Old Oak Common tunnel Frequently Asked Questions

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

Skanska Costain STRABAG (SCS) Railways is the main works civils contractor working on behalf of HS2 Ltd. SCS is responsible for the design and construction of bridges, embankments, and tunnels for the Greater London section of the new railway.

Where is the tunnel?

In the Old Oak and Park Royal area, SCS is working in partnership with HS2 and alongside Balfour Beatty VINCI SYSTRA joint venture (BBVS) who are building the Old Oak Common station. In this area, SCS is responsible for the following HS2 sites: Victoria Road Crossover Box, Flat Iron, Atlas Road, and Willesden Euroterminal.

The Old Oak Common tunnel (OOC tunnel) consists of two tunnels – an upline and a downline – that will run for about 360 metres between the Victoria Road Crossover Box site in Old Oak and Park Royal and the Old Oak Common station site. The OOC tunnel will be 12 metres below ground (to the top of the tunnel) as it travels from Victoria Road Crossover Box to Old Oak Common station. However, the depth below ground will vary (by up to two metres) due to existing ground levels in the local area.

How are you collaborating with other contractors?

SCSJV meets regularly with HS2 and other HS2 contractors working in the Old Oak area to discuss our upcoming works. This allows us to coordinate, where possible, and carry out collaborative engagement with local communities.

How will you build the Old Oak Common tunnel?

SCS will use a cyclic excavation and support method to build the Old Oak Common tunnel. This is also called the sprayed concrete lining (SCL) method. SCL tunnelling is a method commonly used to construct tunnels. We will first make a pilot tunnel that is narrower than the final tunnel diameter. We will then enlarge this to create the final tunnel. The ground is dug out in short lengths and a sprayed concrete lining is used to form the tunnel. After each section is mined and lined, a temporary concrete face forms the end of the tunnel. The temporary face needs to be removed, and the above cycle is repeated until the tunnel construction is completed. This phase generates ground-borne noise which may be heard by properties over 100 metres away from the tunnel location. This depends on how the noise is transmitted through the ground and possibly through a building's structure and foundation.

This method involves rapidly spraying the excavated ground with concrete to stabilise it and form the permanent tunnel lining.
This tunnelling construction method is summarised below:

- Excavation using road headers or excavators,
- Installation of primary sprayed concrete lining,
- Installation of waterproofing,
- Installation sprayed concrete lining to support the tunnel.

You can find out more about this construction method under Section 9: Mined tunnels in HS2 Information Paper D7: Tunnel Construction and Methodology, including an image which illustrates this construction method.

Why are these tunnels not being constructed using a tunnel boring machine (TBM)?

It is not possible to build the OOC tunnel with a TBM because this would result in building the full length of the tunnels with the widest possible diameter necessary, rather than varying the diameter as is needed for this section of the tunnels. This method would result in a bigger diameter than required in this location and also increase the risk of ground movement (settlement).

Why have you chosen to use this method here?

Sprayed Concrete Lining (SCL) is a traditional method used to construct tunnels. This method involves rapidly spraying the excavated ground with concrete to stabilise it and form the permanent tunnel wall. Unlike bored tunnels, which are built using a tunnel boring machine, the SCL method allows variation in the tunnel shape and diameter of the tunnels, which are required in this location. The width (diameter) of the tunnels will vary between 8.9 metres and 14.9 metres as they approach Old Oak Common station. This is due to the need for having wider tunnels next to Old Oak Common station to allow for track separation as trains approach the different platforms in the station when travelling to and from the station.

This method has also been used to build the cross passages on the HS2 tunnels, as well as the launch tunnels for the Northolt Tunnel East TBM tunnels, from Old Oak Common to Northolt.

