems can only be identified through the inspection of individual sewage management systems.

9.1 Notification of Inspection

A property owner will be given two weeks notification in writing of Council's intention to inspect their sewage management system. If the owner wishes to be present at the time of inspection, they will be given an opportunity to contact Council and arrange a mutually suitable time for the inspection to take place.

If Council's 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 and a suitable time arranged for the inspection to be completed.

In circumstances where Council Officers are investigating legitimate complaints or emergencies related to failing systems, Officers may attend premises without prior notice. For standard complaints, Council will make all reasonable contact with system owners to arrange an agreeable inspection time. Failing this, Officers as a last resort can exercise powers of entry to enter the premises under Section 191 of the *Local Government Act 1993* or Section 196 of the *Protection of the Environment Operations Act 1997* to investigate pollution complaints.

9.2 Risk Categories and Frequency of Inspections

The performance and potential pollution risk of the individual sewage management system to the environment and public health, along with the location of the sewage management system (i.e. proximity to waterways, or area of site), will determine the frequency of inspections. The risk categories are as follows:

1. High Risk systems will be given an Approval to Operate for one year, and may be subject to inspections during the duration of the approval as required to monitor the operation of the system, to follow up on complaints, and to respond to unfavourable servicing reports submitted to Council by wastewater servicing technicians,
2. Medium Risk systems will be given an Approval to Operate for three years, and will be subject to inspections during the three years only when complaints are received, or when Council receives unfavourable servicing reports,

3. Low Risk systems will be given an Approval to Operate for five years, and will only be subject to inspections during the five years following complaints or unfavourable servicing reports.

Assigning the above risk categories to sewage management systems will ensure that the ‘polluter pays’ principle is applied, that is, systems which are shown to be failing in the past, or those in a particularly sensitive area will be subject to more frequent inspections and application renewals. Council will assign risk categories following inspections, however, Council may change risk categories if improvements are revealed and/or systems are upgraded or better maintained. This may reduce or increase the regulatory burden on both the system owner & Council and is recognised in lower fees and less frequent inspections.

Prior to the expiry of approvals to operate, Council will send out a reminder letter that a new approval to operate will be required and an inspection is to be conducted.

9.3 Assigning a Risk-Rating

Risk-ratings will be assigned to on-site systems following the first round of inspections. Risk-ratings will be assigned by considering the risk of the area in which the system is located against the performance of the system. Once the Council officer or consultant has inspected a system, the following ‘on-site sewage management system risk matrix’ will be applied. The matrix is based on AS/NZS 4360: 2004 Risk Management Guidelines.

| LIKELIHOOD OF SYSTEM FAILURE | ENVIRONMENTAL CONSEQUENCE | | |
|---|------------------------------|--------------------------------|-------------------|
| | No limiting location factors | Some limiting location factors | Limiting location |
| No history of failure | LOW | LOW | MEDIUM |
| Some history of failure (1-3 incidents) | LOW | MEDIUM | HIGH |
| Significant history of failure (>3 incidents) | MEDIUM | HIGH | HIGH |

| RISK TREATMENT KEY | |
|--------------------|--|
| LOW | Low risk, approval to operate for 5 years |
| MEDIUM | Medium risk, approval to operate for 3 years |
| HIGH | High risk, approval to operate for 1 year |

EXPLANATION OF ENVIRONMENTAL CONSEQUENCE (Based on Table 5 of the DLG Guideline)

‘No limiting location factors’ – The system is located on a property which is:

- > 100 metres to permanent surface waters;
- > 250 metres to a domestic groundwater well;
- > 40 metres to other waters (eg. farm dams, intermittent waterways and drainage channels etc.);
- Not located upstream and in close proximity of sensitive bushland (eg. Duffys Forest remnant vegetation);
- Soils are favourable to the treatment of wastewater.

‘Some limiting location factors’ – The system is located on a property to which one of the following criteria applies:

- < 40 metres to farm dams, intermittent waterways and drainage channels; OR
- Located upstream and in close proximity of sensitive bushland (eg. Duffys Forest remnant vegetation); OR
- Soils are NOT favourable to the treatment of wastewater (e.g., thin, porous or highly dispersive).

'Limiting location' – The system is located on a property to which one of the following criteria applies:

- < 100 metres to permanent surface waters; OR
- < 250 metres to a domestic groundwater well; OR
- Immediately adjacent to or within sensitive bushland (eg. Duffys Forest remnant vegetation).

