The HS2 route from Euston to West Ruislip

High Speed Two (HS2) is the new high speed railway for Britain

What we are doing

Skanska Costain STRABAG Joint Venture (SCSJV) are working in partnership with HS2 Ltd to build 16.4 miles (26.4 kilometres) of the high-speed railway between Euston and West Ruislip.

This includes 13.0 miles (21 kilometres) of tunnels and the associated ventilation shaft and headhouses to provide access to the tunnels for maintenance and emergency services, ventilation and power supply.

Construction of HS2 is now underway and we are holding these information events to share the latest updates about the future tunnelling works in the Acton and Greenford areas.

HS2 route between Euston and West Ruislip

SKANSKA COSTAIN STRABAG Working in partnership with HS2

Tunnelling works between Euston and Old Oak Common Station

The twin-bore Euston Tunnel will be approximately 7.2 km (4.5 miles) between the Old Oak Common Station and Euston. The depth of the Euston Tunnel between Old Oak Common Station and Euston will vary between 12 metres and 60 metres to the top of the tunnel.

Construction of the twin-bore Euston Tunnel is planned from 2026*.

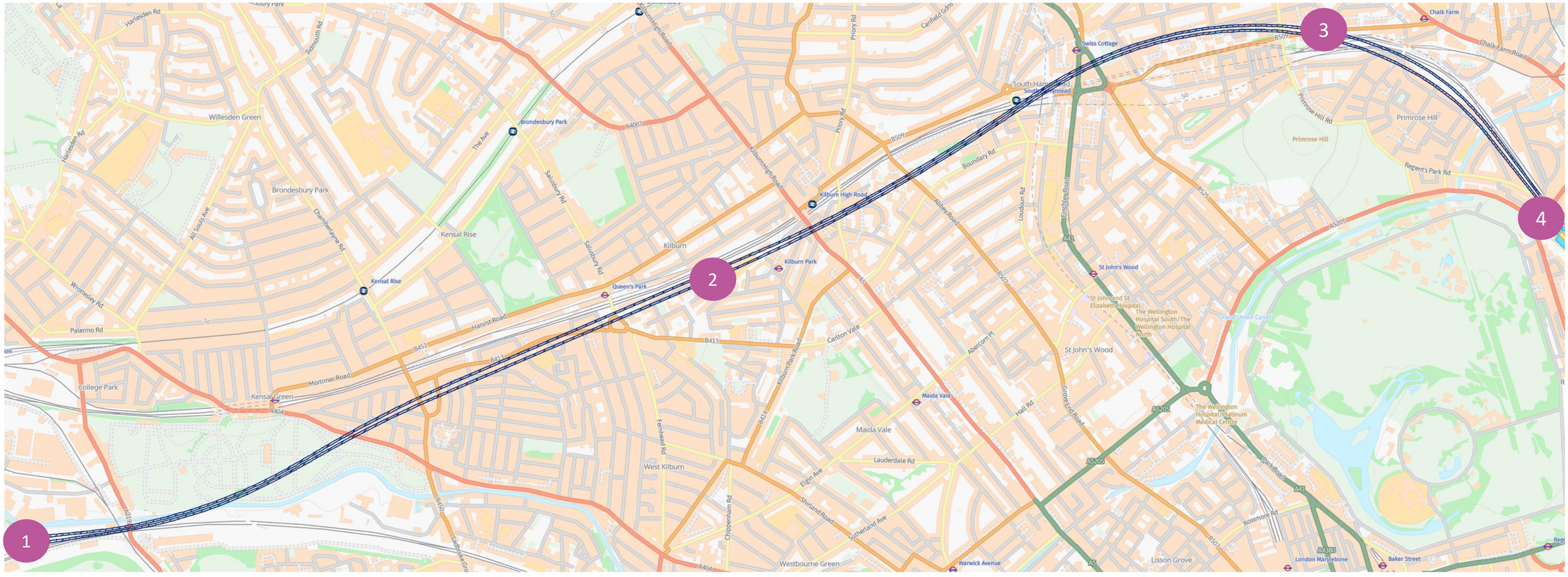
1 Old Oak Common Station (BBVS)

