The HS2 route in the Chilterns and Colne Valley

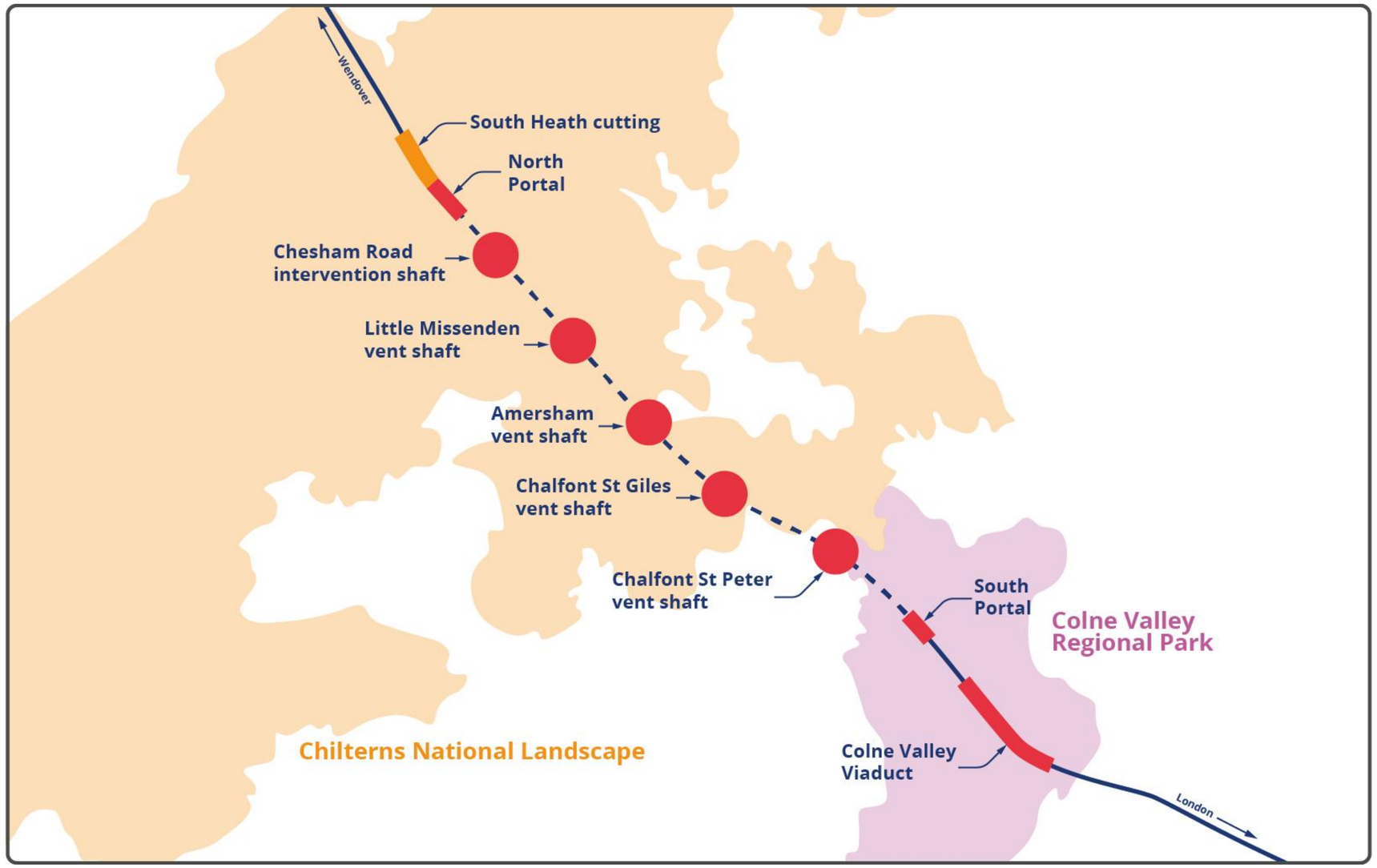
We are working to build the HS2 railway in the Colne Valley and Chilterns.

What we are doing

Align is working in partnership with HS2 Ltd to build over 22 kilometres of the high speed rail line, running between the Colne Valley and under the Chilterns to the South Heath cutting near Great Missenden. It includes the 3.4km-long Colne Valley viaduct and the Chiltern tunnel which has four ventilation (vent) shafts to regulate airflow, and one intervention shaft.

These shafts and the portal buildings at each end of the tunnel will contain electrical equipment to manage the flow of air between the shafts.

We hold regular information events to share details on progress of designs and construction.



Map showing Align's key HS2 construction sites in the Colne Valley and Chilterns

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Welcome

Welcome to our update event for the design of the Leather Lane green overbridge.

