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Part C Controls that apply to all development

Chapter 5 Controls that apply to all development

5.1 On-site effluent disposal for land without reticulated sewer¹

5.1.1 Background

The residential areas of the Narrandera Township have reticulated sewer, however the industrial zones and the Villages of Narellan and Grong Grong presently rely on on-site effluent disposal systems. Most of these systems are basic in nature, including secondary treatment septic systems where treated waste is deposited into a sub-surface trench. There are some parts of Narellan with known odour and migration of effluent issues, due to inadequate septic land application areas, system maintenance and system age.

Current New South Wales laws and guidelines require that an on-site sewage and wastewater management system must be designed, installed and maintained so that any risk to:

- public health (e.g. the spread of disease).
- the environment (e.g. pollution or contamination of groundwater, soil, land, surface waters and vegetation).
- community amenity (e.g. foul odours), is minimised.

The NSW State Government introduced State-wide legislation under the Local Government Act 1993 and Local Government (General) Regulation 1995 that requires Council approval be sought prior to the installation of on-site sewage management systems. This legislation also outlines Council's responsibilities to inspect on-site sewage management systems during their installation and operation.

Additional standards should be taken in to account with regard to the design, construction and maintenance of an on-site sewage and wastewater management system. These include, but are not limited to:

- AS/NZ 1547-2000 – On-Site Sewage Domestic Wastewater Management.
- AS/NZS 3500.5:2000 - National Plumbing and Drainage Code - Domestic Installations.
- Protection of the Environment Operations Act (POEO) 1997 and associated regulations.
- Local Government Act (1993) and associated regulations.

One of the most important elements of on-site effluent disposal is matching the system to the soil type at the development site. The onus is on the applicant to demonstrate, through soil tests or otherwise, the nature of the site soils and their suitability for on-site effluent disposal.

¹ The information within this Chapter is based on comprehensive research carried out by Junee Shire Council and embodied within the Junee Shire DCP No.20 of January 2011. The use of this information is duly acknowledged.

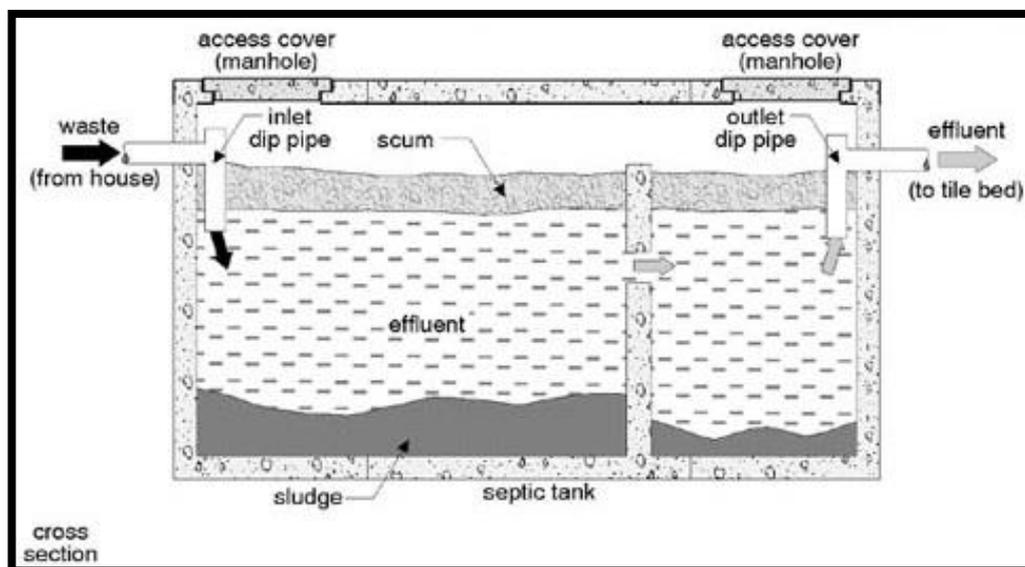
5.1.2 Types of on-site effluent disposal systems

Conventional septic tank

Septic tanks provide preliminary treatment for the entire wastewater stream by allowing solids to settle to the base of the tank, and oils and fats to float to the top to form a scum layer. The solids that have settled in the bottom of the chamber undergo anaerobic bacterial digestion which produces a sludge that must be pumped out periodically (dependant on use).

As septic tanks typically do not remove nutrients or bacteria, the wastewater is not disinfected. Due to this potential public health risk, the effluent must be applied to land below ground level via a suitable soil absorption system. The figure below shows a typical septic tank cross section.