EXPLANATION OF 'LIKELIHOOD OF SYSTEM FAILURE'

No history of failure

Council's records show no history of the system failing.

Some history of failure (1-3 incidents)

Council's records show there have been 1-3 incidences of system failure due to operator neglect in the past five years.

Significant history of failure (>3 incidents)

Council's records show there have been more than three incidences of system failure due to operator neglect in the past five years.

10. Fees and Charges

To contribute to the costs of implementation of the Strategy including inspections, education and administration, a fee will be charged for applications and for inspections.

Standard fees are set out in Warringah Council's 'Standard Fees and Charges' and are charged for the following:

- Approval to Operate an On-site Wastewater Management System;
- Approval to Install an On-site Wastewater Management System; (with additional fee for systems for more than ten persons)
- Inspection Fee; (with additional fee for systems for more than ten persons)
- Initial Registration Fee;
- Renewal of Registration Fee.

Fees may be revised on an annual basis. Inspection fees will be charged for all Council inspections. Fees for follow-up inspections may be charged if continued non-compliance occurs. Fees are charged to cover the cost of providing the service which Council is required to provide by law.

11. Strategy Evaluation

The success of this Strategy will be measured in terms of its effectiveness in achieving its goals and objectives, such as:

- Increased number of approvals to operate issued by Council;
- Increased compliance with approvals;
- The updating of Council's on-site sewage management system register;
- Minimising pollution;
- Awareness of requirements and systems.

The data collected in the implementation of this Strategy, i.e. number, distribution and types of systems being operated and the effectiveness of the operation of the systems, will be essential to Council's environmental strategy and water quality objectives. The integration of this Strategy with Council's water quality monitoring program, the Warringah Plan 2005-2008, Warringah's Environmental Strategy 2001 and the DEC (EPA) interim water quality objectives for the state's rivers and estuaries, will contribute to a coordinated response to environmental and public health improvements in Warringah.

The implementation Strategy is also reflected in the objectives set in Compliance Services Operation Plan.

12. Strategy Review

It is proposed that a major review of this Strategy will be undertaken 12 months after its implementation, then every three years after that. The 12 month review is intended to assess the information gathered over the 12 month inspection and approval program to build a clearer picture of the state of Warringah's on-site sewage management systems. As system improvements occur, and knowledge and performance data become available, Council's database will expand. This information combined with stakeholder feedback relating to the implementation of sewage management programs will be used to inform future Strategy direction.

At the first review of the Strategy, sufficient information and data is expected to be available to review resources to continue the further implementation of on-site sewage management programs, and re-assess educational and compliance initiatives.

References

Blue Mountains City Council On-site Sewage Management Systems – Implementation Strategy (April 1999)

Department of Local Government (1998) Environment and Health Protection Guidelines: On-site Sewage Management for Single Households

Local Government Act 1993

(copies can be downloaded from <http://www.legislation.nsw.gov.au/>)

Local Government (General) Regulation 2005

(copies can be downloaded from <http://www.legislation.nsw.gov.au/>)

NSW Health (2000) Greywater Reuse in Sewered Single Domestic Premises

Onsite Sewage Management Strategy 2004-2006, Hornsby Council (January 2004)

