



Guidelines for Interpretation of Schedule 12 of the Sorell Planning Scheme 1993 (On-site Wastewater Management).

Disclaimer:

This information is correct at the time of producing the document. It is recommended that you consult with relevant Council officers regarding issues identified in these guidelines.

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Introduction

These Guidelines have been designed to assist site & soil evaluators, designers of on-site wastewater management systems, building designers, potential land purchasers and real estate agents to interpret Schedule 12 of the Sorell Planning Scheme.

These guidelines and are not a regulatory document but are intended for information purposes. As such they must also be read in conjunction with the remaining provisions of the Sorell Planning Scheme, please contact Councils planning staff.

Frequently Asked Questions

1. *How much area do I need for wastewater disposal?*

You will need to the following:

- i. How many bedrooms in the proposed house
- ii. Is a septic tank system or AWTs proposed

Step 1. refer to Table 1

Step 2 Look at column one and nominate soil category (see footnote soil depth)

Step 3 use column 2 for septic tank systems and column 3 for AWTs.

Determine area per bedroom that corresponds with the soil category.

Step 4 multiply the area per bedroom by the number of bedrooms (see footnote regarding rooms capable of being used as bedrooms)

An example diagram of how the area required being reserved for wastewater is shown in figure 1.

2. *Where should the wastewater land application (absorption trenches, irrigation area, mounds) be located on the property?*

You will need to refer to the site and soil evaluation report for details of suitable areas for wastewater land application.

Step 1. Refer to Table 2.

Step 2. Refer to column one sensitive features

Step 3. Refer to column 2 for prohibited distances, column 3 for discretionary and 4 for permitted.

Step 4. Locate land application more than prohibited distance from sensitive features. If setback is discretionary refer to relevant factors for determining appropriate setback distances. Figure 3 provides an example of a suitable setback for a wastewater land application area.

3. *What happens if there isn't enough room on the property for wastewater disposal?*

The application will not be approved. However, modifications to the application can be made such as:

- Use an AWTS rather than septic tank system, which in some cases reduce the area required for wastewater disposal.
- Reduce the footprint of the house.
- Reduce the number of bedrooms

4. *Do the changes to the Planning Scheme apply to existing houses?*

No, the changes are not retrospective. However, if you want to extend or build other structures on the property you will need to comply with clause 12.6.2 of the Scheme.

5. *What happens if I want to extend my house, build a shed, garage or deck?*

You will need to refer to clause 12.6.2 which outlines things to consider such as:

- Not building over the existing septic tank or wastewater land application area (irrigation or trenches).
- Ensuring sufficient area is remaining on the property for wastewater disposal after the buildings are completed or if bedrooms are added on. Refer to Table 1 for minimum areas.
- If additional bedrooms are being added the on-site wastewater management system may need to be upgraded (providing sufficient area is available).
- Some exemptions apply such as out buildings that are replacing existing outbuildings

6. *How can I make sure that a particular property (that is not connected to a reticulated sewerage scheme) can be built on?*

- The only certain way is to apply for a planning permit. The criteria for on-site wastewater management systems are contained in Schedule 12. There may also be other issues in the planning scheme apart from on-site wastewater disposal that may impact on the property.

Applications for On-site Wastewater Management Systems and Planning Permits

Planning Permits

Traditionally decisions about the suitability of land for on-site wastewater disposal have been made at the time of lodging a special plumbing permit. The amendment to the Sorell Planning Scheme 1993 number 1/2006 outlines criteria in Schedule 12 that must be complied with. There are requirements on how much land is required on each property for on-site wastewater treatment units and land application systems, setback distances for land application areas, site and soil criteria, apartment development, and extensions.

It will now be necessary before applying for a special plumbing permit to obtain a planning permit and demonstrate that enough suitable area for on-site wastewater disposal is provided. A site & soil evaluation report will now be required to be submitted with the development application. The exact plumbing design will be determined when the special plumbing permit is lodged.

The following information must be included with a development application for compliance with clause 3.2.1, 3.2.2 and Schedule 12.

- A site & soil evaluation report prepared in accordance with AS/NZS 1547 indicating the soil profile and category in the proposed wastewater land application area. Information or calculations that indicate an appropriate setback distance for the wastewater land application.
- A site plan showing all current and proposed buildings, driveways, parking areas, watercourses on the lot, contours, and the location of the wastewater land application area and wastewater treatment unit. Figure 1 indicates how the area required to be reserved must be designated on the proposed plan.

Applications for Special Plumbing Permits for On-site Wastewater Management Systems

Councils Environmental Health Officers assess applications to install new on-site wastewater management systems (applications for special plumbing permits).

Designs of on-site wastewater management systems must be consistent with planning permit conditions.

All applications must be submitted on the approved special plumbing permit application forms. The application must contain the following information:

1. Complete drawings of the proposed on-site wastewater management system drawn to an appropriate scale and including the following information:
 - The title boundaries of the land.
 - The position of any existing buildings or proposed buildings on the land and details of the number of bedrooms and the use of the building.
 - The position of any roads or driveways.
 - The location of any water courses.
 - The contours of the land
 - The position of the wastewater treatment unit and wastewater land application area
 - The location and size of drains and vents
 - The location of cut-off and sub-soil drains to divert surface water.
2. Details of the combined fixture unit load on the wastewater treatment unit in litres per day.
3. A written specification of the type of wastewater treatment unit including details of:
 - Trade name
 - Type of system
 - Manufacturers name
 - Design capacity of the system
4. Specifications and design of the wastewater disposal system.
5. An on-site wastewater site and soil evaluation report prepared by a suitably qualified person such as an engineer, geologist, environmental health officer or soil scientist with demonstrated experience in soil classification.

