Dewatering for the Repair of Leaking Serpentine Trunk Water Mains

In early 2025, the urgent repair of the Serpentine trunk water mains prompted implementing a specialised dewatering strategy. The project was initiated due to reported leaks in the water mains, which required significant excavation work to rectify. The project was bounded by the requirement to minimise disruption to the surrounding environment and infrastructure while ensuring effective groundwater management.

The project entails conducting excavation works at a depth of 6 meters below ground level. To facilitate repair efforts, it is essential to effectively dewater the site, manage discharge effluent, and address any unexpected changes in ground conditions that may arise. Throughout the project, environmental monitoring and reporting compliance will be strictly maintained to ensure adherence to all regulatory requirements.

The project achieved a successful aquifer drawdown, effectively managing water ingress at a rate of 30 litres per second. Ongoing environmental monitoring ensured that the project adhered to regulations, with treated water approved for discharge into the onsite designated infiltration basin. The estimated three days of pumping required to reach manageable aquifer levels were adhered to, allowing construction crews to proceed with the repairs without significant delays.

The project's success was not without challenges. Unforeseen fluctuations in groundwater levels necessitated adjustments in pumping strategies and coordination with environmental management protocols. Continuous monitoring and timely reporting were essential in effectively navigating these challenges.

The dewatering project to repair the leaking Serpentine trunk water mains was carried out successfully. It balanced the technical requirements of the excavation works with the environmental responsibilities associated with groundwater management. The proactive approach to monitoring and management ensured minimal disruption and compliance with environmental standards, ultimately leading to the successful repair of the water mains and restoration of normal service.

Video Link: https://f.io/r_XcmqZV