



POLICY

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TITLE: ON-SITE SEWAGE MANAGEMENT POLICY

**RESPONSIBLE OFFICER: MATTHEW BROWN, MANAGER DEVELOPMENT
ASSESSMENT AND ENVIRONMENTAL HEALTH**

BACKGROUND

Within the Port Stephens Local Government Area there are approximately 4700 On-site Sewage Management Systems (OSMS). The effective and successful management of domestic, commercial and industrial wastewater systems within the un-sewered areas of Port Stephens is a non-discretionary role of Council to ensure protection of the area's pristine waterways, preserve the diverse environment, maintain public health and mitigate the risk to public health.

Council's non-discretionary role for the regulation of On-site Sewage Management Systems involves those with a capacity to treat less than 2500 equivalent persons or <750kL per day or systems that are not operating under a licence issued by the Office of Environment and Heritage (OEH). Council regulates all systems except three sewage treatment plants (STP's) operated by Hunter Water Corporation (HWC).

The Local Government Act and subordinate regulation are the key legislative instruments utilised for regulation of these systems. All owners and operators of functioning On-site Sewage Management Systems are required to obtain an "Approval to Operate" for each system. Additionally, the installation, alteration or construction of a system of sewage management is an activity that requires the prior approval of Council.

Council first adopted an Onsite Sewage Management Strategy in 1999 with a review in 2004. This policy includes a clear framework for Council staff to consistently and effectively manage existing and new systems. For property owners, developers, system installers and consultants the framework provides certainty and direction for all activities and functions relating to the operation, installation and inspection of On-site Sewage Management Systems.

Key components of the program include:

- Approval to operate an OSMS
- Approval to install an OSMS
- OSMS Inspection program
- Education, advice and complaints
- Pollution and incident investigation

OBJECTIVE

This policy has been developed to define Council's role in the effective regulation of On-Site Sewage Management Systems in Port Stephens in order to preserve the areas waterways, community health and the environment. The policy supports a systematic approach to sustainable land use planning, site assessment, system design and installation and ensures accountability by owners and operators for the correct operation and maintenance of on-site sewage management systems. It will assist Council in the prioritising of resources for the efficient regulation and monitoring of on-site sewage management systems and facilitates coordinated data collection, system approval, monitoring and environmental assessment.

PRINCIPLES

- 1) **Legislation and Guidelines:** Owners and operators shall comply with prescribed legislative instruments relating to the operation or installation of on-site sewage management systems. Standards and industry accepted guidelines will be used by staff to assist in the assessment process and ensure appropriate design and installation of on-site sewage management systems.
- 2) **Performance Objectives:** The installation and operation of on-site sewage management systems shall meet minimum performance standards having regard to:
 - preventing the spread of disease by micro-organisms
 - preventing the spread of foul odours,
 - preventing contamination of water,
 - preventing degradation of soil and vegetation,
 - discouraging insects and vermin,
 - 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,
 - the re-use of resources (including nutrients, organic matter and water),
 - the minimisation of any adverse impacts on the amenity of the land on which it is installed or constructed and other land in the vicinity of that land.

- 3) **Operational Framework:** The policy specifies an operational framework designed to effectively manage and monitor existing on-site sewage management systems. This is achieved through the maintenance of a comprehensive OSSMS database, Approval to Operate conditions and routine inspection program. The installations of all on-site sewage management systems are assessed in accordance with legislative requirements and the Development Assessment Framework (DAF). The result for the majority of property owners, developers and installation companies is a timely and cost effective mechanism for receiving an approval to install and operate a system of sewage management.
- 4) **Resourcing:** The OSMS program is managed within the Environmental Health and Regulation team. The program is funded through the fees collected from annual approvals to operate and installation applications. The program is neutrally funded.
- 5) **Education and Research:** A component of the OSMS program involves funding research and educational projects.

POLICY STATEMENT

This policy applies to owners and operators of all permanent on-site sewage management systems in the Port Stephens LGA that do not directly discharge human effluent and trade wastes to a Hunter Water Corporation sewer and are not specifically regulated under an environment protection licence of the Office of Environment and Heritage. The systems covered by this policy include a wide range of public, commercial, industrial and domestic sewage management facilities.

RELATED DOCUMENTS

Port Stephens Council Local Environment Plan 2000
Port Stephens Council Development Control Plan (DCP 2007)
Port Stephens Council Compliance Policy 2007

SUSTAINABILITY IMPLICATIONS

This policy recognises that Council has a non-discretionary role to consider the medium to long term impacts that On-site Sewage Management Systems can have on the environment, public health, tourism and industry. The policy has been developed with consideration to ecologically sustainable development principles, catchment management, productive re-use of resources and protection of public health. It is also recognised that the future development of land without access to reticulated sewer will continue and that this development can only be permitted with an appropriate level of planning and regulation by Council.

SOCIAL IMPLICATIONS

The policy will provide stakeholders with a clear framework for the consistent, timely and effective management of existing and proposed on-site sewage management systems in the un-sewered areas of Port Stephens. The community expectations regarding protection of the environment and waterways will be met through implementation of this policy.

ECONOMIC IMPLICATIONS

There are no additional costs associated with the implementation of this policy. The OSMS program is neutrally funded through collection of scheduled fees linked to the approval to operate (annual renewal) and applications for new installations. These fees are reviewed annually.

For the majority of property owners, developers and installation companies seeking to develop land in areas identified as a low or medium risk this policy will provide a simpler, cost effective and timely process for submitting and receiving an approval for the installation of a system of sewage management.

ENVIRONMENTAL IMPLICATIONS

The implementation of this policy will facilitate acceptable environmental and health standards and assist in the minimisation of impacts caused by On-site Sewage Management Systems. The development of land or the installation of new systems in areas identified as high and very high hazard will be subject to a level of scrutiny commensurate with the prescribed hazard class. It has been shown that the appropriate management of developments involving On-site Sewage Management early in the development process provides better performance outcomes and minimises impacts.

RELEVANT LEGISLATIVE PROVISIONS

The key legislative provisions are obtained through:

- The Local Government Act, 1993 (NSW)
- The Local Government (General) Regulations, 2005 (NSW)

Additional legislative instruments used include:

- Protection of the Environment and Operations Act, 1997 (NSW)
- Environmental Planning and Assessment Act, 1979 (NSW)
- Water Industry Competition Act, 2006 (NSW)

IMPLEMENTATION RESPONSIBILITY

- Co-ordinator, Environmental Health and Regulation
- Team Leader, Environmental Health and Regulation
- Environmental Health Officers, Environmental Health and Regulation

REVIEW DATE

This Policy will be reviewed 4 years after the date on which Council has adopted it.

Attachment 1

Policy Framework

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1. LEGISLATION AND GUIDELINES

This section contains an outline of legislation, guidelines, standards and investigations that must be considered by Council in the regulation of new and existing On-site Sewage Management Systems (OSMS).

