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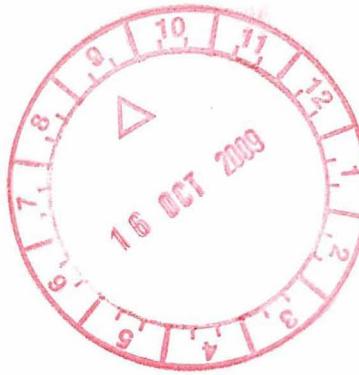
ENVIRONMENTAL TECHNOLOGY CENTRE


**MURDOCH
UNIVERSITY**
PERTH, WESTERN AUSTRALIA

**Standing Committee on Environment
and Public Affairs**

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16 October, 2009



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Re: Deep Sewerage in the Cockburn Area, Western Australia

We wish to make a submission to the Standing Committee that serious consideration be given to decentralised wastewater collection, treatment and reuse options, for the areas currently being considered for deep sewerage. The benefits of decentralised schemes include:

- significantly reduced capital costs compared to deep sewer due to reduced excavation and pipe sizes (for example each house septic tank is decommissioned and a grinder pump pit installed in its place pumping via shallow narrow bore sewer to local wastewater treatment plant (WWTP) – the Victorian Government has taken this approach for its country town upgrade program);
- the potential to reuse treated wastewater for local irrigation of ovals, public open space etc (Sydney Water has taken this approach in areas where significant quantities of irrigation water are required and a sewer main is passing nearby onto which sewer mining WWTP is attached to generate the recycled water);
- significantly reduced energy consumption and greenhouse gas emissions (for example, half the energy of seawater desalination is used in a sewer mining MBR plant to generate recycled water for local irrigation);
- the ability for safe, high quality treated water (meeting all the National Guidelines, Class A+) to be reliably and readily achievable with current technologies such as membrane bioreactor treatment plants MBR. The recycled water can then be returned to the houses and public open space (in the same trench as the shallow sewer) via ‘third pipe’ (dual reticulation) for irrigation. This is the approach now taken for all new subdivisions in parts of Brisbane, Sydney and Melbourne.

In our experience decentralised wastewater systems could be readily installed in the Cockburn area with cost savings in the order of 50% over conventional deep sewerage in addition to providing a far more innovative and sustainable solution when compared to ocean outfall. We are able to provide information to substantiate the benefits described here, and examples of successful decentralised systems nationally and internationally should you wish. There are several relevant examples interstate, utilising advanced waste water treatment systems and we have listed several of these below for your perusal:

- CH2 building in Melbourne at:
<http://www.melbourne.vic.gov.au/info.cfm?top=171&pa=4112&pa2=4091&pg=4077#water>
- 60L building in Melbourne: <http://www.60lgreenbuilding.com/sewagewater.pdf>

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- Port 1010 building in Melbourne: <http://www.gbc.org.au/news/port-1010-at-digital-harbour-achieves-5-star-green-star/1288.htm>
 - Currumbin Ecovillage QLD at: <http://www.innoflowtechnologies.com/pages/165>

Yours sincerely



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