

Management of construction noise at the South Portal, West Hyde – Frequently Asked Questions

High Speed Two (HS2) is the new high speed railway for Britain. Align JV is the Main Works Contractor working on behalf of HS2 Ltd to build 22 kilometres of the high-speed rail line, running between the Colne Valley and the Chilterns. This document gives information about work at our viaduct fabrication plant at HS2's South Portal works site near West Hyde, Rickmansworth, and may be useful for residents who can hear our works activity.

Construction of the Colne Valley Viaduct – Progress to date

In January 2023 we completed the main piling works for the foundations of 56 viaduct piers that will support the viaduct deck, stretching from the viaduct north embankment near Denham Water Ski Club to Harvil Road, Hillingdon. The concrete pours to construct the piers above the ground and lakes are continuing over the coming months, as works progress from north to south across the lakes.

The viaduct deck (the platform that the trains will travel across) is constructed using large reinforced concrete sections that are manufactured at a large purpose-built viaduct factory at the South Portal, near West Hyde.

The construction of these segments is now in full production, and is expected to continue until Autumn 2024, when the viaduct deck will be finished.

What are the works that you are doing at night?

We have two factories onsite that we have permission to operate 24 hours a day. One factory manufactures the segments for the construction of the Chiltern Tunnel, and the other factory, the largest of the two, manufactures segments for the Colne Valley Viaduct.

In both factories, concrete is used to fill large moulds and formwork which then cures (sets hard) to form the individual sections of the bridge and tunnel we are building. To ensure that the concrete is compacted correctly with no air pockets, or inconsistencies in the concrete segments whilst the concrete is curing, it is necessary to vibrate or shake the moulds and metal formwork at specific times during the filling process.

In the viaduct segment factory there is a specific process for each segment that needs to be followed exactly so the concrete is distributed evenly through the formwork to meet a required specification and architectural aesthetic finish.

This whole process to produce a single segment takes 24 hours and at times can generate a low frequency noise that you might hear as an audible hum, particularly when outside. The noise may be heard in 10 second bursts in cycles on and off over a period of two to three hours within the 24 hours process.

Why does the viaduct segment factory need to operate during the night, and why can't you do this in the daytime?

The viaduct factory operates two shift patterns:

	Day shift	Evening shift
Monday - Friday	7am – 7pm	4pm – 4am
Saturday	7am – 3pm	2pm – 8pm
Sunday	No works	No works

The process to construct one viaduct segment begins in the morning at 7am. This shift is the busiest and noisiest phase of work and requires the most intensive use of plant machinery and heavy lifting equipment. Work takes place both inside the factory and outside in the factory yard, with a large workforce (200 operatives), heavy plant and moving equipment.

This working shift requires the optimum daylight hours to be carried out safely and has been carefully optimised to ensure that the quietest phase of works occurs during the night.

At night the workforce is reduced to just 20 operatives and two items of plant, the concrete pump wagon and delivery trucks.

Were we to switch shifts around, this would likely result in more noise from the site due to the outdoor working and heavy lifting happening at night. Changing the day and night shifts around would also require us to light additional areas of the external yard to ensure that the assembly of the concrete moulds could be done in daylight-like conditions.

This additional use of artificial light and fluctuating noise levels in the middle of the night would not only be likely to create additional disturbance to local residents but would also reduce the safety of working conditions for operatives.

Why does the factory have to be located at the South Portal?

When the Colne Valley Viaduct was in planning stage, HS2 and Align JV worked together to ensure that the everyday impacts of construction were mitigated and reduced wherever possible for residents of Maple Cross and West Hyde, and the surrounding areas. One of the biggest concerns amongst residents at the time was the amount of site traffic that would need to use local roads during construction.

It was agreed that the best way of reducing Heavy Goods Vehicle (HGV) movements on important local roads such as the A412, Denham Way was to base fabrication at the South Portal site itself.

The decision to fabricate the tunnel segments and viaduct segments on the site and for all deliveries to site to come from the M25 via dedicated slip roads removed the need for thousands of HGVs to run on local roads.

Align JV also uses a system of internal haul roads to deliver the materials to the viaduct from the factories on site, meaning that we don't run any HGVs on the A412. This is possible because we have factories and a concrete batching plant operating onsite.

