



The problem

The township of Gembrook is 50km east of the Melbourne CBD and includes approximately 300 residential houses that have been constructed on parcels of land which are not large enough in size to properly contain the domestic wastewater each household generates all year round. Reasons for this include the steep topography, the local soil conditions, and the small land sizes.

Yarra Valley Water investigated several options for providing sewerage services to the area. Pressure sewer was eventually selected as it represented a multi-million dollar saving when compared with the traditional gravity alternative. It did not require construction of a new sewerage treatment plant in the local area, had a lower environmental footprint, and provided greater flexibility for expansion in the future at minimal costs.

The Aquatec solution

Aquatec provided domestic pressure sewer pump units to service the parts of the Gembrook Township, including commercial type units to accommodate various shops, primary schools and the community centre.

Aquatec also worked with Yarra Valley Water to develop a pressure sewer unit that integrates into an existing domestic sewer treatment system. This arrangement enabled the property owner to continue to utilise their treated effluent for irrigation during the dry seasons, and during the wet seasons divert the effluent back into the pressure sewer network.

For particular sites in Gembrook that were un-manned for long durations or were critical to being online, Aquatec incorporated a monitoring system into the control panels to notify maintenance staff if a service call was required. We also provided, data loggers for randomly selected properties to enable Yarra Valley Water to download relevant information.

To ensure a successful scheme and our commitment to Yarra Valley Water, Aquatec provided additional assistance in the following areas:

- Were involved in community meetings
- Assisted on property audits
- Trained civil contractors during the reticulation stages
- Provided extensive training for maintenance staff
- Developed a service trailer to aid maintenance staff

Aquatec continue to work closely with Yarra Valley Water personnel on all existing and future projects.

Results

Stage one of the project provided services to approximately 100 properties in the central township including shops in the main street, was completed in June 2007.

Since this time, the following observations have been made:

- The system has little to no leakage during rainfall events (confirmed by comparing flow meter data at the system outlet during both wet and dry periods).
- Call outs and system failures have been lower than was originally budgeted for.
- The community has embraced the new system and were amazed at the low level of disruption during the installation of the street and on-property infrastructure.

“Aquatec worked closely with Yarra Valley Water to deliver a solution which met both our needs and the needs of the local community. This included the little things such as custom made telemetry units for uninhabited installations such as the community centre, and designing air valve pits and vents for the main street which are unnoticeable to the untrained eye.

The Aquatec team were onsite throughout the project planning and delivery phase and no request was too much trouble for them.”
Glenn Wilson, Yarra Valley Water