

## STAFF REPORT

**TO:** Chairman and Members, Engineering Services Committee  
**FROM:** Jeff Cuthbertson, Utilities Manager  
**DATE:** 16 June 2009  
**SUBJECT:** RADIO INTERFERENCE

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### 1 PURPOSE

The purpose of this report is to inform the Engineering Services Committee of an issue with radio interference in Golden Bay which has now been resolved.

### 2 BACKGROUND

An article in the Golden Bay Weekly earlier this year highlighted and raised concerns about the possibility and presence of radio interference in a number of areas in Golden Bay. The article inferred that the primary cause of the radio interference was from adjacent Tasman District Council utilities pump stations.

In March this year our contractor and an independent radio spectrum specialist investigated the issues and analysed the impact of Council's pump stations on the local radio network. The independent specialist has significant experience in the detection and resolution of interference to radio services, and significant working knowledge of the requirements and legalities of Radio Spectrum Management. The findings are summarised below.

#### 2.1 Summary of Results

- Council is operating pump stations in which the pumps are controlled by Variable Speed Drives (VSD's) or Soft Starters (SS). The operation of the VSD's and SS's can potentially interfere with and disturb the reception of radio transmission in properties located near to the pump stations. Out of necessity Tasman District Council is operating these sites within close proximity to residential properties (within 500m).
- The radio specialist engaged to analyse the severity of the issue found that the interference was not as great as depicted in the Golden Bay Weekly; that all residents visited could enjoy reception from the local AM service and other FM broadcast stations free from interference. The effect of interference was exacerbated by listening to weak or distant stations, no outdoor aerial, and the use of low-cost radios designed to operate in a local high-strength area.
- The interference was found to be within the tolerance of the regulations and the equipment meets the required electromagnetic (EMC) standards and it is the view of the specialist that Council is not obliged to modify its equipment. However, additional filtering devices can be retrofitted to existing sites and included in new sites to minimise any potential future interference.

### **3 CONCLUSION**

It is recommended that further investigation be made into existing pump station sites in Golden Bay that are in close proximity to residential properties and causing interference to determine the feasibility of retrofitting EMC filtering devices. Also, that all new pump installations with VSD's or SS's include filtering devices and meet the required standards.

### **RECOMMENDATION**

**THAT this report be received.**

Jeff Cuthbertson  
**Utilities Asset Manager**