



Green tunnel update, Chipping Warden

May 2022 | www.hs2.org.uk

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. If you have any questions about this, please contact our Helpdesk to find out more. You can sign up for regular updates in your local area at www.hs2inyourarea.co.uk.

What are we doing?

In Chipping Warden, we are currently carrying out preparatory works for the Chipping Warden Green Tunnel. A green tunnel, or cut-and-cover tunnel, is where a trench is excavated, tunnel structure built, then the land on top of the tunnel is restored so it blends into the landscape.

Our green tunnels will form part of the HS2 network that will help boost the economies of the Midlands and the North, free up space for passengers on local and regional trains and provide a zero-carbon rail network as a lasting legacy for Britain's cleaner, greener future.

In preparation for the main construction phase of the Chipping Warden Green Tunnel, we will soon begin receiving deliveries of precast tunnel segments.

The deliveries of these tunnel segments will be classed as abnormal loads and you will see HGVs carrying these distinctive, curved concrete structures to our Chipping Warden compound. In order to deliver our widest segments safely, we will require a southbound carriageway closure of the A361 on Sunday mornings. The southbound lane closure is required to allow the wide loads to safely pass through the narrow sections of highway near Wardington.



When will these works take place?

Construction of the Chipping Warden Green Tunnel is expected to commence from May 2022.

We expect deliveries to take place Monday to Friday, with approximately 10 - 15 deliveries each day. Wherever possible, we will minimise the impact on highway users by coordinating deliveries to avoid peak times.

To safely deliver our abnormal loads, the southbound carriageway of the A361 will be closed off-peak, for approximately 2 hours, early on Sunday mornings from the 15 May, subject to consents. We will make improvements and adjustments to this process once our initial deliveries are complete.

Construction of the tunnel is expected to be fully complete in 2024.

If you have a question about HS2 or our works, please contact our HS2 Helpdesk team on 08081 434 434 or email hs2enquiries@hs2.org.uk

Duration of works

Works will commence from the middle of May 2022.

Construction of the tunnel is expected to be complete in 2024.

Our construction programme with further details is included in this update.

What to expect

We expect to receive deliveries of pre-cast tunnel segments in May 2022.

Off-peak southbound closure of the A361 on Sunday mornings to deliver our widest precast segments.

Access for residents will be maintained on Sunday mornings.

While we build the tunnel, we will continue to receive deliveries of precast segments until 2024.

What we will do

Minimise disruption as much as possible for the community by careful timing of deliveries.

Provide updates for communities and maintain regular contact with emergency services.

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When will construction begin?

The Chipping Warden Green Tunnel will be the first green tunnel to be constructed on the HS2 project.

The segments for the green tunnel will be built in a factory in Derbyshire and then transported to Chipping Warden so they can be assembled within the excavated tunnel trench. Once in place, the segments will be covered with earth and landscaped to blend into the surrounding countryside.

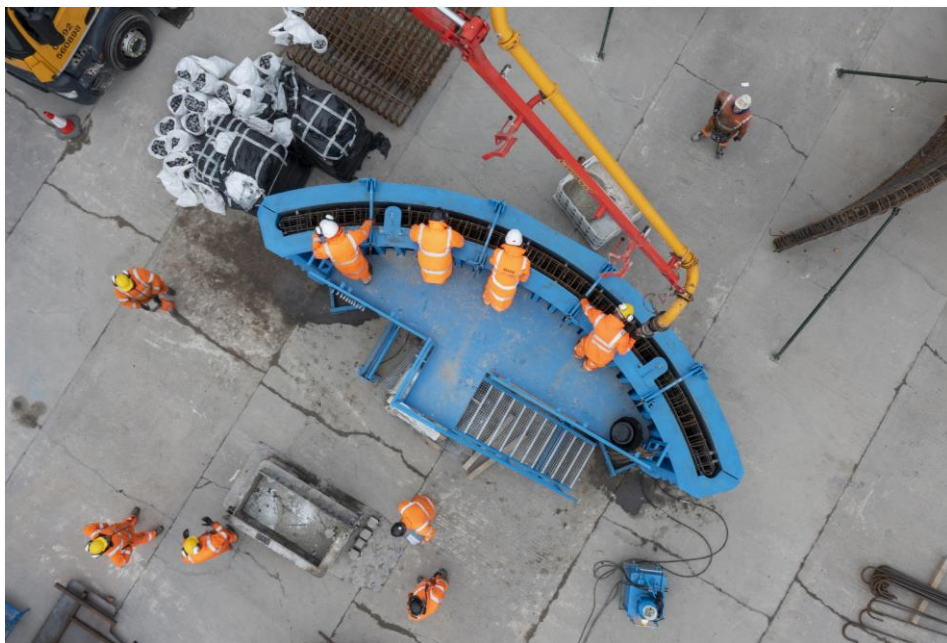


Figure 1: The image above shows part of the precast segments being constructed.