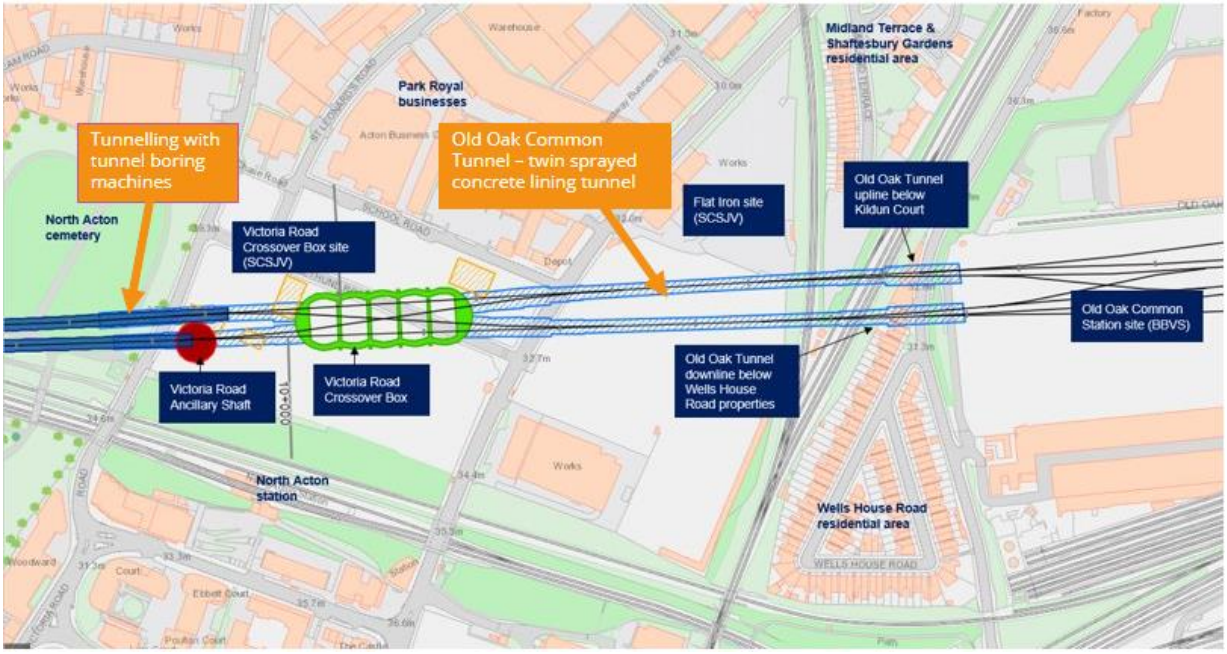
What are the working hours?

Construction of the SCL tunnels will need to be a continuous process, with minimal disruptions for construction and safety reasons. Our tunnelling work will continue using a 24/7 working hour shift, but the main impactful work has been restricted to core hours, Mondays to Fridays 8am to 6pm and Saturdays 8am to 1pm.

Given the location of the tunnel in an urban area with public roads and residential areas above, it is extremely important to reduce ground movement (settlement) where possible. Continuous tunnelling controls ground movement and minimises the potential for settlement. This is explained below.

When will the tunnel be completed?

Old Oak Common tunnel construction started in spring 2024 and is expected to finish in winter 2026/2027. We are continuing with concrete lining and waterproofing works within the tunnel, which will be ongoing until June 2026. Following this, we will start the final phase in June 2026. This will involve digging the tunnel and continuing with further concrete lining and waterproofing in the remaining section, continuing underneath Old Oak Common Lane and connecting into the Old Oak Common station site.



What are the impacts of tunnelling and excavations?

Major excavations cause changes in the ground level nearby, known as ground movement or settlement.

We carefully design our structures and plan our construction methods to minimise disruption to our neighbours. We use a variety of protective measures – or mitigations – to help reduce such impacts. We also closely monitor our works so that we clearly understand the effects of anything we are doing.

The process of removing large volumes of earth can cause some noise, vibration, and dust. Our works require a significant amount of equipment on site and periods of 24 hour working.

In recent years, there have been several large projects that have involved tunnelling in built up areas. These include the Eurostar High Speed line, London Underground extensions, and London's Crossrail.

We have been doing detailed studies that will predict the amount of ground movement we will cause, any impact these movements will have on surrounding buildings, and how to manage this.

We continue to monitor ground movement and nearby structures to verify predicted movement levels and potential impacts from HS2 works.

