

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

HS2 Update

Colne Valley Viaduct | Spring 2023

ALIGN
Working in
partnership with **HS2**

What is happening...

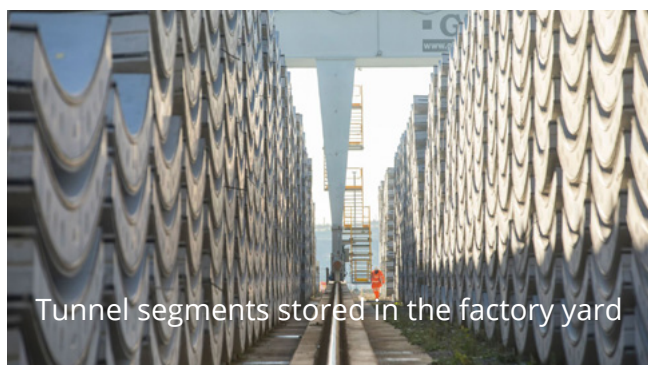
Align's main construction site at West Hyde is called the 'South Portal' as this is the southern point at which trains on the new railway will enter and exit the 10-mile Chiltern Tunnel. We are constructing both the Chiltern Tunnel and the Colne Valley Viaduct here.

We have two large factories on site, one is producing the tunnel lining segments, and the other is building viaduct deck segments for the Colne Valley Viaduct. The viaduct segment factory is 100m long, with an internal volume of 105,000 cubic metres (m³) – making it larger than the Royal Albert Hall. Both factories operate 24 hours a day Monday to Saturday.

The viaduct segment factory produces up to 12 segments every week using a 'match-casting' technique. This means each segment is constructed against the one it will sit next to on the viaduct. This approach ensures the whole deck fits perfectly when assembled on the piers by the viaduct launching girder.



Factories at the South Portal, West Hyde



Tunnel segments stored in the factory yard



Finished viaduct segments

The two tunnel boring machines, Florence and Cecilia, reached Amersham in February this year and are continuing north towards the Little Missenden vent shaft. As they excavate the twin bores of the Chiltern Tunnel, spoil is fed back to the South Portal to be processed through our Slurry Treatment Plant. This spoil is turned into the chalk 'cake' which is being used to build the Western Slopes a new area of calcareous grassland.

By February this year, approximately 1.8 million m³ of chalk cake had already been processed through the plant and 60,000m³ of the chalk had been placed on the slopes.

The Chiltern Tunnel 'precast' factory has produced 10,000 rings. Seven rings are used to complete a ring of the tunnel lining, so that is 70,000 segments now produced. We will need 112,000 segments to complete the tunnel.

Colne Valley Viaduct

At the end of January this year we completed the last of the pier foundations for the viaduct with a total of 292 piles constructed, some up to 60m into the ground, to support the 6,000-tonne deck of the viaduct.

We have now built 22 of the 56 piers for the viaduct, including three of the 'V piers' which will hold the 80m long spans of the viaduct across the lakes.

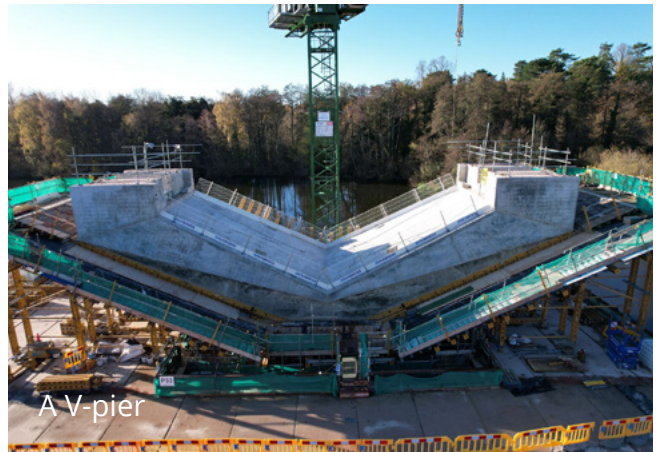
In February 2022 we completed the construction of the internal access road, connecting the M25, where we have our own dedicated slip roads, to our various sites across the Colne Valley.

This included constructing the jetties over the River Colne and the lakes all the way to our South Embankment site, off Dews Lane in Hillingdon. One year later, over 10,000 vehicle trips have taken place along this internal haul road, including 6,000 deliveries.

These trips have been taken off local roads, reducing the impact on our local communities.



