

OdaTech MHV Biofilters

Completely concealed underground odour treatment



Overview

In some cases, an above-ground odour control system is not a practical choice, due to space or aesthetic requirements. In these cases, OdaTech's OdaVent MHV biofilters can be used as a concealed, underground option.

As with all OdaTech systems, the MHV units are designed to be modular, and installed with an array of configuration options including active or passive ventilation, trafficable covers, solar powered control in the event power is not available at site and varied layouts to suit site requirements. They have been installed in pump station driveways, in street verges or utility corridors, servicing pump stations, manholes and air valves.

Case Study – Mandurah Terrace WWPS

OdaTech recently completed installation of an odour control system for Mandurah Terrace Wastewater Pump Station, located on the foreshore in the heart of Mandurah, Western Australia. The site had been a source of ongoing complaints to both the City of Mandurah and the Water Corporation (WA) as it is in the middle of a pedestrian retail and dining precinct and odours from the pump station had been causing complaints from local businesses.



Figure 1 - OdaVent MHV Biofilters concealed under easy-lift covers, with pedestrian footpaths and restaurants in the background.

The City of Mandurah's preference was for the entire pump station to be relocated to a nearby site, at a cost to the Water Corporation of millions of dollars. Instead, OdaTech were tasked with designing and installing a system which would effectively treat odours, stop complaints and not compromise the aesthetic appeal and easy pedestrian access of the area.

As the pump station is not sealed – with just a lockable aluminium cover securing the wet well – a passive treatment option would not have worked as it relies on a sealed system building up pressure to force foul air through the odour control system. Consequently, we decided on a ventilated system, with the fan to be concealed in a cabinet located with the existing pump station switchboards and a short stack which could be partially concealed in the trees.

The desire to limit the aesthetic impact of the odour control system drove the decision to install underground biofiltration units, with covers suited to pedestrian access. The installed system is a 6-unit OdaVent MHV system in a two-stage arrangement to treat up to 300m³/h of foul air ventilated from the pump station. The biofilters themselves are entirely concealed, and located separately from the fan and control cubicle due to space considerations.



Figure 2 - Control cubicle, fan cabinet and short (3m) vent stack located with existing pump station switchboard, and biofilter units in background.

Installation was completed in June 2016, and since then no further odour complaints have been received from residents or local businesses. Performance testing shows better than 99% removal and treatment of odourous hydrogen sulphide gas from biofiltration alone – with no need for an activated carbon polishing unit.