Why are you using a precast tunnel segments?

For the Chipping Warden tunnel, just under 5000 individual tunnel segments will be produced by Stanton Precast in Derbyshire.

The precast method uses approximately half the amount of concrete, 20 percent less steel and significantly reduces the construction time required. It also eliminates the need to have large, factory type manufacturing on site within small rural locations.

We have also carefully considered the material choices for this structure. Concrete and steel are some of the biggest sources of carbon emissions within the construction industry and by reducing the amount of both materials needed for the tunnel, it is also expected to more than halve the amount of carbon that would have been embedded in the structure. It also requires less people and equipment on site, improving safety and reducing disruption for residents.

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How will you construct the green tunnel?

Construction will be divided into three stages:

- Firstly, a cutting is excavated where the green tunnel is needed. The excavated earth is kept close by, as it will be needed later to backfill.
- In the second stage, once the concrete floor has been laid, pre-cast segments are installed forming the structure of the tunnel.
- The final stage occurs after the tunnel segments have been installed. Earth is back-filled, new trees and shrubs are planted and the tunnel blends into the landscape. Once the land is restored to countryside, wildlife habitats are able to connect along the line of route. This is why they're known as green tunnels.

Designed as a double arch, the tunnel will have two separate halves for southbound and northbound trains. Five different concrete precast segments will be slotted together to achieve the double arch – one central pier, two side walls and two roof slabs. Each one will be steel reinforced, with the largest weighing up to 43 tonnes.

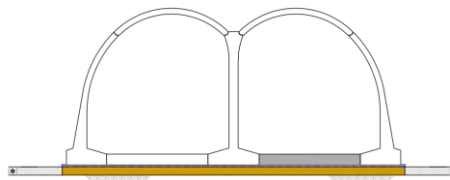


Figure 2: Above is an example of the double arch design we will be using for the Chipping Warden Green Tunnel.

The tunnel will have specially designed 'porous portals' at either end to reduce the noise of trains entering and exiting the tunnel and small portal buildings to house safety and electrical equipment.

Construction phase summary

Phase	Activity
Phase 1	Construction of the central tunnel area between the A361 Byfield Road and Apple Tree Lane. Construction of this section will be completed in 2022*
Phase 2	Construction of the northern section of tunnel near Appletree Lane to the northern tunnel portal near Aston Le Walls. This section will commence in late 2022 and will be completed by late 2023*.
Phase 3	Construction of the southern section from the south tunnel portal to the A361 Byfield Road. This section will commence in mid 2023 and will be completed mid 2024*

*Dates may be subject to change due to ground conditions and other factors.

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Where will the green tunnel be located?

The map below, shows where the Chipping Warden Green Tunnel will be located.

