

# HS2 launches third giant tunnelling machine under the capital

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HS2's London tunnels programme passed a major milestone as the third tunnel boring machine (TBM) being used as part of the project was launched.

TBM Emily, named after Emily Sophia Taylor who helped establish the Perivale Maternity Hospital in 1937 before becoming Ealing's first female mayor in 1938, will be used to dig almost half of the 8.4-mile [Northolt Tunnel](#).

She will bore 3.4 miles under Ealing from Victoria Road Crossover Box, near HS2's new Old Oak Common station, to Greenpark Way in Greenford.

HS2's London Tunnels contractor, Skanska Costain STRABAG joint venture, assembled the TBM underground at the Victoria Road site after being lifted in parts and lowered into a shaft.

Manufactured by world-leading tunnelling experts, Herrenknecht in Germany, TBM Emily weighs 1,700 tonnes and has a 9.11m diameter cutterhead. The TBM is an earth pressure balance machine, which is designed specifically for the soft London clay that will be extracted from the ground.

Speaking about the next TBM launching in London for HS2, Malcolm Codling, project Client Director, HS2 Ltd, said: “We are working at peak construction on HS2, delivering the tunnels which HS2 trains will travel through under London. The preparation to launch TBM Emily has been complex and we remain on schedule to complete the Northolt Tunnel in 2025.”

The Northolt Tunnel will carry HS2 trains in and out of London – extending between the new Old Oak Common superhub and the outskirts of the capital at West Ruislip.

The twin-bore tunnel is being built in two sections. Two TBMs, named Sushila and Caroline, are already constructing it eastward between West Ruislip and Greenford. Another two – Emily and Anne – are being used to dig the tunnel in the opposite direction from Victoria Road Crossover Box to Greenford.

Emily and Anne’s tunnel drive will cover 3.4 miles of the tunnel in total – slightly less than those being used on the other section. Emily was launched today and Anne – the fourth and final Northolt TBM – will launch next month.

The quartet of TBMs are all set to complete their journeys in 2025, when they will be extracted from the ground through giant shafts at Greenpark Way.

The London Clay, that will be extracted to build the tunnel, will be taken away from Victoria Road Crossover Box by conveyor, and taken to the London Logistics Hub at Willesden Euro Terminal. From there, it will be taken by rail and reused at sites in Cambridgeshire, Kent and Rugby.

James Richardson, Managing Director of Skanska Costain STRABAG joint venture (SCS JV), said: “The HS2 London Tunnels team are well on the way to delivering a new railway into the heart of London with the launch of TBM Emily. Next month, we will be launching TBM Anne who together with Emily will form the tunnel from old Oak Common to Greenpark Way Shaft where they will meet with TBMs Sushila and Caroline, who are already halfway to completing their journeys from West Ruislip.”

HS2 is also making progress on preparations on the separate tunnel between Old Oak Common and Euston – the line’s ultimate central London terminus.

The Atlas Road Logistics Tunnel breakthrough in January. The logistics tunnel is runs from the Old Oak Common Station box to Atlas Road logistics site and will facilitate the tunnelling operation to construct the Euston Tunnel.

Two further TBMs will be delivered to Old Oak Common later this year, and placed into the underground box, ready to begin boring the Euston Tunnel. Following the Government’s Network North announcement in October last year, the funding and delivery arrangements for the Euston Tunnel are being reviewed.

*Photo credit: HS2 Ltd*