Some structures will need specific measures put in place before we start tunnelling or other major excavations nearby. We are already in contact with the owners of any structures which this could apply to.

Will I be able to see the tunnelling works?

Although the main works to build the tunnels will be carried out below ground, support activities will take place above ground. There are various pieces of construction plant and ad hoc activities above ground in our Flat Iron and Victoria Road Crossover Box sites, including:

- Operation of the concrete batching plant,
- Removal of excavated material from the tunnel face to the material stockpile,
- Operation of key plant on the surface needed in support of underground construction (e.g., fans, compressors, generators, batching plant).
- Maintenance of key plant necessary for the safety of the works (underground or on the surface).
- Surface support to the underground work, including welfare facilities, cranage, fitters' workshops and stores.

We will write to local community with more information about these future works nearer the time.

What will happen to the excavated material (spoil)?

Evacuated materials from the OOC tunnel will be stored in muck bins before being taken by road to our Willesden Euroterminal Site.

The excavated materials will be removed from Willesden Euroterminal site by rail and be transported to locations in Cambridge, Kent and Bedfordshire. From this location, we expect to transfer 5 million tonnes of excavated material, with an average day made up of 3,000 to 5,000 tonnes, the equivalent of 1,500 tonnes by train removing 70 lorry movements from the road. Reducing emissions from vehicle movements and traffic.

What is ground movement?

Ground movement – or settlement – is the technical term given to the way the ground moves around a hole after it has been dug out. It also occurs naturally when trees drink a lot of water for example. Building tunnels, shafts, and basements causes a small amount of extra movement to the ground nearby.

We know how to limit the effects of this movement on buildings. In most cases, ground movement does not cause damage to properties. In some cases, there may be small cracks in plaster, and in a few cases doors or windows may stick. In very rare instances, settlement can affect the structure of the building. For more information about ground movement, please read the HS2 Phase One HS2 Guide to Ground Settlement.

How do you monitor ground movement?

We use satellite monitoring, laser and physical monitoring via prisms, stick-on targets and sensors installed on local properties, structures and in the railway cutting. We use these methods to monitor ground movement across the local area which helps us understand existing levels of movement, and to accurately predict changes due to our works. Ground

movement typically happens slowly, allowing time to respond appropriately and safely to any changes.

We also install small metal studs in publicly accessible spaces, such as on footpaths and roadways, which enable us to monitor levels very accurately and determine trends over long periods.

Will your works cause ground movement?

We have been monitoring the area for a few years to understand these usual patterns of movement in the area.

Our major excavations, such as tunnelling, will create additional ground movement – beyond that caused by seasonal change or large trees drawing water from the ground for example. This additional movement has the potential to cause changes or damage to structures such as utilities, buildings, bridges and rail lines. The likelihood and degree of damage to a structure depends on many factors, including how it is constructed, the condition of the structure and its location in relation to major works. It is also dependent on the type and scale of excavation work itself.

We continue to monitor ground movement and nearby structures to verify predicted movement levels and potential impacts from HS2 works.

There will be occasions where we will strengthen structures prior to nearby major excavations to protect against potential damage.

What are you doing to limit the impacts on residents and buildings?

In building the new railway, we are committed to being a good neighbour, by respecting the people and communities we affect and being sensitive to their needs. We are already implementing measures to reduce the impacts of our upcoming major excavations.

Firstly, we aim to cause as little ground movement as possible by controlling the way the excavation work is carried out and if necessary, treating the ground or the structures themselves to reduce movement.

Measures to address ground movement and potential damage include:

- Employing industry best practice when carrying out major excavations. The application of in-tunnel mitigation measures has been shown to reduce ground movements generated by construction works. For example, installing our concrete tunnel linings to support the ground as quickly as possible, limits the amount of time the ground is exposed and can move.
- Carefully planning the works and choosing the best equipment to avoid or reduce noise, vibration, dust, and ground movement within the worksite – and therefore the surrounding area – as much as we can.
- Surveying and investigating before we start major excavations to understand the condition of the ground, buildings, bridges, utilities and other structures, and to assess if we need to provide any extra protection ahead of starting the major works.
- Ground treatment, such as injecting grout or installing ground anchors to add strength and reduce or offset movement.

