

Date 24<sup>th</sup> September 2009

Our Ref: 211418-003-2009

Trevor Dillon  
 Director  
 Macarthur Strata  
 PO Box 205  
 Narellan, NSW, 2567  
 Trevor@macarthurstrata.com.au

Dear Trevor,

**Re: Monthly Visit to the Nangarin Vineyard Estate STP**

The monthly visit to the Nangarin Vineyard Estate Sewage Treatment Plant (STP) was carried out on the 17<sup>th</sup> September 2009. The purpose of this report is to detail the inspection, monitoring and works undertaken at that visit.

**Water Quality**

The water quality results recorded during the monthly visit (17/09/2009) were similar to the historical data collected at the site during the previous 6 months. The water quality results collected during the visit are displayed in Table 1 below. The historical results are presented in the spreadsheet accompanying this report.

**Table 1: Physiochemical data**

Analyte	Units	Plant	Pond
Temperature	°C	18.05	16.08
Conductivity	µS/cm	601.4	582.0
pH	pH Units	7.48	8.33
Dissolved Oxygen	%	90.1	79.4
Dissolved Oxygen	mg/L	8.51	7.67
Chlorine	mg/L	0.07	-

As mentioned in the previous report the low dissolved oxygen content recorded in the holding tank was likely to be due to the lack of water being pumped into the tanks as a result of the pump failure. It can be seen that after the pump had been fixed and water was able to again pump into these tanks, the dissolved oxygen level returned to a level similar to those recorded previously at the site. The dissolved oxygen level in the pond followed this trend.

The pH level measured in the pond was still slightly above the historical data collected at the site, and may be attributed to other environmental processes including evaporation. The pH level measured post plant was close to neutral.

Water samples were collected during the visit on the 17<sup>th</sup> September 2009. The results from the samples will be presented in the next report.

### **Plant Functionality**

During the visits the plant was noted to be fully operational, both blowers were working and the aeration in the tanks was normal.

The concentration of the chlorine was still outside the range that Ecowise desires (0.2-0.5 mg/L). Whilst the electrician is on site to connect power to the Magnetic Flow meter, he will assess whether there is power going to the pump and whether or not the pump is tripping the circuit, thus preventing it from pumping chlorine into the system.

A meeting was held with the plumber and a representative from a wastewater specialist company. After the pump failure in the final treatment tank mentioned in the previous report, the plumber felt that he was unable to properly service the pumps in the system and requested we look at getting a specialist to deal with the pumps on site. The details of the company will be forwarded on to Macarthur Strata for their approval before the company is engaged.

The electrician will be on site during the next visit to assess the functionality of the chlorine pump, as mentioned above. Whilst on site he will also connect the Magnetic Flow meter to a 24 volt DC connection. It is planned that at the same time we will discuss with the electrician the faulty circuits he identified before the last site visit.

### **Plant Upgrades**

As mentioned above the electrician will be on site during the next site visit to connect power to the Magnetic Flow meter. The plumber has designed a covering for the meter to prevent the display from being degraded by the sun.

Some of the broken pipes have been replaced by the plumber and he intends to replace the remaining couple in the coming weeks when he fits the new pipe work for the blowers.

A quote for the painting of the pipe work has also been accepted by Macarthur Strata and Ecowise and it is expected that the painting will begin once the plumber has finished installing the new pipe work.

Please do not hesitate to contact Tony Farrugia, Danielle Baker or Tristan Newton-McGee on 02 4721 3477 to discuss further.

Yours sincerely,

Danielle Baker

Senior Consultant