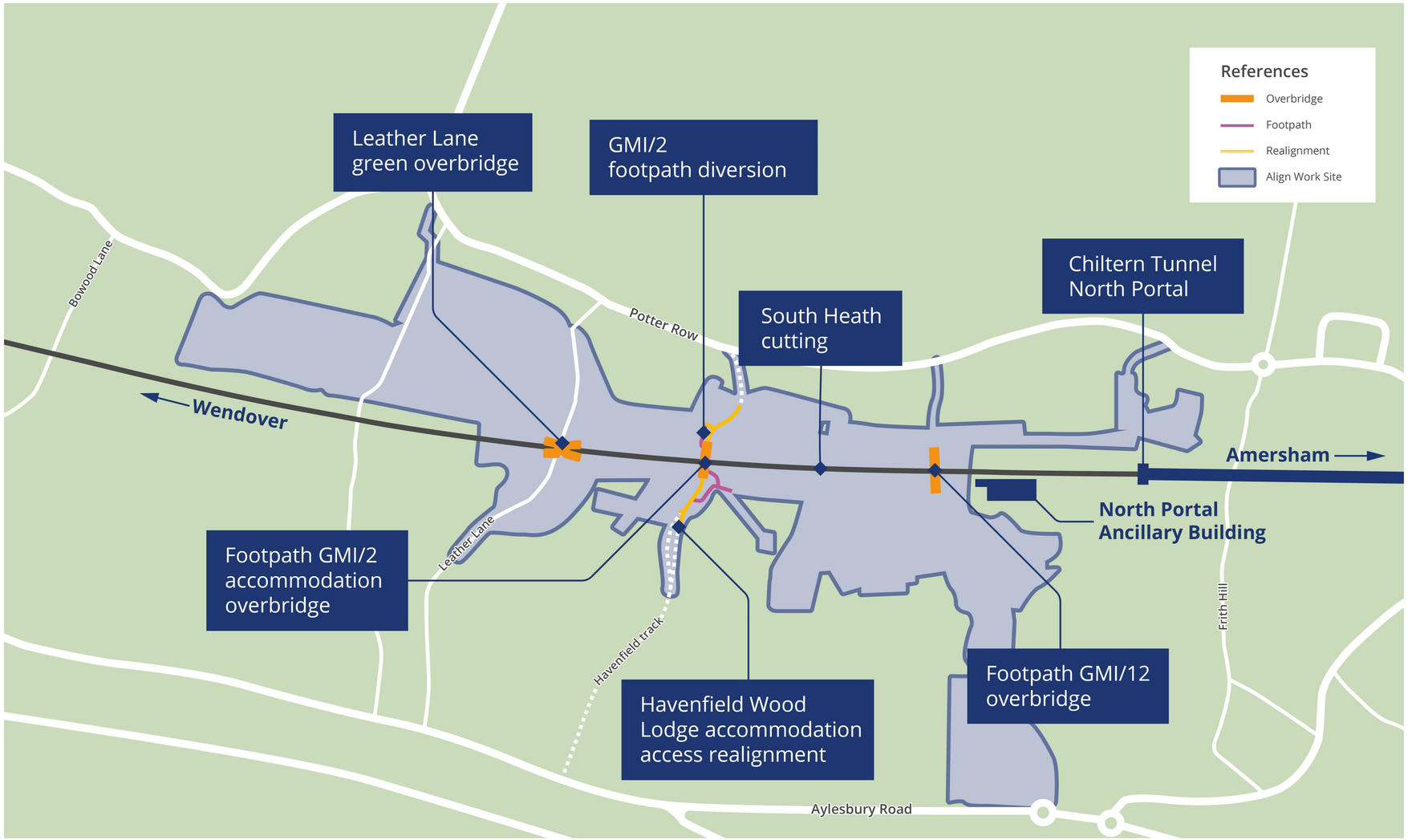
Align JV's work in your area

Align JV began construction work on the South Heath cutting between South Heath and Leather Lane in July 2024. Our works area includes the construction of three overbridges GMI/2, GMI/12 and the proposed crossing at Leather Lane.

Over the last 18 months we have been working to prepare design proposals to create a green overbridge and realign Leather Lane, near Great Missenden.

We have now submitted our design proposals to Buckinghamshire Council.

We are sharing these designs today. We welcome any questions that you have about the new plans.



Map showing Align's work site including South Heath cutting and Leather Lane green overbridge.

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Site Context

Leather Lane and the surrounding area presents a unique landscape and ecological context, including the tree-lined holloway lane and the “Lone Oak”.

The area surrounding Leather Lane, near Great Missenden, in Buckinghamshire is rural in character and is surrounded by a mosaic of arable and grazing agricultural land, with occasional paddocks. These fields are small to medium sized and are well-defined by mature hedgerows with intermittent mature trees, which connect isolated blocks of oak and beech woodland.

Leather Lane itself is characterised by its historic holloway – a narrow sunken lane – containing a line of mature trees, mostly oak (Quercus robur). These trees act as a visual and ecological connection from the Misbourne valley edge to the plateau above.

The mature trees lining Leather Lane are the most important ecological feature in the Leather Lane area.

They provide connectivity across the landscape, and surveys show these to be an important feature for foraging and commuting bats. The lane is used by a diverse variety of bats (at least nine species) with the rare Barbastelle bat being regularly recorded.

To the south of Leather Lane is the tree which has become known as the “Lone Oak” or “Ilona”, which is listed on the Ancient Tree Inventory as a notable tree by the Woodland Trust.

Leather Lane existing holloway character

Barbastelle bat (Barbastella barbastellus)

Existing tree line along Leather Lane

“Lone Oak” (Quercus robur)

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Leather Lane Design Principles

Our design responds to the unique nature of Leather Lane.