- Designing specific solutions for buildings or structures that we have identified as being at risk. These solutions can provide additional strength to help the structures accommodate the ground movement or lessen the effect of the ground movement.
- Monitoring to be sure our forecasts and baseline measurements are in line with the actual situation once major works start. If there are unexpected monitoring results, we assess the situation and decide on next steps. These may involve more frequent monitoring, changing our working methods, or adding extra support or insulation to structures.

Is my property at risk?

If your property requires additional measures to protect against damage from additional ground movement, our team will have already been in contact with you. If you have not heard from us and are worried about damage from tunnelling, please contact HS2 Helpdesk and we can tell you what to expect from tunnelling.

Should your property be identified in future studies as one that may benefit from extra monitoring or protective measures, we will contact you.

Most properties will not experience additional ground movement or damage as a result of HS2 works. We do understand many properties in the area already experience cracks and sticking doors and windows from seasonal and other types of ground movement. Our technical review panel monitors all HS2 works and associated ground movement. This data is used to assess building damage claims submitted to HS2 Helpdesk.

You can find out more about the process for assessing potential damage from ground movement, and how to claim for any damage, in the HS2 Works Information Paper C3: Ground Settlement.

How will you protect local properties?

The High Speed Rail Act 2017 automatically protects properties from damage because of our future tunnelling works. HS2 is responsible for any damage caused to your house because of the construction or operation of the railway. HS2 has a well-established settlement policy that involves the principles of assessing, monitoring, recording, protecting, and repairing. Further information can be found here HS2 Guide to ground settlement.

What happens if I notice cracks in my home?

If we cause any physical damage, we have a legal responsibility to repair this, under the High Speed Rail (London to West Midlands) Act 2017. We deal with claims under £10,000 through our small claims scheme and those over £10,000 through our damage claim process. You can find out more about the HS2 Small Claims scheme in HS2 Information Paper C10: Small Claims Scheme.

If you think that your property has been damaged as a result of our construction work please contact the HS2 Helpdesk via phone 08081 434 434, minicom 08081 456 472 or email HS2enquiries@hs2.org.uk. In order for your concerns to be investigated, you will need to provide a description of the damage or nuisance to your property as a result of HS2 construction related activity via the HS2 Helpdesk.

What is a settlement deed?

This is a legal agreement between HS2 Ltd and owners of properties within 30 metres of an excavation. HS2 will be responsible for paying for any property repairs related to its works, whether the property owner holds a deed or not. However, some people find them useful if selling or borrowing, for example.

The settlement deed is part of the HS2 settlement policy, which is part of the 2017 Act. The same protection provided in the Deed is provided to any property affected by HS2. We will put right any damage caused by HS2, whether or not you have a settlement deed.

If your property is eligible and you request a settlement deed, you will receive a settlement report for your property. This will contain a map showing your property and tell you how much settlement is predicted at your property. We cannot give you the settlement details for all properties affected, only for your property.

If you have any questions about settlement deeds, please get in touch with our dedicated Property team by email at property@scsrailways.co.uk or contact the HS2 Helpdesk on 08081 434 434.

Why is the limit for settlement deed eligibility exactly 30 metres?

The impact of settlement beyond 30 metres is likely to be negligible, however properties over 30 metres away from our excavations are still protected by the Act. The settlement deed is to give extra reassurance to those more likely to be affected by settlement, i.e. those closer to the works.

Is my property eligible for a settlement deed?

We offer property owners within 30 metres of specific excavation works a settlement deed. This is a legal agreement between HS2 Ltd and owners of properties within 30 metres of these excavations.

If you have any questions on settlement deeds, please get in touch with our dedicated Property team by email at property@scsrailways.co.uk or contact the HS2 Helpdesk on 08081 434 434. You can find out more about ground settlement and settlement deeds on the HS2 website here and HS2's commitments with regard to settlement are explained in Information Paper C3: Ground Settlement.