Viaduct ground piers and launching girder



A V-pier



The launching girder, named 'Dominique' erects the deck of the Colne Valley Viaduct over the A412 near Denham Waterski Club, Denham, Buckinghamshire.

Water supply at our construction sites

We know that residents have concerns about water use at our construction sites and water management in our area. Below are some Frequently Asked Questions all about water. To find out more please see page 7 for details of our upcoming webinar.

What is HS2 Ltd doing at the water treatment stations? Is it true that you will be abstracting water from the aquifer or River Misbourne to supply the TBMs?

HS2 Ltd is working closely with Affinity Water to install additional water treatment capacity at three pumping stations close to the line of the route in order to protect existing potable water supplies. This is a precautionary measure in the event that construction activity has an adverse effect on the turbidity of water being abstracted. HS2 Ltd will not be abstracting water from the chalk aquifer or from the River Misbourne. HS2 Ltd's water requirements will be met from existing water company resources, principally from Thames Water, outside of the Colne Valley area.

What will happen to the surface water after construction? Is there an increased flood risk for residents from the main compound / landscape area at Chalfont Lane?

Surface water runoff across the site will either infiltrate into the soil or during very heavy rainstorms will runoff and collect in an attenuation pond. Attenuation ponds are designed to contain and manage storm water. From the attenuation pond it can be released to surface water at a rate no greater than the pre-HS2 rate. The attenuation pond is sized to limit the potential for offsite flooding. The landscape area for the main compound (at the South Portal) and surround also includes several wetland features that will help reduce runoff.

What is HS2 Ltd doing to support Affinity Water to protect the water at its abstraction sites?

To safeguard the risk to public water supplies, Affinity Water, with HS2 Ltd's support, has installed new water treatment facilities at its key supply sites that are close to the rail route. Water monitoring data collected from across the site is shared with Affinity Water daily. HS2

Ltd is also sharing construction programme details with Affinity Water so that it is aware of when activities will be taking place close to its abstractions.

Can the fissures (fractures or cracks) in the ground cause contamination to spread into the water supply?

HS2 Ltd is aware of areas of existing contaminated land in the Colne Valley, and the impact that these already have on groundwater quality in some areas. As HS2 Ltd will not be constructing in, or otherwise disturbing, areas of known contaminated land, our work will not lead to any additional groundwater quality issues coming from contaminated land in this area.

Is there water quality testing?

Yes. HS2 Ltd has developed a series of comprehensive water monitoring plans for each of its major construction sites to check groundwater and surface water quality before, during and after construction. The testing requires a full-time team of specialists to collect and analyse water samples from hundreds of locations, including the use of automated systems in some areas. HS2 Ltd has worked very closely with Affinity Water and the Environment Agency to agree the scope of the monitoring and to ensure that our methodologies and water monitoring regimes during our works are robust and effective. This is in addition to regular groundwater quality testing undertaken by water companies and the Environment Agency. The HS2 Ltd testing regime commenced in 2017 and is ongoing along the length of the rail route and will continue beyond the construction phase of the project.

Will domestic water supplies be affected by HS2 Ltd.'s demand for water?

Domestic water supplies will be unaffected by HS2 Ltd's water demand as the demand will be met from existing water company resources from outside the Colne Valley area, not from

additional abstraction from pumping stations above current licence constraints.

Are there risks to the drinking water?

Construction activities in a principal aquifer that provides a high level of water storage, such as the chalk, can introduce risks to groundwater quality and hence potentially to drinking water abstracted from the aquifer. Therefore, before any HS2 Ltd work below the water table is started, a comprehensive risk assessment is completed and provided to the Environment Agency and Affinity Water for review and comment. Each organisation issues a consent to allow the work to progress if the work is approved. The assessments take into account numerous protective measures to reduce the risk of adversely affecting drinking water. The protective measures include the selection of the cleanest construction techniques, choice of materials, the implementation of robust pollution prevention measures, the provision of enhanced protection at pumping stations and an extensive monitoring programme to check on effects and implement additional mitigation if required.

What role does the Environment Agency provide in relation to water quality?

The Environment Agency is the regulator in England for the water environment and as such it regulates and protects the quality of all controlled waters including rivers, lakes and groundwater. HS2 Ltd cannot progress its construction activities until the Environment Agency is satisfied that any risks to water quality are adequately controlled. The Environment Agency receive regular updates on the results of water monitoring across site and are kept informed of the progress of the project.

What steps are you taking to ensure that you do not pollute the lakes when you construct piles in them for the Colne Valley Viaduct?

