

Assessing A20 permit applications for onsite wastewater management systems

Training for Council Officers

How to Use the New EPA Guidance

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What the new EPA guidance is not

- Guideline for Onsite Wastewater Management (GOWM) (2024)
- Guideline for Onsite Wastewater Effluent Dispersal and Recycling systems (EDRS Guideline) (2024)
- Both Guidelines specifically state that they are for general information only, and that they do not “constitute legal or other professional advice and should not be relied on as a statement of the law.”
“You should obtain professional advice or contact EPA if you have any specific concern.”

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What the new EPA guidance is

- The new EPA guidelines are reference documents designed to provide information to help duty holders understand their obligations under the the Environment Protection Act 2017, Environment Protection Regulations 2021 and subordinate instruments that make up Victoria’s environment protection regulatory framework in relation to onsite wastewater management systems with a design or actual flow rate of sewage not exceeding 5,000 litres on any day

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What the new EPA guidance is

- The GOWM and EDRS Guideline replace EPA Publication 891.4: Code of Practice: Onsite Wastewater Management
- The Code of Practice was a statutory document. The new guidelines are not statutory
- These guidelines provide advice on how to meet the obligations of the regulatory framework, including the General Environmental Duty (GED) to minimise risks to human health and the environment

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What the new EPA guidance is

- The GOWM outlines a risk-based approach to managing OWMS and provides links to other guidelines and information about onsite wastewater management
- The EDRS Guideline is a technical guideline of better practice information to support and supplement the GOWM
- Neither guideline has OWMS operators or owners as their target audience

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Other supporting guidance

- The Victorian Government have also produced other supporting guidance documents, some of which are due for review currently:
 - Regulating onsite wastewater management systems: Local government toolkit. Publication 1974 (2022)
 - Victorian Land Capability Assessment Framework (Municipal Association of Victoria (MAV), Department of Environment and Primary Industries (DEPI) and Environment Protection Authority Victoria (EPA) (2014)

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How to use the guidance

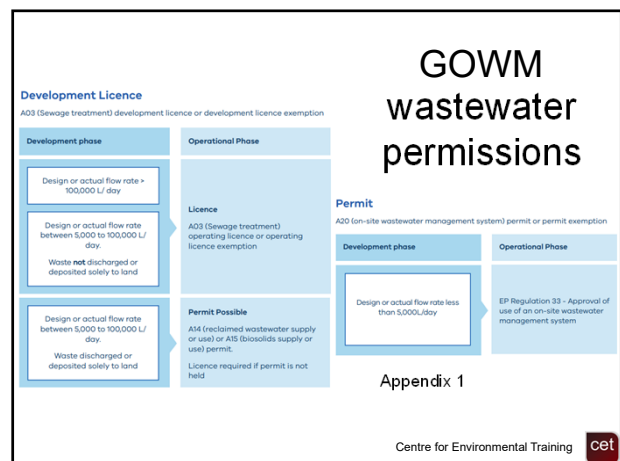
- Each council must follow the prescribed directions in the legislation
- Each council selects how they implement the prescribed directions for their area, based on their own circumstances and, if necessary, legal advice
- Each council can choose whether to require applications be prepared in accordance with the new guidance
- The EPA have provided tools to assist councils in the completion of their OWMS regulatory roles

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GOWM contents

- The GOWM provides explanatory diagrams of: the regulatory framework (Figure 2-1); installation approval process (Figure 2-2); different OWMS scenarios and likely approvals, and a general overview of permits or licences required for wastewater
- Chapter 2 – Overview of the regulatory framework
- Section 4.2 – Household wastewater generation calculation methods and flow rates
- Commercial and community premises flow rates and organic load considerations

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GOWM contents

- Section 4.3 – Wastewater treatment quality standards and suitable uses
- Greywater treatment quality standards and suitable uses
- Section 4.4 – Overview of EDS types and suitability for various application scenarios
- Tables 4-8 and 4-9 design loading and irrigation rate (DLR / DIR) tables
- Section 4.5 – Setback distances and risk factors tables. Suggested assessment points for reduced setbacks

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GOWM contents

- Section 4.6 – Suggested wastewater management solutions for various site constraints
- Chapter 5 – Lists installation requirements, including appropriate contractors, commissioning, documentation, council inspection and building surveyor approval
- Chapter 6 – Overview of operation and maintenance measures

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EDRS Guideline contents

- Provides technical and practical information on EDRS design and installation, without being a design manual
- Substantial cross-referencing to GOWM and other standards and guidelines
- Chapter 2 – Provides performance objectives to guide preparation and assessment of an OWMS design
- Description of various effluent dispersal systems (EDS) (wastewater effluent) and effluent recycling systems (ERS) (greywater effluent)

EDRS Guideline contents

- Diagrams of EDS/ ERS biophysical processes and conceptual water balances for various EDS
- ERS recommended controls (annual testing for indoor recycling, outdoor recycling for domestic and non-domestic developments)
- Guides for effluent quality and soil characteristics in relation to system selection

EDRS Guideline contents

- The EDRS Guideline has been prepared along a risk assessment and management framework and steps through the selection to operation processes
- EDS selection is completed following the site and soil assessment and in parallel with EDS design
- Tables and explanatory notes have been included to provide guidance on the impact of site and soil characteristics for each EDS type
- These can be used to design an OWMS but also assess an OWMS application