2 Canterbury Works Vent Shaft (SCSJV)

3 Adelaide Road Vent Shaft (SCSJV)

4 Euston Caven Headhouse

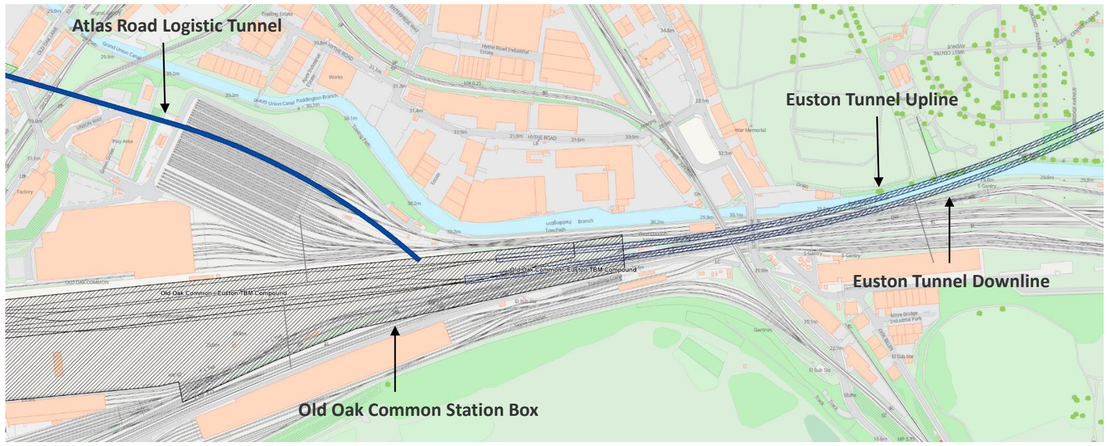
Twin-bored Euston Tunnel



*Note: all dates remain subject to change. We will provide more information to local communities in advance of the future tunnelling works

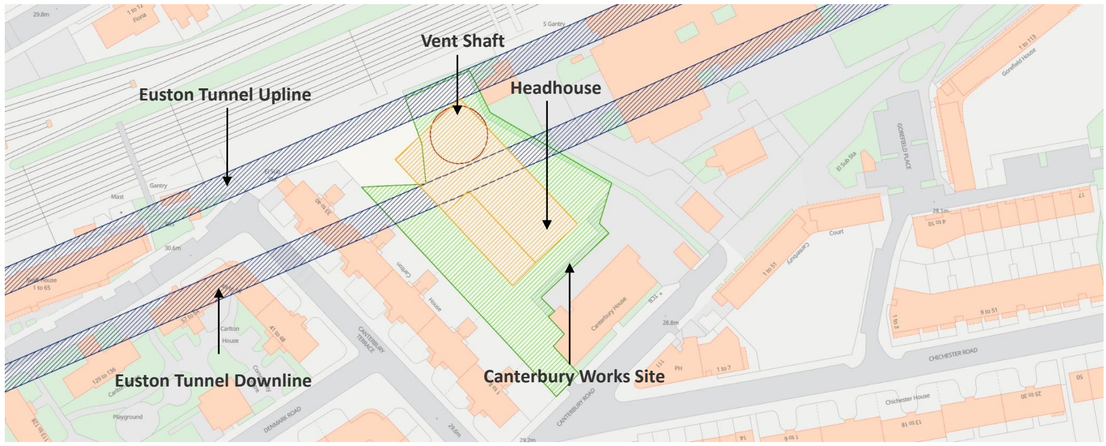
Tunnels and ventilation (vent) shafts

*Note: all dates remain subject to change. We will provide more information to local communities in advance of the future tunnelling works