We will only use materials that are acceptable to both Affinity Water and the Environment Agency. We are using bespoke piling methods, informed by the local ground conditions to ensure the risk of introducing contamination

to the lakes is low and closely managed. Our Construction and Environment Plans have the control measures and mitigation plans detailed in them. Everyone working on the project will comply with these documents.

What will the impact be on the chalk aquifer?

HS2 Ltd is committed to protecting the chalk aquifer within the requirements for the construction and operation of the new railway. There will be effects on the aquifer, but these will be localised, on the whole temporary and will not be significant.

Substantial assessment and liaison with the regulators are undertaken prior to any works starting close to or below the water table.

The River Pinn is the location for storm water and has experienced flooding, will additional water in the locality increase risks of flooding?

HS2 Ltd is committed to ensuring that there is no increase in flood risk as a result of the scheme. We use available and accepted flood risk resources, such as the Environment Agency's hydraulic models and considerable local knowledge, to assess the flood risk resulting from our scheme. From this we are able to achieve a design that is compliant with this commitment and approved by the Environment Agency.

Will water be taken from the chalk streams such as the River Misbourne or River Chess?

No. Construction water requirements are of a volume and duration that mean these rivers do not offer a viable source. Furthermore, the Environment Agency would not sanction new abstraction from these rivers, in line with its abstraction policy for these water bodies.

These areas were considered within the Environmental Impact Assessment for HS2 and are also considered within our risk assessments for below ground works at the southern end of the viaduct. However, as HS2 Ltd does not pass over or through these areas no direct investigations or surveys of them have been completed by HS2 Ltd.

Community investment and social value



We are committed to working closely with communities in the areas we are constructing HS2. Through our engagement we seek to deliver benefits that enhances the lives and wellbeing of the residents, the environment and society in general.

Align JV generates value and long-term social impact through a series of planned community investment activities. Staff volunteer their time to work with local schools, businesses, charities and environmental and community groups to provide support, deliver projects and share our expertise and resources. We make donations to local schools, charities and community initiatives when we have the resources available to support them.

We also have a small community investment fund that allows us to support projects and initiatives in the local community. If you have an idea for a community project that may benefit from our investment fund, please use the application form on our website –

<https://alignjv.com/communities-1#engagement-investment>

If you would like to discuss a potential project or request our help in delivering a community scheme, please contact us by email to communityengagement@alignjv.com.

All applications to the community investment fund are reviewed against our sustainability criteria. Please be aware that projects will need to demonstrate how they tackle economic inequality, support equality, diversity and inclusion, tackle climate change and/or promote health and wellbeing. We encourage all applicants to think about the following questions before submitting their application:

- What is the need/ requirement for the project?
- How many people will it benefit?
- How will people benefit?
- Does the project have long term benefits?
- Is there a community legacy beyond construction?
- Is it inclusive?
- Does it support community cohesion?
- Will it up skill or empower individuals or groups?

Align JV charity partnerships

In 2022 we partnered, by providing both financial and volunteering support, with two charities, one in each of our local authority areas we impact as we construct both the Chiltern Tunnel and the Colne Valley Viaduct.

- Action for Children located in West Hyde, Hertfordshire and on the doorstep of Align's South Portal site, provide residential and activity-based respite for children and young people with learning disabilities, autism, multiple impairments and complex health needs
- Epilepsy Society located Chalfont St Peter, Buckinghamshire is the UK's leading organisation for epilepsy research and support. The centre and clinic offer the most advanced techniques for the diagnosis and treatment of epilepsy.

The fundraising efforts of colleagues and Align JV's own contribution allow us to directly support and give back to the communities in the local area. Our supply chain also play an important role in empowering and supporting our charitable initiatives.

HS2 also has it owns community funding. For information on HS2's Community and Environment Fund (CEF) and the Business and Local Economy Fund (BLEF) please visit the HS2 website - <https://www.hs2.org.uk/in-your-area/community-funding/>

Community investment in Hillingdon, Hertfordshire and Buckinghamshire – 2022 review

South Portal and Colne Valley construction sites are located across several local authority areas. We want to share community investment activities with all the communities we work in.

Phoenix cafe

Eight staff volunteers from Align spent two days volunteering in December last year, removing tiling before painting the rooms in The Epilepsy Society's Phoenix Café.

Align supplied the equipment with the Epilepsy Society providing the paint. The rooms were completely transformed.

The newly painted rooms are being used as a games room and new IT space for residents and visitors.

If you have an idea for a similar volunteering project, let us know!