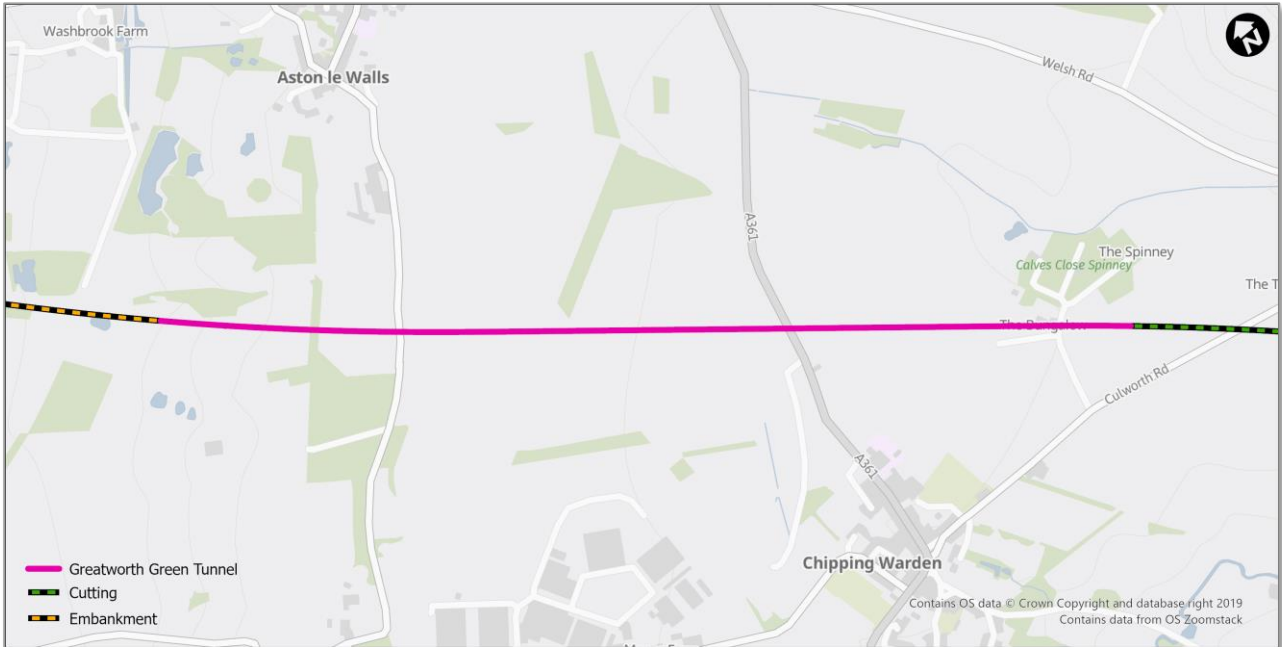


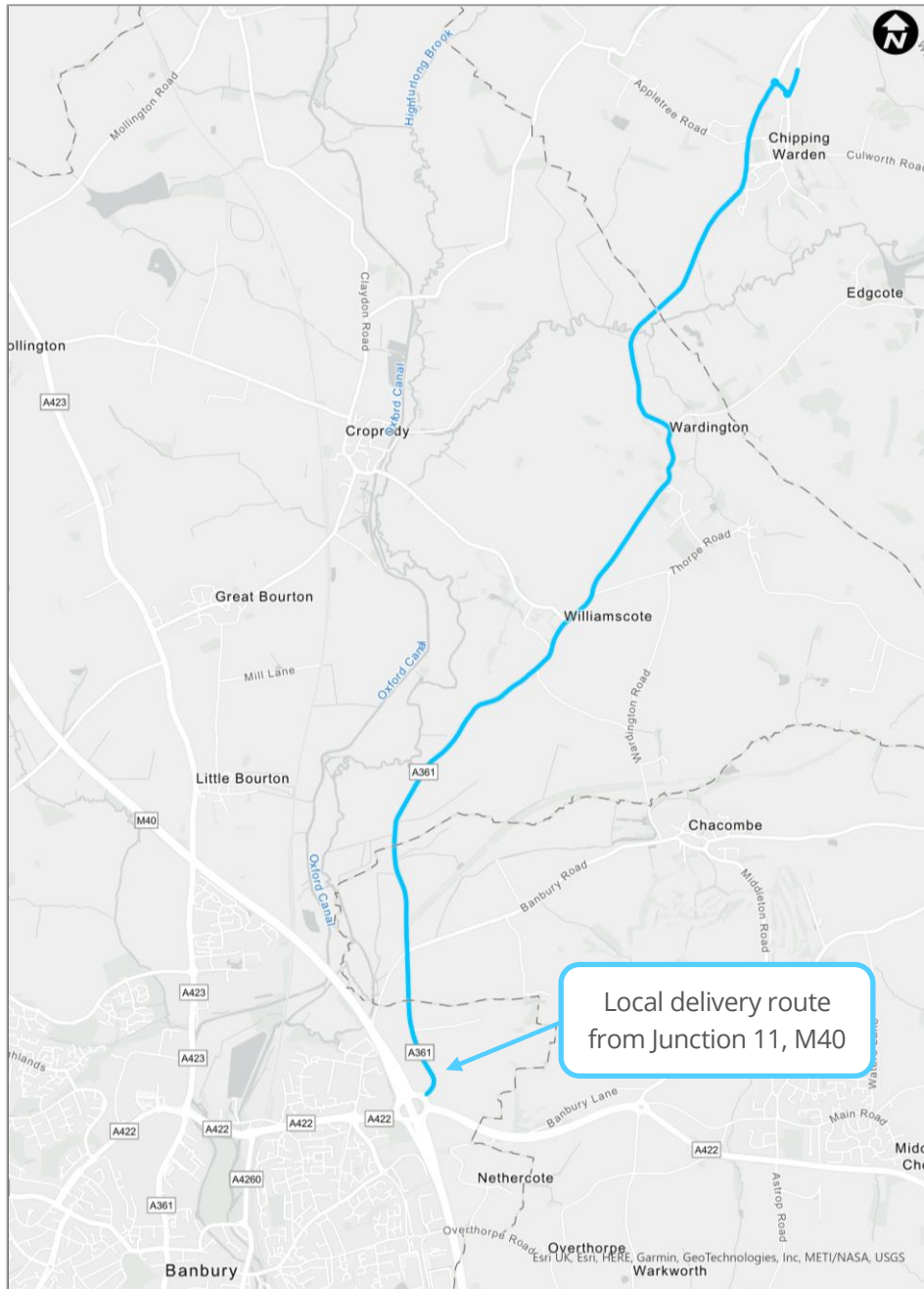
Figure 3: The above image is an aerial photograph, looking across the A361 from the East, showing our preparatory works for the Chipping Warden Green Tunnel, April 2022.