A suitably qualified person must verify that the location of the wastewater treatment unit or wastewater land application area will not affect the stability of the site or undermine the footings of the building.

A Certificate of Others may be issued under the Plumbing Regulations by the person completing the site & soil evaluation report or the designer of the OWMS. Council can rely on this certificate as a statement of compliance with the Tasmanian Plumbing Code but is not bound to accept the certificate.

Subdivision of Land in Unsewered Areas

All subdivisions in unsewered areas require assessment to determine if on-site wastewater disposal systems are suitable for each lot. The assessment will also consider the broader impacts that the wastewater from all of the development

may have on the catchment. Subdivisions will be assessed against the criteria listed in Schedule 12 of the Planning Scheme.

Site and soil suitability reports should be prepared for all subdivisions where the lot size is smaller than 2 hectares and for subdivision of greater than 5 lots.

For details of site and soil assessment refer to Australian and New Zealand Standard AS/NZ 1547 – 2000, On-site domestic wastewater management section 4 and appendix 4.1.B. The performance objective for subdivision assessment is listed in section 2.3.

Site Evaluation Reports for Individual Lots

All applications for on-site wastewater management systems must be accompanied by a site evaluation report. AS/NZ 1547 – 2000 section 4 and appendices 4.1A, C, D, E, and F outline acceptable procedures for site evaluation procedures for individual lots. All evaluations must satisfy the performance objectives listed in section 2.3 of this standard. *TrenchTM 3.0 land suitability and system sizing for on-site wastewater management* (AIEH 1999) is an acceptable method of site evaluation. Information from the site evaluation report must be given to the designer of the on-site wastewater management system to select the appropriate wastewater treatment unit and design the land application system.

If a site and soil evaluation report uses *TrenchTM* the report must also include a site plan detailing the location of the test holes and a description of the soil profile.

Criteria for Site Suitability for On-Site Wastewater Management Systems

General Requirements

All development in areas where on-site wastewater management systems are used must comply with the Sorell Planning Scheme. Specific criteria are included in Schedule 12.

The following criteria are from Schedule 12 of the Sorell Planning Scheme 1993 and include additional diagrams and explanatory notes to assist with interpretation.

SCHEDULE 12

CRITERIA FOR ON-SITE WASTEWATER MANAGEMENT SYSTEMS.

S12.1 INTENT.

This schedule applies to all properties where on-site wastewater management systems are used.

S12.2 DEVELOPMENTS REQUIRING ON-SITE WASTEWATER MANAGEMENT.

S12.1.2 On-site wastewater management systems must be designed with the hierarchy of waste management as a guiding principle for development. This principle is, in declining order of preference:

Waste Avoidance	Waterless toilets, water reduction fixtures
Waste Reuse	Treated wastewater used for toilet flushing, (subject to Tasmanian Plumbing Code approval.)
Waste Recycling	Treated effluent irrigation.
Waste Treatment	Secondary treated effluent used rather than primary
Waste Disposal	Absorption trenches

S12.3 LAND AREA TO BE DESIGNATED FOR ON-SITE WASTEWATER MANAGEMENT.

Suitable area must be provided on each lot specifically designated for disposal/reuse of wastewater from the on-site wastewater management system and does not include land designated for private open space. The area must provide sufficient space for:

A primary and secondary wastewater land application area (absorption trenches, irrigation area or similar)

The wastewater treatment unit (septic tank, aerated wastewater treatment system or similar device) including access for maintenance

The Minimum area required to be designated for on-site wastewater treatment and disposal/reuse is listed below in Table 1.

TABLE 1 TO SCHEDULE 12		
MINIMUM AREA TO BE ALLOCATED ON-SITE FOR WASTEWATER TREATMENT		
Soil Category for top 1.5m of soil profile as listed in AS/NZS 1547-2000	Minimum reserved area per bedroom where effluent is from a septic tank m ²	Minimum reserved area per bedroom where effluent is from an AWTS ¹ or any other onsite wastewater management system capable of treating wastewater to secondary standard (BOD ₅ less than 20mg/L and Suspended solids 30 mg/L) m ²
1 (Sand)	50	50
2 (Sandy loam)	60	55
3 (Loam)	90	70
4 (Clay loam)	120	80
5 (Light clay)	180	100
6 (Clay)	180	130

1. AWTS: aerated wastewater treatment system.

Interpretation for table 1:

- If the soil in the upper 1.5m of the soil profile comprises two or more soil categories, the required minimum reserve area size shall be calculated on the basis of the requirements for the predominant soil category.
- If bedrock or other highly limiting soil attributes, or a Category 5 or 6 soil are encountered within the upper 1m of the soil profile, then the minimum reserve area shall be calculated on the basis of the requirements for the Category 6 soil.
- Wastewater land application area must also comply with required setback distance (see S12.4) to ensure sufficient separation/buffer distances from the land application area and wastewater treatment unit to protect sensitive features on and off the site. Sensitive features include but are not restricted to; buildings, property boundaries, swimming pools, vegetation, cuttings, drainage easements, cultural heritage sites, water bodies and courses, groundwater resources, groundwater bores, and unstable land.
- Reserve area to include area for installation of back-up trenches and a perimeter strip around the trenches
- The location, size and shape of reserve area must be suitable for wastewater application. Areas underneath buildings, or other structures, driveways, or other hard standing areas, are not to be included as part of the minimum reserve area.
- A bedroom includes any habitable room capable of being used as a bedroom such as a 'rumpus room', 'study' or 'office'.

