Lachlan Shire Council

ON-SITE SEWAGE MANAGEMENT

POLICY 2007

Clerical amendment, 15 November 2016, to reflect gazetted Lachlan Local Environmental Plan 2013.

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Objectives:-

- To assist in assessing land for on-site disposal of effluent.
- To implement the provisions of the Local Government Act 1993 and Regulations.
- To protect surface and ground water quality within the Shire.
- To incorporate sewage management considerations in the early stages of development and environmental assessment as required under the Environmental Planning and Assessment Act 1979.
- To specify the standards for septic tanks and soakage trenches in the Shire.

Sewage Management

Sewage Management is “any activity carried out for the purpose of holding or processing, or reusing or otherwise disposing of, sewage or by-products of sewage.”

Sewage Management Facilities are the method by which sewage management is carried out.

On-site Sewage Management Strategy

This policy is part of an On-site Sewage Management Strategy that Council is required to prepare under the Local Government Act 1993. It also provides for approvals under the EPA Act 1979. Council has prepared this policy in close consultation with the Forbes, Weddin and Parkes Shire Alliance Councils to determine a best practice based approach for sewage management within the region.

Evaluation of On-site disposal

The evaluation of on-site disposal is broken into three (3) steps depending on the type of development and the location of the site. These steps will determine the level of site assessment and the extent to which soil testing is required.

Step 1- Determine the type of development and site evaluation

There are 2 types of development that require different site evaluation for on-site effluent disposal. These are –

- Subdivisions
- Single sites

Information regarding the assessment for subdivisions is available in the publication titled *"Environment and Health Protection Guidelines On-site Sewage Management for Single Households"* prepared by the N.S.W. Department of Local Government. This policy deals with the second type of assessment being single sites Sewage Management.

Note: For all proposed subdivisions the applicant is required to provide Council with a "Geotechnical Report" or "Septic System Report" which is to be undertaken by a suitably qualified person(s) and is to be submitted to Council in conjunction with the subject development application. To ensure that a proper consideration is given to the suitability of the site in terms of existing environmental characteristics of the land.

Note: For all aerated treatment systems, a geotechnical report will be required to be prepared by an accredited person.

Step 2 - Identify the location and areas of risk

This policy provides information to assist in identifying areas of risk. There are two (2) types of risk areas Low and high. These risk factors are determined by the criteria set in Table 1.

Step 3 - Site and Soil Assessment

Developments in high risk areas require a Geotech report. For all developments in Low risk areas, no Geotech report is required for the installation of On-site Sewage Management Systems. Application and registration forms in Appendix 1 are required to be completed prior to lodgement of the application.

For further information, the publication titled 'Environment and Health Protection Guidelines, On-Site Sewage Management for Single Households' prepared by the NSW Department of Local Government. A copy of the publication is available by contacting the NSW Department of Local Government on 02 6793 0793.

Table 1 identifies areas that may have a low risk associated with on-site effluent disposal. Low risk is "the recommended minimum values based on ideal site and soil conditions". If the answer is NO to any one of the criteria, then the On-site Sewage management system will require a full Geotech report as it is classified as being in a High Risk Category.

TABLE 1

Criteria for effluent disposal area	Yes	No
Greater than a Minimum 100m from a river, stream or lake		
Located within Zone Primary Production RU1 Lachlan Shire Local Environment Plan 2013		
Allotment is 2 hectares or greater in size		
Greater than a Minimum of 250m up-slope from a bore or domestic water supply		
Does not adjoin wetlands or other identified sensitive areas		
Greater than a Minimum 40m up-slope from a dam or dry gully		
Does not include commercial developments or developments accommodating more than 12 persons		
Greater than a Minimum 12m from an adjoining boundary		
Slope less than 18 degrees		

Proposed site of the OSSMS Not subject to flooding		
Proposed site of the OSSMS Not subject to surface water or stormwater pooling during heavy rain		

If the answer is NO to any one of the criteria, then the On-site sewage management system will require a full Geotech report as it is classified as being in a High Risk Category.