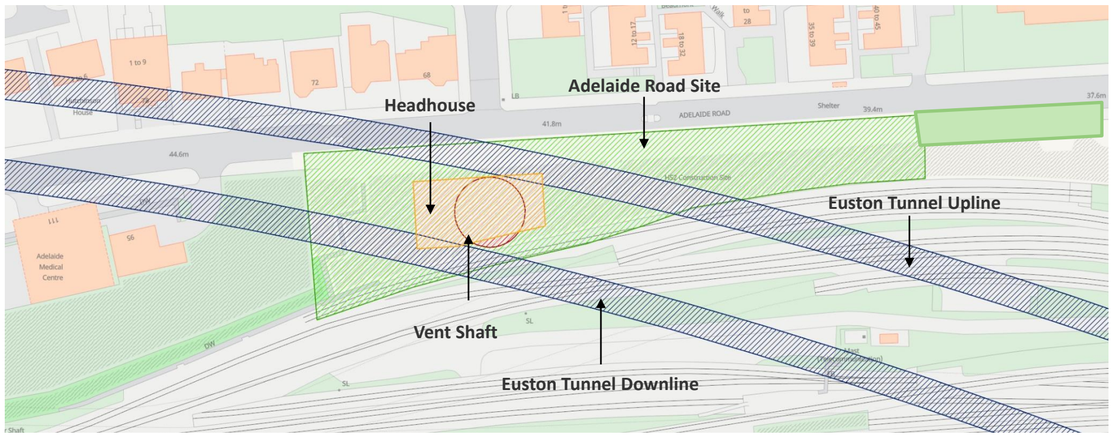
Euston Tunnel from Old Oak Common Station

SCSJV will launch two TBMs to build the twin-bore Euston Tunnel from Old Oak Common Station towards Euston Station. Old Oak Common Station is located in the London Borough of Hammersmith and Fulham. The tunnels will vary in depth but will begin at around 12 metres before heading further underground.



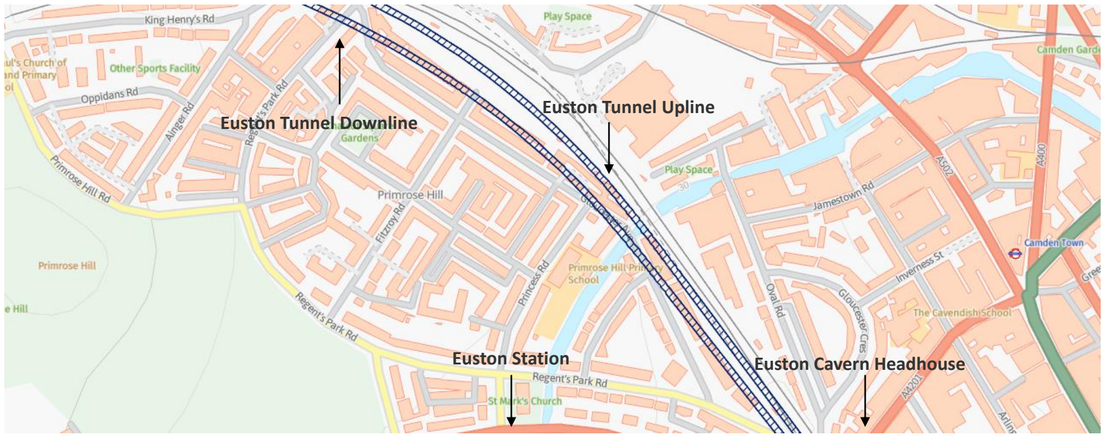
Canterbury Works Vent Shaft and Headhouse

SCSJV are building this vent shaft and headhouse in south Kilburn behind Canterbury Road, Canterbury Terrace and next to the existing railway tracks. The twin-bore Euston Tunnel in this location will be approximately 36 metres in depth.



Adelaide Road Vent Shaft and Headhouse

SCSJV are building a vent shaft and headhouse at the Adelaide Road site located in the London Borough of Camden, between Chalk Farm and Primrose Hill Road. The twin-bore Euston Tunnel in this location will be approximately 27 metres in depth.



Euston Tunnel ending at Euston Cavern Headhouse

SCSJV will complete construction of the twin-bore Euston Tunnel at the Euston Cavern Headhouse, located in Camden. The tunnel will arrive here at around a depth of 23 metres.