Table 1: Applicable Legislation

Legislation	Relevance or Purpose to On-site Sewage Management
Local Government Act, 1993	Legislative instrument applicable to all activities and functions relevant to On-site Sewage Management Systems
Local Government (General) Regulation, 2005	Sets standards and conditions for assessment, installation and operation of on-site sewage management systems
Hunter Water (special areas) Regulation, 2003	Defines drinking water catchment areas and conditions relating to sewage disposal within these special areas.
Environmental Planning and Assessment Act, 1979	Legislative instrument governing the LEP and DCP
Marine Park Act, 1997.	Applicable to development affecting a marine park - part 3, division 2(20)
Local Environment Plan 2000	The LEP 2000 is a statutory instrument that sets out the land use zones and broad development controls for development within the LGA.
Development Control Plan (as amended from time to time)	The DCP is a suite of documents that provide practical information to support development that retains and enhances the natural and heritage values of the PSC LGA. The DCP applies to all land zoned under the LEP.
State Environmental Planning Policies (as amended from time to time)	Sepp14 – coastal wetlands Sepp62 – sustainable aquaculture (part3a) Sepp71 – coastal protection (part 4(15))
Water Industry Competition Act, 2006	Legislative instrument applicable to installation of OSMS systems greater than 2 dwellings – generally commercial and industrial installations relating to recycling or sewer mining. Managed by IPART.

Table 2: Applicable Standards, Guidelines and Reports

Standard/guideline/other document	Purpose
Environment and Health Protection Guidelines – On-site Sewage Management for Single Households	Guidelines compiled to assist councils in regulating small to medium on-site sewage management systems.
Various State Government Department Guidelines	Use of Effluent by Irrigation (Dept. OEH) Use and Disposal of Biosolid Products (Dept. OEH)
Australian standards	<p>AS/NZ 1546</p> <p>A set of standards prescribing performance requirements and performance criteria for septic tanks and treatment systems. They specify technical means of compliance and provides test specifications that enable septic tanks to be manufactured to comply with the performance requirements and criteria.</p> <p>AS/NZ 1547: 2000 – on-site domestic waste water management</p> <p>A reference document providing procedures, guidance and information covering site and soil assessment, treatment systems and disposal areas.</p>
Broad Scale Study of On-site Effluent Disposal Suitability in the Port Stephens Council LGA, Martens and Associates, 1999	<p>Port Stephens Council commissioned the above study to be carried out by Martens and Associates early in 1999. This study was completed in May 1999 and provided council with:</p> <ol style="list-style-type: none"> 1. A study report summarising all investigations, field auditing and sampling programs, modelling and recommendations. 2. Land capability or 'suitability' map(s) for on-site effluent disposal in the Port Stephens LGA. 3. A gis dataset of relevant factors of consideration for on-site wastewater disposal in the Port Stephens LGA. 4. Recommendations regarding suitable systems, system sizes based on ESD principles and required management protocols for each of the identified capability classes. 5. Recommendations for the management of on-site wastewater disposal in existing unsewered rural and urban residential areas where allotment density exceed critical densities as defined by the modelling exercises and where existing systems are failing <p>The document has been used by council in the assessment of proposed development in unsewered areas.</p>

Table 2 con't: Applicable Standards, Guidelines and Reports

Standard/guideline/other document	Purpose
<p>Port Stephens Council On-site Sewage Management Technical Manual, BMT WBM, March 2011</p>	<p>The main objectives of the study were:</p> <ul style="list-style-type: none"> • Review methodologies adopted in the broad scale study (1999); • Produce revised land capability maps; • Identify sustainable system densities and minimum allotment sizes; • Provide a technical/scientific justification for restricting un-sewered development. • Produce a framework for assessing and classifying land according to risk.
<p>Port Stephens Council On-site Sewage Development Assessment Framework (DAF), BMT WBM, August 2011</p>	<p>The framework by which all new and replacement On-site Sewage Management Systems are assessed. The document also defines criteria and standards relating to treatment systems and disposal areas.</p>
<p>NSW Health accreditation for domestic On-site Sewage Treatment Devices</p>	<p>NSW health is responsible for accrediting human waste treatment or storage devices that are intended to receive domestic wastewater or human waste. Accreditation is mandatory for commercially manufactured units and for commercially distributed standard designs of the types specified in the regulations.</p>

2. EXISTING CONDITIONS

Port Stephens Council has an area of approximately 977 square km and extends from the coast with Newcastle Council to the South and Great Lakes Council to the North, inland to the west where it is bordered by Maitland and Dungog Council areas. The LGA includes a variety of landscapes from the port, beaches, extensive estuaries, river and sand dune systems, volcanic outcrops and a large rural hinterland.

The potential impact of on-site sewage management systems on water quality is of particular relevance in the Port Stephens Council Area where development has taken place around a variety of waterways. The region's rapidly expanding tourist industry relies upon clean lakes and beaches for swimming, diving, boating and fishing, as does the local oyster and aquaculture industry for commercial production. The area serves as a catchment for the Hunter, Paterson, Karuah and Williams Rivers, and the water storage areas of Grahamstown Dam and the Tomago and Tomaree aquifers. The area is the source for Port Stephens residents' water supply, much of the domestic supply for the city of Newcastle and also supplies the regions' agricultural industry with water to irrigate and water stock.

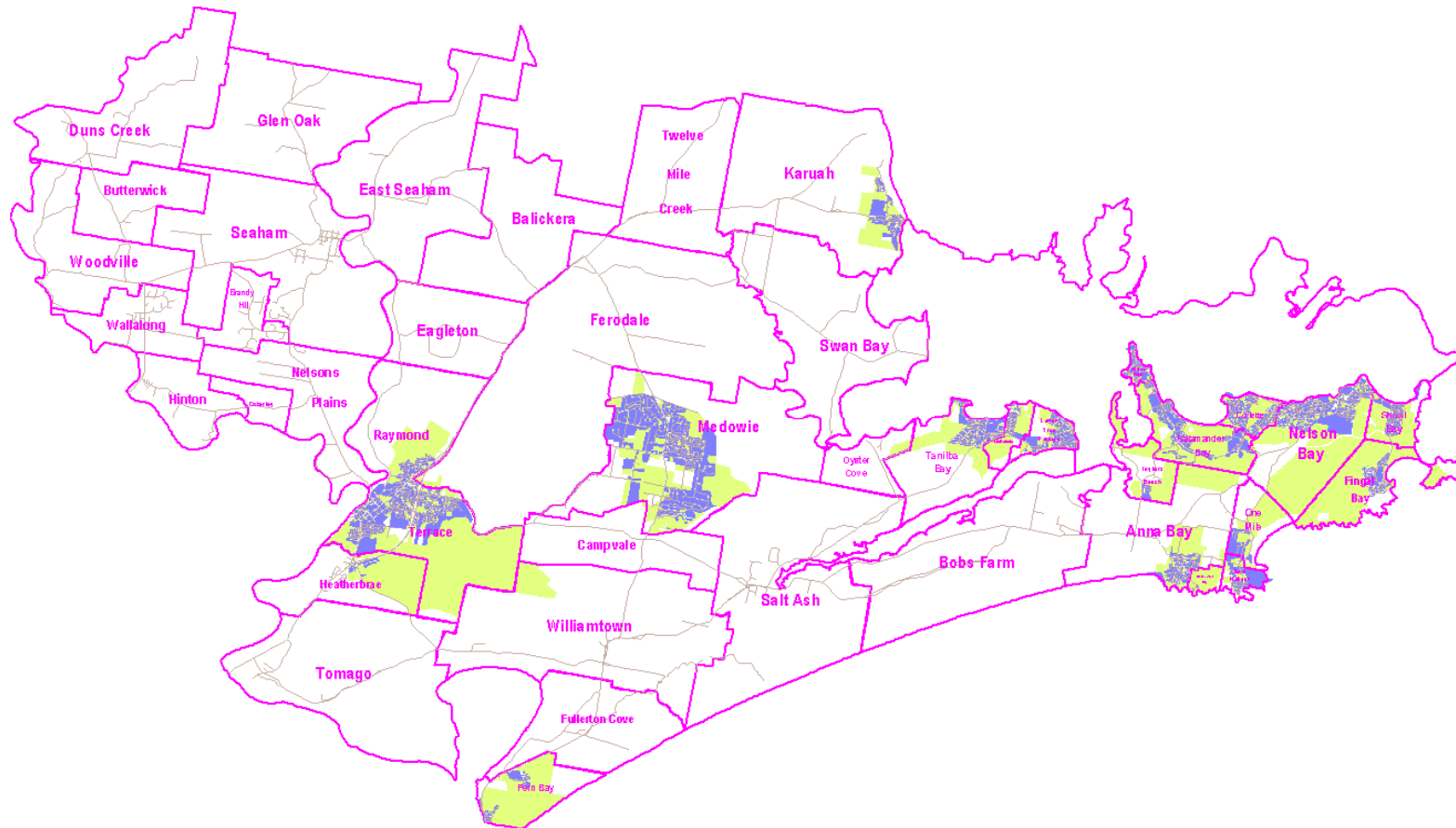
Table 3: Locality Guide for Onsite Sewage Management Systems in Port Stephens

