

Submission: Hölscher Jensen — Nordhavn Tunnel (Copenhagen)

Hölscher Jensen's dewatering is handling the total dewatering and water cleaning for the 1.4 km Nordhavn Tunnel in Copenhagen. The project combines a large-scale dewatering and groundwater management with disciplined hydraulic control in a dense urban–marine setting.

The scope was to handle approximately 16–20 million m³ of groundwater over ~28 months, with reinfiltration used strategically to stabilize heads and minimize advective transport.

Across heterogeneous strata—from marine sands to Copenhagen limestone—the team-maintained excavation stability and target drawdowns under live city constraints, supported by an integrated pipe network of 19,4 km that ties together pumping, reinfiltrating and extensive water treatment before discharge to Copenhagen harbor.

A defining feature is the use of distributed reinfiltration as a hydraulic barrier to protect sensitive structures and minimize the risk of mobilizing contamination. All done with online monitoring SCADA based infiltration system, with automatic steering of flowrate to every single infiltration well to keep the groundwater level stable throughout the project.

Continuous instrumentation and water-quality monitoring at critical control points informed adaptive set-points and real-time operational decisions. In parallel. Both are done with sampling and online sensors.

Best Available Technology “BAT” was used to determine optimal heavy-metal, oil, iron, manganese and hydrochloride removal prior to discharge to the harbour, evaluating adsorption-based units alongside alternative precipitation and filtration techniques to ensure environmental compliance with high environmental project standards to secure minimum environmental impact.

The project's risk management and HSE performance are equally strong. A risk-led approach coupled with compartmentation and targeted grouting with responsive pump control to minimize geotechnical and environmental uncertainty at each construction stage.

Notably, our Safety Representative Luca Garrone, was recognized as Safety Representative of the Year 2024 for proactive engagement, including high quality reporting of 25 near-miss incidents within a single year—helping to prevent hazardous situations and reinforcing a safety culture that matches the project's high technical ambition.

The large scale, innovation in reinfiltration-led control, evidence-based environmental performance and demonstrated HSE leadership make Hölscher Jensen a compelling winner of “Dewatering Contractor Project of the Year.”

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