

# HS2's next tunnelling machine names revealed

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HS2 Ltd has unveiled the names of the next pair of tunnel boring machines (TBMs) that will construct the high speed rail line under the capital. Following a public vote, the names Emily and Anne have been chosen, named after local female icons from history.

Major components of the first machine due to launch have now been lifted into the 25 metre deep ancillary shaft at the HS2 site in Ealing to prepare for the launch. HS2's London Tunnels contractor, Skanska Costain STRABAG joint venture completed the lift as they prepare for the next stage of tunnelling under the capital.

The first TBM lowered into the shaft has been named after Emily Sophia Taylor who lived between 1872 and 1956. Emily was a midwife who provided services for women who could not afford maternity care. She helped establish the Perivale Maternity Hospital in 1937 before becoming Ealing's first female mayor in 1938.

The second TBM's namesake is Lady Anne Byron, an educational reformer and philanthropist who lived between 1792 and 1860. She established the Ealing Grove School in 1834 – England's first co-operative school which provided education for the working classes, in an era when it was mainly for the wealthy.

The two TBMs were manufactured by world-leading experts Herrenknecht in Germany, and weigh 1,700 tonnes each. After being lowered underground into the launch chambers in pieces, they will be reassembled. Each part of the TBM is lifted using a crane, including the 316-tonne front shield and 336-tonne middle shield. Eight back gantries for each machine will also be lifted into place to provide all the systems required for the tunnelling operations underground.

Speaking about the preparations for the next set of TBMs to be launched in London, Richard Crathern, Head of Delivery for HS2 Ltd said:

"We are proud that the TBMs have been given names from women with a connection to the local area who made a difference to previous generations of young people. This next set of TBMs will be contributing to important infrastructure for generations to come as they build Britain's new high speed railway."

The machines are earth pressure balance TBMs, designed specifically for the soft ground conditions, specifically London clay.

The machines will begin the 3.4mile journey at the start of 2024, travelling under Ealing from the Victoria Road site towards Greenpark Way in Greenford, taking around one year to complete the journey. At Greenpark Way, the machines will be disassembled and removed via another 35 metre deep shaft.

James Richardson, Managing Director of Skanska Costain STRABAG joint venture, said:

"The London Tunnels programme is in full swing and we're excited to introduce our next two TBMs, Emily and Anne, to the project. They will join our first two TBMs, Sushila and Caroline, who are one year into constructing the 8.4 mile section of tunnel between West Ruislip and Victoria Road, just outside Old Oak Common.

We are well on the way to delivering 13 miles of twin bore tunnels in London and next year we'll be manufacturing our final two TBMs that will tunnel our final drive between Old Oak Common and Euston."

This section of tunnelling will complete the 8.4mile long Northolt tunnel. The tunnel is being built in two sections. Two TBMs are already boring the western end of the tunnel beginning in West Ruislip working towards Greenford with almost two miles completed so far. The two new TBMs will bore the eastern section. The final section of tunnel from Victoria Road Crossover Box to connect to Old Oak Common Station will be constructed using spray concrete lining.

Before the launch of the TBMs, a blessing ceremony conducted by a local priest will be held – a longstanding tunnelling tradition. A statue of St Barbara, the Patron Saint of tunnelling, will be blessed and placed at the entrance of the tunnel.

*Photo and video credit: HS2 Ltd*