



EXPANSION OF WASTEWATER TREATMENT CAPACITY FOR TALISON LITHIUM

Centurion Water and Wastewater Solutions (CWWS) delivered a high-performance Membrane Bioreactor (MBR) wastewater treatment plant for Talison Lithium's expanded Greenbushes camp, increasing capacity by 95kL/day to support 880 personnel. The system met "High Risk" effluent standards for safe reuse and integrated seamlessly with existing infrastructure. With a scalable design and automated controls, it provides reliable, low-maintenance performance to support current operations and future growth.

THE CLIENT

Talison Lithium Camp Project, Greenbushes, Western Australia

With Talison Lithium's camp expanding from 500 to 880 personnel, the need to increase wastewater treatment capacity became critical. Centurion Water and Wastewater Solutions was engaged to design, supply, and install a new Membrane Bioreactor Wastewater Treatment Plant (WWTP) to operate in parallel with the existing 500 equivalent persons system.



CLIENT CHALLENGES

- Increased capacity requirements - an additional 380EP (95kL/day) of treatment capacity was needed to meet the growing camp
- Stringent effluent standards - the system had to comply with the Department of Health's "High Risk" effluent quality standards for safe reuse
- Infrastructure integration - the new WWTP needed to integrate with existing balance tanks and the UV disinfection system
- Reliability and operator efficiency - the plant had to manage variable flows and loads while minimising operator involvement.

OUR SOLUTION

Centurion delivered a tailored wastewater treatment solution that met the project's specific requirements:

- Advanced MBR technology - ensured high-quality effluent suitable for use in camp beautification, dust suppression, process water, and fire water applications
- Scalable capacity design - engineered to accommodate either 250EP or 380EP, allowing flexibility for future growth
- Smart integration - connected via an additional balance tank to the existing infrastructure, ensuring smooth operation across both systems
- Enhanced disinfection - upgraded the UV system with a WEDECO LBX90e unit for improved pathogen removal and compliance with regulatory standards
- Low maintenance operation - designed for high reliability with minimal operator input, reducing long-term costs and complexity.



RESULTS

- Increased capacity - met the expanded camp's wastewater treatment needs efficiently and effectively
- Regulatory assurance - achieved Department of Health's "High Risk" effluent standards for safe, environmentally sound reuse
- Improved efficiency - automated controls reduced manual intervention, improving system performance
- Future-ready solution - delivered a scalable, cost-effective system to support ongoing and future growth.

CONCLUSION

Centurion Water and Wastewater Solutions successfully delivered a high-performance, low-maintenance MBR wastewater treatment plant for the Talison Lithium camp. By seamlessly integrating with existing infrastructure and meeting strict effluent standards, the solution supported the camp's operational goals while ensuring long-term sustainability.

CONTACT INFORMATION

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