Localities in Port Stephens containing on-site sewage management systems		
High reliance	Moderate reliance	Low reliance
Balickera	Anna Bay	Fern Bay
Bobs Farm	Medowie	Karuah
Brandy Hill	Taylors Beach	One Mile
Butterwick		Raymond Terrace
Campvale		Tomaree Peninsula
Duns Creek		
Eagleton		
East Seaham		
Ferodale		
Glen Oak		
Heatherbrae		
Hinton		
Nelsons Plains		
Osterley		
Oyster Cove		
Salt Ash		
Swan Bay		
Tomago		
Twelve Mile Creek		
Wallaong		
Williamtown		
Woodville		

MAP 1: SEWERED AREAS IN THE PORT STEPHENS LOCAL GOVERNMENT AREA

(HUNTER WATER CORPORATION DATA, JAN 2009)

- Purple:** Parcels with provision of sewer service (Hunter Water Corporation).
- Yellow:** Parcels within 75m of sewer service.



3. OPERATIONAL FRAMEWORK

This section of the policy sets out the processes for the issuing of Approvals to Operate, new system installations and the classification and inspection of On-site Sewage Management Systems. The operational policy outlined is designed to provide an effective and self-funding approvals and monitoring framework for On-site Sewage Management in the Port Stephens LGA. The approach taken is based on the principles of protection and enhancement of public health and the environment through the cooperative management of On-site Systems by all stakeholders.

A. DEVELOPMENT ASSESSMENT FRAMEWORK (DAF)

In 1998 Port Stephens Council, using a monetary grant from the NSW Government, engaged a consultant to undertake a comprehensive study relating to On-site Sewage Management in the PSC LGA. The resulting document titled *Broad Scale Study of On-site Effluent Disposal in the Port Stephens Council LGA, NSW* (Martens and Associates, 1999) was used to assist in development of the OSMS program.

Being that the initial study took place over ten years ago there have been many improvements in scientific knowledge and technologies relating to the design of On-site Sewage Management Systems and in environmental assessment procedures. As a consequence in 2009 Council engaged consultants BMT WBM Pty Ltd (Newcastle) to undertake a comprehensive review of the "Broad Scale Study".

The project aims were to:

- Undertake a background review and develop objectives through;
 - Data collection and background review
 - Field visits and discussion with Council
 - Review the 1999 Broad Scale Study
 - Refine mapping and modelling methodology
- Develop revised land capability maps through;
 - Development of land capability assessment logic
 - GIS analysis and creation of land capability map
 - Apply land capability to Council policy
- Develop sustainable system densities and allotment sizes through;
 - Build On-site system water quality models
 - Calibrate models with available data
 - Develop and run indicative system densities and lot size scenarios
- Prepare project outputs;
 - Technical manual - This document provides the technical basis for:

- On-site sewage management hazard mapping
 - Minimum allotment size
 - Maximum lot density
 - Rationale for acceptable solution tables
 - DAF design procedure, and
 - Cumulative impact assessment procedures
- Development assessment framework (DAF) - This document provides Council officers, applicants, consultants and installers the necessary information to undertake an appropriate level of site and environmental investigation, system design selection and sizing and system installation.

Both the DAF and technical manual are separate documents that are called up by this policy. The technical manual provides the technical and scientific basis for the DAF.

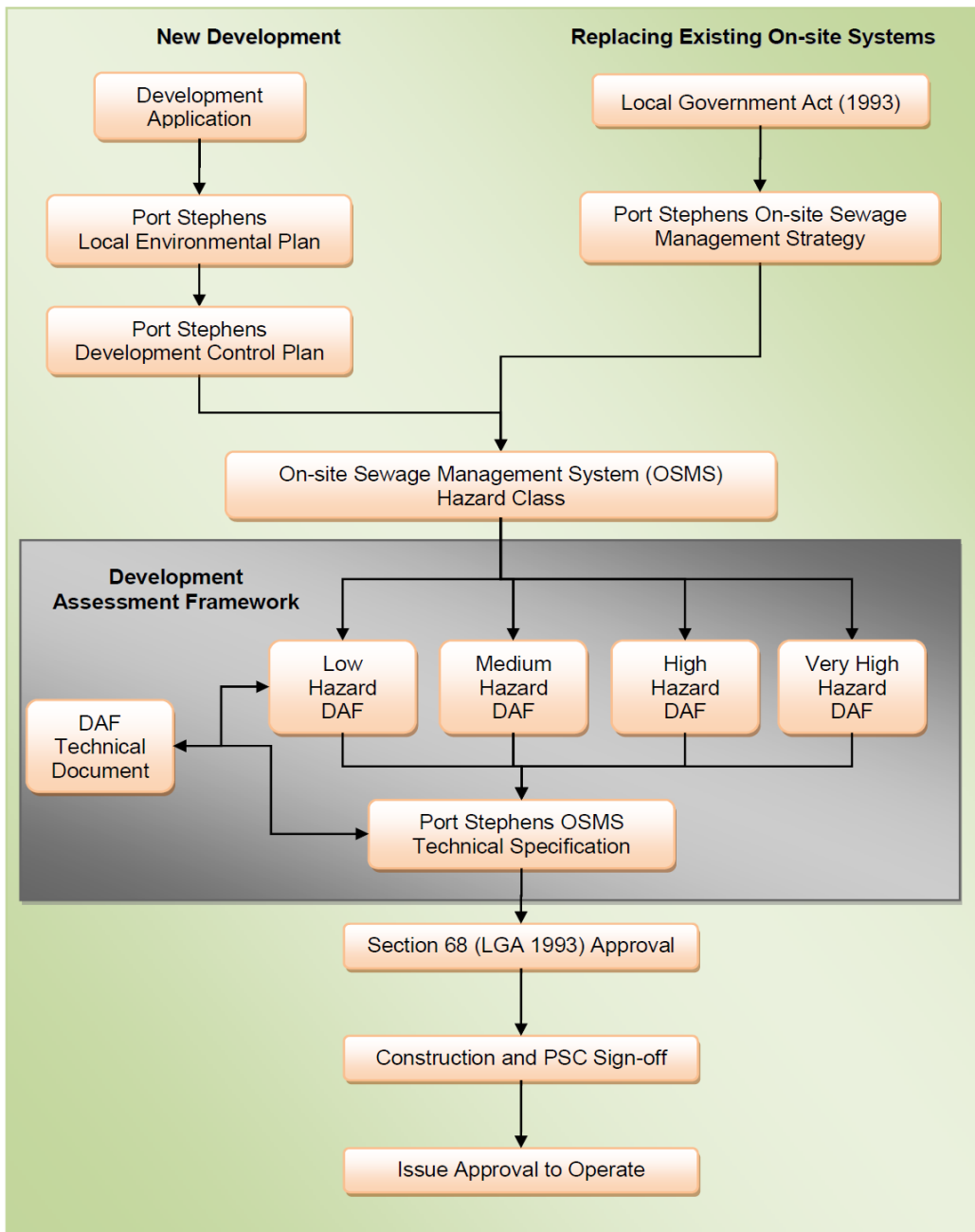
The DAF shall be used to determine investigation level, system applicability and minimum site and environment assessment requirements for the installation of new and the replacement of existing systems and in the assessment of applications for the subdivision of land in un-sewered areas.

