

DOMESTIC WASTEWATER MANAGEMENT PLANNING IN VICTORIA: WHERE CAN I BUILD MY DREAM HOME?

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ABSTRACT

In Victoria, Local Government is the approval authority for domestic wastewater systems. This inspection and approval process has traditionally been permit driven and local governments have rarely had the time or resources to strategically review the potential environmental impact that the discharge of these wastewaters could have on the township's water resources and downstream catchment. For the Shires of Glenelg and Corangamite the domestic wastewater management planning process provided an excellent opportunity to take a step back from the traditional permit dominated approach for domestic wastewater approvals and to undertake a strategic review of the development potential of allotments in six unsewered towns.

Using a blend of GIS techniques and onsite expertise, we looked at the towns strategically by evaluating each block according to its ability to sustainably deal with wastewater onsite. Mapping inputs to the model included soils, hydrogeological and groundwater information where relevant and available, aerial photographic images, rainfall and evaporation, cadastre (block size), surface waters, slope and existing dwellings. Australian Standards AS/NZS 1547:2000, the Victorian EPA Code of Practice – Septic Tanks (EPA, 2003) and EPA guidelines for on-site systems (EPA draft, 2007) provided the sizing criteria for effluent disposal fields. For trench and irrigation technologies, the sustainability of blocks was modelled and then mapped according to a traffic light principle – red having limited development potential, amber being sustainable for a two bedroom home, and green being sustainable for a three bedroom home (or possibly more).

The maps illustrated a range of problem characteristics. Some towns were experiencing minor problems, other towns had the potential for major problems if fully developed in the future, and in other towns there were clusters-of-concern. Because there is no Act of Parliament that would allow a Council to apply any environmental standard retrospectively, the maps provided a focal point for understanding where sustainability outcomes could be improved through community education, technology solutions, engineering solutions, or some combination of these. As a day-to-day tool, the Shires will use the colour coded maps as a referral trigger for individual permit applications.

Keywords: Conflict resolution, domestic wastewater planning, environmental planning, GIS, mapping, soils, strategic planning