

CONSENT MONITORING REPORT

Consent Name	Raglan Wastewater Treatment System
Consent No.	971390
Year	2007-08
Date	22 October 2008
File No.	55 06 17M

REPORT/COMMENTS

Raglan Wastewater Treatment System

The Waikato District Council holds resource consent to discharge up to 3400 cubic metres of treated wastewater per day into the Raglan Harbour. The consent was issued on 1st Feb 2005 and has an expiry date of 14th February 2020.

The data summarises annual monitoring test results for the parameters monitored at the consented site. During the report period the treatment plant upgrade was not fully completed in all aspects and the non-compliant results reflect this.

Flow records are incomplete due to a combination of SCADA faults however it is known that at certain times the pumps operated outside the required tide timetable. Also at times the discharge pumps had to be manually operated outside the required tide timetable to cope with increased volumes during heavy rainfall. EW staff were advised of this as was the Medical Officer of Health. Furthermore the sampling data management was not as rigorously managed as it might have been so some confusion of naming occurred early on during the change from the old pond layout to the new configuration.

A noticeable reduction of microbiological pathogens could be seen as soon as the UV system was commissioned in late May, early June 2008, although there were some teething problems at the time.

- Non-compliant SS. The median value for the 2007-08 year was 62 g/m³. The 90th Percentile value was 81 g/m³. Minimum 11 g/m³, Mean 54 g/m³, Maximum recorded value was 98 g/m³. Suspended solids levels have exceeded especially whilst construction of the sludge maturation pond continued over the 2007/2008 Christmas period. Final suspended solids levels have been degraded at times by difficulties controlling the minimum level of the final roadside holding pond. A plan is being developed by the consultant design engineer to reconfigure the UV shed and final pump station pipe work and controls to improve this.
- Partially-compliant BOD. The median value for the 2007-08 year was 13 g/m³. The 90th Percentile value was 19.2 g/m³. Minimum 5 g/m³, Mean 11.8 g/m³. Maximum recorded value was 20g/m³.
- Non-compliant Faecal Coliforms. The median value for the 2007-08 year was 1425 MPN per 100mL. The 90th Percentile value was 5300 MPN per 100mL. Minimum <10 MPN per 100mL. Mean 1939 MPN per 100mL. Maximum recorded value was 7325 MPN per 100mL.

- Non-compliant Enterococci. The median value for the 2007-08 year was 570 MPN per 100mL. The 90th Percentile value was 1313 MPN per 100mL. Minimum <10 MPN per 100mL. Mean 575 MPN per 100mL. Maximum recorded value was 1375 MPN per 100mL.
- Non-compliant flow records. Records have been lost due to SCADA database corruption fault so it is not possible to confirm maximum flows in any one day for a significant portion of the reporting period. Maintaining this tidal discharge time control integrity continued to prove problematic due to PLC control failures. The meter installed to record quantities of effluent discharged has recently been erratic however replacement is a major pipe work exercise that could not be completed in the reporting period. In June 2007 high influent flows have required the final pumped discharge to run outside normal stipulated high tide periods. EW was notified in these cases but records cannot be demonstrated due to corruption/loss of the SCADA database records.

The delayed installation of the UV system meant that the effluent was non-compliant for the larger portion of the reporting period. Peak measured values correspond with construction of the sludge maturation pond over the 2007/2008 Christmas period. Very high wild fowl numbers over the drought period were likely contributors to the subsequent high levels recorded. The reduced levels of the last two months of the reporting period correspond with duck shooting season reducing wild fowl numbers and the commissioning of the UV system.

Odours are intermittently released as the anaerobic ponds mature and will be managed as best possible but cannot be prevented completely. Odours complaints have come from the treatment plant's immediate neighbour only and seem to be specifically when the wind direction blows up the valley to the east. The normal high winds experienced on the site have also contributed to raising the dissolved oxygen in the anaerobic ponds and causing turbulence that may have released odour due to turn over.

Upgrade works still left to be completed include;

- The anaerobic settling ponds 1 & 2. These were commissioned late in the reporting period and are not expected to be fully functional until at least the end of summer in the next reporting period 2008/2009. Fully mature means there will be a natural solid cap on the pond surface. If this does not develop a mechanical cap may need to be considered.
- The flow display panel visible to the public still to be installed in the vicinity of the UV building.
- The septage tanker receiving facility next to the sludge maturation ponds is still to be installed.
- Dissolved Oxygen monitoring and aeration control was not installed in the reporting period.

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