The basis for the DAF is the classification of land into four risk categories (low, medium, high and very high) according to defined topographical, environmental, soil and climate factors. The more constrained the property the higher the hazard class. The level of assessment required for development applications is a function of the hazard class identified for the property. The higher the hazard class the greater the level of assessment required.

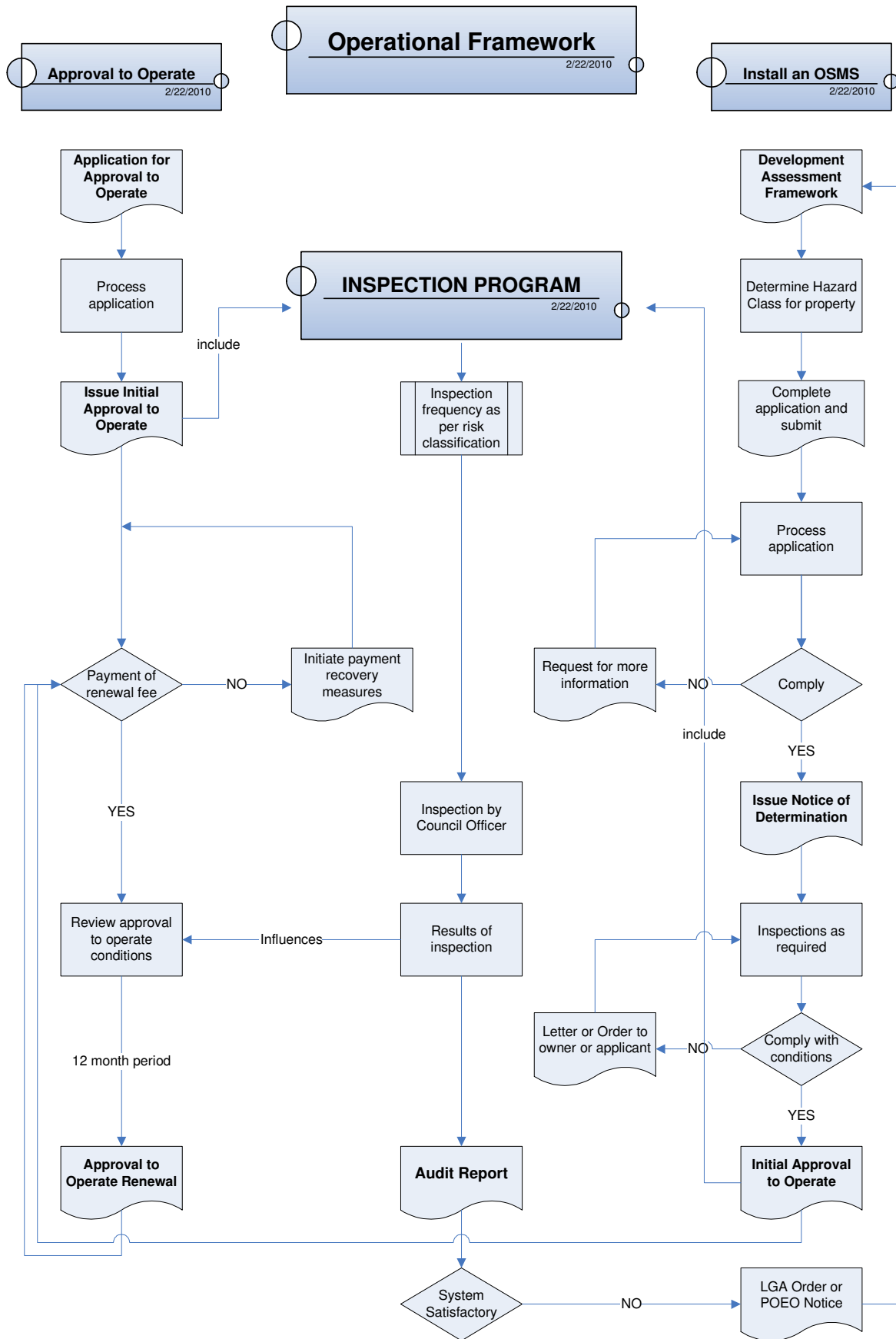
Two maps have been developed defining the hazard classes. One map relates to the installation of an on-site sewage management system on a single allotment with a second map defining hazard classes when proposing subdivision of land. Property owners, consultants and installers access these maps to identify the hazard class applicable to the lot identification details. Assessment requirements, developed specifically for each hazard class, are used by the installer or consultant to undertake an appropriate level of investigation and prepare and submit the application with the necessary information.

- **Flowchart 1:** provides an overview of the On-site Sewage Management structure. It includes the legislative framework and development assessment framework for existing and new on-site sewage management systems.
- **Flowchart 2** details the operational flowchart for the approval to operate, inspection program and system installation.
- **Flowchart 3** provides a more detailed explanation for the installation of an On-site Sewage Management System using the DAF.