Detail design principles

The Chilterns Area of Outstanding Natural Beauty (AONB) HS2 Detailed Design Principles document was produced on behalf of the AONB Review Group in collaboration with the following organisations: Chilterns Conservation Board, Chiltern District Council, Aylesbury Vale District Council, Natural England and HS2 Ltd.

We have closely followed these principles to create a design which is sensitive to landscape and ecological setting throughout the Chilterns, including at Leather Lane.

Design principles	Chilterns National Landscape detail design principles	HS2 / ALIGN - Principles
Connected	**Greening of bridges** should be considered to minimise disruption to wildlife movement and habitat connectivity. **Improve integration** with the landscape surroundings.	**Maximised tree retention** to reduce impact to the bat corridor. Retention and creation of **hedgerows to maximise connectivity.**
Cohesive	Character of the **holloways** should be conserved. Their character should be reflected in the design of the new sections.	The character of the sunken **holloway of Leather Lane** retained and replicated across the railway.
Integrated	Railway structures design to be site specific reflecting both **landscape context and landform.**	**Railway features lowered** in the landscape, with **proposed screening** from earthworks and planting minimising visibility whilst maintaining historical character.
Responsive	**Reduce ecological fragmentation** by facilitating ecological connectivity across the route. Hunt's Green Farm landform and planting that retains openness.	Large areas of open calcareous grassland, with contextually appropriate contouring to **retain open character** and **enhance biodiversity.**
Enduring	**Highest quality design** adopted to create elegant features of interest, complementary to the character and beauty of the Chilterns.	**Simple, refined design fully integrated into associated features,** such as highways and fencing. Robust and durable material palette to achieve a **high-quality finish** over a 120-year design life.

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Landscape and Ecology Masterplan

The realignment of Leather Lane is based on the avoidance of trees and minimising harm to impacted trees, with care taken to align and reconnect the highway through the tree line in locations which have the least impact on existing trees.

Priority has also been given to protecting high quality oak trees, which provide landscape character and ecological connectivity, especially for bats.

Key

- Ecological connectivity across HS2
- Application boundary
- 1 Existing tree line retained
- 2 “Lone Oak” and hedgerow
- 3 Green tunnel crossing
- 4 HS2 railway cutting
- 5 Mid Point Auto Transformer Station (MPATS) location
- 6 Proposed woodland/woodland edge
- 7 Drainage basin

Landscape masterplan

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Landscape and Ecological Elements

New habitat creation will enhance biodiversity in the Leather Lane area. We will use existing soils and native plant species to form characteristic and defining habitats – replacing agricultural land which was low in diversity.

Invertebrate and botanically rich chalk grassland to the east of the railway will be connected to woodland and scrubland to the west, by the green overbridge, forming a diverse habitat mosaic. This will allow the passage of wildlife from one side of the railway to the other via a hedgerow-lined sunken holloway lane.

Key

- Existing ground level
- Proposed ground level
- 1 Sunken holloway lane
- 2 Hedgerow with trees
- 3 Woodland and woodland edge planting
- 4 Existing trees retained

Chalkhill blue butterfly (Polyommatus coridon)

Woodland edge and scrub planting

Calcareous grassland

Section AA - Landscape section through proposed realigned Leather Lane (refer to Landscape and Ecological Masterplan board for section location)

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Landscape and Ecological Proposals

Our proposals include 7.31 hectares (ha) of habitat creation within the Leather Lane area, including:

- 1.4ha of woodland
- 0.6ha woodland edge
- 0.3ha of scrub
- 4.95ha of calcareous grassland
- 0.06ha of wet grassland.

Ecological connectivity will be aided by over 1km of new hedgerow planting, of which 820m will be advanced hedgerow planting at larger plant sizes.

Key

- Existing trees retained
- Existing hedgerow retained
- Proposed mixed woodland
- Proposed woodland edge
- Proposed scrub
- Proposed native hedgerow
- Proposed advanced hedgerow
- Proposed individual trees
- Land restored to existing use