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What route will be used to deliver the tunnel segments?

The tunnel segments will be delivered from Derbyshire, via the M40, where they will exit at Junction 11 for Banbury. They will then begin their journey north on the A361 travelling through Wardington Village to our Chipping Warden Compound.



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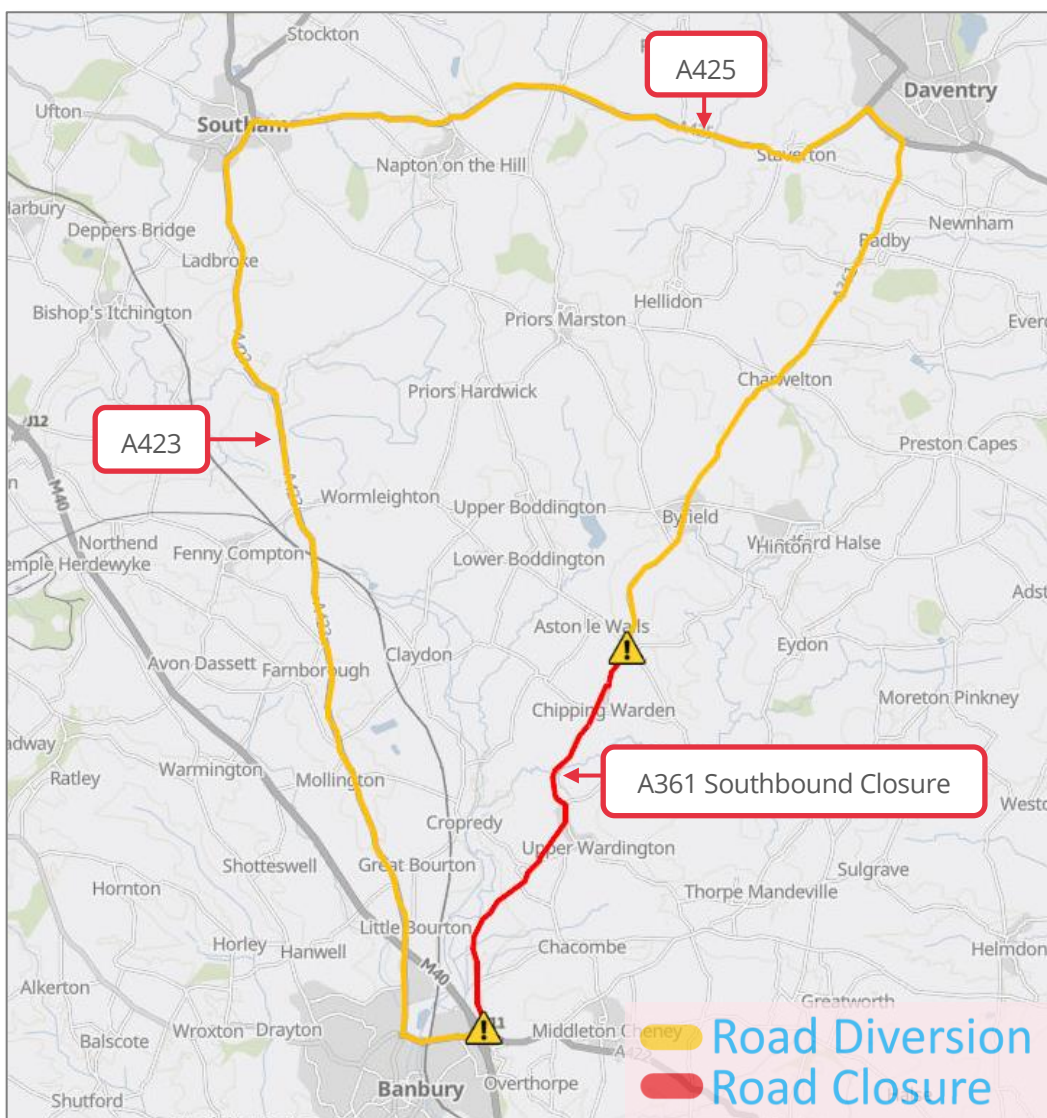