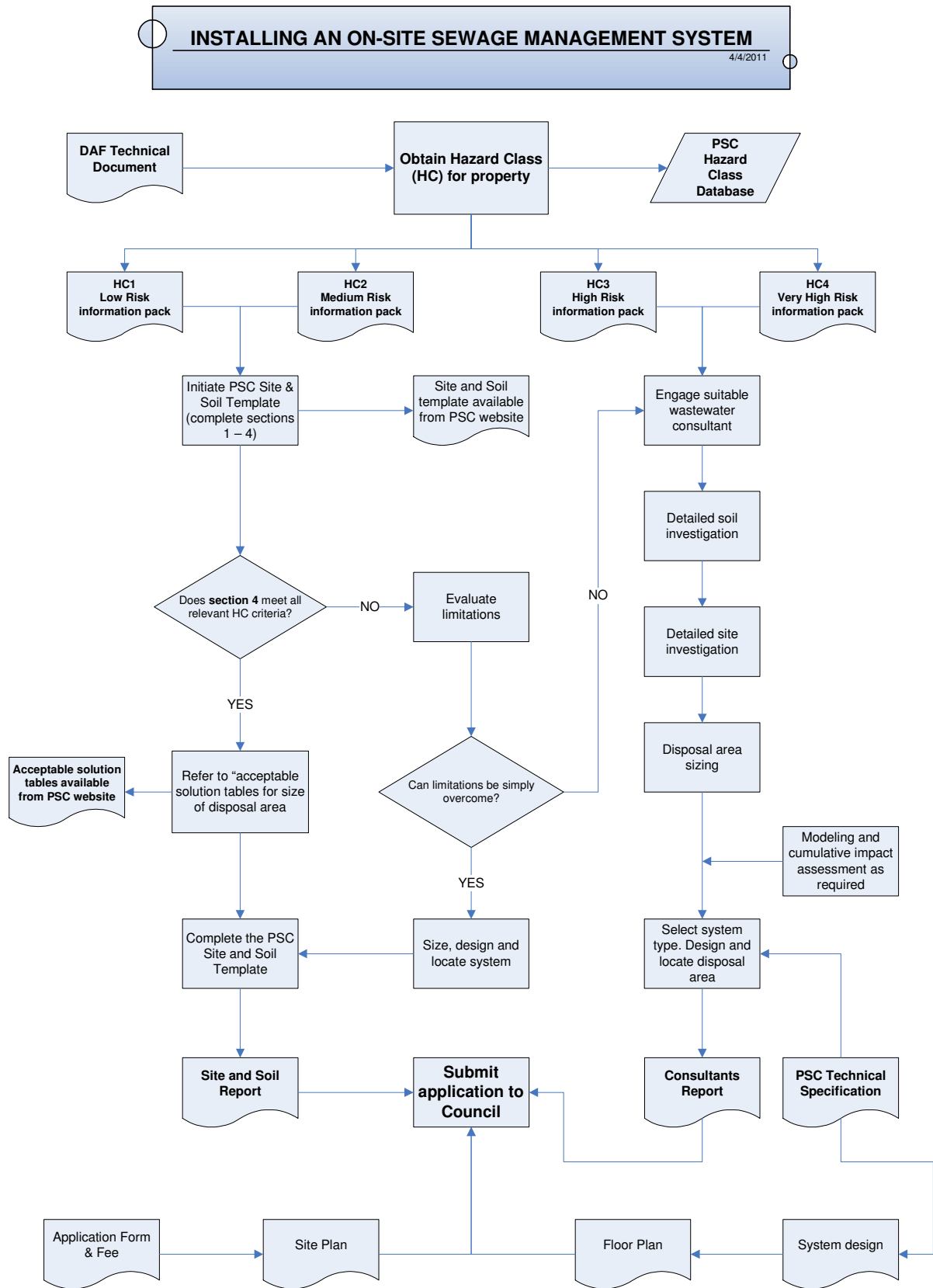
Flowchart 1



Flowchart 2



Flowchart 3



B. APPROVAL TO OPERATE

An approval to operate is required in accordance with section 68 and 68A of the Local Government Act, 1993. The operation of a system of sewage management is an activity that requires an Approval from Council (item 10 of Part F of the table in Section 68 of the Act).

Table 4: Approval to Operate Key Points

Item	Key Points
Legislative instruments	<ul style="list-style-type: none"> • Local Government Act, 1993 (Section 68/68A) • Local Government (General) Regulations, 2005
Approval to Operate	<ul style="list-style-type: none"> • Required by all on-site systems with a capacity <2500EP or 750kL/day and not covered under another statutory licence • Rests with the owner or operator not the system or property
Period	<ul style="list-style-type: none"> • Valid for 12 months • Currently operates 1st September to 31st August
Renewal	<ul style="list-style-type: none"> • Renewed annually • Application not required
Fee	<ul style="list-style-type: none"> • Included in land rates assessment notice • Fee in accordance with the annual Schedule of Fees and Charges
Conditions	<ul style="list-style-type: none"> • Each approval to operate is conditioned • Conditions relate to operational, environmental and health related objectives and are specific to the system type
Modification to Approval	<ul style="list-style-type: none"> • Approvals can be modified in accordance with s109 of LGA • Conditions reviewed each year • The approval and/or conditions may be modified if deemed necessary as a result of information obtained from an inspection
Change of ownership	<ul style="list-style-type: none"> • Approval re-issued to new owner/operator following notification from Lands Titles Office

C. NEW INSTALLATIONS

The installation, construction or alteration of a waste treatment device or a human waste storage facility is an activity that requires an approval from the local authority in accordance with the Local Government Act 1993.

Table 5: Approval to Install Key Points

Item	Key Points
Legislative Instruments and Policies	<ul style="list-style-type: none"> • Local Government Act, 1993 (Section 68) • Local Government (General) Regulations, 2005 • Protection of the Environment and Operations Act, 1997 • Marine Park Act, 1997 • SEPP's 14, 62, 71 • WICA, 2006 • PSC Local Environment Plan, in-force • PSC Development Control Plan, in-force • PSC Development Assessment Framework • PSC On-site Sewage Management Technical Manual
Standards and Guidelines	<ul style="list-style-type: none"> • Australian Standard AS1546 • Australian Standard AS1547:2000 • Environment and Health Protection Guidelines • The NSW State Groundwater Policy – Framework Documents • Use of Effluent by Irrigation, EPA • NSW Management of Private Recycled Water Schemes • Grey water reuse in sewerred single household residential premises
Applicability	<ul style="list-style-type: none"> • Install, alter or construct a waste treatment device or human waste storage facility (section 68 Part C 5). • Systems with a capacity <750kL/day or <2500EP. • Includes pump to sewer systems.
Documentation	<ul style="list-style-type: none"> • Application Form • Sufficient documentation required for adequate assessment • Division 4 Local Government (General) Regulations, 2005 • Development Assessment Framework (DAF)

Table 5 con't: Approval to Install Key Points

Item	Key Points
Fee	<ul style="list-style-type: none"> In accordance with schedule of fees and charges
Valid	<ul style="list-style-type: none"> 5 years from date of approval
Inspections	<ul style="list-style-type: none"> Site (pre-approval) Installation (disposal area) Final on completion Other inspections as required
Satisfactory Final Inspection	<ul style="list-style-type: none"> Issue of Approval to Operate
Unsatisfactory Final Inspection	<ul style="list-style-type: none"> Remedial works required. Local Government Act, 1993 (Section 124)

D. RISK CATEGORIES & INSPECTION FREQUENCY

All existing systems are risk classified according to specific criteria. The risk classification provides a mechanism for determining inspection frequency and the potential health and environmental risks. Three risk classifications are used (refer table 6).

Table 6: OSMS Risk Categories

Hazard Class	Risk Classification	Indicative Inspection Frequency (internal use only)
Very High	High	Annually or 2 years
High	High	2 years
Medium	Medium	3 years
Low	Low	5 years
Low	Low(TS) Functioning secondary treatment system	By Exception Only (complaint, or major fault identified on service report)

Systems will be classified according to the hazard class map for single allotments. The risk criterion in **Table 7** below provides a summary of the logic used to compile the hazard class map. With particular installations there may be additional issues to consider as part of the risk categorisation process. In some circumstances not ALL criteria within a particular category may apply to either the system or location. In this instance the officer performing the classification must make a decision whether there is sufficient reason to move the system into a higher or lower risk category. Generally though, classifying a system to a higher or lower risk category based on one non-complying criterion would not be warranted. (Note: Systems classified as very high according to the hazard class map are classified high with inspections annually or every 2years).