Planting and ecological proposals

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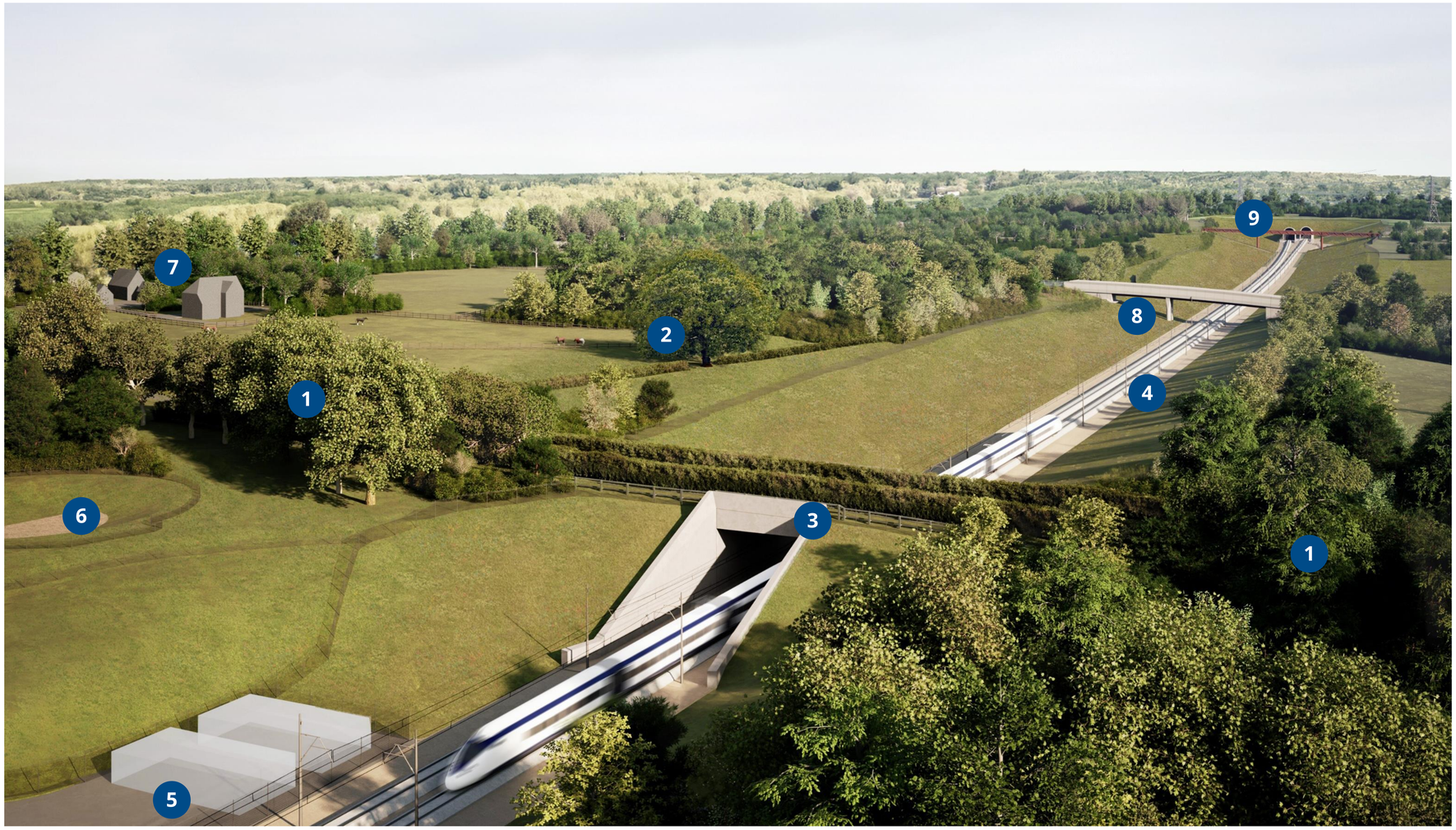
Leather Lane Realignment

The design of the green overbridge has carefully considered feedback from stakeholders to minimise visual impact on the surrounding landscape, facilitate the movement of wildlife, and recreate the character of the local context within the Chilterns National Landscape through the integration of a sunken lane.

Key

1. Existing tree line retained
2. “Lone Oak” and hedgerow
3. Green overbridge crossing
4. HS2 railway cutting
5. Mid Point Auto Transformer Station (MPATS) location
6. Drainage basin
7. Hammonds Hall Farm
8. GMI/2 Bridge
9. GMI/12 Bridge and Chilterns Tunnel North Portal



Leather Lane overbridge illustrative aerial view (looking southeast)

