

Onsite Wastewater Management Code

Issues for Councils and Environmental Health Officers



Presentation Outline

1. Authority for approval
2. Planning
3. Setback distances
4. System Design and Evaluation
5. Installation
6. Operation



1. Local Council's authority for approval

- Approve installation of all types of onsite wastewater systems
 - ST, aerated WWTP, reedbeds, greywater systems, composting toilets
 - under the capacity of 20 equivalent persons
 - DH approved products
- Choose to approve onsite wastewater systems up to 50 EP
 - provided the number of connected buildings does not exceed five
 - in consultation with the Department of Health



DH authority for approval

- Systems above 20 EP (or 50 EP) capacity, which are not approved by Local Government
- DH will continue to issue product approvals for manufactured systems
- DH will issue product approvals for non-manufactured (ie build in-situ) systems such as reedbeds and sandfilters



2. Planning

- Communication between Planning officers and Environmental Health officers
 - good understanding of approval requirements, both for wastewater systems and development issues,
 - communicate closely
- Smaller block sizes
- Larger houses
- Poor soils / reserve disposal area



Planning Requirements contd

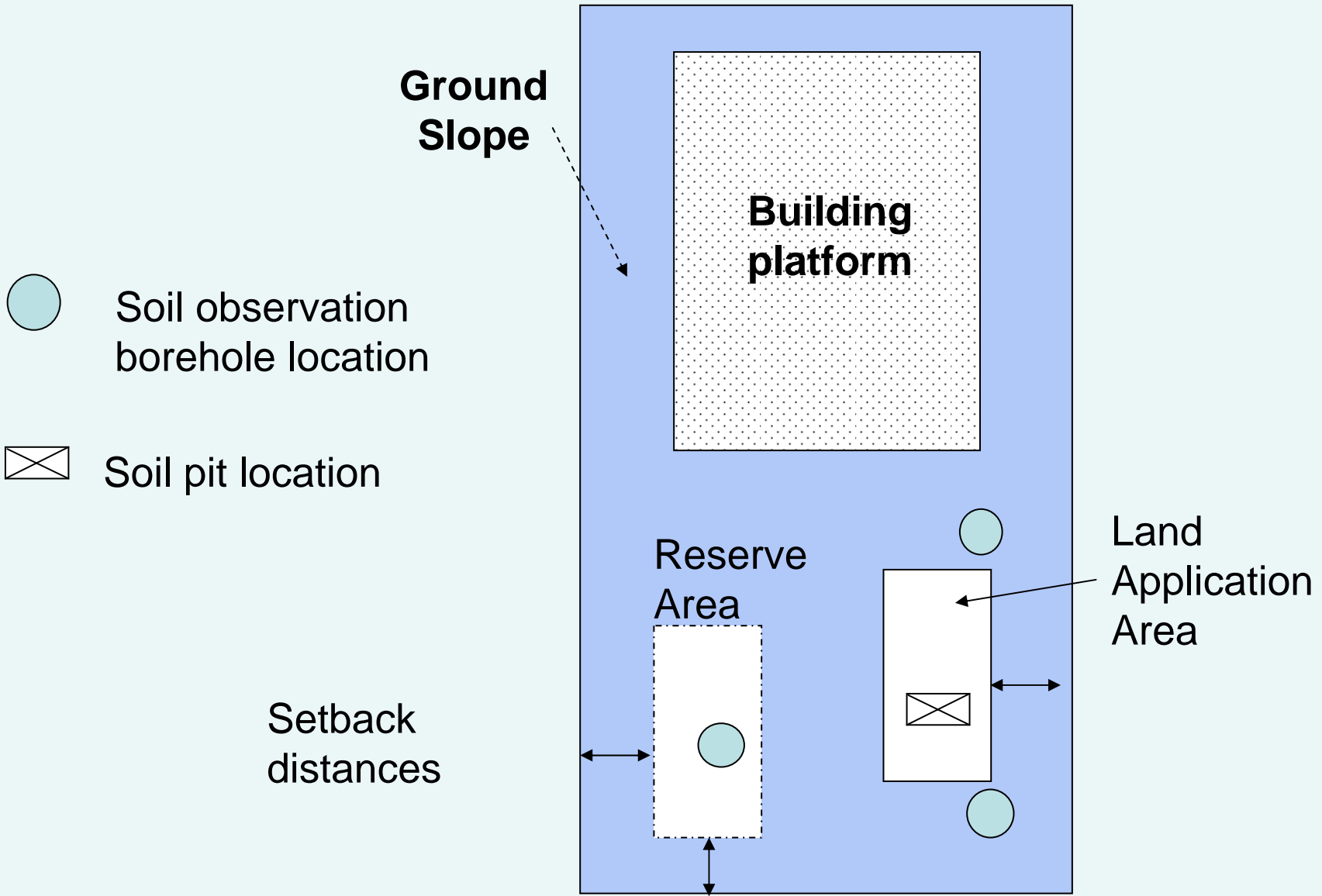
- Onsite Wastewater Systems versus Reticulated Systems
 - Developers must assess the option of a reticulated system and compare with on-site servicing
 - Choose the best practicable option which best meets the performance requirements
 - Public health, environmental, legal and economic factors
 - New subdivisions



