

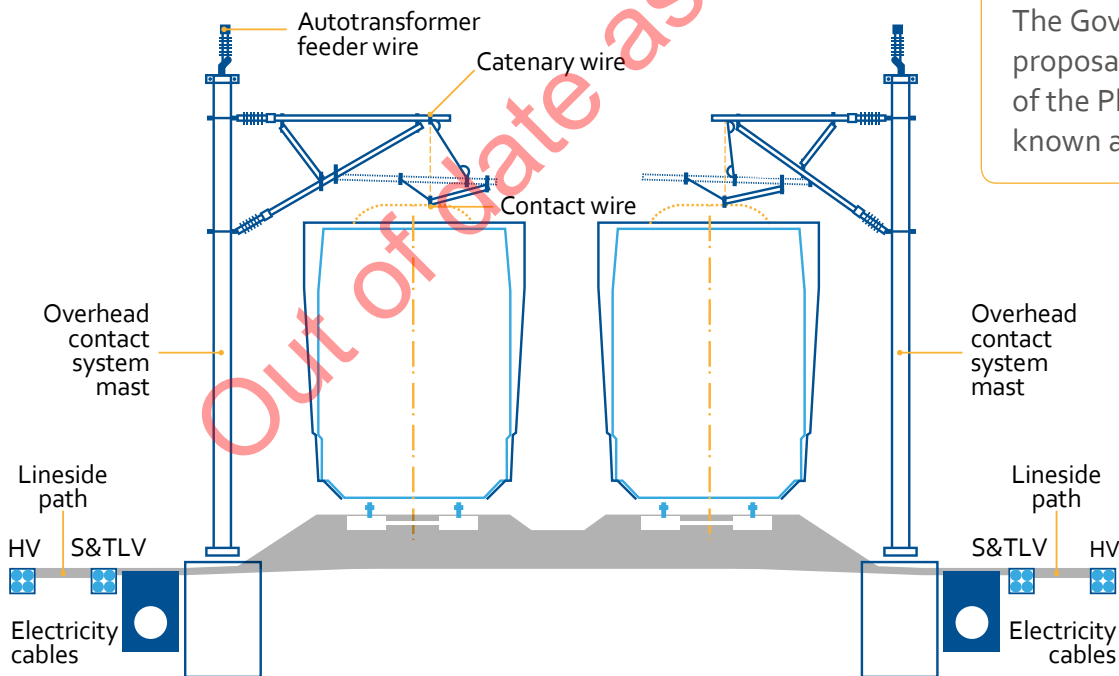
High Speed Two is the Government's planned new, high speed railway. HS2 Ltd is the company responsible for designing and building the railway, and for making recommendations to the Government.

This factsheet explains what a typical rail corridor for HS2 will look like, including:

- how wide a typical HS2 rail corridor will be;
- what type of operational equipment will be located within the corridor; and
- what the equipment will look like and where it might be located.

What will a typical HS2 corridor look like?

The HS2 route will typically accommodate two railway tracks (one northbound and one southbound) with an overall width of about 19 metres (excluding fences). The rail corridor will include the following operational equipment: overhead line equipment; track drainage; electricity cables; lineside walkway; and ducting for fibre-optic communications.



■ Typical HS2 corridor

Between July 2013 and January 2014

HS2 Ltd consulted the public on the proposed route and stations for Phase Two of HS2, from the West Midlands to Manchester, Leeds and beyond.

In November 2015

The Government announced its intention to bring forward the delivery of the Phase Two route between the West Midlands and Crewe, known as Phase 2a.

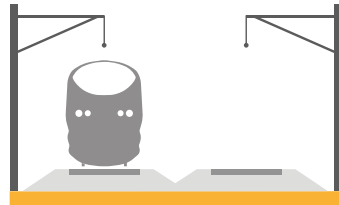
In November 2016

The Government announced proposals for the remainder of the Phase Two route, known as Phase 2b.

In practice, space requirements will vary along the route to reflect location-specific factors, such as line geometry, earthworks, adjoining land use and the need to incorporate mitigation. Overall, the rail corridor will be significantly narrower than a typical motorway in the UK, as shown in the figure below.