Table 7: OSMS Risk Classification Criteria

Indicative Criteria	High Risk	Medium Risk	Low Risk
Land Area	<2000m ²	2000 – 4000m ²	>4000m ²
Soil type	Clay or Sand	Loam	Loam
Soil Structure	Weak/massive	Moderate structure	Good structure
Flooding	Flood prone	Not flood prone	Not flood prone
System Type	Primary	Primary Secondary	Secondary or better
Depth to Groundwater or Hardpan	<0.6 metre	0.6 – 1.0 metres	>1 metres
Slope	>20%	10 – 20%	<10%
Water Catchment	Yes	No	No
Buffer distances	Not comply	Partial compliance	Comply

A category known as Low(TS) will be used for systems meeting the following criteria:

- The system is a secondary or advanced secondary treatment system;
- The system has been installed in accordance with a valid approval and is operating in accordance with the conditions of the approval to operate;
- The system is being serviced under a maintenance agreement by a suitably qualified and experienced servicing agent;
- There are no outstanding maintenance issues identified on a service report.

This category are not included on the routine inspection program but managed by exception. Inspections may be undertaken should a problem be identified through a complaint or unsatisfactory service report at the discretion of the assessing Council officer.

E. REVIEW OF AND CHANGES TO CATEGORIES OR RISK

In order to encourage appropriate management and maintenance of on-site sewage management systems Council provides for the re-categorisation of systems from the high and medium risk categories. This will involve re-categorisation of systems from high risk to medium risk where the continuing operation of a particular installation has been shown, to Council's satisfaction, over 2 consecutive programmed inspections, to be in accordance with the performance standards set out in this strategy. Similarly medium risk installations whose continuing operation has been shown, over 2 consecutive programmed inspections, to be in accordance with the performance standards set out in the strategy will be re-categorised to low risk.

Council officers may increase the risk rating of any installation after inspection if that inspection reveals that more frequent monitoring of that system is required.

Council will advise the owners concerned in writing of the outcome of requests for re-categorisation.

F. INSPECTION PROCESS

Council has developed an inspection program for existing on-site systems to ensure those systems meet environmental and health performance objectives set out in this policy and in the Environmental and Health Protection Guidelines over the long term. The program involves the monitoring of existing service documentation and programmed on-site inspections.

At present there are approximately 4800 on-site sewage management systems in the Port Stephens LGA. To carry out effective and ongoing inspections systems are classified according to risk. Inspections will then be carried out at an interval appropriate to the individual systems risk assessment subject to adequate resourcing.

Council will inspect all systems in the LGA with the exception of those identified as Low(TS). Properties will be inspected to the schedule outlined above and individual systems assessed on performance standards as stated in the EH&P Guidelines. An audit report is completed for each inspection with a copy of the report forwarded to the property owner or designated operator. If changes are made to conditions as a result of the inspection, owners are issued with a amended Approval to Operate (with conditions attached).

Table 8: OSMS Inspection Process

Item	Criteria
Which Systems?	<ul style="list-style-type: none"> • All domestic and commercial on-site systems holding an active approval to operate
Exemptions	<ul style="list-style-type: none"> • Systems classified as Low (TS)
When undertaken?	<ul style="list-style-type: none"> • In accordance with risk classifications • If complaint received • If requested by owner/operator • Request for pre-purchase inspection (ie impending sale of the property)
Who performs?	<ul style="list-style-type: none"> • Councils Environmental Health Officers • Notification of inspection in accordance with LGA is sent to owners/operators • Signed authority to enter property provided with pre-purchase inspection request
Why inspect?	<ul style="list-style-type: none"> • To determine operating status and compliance with standards and guidelines • Assess risk to environment and public health
Fee	<ul style="list-style-type: none"> • No charge for routine inspections • Pre-purchase inspection in accordance with schedule of fees and charges
Records	<ul style="list-style-type: none"> • Audit sheets maintained electronically • Typed report sent to owner/operator • Pre-purchase inspection report to applicant

Table 8 con't: OSMS Inspection Process

Item	Criteria
Pumpout Systems (tanker removal)	<ul style="list-style-type: none"> • Servicing records obtained by contractors and entered into electronic database. • Reports generated detailing servicing frequency.
Aerated wastewater treatment systems (AWTS)	<ul style="list-style-type: none"> • Servicing records obtained by contractors and entered into electronic database. • Reports generated detailing servicing frequency.
Pump to sewer systems	<ul style="list-style-type: none"> • Classified as an on-site sewage system in accordance with regulations. • Inspected to determine compliance with Hunter Water Corporation specifications

G. UPGRADING FAILING SYSTEMS

Inspections of on-site sewage management systems are required to ensure that they are installed and operated in accordance with the conditions specified in any Council approval. Beyond system design and installation, those approval conditions relate primarily to the performance standards specified in the regulations and this policy.

System failure is deemed to have occurred when a system fails to achieve prescribed performance standards resulting in adverse impacts on public health or the environment. **Appendix 1** provides a methodology for defining minor and major breaches for treatment systems and disposal areas. **Table 9** provides a methodology for prioritising indentified issues, determining an appropriate response and provides tools that may be used to assist in investigating and addressing the issue.

The upgrading of failing system shall be in undertaken in accordance with:

- Legislative requirements, and
- The Development Assessment Framework

COMPLAINTS ABOUT FAILING SYSTEMS

A member of the community who has a problem with the operation of an on-site sewage management system is entitled to approach Council about the problem. Council must regulate the operation of on-site sewage management facilities so that risks to health and the environment do not arise or do not escalate. Council will investigate complaints relating to systems failures irrespective of the priority area. This inspection may replace the next scheduled inspection for any system that is the subject of a complaint and where as a result of that inspection Council requires the owner/operator to take some action. Changes may also be made to the risk categorisation of systems as a result of any complaint investigation.

It is the responsibility of the owner or occupier of the premises to ensure that on-site systems are designed, installed and managed so that environmental

nuisance/damage does not occur and there is no risk to public health from the operation of the system.

Owners should also ensure that other occupiers of the premises are also aware of the systems operation and maintenance requirements. If a system is defective and cannot be corrected by the proper operation and maintenance, householders should report this to Council so that immediate action can be taken to address the problem.

Table 9 provides a methodology for prioritising identified issues, determining an appropriate response and provides tools that may be used to assist in investigating and addressing the issue.