Reserve Area

- To prevent saturation and overflows at the disposal site over time
- Allow recovery time for an original disposal site
- Reserve disposal / irrigation site is to be:
 - equal in area to the initial disposal site
 - subject to the same setback requirements
 - in addition to Council's recreation/open space requirements
 - no development allowed on the site
 - only for new developments





Reduction in Reserve Area

- Developer to:
 - nominate reduction in area
 - demonstrate sustainability for the life of the system
 - to the satisfaction of Council



3. Setback Distances

- Vertical setback to Rock and Water Table
 - Greater than 0.6m
- Setback to rock
 - Soil depth between the base of the disposal/irrigation area and bedrock
 - Bedrock for the purpose of this Code is unbroken solid rock and includes shallow cap rock formations found in many parts of South Australia.
- Setback to watertable
 - Unsaturated depth from base to predicted average wet-season water table



Horizontal Setbacks - Water Protection Areas

Effluent Quality for subsurface or above surface application	Horizontal Setback
Primary effluent or septic tank effluent	Not permitted
Secondary effluent	50m
Nutrient reduced effluent (10mg/L Nitrate as N, 5mg/L Phosphorous as P)	50m



River Murray Water Protection Area

Effluent Quality for subsurface or above surface application	Horizontal Setback
Primary effluent or septic tank effluent	Not permitted
Secondary effluent (including Nutrient reduced effluent (10mg/L Nitrate as N, 5mg/L Phosphorous as P))	100m from pool level of the River Murray, or above the 1956 flood level, whichever is greater



Coastal Areas

Effluent Quality	Horizontal Setback
Primary effluent or septic tank effluent – subsurface only	<ul style="list-style-type: none">• 70m from the mean high water spring; or• > 70m if required by the Coast Protection Board Policies, or the relevant Council’s Development Plan
Secondary or further effluent	<ul style="list-style-type: none">• 50m from the mean high water spring, or• > 50m if required by the Coast Protection Board Policies, or the relevant Council’s Development Plan



All Other Areas

Effluent Quality for subsurface or above surface application	Horizontal Setback
Primary effluent (or septic tank effluent) in sandy soils – subsurface only	70m
Primary effluent (or septic tank effluent) in soil types other than sandy soils – subsurface only	50m
Secondary effluent in sandy soils	50m
Secondary effluent in soil types other than sandy soils	30m
Nutrient reduced effluent in sandy soils	50m
Nutrient reduced effluent in soil types other than sandy soils	20m



Setbacks from Wells or Dams

Effluent Quality for subsurface or above surface application	Horizontal Setback
Primary effluent or septic tank effluent in sandy soils	70m
All other types of soils	50m



4. System Design & Evaluation

- Site and Soil Evaluation / Design Report
 - Site specific
 - Select system to match soils
- Design Loading Rates
 - Soil DLR (mm/day)
 - Selected from tables in AS/NZS 1547 for specific soil types and systems