EDRS selection process flowchart

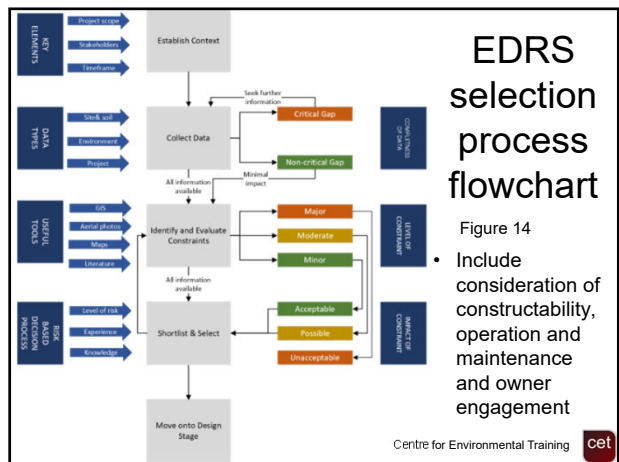


Figure 14

- Include consideration of constructability, operation and maintenance and owner engagement

EDRS design process flowchart

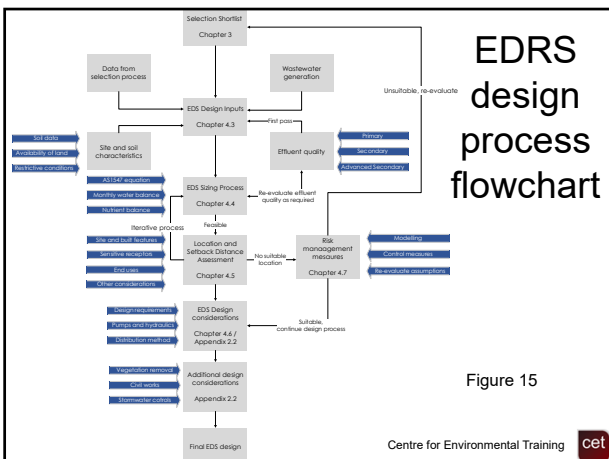


Figure 15

EDRS – wastewater generation

- Wastewater generation – notes on occupancy and flow rates for domestic and non-domestic premises, with references to the GOWM
- Inclusion of the equation to calculate the daily wastewater flow generation rate for a residential dwelling, based on number of bedrooms
- Consideration of surge flows on system design

EDS sizing and setbacks

- Section 4.4 – EDS sizing methods explanation and discussion:
 - Simple hydraulic equation
 - Water balance calculations
 - Nutrient balance calculations
- Explanation and discussion of water and nutrient balance inputs and their impact on calculations
- Section 4.5 – Setback distances – discussion of the GOWM Table 4-10 and alternatives based on constraints and design to mitigate the risk

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EDRS technical details for design

- Table 24 provides a constraint scale to aid the siting and location of EDS in relation to various site or system elements
- Appendix 1 – EDRS construction standards and drawings
- Appendix 2 – greater detail on design (site and soil characteristics, mitigation measures, details on specific EDS, pumps, civil works, retaining walls, vegetation and phosphorus-sorption capacity)
- Some reference is made back to GOWM, but generally the EDRS Guideline contains most of the technical information

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EDRS risk management

- Sections 3.3 and 4.7 discuss risk management and risk reduction measures that can be used in an OWMS design to address identified constraints
- Section 4.7.1.5 discusses impact assessment and modelling, including daily water and nutrient balance modelling, viral die-off modelling and water quality modelling to evaluate the risk of design concessions
- Section 4.8 discusses the detail required in the various plans for a design, including construction specifications

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EDRS assessment and checklists

- Chapter 5 provides guidance on assessment of EDRS, including assessing the proposed system's suitability and functionality, the environmental sensitivity of the site and recognition of sensitive receiving environments (Table 32)
- Appendix 3 provides suggested checklists for OWMS application assessment, plus assessment of operational OWMS to Part 5.7 of the EP Regulations

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EDRS construction

- Chapter 6 discusses construction of an OWMS, especially an EDS, including common pre-construction, construction, testing and post-construction activities
- Table 44 summarises the various inspection stages and their purpose and detail to be inspected, including testing
- The EDRS notes that mandatory inspections and commissioning requirements are at the discretion of the council and should be documented in the permit approval

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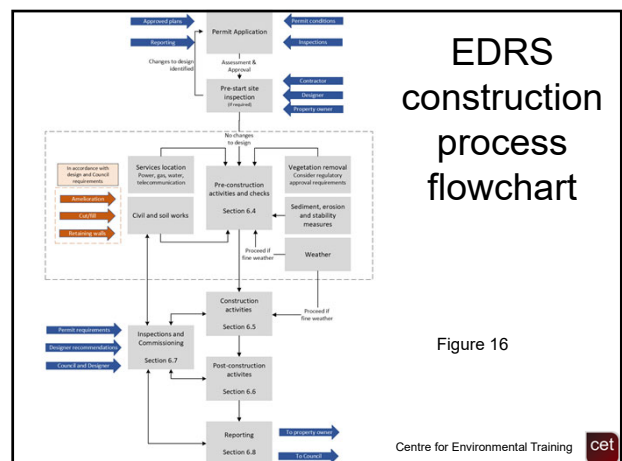


Figure 16

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EDRS operation and maintenance

- Chapter 7 discusses operation and maintenance of onsite wastewater treatment plants and EDRS
- Tables 47 and 48 list operation and maintenance activities, possible actions, applicable systems and identifies the 'responsible persons'
- It is noted that operation and maintenance of the treatment plant does impact the EDRS, and that the impact is often delayed and may not be readily apparent

EDRS troubleshooting

- Table 49 provides an extensive list of troubleshooting guidance, including the fault / malfunction, possible causes and possible corrective actions
- Table 51 provides a list of mandatory operation and maintenance requirements from Part 5.7 of the EP Regulations
- The table lists the requirements against each regulation so that they are clear and also provides examples