Figure 1 Cross section of typical septic tank



Septic tank soil absorption systems – evapotranspiration or trench

An evapotranspiration bed generally consists of a layer of fine soil or sand within which grass grows, sitting on a layer of geo-textile fabric, with the effluent deposited into a layer of gravel sitting beneath the geo-textile layer. The grass layer is required to be continually maintained and cut, so that the grass growth pulls moisture from the gravel layer, which then transpires to the atmosphere. The hydraulic load is evaporated whilst the nutrient load is taken up by the grass.

A trench system is similar however it is deeper and does not rely on transpiration for dispersal of moisture...it relies solely on absorption of the hydraulic load and nutrient load.

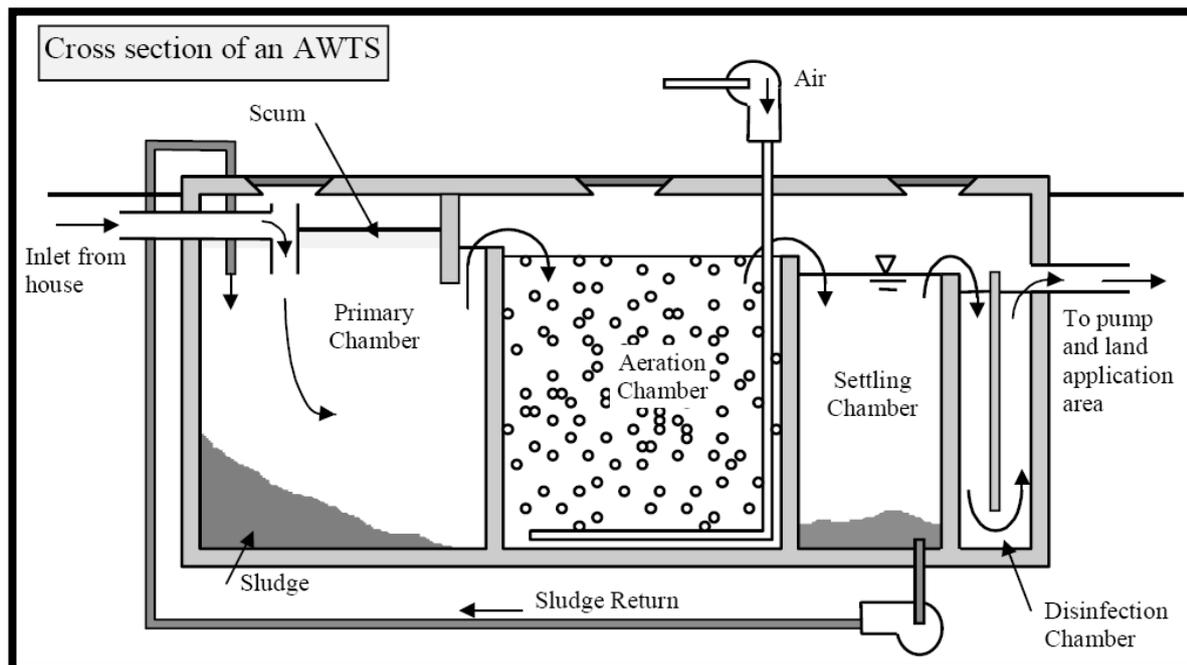
The Council does not favour trench based septic systems on any land (due to their inferior capacity to disperse hydraulic load and nutrient) and does not favour evapotranspiration based septic systems on allotments less than 4,000m² in the Villages area of Barellan and Grong Grong (R1 and R5 zones). Village areas should utilise an aerated water treatment system – see over.

Aerated water treatment system (AWTS)

An aerated wastewater treatment system consists of a series of treatment chambers combined with an irrigation system. The AWTS will operate as a small scale treatment plant to allow for aeration, clarification and disinfection to treat wastewater.

Final effluent is treated to a higher standard than the traditional septic system, provided the system is maintained according to the manufacturers' requirements. Such maintenance will include (usually at a minimum) quarterly servicing by a qualified/ accredited service technician. Refer to the Figure below.

Figure 2 Typical AWTS cross section



Aerated water treatment systems – surface irrigation or sub-surface disposal

Surface irrigation requires a specific area of land using specially designed sprinkler heads producing a large droplet to reduce spray drift. The irrigation areas cannot be used for recreation (eg normal back yard use) and the treated effluent cannot be used to irrigate fruit or vegetable plots.

The Council does not favour surface irrigation based AWTS on lots less than 4,000m² on any land, whether the land use is industrial, residential, commercial. Allotments of land less than 4,000m² should use an AWTS with sub-surface disposal. Sub-surface disposal discharges effluent evenly below ground through an arrangement of specially designed pipes. Effluent is applied to the root zone of plants to increase nutrient uptake, adsorption, treatment and evapotranspiration.