Figure 1 indicates how the required area to be reserved for on-site wastewater management should be designated on the proposed plan.

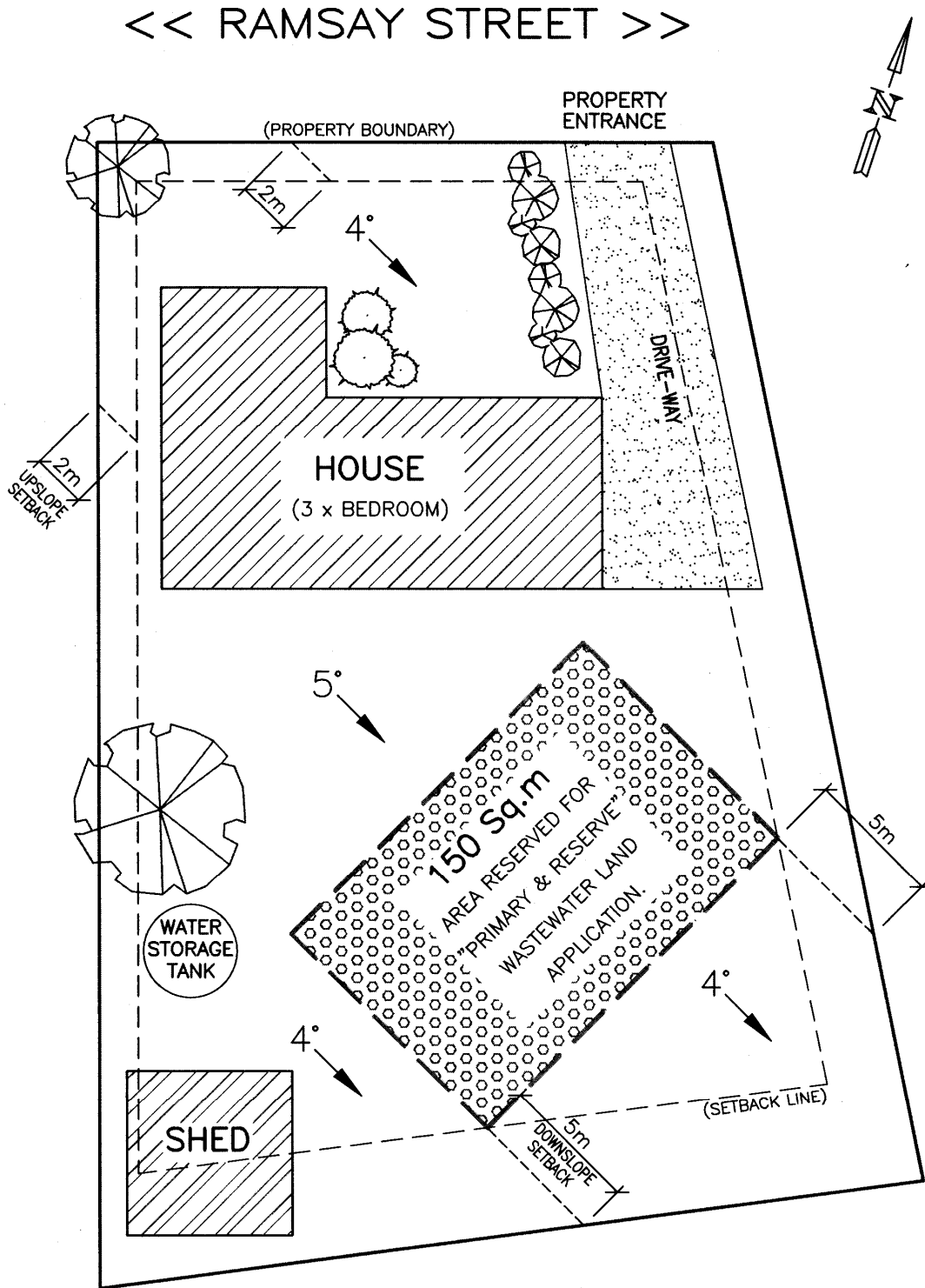


Figure 2 (a) Indicates how absorption trenches should be located within the area reserved for wastewater land application (reserve area for future trenches between trenches).