Protection of the Environment Operations Act 1997

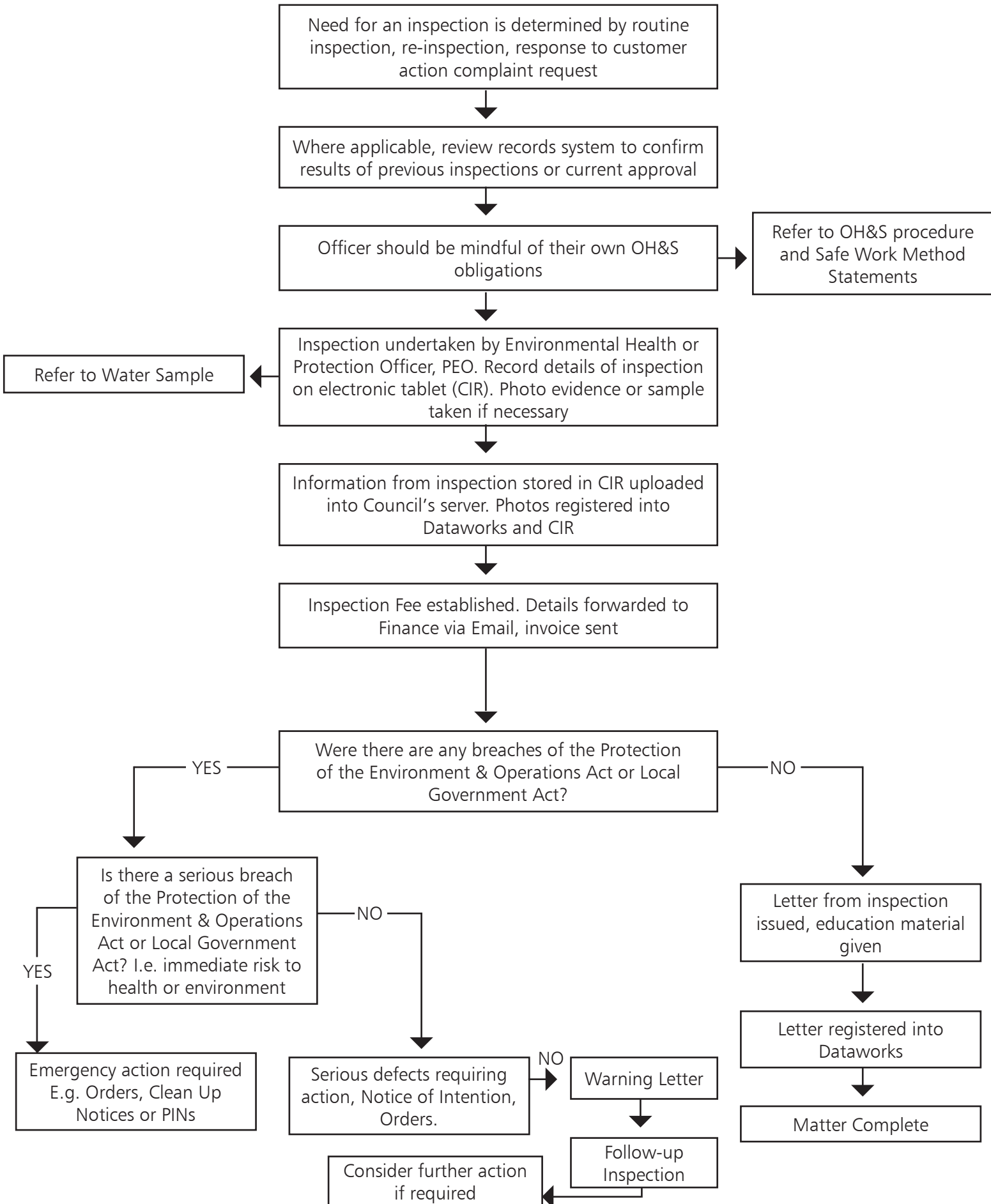
(copies can be downloaded from <http://www.legislation.nsw.gov.au/>)

Standards Australia & New Zealand, AS/NZS4360 : 2004, Risk Management

Standards Australia & New Zealand, HB : 436 : 2004, Risk Management Guidelines

Appendix 1: Inspection Procedure

PROCESS FOR ON-SITE SEWAGE MANAGEMENT SYSTEM INSPECTION



Appendix 2: Inspection Equipment Checklist

Vehicle containing all the equipment listed below:

- Camera
- Personal Protective Equipment
- Esky
- Appropriate sample bottles/jars
- Water sampling pole and bottle
- Sludge level inspection pole/ pole holder attached to vehicle roof racks
- Tools required for opening lids of tanks, such as pliers and pinchbar
- Electronic tablet loaded with inspection register
- First aid kit
- Torch

Appendix 3: Frequently Asked Questions

FAQ' s for customer service staff answering enquiries regarding on-site sewage management system applications and inspections

Q Why do we need to have an inspection?

A So that Council staff can check on site that all systems are being operated properly so that they do not pollute the Warringah environment and pose a health risk to residents. Everyone will be inspected to ensure fairness and consistency.

Q Why is there a fee for inspections and applications?

A Council charges a fee to cover the costs of running the inspection and regulation program. Just as properties which are connected to the Sydney Water Sewer pay a quarterly service fee to Sydney Water, fees for inspections and applications enable Council to provide the service of regulating and monitoring of on-site sewage management systems.

Council is required by law to assess applications and conduct inspections, and it is reasonable for users of systems to pay.

Q What is an 'Approval to Operate'?