What is the diversion route for Sunday closures?

For the safety of all road users, the southbound carriageway of the A361, from the M40 roundabout for Banbury to Chipping Warden, will be closed while we make these deliveries.

The map below shows the closure and diversion route, consisting of like for like roads. The first closure on Sunday 15 May 2022, subject to consents, will commence at 7am and last approximately 2 hours. The following Sundays we anticipate these deliveries will take place from approximately 5am. Times may vary and may change depending on circumstances outside of our control.

We will continue to develop the best delivery method for our widest tunnel segments.



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What will the Chipping Warden Green Tunnel look like?

Tailored landscaping design plans are being developed, with thousands of native trees and shrubs typical to the local area planted to create new woodland areas around the portals and recreate the hedgerows and field boundaries on top of the tunnel.



Figure 4: The Computer-Generated Image (CGI) above, is an artist's impression of what the north portal of the Chipping Warden Tunnel.

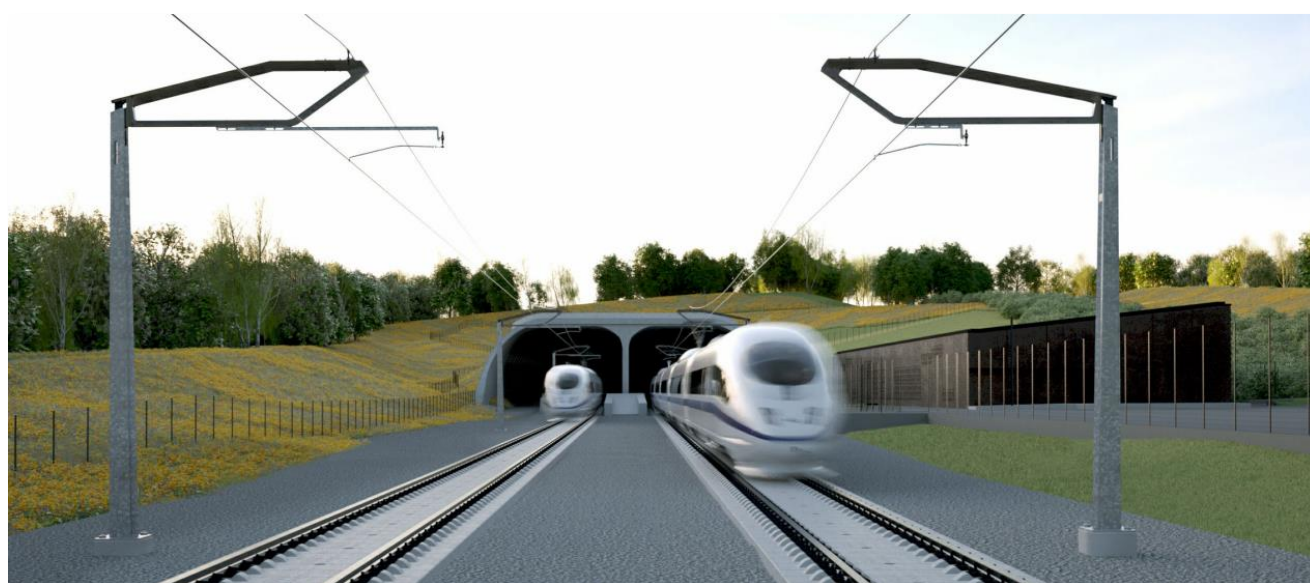


Figure 5: The above CGI is a trackside view of the north portal.

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

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

You can contact the Commissioner at: 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

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
Find out if you're eligible for compensation at: 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

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**

Write to:

FREEPOST

HS2 Community Engagement

Website **www.hs2.org.uk**

To keep up to date with what is happening in your local area, visit: **www.hs2inyourarea.co.uk**

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