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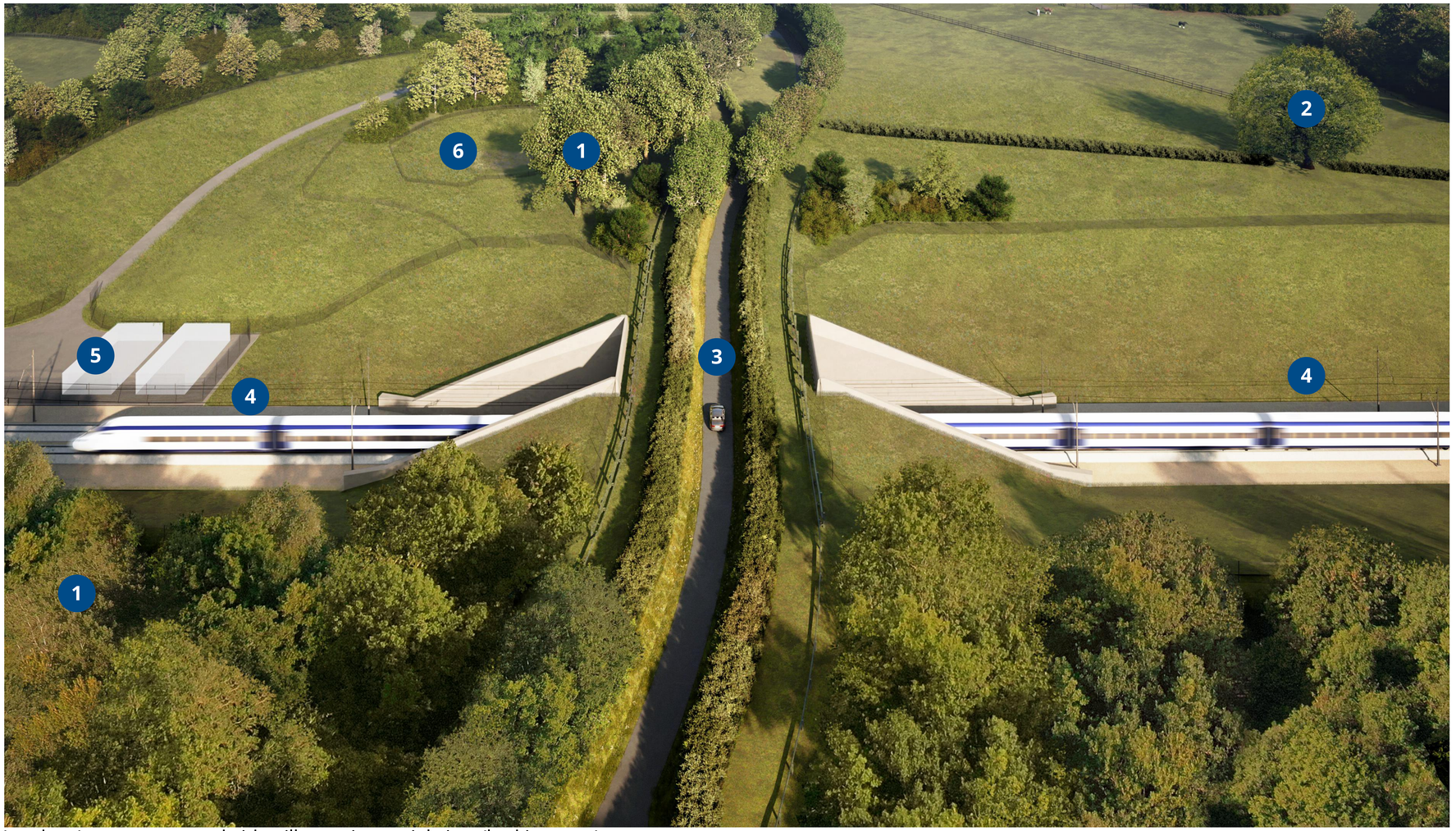
Leather Lane Realignment

The design proposals will reinstate ecological connectivity for bats (and other species of mammals and birds) by providing continuous high-quality habitat across the railway, and the approaches on both sides of the proposed HS2 route.

The Mid Point Auto Transformer Station (MPATS) area has also been lowered to track level as part of the design, reducing its visual impact in the landscape.



Leather Lane green overbridge illustrative aerial view (looking east)

Key

1. Existing tree line retained
2. “Lone Oak” and hedgerow
3. Green overbridge
4. HS2 railway cutting
5. Mid Point Auto Transformer Station (MPATS) location
6. Drainage basin

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Leather Lane Realignment – Approach

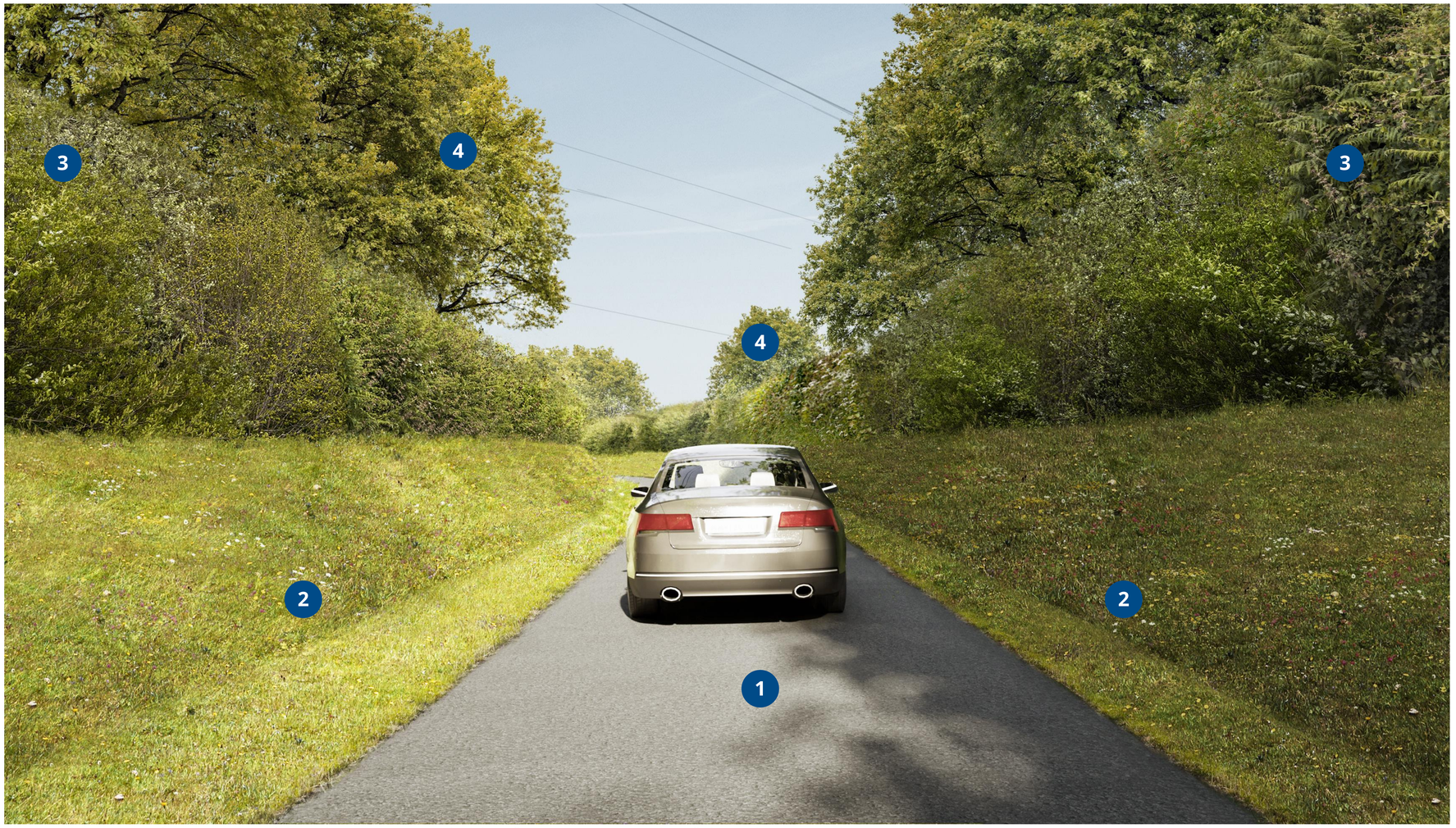
The existing Leather Lane holloway is a key feature of the Chilterns National Landscape, with users experiencing a sunken narrow lane with an enclosed character.

