



WEDDIN SHIRE COUNCIL

POLICY NUMBER: 7.4.4

POLICY FOR ON-SITE SEWAGE MANAGEMENT

Adopted: 18 May 2017

POLICY FOR ON-SITE SEWAGE MANAGEMENT (NO. 7.4.4)

1. **Title:** Policy for On-Site Sewage Management
2. **Number:** Policy Number 7.4.4
3. **Purpose:**
 - 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
4. **Definitions:**

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.
5. **Associated Legislation and Other References**

Local Government Act 1993
EP & A Act 1979
Environment and Health Protection Guidelines Onsite Sewage Management for Single Households (Silver Bullet)
6. **Policy**
 - 6.1 **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.
 - 6.2 **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 soil testing 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.

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 minimal and high.

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Step 3 - Site and Soil Assessment

Council has prepared detailed site and soil assessment sheets that are to be lodged with an application to install or alter a Sewage Management Facility. This application and information is to be lodged with the development application. This policy **must** be read in conjunction with the site and soil assessment sheets.

6.3 Further Information

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. A copy of the publication is available by contacting the N.S.W. Division of Local Government on (02) 4428 4100.

Step 1 - Determine the type of development and site evaluation

The aim of this policy is to provide for the assessment of development on single allotments of land where those lots have been delineated and no assessment has been carried out at subdivision stage. It also caters for alterations to existing systems on such lots.

Step 2 - Identifying the location and areas of Risk

Table 1 identifies areas that may have a **minimal risk** associated with on-site effluent disposal.

Minimal risk is “the recommended minimum values based on ideal site and soil conditions”. If the site is located in an area that does not meet the criteria in this table it is classed as **high risk**.

TABLE 1

Area, site and type of development	Criteria for effluent disposal area
Single allotment of land	Minimum 100m from a river, stream or lake
Located within Zone No 1(a) Weddin Shire Local Environment Plan 2002	Minimum of 250m up-slope from a bore or domestic water supply
2 hectares or greater in size	Minimum 40m up-slope from a dam or dry gully
Not supplied with reticulated water	Minimum 12m from an adjoining boundary
Does not adjoin wetlands or other identified sensitive areas	Slope less than 18 degrees
Adjoining land uses are consistent with proposed land use	Not subject to flooding
Does not include commercial developments or developments accommodating more than 12 persons	Not subject to surface water or stormwater pooling during heavy rain
Note: The above criteria apply to both minimal and high risk areas.	

Step 3 - Site Assessment and Soil testing

Site assessment and soil testing are used to identify the most appropriate application area/s within the lot and the most appropriate on-site sewage system.

The site assessment is to be undertaken in conjunction with the soil testing.

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

Table 2 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.

6.4 Site Assessment

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°C decrease the performance of wastewater treatment processes that rely on biological activity. E.g. 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.

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 maximised 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

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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.

9. Land area

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

- the sewage management system, including treatment system, dedicated land application areas and reserve areas
- buffer distances
- house and associated structures
- social and recreational uses
- vehicular access areas

10. 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.

11. 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

6.5 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.

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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 provide advice on 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.

The following table indicates the number and type of tests required for high risk and minimal risk areas.

TABLE 2

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/cm ³]	Yes	
6. PH <i>CaCl2</i>	Yes	
7. Electrical Conductivity	Yes	
8. Sodidity	Yes	
9. Caton Exchange Capacity	Yes	
10. Phosphorus Sorption	Yes	
11. Modified Emerson Aggregate	Yes	

Septic Tanks and Absorption Trenches

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	2500 litres
Dwelling accommodating up to 4 persons	3000 litres
Dwelling accommodating more than 4 persons	3000 litres + 150 litres per person in excess of 4 persons
Minimum absorption trench length	36 metres
Additional soakage trench for accommodation in excess of 6 persons	6 metres per person

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Note - the number of persons accommodated in a dwelling is calculated by dividing the floor area of each bedroom by 5.5m². For accommodation in excess of 12 persons, consult with Council to determine septic trench size and absorption trench length.

Example:

Floor area of bedroom = 14m²

Persons to be accommodated = 2

(lowest whole number applies)

7. Review and Amendment

- This policy shall be reviewed by September 2021 and thereafter at four (4) yearly intervals, to ensure it meets all statutory requirements and the needs of Council.

8. Adoption

- This policy commences as from the date of adoption by Council, being 18 May 2017 and replaces any previous policy.

9. History

Version	Details
7.4.1	Adopted Unknown
7.4.2	Adopted 17 September 2009
7.4.3	Adopted 18 April 2013
7.4.4	Adopted 18 May 2017