

» setback distances for effluent land application systems

(guideline - AS/NZS 1547 Appendix R)

OSSM Factsheet 13

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If the proposed installation of an On-Site Sewage Management (OSSM) system does not comply with the prescriptive setback distances then the method in AS/NZS 1547 (Appendix R – Recommended Setback Distances for Land Application Systems) is to be used. The AS/NZS 1547 method uses a site specific and performance based approach to justify a reduced setback distance. In addition, this method supports the level of wastewater treatment required for site specific situations and constraints.

Table 1: Prescriptive setback distances for effluent land application systems

Effluent Land	Recommended Setback Distances
All effluent land application systems	<ul style="list-style-type: none"> • 100m to permanent surface waters (eg rivers, streams, lakes etc) • 250m to domestic groundwater well • 40m to other waters (eg farm dams, intermittent waterways and drainage channels etc)
Sub-surface irrigation	<ul style="list-style-type: none"> • 6m if area up-gradient and 3m if area down-gradient of swimming pools, property boundaries, driveways and buildings
Evapo-transpiration/absorption trench/bed	<ul style="list-style-type: none"> • 12m if area up-gradient and 6m if area down-gradient of property boundary • 6m if area up-gradient and 3m if area down-gradient of swimming pools, driveways and buildings

Table 2: AS/NZS 1547 – Appendix R – Table R1 – Guidelines for horizontal and vertical setback distances
Extract from standard showing the maximum setback distances.

(Refer to AS/NZS 1547 Table R1 for the complete table)

Site Feature	Horizontal Setback Distance Range (m) (maximum or greater)
Property boundary	50
Buildings/houses	>6
Surface water	100
Bore well	50
Recreational areas (children's play areas, swimming pools etc)	15
In-ground water tank	15
Retaining wall and embankments, escarpments, cuttings	3m or 45° angle from toe of wall (whichever is greatest)
Site Feature	Vertical Setback Distance Range (m) (maximum or greater)
Groundwater	1.5
Hardpan or bedrock	1.5

See next page for more information ...

Steps and information to include in the OSSM Report:

1. If the proposed installation of an OSSM system can comply with the prescriptive setback distances (refer Table 1) and/or the maximum setback distances of AS/NZS 1547 – Appendix R–Table R1 (refer Table 2) then minimal information is required in the OSSM report. The OSSM designer will state in the report that they can achieve compliance with the setback distances and include a site plan indicating the actual measurements from applicable site features to the effluent land application area.
2. Alternatively, if the proposed installation of an OSSM system cannot comply with step 1 then the OSSM designer is to use the sliding scale method of AS/NZS 1547 – Appendix R–Table R1 to support the nominated setback distance from a site feature to the effluent land application area.
 - a. Using Appendix R–Table R1 - Identify the site feature/s that cannot achieve the maximum setback distance, list the setback distance range and their corresponding site constraint items (refer Example 1 below).

Example 1

Site Feature	Horizontal Setback Distance Range	Site Constraint Items
Property boundary	1.5 - 50	A, D, J

3. Determine for each applicable site constraint item the level of constraint eg if low, medium or high end of the constraint scale (see Example 2 below). Then assess all constraint level results to ascertain if the sliding constraint scale maximum measurement can be decreased and by how much. This information is used to justify the nominated separation distance in the OSSM report and a site plan is to indicate the actual measurements from applicable site features to the effluent land application area.

Example 2

Site Constraint Item and Site/System Feature	Constraint Scale Factors		Low, Medium or High Constraint
	Lower	Higher	
A Microbial quality of effluent	Effluent quality consistently producing ≤ 10 cfu/100ml E.coli (secondary treated effluent with disinfection)	Effluent quality consistently producing $\geq 10^6$ cfu/100ml E.coli (for example, primary treated effluent)	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
D Slope	0-6% (surface effluent application) 0-10% (sub-surface effluent application)	>10% (surface effluent application) >30% (sub-surface effluent application)	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High
J Application Method	Drip irrigation or sub-surface application of effluent	Surface/above ground application of effluent	<input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High

»» Additional supporting information

Recommend that the OSSM designer include a viral die-off calculation to further support the nominated setback distance from a site feature (ie watercourse, bore) to the effluent land application area.



If you have any questions or concerns please contact:

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