


# Victorian Onsite Wastewater Framework & Mornington Peninsula Case Study



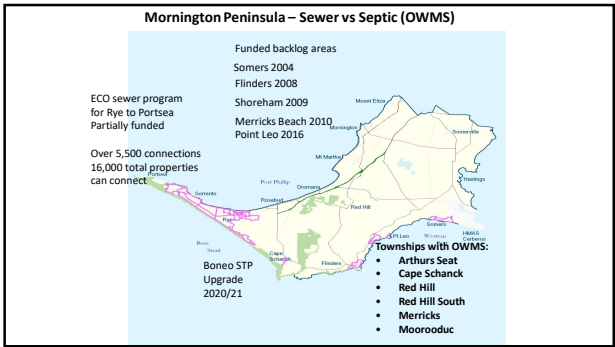
Peter O'Brien  
Environmental Health Team  
Mornington Peninsula Shire



## Onsite Wastewater – Mornington Peninsula Shire

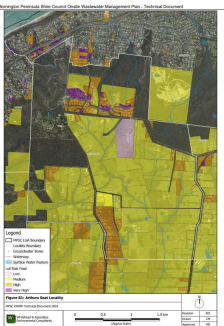
Monitoring of standards to ensure the correct design and operation of onsite wastewater management systems (OWMS).

- Council responsible for sites <5000 Litres per day wastewater flow
- Environment Protection Act 2017
- EPA guidance – Guidelines for Onsite Wastewater Management (GOWM) and Effluent Disposal and Reuse Guidelines (EDRS)
- 200 Installation permits per year
- 25,000 existing systems
- Permitting, complaints, proactive inspections, investigate complex cases

## Risk Based Approach – MPS Onsite Wastewater Management Plan

- Informs LCA requirements and design specifications
- Identify areas that require further investigation or alternative sewerage disposal methods
- Priority areas for monitoring and compliance program
- Department of Energy, Environmental and Climate Action (DEECA) model for Very High, High, Medium and Low Risk sites
- Online map for the public [Here](#)



## SEPTIC (OWMS) PERMITS

- For all new septic systems >5000L/day wastewater, residential and commercial
- Also needed for system alterations – extra bedrooms or bathrooms, bungalows/DPU's, second dwellings
- OWMS Permit is the Report and Consent for a Building Permit and Certificate of Occupancy

**MPSC Wastewater Policy:**

1. Support sewer programs and encourage owners to connect
2. Ensure appropriate long-term systems for sub-divisions
3. Approve suitable systems for existing lots, maximise effluent disposal areas


## On Site Disposal

Disposal is through **transpiration by plants AND absorption into the soil**. Both are equally important

90 mm Slotted PVC  
Agricultural Trench:

1. **Absorption trenches** -
  - Historically the most common form of effluent disposal
  - Permitted after primary or secondary treatment
  - Life span of 20-25 years
2. **Sub-surface irrigation**
  - Permitted only after secondary treatment
3. **Other options need an LCA**

**MPSC has updated installation specifications from recent EPA guidance – available [Here](#)**




### Sub-Surface Irrigation

- 200-400 square metres of irrigation area for 3 to 5 bedroom house
- Effluent re-used on garden beds or lawn areas
- Permitted in all soil types




### Selecting the Correct OMWS

- Daily wastewater flow and organic loading
- Setback distances
- Soil type, absorption and transpiration rates
- Slope (>15% is problematic)
- Flooding, site drainage
- Vegetation
- Site constraints – buildings, pools, driveways
- Available area for disposal (min 300 sqm)


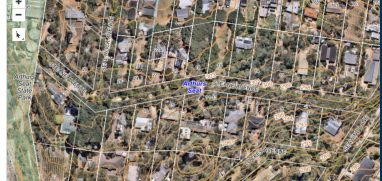


**Sewage Treatment Plant – with flooding issues**



### Small Site OWMS Issues

- Flow rate and over-development
- Peak or commercial usage
- Land value
- Lot size (600-900 sq m)
- Soil type, DIR/DLR rates
- Slope (up to 30%)
- Flooding, stormwater
- No reserve area
- Owner education

### Small Site Solutions

- Sub-surface irrigation with soil modification and reduced spacings
- Absorption Trenches (dosed vs gravity) and trench beds
- Mounds
- Wick Trenches
- Emerging technologies



Wick Trench



Wisconsin Mound

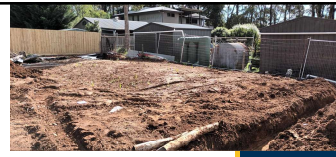


S/S Irrigation 800mm spacings




### Emerging Technologies


- Pressure dosed trench beds
- Absorb Filter and Trench (treatment and disposal)
- ETA Beds for evapotranspiration and absorption
- Vegetated recirculating beds (e.g. Rhizopods)
- Composting toilets with advanced greywater



Absorbs after installation




Rhizopod with planting



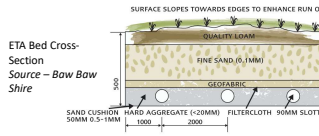
Absorbs with dosing

### Emerging Technologies (cont)

- Can be proprietary systems – contact the manufacturer
- Sized from an LCA and water balance
- Some require a nutrient balance
- Closed systems with salt accumulation and regular pumping
- Reserve areas needed
- Check owner obligations/maintenance



Pressure Dosed Trench Bed



ETA Bed Cross-Section  
Source – *Baw Baw Shire*

### Further Resources

**Mornington Peninsula Shire:**

- [Septic Tank Maintenance and Care - Mornington Peninsula Shire \(moropen.vic.gov.au\)](#)
- [Wastewater Management Plan - Mornington Peninsula Shire \(moropen.vic.gov.au\)](#)
- [Septic Tank Permits - Mornington Peninsula Shire \(moropen.vic.gov.au\)](#)

**Water Authority (South East Water):**

- [Be part of our pressure sewer network | South East Water](#)
- [Peninsula Eco frequently asked questions \(southeastwater.com.au\)](#)

**Environment Protection Authority:**

- [Wastewater | epa.vic.gov.au](#)
- [Manage an onsite wastewater management system | epa.vic.gov.au](#)
- [Guidelines for onsite wastewater management | epa.vic.gov.au](#)
- [Guidelines for effluent dispersal and recycling systems | epa.vic.gov.au](#)

**Municipal Association of Victoria:**

[On-site domestic wastewater management | MAV website](#)  
Includes Model LCA Framework and water/nutrient balance spreadsheets