Are my garden and outbuildings covered by the settlement deeds?

We have used Ordnance Survey map data to define a 'property', and in most cases structures such as outbuildings would form part of the property and so would be eligible. Similarly, a swimming pool would be covered. Lighter structures, such as a garden shed would not be eligible.

Is my property protected still without a settlement deed?

HS2 will be responsible for paying for any property repairs related to its works, whether the property owner holds a deed or not.

You can find out more about ground settlement and settlement deeds on the HS2 website here. HS2's commitments regarding settlement are explained in Information Paper C3: Ground Settlement.

What is the potential impact of tunnelling on Kildun Court?

The tunnel is relatively shallow in this area which can increase the risk of settlement (the way the ground moves around an excavation during tunnel construction). Ground movement is predicted underneath Kildun Court. We know that Kildun Court will move with the ground because of the structural form of the building, which is a steel framed structure on pad foundations, and because of the proximity to the tunnel.

Because of the predicted ground movement, we need to carry out essential works and monitoring within Kildun Court during our tunnelling activities, to ensure the structure of the building is protected. The works will include exposing supporting beams, installing internal supports within the building, decommissioning the lift and the replacement of windows with boards. Due to the intrusive nature of these works, we require the building to be unoccupied.

The Old Oak Common and Park Royal Development Corporation (OPDC) bought Kildun Court ahead of HS2's tunnelling and as part of its long-term plans.

Why do residents of Wells House Road not need to vacate their properties?

Kildun Court behaves quite differently to the adjacent houses in Wells House Road. These are semi-detached brick buildings on strip footings which will withstand any potential ground movement. We are contacting residents living near the tunnel to help them understand what its construction is likely to mean for them and their property. The expected impact on properties varies depending on factors like proximity and the structure of the building. These protective works will ensure the buildings are protected from any potential damage. Any properties requiring these works have already been contacted individually.

Will my rent be reduced during the tunnelling works? / Will you pay my rent during construction of the tunnels?

We cannot pay rent for local residents. You will still be responsible for the rent, bills and other payments at your current home for as long as you are a tenant at / residing in the property.

I would like to sell my property, what support do you offer?

HS2 have a 'Need to Sell Scheme' available to residents who need to sell their property but cannot because of HS2. You can view more information about the Need to Sell Scheme here. or by contacting the HS2 Helpdesk on 08081 434 434 or email HS2enquiries@hs2.org.uk

Why didn't HS2 compulsory purchase my property?

HS2 does not compulsorily purchase properties that it does not need to demolish or make otherwise unusable in order to build or operate the railway.

The Need to Sell scheme remains available to owner occupiers who can demonstrate a qualifying need and an effort to sell their property, but who cannot do so at a fair price because of HS2.

What is a subsoil notice?

The term subsoil is used to refer to the part of the land which is below its natural surface. English property law recognises that, unless specified otherwise, freehold ownership of land includes the ground below the surface of the land to an unlimited depth. In some cases, leaseholders may share these rights, which may include the subsoil beneath adjacent public roads or streets.

The HS2 tunnels will be constructed in a stratum of subsoil generally more than nine metres below ground level. This stratum of subsoil will be compulsorily acquired using powers within the HS2 Act 2017 and, if you have an interest in the subsoil, you will be entitled to receive fixed value compensation. Subsoil notices will be sent to owners of properties directly above the tunnels to confirm that your subsoil rights will be obtained by HS2. For further information please refer to Using subsoil for HS2

What is a pre-condition survey? / Is my property eligible for a pre-condition survey?

Pre-condition surveys are visual inspections by an independent accredited surveyor to capture the existing condition of a property. They are required for all properties along the HS2 route within the zone for predicted ground movement of more than 10mm for non-listed buildings and 1mm for listed buildings.

We are aware that properties in this area may have had pre-condition surveys previously in relation to other HS2 works in the local area. However, it is important that we carry out another pre-condition survey in advance of the tunnelling works so that we have an accurate record of the condition of your property nearer to the start date of these works.

Are surveys an essential part of the settlement deed process?