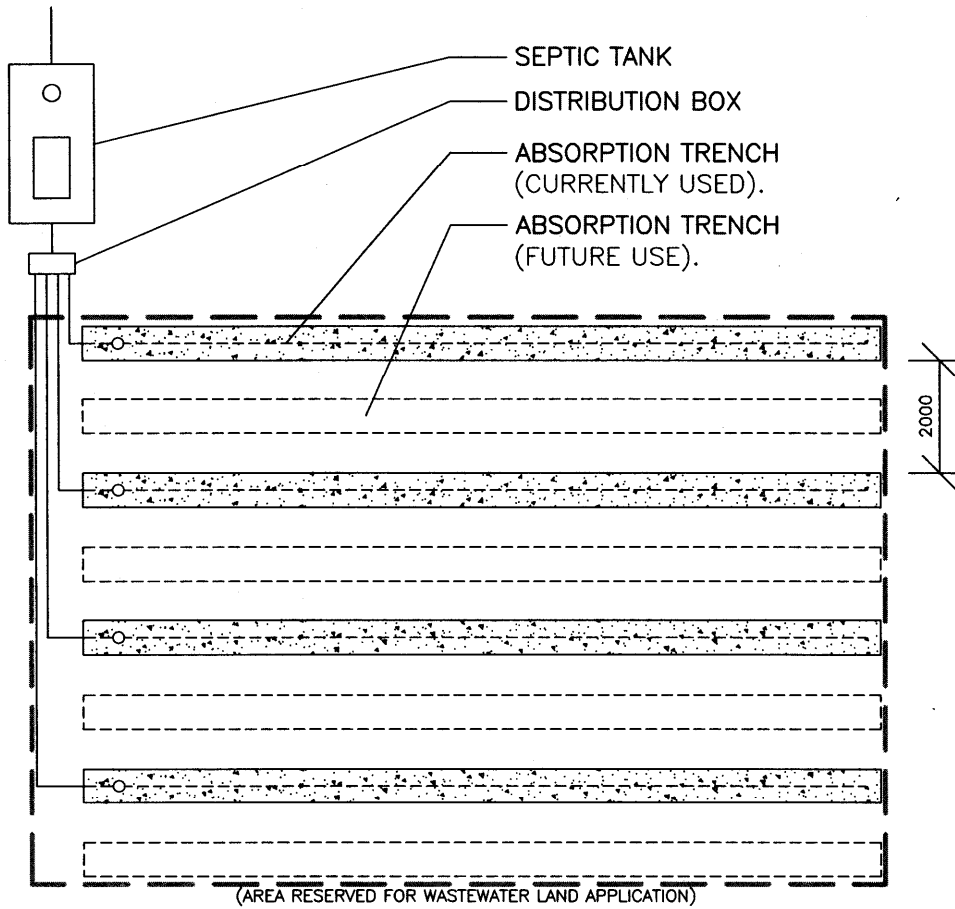
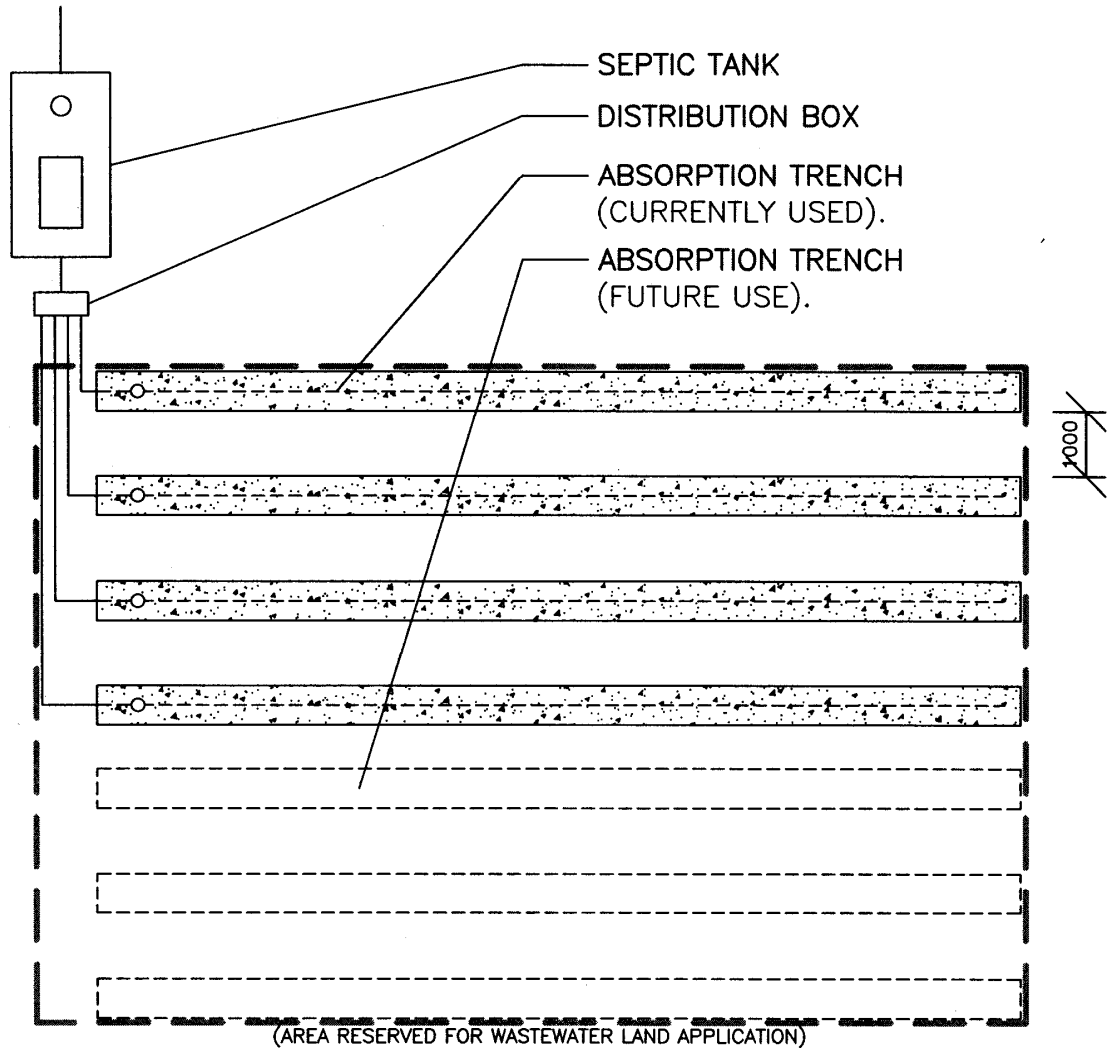


Figure 2 (b) Indicates how absorption trenches should be located within the area reserved for wastewater land application (reserve area for future trenches below trenches).



