



KEMPSEY  
Shire Council

## **DIRECTOR SUSTAINABLE DEVELOPMENT SERVICES REPORT**

11<sup>th</sup> December 2007

<b>DSDS4</b>	<b>WILLAWARRIN ON-SITE SEWAGE INVESTIGATION</b>
	<b>FILE: 1100 MR {Folio No. *} }</b>

### **SUMMARY:**

Reporting on the performance of domestic On-site Sewage Disposal in the township of Willawarrin with consideration into the need for connection of town sewerage

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At its meeting of 10<sup>th</sup> April 2007, Council resolved that a report be presented to Council relating to the number of failing Septic Systems in Willawarrin and Bellbrook and associated environment risks.

### **Inspection Program**

Septic inspections were undertaken throughout the month of June 2007 in the township of Willawarrin.

The aim of the inspection program was to determine the current operational status of the existing systems and investigate the suitability of each site to achieve satisfactory disposal of domestic wastewater within the confines of the owners land. The findings of the report will be used in determining the requirement for town sewerage in Willawarrin.

In total, twenty-one (21) inspections were completed [\(Appendix F – Page G21\)](#). Only blocks of land less than 2000m<sup>2</sup> in size were inspected, all other blocks exceeding this size were considered to have sufficient land area available for on-site wastewater disposal. The number of bedrooms in each residence was used to determine the potential occupancy and hence the amount of land area required to satisfactory disposal of wastewater.

Depending on the site topography and land area available, consideration was given to which type of wastewater treatment system would be possible for each site. Primary treatments systems involve treatment through a conventional septic tank with absorption trenching and generally require a considerably large area of land. Secondary treatment systems (i.e. AWTS) are another type of wastewater system that provides a further step of treatment, with chlorination or advanced filtration systems. These kinds of system are often more expensive but require less area and have the advantage of an inbuilt pump system to irrigate lawns and gardens. Both types of treatment systems are referred to throughout this report.

### **Investigation Results**

The results from the investigation were compiled and divided into two categories;

1. On-site wastewater disposal achievable;
2. Site unsuitable for on-site disposal.

In the township of Willawarrin it was found that only five (5) properties had insufficient area available, to satisfactorily dispose of wastewater within the confines of the property. Each property is restricted in their ability to adequately dispose of wastewater due to the small block size (600-700m<sup>2</sup>) and heavy clay soils. Each block is considered high risk due to their locality and history indicates issues with discharges off-site. However, during the time of inspection, four of the five properties had wastewater systems that were operating in a satisfactory manner due to minimal occupancy. In these situations, it may be appropriate to place a condition on the septic approval that restricts occupancy to two (2) occupants, limitation on the number of students at the pre-school and twelve (12) monthly re-inspections as part of Council's On-site Sewage Management Strategy. In the situations where the owners decide to sell the property, upon request, Council provides information to potential purchasers of the restriction through 149 (5) certificates.

### **Cost to residents**

In order to achieve satisfactory wastewater disposal, non-complying on-site systems will need to be upgraded in order to comply with performance standards outlined in AS1547:2000 and the Environment & Health Protection Guidelines 1998. Six (6) of the total twenty-one (21) properties surveyed require upgrade work in order to achieve approval. In most cases only minor work is required. Two of these properties cannot achieve appropriate disposal via absorption trenches due to site restrictions. The installation of secondary treatment systems (i.e. AWTS) may be required. Owners may be facing costs of up to \$14,000 to have a new secondary treatment system (AWTS) fully installed. Other properties where the installation of disposal trenching is feasible may be up for costs around \$6000 to upgrade.

### **On-going inspection program**

Septic operation approvals are a State Government requirement under Section 68 of the Local Government Act 1993. Council will continue to undertake regular On-site Sewage Management System inspections in the township of Willawarrin to ensure all systems continue to operate in accordance with relevant guidelines and regulations. Those systems that have been identified as non-compliant will be required to undertake repair or upgrade work and ensure their system is operating in accordance with relevant environmental and health regulations.

### **Summary**

From the results compiled from the septic program, it is evident that connection of town sewerage in the township of Willawarrin is not warranted. The significant financial cost to Council and the residents of Willawarrin in provision of this service is unjustified. Of the twenty-one (21) properties inspected only five (5) were found to have insufficient allotment size to accommodate the disposal of effluent in a satisfactory manner. Council will enforce septic compliance on those properties in Willawarrin where upgrade work is required. All septic systems within the Shire are required to operate in accordance with environmental and health standards.

Therefore there is a requirement for these landowners to ensure their system is adequate as is the case with all other areas in the Shire.

Properties that are identified as high risk should have occupancy and building restrictions imposed to ensure existing septic systems are not overloaded. Building restrictions must be imposed to ensure that sufficient land is available in the event the existing system fails and upgrade work is required. A further alternative is for Council to purchase a portion of land behind the School and have a Common Effluent (Decentralised) System installed that is capable of servicing these five premises. Costs associated with the installation of this system would be at a cost to the owners. On-going maintenance of the treatment plant can be undertaken by a suitably qualified service technician on a quarterly basis.

Septic systems throughout Willawarrin will continue to be monitored under Council's On-site Sewage Management Strategy (DCP32) to ensure continued compliance with regulations. Those properties identified as high risk will be issued with twelve monthly approvals to ensure these systems continue to operate in a satisfactory and sustainable manner.

### **Acting Director Shire Services Review**

A concept design of a sewage treatment plant for Willawarrin shows that the demand is 120 equivalent persons. A preliminary cost estimate is \$4.6M for the provision of the plant and reticulation. The plant would provide tertiary treatment with micro-filtration and recycled water reuse available for agriculture and landscape irrigation. A backup creek discharge is provided. The estimated cost of approximately \$90,000 per dwelling is considered prohibitive and accordingly the provision of a sewage treatment plant at Willawarrin is not recommended. Should Council accept this recommendation then we should notify the Country Towns Program of the deleted project to enable funding of other high priority funding projects.

#### **REPORT IMPLICATIONS:**

- ***Environmental***

***Environmental risks posed by failing septic systems in the Willawarrin district include; increase in nutrient loads in watercourses, ground and surface water contamination, vegetation and soil degradation.***

- ***Social***

***Wastewater discharging onto neighbouring properties often results in feuds between residents.***

***Failing septic systems pose a threat to the health of residents and the students / staff of Willawarrin Public School.***

***Visual amenity is often affected.***

- ***Economic (Financial)***

***Costs to residents requiring upgrade work may be in the vicinity of \$6,000 – 14,000. When considering that only five (5) residential blocks have insufficient area available for on-site waste disposal, the connection of town sewerage in Willawarrin is not warranted.***

*The estimated \$4.6million financial burden to Council and to the residents of Willawarrin to provide sewage is unjustifiable.*

- *Policy or Statutory*

*All septic systems within Kempsey Shire must comply with the following; Council's DCP 32 – OSMS Strategy, Sections 68 & 124 of the Local Government Act 1993, and the Local Government (General) Regulation 2005.*

**RECOMMENDATION:**

1. That a sewage scheme at Willawarrin be deleted from the sewer capital works program.
2. That Country Towns Program be notified of the deletion of this project.

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**R B Pitt**  
**DIRECTOR SUSTAINABLE DEVELOPMENT SERVICES**