

Piling works at Euston Approaches

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

Over the last six years we have constructed over 1,200 underground piles between Hampstead Road and the northern end of the Euston Approaches to create the foundation for the future railway.

What is piling and why do we need it?

Piles are structures we build or install vertically into the ground to provide strength and support to an above-ground structure or an excavation. Our piles, made of concrete and steel, create safe foundations by transferring the weight of the future structure above into the hardest ground or rock deep underground.

There are various piling methods used in construction and we have chosen the quietest methods available. We have constructed auger-bored concrete piles through the Euston Approaches as well as using sheet piling.

Auger boring

Our piles are constructed with a piling rig, drilling a deep hole in to the ground with an auger (a drill resembling a large corkscrew).



Drilling or boring this way is far quieter than hammering piles into the ground. A crane then places a steel cage into the hole and concrete is poured in to fill the hole. Once the concrete pour is started, it must be finished the same day to ensure the pile is constructed safely and allowed to set overnight.

To complete concrete pours of this size, we need to work until 10pm most week-day evenings although we will always aim to finish earlier if possible.

Once a row of piles has been constructed, we break down the exposed concrete until it is even and install a concrete platform, or 'pile cap', on top to tie the structure together and add strength.

Sheet piling

Sheet piling involves pressing metal sheets, pre-constructed piles, into the ground using hydraulic press. This technique is very quiet as opposed to driving or vibrating techniques.

There may be times we hit buried obstacles but otherwise we would not expect nearby residents to notice this type of piling.



Piling works at Euston Approaches

- Piles are up to 50m deep and 1.8m across in width
- A 30m high rig drills holes 40m deep using the quietest methods available
- Cranes lift and drop long steel cages into concrete-filled holes to reinforce the piles

Working hours: Monday to Friday from 8.00am-6.00pm and Saturday 8.00am-1.00pm

Concrete pours until 10.00pm most weekdays

On site for an hour before the start and/or at the end of each shift

Vibratory sheet piling

Vibratory piling is a method of installing sheet piles using an excavator attachment known as a Movax. Whilst we always aim to use the least disruptive method of piling, which is pressed sheet piling, there are locations where we have to use vibratory sheet piling. We have to use this method in the Euston Cavern worksite located in the cutting. This is because the space between the live railway and our worksite is too small to accommodate the larger sheets and equipment required for pressed piling. Even if a larger sheet would fit in this space, it would be of a length that would penetrate the future tunnel beneath.



What equipment will I see?

A 26m-high (about 10 storeys high) piling rig, cranes, excavators, polymer storage silos and concrete trucks are used for piling works.

Piling materials, such as reinforcement cages, are delivered on articulated lorries and concrete via concrete wagons.

How will the impacts from the works be managed?

As with all our works, we do our best to reduce impacts as much as possible and measures include:

- vibratory sheet piling works only during core hours 8:00am to 6:00pm Monday to Friday, working within legal noise thresholds
- minimising noise by screening works and controlling noise and vibration at the source, such as using the piling rig in 'eco' mode
- using a special attachment to clean the drill during piling as quietly as possible
- using super-silence generators
- fitting percussion tools with mufflers or dampers

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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