S12.4 LOCATION OF ON-SITE WASTEWATER MANAGEMENT SYSTEMS AND WASTEWATER LAND APPLICATION AREAS.

When determining the location of a wastewater land application area, the applicant must consider both the risk and consequences of the failure of the on-site wastewater management system and demonstrate that, in the event of such failure, there is a feasible system to rectify the failure of on-site wastewater management system.

S12.5 SETBACK OF WASTEWATER LAND APPLICATION AREAS FROM SENSITIVE FEATURES

Wastewater land application areas must be located on the site so as to ensure that wastewater is adequately treated within the boundaries of the property and so as not to result in environmental harm either on or off-site.

Setbacks are intended to protect sensitive features from contamination by both subsurface flows of inadequately treated wastewater and from overland flows in the event of failure of wastewater land application systems.

Setbacks delineate a Buffer Area between wastewater land application areas and Sensitive Features. Setback distances are included in Table 2 and the setback distance to sensitive features will determine if the development is prohibited, discretionary or permitted as defined in clauses 2.6, 2.5 and 2.4.

Relevant factors for determining appropriate setback distances include:

- a. Slope
- b. Soil permeability
- c. Soil profile
- d. Groundwater characteristics, including temperature.
- e. Nature of area downslope of wastewater land application area. (such as bushland, pasture, hard standing areas, excavations, land use etc)
- f. Protected Environmental Values of water bodies, or current and potential uses of the water (eg, potable, agriculture, aquaculture, industrial, aquatic ecosystems).
- g. Land stability on and off the site
- h. Proximity to sensitive features including swimming pools, water bores, surface and sub-surface drains, water bodies, excavations, land use,

Explanatory notes:

Determining appropriate setback distances is a complex issue as many factors on and off the site influences the distance. Computer modeling can be used to calculate distances; however, this shall not be used as the sole determinant. The *Trench™ 3.0 land suitability and system sizing for on-site wastewater management* program is commonly used in Tasmania and may provide a means of demonstrating an acceptable setback distance (for pathogen removal).

Slope

- Setback distance will generally increase as slope increases and will be influenced by soil permeability, soil structure, and vegetation type within the setback distance. The method of wastewater land application will also

influence setbacks. Surface irrigation systems will require greater setbacks (particularly in low permeability soils) as surface run-off is greater (figure 4). Conversely, in ground systems may require less setback as storage in the trenches ensures that immediate overflow and run-off does not occur.

- Likelihood of failure of the land application must be considered. In low permeability soils failure of trenches is more likely (particularly during wet weather) adequate setback is required to prevent effluent run-off from overflowing trenches (figure 4).

Soil permeability

- Soil permeability affects setback distances for overland flow and subsurface flow differently. Setbacks may be reduced for high permeability soils where overland flow will or may occur (figure 3). High permeability soils may be less efficient at removing nutrients and viruses so larger setbacks may be appropriate depending on other factors such as the water table gradient and proximity to downslope sensitive features.

Soil profile

- The soil structure, chemical composition, texture and depth may influence setback distances. Generally shallow soils overlaying low permeability subsoils (particularly on sloping lots with downslope cuttings) will require larger setback distances. (figure 3 & 5)

Groundwater characteristics, including temperature.

- The temperature of groundwater can influence the die-off rate of viruses significantly. Lower temperatures will result in larger setback distances. Groundwater, use, gradient and direction will all influence setbacks.

Nature of area downslope of wastewater land application area. (such as bushland, pasture, hard standing areas, excavations, land use etc)

- Vegetation can be an effective at removing contaminant in wastewater and preventing run-off from failing land application areas. Downslope cuttings provide an area where wastewater may seep out of and hard standing areas allow for surface flow of effluent to run off-site quickly.

Protected Environmental Values of water bodies, or current and potential uses of the water (eg, potable, agriculture, aquaculture, industrial, aquatic ecosystems).

- Large setback distances may be required if sensitive downslope features exist near the site.