Woodoaks Farm, Maple Cross

Align undertook a number of community investment activities at the farm in 2022 and look to provide further support this year.

We donated a large amount of woodchip from a stockpile on site which the farm has been using for gardening and improving tracks around the grounds. Align staff also volunteered to take part in the farm's tree planting event in December, where a large number of cherry and birch trees were planted which will offer local wildlife food in the winter and encourage wildlife to remain on the farm all year round.



Foodbank drive for Hillingdon

Align's social value team ran a month-long foodbank drive in September, with boxes to donate food placed across all of our construction sites.

We were able to deliver large quantities of food to a number of foodbanks, including Hillingdon Food Bank.



Job Opportunities



In January this year HS2 celebrated a major milestone, with over a thousand apprentices having started on the project. In total 1,126 are now working along the line of route for the joint ventures that are constructing the permanent structures of the railway.

HS2's target is to create 2,000 apprenticeships.

In September 2020 when construction began on the first phase of the railway from London to Birmingham, HS2 forecast that it would create 22,000 jobs in the coming years. The skilled workforce has now reached nearly 30,000, with thousands more jobs supported across the country in the wider supply chain.

Align has now recruited over one hundred apprentices working across all of our sites, including in the Chiltern Tunnel, vent shaft teams, and support teams. Our apprentices range from new starters aged just 17 years old to apprentices aged over 40, showing that its never too late to change career or learn new skills as an apprentice.

HS2 is actively recruiting for many new roles across the project and within the supply chain, including experienced engineers, apprenticeships and internships.

You can search and apply at www.hs2.org.uk/jobs-and-skills.

Community events

Online event: water in the Chilterns and Colne Valley

In March we held an online water webinar for the public about HS2 and the ways in which we safeguard the quality and supply of water during our works in the Chilterns and the Colne Valley. Our experts shared details of how water treatment, monitoring and construction mitigation across our sites are being used to reduce and prevent impacts on ground and surface water. The webinar also included a question and answer session. Link for the webinar and a previous webinar on construction of the Colne Valley Viaduct can be found on the following page

[/www.hs2.org.uk/building-hs2/viaducts-and-bridges/colne-valley-viaduct/managing-water-in-the-colne-valley-area](http://www.hs2.org.uk/building-hs2/viaducts-and-bridges/colne-valley-viaduct/managing-water-in-the-colne-valley-area)



Drop ins – come and talk to us

We have a number of drop in events throughout 2023. These are where residents and businesses can pop in and talk to the engagement team about the project, any local impacts from our works or how we can support local groups through community investment.



Harefield Library, Harefield, Hillingdon

- Tuesday 18 April, 5.30pm to 8pm
- Tuesday 11 July, 5.30pm to 8pm
- Tuesday 17 October, 5.30pm to 8pm
- Tuesday 5 December, 5.30pm to 8pm



St Thomas' Church, West Hyde, Hertfordshire

- Tuesday 16 May, 3.30pm to 8pm
- Tuesday 27 June, 3.30pm to 8pm

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 you.

The Residents' Commissioner

The independent Residents' Commissioner oversees and monitors our commitments to you.

The commissioner's reports and our responses can be found at www.gov.uk/government/collections/hs2-ltd-residents-commissioner

The Residents' Commissioner makes sure we fulfil the commitments in the HS2 Community Engagement Strategy (<https://bit.ly/3oOA25j>).

The Residents' Commissioner can be contacted on: residentscommissioner@hs2.org.uk

Construction Commissioner

The independent Construction Commissioner regularly meets our Chief Executive Officer to raise any concerns or emerging trends across HS2.

The Construction Commissioner's role has been developed to monitor the way we manage and respond to construction complaints.

The commissioner mediates on disputes about construction, involving individuals and organisations, that we can't resolve. The commissioner advises members of the public about how to make a complaint about construction.

The Construction Commissioner can be contacted on: complaints@hs2-cc.org.uk

Property and compensation

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

www.gov.uk/government/collections/hs2-property

Find out if you can claim 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 the HS2 Helpdesk. For more details on our complaints process, please visit:

www.hs2.org.uk/in-your-area/contact-us/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:

Please contact us if you'd like a free copy of this document in large print, Braille, audio or 'easy read' format. You can also contact us for help and information in a different language.

HS2 Ltd is committed to protecting personal information. If you wish to know more about how we use your personal information please see our Privacy Notice: <https://www.gov.uk/government/publications/high-speed-two-ltd-privacy-notice>

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