Table 9: OSMS Prioritisation Methodology

Situation Classification		
Critical	Major	Minor
Situations <ul style="list-style-type: none"> Significant failure of the wastewater treatment system or disposal area whether intentional or unintentional Significant threat to the environment and public health 	Situations <ul style="list-style-type: none"> Major failure of the wastewater treatment system, component or disposal area Moderate to major threat to the environment and public health 	Situations <ul style="list-style-type: none"> Minor or insignificant problem with the wastewater treatment system, component or disposal area Minor or no threat to the environment and public health
Responses <ul style="list-style-type: none"> Immediate action by Council is to commence May need multiple Council staff to respond May need consultation with DECCW staff Same day response Immediate communication with system owner / operator Definite follow up action by Council staff 	Responses <ul style="list-style-type: none"> Important but not urgent. Action by Council should commence within 5 business days May need immediate communication with system owner/operator if necessary Would involve follow up action by Council staff 	Responses <ul style="list-style-type: none"> Needs attention by owner/operator but is not urgent Minimal intervention by Council staff May be remedied with discussion with owner or operator May need a follow up response to ensure the problem does not escalate Educational material may be appropriate
Tools <ul style="list-style-type: none"> Water and/or soil samples. Chemical and microbiological testing Photographic evidence Detailed notes Interviews with relevant persons POEO – Prevention Notice, Clean-up Notice Legal action if warranted 	Tools <ul style="list-style-type: none"> Testing of water and/or soil samples only if necessary. Photographic evidence if necessary Detailed notes Local Government Act Order (s124) if necessary Penalty infringement notice if failure to undertake works in a reasonable time 	Tools <ul style="list-style-type: none"> Routine inspection Audit report or letter Warning letter if left unresolved
Examples <ul style="list-style-type: none"> Significant failure of a wastewater system discharging effluent into a drinking water supply, waterway or stormwater drainage system 	Examples <ul style="list-style-type: none"> Failing wastewater system or disposal area Major unresolved problem with a treatment system component 	Examples <ul style="list-style-type: none"> Minor problem with a wastewater system or disposal area

4. RECORDS, REPORTING, REVIEW & EDUCATION

A. COUNCIL RECORDS

All applications and associated information received are recorded in the appropriate electronic register (Authority) and/or hardcopy file. Such a register will include details of, the applicant, the property concerned, the type of installation, the date of application, the determination of the application, the date of issue of any approval or refusal, any site inspections and any other relevant details. This register will be kept in electronic format and applications, audit sheets, special conditions attached to approvals and correspondence will be saved electronically in TRIM.

All service documentation related to AWTS quarterly maintenance that are forwarded to Council will be recorded within the Authority wastewater register (AWTS servicing data base).

Council will also maintain a record of effluent pumpout figures to allow periodic desktop analysis of volumes from individual properties. These figures are currently provided by Council approved transport contractors and maintained within the Authority wastewater register.

B. NOTIFICATION THROUGH THE 149 CERTIFICATE

In the case of land subject to a Development Control Plan for on-site sewage management, intending purchasers would be notified of that DCP (under Section 149 clause 2 of the EP&A Act (1979)).

C. ENVIRONMENTAL AUDIT

The operation of large numbers of on-site sewage systems in a catchment area have the potential, in the long term, to detrimentally impact on the environment especially water quality. To monitor these impacts regular testing of ground and surface waters for faecal, nutrient and other relevant contaminants should be routinely performed through a targeted water quality program. The monitoring program should involve a review of existing water quality data collected by other authorities in the Port Stephens Area where that data was relevant and available. These authorities may include the Hunter Water Corporation, NSW Fisheries and Port Stephens Shellfish Association.

The program will assist in assessing the effectiveness of Port Stephens management practices for on-site sewerage systems and also as an indicator of problem areas and management priorities.

D. ANNUAL REPORTING

Council's Annual State of the Environment Report will include details of:

- The results of the on-site sewage management inspection program;
- Details regarding particular patterns of system failure related to either location criteria or system type;
- An assessment of the ongoing integration of this strategy with the other strategic planning processes of Council;'
- The effectiveness of this strategy and its implementation measured against the objectives and goals set out in this strategy;
- A review of water quality data from the environmental auditing process if available.

E. REVIEW & EVALUATION OF THIS STRATEGY

This strategy will be the subject of ongoing review. Reviews will occur every four years in the twelve-month period after each general Council election.

F. EDUCATION & PROVISION OF INFORMATION

An important part of this strategy is to ensure that all parties involved in the installation operation and maintenance of on-site sewage management systems are aware of their responsibilities and have enough information to carry them out. The level of knowledge required will depend on the type of sewage management system and what the stakeholder needs to do.

The operation of a centralised sewage system requires limited input from the individual householder, but householders need to take an active role in the operation of on-site sewage management systems. They should have a broad knowledge of on-site sewage management principles and be able to apply that knowledge responsibly.

Householders need to have a full knowledge of:

- System operation and maintenance requirements;
- Responsibilities under the new regulations;
- System selection and design of effluent application areas;
- Health risks of effluent and chemicals;
- Emergency contact numbers;
- Waste and water minimisation principles and techniques;
- Environmental impacts of wastewater.

Council will take an active role in the provision of this information to the householder and help in the development of individual management plans through this information and the approvals and inspection process. Information will be made readily available from Councils website, emailed or posted if requested or included with an inspection report.

5. FEES AND RESOURCING

A. FEES

The fee schedule has been designed to provide Council and users of on-site sewage systems with a cost-effective, user pays monitoring program that provides an efficient mechanism to ensure the long term environmental and public health objectives of this strategy.

The fees are levied under s608 of the Local Government Act, 1993. These are debts on the owner / occupier rather than on the land.

Fees are revised annually.

Table 10: OSMS Fees

Fee Name	Details
Application to install, alter or construct a waste treatment device or human waste storage facility	<ul style="list-style-type: none"> • The installation of an OSMS incurs an application fee in accordance with s80 of the Local Government Act. • Amendments to issued consents also incur an amendment fee, usually 50% of the application fee. • Fees are set in accordance with the schedule of fees and charges.
Approval to Operate	<ul style="list-style-type: none"> • An application for an initial approval to operate is subject to an application fee in accordance with the schedule of fees and charges.
Approval to Operate Renewal	<ul style="list-style-type: none"> • The annual approval fee is levied on all owners of on-site systems in the Port Stephens LGA to cover costs of the On-site Sewage Management Program. These costs include work by clerical staff, monitoring of service documentation and pumpout figures, inspections, environmental auditing, complaint investigations and the provision of educational and system management advice. • The fee is levied on an annual basis and is included as a separate item on the land rates notice.
Routine/Programmed Inspections	<ul style="list-style-type: none"> • Routine inspections do not incur a fee.
Re-inspections	<ul style="list-style-type: none"> • Situations involving more than one re-inspection may incur a charge in accordance with the schedule of fees and charges. • This is at the discretion of the Council officer in consultation with management.
Extraordinary Costs	<ul style="list-style-type: none"> • May include testing of water and soil samples. • Charged on a cost recovery basis.

B. RESOURCING

The OSMS program is performed by the Environmental Health and Regulation team.

Core functions include:

- Complete programmed inspections
- Initiate action for upgrading and maintaining systems
- Ensure all owners/operators of systems obtain and renew an approval to operate
- Provide education and guidance to the community, staff and Council
- Assess applications for new installation
- Monitor and assess data and reports for systems
- Undertake continuous improvement of the program

6. GLOSSARY OF TERMS

Aerated Wastewater Treatment System (AWTS) – Aerated wastewater treatment systems treat all household wastewater and have several treatment compartments. The first is like a septic tank, but in the second compartment air is mixed with wastewater to assist bacteria to break down solids. A third compartment allows settling of more solids and a final chlorination contact chamber allows disinfection.

Blackwater- human excreta and water grossly contaminated with human excreta.

Catchment – A catchment is an area of land with natural features such as hills or mountains, from which all run-off water flows into a creek, river, lake or ocean.

Composting Toilets – Composting toilets collect and treat toilet waste only. Water from the shower, sink and washing machine needs to be treated separately. The compost produced by a composting toilet has special requirements but is usually buried on site.