Atlas Road Logistics Tunnel

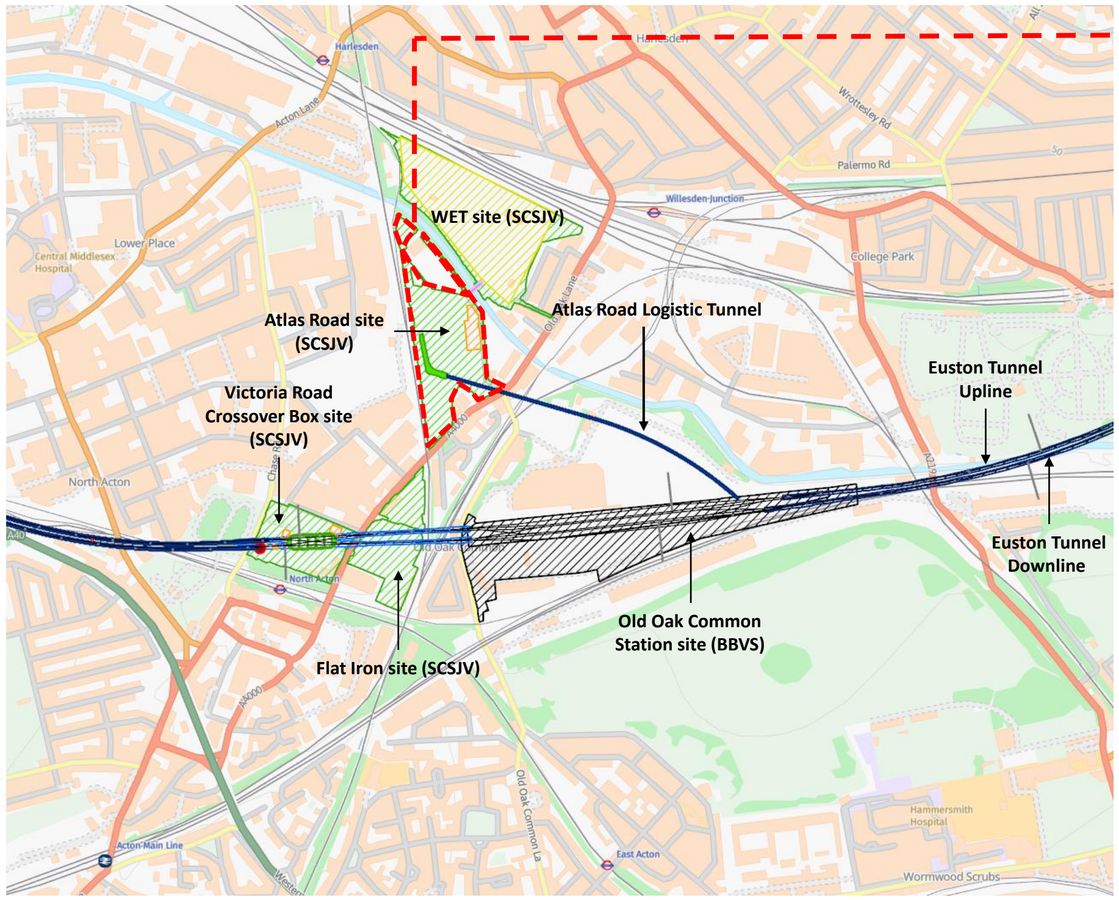
What will the Atlas Road Logistics Tunnel be used for?