There are other advantages to having the factories on-site:

- The carbon-footprint is substantially smaller as the distances that the viaduct huge sections are carried are shorter than if they were prefabricated off-site
- Quality control and monitoring of the manufacturing process can be directly managed and monitored onsite
- Reduced delays in the construction programme due to outside factors- for example, there are no delays to production caused by concrete deliveries being late or stuck in traffic.

What are you doing to reduce and control noise from the site?

There are strict arrangements governing the noise and vibration our work causes. The works at our South Portal site are being managed and monitored on site in line with the consents we have with the local planning authority (in this case Three Rivers District Council).

We will continue to build the viaduct in ways that reduce noise as much as we reasonably can. To date the noise generated by the factory on site has been compliant with the consents issued by the Local Authority. A number of important measures have already been put in place to ensure that noise is kept to a minimum, including:

- Enclosing the activity in a purpose-built building: Align JV designed the enclosure that surrounds the viaduct factory to minimise the amount of noise that escapes, by installing a large acoustic enclosure over the whole operation
- Siting the fabrication buildings away from the site boundaries
- Regular surveys in residential streets and resident's properties during casting to evaluate noise levels

Since complaints were received we have already implemented changes to the process to reduce noise, including:

- Reducing the number of cycles that the segments are vibrated (which reduces the overall time this noise is created)

- Swapping some of the noisier mechanical activities with quieter manual ways of working

We are investigating further improvements to the process to see if we can further reduce noise from this activity.

We are also undertaking extensive noise and vibration measurements throughout the works to ensure that we are meeting the project's commitments on noise and vibration. Noise monitors operate around the clock at multiple locations in the Colne Valley. The data from these monitors is shared regularly with the local consenting authority and is later collated and published on the HS2 website:

<https://www.gov.uk/government/publications/monitoring-the-environmental-effects-of-hs2>.

We are working with our engineers responsible for the factory to evaluate whether additional noise mitigation measures are practicable, and to ensure that Best Practicable Means (BPM) are being employed.

What can I do if I can hear the factory and I don't like it?

We are committed to reducing the impact of our works further, wherever practicable, and our construction noise team continue to investigate every noise complaint or enquiry that we get to verify the origin of the noise and look at what may be done to further reduce noise from site.

Some construction noise is permitted during 24/7 works on any site and HS2 works are often not the only source of construction or operational noise in the Colne Valley. We are, however, strictly regulated and monitored by the local authority and we will always act to investigate any complaint or enquiry we receive.

If you are finding the noise made at night by the factory is disturbing you, or you wish to register a complaint, then it is important that you let us know by contacting the HS2 Helpdesk:

Freephone: 08081 434 434

Minicom: 08081 456 472

Email: HS2enquiries@hs2.org.uk

This gives us the opportunity to investigate and if possible look at ways to reduce the impacts of the works. We may ask for further information to help us identify the source of the disturbance.

What does this mean for residents nearby who may be affected by the noise?

We are implementing best practicable means to reduce noise for you and your neighbours. In some circumstances, residents or businesses close to the works may be particularly vulnerable to the disruption caused by construction noise.

HS2 Ltd's [Information Paper E23](#) sets out the circumstances by which additional requests for

mitigation may be pursued. However, the noise levels being created by the activity at the South Portal currently fall below the thresholds for mitigation set out in this paper.

Nevertheless, if you feel you could be considered as a special case, as defined in the E23 paper, then please let us know so that we can discuss this further with you. In these cases, we may suggest that an independent panel can assess your circumstances on a case-by-case basis to seek further mitigation.

Examples of special cases may include people who:

- work nights;
- regularly work from home and need a quiet environment; or
- have a medical condition which will be seriously aggravated by construction noise.

Please do let us know if you fall into one of these categories or consider yourself a special case for any other reason. We may ask for evidence to support your special case. We will handle all confidential information sensitively and securely and in line with all relevant legislation. We will only keep the information for as long as it takes to deal with your case.

Who can I talk to find out more?

Should you have any questions or enquiries about the information in this leaflet or works on our construction site please contact us via HS2's 24/7 Freephone Community Helpline on 08081 434 434.

Align JV will also be holding regular drop-in events in venues around the Colne Valley, should you wish to meet the team to discuss.

The first of these drop-in events is at Harefield Library on 21 February 2023, from 5pm to 8pm.

We are committed to minimising the impact that our site has on those communities who live close to our site and we will continue to take all reasonable steps to ensure residents are not disturbed overnight.

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: <http://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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<https://www.gov.uk/government/publications/high-speed-two-ltd-privacy-notice>

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