

Noise and vibration

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High Speed Two (HS2) is the new high speed railway for Britain.

Building the new high speed railway involves major construction of shafts, caverns, tunnels, earthworks, piling and bridge extensions. Nearby properties are likely to notice noise and vibration from our works.

About noise and vibration

'Noise' refers to the level of sound and is measured in decibels. Vibration is the movement of objects resulting from noise or from the shaking of another object. Our construction works will cause an increase in the level of noise and vibration. SCS is committed to limiting and reducing these impacts as much as possible.

The HS2 Act provides the limits within which we must work. These limits are stricter than typical industry standards. For example, the noise limit at night is 55dB, which is about the same level of noise as a washing machine or normal conversation. You can find out more about noise and vibration thresholds in the [HS2 Information Paper E23](#).

People perceive noise and vibration levels differently so even when we are working within agreed limits, at what is considered an acceptable level, some people will be more affected than others.

People are often concerned vibration from our works could cause damage to buildings. We carefully manage our works to ensure vibration levels, while sometimes perceivable, are below the levels capable of causing damage to stable structures.

What are we doing to limit noise and vibration?

We take several measures to limit the impact of noise and vibration on the local community. We always look to reduce the level of noise and vibration at the source, opting for the least impactful method or machinery available, before looking to additional mitigation methods to limit the impact further. We have reduced noise and vibration with

- quieter and less vibratory piling methods
- exhaust silencers on excavators
- use of machinery with hybrid or electric engines
- limited vibratory rollers, using the low power modes
- limited reversing vehicles, using white noise alarms
- high acoustic barriers around the sites where noise thresholds are exceeded without them

SCS FACTSHEET



Key documents

- Code of Construction Practice
- HS2 noise insulation scheme
- Non-technical summary of the HS2 Phase 1 environmental statement
- Information Paper E23—control of construction noise and vibration
- Noise Insulation—A guide to the HS2 noise insulation scheme

The above documents can be found on the [HS2](#) section of the www.gov.uk website

Noise and vibration monitoring

We closely monitor the level of noise and vibration caused by our works to ensure levels are similar to what we predicted. We also need to know if and when our works exceed the limits agreed with the local council or the trigger levels in [HS2 Information Paper E23](#) so we can fix any issues. If the levels come close to, or exceed, what was agreed with the local council, an alert is sent to our specialist staff and we stop work while the issue is investigated. We will only continue working once the source of the issue has been identified and resolved to ensure we complete our works within the limits.

We use a combination of permanent and temporary monitors in the Euston Approaches. We rely on permanent monitors to supply a continuous 24 hour, 7 days a week portfolio of data. We then assess this data to identify any noticeable issues and find ways to reduce our impact further. We use temporary monitors to measure the impacts of specific short-term works. The location of our monitors is agreed with the council to ensure we are providing an accurate account of the impact of our works on the surrounding community.

The permitted level of noise and vibration varies depending on the time of day or night.

For more information on our permitted levels, please read Appendix B of [Information Paper E23: Control of Construction Noise and Vibration](#).

Noise insulation

We use noise modelling as part of the planning process to predict the level of noise we will produce as a result of our works. In specific locations where, despite taking measures to reduce the impact, the level of noise is predicted to be over a certain threshold for a certain period of time, HS2 has offered noise insulation. The thresholds for noise insulation can be found in [HS2 Information Paper E23](#).

Under the HS2 noise insulation scheme, noise mitigation is done by

- secondary glazing for living room and bedroom windows
- blinds on façades
- insulation for external doors

Vibration protection

We carefully plan our works to minimise vibration and work within agreed limits. We strive to keep within these limits in everything we do. However, if we learn a building will experience vibration beyond agreed limits, then we investigate a range of options, including changing our works if possible. Our monitoring allows us to understand what has caused vibration and to know in advance what levels of vibration are expected.

Do I qualify for protective measures?

HS2 has identified and contacted all properties in Euston Approaches currently eligible for noise insulation. Whether you are eligible for noise insulation depends on predicted noise levels.

If you think you qualify for noise insulation but we haven't contacted you, or you have changed your mind about receiving noise insulation, please speak to our Helpdesk. If noise predictions show your property might be eligible, we will ask you to fill in an application form to register your interest. We will then arrange a visit to carry out a survey of your property. After the initial survey, we will tell you whether you qualify for the scheme and discuss the details of the offer with you. You can then decide if you want noise insulation. Further information on what noise insulation is and the eligibility criteria can be found in [A Guide to the HS2 Noise Insulation Scheme](#).

Keeping you informed

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

Residents' and Construction Commissioner

The independent Residents' and Construction Commissioner oversees and monitors our **community engagement strategy**, making sure we fulfil our commitments to you.

The commissioner monitors the way we manage and respond to complaints about construction and advises members of the public how to make complaints.

The commissioner helps settle disputes involving individuals and organisations that we can't resolve.

You can find the commissioner's report and our responses at:

www.gov.uk/government/collections/independent-hs2-commissioner

The commissioner can be contacted on:

hs2commissioner@dft.gov.uk

Property and compensation

You can find out all about HS2 and properties along the 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/contact-us/how-to-complain

Contact us

Our HS2 Helpdesk team are available all day, every day. You can contact them by:

 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 area, visit:

www.hs2inyourarea.co.uk

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