Consideration has been given to retain this experience in the new design:

- Minimise the highway and verge widths
- Incorporate holloway earthworks at a slope of 1:1 and varying in height up to 1.5m
- Establish a continuous hedgerow with trees on either side of the highway.

Key

1. Realigned Leather Lane
2. Proposed holloway earthwork
3. Proposed hedgerow
4. Proposed tree planting



Illustrative view when approaching the green overbridge from western side of the railway (looking southeast, year 15)

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Leather Lane Realignment - Overbridge

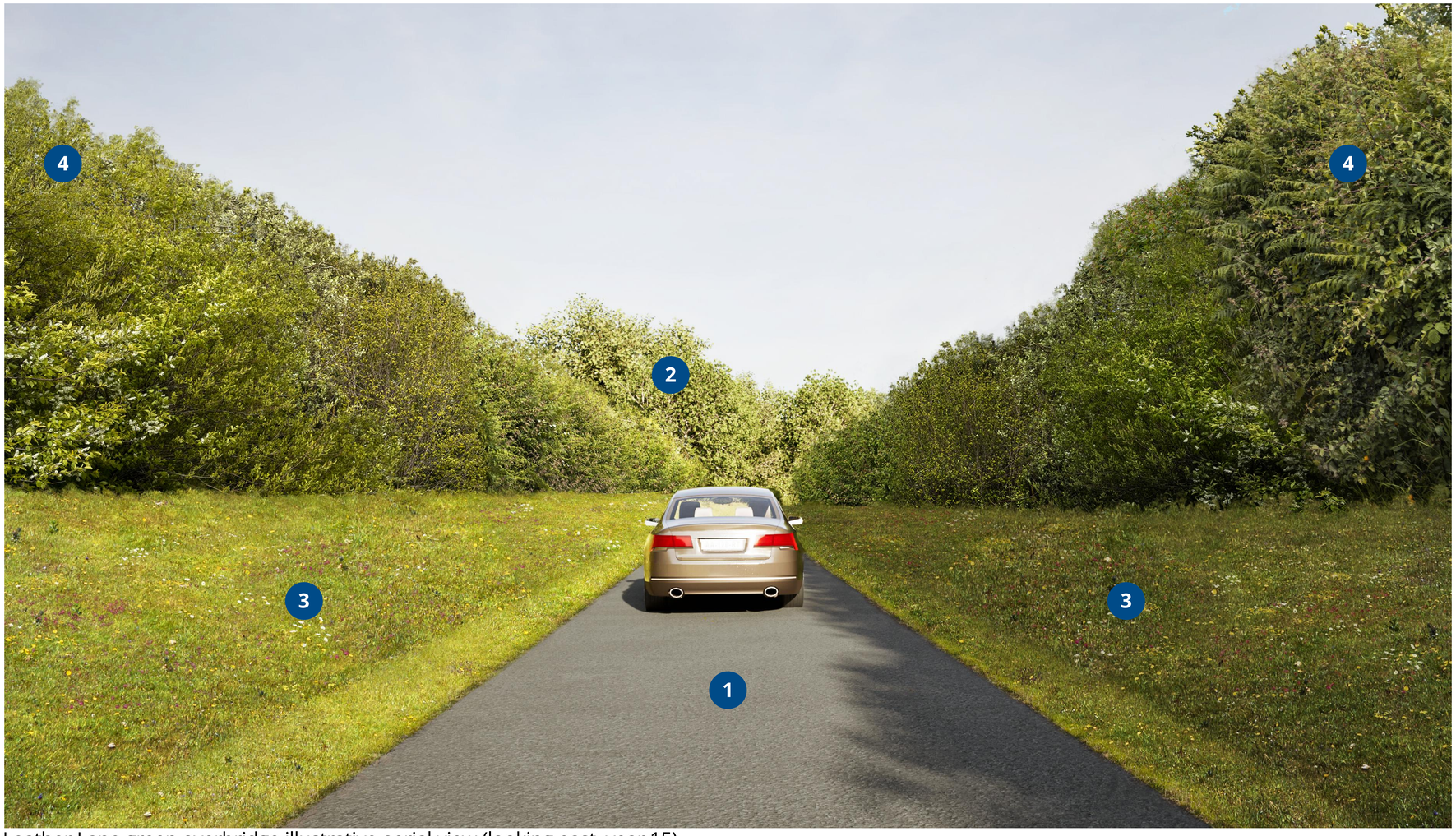
To mitigate the change in character of the realigned section of highway, holloway earthworks will be created.