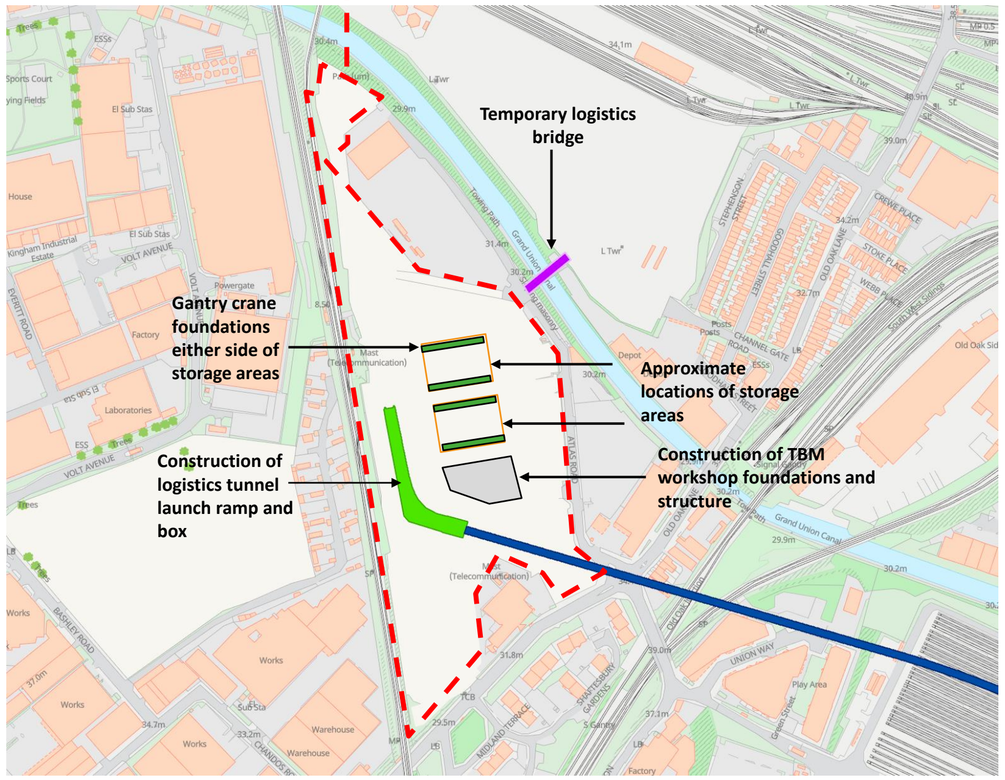
The Atlas Road Logistics Tunnel will have two main purposes which will support the construction of the HS2 tunnels between Old Oak Common and London Euston:

- The logistics tunnel will be used to transport the tunnel segments from the Atlas Road site to build the twin-bored Euston Tunnel. The segments will be transported to the TBMs by multi service vehicles. There will be measures in place, such as reduced speed limits, to minimise disruption while the tunnel is in use.

- The logistics tunnel will have a conveyor system to remove excavated materials from works to build the twin-bored Euston Tunnel to the Willesden Euroterminal (WET) site where they will be removed by rail. The conveyor system in the Atlas Road Logistics Tunnel will join the above ground conveyor system in the Atlas Road site.

- **Construction of the logistics tunnel is planned from spring 2023 to winter 2023**





Tunnelling method

Tunnel boring machines or TBMs are giant machines used to build tunnels. In the Old Oak and Park Royal area, five TBMs will be used to build the Northolt Tunnel East, Euston Tunnel and Atlas Road Logistics Tunnel.

How does a TBM work?

TBMs operate as a self-contained factory and will run 24/7, deep beneath the ground. As well as digging the tunnel, the TBM lines it with precast concrete segments and grouts the space between the tunnel wall and the surrounding ground.

The TBMs are fully built for testing at the factory, then broken up into numerous sections and transported to London. They're reassembled on site like a giant jigsaw puzzle before starting to build the tunnels.

Each TBM is made up of thousands of parts including:

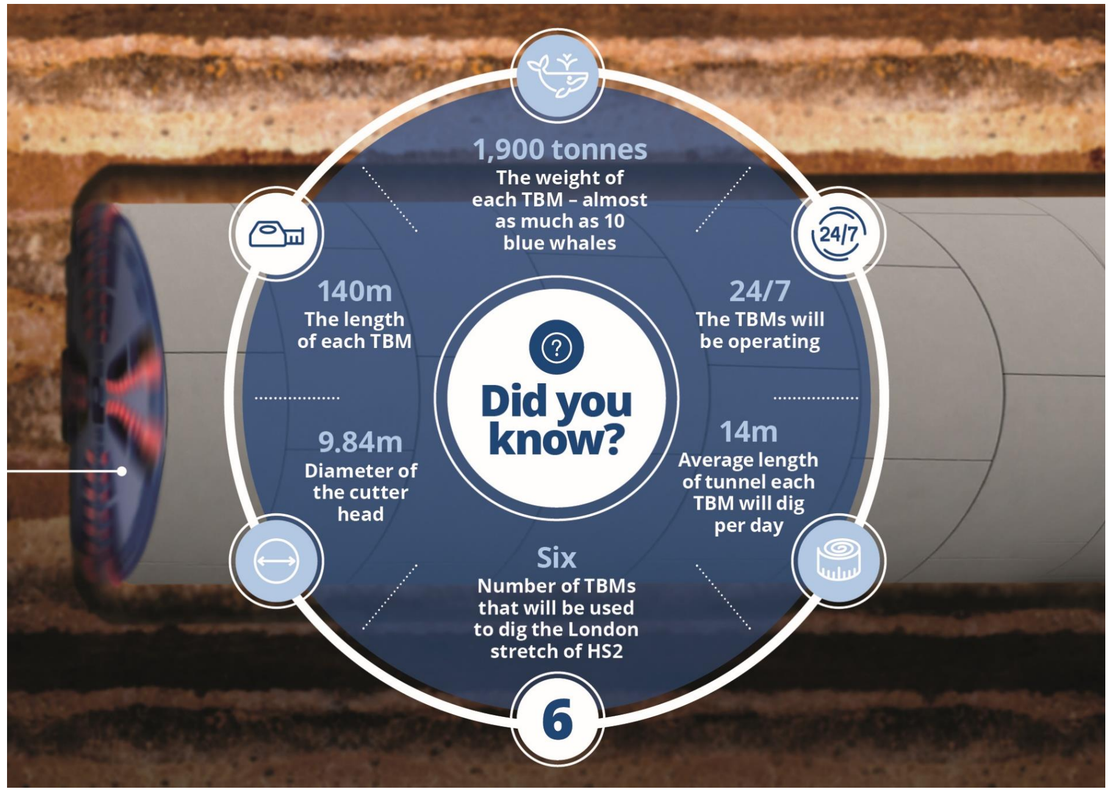
- a rotating cutterhead
- a screw conveyor
- conveyor belts
- a tunnel segment erector

Watch a video about tunnel boring machines

To view a video about tunnel boring machines, scan the QR code to the right or visit **www.hs2.org.uk/building-hs2/tunnels/meet-our-giant-tunnel-boring-machines/**

Fascinating facts about TBMs

Here are some fascinating facts about the tunnel boring machines that will build the HS2 tunnels between West Ruislip and Euston.



Please note: the diameter and length of the tunnel boring machines varies across the project.

Moving excavated materials

HS2's construction partners, BBVS and SCSJV, have constructed a conveyor system in the Old Oak and Park Royal area to reduce construction traffic on local roads while we build HS2. It will move excavated materials from Old Oak Common Station, Victoria Road Crossover Box and the HS2 tunnels to Willesden Euroterminal site.

Installation of conveyor system in Atlas Road site in August 2022

Installation of conveyor belt and dust covers in Flat Iron site in September 2022

Installation of conveyor in the Willesden Euroterminal site in September 2022

Operation of the conveyor system

The SCSJV section of the conveyor system will be operational from spring 2023 to summer 2025, though the dates of operation will vary for BBVS and SCSJV as we continue our works to build HS2.

The BBVS section of the conveyor will be in operation during core working hours on Mondays to Fridays from 8am to 6pm and Saturdays from 8am to 1pm for maintenance. The SCSJV section of the conveyor will operate 24/7 to support the continuous operation of the tunnel boring machines as they build the HS2 tunnels.

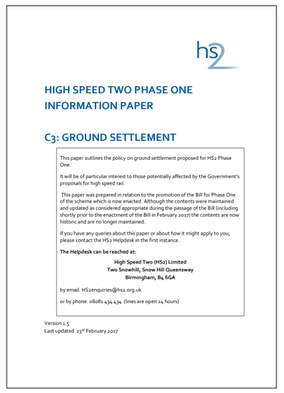
Frequently Asked Questions (FAQ)

To view our FAQ about the conveyor system, scan the QR code to the right or visit **www.hs2.org.uk/in-your-area/local-community-webpages/hs2-in-old-oak-and-north-acton/**

Managing settlement

Settlement is the technical term for the way the ground moves around a hole after it has been dug out. Building tunnels, shafts and basements can cause a small amount of movement to the ground, but we know how to limit the effects of this movement on buildings.