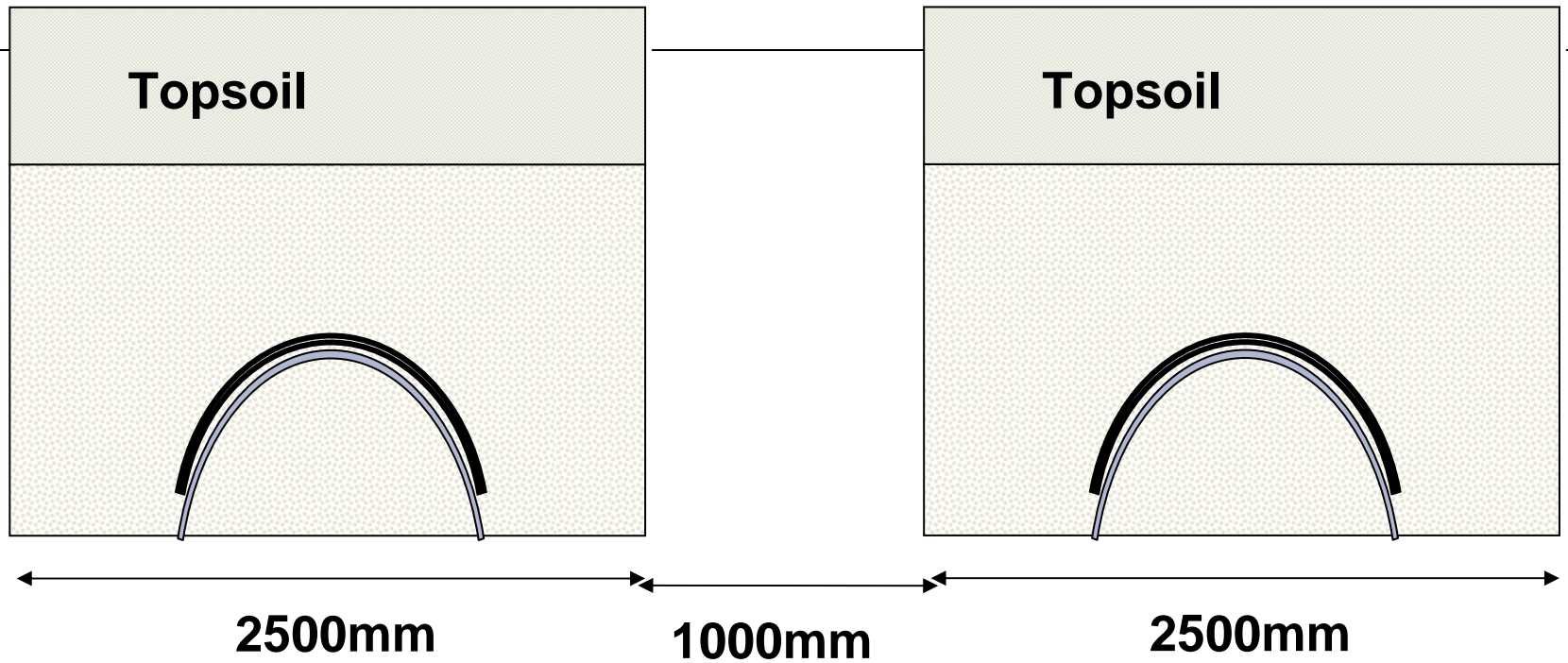


Soakage Trench Design

- Current method vs AS 1547:2000 method
 - SAHC Code method – base area + sidewall area
 - AS 1547 - base area only
- Use DLR
- Differences between
 - Trench widths
 - Spacing between trenches