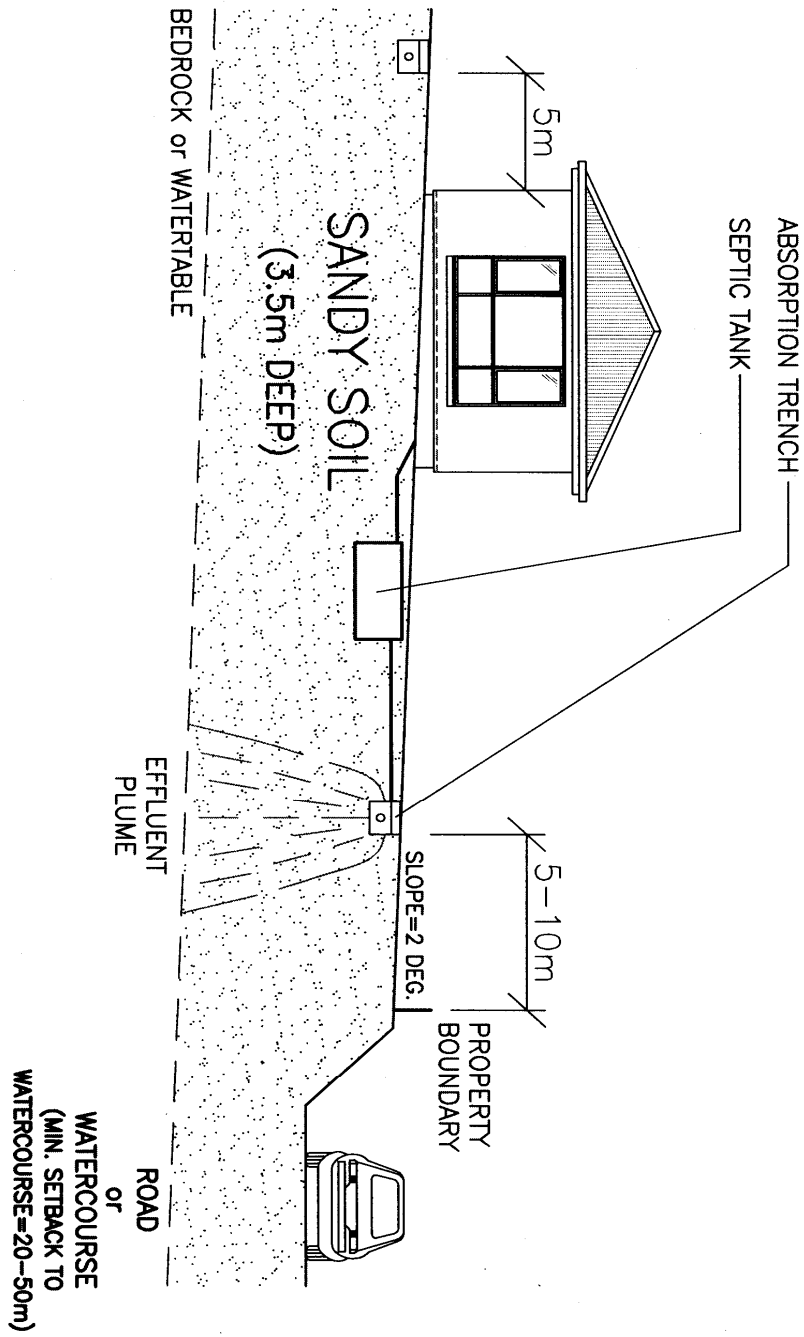
Land stability on and off the site

- Wastewater land application can affect land stability on some sites. Large setback distance may be required on these sites.

Proximity to sensitive features including swimming pools, water bores, surface and sub-surface drains, water bodies, excavations, land use,

- Large setback distances may be required if sensitive downslope features exist near the site.

