

## Another in the series of “What’s that and how does it work”



### THE DAF

Every now and again you will hear someone mention the ‘DAF’ and perhaps you have wondered what they were talking about or where it is located.

The DAF is a Dissolved Air Flotation unit. It is located out the back just north of the Effluent Treatment Plant's largest tank. The DAF consists of a series of baffle plates that the effluent passes through. It is similar in concept to grease traps that existed in homes prior to the arrival of sewerage systems.

The DAF is a solids removal process which operates on the basis of pumping air into the effluent (water contaminated with unwanted solids) as it passes through a pressurised mixing chamber prior to entry to the DAF. When the effluent enters the non-pressurised chambers of the DAF, fine air bubbles are generated by the process. These become attached to the solid particles that are suspended in the effluent. The air bubbles cause the solid material to float to the surface. These solid particles and their attached air bubbles form a floating layer of sludge on the top of the effluent. The layer of sludge is then skimmed off and removed from site.



To get maximum results from the unit, a flocculant aid (chemical additive designed to cause solid particles to become suspended) such as alum is added to the effluent along with injected air.