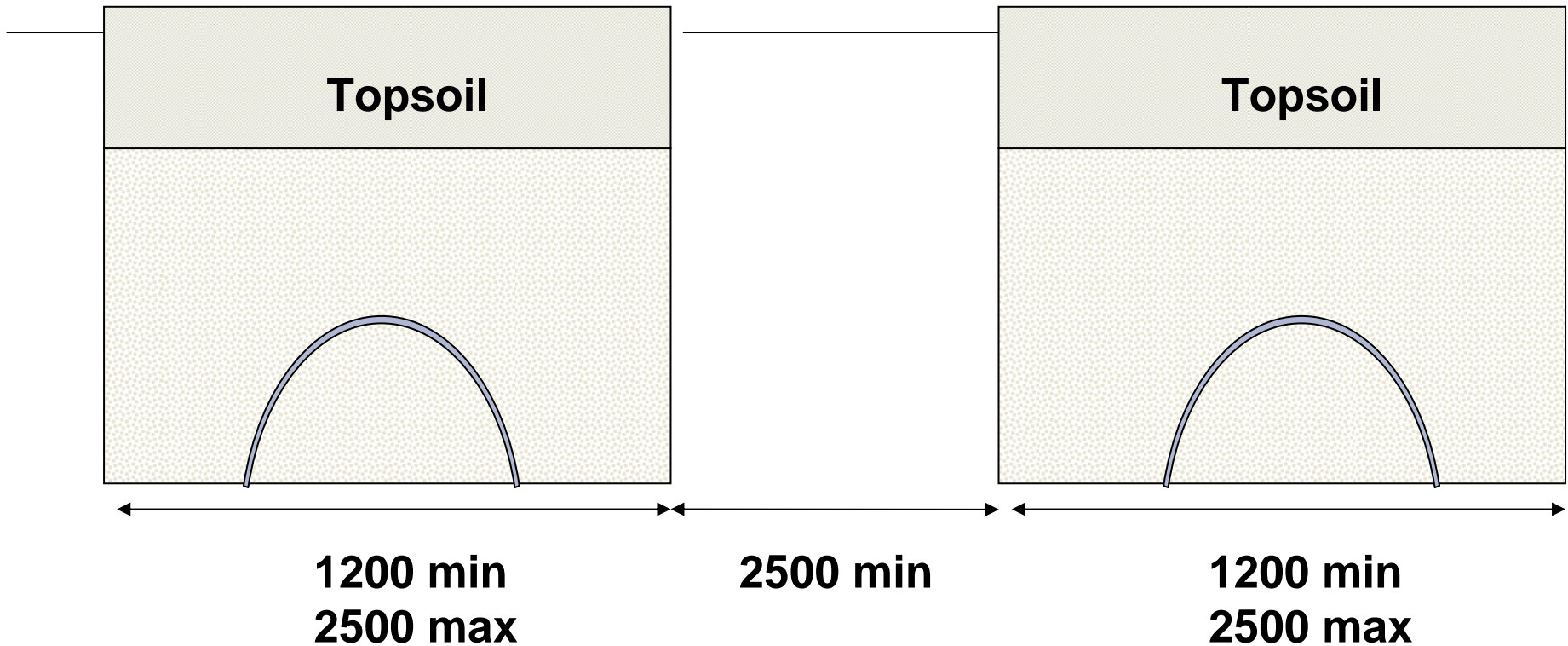
AS 1547 Method



Reproduced from AS 1547:2000



SAHC Standard method



Holding Tanks

- For new land divisions
 - No holding tanks will be permitted
- For existing allotments
 - Consider on-site and communal treatment options
 - Not permitted for existing allotments in Water Protection areas (unless approved by DH & EPA)



5. Installation

- All onsite wastewater systems must be installed by a licensed plumber
 - Underfloor plumbing, connection of wastewater system and land application system including irrigation system
- Irrigation specialist for irrigation system
- Installed prior to the system being used



Certificate of Compliance

- Self Certification
 - Certificate of Compliance must be provided by the plumber(s) for installation
 - Modified SA Water CoC form
 - Independent certification for the system
 - plumbing, electrical, mechanical and construction / installation (including irrigation system)





Installation Details on Property

- Durable notice
- Permanently located on the property
 - Type of system installed
 - Date of system installation
 - Servicing / desludging frequency
 - Prohibited discharges
 - Council details for further information



6. Operation

- Annual Performance Testing
 - 10% or minimum of 5 of all installed systems will be randomly selected by DH
 - Compliance with effluent quality requirements
 - Only for systems producing secondary quality effluent or greater



Annual Performance Testing

- Responsibilities for arranging performance testing:
 - First year of installation:
 - Manufacturer for standard systems
 - Designer for non-standard systems
 - Second and subsequent years of installation:
 - Council, who may determine measures to recoup associated costs.



Example

	Number Installed in a Council area during year	Total Number installed	# Randomly Selected	Manufacturer s Expense	Council
Year 1	20	20	5 selected (minimum 5)	5	0
Year 2	80	100	10% = 10	8	2
Year 3	80	180	10% for first 100 + 1% after = 11	8	3
Year 4	20	200	10% for first 100 + 1% after = 11	2	10
Year 5	60	260	10+ 1.6 (10% of 160) = 12	6	6



Council Audit Programs

- Councils are encouraged to carry out an inspection and monitoring audit program
 - Maintenance, repair or replacement of on-site wastewater systems
 - Audit checklists - Friday's presentation



Questions

