

11g On-site waste water management

Explanatory outline

Section 11g outlines assessment criteria relating to on-site waste water management. The following matters are covered:

- adequate land available for on-site disposal
- cumulative impacts
- types of treatment and disposal systems

All developments that have the potential to generate sewage must be connected to an approved sewage system.

In the case of land that cannot be connected to the reticulated sewerage system, a system of on-site waste water management is required.

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11g.1 Application of this section

This section applies to development described in Column 1 when carried out on land described in Column 2.

Column 1: Type of development	Column 2: Applicable land
Development that involves the generation of sewage or other waste water.	Land that cannot be connected to a reticulated sewerage system.
Temporary development, facilities or land uses generating sewage or other wastewater.	All land

Note: all developments that will require a new on-site waste water management system to be constructed or installed or the modification of an existing system must be the subject of an application for approval under Section 68 of the Local Government Act 1993 using Council's approved form.

11g.2 Relevant planning instruments, legislation & other policies & documents

The following environmental planning instruments and other legislation (or instruments under the legislation) are relevant to development to which this section applies:

- *Upper Hunter Local Environmental Plan 2013*
- *Local Government Act 1993*
- *Local Government (General) Regulation 2005*

Further planning instruments and legislation may also be relevant. In the event of any inconsistency, the above listed instruments and legislation will prevail over requirements or criteria contained in this section.



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This section should also be read in conjunction with:

- *Upper Hunter Shire Council Onsite Sewage Management Strategy (2015)*
- *AS/NZ 1546.1:2008 On-site domestic wastewater treatment units, Part 1 – Septic tanks*
- *AS/NZ 1546.2:2008 On-site domestic wastewater treatment units, Part 2 – Waterless composting toilets*
- *AS/NZ 1546.3:2008 On-site domestic wastewater treatment units, Part 3, Aerated wastewater treatment systems*
- *AS/NZ 1547:2012 On-site Domestic Wastewater Management*
- *AS/NZS 3500.5:2000 National Plumbing and Drainage Domestic Installations*
- *Environment and Health Protection Guidelines for On-site Sewage Management for Single Households (1998) (EHP Guidelines).*

11g.3 Definitions

There may be terms defined in the Dictionary that are relevant to this section, or they may be defined in other Acts as relevant.

11g.4 Objectives

The objectives of this section are to:

1. ensure that development is not approved unless there is sufficient suitable land for the disposal of effluent on-site
2. discourage the use of above ground irrigation of on site effluent in areas where environmental harm is likely to result
3. provide clarity where existing guidelines or standards do not clearly set out requirements
4. promote the sustainable use of water and waste resources.

11g.5 Supporting plans & documentation

Development applications that are subject to this section should be supported by the following plans and documentation.

The applicant should consult with Council staff to determine any other additional information that may be required in addition to this section.

In some cases the information required to determine a Development Application may be equivalent to the information required for an application under section 68 of the *Local Government Act* to install, construct or alter a system of on-site waste water management. A wastewater application may be lodged at the same time as the development application.

Item	When required	Plans or information to be provided
A. General requirements	All applications	Refer to Part 2 Preparing & lodging a development application.

