

## 1MC12 - Stage 2 - Main Works Civils for C2 and C3 Sectors

# Newsletter - Twyford to Greatworth Autumn 2022

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P01	November 2022	Brenna Slade				

Stakeholder review required (SRR)	Purpose of SRR
<input type="checkbox"/> County / District / London Borough Council	<input type="checkbox"/> Acceptance
<input type="checkbox"/> LOV	<input type="checkbox"/> Approval
<input type="checkbox"/> LUL	<input type="checkbox"/> No Objection
<input type="checkbox"/> NRL	<input type="checkbox"/> Consent
<input type="checkbox"/> TFL	
<input type="checkbox"/> Utilities Company	
<input type="checkbox"/> Other (please specify)	

Contact our HS2 Helpdesk team on **08081 434 434**



# HS2 Update

Twyford to Greatworth | Autumn 2022

High Speed Two (HS2) is the new high speed railway for Britain. We are following Government and Public Health England (PHE) advice on working safely during the pandemic. The health and safety of our workforce and the communities we work within is our priority. You can sign up for regular updates in your local area at [www.hs2inyourarea.co.uk](http://www.hs2inyourarea.co.uk).

## Update on our continuing works

Looking ahead over the next three to six months, between Twyford to Greatworth (T2G) you will continue to see:

- utility survey and diversion works (including electricity, water and sewage);
- excavation and movement of earthworks;
- localised vegetation clearance;
- piling works for the foundation of our main structures;
- watercourse management;
- continued set up of compounds; and
- delivery of precast components for our viaducts and bridges.

In this update you will also find information on our construction progress and overviews for the Westbury Viaduct, footbridges and road bridges and our utility works along the A4421 and A421. We will also provide an update on abnormal load movements for the delivery of components to construct our main structures as well as our earthworks activities including information on the Barton Hartshorn to Mixbury Cutting, which is the longest section of cutting along the entire route of HS2.

We are also delighted to share updates on our social value projects, volunteering and ecology work in T2G. This includes our partnership with the British Black Bee Conservation Project with the first beehives being installed at one of our sites in Halse Copse this October as well as a short update on our Barn Owl mitigation progress.



## Join us ...

You can expect to see our mobile visitor centre visiting a town near you! This specialised vehicle enables us to increase the reach and visibility of our local engagement team, while giving communities a safe, comfortable space where they can find out more about the HS2 project and the work EKFB do.

Please contact the HS2 Helpdesk or visit [hs2.org.uk/events](http://hs2.org.uk/events) for more information on events in your area.

[www.hs2.org.uk/events](http://www.hs2.org.uk/events)



## Utility Works

As we continue our utility works, we will be diverting underground cables along the A4421. We

will be working in the verge very close to the road. For reasons of safety, the A4421 will have traffic management 24-hours a day until these works are completed in spring 2023.

As the project progresses will also be carrying out further utility diversions before the construction of our main structures such as the A421 London Road Overbridge and the Turweston Green Overbridge as well as the many cuttings we are creating. These utility works will include diversions of water mains, electricity mains, BT and telecom cables as well as gas mains.

In 2023 we are planning to install some culverts for watercourse diversions in T2G. These culverts allow water to pass under the railway and may take up to 6 months to install.

## A43 Compound update

Our A43 Compound officially opened at the end of October. Our teams working on the construction of the A43 Overbridge will be based at this site. Our earthworks teams who are responsible for the Brackley Cutting will also use being using this compound.



Figure 1: This image shows what the interior of the offices at the A43 Compound look like, October 2022.

## Abnormal Loads

As we begin the main construction of viaducts and overbridges in the local area, we may periodically receive deliveries of abnormal loads to our sites.

An abnormal load is a load which, due to its weight or dimensions, cannot be carried on a conventional goods vehicle and requires a special vehicle and arrangements for its transport. These deliveries often include very large construction machinery such as cranes and piling rigs.

For the safety of road users and our staff, these abnormal loads may require temporary traffic management in the form of a lane closure to provide enough space for the vehicles to safely turn into our construction sites.

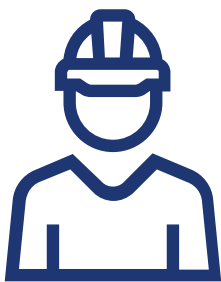
## A422 Compound

In the winter of 2021 and spring of 2022, the A422 compound located in Westbury was assessed by the Considerate Constructors Scheme.

