

# Waste water options - Wye River/Sep Creek

Wastewater Solution	Advantages	Disadvantages	Likely broader impact	Cost - Capital and OpEx	Timing	Comments
<p>On Site Wastewater Disposal</p>	<p>Likely only option for those seeking to redevelop now</p>	<p>May limit options for empty lots</p> <p>Some lots will still discharge effluent off site</p> <p>Will restrict use of land</p>	<p>Will retain high levels of water in landscape in summer months</p>	<p>\$15K - \$20K, up to \$50K depending on site constraints</p>	<p>Can commence re-development now</p>	<p>Current approach</p> <p>Assumes adoption of current contemporary best practice system with objective of containing all waste on site, but noting pragmatic flexibility in current controls.</p> <p>Will retain existing township built character</p>
<p>Cluster system</p>	<p>Better environmental and public health outcome</p> <p>Solution for small steep lots</p> <p>Reuse water can be available depending on treatment</p> <p>Solution available to others</p> <p>Enough potential to treat highly constrained lots</p>	<p>Will take time and commitment to implement</p> <p>Take-up can be variable</p> <p>Approvals required (not extensive)</p> <p>Management entity is required</p> <p>Land availability could be an issue</p>	<p>Need land for treatment and disposal</p> <p>Optimum size is &gt;20 houses</p> <p>Can treat and dispose effluent from onsite systems.</p> <p>Environmental and public health improvement compared to onsite systems.</p> <p>Grey water separation</p>	<p>Initial cost plus maintenance</p> <p>Cost may not be cheaper than onsite domestic wastewater disposal (geotech risk and terrain?)</p> <p>Costs range from \$30 - 60k per highly constrained lots)</p>	<p>Can take 1-2 years to implement</p>	<p>Management needs to be agreed</p> <p>Need expertise to run a cluster system properly by residents.</p> <p>Creation of sewerage management district or corporate management possible (private entities can manage these systems)</p> <p>EPA works approval required if over 5,000l/d - require establishment of a legal entity would need to be established to run the system if not WA or LG</p> <p>Better if a Water Corp or local government manages</p> <p>Potato patch (based on SKM report) might be OK to treat small scale solution (former land slip site)</p>
<p>Medium scale - community wastewater reticulation and treatment (up to 100 properties)</p>	<p>Better environmental and public health outcomes</p> <p>Reuse water available</p>	<p>Involves construction of two sets of pipelines (transfer and reuse)</p> <p>Sophisticated treatment and substantial storage</p>	<p>Potential increase in scale of residential development</p> <p>Need land for treatment and disposal</p>	<p>Medium capital cost</p>	<p>Can take up to 2-3 years to implement</p>	<p>Management needs to be agreed</p> <p>Potato patch might be OK to treat small scale solution (former land slip site)</p>

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Pressure Sewer Scheme	Can provide a settlement-wide solution	<p>High costs to mitigate geotechnical risks</p> <p>Some areas are not suited due to very high geotech risks</p> <p>Challenges in the disposal of treated effluent</p>	<p>Potential increased scale of residential development - may not happen.</p> <p>Large volume of effluent requiring disposal - options include ocean outfall or disposal to Wye River and / or Separation Creek</p>	\$30m+	Will take more than 3 years to implement	<p>Ocean outfall will require treatment to a very high standard but is more robust as compared with discharge to creek or river</p> <p>Ocean environment needs consideration - long process Pipe wastewater to Apollo Bay or Lorne - geotech considerations</p> <p>Can use temporary pump-out option to manage effluent</p>
Traditional Gravity Sewer	Provides a settlement-wide solution	<p>Requires deep trenches and large diameter pipes</p> <p>Not suitable due to high geotechnical risks</p>	As above		Will take more than 3 years to implement	Not a viable options
Hybrid comprising on-site disposal with excess effluent removed via a community or other system						<p>Residents have a choice</p> <p>Has all the elements of a cluster or pressure sewer system</p>
Advanced MBR systems (membrane technology) for single dwellings	Local products available Reuse water available	<p>Can be expensive to run</p> <p>Membranes can be difficult to keep clean and operating efficiently</p> <p>Still need to be able to discharge effluent water</p> <p>High power consumption</p>				Complications for domestic users due in part to volume issues