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Item	When required	Plans or information to be provided
B. On-site waste water management assessment report	<p>Applications for subdivision of land in Zones RU1, RU4, RU5, C3 or R5 where the proposed lots are less than 4,000 m², or there are environmental constraints such as:</p> <ul style="list-style-type: none"> • nearby watercourses or waterbodies (<100 m); • unfavourable topography, soils or geotechnical conditions. • high water table. • potential for flooding. • proximity to groundwater bores or • limited available land area. 	<p>The report shall be prepared in accordance with the <i>EHP Guidelines</i> and <i>AS /NZS 1547:2012 On-Site Domestic Wastewater Management</i>. The report must be prepared by a suitably qualified and experienced person.</p> <p>A plan of the land to be subdivided must be provided clearly showing land that is suitable for effluent disposal in relation to:</p> <ul style="list-style-type: none"> • homogenous soil capability types. • EHP Guideline buffer distances from water courses, boundaries and roads. • soil permeability classes. • soil depth and depth to groundwater where it is a moderate or major limitation. <p>Where a nominal area for an on site system is provided, an appropriately sized polygon should also be marked on the plans to indicate that sufficient area is available.</p>
On-site waste water management assessment report con'td	<p>Applications for single dwellings or other development catering for less than 10 persons where the allotment is less than 4,000 m², or there are environmental constraints such as:</p> <ul style="list-style-type: none"> • nearby watercourses or waterbodies (<100 m); • unfavourable topography, soils or geotechnical conditions • high water table • potential for flooding. • proximity to groundwater bores or • limited available land area. 	<p>Where an on site waste water management assessment report has <u>previously been prepared</u> for the land in a previous subdivision application, the same assessment may be submitted where it meets the requirements listed above in the 'subdivision' section (and updated as required). Where the site layout or the potential to generate sewage is revised or modified, updated information will also be required.</p> <p>Where a suitable on-site waste water management assessment relevant to the property has <u>not already been prepared</u>, the following minimum information must be prepared by a suitably qualified and experienced person:</p> <p>A plan to scale is to be submitted, showing the location of:</p> <ul style="list-style-type: none"> • the sewage treatment facility proposed to be installed or constructed on the premises. • any related effluent application areas including 50% reserve area, and. • any buildings or facilities existing on, and any environmentally sensitive areas of, any land located within 100

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Item	When required	Plans or information to be provided
		<p>metres of the sewage management facility or related effluent application areas, and.</p> <ul style="list-style-type: none"> any related drainage lines or pipe work (whether natural or constructed) located within 100 metres of the sewage management facility or related effluent application areas. <p>Sufficient information must be included in the report to confirm the size of area required for effluent application areas including reserve area with reference to soil, climate and wastewater flow rate and effluent quality.</p> <p><i>Note: where the precise location of the effluent disposal area is not specified on the plan, a consent may be conditioned to require an approval to install as deferred commencement, or prior to the issue of a Construction Certificate.</i></p>
	<p>Commercial, tourist, agricultural and designated development</p>	<p>The following minimum information must be prepared by a suitably qualified and experienced person:</p> <ul style="list-style-type: none"> outline of the type and configuration of the proposed system, including tank capacities and specifications information and calculations showing how the system will cater for the proposed loading and effluent disposal (must reference hydraulic and soil capacities) water balance analysis expected wastewater quality potential adverse chemical or biological inputs into the system and how the treatment device will process these inputs and achieve the accepted effluent quality demonstration that the proposed system meets the objectives and development outcomes of this and other relevant DCP sections and related legislation. a design including sizing calculations and construction design regarding the system and effluent disposal area which also includes the details of nearest potential receptors.

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Item	When required	Plans or information to be provided
		<ul style="list-style-type: none"> detail of the mitigation measures proposed regarding protection of the system in the event of flood if the land is susceptible.

11g.6 Assessment criteria

A performance-based approach will be adopted in the assessment of development applications. Applications will be assessed according to the extent to which the outcomes specified in the left-hand column of the following table will be satisfied or achieved by the design, construction or operation of the proposal.

The design guidelines specified in the right-hand column indicate design and best practice solutions by which the required outcomes can be met. They do not preclude other solutions that may be suitable under particular local circumstances. All proposals will be considered on merit.

