HS2 Greenpark Way Headhouse (UK)
Shaft Waterproofing

Country	United Kingdom
Type	Railway
Client	High Speed Two (HS2) Limited
Main Contractor	SCS JV (Skanska Costain STRABAG), Joseph Gallagher Ltd.
Execution of the work	Renesco UK Ltd.
Designer	Design House JV (Arup, Typsa, Strabag)
Construction Period	2024

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Project Description

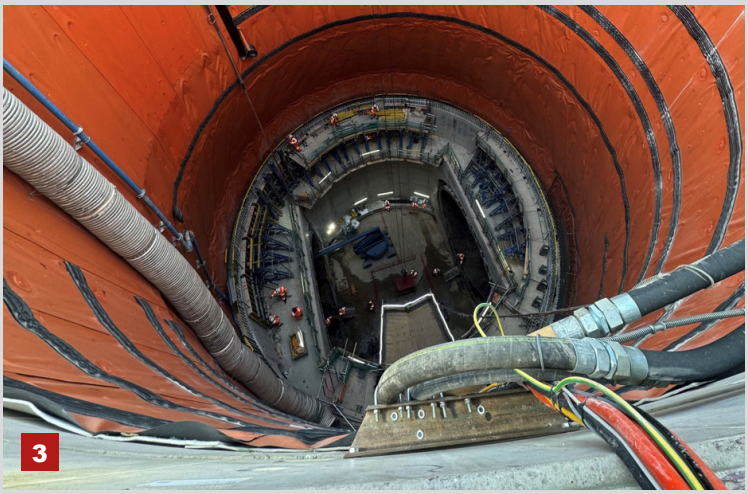
High Speed 2 (HS2) is a planned high-speed railway running between London in the South and Manchester and Leeds to the North. Phase1 involves the route between London and Birmingham with approximately 200km of new high-speed rail being laid. The two Main Works Civils lots start from Euston Station in London. S1 includes two 9 km twin bored tunnels between the new HS2 stations, Euston and Old Oak Common. S2 continues from Old Oak Common with 15 km of twin bored tunnels to West Ruislip where there is approximately 5 km of open route before transitioning into C1 lot.

The Greenpark Way Headhouse and Ventilation Shaft in Ealing, located on the Chiltern line embankment, is one of four shafts along the Northolt Tunnel route of HS2 including adits and cross-passages, around 35 meters below the surface, wherein the secondary lining is sealed with a sheet membrane system.

Scope of Service

Supply and Installation of a loose laid waterproofing sheet membrane system under pressurized water conditions, primary lining with fiber-reinforced shotcrete, sheet waterproofing according to BS8102 (British standard), full-round (360°) sealing, secondary lining via cast-in-place concrete and the option for remedial grouting/ injection works.

- Sheet membrane, PVC-P, 2 mm
- 1'200 g/sqm PP protection geotextile
- Protection sheet membrane, 1.5 mm
- Water barriers, 400/30/6, PVC-P
- Termination at pre-cast-concrete-elements with adhesive strips/tapes
- Injection system, active control sockets, injection hoses, hydrophilic swelling profiles
- BA-Anchors
- Temporary under slab drainage



1. Installation of the waterproofing system in the main shaft
2. Tunnel adit & shaft
3. Waterproofing works in the satellite shaft, concrete pour