Pre-condition surveys (also known as defect surveys) are required for those properties that are predicted to experience settlement of 10mm of greater or over 1mm for listed buildings. It is not necessary for pre-condition surveys to be undertaken for properties predicted to experience settlement of less than 10mm as they are unlikely to experience damage. However, where a settlement deed is in place, the property owner will be agreeing to allow access for the survey, where requested.

When will I know if I am eligible for a survey?

We will contact all of those properties eligible to have a pre-condition survey five to six months before the triggering works start. We will send letters offering the survey and conduct door knocks to give occupants and owners sufficient notice to take up the survey.

If my property is predicted to move less than 10mm can I request a survey anyway or could I commission one myself?

You can commission your own pre-condition survey at your own cost.

What do I do if I'm not eligible for a survey but think my property has been damaged?

Please contact the HS2 Helpdesk to let us know, and we will address this on a case-by-case basis. You are still able to raise a damage claim without a survey or settlement deed in place.

Will I feel the tunnelling works (e.g., noise and vibration)?

Some properties in the local area may be impacted by ground borne noise and vibration for a short period of time during the tunnelling works. We are currently carrying out further assessments in advance of these works and will provide further information to properties predicted to be impacted by noise and vibration during the tunnelling works.

Can I have additional noise insulation?

There is no further noise insulation available because of future tunnelling works. Properties eligible in the Old Oak and Park Royal area who are eligible for noise insulation have already been contacted about this. For more information about HS2's noise insulation scheme, view HS2's guide to noise insulation (Phase One).

Will I be disturbed by the future trains operating in the tunnels?

We are taking all reasonable steps to control ground-borne noise and vibration so that it does not exceed the Lowest Observed Adverse Effect Levels (LOAEL) set out in Information Paper E21: Control of ground-borne noise and vibration from the operation of temporary and permanent railways. Based on experience from London Underground, ground-borne noise or vibration below the LOAEL may still be perceptible to some people some of the time depending on the person's sensitivity to noise and how much sound there already is in the environment. But noise exposure below LOAEL is unlikely to have adverse effects on health or quality of life.

In our Environmental Statement (ES), and as a result of the envisaged mitigation in the tunnels, the majority of properties in the vicinity of the tunnels were forecast to experience ground-borne noise and vibration levels below LOAEL. HS2 is in the process of specifying the track so there is no significant change to the effects set out in the ES. Ground-borne noise and vibration control is achieved by engineering the track in the tunnels to stop the vibration generated by the train from being transmitted into the tunnels and surrounding ground. There are a number of different types of tracks available that will achieve this that are already used on high-speed lines in the UK and abroad.

Will I be rehoused during the tunnelling works? / What respite will you offer? / Can I stay in a hotel during the tunnelling works? / I don't want to stay in my home, what are my options?

Some properties in the local area may be impacted by ground borne noise and vibration for a short period of time during the tunnelling works. We are currently carrying out further assessments in advance of these works and will provide further information to properties predicted to be impacted by noise and vibration during the tunnelling works.

HS2 recognises that, in some instances, buildings and the people who live in them may not be properly protected by our policies and that we need to consider these 'special cases' individually. Examples of special cases include but not limited to homes where noise insulation isn't an option, such as houseboats or mobile homes as well as night workers and people with a medical condition which will be seriously aggravated by construction noise.

We have set up a panel to oversee and manage the assessment of all special case applications. The panel will consider your individual circumstances, together with any supporting information it may request from you or our contractors to decide whether any alternative mitigation or other reasonable adjustment should be offered. In such circumstances, any measures will be provided at the absolute discretion of HS2 Ltd.

We actively encourage individuals to make themselves known to either HS2 or our contractors in order that their individual circumstances can be considered by the panel.

How can you assure that I'm safe to stay in my home? / Will my home be safe?

Several major tunnelling projects have been or are being undertaken in London in recent years, including Crossrail, the London Water Ring Main, Heathrow Express, Jubilee Line Extension, extensions to the Docklands Light Railway, the Channel Tunnel Rail Link, and the Heathrow Express and Piccadilly Line extensions to Heathrow Terminal 5. As a result, there is extensive experience of how the ground behaves when tunnels are constructed and how to minimise settlement affecting buildings above.