Hedgerows will be planted at the top of holloway earthwork, with an established width and height of 3m. Trees will be intermittently planted within this hedgerow.

These earthworks and hedgerows will recreate the holloway character, mitigating impact to users of the lane and will create ecological connectivity across the railway between the retained trees along Leather Lane.

Key

1. Realigned Leather Lane
2. Existing tree line retained
3. Proposed holloway earthwork
4. Proposed hedgerow



Leather Lane green overbridge illustrative aerial view (looking east, year 15)

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Leather Lane Realignment

The green overbridge structure is formed from a reinforced concrete box which will support the deck over the HS2 railway track, enabling the realigned lane, holloway earthworks and hedgerow planting.

Simple concrete upstands have been adopted to provide fall protection from the embankment slopes onto the railway.

The upstands avoid the need for visually cluttering safety rail systems.

Illustrative view of green overbridge at track level on the southwestern side (looking east). Note: View not accessible to the public

Key

1. Existing tree line retained
2. “Lone Oak” and hedgerow
3. Overbridge
4. HS2 railway cutting

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Working with the Community

To ensure public concerns about Leather Lane were recognised and local knowledge was considered in the design, Align has discussed the proposals with local stakeholders at key stages of the design process.

Key meetings include:

January 2024 – Meeting with local stakeholders

March 2024 – Updated design presented to local stakeholders

July 2024 – Pre-application meeting with Buckinghamshire Council

August and September 2024 – Updated design presented to local stakeholders and Buckinghamshire Council

November and December 2024 – Additional pre-application meetings with Buckinghamshire Council

January 2025 – Meeting and site walk with local stakeholders to discuss final design and tree works

April 2025 – Leather Lane Schedule 17 application submitted to Buckinghamshire Council

Design principles	Changes in the design made in response to feedback
Connected	Priority given to the trees along Leather Lane – just two high value trees removed from **88 trees surveyed** in the area. **Ecological connectivity** recreated across the HS2 railway with hedgerow and tree planting.
Cohesive	Character of Leather Lane recreated with new **holloway and hedgerows.**
Integrated	Mid Point Auto Transformer Station (MPATS) relocated to track side reducing **visibility in landscape.**
Responsive	The "Lone Oak", the adjacent hedgerow and surrounding openness **protected.** Over 7ha of new habitat created for biodiversity enhancement.
Enduring	Simple and recessive **green overbridge** embedded into landscape, minimising impacts to views and landscape character.

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Traffic Management and Planning

Heavy Goods Vehicles (HGVs) using local roads in the area is a key concern for local residents. Our routes to each site are carefully planned to reduce impact on local communities.

During stages of high activity on site – such as excavation, earthworks, and concreting – there will be a corresponding increase in HGV movements.

There will also be periods where the need for HGV movements will be lower.

The existing concrete batching plant, situated within the cutting at the Chiltern Tunnel North Portal, will help us to reduce lorry movements on local roads during the heaviest construction periods for GMI/2, GMI/12, and Leather Lane green overbridge.

The design changes proposed are more complicated than the previous preliminary construction plans and will take longer to deliver.

We anticipate that these proposals, if approved, will require a closure of Leather Lane for up to 14 months. This closure is required to complete the excavation and construction of the green overbridge and the realignment of the road.

Traffic management and road closures will be employed to ensure that the safety of the public and our workers is maintained. We will programme works to avoid other local road closures, wherever possible.

Map showing approved HS2 routes to our work sites in the Chilterns

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Leather Lane Construction Timeline

Below is an indicative timeline of construction activity at the South Heath cutting, with a focus on activity at Leather Lane. We have highlighted those works which may be more noticeable to local residents.

Current activities
Earthworks between South Heath and Leather Lane

GMI/2 beam, parapet, and deck installation

GMI/12 abutments and deck build

Traffic impact:
Construction traffic crossing Leather Lane.

Summer 2025
Earthworks north of Leather Lane

GMI/2 Parapet installation

GMI/12 Earthworks ongoing

Traffic impact:
Leather Lane closed to traffic (to be confirmed). Diversion route in place.