In summary then, allotments less than 4,000m² should use a sub-surface irrigation based AWTS and allotments above 4,000m² may choose between an evapotranspiration based septic system, or an AWTS, with sub-surface irrigation favoured in all scenarios over a surface irrigation system.

5.1.3 Land application areas for effluent disposal

The land application area is the portion of land allocated to the sub-surface or above ground network of pipes, trenches or sprinklers associated with on-site effluent treatment system.

The minimum land area for any on-site effluent treatment system, for a dwelling with up to four bedrooms, or a commercial or industrial premises, is 150m². Dwellings having more than four bedrooms, or non-residential buildings proposing an equivalent effluent load or higher, will require an individual justification of the land application area size.

The land application area for any AWTS where surface irrigation is proposed must be separated by fencing or other suitable method to prevent children or animals utilising the area. This area must be raised above the surrounding ground level to prevent infiltration of surface water runoff. The land application area for evapotranspiration based septic systems must also be raised or protected to avoid inundation by surface waters.

5.1.4 Buffers and setbacks to land application areas

On-site effluent disposal systems have the potential to contaminate surface water and groundwater, in domestic and rural environments, including bores used for domestic non-potable garden and animal use. The minimum buffer areas and property boundary setbacks for new systems are provided below, and should be adhered to unless specific circumstances can be demonstrated on merit.

Table 1 Buffers and boundary setbacks to effluent land application areas

System	Buffer, boundary setback or protection area
All land application areas	<ul style="list-style-type: none"> • 250m to a domestic groundwater well/bore used for human consumption • 100m to all permanent surface waters, including rivers, creeks and public dams • 40m to intermittent creeks, farm dams and drainage lines • Minimum 6m from fruit and vegetable plots intended for human consumption • Surface irrigation area for AWTS fenced or protected from human or animal use
Surface irrigation application area	<ul style="list-style-type: none"> • 10m from any property boundary, swimming pool or building
Evapotranspiration area or sub-surface irrigation area	<ul style="list-style-type: none"> • 6m to downhill (or level ground) property boundaries, swimming pools or buildings • 3m to uphill property boundaries

For rural properties where the land area is typically much more than 4,000m², the land owner may choose between an evapotranspiration based septic system, or an AWTS, with sub-surface irrigation favoured in all scenarios over a surface irrigation system.

5.1.5 Approval and inspection of systems

Council approval

Council approval is required for all alterations to or applications for new on-site effluent disposal systems. All work must be carried out by an appropriately licensed plumber and be subject to inspections by Council.

One of the most important elements of on-site effluent disposal is matching the system to the soil type at the development site. The onus is on the applicant to demonstrate, through soil tests or otherwise, the nature of the site soils and their suitability for on-site effluent disposal.

NSW Health accreditation

All AWTS must be accredited by NSW Health and have a maximum 10 person capacity.

Council records

The Council is required to keep records of identification, registration and inspection of all on-site sewage management systems. All existing operating systems should already be registered with the Council, through the submission of an on-site effluent disposal system application. If not an application should be lodged with Council and will be inspected and assessed for risk.

Inspection of systems, based on risk management

It is a requirement of the Council to carry out periodic inspections of all on-site waste management systems. The frequency of these inspections will depend on the risk assessment of the system and may be classed as high or low. The level of risk is based on, but not limited to, one or more of the following criteria.

High Risk

- Located within a RU5 Village or R5 Large Lot Residential zone under the Narrandera Local Environmental Plan 2012 (on land or allotments less than 4000m²).
- Within 100 metres of a permanent surface water (river, creek, stream, lake or public dam).
- Within 40 metres of other waters (farm dam, intermittent waterway, drainage line).
- Within 250 metres of a domestic groundwater bore/well for human consumption.
- Located in an area prone to flooding in a 1 in 100 year flood event.
- A type of sewage management system which serves more than ten (10) people.

- Systems servicing schools, child care centres or other high risk populations.
- A system that is not operated in accordance within the provisions of this Chapter, the conditions of accreditation imposed by the NSW Health Department, or any installation and operating conditions set by the Council.

Low Risk

- The System is located on a property with a total land area greater than 4,000m² in area, and
- The system clearly over-complies with the buffer and setback distances in this Chapter.

Notwithstanding the above risk criteria, Council maintains the ability to conduct on-site inspections at any time where it is considered necessary.

Council can take legal action against the owners of any property that has an on-site effluent disposal system operating outside approved design and operating conditions, but prefers to work constructively with landowners to ensure safe operating systems, for the benefit of the wider community.

5.2 Off-street parking – Business centre and other land uses

The Narrandera Township is fortunate to have established off-street car parking areas in close proximity to the business centre. The Narrandera business centre does not have timed parking, but parking is regulated for compliance with No Standing zones, angle and parallel parking and the like.

