

**Membrane Works** are a specialist consultancy that provide process engineering services to the water and wastewater industry with a special focus on membrane systems. Our services are delivered through our partnerships with leading universities such as UNSW Australia which to be at the forefront of innovation and allow us to solve complex problems and provide technical solutions where existing systems aren't suitable for our industrial and commercial clients.



## Membrane Services

We provide world leading membrane autopsy and characterisation services. Our staff have experience with over 150 membrane autopsies (MF/UF/NF/RO).

Our autopsies include all of the standard autopsy procedure as well as a number of advanced techniques we have developed in-house. Reporting includes root cause analysis of performance issues and provides recommendations for system improvements.

We are also able to provide our expert advice and technique development expertise to our strategic partners to help them provide similar service in other geographical regions.

## Laboratory Services

Water characterisation and treatability studies are vital in the development and on-going operation of any water or wastewater treatment facility.

Our services include:

- Development of a standardised and on-going water characterisation program
- Advanced characterisation of natural organic matter using techniques such as liquid-chromatography organic carbon detection and fluorescence emission-excitation matrix analysis.
- Jar Testing for optimising chemical addition for coagulation, flocculation and DAF.
- Ion Exchange resin evaluation and loading rate optimisation.

## Computational Services

Computational Fluid Dynamics and other process simulation tools are emerging as vital in the design and optimal operation of large scale water and wastewater treatment facilities.

Our services include:

- Design of bio-reactors for prediction of organic loading, ideal reactor geometry, solids and hydraulic retention times
- Design of membrane modules (MF/UF/NF/RO) – including module configuration, aeration system and tank geometry for fouling minimisation.
- Design and optimisation of capital investment and energy consumption for brackish water and seawater desalination.

## Contact Information

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