Autumn 2025
Earthworks north of Leather Lane

GMI/2 bridge completion and side road construction

GMI/12 piling

Traffic impact:
Leather Lane closed to traffic (to be confirmed). Diversion route in place.

Winter 2025
GMI/12 concrete pier and deck installation

Traffic impact:
Leather Lane closed to traffic (to be confirmed). Diversion route in place.

Spring 2026
Earthworks between Leather Lane and GMI/12

Leather Lane green overbridge structure backfill and new road construction

Traffic impact:
Leather Lane closed to traffic (to be confirmed). Diversion route in place.

Summer 2026
Leather Lane green overbridge structure and new road construction near completion

Topsoil placement, seeding and planting begins

Traffic impact:
Leather Lane closed to traffic (to be confirmed). Diversion route in place.

Autumn 2026
Leather Lane green overbridge reopens

Earthworks, landscaping, seeding and planting begins.

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Thank you for attending our event

We will continue engagement with the local community to provide regular updates on the progress of design and construction.

Next steps

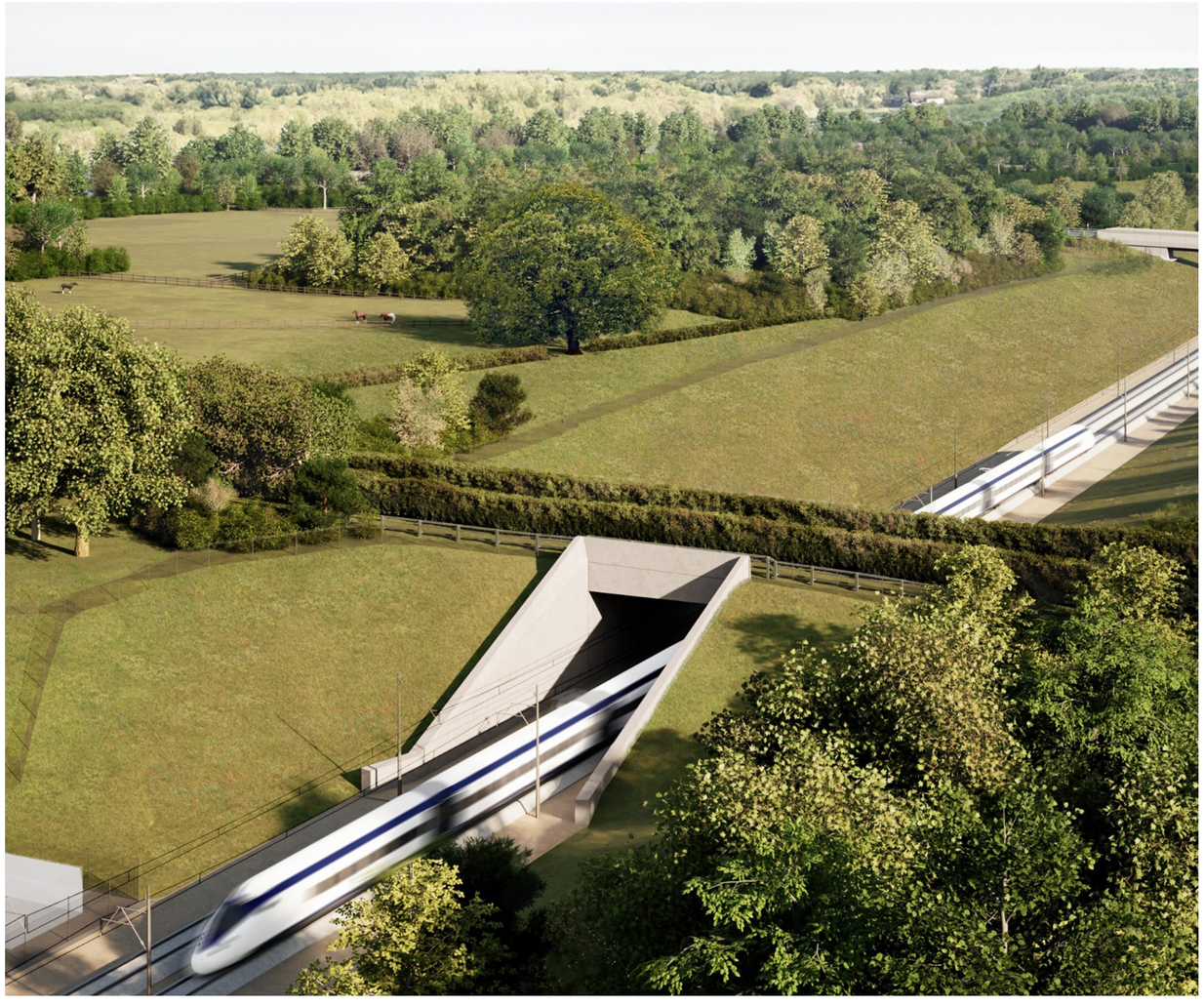
We will hold further events in the local area in the summer to update residents and stakeholders on the progress of these proposals, and any impacts that construction may have on the local community.

Information events

For more information on these events, and to find out how to receive regular updates, please visit: www.hs2.org.uk and visit the Buckinghamshire and Oxfordshire local area pages.

You can 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



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