The sections below address parking provision and design standards.

5.2.1 Car parking design standards

Car parking areas and individual spaces are to be designed in accordance with the Section 6 “Access and parking area design” of the NSW Roads and Traffic Authority Guidelines for Traffic Generating Development,² with the exception of the following standards.

- Individual car parking spaces are to have minimum dimensions of 2.6m x 5.2m.
- Car parking spaces for disabled persons are to comply with AS 2890.1-1993.
- For all land uses apart from single dwellings, vehicles are to enter and the leave the site in a forward direction.

5.2.2 Car parking provision

Car parking for individual land uses is to be provided in accordance with the Table below, with the exception of the following matters below.

- In the case of redevelopment or change of land use the required off-street parking is to be calculated by calculating the parking required for the current or previous land use, calculating the parking required for the new land use, and subtracting the existing or previous requirement from the new requirement to obtain the total number of new spaces required (above zero). A credit will be applied for any shortfall of parking that exists for the current use.

Required parking = New land use requirement - Current/previous requirement (or credit)

- Large businesses, such as supermarkets, which occupy the whole of a street block frontage, that is, between two intersecting roads; may count as part of their requirement the existing kerbside parking along their frontage, for up to one third of their required off-street parking.
- Variations to off-street parking requirements may be considered where the building alterations or additions are minor and do not encroach upon or reduce existing off-street parking for the land use.
- The Council does not have a Section 94 Contributions Plan for off-street car parking and is not able to accept monetary contributions in lieu of parking provision.
- The provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 override the land use based provisions of this Chapter.
- Land uses not referred to in the Table should utilise the provisions of Section 5 of the Guidelines for Traffic Generating Development.

² NSW Roads and Traffic Authority October 2002, *Guide to Traffic Generating Developments*

Table of off-street parking provision

Land use	Off-street parking requirement
Residential land uses	
Dwelling house and dual occupancy	1 space
Multi dwelling housing and Residential flat building	<ul style="list-style-type: none"> • 1 space per 1-2 bedroom dwelling • 2 spaces per 3 bedroom dwelling • 1 visitor space per 4 dwellings (where there are 4 or more dwellings)
Seniors living	In accordance with the SEPP (Seniors Living) 2004
Tourist and short term accommodation	
Hotel/Motel	1 space per accommodation room
Caravan park	1 space per cabin and/or campsite
Bed & Breakfast	1 space per bedroom
Other tourist/visitor accommodation	1 space per unit/cabin
Business and retail land uses	
Commercial offices and professional services	3 spaces per 100m ² gross floor area (GFA)
Retail shops	3 spaces per 100m ² GFA
Restaurant/café/food sales	3 spaces per 100m ² GFA
Industrial land uses	
General or light industry	1 space per 100m ² GFA or 1 space per 2 employees, whoever is the greater
Storage/warehousing	1 space per 250m ² GFA or 1 space per 2 employees, whoever is the greater
Industrial retail	1 space per 50m ² of display area
Vehicle based land uses	
Vehicle repair	3 spaces per work bay
Health and community land uses	
Consulting rooms	3 spaces per consulting room plus 1 space per support staff member
Church or place of worship	1 space per 4 seats or 1 space per 10m ² , whichever is the greater
Nursing home & Seniors Living	Subject to the provisions of the SEPP (Seniors Living) 2004

5.3 Exempt and complying development

Approval of new single detached dwelling houses, and additions to existing houses in the Shire is typically covered under the separate provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 – the ‘Codes SEPP’, see

<http://www.legislation.nsw.gov.au/maintop/view/inforce/epi+572+2008+cd+0+N> .

The Codes SEPP provides for a large range of residential based additions, such as pergolas and sheds, which are of minimal environmental impact, as **Exempt Development**. Exempt development does not require the Council’s development consent, but must meet the set standards and controls outlined within the SEPP.

The Codes SEPP also provides for new dwellings and minor habitable dwelling additions to be considered and approved as **Complying Development**. Complying Development is of minor environmental impact and again must meet set standards and controls. Development consent for Complying Development must be provided by either the Council or an Accredited Certifier, within a 10 day period, provided it meets the set standards.

In addition to residential buildings the Codes SEPP also contains provisions for rural housing, commercial and industrial development and some forms of subdivision.

It is the intention of the NSW Department of Planning and Infrastructure to add further provisions to the Codes SEPP, including signage and advertising and a wider range of commercial and industrial controls.

Council staff are available to assist applicants with enquiries as to whether their proposed development will be exempt or complying development, or will require lodgement of a development application with the Council.