

# **PROCEDURES – SEWAGE TREATMENT PLANT**

## **THE SYSTEM:**

All product goes into the large 4 lidded holding tank under the ground. This holding tank has a baffled set up where the solids are held back and the liquid flows over an internal wall, through large filters and into the wet well. This wet well has a large pump on a float system that will send the effluent up the hill to the black tanks for processing. Once processed it will then be sent to the top of the hill to the dripper fields.

As long as the filters are regularly cleaned, as per below, then there is usually never a problem.

Laser Plumbing installed the system so if I am, for whatever reason, not contactable then a call to them is needed.

## **WHAT TO DO:**

There is a float rod attached to the top of the chamber (by way of the bolt on the top) which has 3 floats on it. The first (when raised) will connect the pump with the control panel, the second (when raised) will start the pump and send the liquids to the processing plant half way up the hill (black tanks). The third is the high level alarm. Unless there is a huge amount of liquid being dumped into the wet well then the high level alarm should not sound. If it does it would be for a short time and once caught up will stop.

Once the second float and then the first float drops the pump will stop and the pump should still be partially submerged. This is to keep the running temperature of the pump low so as not to overheat.

If the alarm sounds the first thing to do is to open up the wet well and see where the level is. If the level is high, either at the height of the top float or the white pipe but the pump is running, watch and see if the level is going down. If it is not going down, go to the control panel and see what is being displayed and **call me**. If I am uncontactable after a few attempts call **Tony (Laser Plumbing, 021-931-702)**. I will normally be available to either come down or talk through the process of starting the pump and getting you to relay what is on the display.

If necessary we pump into the green holding tank while we get things sorted or fixed. This tank will hold 10,000 litres so will give us time – Do not panic.

## **DAILY TASKS:**

Every morning, when on duty, open up the man hole and check levels and operation i.e. if the pump is going (level reducing). Check the floats are not tangled or are free from obstruction and that they are not caked in debris. If they are caught, free them, and if there have stuff on them get the hose and wash them down.

Check that the white pipe, half way down the side of the wet well, is flowing - at a minimum there would be a dribble coming out and at a maximum there will be a gravity type hose pressure coming out (not pump pressure).

Head up the hill to the processing plant, on entering, check that the settling tank (first black tank) is at a level, just higher or lower than the rope used as a level guide. Head around the shed to the filters. Switch over to the clean filters and then wash the filters that were just in service ready for the next changeover.

If the pump in the shed is running, check the dial is spinning just outside and to the left of the gate. If the level is above the rope then the pump should be running, if it is below the rope it may or may not be running as the settling tank is also on a single float system.

There is a red light on the pole by the processing area. This can be seen really well at night from the camp and this is to show that the level in the settling tank is high and needs to be checked. Usually a wash of the filters will help get the level down quicker. This is something that happens a lot over the busy periods so extra washes of the filters are needed. Washing the filters here should be daily when quiet and up to 3 times a day when we are at maximum capacity.

### **WEEKLY TASKS:**

Backwash the pipe running from the processing plant to the dripper field once a week. At the meter (spinning dial) turn off the left valve then open up the right valve. This will dump what is in the line and the fast downwards flow from the top of the hill will clear and clean the pipe. Wait until it completely stops, close the right one first and then open the left one again.

Open up the dripper lines in the fields and run until they stop and then close again. They are located at the base of the fields. There are 4 of them and the first two is opposite the 'Big Chair'. Walk up to the gate from the chair and into the field, walk back towards the chair and you will see a bunch of standards sticking out of the ground. There are 2 valves here in the grass. Open both and walk to the next one.

The next one is located along the base of the fields. There is a very dead tree up from the fence line and the next release valve is located around this area, marked again by standards above the ground, there is only 1 valve here.

A little further on there is another one, also with 1 valve. Just wait at the last one until it stops flowing and once stopped, close the valve make your way back closing all the others on your way back.

### **MONTHLY TASKS:**

At the plant in the camp, the 4 lidded holding tank has large long filters that need washing. These can be done with a water blaster but be careful of any 'blow back', a hose is usually fine. Making sure you wear a pair of the high protection black gloves gently pull out a filter, lay it on the ground and wash.

Wash all filters before replacing and wash down the filter housing before returning them to their positions.

The main thing is to ensure the pump does not overheat. Keeping an ear out is the main thing, if you hear the alarm sounding under the lean-to, then check or call me