Completion certificate – formal notification from council indicating that a sewage management facility has been installed substantially in accordance with a relevant development approval, and is able to be commissioned.

Council – for the purposes of this strategy refers to the Port Stephens Council.

DCP – Development Control Plan within the meaning of the Environmental Planning and Assessment Act.

Desludging – Withdrawing of sludge, biosolids, scum and liquid from a septic tank.

Ecological Sustainable Development – Development that improves the quality of life, both now and for the future, in a way that maintains the ecological processes on which life depends.

Effluent – wastewater discharging from a sewage management facility.

Effluent application area – an area of land specifically designated for the application of effluent either by subsurface absorption or by surface irrigation.

Evapotranspiration – process by which soil moisture is subject to processes of evaporation from the sun and wind and is transpired to the atmosphere via trees and plants.

Greywater (or sullage) – domestic effluent, excluding toilet waste.

Ground Water – All naturally occurring underground waters.

Guidelines – Environment and Health Protection Guidelines – *On-site Sewage Management for Single Households*.

LGA – Local Government Area.

On-site Sewage Management System – Any facility that stores, treats and/or disposes of sewage and wastewater on-site.

Operational Constraints – Those site or systems characteristics which place limits on the quality and quantity of wastewater that can be effectively treated by a sewage management facility within a given period of time.

Pump-out System – A septic system where all accumulated wastewater is removed from site by a purpose built road tanker.

Reticulated Sewer – Centralised sewerage system, consisting of a wastewater transport network, pumping stations, and treatment facilities designed to services multiple users concurrently. Hunter Water Corporation is the local authority for all reticulated sewer and Sewage Treatment Plants in the Port Stephens LGA

Regulation – Local Government (Approvals) Amendment (Sewage Management) Regulation 1998.

Run-off – The part of precipitation of irrigated effluent that becomes surface flow because it is not immediately absorbed into or detained by the soil.

Septic tank – conventional septic tank systems treat both greywater and blackwater, but they provide only limited treatment through the settling of solids and the flotation of fats and greases. Bacteria in the tank break down the solids over a period of time. 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.

Sewage – human wastewater and matter which usually passes through the reticulated sewer or an on-site sewage management system.

Sewage Management – Any activity carried out for the purpose of holding, processing, reusing, or otherwise disposing of sewage or by-products of sewage.

Total Catchment Management – Total Catchment Management is the co-ordinated and sustainable use and management of land, water, vegetation and other natural resources on a catchment basis so as to balance resource utilisation and conservation.

Useable land - total allotment area excluding dams, intermittent and permanent watercourses and open stormwater drains and pits in addition to the relevant buffer distances prescribed in the Port Stephens Council Development Assessment Framework for those objects.

Wastewater – Blackwater and/or Greywater.

APPENDIX 1

DEFINITION OF “MAJOR AND MINOR” BREACHES

Treatment System “Major” Breach – the failure, malfunction, collapse, omission, deterioration or breakdown of any treatment system component, tank, internal vessel or chamber, segregating baffle, control panel, power supply, chemical, aerating device or mechanical pumping device that is:

- Not currently under repair, or
- Has not been reported to an appropriate service provider in a timely manner,

And that:

- **Has** the potential to prevent the normal operation of the system;
- **Has** the potential to significantly reduce the quality of effluent from expected levels;
- **Has** the potential to impact on the natural environment, human health or public amenity;
- **Has** the potential to cause a significant public safety risk.

Table 1: Examples of Treatment System Major Breaches

Treatment System Type	Major Breach Description (To be considered in conjunction with definition)
Aerated Wastewater Treatment System	Inoperable aeration blower causing significant effluent quality problems
	Inoperable irrigation pump with effluent overflowing
	Fused/damaged control panel
	Internal baffle that has separated from the side wall allowing mixing of treated and untreated water
	System not being serviced and effluent quality significantly deteriorated
	No disinfection system (ie. Chlorine, ultra-violet, etc) in operation
Septic Tank	Tank lid that is significantly damaged. Potential safety risk, odour problem
	Excessive sludge levels (<200mm below outlet invert)
	Excessive water levels (above top of inlet/outlet junctions) or overflowing
	Structurally unsound tank - damaged below water level and is leaking effluent to ground surface/groundwater
Septic Pumpwell	Tank lid that is significantly damaged. Potential safety risk, odour problem
	Inoperable irrigation pump with effluent overflowing
Effluent Pump-out Tank	Tank lid that is significantly damaged. Potential safety risk, odour problem
	Effluent levels excessive with overflows visibly occurring
Wet Composting System	Tank lid that is significantly damaged. Potential safety risk, odour problem
	Structurally unsound tank - damaged below water level and is leaking effluent to ground surface/groundwater

Treatment System “Minor” Breach – all other areas, components or adjustments of the treatment system not captured under major breach definition and that:

- **Does not** have the potential to prevent the normal operation of the system;
- **Does not** have the potential to impact on the natural environment, human health or public amenity;
- **Does not** have the potential to significantly reduce the quality of effluent from expected levels.
- **Does not** have the potential to cause a significant safety risk.

Table 2: Examples of Treatment System Minor Breaches

Treatment System Type	Minor Breach Description (To be considered in conjunction with definition)
Aerated Wastewater Treatment System	Skimmer not operable
	Irrigation filter not in place
	Missing primary chamber inspection cap
	Minor odour
	Floating media blocks
Septic Tank	Floating scum in clarification chamber
	Moderate sludge levels (>200mm below outlet invert)
	Minor elevated water levels (above invert of outlet pipe but not above top of junctions)
	Tank that is cracked above water level and cracks are hairline only
	Tank lid that has minor cracking (hairline cracks)
	Missing inlet/outlet junctions
	Tank lid at ground level
Septic Pumpwell	Missing inspection caps
	Tank lid at ground level
Effluent Pump-out Tank	Missing inspection caps
	Missing standpipe cap

Land Application (Disposal) Area “Major” Breach – the observed failure of the land application area to adequately dispose of or contain effluent during normal annual climatic conditions that potentially may result in risk to the environment, public health or public safety. The failure of the land application area to operate within expected design limits. Land application area includes but is not limited to absorption trenches, evapo-transpiration beds, Wisconsin mounds, surface irrigation areas and sub-surface irrigation areas.

Table 3: Examples of Disposal Area Major Breaches

Land Application Area Type	Major Breach Description (To be considered in conjunction with definition)
Surface/subsurface Irrigation	Inadequate maintenance of irrigation hardware that results in the surface ponding of effluent
	End-of-pipe disposal
	Inadequate size of disposal area that results in significant saturation of soils
	Location of disposal area within prescribed buffer zones and environmentally sensitive areas
Absorption/Evapo-transpiration	Location of disposal area within observed recreational areas
	Observed ponding of effluent on the disposal area surface. Effluent must be confirmed via colour, clarity or odour.
	End-of-pipe disposal

Land Application (Disposal) Area “Minor” Breach – all other areas not captured under major breach definition and that are unlikely to result in environmental harm, risk to public health or risk to public safety.

Table 4: Examples of Disposal Area Minor Breaches

Land Application Area Type	Minor Breach Description (To be considered in conjunction with definition)
Surface/subsurface Irrigation	Missing warning signs
	Some spray heads inoperable
	Irrigation line not buried
Absorption/Evapo-transpiration	Overgrown vegetation
	Infrequent livestock access
	Damp/soft underfoot but no visible signs of effluent