HS2 is responsible for any damage caused to your property as a result of our works.



HIGH SPEED TWO PHASE ONE
INFORMATION PAPER

C3: GROUND SETTLEMENT

This paper outlines the policy on ground settlement proposed for HS2 Phase One.

It will be of particular interest to those potentially affected by the Government's proposals for high speed rail.

This paper was prepared in relation to the promotion of the Bill for Phase One of the scheme which is now enacted. Although the contents were maintained and updated as considered appropriate during the passage of the Bill (including shortly prior to the enactment of the Bill in February 2017) the contents are now historic and are no longer maintained.

If you have any queries about this paper or about how it might apply to you, please contact the HS2 Helpdesk in the first instance.

The Helpdesk can be reached at:

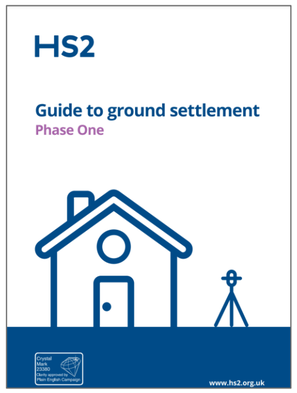
High Speed Two (HS2) Limited
Two Snowhill, Snow Hill Queensway
Birmingham, B4 6GA

by email: HS2enquiries@hs2.org.uk

or by phone: 08081 434 434 (lines are open 24 hours)

Version 1.5
Last updated: 23rd February 2017

[Information Paper C3: Ground Settlement]



HS2

Guide to ground settlement
Phase One

www.hs2.org.uk

[Guide to ground settlement]

Assess

- Well established process to assess possible impacts of tunnelling works
- Conservative assessment that identifies properties that might be impact in the initial phases

Monitor

- Specialist equipment will be installed to monitor ground movements before, during and after construction.

Record

- We will offer condition surveys to properties that are eligible
- If you accept the offer, condition surveys are conducted within three months of the tunnelling impact to your property

Protect

- Structures that have been identified as at risk of being damaged will be protected

Repair

- If you are concerned about damage to your property resulting from our works you can contact us
- We will carry out a post-condition survey after the works if you believe damage has occurred as a result of our works

Managing impacts during tunnelling

Construction activities generate physical vibration and noise, which may cause temporary disruption to local properties.

Managing noise and vibration

We're designing and building HS2 in ways that reduce noise and vibration from our construction works as much as possible. The **HS2 Code of Construction Practice** outlines the measures we will implement to control and reduce noise and vibration during the construction of HS2.

- Managing noise and vibration at the location of our construction activities ('at source')
- Using 'Best Practicable Means' and keeping our construction methods under review
- Constant monitoring of noise and vibration during our works

Find out more

To find out more about how we manage the impacts of construction and view the HS2 Code of Construction Practice, scan the QR code to the right or visit **www.hs2.org.uk/in-your-area/managing-impacts-of-construction**

Protecting your property

The **High Speed Rail Act 2017** automatically protects your property from damage as a result of our work.

We offer property owners within 30 metres (m) of excavation work a settlement deed, and we will write to you if your property is eligible. A settlement deed is a formal legal agreement between a property owner and HS2. We will put right any damage whether or not you have a deed.

If you notice damage to your property

We know that cracks in your property can be alarming. If you notice cracks in your property and think that these are related to HS2 works, please contact the HS2 Helpdesk. You will be asked to complete a small claims form with information about the cracks you have noticed, and this will be investigated on a case-by-case basis.

Special circumstances

We know that planning and building the railway disrupts the lives of local people. We will always try to do the right thing and reduce disruption as much as we can.

HS2 recognises that, in some instances, buildings and the people who live in them may not be properly protected by our policies and that we need to consider these 'special cases' individually.

HS2 have set up a panel to oversee and manage the assessment of all special case applications. We actively encourage individuals to make themselves known to HS2 or us so that any individual circumstances can be considered by the panel.