Figure 3 example of acceptable setback distance



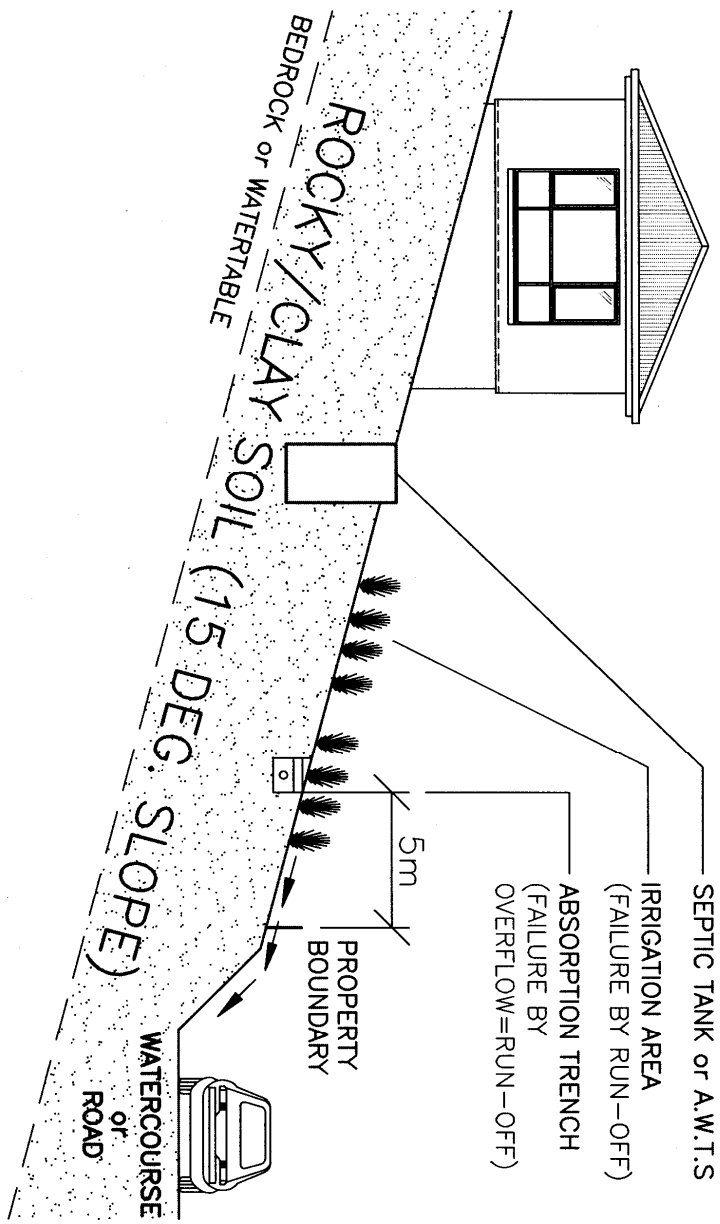


Figure 4 example of unacceptable setback distance, surface run-off / overflow

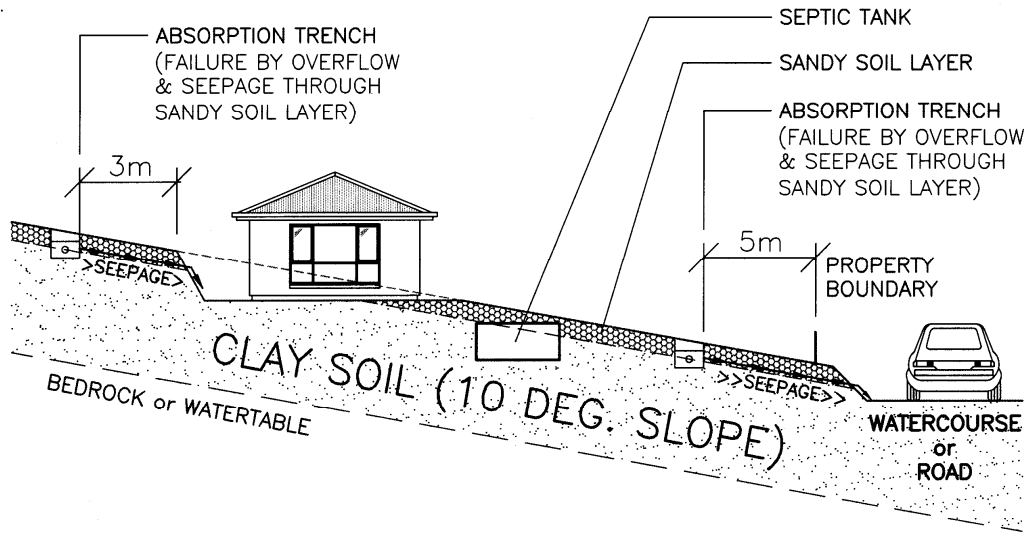


Figure 5 Unacceptable Wastewater Land Application With Sub-Surface Seepage

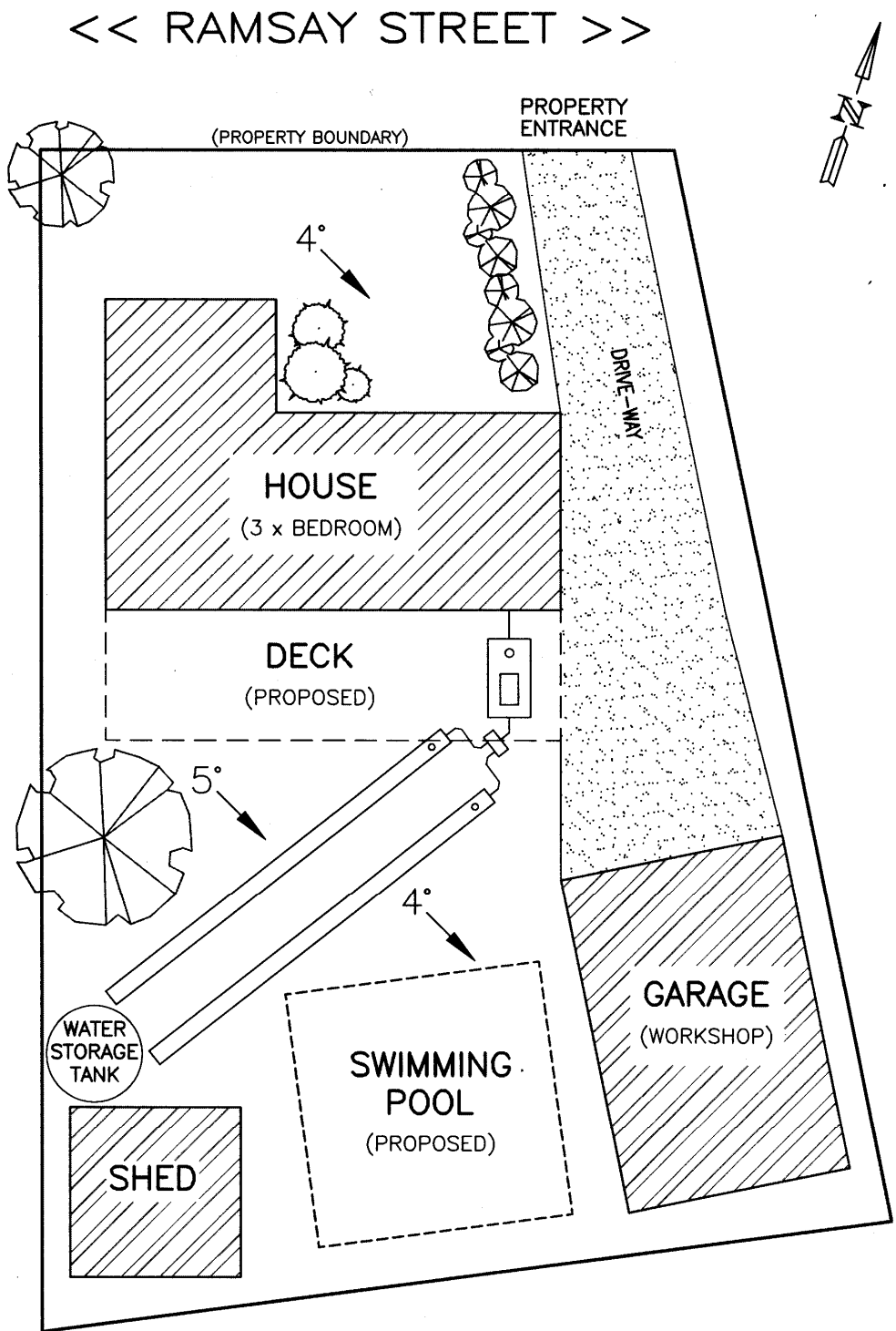


Figure 6 example of over-development of a site no room for future absorption trenches

