



Silvertown tunnel

London, UK / 2021-2023

Characteristics

Owner	TFL Transport for London
Client	Riverlinx CJV
Constructor	Riverlinx CJV (Ferrovial, BAM Nuttall)
Scope	CAT3 check
Architect	ARUP

12m diameter segmental concrete TBM bored tunnel, cut-and-cover tunnels, launching and retrieval chambers, and other structures

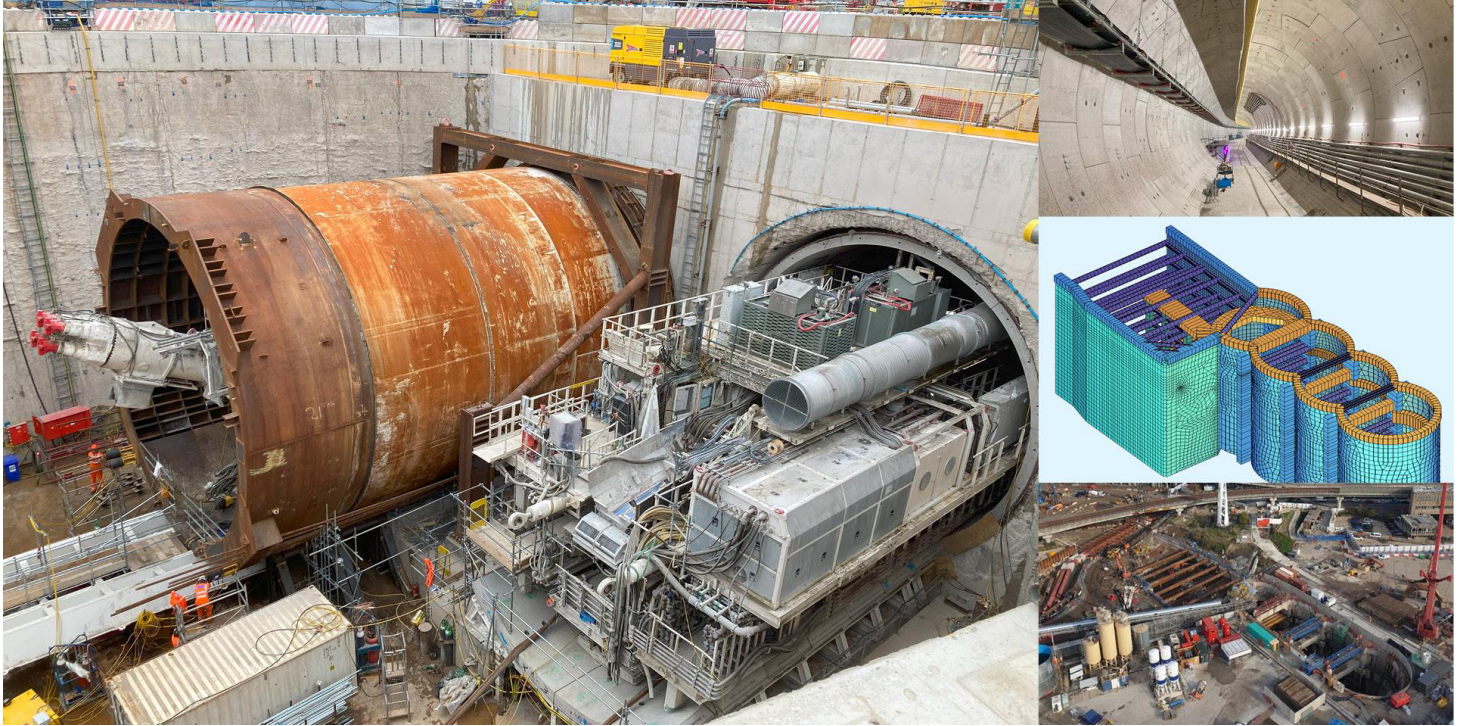
TFL Transport for London

Riverlinx CJV

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CAT3 check

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In partnership with Ramboll UK, FHECOR served as independent checker for all temporary and permanent structures and geotechnical engineering related to the tunnel project.

Passing through and beneath the notorious London Clay stratum, the crossing is comprised of two bored tunnels, each measuring 12 metres in diameter. The bored tunnel connects to surface roadways by means of cut-and cover and open cut sections. Whereas the roadway is supported on rigid fill within the bored tunnel's circular cross section, stormwater pumping facilities at the tunnel's low point are contained within a precast concrete structure (designed by Ramboll-FHECOR).

To bore the southbound tunnel, the German-built tunnel boring machine (TBM) was "launched" from a peanut-shaped temporary structure on the Silvertown side, then rotated (a novel maneuver) in a temporary circular cut on the Greenwich side before returning north to bore the northbound tunnel.

The Silvertown Tunnel was deemed necessary in light of increasing maintenance closures of the nearby Blackwall tunnel - originally opened in 1897 - which can now be renovated with reduced impact to mobility in east London.

Funded by Transport For London (TFL), construction of the new tunnel was executed by a joint venture of Ferrovial and BAM Nuttall, with the Spanish firm Ayesa serving as lead structure and geotechnical designer. For a small percentage of the overall construction cost, the Independent Checking services provided by Ramboll-FHECOR effectively eliminated risk for all parties involved, not least to the safety of the travelling public.



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