Where on-site sewage management systems are being installed in a low risk area, the minimum standards outlined in Tables 2 and 3 respectively will be required.

Table 2 – Minimum Standards for Septic Tanks

The following standards apply for the sizing of septic tanks and soakage trenches –

Minimum size septic tank where only a WC, hand basin and shower are installed for up to four (4) people	2,500 litres
Dwelling accommodating up to 4 persons	3,000 litres
Dwelling accommodating more than 4 persons	3,000 litres + 150 litres per person in excess of 4 persons

Table 3 – Minimum Standards for Absorption Trenches

Minimum absorption trench length	36 metres
Minimum absorption trench width	400 mm
Minimum absorption trench depth	600 mm
Additional soakage trench for accommodation in excess of 6 persons	6 metres per person

Note - the number of persons accommodated in a dwelling is calculated by dividing the floor area of each bedroom by 5.5m^2.

Example:

Floor area of bedroom = 14m2

Persons to be accommodated = 2

(lowest whole number applies)

If the proponent intends to install a system outside the minimum standard identified Table 2 and 3 respectively, then they must undertake a site Assessment in accordance with Appendix 2. This assessment may be carried out by anyone authorised by the owner / proponent and alternate details based on this assessment must be submitted to council for consideration. Council will assess the site assessment against the requirements stipulated in the Environmental and Health Protection Guidelines – On-site Sewage Management for Single Households.

Requirements relating to Modification (Additions etc)

In situations where a proponent is increasing the size of the house (e.g. adding additional rooms to a dwelling, the proponent will be required to work to the Minimum standards in Tables 2 and 3. If the proponent proposes to utilise a system outside the minimum standard identified Table 2 and 3 respectively, then they must undertake a site Assessment in accordance with Appendix 2. This assessment may be carried out by anyone authorised by the owner / proponent and alternate details based on this assessment must be submitted to council for consideration.

Monitoring and Compliance of On-site Sewage Management Systems

In order to ensure that the on-site sewage management systems are maintained in a satisfactory manner, Council is committed to undertaking a long-term and practical monitoring program. This monitoring program will be based on a risk assessment and type of on-site sewage management system. The inspections of each type of system will be undertaken as follows:

Low Risk Areas (Septic Systems)

- Upon installation
- On complaint, and
- On request

High Risk Areas (Septic Systems)

- Upon installation
- On complaint
- Every 3 years, and
- On request

All other Systems (e.g. AWTS) both High and Low Risk

- Upon installation
- On complaint
- Every 3 years, and
- On request

Fees and Charges

The costs of the inspections will be in accordance with the Local Government Act and be charged based on the fees prescribed in Council's Fees & Charges

Appendix 1 – License and Application Forms

Application for Licence to Operate and Install
Septic Tank/On-site Sewage Management System
Section 68 Local Government Act 1993

I/We the undersigned hereby make application to Licence the Septic tank/On-site Sewage Management system on the undermentioned premises:-

PROPERTY DESCRIPTION

Name of Applicant: ……..

Address of Property ……..

……

……..Post Code:……..

Preferred day for inspection: Monday Tuesday Wednesday Thursday Friday

Preferred time for inspection Morning or Afternoon
(please circle)

LOCATION OF PROPERTY (showing directions)

Office Use Only:
No. of systems:…… $ ……..
Receipt No.:…….. Date: / / Assessment No.:…….
Application No.:…… Entered in Data Base:……..

Registration Form

Registration of Existing On-Site Sewage Management System

PROPERTY DETAILS

Address of Property_____

_____

Lot & DP Numbers: _____

Assessment Number: _____
(See rates notice)
Area of Land: _____m^2/hectares

If you have more than one on-site sewage management system, a separate form must be completed for each system.