TABLE 2 TO SCHEDULE 12				
SETBACKS				
Sensitive feature	Setback distance for the wastewater land application area			
	Prohibited	Discretionary	Permitted	Comments
Surface water including a watercourse carrying water for part or all of the year for most years, lake, or marine water	20 metres	20 -50m	>50m	Measurement shall be taken from high water mark or the top of an embankment or cliff if directly adjacent to a waterway.
Property boundaries	<2 metres (upslope & sideslope) 5 metres (downslope)	2 – 3m 5-50m	>3m >50m	If the natural ground level measured at any boundary is at a lower elevation than the natural ground level where the wastewater land application is located, the boundary shall be deemed to be downslope. The downslope boundary is intended to represent the direction of wastewater flow across or through the soil after being discharged in the land application area.
Buildings	<1m	1 – 5m	>5m	The distance must be determined by the Engineer certifying the footing design

S12.6 WASTEWATER LAND APPLICATION AREA EXCLUSION ZONE

Wastewater land application areas must not be located in any area designated as a 'wastewater land application area exclusion zone'. This clause does not apply to existing wastewater land applications areas that have previously been issued with a special plumbing permit or septic tank approval.

S12.6 APARTMENTS, ANCILLARY APARTMENTS, BUILDING EXTENSIONS AND OUTBUILDINGS

S12.6.1 Apartments

(already required)

- In the Residential Unserviced Zone the maximum density shall not exceed 1 bedroom per 500m² of land area per apartment.

S12.6.2 Building Extensions, Ancillary Apartments & Outbuilding

- sheds, garages, decks, driveways or any additional structures must not be located on, over or in a location which may potentially affect the operation of the existing on-site wastewater management system
- If bedroom(s) are being added to a house or there is any other addition or activity which results in or may result in the generation of additional wastewater loadings, the existing on-site wastewater management system must be assessed and upgraded if the design capacity of the on-site wastewater management system will be exceeded.
- Development for building extensions, ancillary apartments and outbuildings are prohibited if the development reduces the available land for wastewater land application to less than the minimum reserve area listed in Table 1 unless:
 - The building is replacing an existing building of the same size and use; or
 - The building is located over an existing established driveway or parking area; or.
 - Council is satisfied that the building will not impede the current or future ability to sustainably dispose of wastewater on the lot, including the provision of secondary land application areas.

Explanatory notes:

Redevelopments of dwellings and outbuildings can have a significant direct and in direct affect on the sustainability of the on-site wastewater management system. In the case of an extension to a house where more bedrooms are added,

more people can occupy the building and therefore more wastewater would be generated. If the extra wastewater overloads the on-site wastewater management system failure will occur.

Some extensions do not increase the occupancy of the building but they can decrease the land area available for wastewater land application. If there is insufficient area left remaining on the site for a future wastewater land application area the application may be refused.

Figure 6 is an example of an over developed site.

S12.7 SPECIFIC CRITERIA FOR DEVELOPMENT

Table 3 defines the site characteristics and necessary measures that must be satisfied for on-site wastewater disposal. Where the identified necessary measures are not satisfied, development is prohibited in accordance with clause 3.2.

TABLE 3 TO SCHEDULE 12 SPECIFIC CRITERIA FOR DEVELOPMENT IN UNSEWERED AREAS		
Feature	Necessary measures	Comments
Soils	The applicant must demonstrate that the soils are suitable for treatment of wastewater within the boundaries of the title or proposed lot. If only a limited area of a proposed lot is suitable for wastewater treatment and disposal, this area must be designated on the title.	A report from a suitably qualified person prepared in accordance with AS/NZS 1547-2000
Groundwater	<p>The applicant must demonstrate that groundwater where used for potable or domestic purposes (or could be used for those purposes) will not be polluted.</p> <p>A Sufficient depth of unsaturated soil must exist for wastewater treatment. A minimum of 1 metre of unsaturated soil below the base of the wastewater land application area is required. Seasonal variations in the water table must be considered.</p>	A report from a groundwater geologist will be required
Land stability	Where mass movement has or may occur the applicant must demonstrate that on-site disposal of wastewater will not increase the risk of mass movement	Report from a geo-technical engineer is required.
Surface waters	The applicant must demonstrate that environmental values of that water body will not be jeopardized.	The highest levels of protection is afforded to water used for drinking, swimming, marine farming or sensitive aquatic eco-systems
Soils and vegetation	The applicant must demonstrate that wastewater disposal is not likely to cause serious damage to soils or vegetation.	<p>Special measures to protect soils if they are prone to dispersion</p> <p>Wastewater may need to be treated to improve quality</p>
Drainage	The applicant must demonstrate that the site is not subject to flooding or is capable of being drained.	Special drainage measures may be required to modify site conditions or restrict development to particular parts of the site