Outcomes to be achieved	Design guidelines
<p>A. Adequate land suitable for on-site disposal</p> <ul style="list-style-type: none"> On-site waste water management systems are not permitted on properties which are less than 2,000 m² in area. Each lot to be created in a proposal to subdivide land must have an adequate area suitable for the on-site disposal of effluent and wastewater. On-site waste water disposal areas are sized relative to wastewater generation rates, treatment method and soil type and shall take into account limiting factors. <ul style="list-style-type: none"> On-site waste water management systems must comply with the minimum buffer distances specified at <p>Table 1 Required buffer distances for onsite waste water management systems. Any variation to these buffer distances will need to be supported by a report prepared by a suitably qualified and experienced person.</p> <ul style="list-style-type: none"> When determining buffer distances, consideration is given to: <ul style="list-style-type: none"> the type of land application system to be used surface and subsurface drainage pathways site factors – topography, soil permeability, geology, vegetation buffering sensitive environments – national parks, rainforests, estuaries, wetlands, groundwater 	<p>The installation of the following treatment systems may be approved:</p> <ul style="list-style-type: none"> Septic tanks Wet Composting toilets Waterless composting toilets AS/NZ 1546.2:2001 Incinerating toilets Aerated Wastewater Treatment Systems (AWTS) AS/NZ 1546.3:2001 Bio filters Reed beds or constructed wetlands Sand filters Greywater treatment systems <ul style="list-style-type: none"> AS/NZ 1546.2:2001 On-site domestic wastewater treatment units, Part 2 – Waterless composting toilets -AS/NZ 1546.3:2001 On-site domestic wastewater treatment units, Part 3, Aerated wastewater treatment systems Pump out systems (only on industrial sites) <p>The installation of the following disposal systems is permitted with the approval of Council:</p> <ul style="list-style-type: none"> Absorption trench or Evapo-Transpiration Absorption (ETA) Beds as per AS/NZS 1547:2000 Sub-surface irrigation

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Outcomes to be achieved

- extraction areas, and areas with poor tidal flushing
- development density.
- On site effluent disposal areas for dwelling houses must account for wastewater disposal of a minimum of a 5 person equivalent population.
- Surface irrigation is not permitted on properties which are less than 4,000 m² in area.
- An area of land is available with suitable soil and site properties to allow the on-site waste water management system to receive the estimated wastewater loading and have a reserve area equivalent to 50% of the assessed capacity.
- For on-site waste water management systems proposed to cater for more than 10 persons for commercial, tourist, agricultural or designated developments, the system must produce effluent quality of at least a secondary standard however they shall be classified as medium risk systems.

Design guidelines

- Mound Systems
- Surface irrigation will be permitted only where site and soil limitations are minor and where the EHP Guideline buffer distances can be achieved.
- Installation and operation of conventional pit toilets, cess pits or long drop toilets will not be approved.

B. Cumulative impact considerations

- The cumulative impact of adjoining and nearby on site waste water management systems is considered
 - Use of on-site waste water management systems does not contribute to an adverse cumulative impact on soils and water in the area
- Any development within 75 m of a reticulated sewerage system is to be connected to that system.

C. Temporary facilities, development or land use

- Impacts of temporary activities are adequately considered and adequate standards are complied with.
- The impacts of wastewater management are considered, and the *On-site Sewage Management Strategy 2015* general terms of approval can be complied with.
 - Chemical closets may only be approved for temporary facilities, development or land use.

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Table 1 Required buffer distances for onsite waste water management systems

System	Required buffer distances
All land application areas	<ul style="list-style-type: none"> • 100 m to permanent surface waters (for example, river, streams, lakes etc.),. • 250 m to domestic groundwater well,. • 40 m to other waters (for example, farm dams, intermittent waterways and drainage channels).
Surface spray irrigation	<ul style="list-style-type: none"> • 6 m if area up-gradient and 3 m if area, down gradient of driveways and property boundaries,. • 15 m to dwellings,. • 3 m to paths and walkways,. • 6 m to swimming pools.
Surface drip and trickle irrigation	<ul style="list-style-type: none"> • 6 m if area up-gradient and 3 m if area down gradient of swimming pools, property boundaries, driveways and buildings.
Subsurface irrigation	<ul style="list-style-type: none"> • 6 m if area up-gradient and 3 m if area down gradient of swimming pools, property boundaries, driveways and buildings.
Absorption system	<ul style="list-style-type: none"> • 12 m if area up-gradient and 6 m if down gradient of property boundary. • 6 m if area up-gradient and 3 m if area down gradient of swimming pools, driveways and buildings

Source: Environment and Health Protection Guidelines: Onsite Sewage Management for Single Households 1998.

11g.7 Supplementary guidance

The following documents or reference materials provide further advice or information that is relevant to this section.

- *Upper Hunter Shire Council Onsite Sewage Management Strategy* (2015)
- *Environment and Health Protection Guidelines for On-site Sewage Management for Single Households* (1998) (EHP Guidelines).
- AS/NZ 1546.1:2008 On-site domestic wastewater treatment units, Part 1 – Septic tanks
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