These assessments scored the A422 Compound in the following areas: the appearance of our site, the wellbeing of our workforce, our work with communities and schools, how we are protecting the environment and health and safety. We are proud to share that the A422 Compound scored 43 points out of 45 – which translates to “excellent.”

Throughout the autumn we have been carrying out resurfacing works to the internal roads of our compound as well as installing dimmable street lighting for safety and security.

We will also be enhancing our wheel washing measures at the compound to help reduce mud on the local road network through the winter.



## Road Bridges

We began works for the A421 temporary bridge in early September 2022. This bridge is for our internal road network and is expected to be completed

in November 2022.

We will also be constructing a new site entrance along the A421 near the bridge. While these works are carried out there will be temporary traffic management in the form of two-way traffic lights beginning this autumn and carrying on until spring 2022.

The A421 Overbridge will carry traffic over the railway and along the newly aligned A421 road. The bridge will be constructed in stages. First, we will carry out piling to create the underground foundations of the bridges. The geological conditions allow us to use a process called bored piling, where deep holes are drilled into the ground and filled with reinforced concrete. We were able to begin our piling works for the bridge this November.

Once the piling works are complete, the piles will be capped. This is where a reinforced concrete slab is constructed on top of the piles to evenly spread the load they are to carry. Our teams will then begin constructing the concrete piers which are concrete columns that will support the bridge. These works are planned to be carried out in early 2023 and we will begin receiving deliveries of steel beams for the bridge deck by summer 2023.

Throughout the autumn and winter, we will continue to carry out early works in preparation for the main construction of the A4421 Overbridge. This is the only permanent structure where construction has already started in T2G.

In September, we completed the installation of 18 piles for the overbridge and the new A4421 road.

The A4421 bridge will be constructed from precast segments, helping further reduce our impact on the local area. Using precast segments eliminates the need to have large, factory type manufacturing on site within small rural locations. It also significantly reduces the construction time required.

## Volunteering

During October half-term, members of the construction team volunteered at a local school to renovate their outdoor area. This was to help the school continue their outdoor Forest School lessons.

These works were carried out over two days and involved repurposing disposable fencing posts to build six planters, removing 19 tyres the school no longer wanted in the playing field and constructing a new shed and new fencing in the school grounds.



*Figure 2: The image above shows some of the volunteers who helped renovate a local school's outdoor area.*



## Earthworks and the Barton Hartshorn to Mixbury cutting

We continue to make excellent progress with our earthworks activities. These works will begin to slow down as we enter winter before gathering pace again once the weather begins to warm in the spring.

Our earthworks in the area are mainly focused on the construction of cuttings. A cutting is created through the excavation of soil that will allow the rail line to pass through surrounding ground. Cuttings are used as part of railway construction to reduce noise, reduce visual impact and to keep the track level. In total, there will be 70 cuttings to keep the railway level as it crosses the countryside between London and Birmingham.

The area between Twyford and Greatworth will have eight cuttings. This figure includes the longest cutting on the project known as the Barton Hartshorn to Mixbury cutting.

Excavations for the Barton Hartshorn to Mixbury cutting are making good progress. The 2.5 mile (4.1km) cutting, near Brackley, will be the project's longest cutting with 1.3 million cubic metres of material set to be excavated in stages over the next three years.

Running across the boundaries between Buckinghamshire and Oxfordshire, the cutting will be up to 11m deep and will be crossed by six road, foot and bridleway bridges in order to keep communities connected.

Material from the excavation – expected to be a mix of clay, sand, gravel and limestone – will be reused elsewhere on the project to help create embankments,



Figure 3: Excavation works at the Barton to Mixbury cutting, September 2022.

noise barriers and landscaping. Sourcing these materials on site also helps to reduce the number of lorries on local roads.

Across the 80km section of the HS2 route through Buckinghamshire, Oxfordshire and West Northamptonshire, we will be moving approximately 36 million cubic metres of earth and rock over the next three years. Around 99% of this will be moved within HS2 land using our dedicated network of haul roads to reduce traffic on public roads.

