Learmonth Modular UV Disinfection Upgrade

Victoria, Australia

FILTEC
Making Water Safer

Project Snapshot

Client: Central Highlands Water

Capacity: 14 L/s

Technology: Toray Ultrafiltration, Coagulation, Chlorination, Trojan UV Swift D06, Strainer Filtration, UVT Monitoring

Source Water: Bore Water

Completion: 2025

Project Outcomes

- Validated UV treatment barrier to USEPA UVGM standards
- 4-log protozoa and bacteria reduction
- 1-log virus reduction
- Modular prefabricated UV building
- Scalable modular design suitable for replication

Modular UV Deployment for Learmonth Water Treatment Plant

Following identification of potential E. coli risk due to surface water ingress during heavy rainfall events, Central Highlands Water engaged FILTEC to strengthen treatment barriers at Learmonth, Victoria. The bore is located within a porous volcanic scoria formation, making prevention of surface water contamination difficult.

FILTEC designed and constructed a modular UV disinfection system incorporating a Trojan UV Swift D06 reactor with upstream strainer filtration and a Trojan OptiView UVT analyser.

The system provides validated 4-log protozoa and bacteria reduction and 1-log virus reduction in accordance with the USEPA UV Guidance Manual, delivering an independently verified disinfection barrier for bore water supply. The UV system was installed within a transportable prefabricated building, fully fitted out and factory acceptance tested prior to delivery. Once on site, the building was craned into position and integrated into the existing network with minimal disruption. The Learmonth installation establishes a scalable modular UV design suitable for replication across comparable sites.

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