PROPERTY OWNER/OCCUPIER DETAILS

Owner's Name: _____

Postal Address: _____

_____

Contact number/s_____

Occupier's Name: _____

Contact number/s _____

Council officers may need to inspect your on-site waste management system. Please provide the name, address and phone numbers of the person to be contacted should an inspection be necessary.

_____

TYPE OF ON-SITE SEWAGE MANAGEMENT SYSTEM *(Please tick)*

Manufacturer (if known) _____Size (L) _____

[ ] Septic Tank [ ] Aerated Waste Treatment System (AWTS)

For an AWTS: Who will maintain the system?

Name: _____Licence No.: _____

Address: _____Post Code: _____

Contact numbers: _____ Mobile: _____

[ ] Other type of system *[please specify* _____

SITE DETAILS

Number of bedrooms in house *(residential)* _____ OR

Number of occupants of premises *(non-residential)* _____

Please indicate the predominant soil type on the property:

[ ] sand [ ] clay [ ] loam [ ] unknown

Please indicate the slope of the land:

[ ] steep [ ] gentle [ ] flat

Are there any stony outcrops near the disposal area? Yes/No

DISPOSAL AREA DETAILS *(the land over which treated wastewater is used or disposed of)*

Distance of disposal area from the nearest watercourse? _____ m/km

Describe the watercourse: _____

Distance of disposal area from the nearest downhill boundary: _____m/km

Distance of disposal area from nearest residence: _____m/km

Distance of disposal area from nearest bore: _____m/km

Level of groundwater *(if known)*: _____m

Is there any physical barrier between the disposal area and the watercourse? Yes/No

Is stormwater runoff diverted away from the disposal area? Yes/No

Appendix 2 – Site Assessment

Any person authorised by the owner may carry out site assessment for minimal risk areas. In areas of high risk only qualified persons (Geotech) are to carry out site assessments.

1. Climate

Climate influences the use of hydraulic load of the wastewater for all types of land application systems. Areas with high evaporation compared with rainfall allow for greater use of hydraulic load.

A water balance based on the historical rainfall and evaporation data for the locality is to be completed where irrigation is proposed to assist in system design. Average maximum daytime temperatures below 15^{o}C decrease the performance of wastewater treatment processes that rely on biological activity. Example AWTS and composting toilets.

2. Flooding

All components including electrical, venting and inspection openings of on-site systems must be located above the 1 in 100 years probability flood contour. Survey Report required to identify this?

Where land application areas are proposed a 1 in 20 years flood probability contour may be used.

3. Exposure

Evaporation may be reduced up to two thirds in some locations by a poor aspect, overshadowing, sheltering of disposal areas by the topography, buildings or vegetation. Sun and wind exposure is to be maximized on all disposal areas to encourage evaporation.

4. Slope

The recommended maximum slope will depend on the type of land application system used, the site and soil characteristics.

Excessive slope may pose problems for installing systems and the even distribution of wastewater, which may result in runoff particularly from surface land application systems.

5. Run–on and uphill seepage

Run-on of rainfall onto the land application area is to be avoided. Run-on is to be diverted around any land application area by using earthworks or a drainage system. Upslope seepage can be partly controlled by installing groundwater cut-off trenches where the lowest level of the trench is above the level where effluent can enter the land application area.

6. Erosion

On-site systems are not to be located in areas where there is evidence of erosion, mass movement or slope failure.

7. Site drainage

On-site systems are not to be installed on damp sites. Seepage, springs and soaks are evidence of poor site drainage. The type of vegetation growing on the site also evidences surface dampness and poor drainage.

8. Fill

Fill often has highly variable properties such as permeability and can be prone to subsidence. Fill may have material that is not suitable for the construction of land application systems. Fill that is less than 300mm deep may be suitable for land application systems depending on the nature of the material and the suitability of the underlying soil.

9. Buffer distances

Buffer distances are required between land application systems and sensitive environments on and off site to ensure protection of community health and the environment.