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*1.9 million cubic metres of rock and earth that will be excavated to create the two longest cuttings on the project– will be enough to fill the Royal Albert Hall more than twenty times.*

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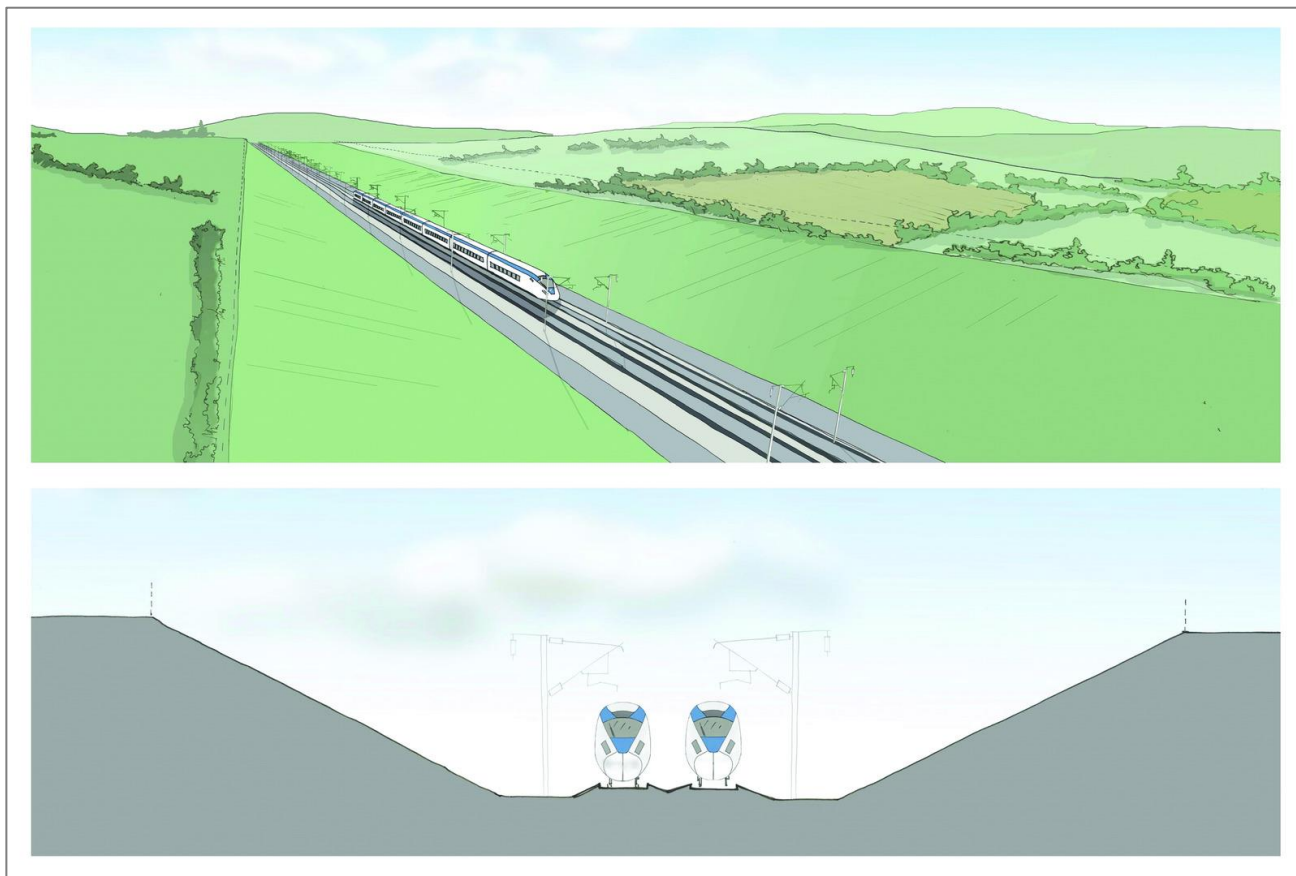


Figure 4: The image above is an illustration of what a railway cutting looks like.



Figure 5: The image above is from one of our cuttings and shows how our teams carry out excavation works using large hydraulic diggers.

## Viaducts

HS2 will build more than 500 bridges along the route – including over 50 major viaducts which will stretch for a combined total of 15km (9 miles) across valleys, rivers, roads and flood plains.