The route will be continuously fenced. The type of fencing used at each location will reflect the functional requirements of the line and its surroundings (e.g. whether it passes through an urban or rural area).

We will also manage and control existing vegetation along the edge of the route, as well as planting additional vegetation, where required, to act as screening.



Two-track high speed railway



■ Widths of a typical motorway and a two-track high speed railway

Operational equipment: location and size

Electrical power supply equipment

An overhead line contact system will transmit high-voltage power to the trains. The system will include masts, portal frames and contact wires. The masts and frames will typically be 8m–9m high and spaced at 45m–55m intervals along the route. The power will be delivered via the catenary to a power collection device known as a pantograph, mounted on the roof of the train.

The power will be supplied from the National Grid 400kV or 275kV network via feeder stations, which will be located along the route. Feeder stations will house electrical equipment that protects and controls the power supply and will be located close to where the National Grid power lines cross the route. The area of land required for each feeder station will vary.

Approximately every three miles (5km), auto-transformer stations will be required to strengthen the power supply. It is envisaged that these will require an area no greater than 50m by 20m.

This type of electrification infrastructure is used around the world without adverse effect on railway users and neighbours. We will employ similar methods to ensure the safety of our users and neighbours. Site locations for electrification equipment will be chosen with the aim of minimising its visual impact.



For questions about HS2, call our Community Relations team on 020 7944 4908

Who are HS2 Ltd?

We are the company set up by the Government to deal with the design, engineering and technical requirements of building the railway.

We also have an important role in making sure that if you're affected by the Government's plans, you understand what to expect (and when), and how we can help.



■ HS2 will build on the experience and practice of HS1

Image: HS2/Emily Pain

Telecommunications equipment

Telecommunications equipment will also be located within the rail corridor. This equipment supports the radio-based signalling system, which controls the movement of trains and allows those operating and maintaining the railway to communicate.

Telecommunications equipment also monitors security and access to infrastructure.

The telecommunications equipment will be significantly smaller than that used and installed along the existing UK railway. The train control and telecommunications system will be a computer-based interlocking system, controlled from a central hub for the whole HS2 network, and will not require traditional trackside signals for its operation. The associated equipment located beside the railway will include cable troughs, marker boards and cabinets or rooms, generally no higher than 3m. Some control equipment will also be housed within equipment rooms at stations.

The route will use radio communications as part of its operations and train control system. Radio antennae will be mounted on short extension poles fixed to the overhead power masts, adding approximately one metre to the top of the poles. The associated radio transmission equipment will be mounted at the pole base. An optical fibre network, with cables laid in trenches beside the track, will link all line-side equipment, stations and the control centre. Work on detailed locations for this equipment will form part of the next stage of engineering design.

Contact us at HS2

If you have any questions about this leaflet, please get in touch. You can contact our helpdesk on:

T: 020 7944 4908

E: hszenquiries@hs2.org.uk

For the latest documents including route plans and profile maps visit:

www.gov.uk/hs2

Out of date as of 17 July 2017

Keeping you informed

We are committed to keeping you informed via various channels



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. You can read it by visiting:

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. The first of the Residents' Commissioner's reports is published at:

www.gov.uk/government/publications/hs2-residents-commissioner-report-1-may-2015

You can contact the Commissioner at:

residentscommissioner@hs2.org.uk

Project updates

For more information about Phase Two, visit

www.gov.uk/government/collections/hs2-phase-two-from-the-west-midlands-to-leeds-and-manchester

And for details of events in your area, visit

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

Contact us

HS2 Helpdesk

Tel: 020 7944 4908

Email: hs2enquiries@hs2.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

You can also find out if you're eligible for compensation at:

www.gov.uk/claim-compensation-if-affected-by-hs2

Jobs and skills

To see what jobs are available on HS2 at the moment, check our careers page:

<http://careers.hs2.org.uk>

If you're a student wondering what careers in STEM subjects are like, check out articles and have a look around our Plotr World:

www.plotr.co.uk/careers/worlds/hs2

And if you're a business wondering how to get involved with HS2, have a look at our guides and updates on:

www.gov.uk/hs2 – search for *HS2 business*

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