A Approval to Operate an On-site Sewage Management System is required by legislation (Section 68 of the *Local Government Act 1993*). It is like a temporary license to operate and on-site sewage management system, and is issued and regulated by the Council. The length of the license depends on the state of the system and the location of the system, and can be issued as a high, medium and low risk approval.

Q Why do I have to apply for an approval to operate when I already got approval for my system when it was put in?

A Approval to Operate an On-site Sewage Management System is a separate approval required by legislation (Section 68 of the *Local Government Act 1993*). It is required in addition to an Approval to Install an On-site Sewage Management System, and exists so that the ongoing use of the system can be regulated by Council.

Q Why are some people given approval to operate for five years and some for one year?

A Approvals to operate are granted on a risk-based assessment. High risk systems are given a relatively short (one year) approval because they are either in a high risk area, such as close to a waterway, or have a history of significant system failure in the past. The risk-based assessment ensures that the 'polluter pays' principle is upheld, and good system operators are rewarded with longer approvals and as a result, less fees. This is outlined in more detail in the 'Warringah Council On-Site Sewage Management Strategy'.

Q Why has Council never inspected my on-site sewage management system before?

A In the past, Council did not have adequate resources, nor was there a coordinated program of approvals and inspections. This meant Council has been unable to inspect all of the 600 or so on-site sewage management systems in Warringah over recent years. However, every Council is required by law to regulate on-site sewage management systems, so Council has developed a Strategy and is now carrying out the approval and inspection program.

Appendix 4: Customer Service Checklist

Accepting application to install an on-site sewage management system applications checklist

Has the application form to install an on-site sewage management system been completely filled out?

Are the site plans at a scale of 1:200, i.e., A3 paper size or bigger? Site plans must include at a minimum:

- Location of dwellings and buildings;
- Location of nearby watercourses, such as creeks and dams;
- Location of tanks, plant, equipment and plumbing lines.

Have the relevant fees been paid?

Are the full specifications of the proposed on-site sewage management system included, preferably with a plan/diagram?

Are there details of soil type/depth, rainfall and slope, or a 'wastewater management report' by a qualified wastewater consultant attached?

If not, Council is unable to accept the application for assessment.

For any queries, do not hesitate to ask Council's Environmental Protection Officer 9942 2111.

Appendix 5: Keeping your sewage system safe brochure

Keeping your sewage system SAFE

WARRINGAH COUNCIL

Your sewage system is a septic or aerated treatment system that stores or treats human waste on a property without access to the Sydney Water sewer.

If you live at a property with a system like this, you are responsible for making sure it is safe and in working order. A system that is not maintained is a health risk for your family and the community and can also have adverse effects on the environment. By ensuring that your system is working correctly you can do your part in helping to protect our environment.

Why do I need Council approval for my system?

NSW Government legislation requires every on-site wastewater management system to be approved by Council. This is necessary so we can monitor and manage the potential impact of sewage systems on our waterways.

What are my responsibilities?

- Ensuring the sewage system and associated pipes don't leak
- Getting your system repaired if it is not working properly
- Ensuring the system is checked and serviced regularly
- Getting the system pumped out (de-sludged) at the necessary intervals (every 2-5 years)
- Maintaining and protecting the absorption or irrigation field (the area surrounding the system)
- Meeting the Council's requirements for installing, operation and maintenance
- Paying fees for inspections and applications

WARNING! If your system is failing you should contact the Council or a plumber for advice. Here are the warning signs:

- The air around it smells – usually like rotten egg gas
- The ground is damp and soggy
- Green grass growing on or around the absorption area
- The toilet or drains are slow to clear, or keep backing up
- There are gurgling sounds in the plumbing
- There are lots of weeds growing downhill from the absorption area or in nearby drainage channels
- The sewage system has not been checked for over 12 months
- The sewage system has not been pumped out in the past 3-5 years

How do I maintain a healthy sewage system?

Firstly, always follow the manufacturers requirements for your system.