All activities to build the HS2 tunnels will be assured technically by competent engineering teams and independently checked by external parties. Monitoring will be carried out throughout the tunnelling works.

I work from home; will I be disturbed on a daily basis?

Local disruption may be experienced during any mitigation and repair works to properties in the local area. Measures will be in place to minimise disruption, and we'll let you know about these works in advance.

Some properties in the local area may be impacted by ground borne noise and vibration for a short period of time during the tunnelling works. We are currently carrying out further assessments in advance of these works and will provide further information to properties predicted to be impacted by noise and vibration during the tunnelling works.

BBVS are also continuing works at the Old Oak Common Station site and on Old Oak Common Lane, which are impacting residents in the Wells House Road area on a daily basis. SCSJV is working with the BBVS engagement team to coordinate engagement where possible about disruption during current and future construction activities.

Additional circumstances

We recognise that there may be circumstances in which residents are more sensitive to construction noise. In such circumstances specific noise trigger levels and/or alternative noise

control measures will be considered on a case-by-case basis to protect residents. Some situations that might require alternative measures include:

Residential homes where noise insulation is not a viable option;

- Night workers;
- People who regularly work from home and need a quiet environment; and
- Those that may have a medical condition which will be seriously aggravated by construction noise.

If you think the above may apply to you, please contact our helpdesk in the first instance. To progress your application, we may need certain additional information from you, for example evidence that you work from home regularly or medical evidence from your doctor. We will handle all confidential information you provide to us sensitively and securely and in accordance with all relevant legislation and we will only hold it for the time required to progress your case.

How will you engage with us?

SCSJV's local engagement team will be engaging with local property owners and the wider community about these works. A summary of engagement planned is included below. Please note, these dates and the details of the engagement may change.

SCSJV are engaging with local community about:

- Future tunnelling works (direct engagement with property owners and wider local community),
- Predicted impacts to individual properties (direct engagement with property owners).
- Proposed mitigation works (included design of mitigation works) (direct engagement with property owners),
- Settlement deeds (direct engagement with eligible properties).

A number of engagement channels will be used including but not limited to:

- Meetings / correspondence with individual property owners,
- Updates at Old Oak Community Representative meetings,
- Factsheets,
- Advance notice letters about upcoming works,
- 3-month and 12-month lookaheads,
- Community meetings,
- Community drop-ins / virtual one-to-ones,
- Updates on the HS2 website.

Where can I find out further information?

Please contact our engagement team if you have any questions or require information on the Old Oak Common Tunnel by contacting communities@scsrailways.co.uk.

Appendix

- HS2 in your area map– Here you can view our latest works notifications for your local area
- Join our mailing list – here you can join our mailing list to receive our latest updates via email
- Need to sell scheme – Here you will find information about a scheme available to owner-occupiers who can show that they have a 'compelling reason' to sell their property but have been unable to do so (other than at a greatly reduced price) as a direct result of the announcement of the route of HS2.
- Using subsoil for HS2 – Here you will find information which will explain:
    - How and why, we obtain and use subsoil that is beneath land and properties;
    - The legal permission we need and your rights to compensation;
    - How we will build the tunnels; and
    - How we will keep you informed.
- HS2 Guide to ground settlement – This guide tells you about settlement on HS2 and provides information on:
    - how your property might be affected;
    - what we will do to protect your property or pay for repairs;
    - how we will keep you informed; and
    - how to apply for a settlement deed.
- Environmental Statement (ES) - Further information about the environmental minimum requirements for HS2 Phase One.
- Information Paper E21 - Further information about the control of ground-borne noise and vibration from the operation of temporary and permanent railways.
- Information paper - E22 – Further information about the control of noise from the operation of stationary systems.
- Information Paper E23 - Further information about the control of construction noise and vibration
- Code of Construction Practice (COCP) – The CoCP contains control measures and the standards to be implemented throughout Phase One of HS2.