



Inspection and Troubleshooting of Onsite Wastewater Management Systems

Why Inspect? Background and Rationale

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Introduction

- No amount of desktop assessment can substitute for an inspection of an existing onsite system
- Wide variation in designs and configurations makes standardised assessment a challenge
- Inspectors need a sound knowledge of past and present technologies and working knowledge of basic physical and biochemical processes
- Some of this can only be gained through field experience. Don't be afraid to open the lid!

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A look inside a septic tank!



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Why Inspect? Background and Rationale


- Why are the inspections being done?
- What are they meant to achieve?
- What to inspect and to what detail?
- What is compliance or non-compliance?
- Existing approvals?
- Who is inspecting – regulator or designer?

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Why Inspect?

This impacts the preparation and equipment required:

- New / modified installation
- Operational inspection / audit
- Complaint investigation / compliance
- Catchment audit
- Design upgrade (data gathering)

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Why Inspect?

New / modified installation

- Compliance with approval conditions including design plan

Operational inspection or complaint investigation


- Compliance with installation and operation approval conditions
- Compliance with environmental and public health protection requirements

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Why Inspect?

Design upgrades (data gathering)

- Component details – model, condition and sizing
- Compliance with current design guidelines
- Confirming design flow sources and loading

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What to Inspect For?


- Is the system compliant?
- What defines effective treatment?
- What defines effective land application?
- Environmental and public health protection?
- Does effluent reach the surface?
- Does the system comply with buffer requirements?

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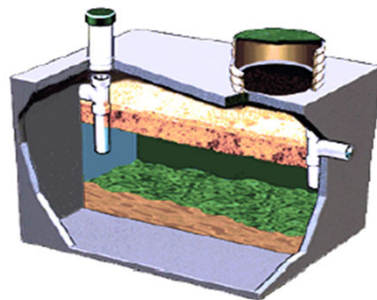
System Condition

- Structural integrity of all components?



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Sludge and Scum Accumulation



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Effective Treatment Processes



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Land Application System

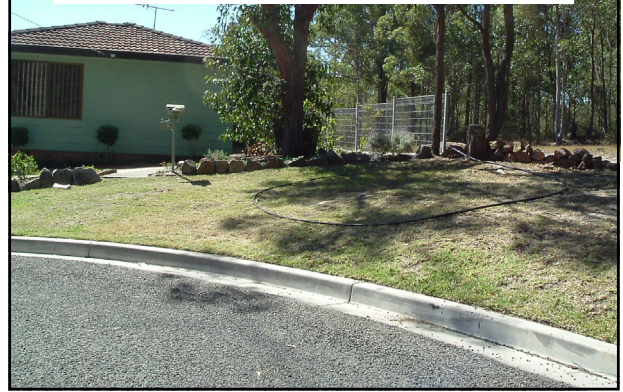
- Effluent discharge (surface or groundwater)
- Suitable land application method?
- Suitable sizing?
- Suitable location?
- Point of application in relation to water table?
- Buffers and attenuation
 - Nutrients
 - Pathogens

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Land Application System



Land Application System



Conclusions

- Don't be afraid to learn from plumbers, installers, designers and regulators with on-site experience
- Look at as many different systems as you can
- Be systematic and recognise the links between various processes
- Always keep an open mind about the possible cause of a problem