In the area between Twyford and Greatworth we will be building 5 viaducts:

- **Turweston Viaduct**
- **Westbury Viaduct**
- **Godington East Viaduct**
- **Godington West Viaduct**
- **Twyford Viaduct**

This October 2022, our teams began works for the Westbury Viaduct which include piles and drains in the north embankment. The Westbury viaduct, located west of Westbury, will carry the railway over the River Great

Ouse approximately 10m-12m above existing ground level.

The Westbury Viaduct will be the longest viaduct of the five we are constructing in the section of route between Twyford and Greatworth. Spanning 320 metres in length with 7 evenly spaced piers to support the deck of the viaduct, it will be nearly as long as 3 football pitches put together.

The construction methodology that will be used for this viaduct is innovative in that it will be built with a 'double composite' structure, using significantly less carbon-intensive concrete and steel in comparison to a more traditional design.

The Westbury Viaduct is planned to be completed in Spring 2025.



*Figure 6: The computer-generated image (CGI) above is an elevation view of the Westbury Viaduct.*





## Footbridges

In July 2022, HS2 revealed the first images of the bridges that will carry rural footpaths and bridleways across the

new high-speed railway as it passes through Buckinghamshire, Oxfordshire and West Northamptonshire. Construction on the footbridges between Twyford and Greatworth is expected to begin in 2024 and will allow the public to travel over the railway.

Made of weathering steel– which ages naturally to a russet brown colour – the sides of the lightweight bridges will lean outwards to maximise views of the sky and improve the experience of people crossing the railway.

To emphasise the sense of lightness, each span will be slightly higher in the middle so that they appear to leap over the railway. Most of the bridges will consist of just one 42m span, with extra spans added where necessary to create bridges of up to 102m long.

In order to improve efficiency of manufacturing and assembly, all the bridges will have the same basic form, with the approach paths built into the earthworks on either side of the bridge. This also means that all the footbridges will effectively be step-free.

Designed with guidance from the British Horse Society, the bridges which carry bridleways will follow the same basic pattern, with a recycled, non-slip rubber deck and the structure will help mitigate any noise to stop horses being distracted by passing trains.

Footbridges will be 2.5m wide, while bridleways will be 3.5m wide to allow two horses to pass comfortably and safely.

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## HS2 Architect Ben Addy said:

*“The design team looked at how we could make the bridge approaches and the landscape around them completely accessible to create a seamless user experience for all, whether travelling on foot, on bike, on horseback or with any type of mobility aid.”*

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Figure 7: The CGI above show, the HS2 rural footbridge design from the side with passing train below.

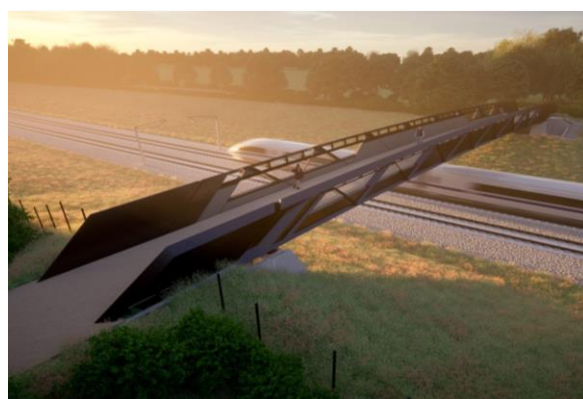


Figure 8: The CGI above shows the HS2 rural footbridge design as viewed from above with train passing below.



## British Black Bee Conservation Project

The first 2 of 14 beehives have been installed on a wildlife site created by HS2 in Northamptonshire, as part of a unique partnership with the Great British Bee Project (GBBP) to protect and expand populations of the endangered British Black Bee – Britain’s only native bee species - across the UK.

To mark the occasion, school children from The Radstone Primary School visited the site to name the queen bee ‘Lillibee’. A shortlist of names was chosen and voted on by the School Council, which is made up of 12 children aged between 7 and 11, who said they put forward the name as a tribute to the late Queen Elizabeth II.

The collaboration was part of HS2’s local education and engagement programme. The team worked with The Radstone Primary School in Brackley, Northamptonshire, to organise an outdoor learning seminar for the children alongside the beehive installation.