When determining buffer distances consideration is to be given to:

- the type of land application system to be used
- surface and subsurface drainage pathways
- site factors - soil permeability, geology and vegetation buffering
- sensitive environments (e.g. national parks, wetlands)
- the density of the development

The following are the recommended minimum buffer distances based on ideal soil and site conditions for various land application systems :-

All land application systems

- 100 metres to permanent surface waters (e.g. river and streams)
- 250 metres horizontal distance to a domestic groundwater well
- 40 metres to other permanent and temporary water bodies (e.g. dams, drainage channels)

Surface spray irrigation

- 6 metres if area up-gradient and 3 metres if areas down gradient of driveways and property boundaries
- 15 metres to dwellings
- 3 metres to paths and walkways
- 6 metres to swimming pools

Surface drip and trickle irrigation/Subsurface irrigation

- 6 metres if area up-gradient and 3 metres if area down gradient of swimming pools, property boundaries, driveways and buildings.

Absorption system

- 12 metres if area up-gradient and 6 metres if area down gradient of the property boundary
- 6 metres if area up-gradient and 3 metres if area down gradient of swimming pools, driveways and buildings

Note: Notwithstanding risk category, all buffer distances must be maintained or achieved. If the distances cannot be achieved, then any variation will not be considered unless accompanied by a report prepared by a hydrologist certifying that ground conditions exist in the subject area that will ensure that contamination of water bodies (rivers, streams. dams, bores, lakes or the like) will not occur.

10. Land area

Sufficient land area must be available within the boundary of the site for the following:

a. the sewage management system, including treatment system, dedicated land application areas and reserve areas

b. buffer distances

c. house and associated structures

d. social and recreational uses

e. vehicular access areas

11. Rock and rock outcrops

The presence of rock outcrops may indicate highly variable bedrock depths. The presence of rocks can limit evaporation and interfere with drainage. Rocks may collapse into installations and cause problems with even effluent distribution.

12. Soil features (applies to high risk areas only)

Soil is a complex arrangement of mineral and organic particles that vary horizontally and vertically. Understanding soil features will assist in the choice of a sewage management system. A qualified soil scientist should undertake assessment of soil features. Soil feature assessment is to include:-

- Depth of soil
- Depth to episodic/seasonal watertable
- Soil permeability

Soil Testing

The following procedure is to be followed for soil testing:-

Assess three soil profiles (pits or cores) to a depth of 1.7 metres for each proposed land application area.

If soil absorption systems are chosen as the preferred system (i.e. septic tank and trenches) and information about the depth of groundwater at the site is not available then investigate to 1 metre deeper than the base of the proposed system. The number of soil profiles required will depend on soil variability and site sensitivity.

Suggested soil profile locations are –

- One pit /core at the centre of the proposed land application area
- One adjacent to the proposed treated wastewater entry point

- One at the opposite end of the land application area from which the treated wastewater is entering.

Samples for analysis are to be taken for each major soil horizon and be forwarded to a recognised testing laboratory. For high-risk areas it is recommended that a suitably qualified person take soil samples.

The testing laboratory will be able to advise you of the quantity of soil needed for analysis. Information from the laboratory data should be described using the NSW Soil Data System.

All relevant soil features tested are to show only minor limitations to on-site sewage management for all pits and cores.

Table 4 explains the various components of the site assessment for the location of the land application system. This is to be read in conjunction with the site assessment forms. The following table indicates the number and type of tests required for high risk and minimal risk areas.

TABLE 4

Soil Assessment	High Risk [Testing required]	
1. Depth to bedrock [m]	Yes	
2. Depth to Highsoil or Watertable[m]	Yes	
3. Soil Permeability	Yes	
4. Course Fragments [%]	Yes	
5. Bulk Density [g/cm3]	Yes	
6. PH *CaC12*	Yes	
7. Electrical Conductivity	Yes	
8. Sodicity	Yes	
9. Caton Exchange Capacity	Yes	
10.Phosphorus Sorption	Yes	
11.Modified Emerson Aggregate	Yes	