In the laundry

- Avoid flooding the system with large amounts of water by not doing consecutive loads of washing
- Don't pour excess bleach, whiteners, nappy soakers and spot removers down the sink, washing machine or toilet
- Use no or low phosphorus detergents, and do not exceed the recommended dose
- Repair leaking taps or cisterns
- Install a lint filter on the washing machine to avoid blockages in the trench
- If you have a blocked drain use boiling water or a drain eel (plunger) to clear the line

In the kitchen

- Use your sink strainer to prevent food particles entering the system
- Don't pour oils and fats down the sink as they solidify and block the system

Display signs "RECLAIMED EFFLUENT NOT FOR DRINKING, AVOID CONTACT". These are available from Council

In the bathroom

- Repair leaking taps or cisterns
- Install a low flow (AAA-rated) shower head
- Minimise the use of commercial cleaners and bleaches as they can interfere with bacterial breakdown in the system
- Don't flush anything down the toilet that could clog up the system such as tampons, condoms, cotton buds, paper towels, plastics or cat litter
- Don't leave taps running unnecessarily
- Install a dual flush cistern for the toilet

Around the tank and trench area

- Keep water from roof downpipes and paved areas away from the absorption area
- Have a plumber fit an effluent filter to the tank outlet to keep solids in the system and extend the life of your trench
- Only plant grass near the absorption area as roots from larger plants can damage the trench
- Don't drive or park on any part of the absorption area
- Grow nutrient tolerant plants near drain fields and irrigation areas

Health Warning!

Effluent from any on-site wastewater management system may be a health hazard. Children and/or pets should not play in the trench or irrigation area nor should fruit and vegetables be grown there.



This leaflet outlines how your system works and offers some tips for keeping it operating efficiently.



Contact Council for information on a simple do-it-yourself yearly sewage system check up

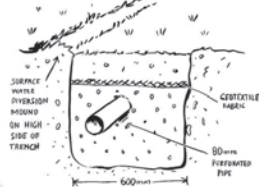
How does your on-site wastewater management system work?

You may have one of the following three basic sewage systems:

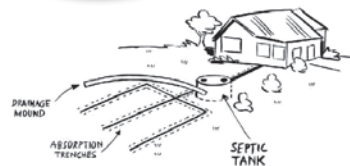
1. Septic Tank and Absorption Trench

Septic tanks can treat all household water and bacteria in the tank breaks down solids over time.

However, treatment is limited to the settling of solids and the flotation of fats and greases. Wastewater that has been treated in a septic tank can only be applied to land through a covered soil absorption system, as the effluent is still too contaminated for above ground irrigation.

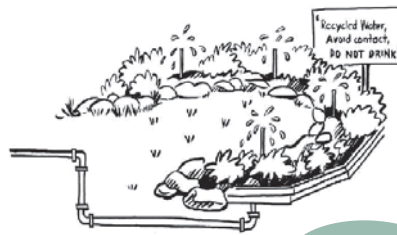


Boost bacteria in the on-site system by flushing enzyme promoting tablets or yoghurt down the toilet



2. Aerated Wastewater Treatment Systems

These systems are made up of several compartments and can treat all household wastewater. The first compartment is similar to a septic tank, and the second compartment is filled with air that is mixed with the wastewater. This second compartment assists the bacteria to break down the solids. A third compartment allows settling of more solids and a final chlorination or UV chamber is where disinfection takes place. Some of these systems are very compact and are constructed with all the compartments inside a single tank. The effluent produced may be surface or sub-surface irrigated in a dedicated area that complies with the Department of Local Government guidelines. These systems must be maintained and serviced by a qualified technician every three months.

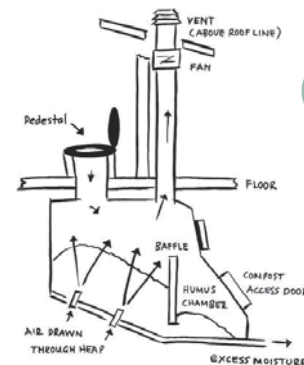


Remove collected oils and fats from the grease trap regularly



3. Composting Toilets

Composting toilets rely on breaking down solids through micro-organisms to decompose human waste. Composting toilets come in two varieties - dry (waterless) or wet. The dry varieties are designed to collect and treat human waste only. Water from the shower, sink and washing machine must be treated separately. However, the wet variety may treat water from flushing toilets, shower, sink and washing machine. Unless otherwise permitted by Council or the NSW Department of Health, all compost from your system must be buried within your property's boundaries.



Failing sewage systems can pollute stormwater, creeks and groundwater

For more information

If you have any enquiries or would like more information about how to properly maintain your system, please phone Warringah Council's Environmental Health and Protection Team on 9942 2111 between 9.30am- 10.30am and 3pm- 4pm Monday to Friday.
Or visit Department of Local Government 'Septic Safe Program' – www.dlg.nsw.gov.au/dlg/dlghome/dlg_home.asp
Local Government (General) Regulation 2005 – www.austlii.edu.au

Illustrations courtesy of Hornsby Shire Council