The seminar was focused on pollination and the wildlife in their area, and the children had the opportunity to learn more about careers in the fields of ecology and the natural environment.



*Figure 9: The three images above are from the installation of the first beehives in Northamptonshire.*



Scan this QR code by opening the camera app of your smart phone and pointing your phone at the QR code to watch a video celebrating the first beehives installed on an HS2 site.



## Barn Owls

We are happy to share that in addition to our normal construction activities in Twyford, this August 2022 we captured a photo of a

Barn Owl making use of one of the mitigation boxes installed along the route.

HS2 continues to support the breeding population of Barn Owls by creating up to 240 new artificial nest sites at least 3km from the railway

To date, 135 temporary nesting sites have been installed, which will significantly reduce nest disturbance to the species while the railway is being constructed.



*Figure 50: The image above shows a Barn Owl using one of the mitigation boxes in August 2022.*

## Frequently Asked Questions

### Some of our most commonly asked questions in your area

#### **Q: I'm concerned about mud on my local roads from your construction sites.**

A: We have a suite of road sweepers that are operational throughout our normal working hours, they cover our HGV routes as well as locations near our sites and compounds. Alongside this we have our Traffic Safety Control Officers who are on site daily, monitoring the road conditions, traffic congestion and more.

#### **Q: Why are your worksites lit up at night?**

A: We have 24/7 security at our construction sites and therefore we need appropriate lighting for the safety and welfare of our security staff. Where possible we switch off the majority of lights overnight and we ensure all lighting is correctly positioned and monitored in line with HS2's Code of Construction Practice.

#### **Q: How can I get a quick response to a construction related query?**

A: The HS2 Helpdesk is open 24 hours a day (08081 434 434 / [HS2enquiries@hs2.org.uk](mailto:HS2enquiries@hs2.org.uk)) and we thank you for raising your queries, comments and concerns with us – these allow us to improve how we work. In your area EKFB are now responding to your queries and complaints within 3.5 working days on average.

# Keeping you informed

We are committed to keeping you informed about work on HS2. This includes ensuring you know what to expect and when to expect it, as well as how we can help.

## Residents' Charter and Commissioner

The Residents' Charter is our promise to communicate as clearly as we possibly can with people who live along or near the HS2 route.

[www.gov.uk/government/publications/hs2-residents-charter](http://www.gov.uk/government/publications/hs2-residents-charter)

We also have an independent Residents' Commissioner whose job is to make sure we keep to the promises we make in the Charter and to keep it under constant review. Find reports at:

[www.gov.uk/government/collections/hs2-ltd-residents-commissioner](http://www.gov.uk/government/collections/hs2-ltd-residents-commissioner)

You can contact the Commissioner at:  
[residentscommissioner@hs2.org.uk](mailto:residentscommissioner@hs2.org.uk)

## Construction Commissioner

The Construction Commissioner's role is to mediate and monitor the way in which HS2 Ltd manages and responds to construction complaints. You can contact the Construction Commissioner by emailing:  
[complaints@hs2-cc.org.uk](mailto:complaints@hs2-cc.org.uk)

## Property and compensation

You can find out all about HS2 and properties along the line of route by visiting:

[www.gov.uk/government/collections/hs2-property](http://www.gov.uk/government/collections/hs2-property)

Find out if you're eligible for compensation at:

[www.gov.uk/claim-compensation-if-affected-by-hs2](http://www.gov.uk/claim-compensation-if-affected-by-hs2)

## Holding us to account


If you are unhappy for any reason you can make a complaint by contacting our HS2 Helpdesk team. For more details on our complaints process, please visit our website:

[www.hs2.org.uk/how-to-complain](http://www.hs2.org.uk/how-to-complain)

## Contact Us

Contact our HS2 Helpdesk team all day, every day of the year on:

 Freephone **08081 434 434**

 Minicom **08081 456 472**

@ Email **[HS2enquiries@hs2.org.uk](mailto:HS2enquiries@hs2.org.uk)**

Write to:

**FREEPOST**

**HS2 Community Engagement**

Website **[www.hs2.org.uk](http://www.hs2.org.uk)**

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**[www.HS2inyourarea.co.uk](http://www.HS2inyourarea.co.uk)**

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