

ROSTHERNE TO MANCHESTER PICCADILLY

In your area

July 2013

High Speed Two (HS2) is the planned new high speed rail network connecting London with the West Midlands and running lines on to Manchester and Leeds. This factsheet, produced to accompany the consultation on the route from the West Midlands to Manchester, Leeds and beyond, explains how the proposed route will affect your area, including:

- the proposed HS2 route between Rostherne and Manchester Piccadilly;
- the implications for people living between Rostherne and Manchester Piccadilly; and
- how we would manage construction.

The proposed route

The proposed route would be in cutting between the M56 and Rostherne Mere. It would continue to run parallel to the M56 on its south side, following terrain passing over Birkin Brook and the Altrincham to Chester railway on embankment, before heading north-west to cross under the M56 at Warburton Green, to the north of the Manchester Airport runways. The route would then be in cutting to the west of the M56, running into the proposed interchange station, close to the airport and motorway.

From the interchange station at Manchester Airport, the route would continue to head north-east, descending into twin tunnels close to Junction 5 of the M56 for 7.5 miles under Newell Green, Wythenshawe, Northenden, West Didsbury, Withington, Rusholme and Longsight.

The route would resurface at West Gorton and would be located alongside the existing railway line into Piccadilly. It would continue in cutting through Ardwick, adjacent to the existing rail corridor. It would then be elevated to pass over the Inner Relief Road (Mancunian Way), and approach the new station, which would be immediately north of the existing Piccadilly station.

Tunnel under Manchester

The tunnel would be an approximately 7.5-mile (12km) twin tunnel passing under south Manchester. It has been designed to avoid adverse effects on residential property by being located between 22m and 43m below ground level. The twin tunnels would be linked by cross-passages approximately every 500m, which would enable evacuation from one tunnel to the other in the event of an emergency.

What would I notice above ground?

The only surface structures required for the tunnel would be the portals and ventilation shafts. The area above the tunnels is densely populated and we would design and construct the tunnel to avoid perceptible effects on properties above, as far as reasonably practicable. The engineering design of HS2 would build on the application of proven technologies implemented successfully in similar tunnels on High Speed One (HS1) and now under construction for Crossrail. Experience gained from HS1 in Kent and other high speed railways abroad has shown that potential effects from vibration and ground-borne noise (audible vibration) in properties over tunnels can be largely avoided.

HS2 Ltd is committed to ensuring that properties above tunnels are not affected. Where relevant, properties above tunnels would be independently surveyed before and after construction to reassure residents and to ensure that, in the very rare instance of any impacts on property, these could be rectified by HS2.

Ventilation shafts

Longer tunnels require shafts for ventilation, maintenance, pressure relief and emergency intervention. Typically, the shafts will be located every 2km-3km, depending on total tunnel length, train operating speed and land take at the surface. The ventilation shafts provide emergency access in the event of an incident, and can remove smoke from the tunnels if an incident occurs below ground. Ventilation fans would need to be activated to remove the smoke;



Visualisation of the line as it emerges from tunnel at Ardwick and West Gorton | Source: HS2 Ltd

noise may be noticeable in an emergency or during the maintenance and testing of the equipment. However, in normal circumstances there would be no noise from the ventilation shafts. The shafts also relieve air pressure and therefore maintain passenger comfort.

Indicative locations

At this early stage in the design, the proposed route for consultation includes indicative locations for ventilation shafts. As the design progresses, further detailed aerodynamic modelling will be undertaken to confirm the exact location. The proposed tunnel approaching Manchester city centre would require four ventilation shafts at roughly equal intervals.

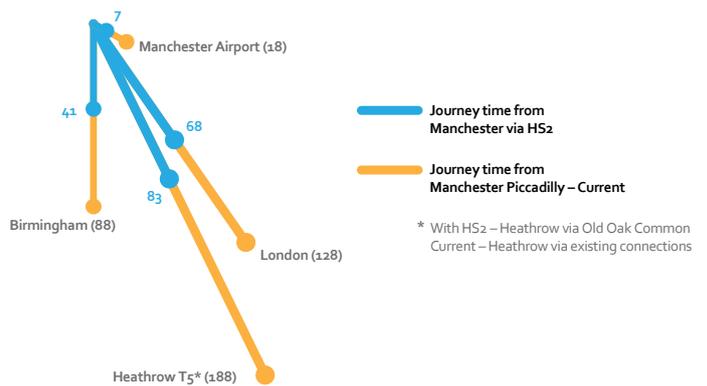
- **Altrincham Road (A560) and the M56** – We consider there to be a potential option for a ventilation shaft at a commercial development at the junction of Altrincham Road (A560) and the M56. Alternatively, it may be possible to use the car parking structure behind this location.
- **Palatine Road** – The indicative location of the second shaft would be in an area adjacent to the Withington golf course off Palatine Road.
- **Lapwing Lane and Palatine Road** – The indicative location of the third ventilation shaft would be on the site of the Public House and its car park at the corner of Lapwing Lane and Palatine Road.

- **Whitworth Lane and Old Hall Lane** – The fourth ventilation shaft would be located close to the corner of Whitworth Lane and Old Hall Lane, in an area presently occupied by a University car park and playing fields.

Implications for people living between Rostherne and Manchester Piccadilly

Opportunities

It is estimated that the proposed station at Manchester Piccadilly could support between 29,700 and 42,900 jobs and between 3,100 and 4,100 homes, and the Manchester Airport High Speed Station an estimated 300 to 700 jobs, through the development that could be generated as a result of HS2.



* With HS2 – Heathrow via Old Oak Common
Current – Heathrow via existing connections

People living along this section of the route could access HS2 services via these stations, benefiting from faster, more frequent services to Birmingham, London and other cities served by HS2.

Landscape and townscape

Cutting north of Rostherne would enclose a strip of landscape with the M56 affecting local views. Mixed plantings around the edge of Tatton Park would largely screen views. Approaching the urban fringe of Manchester, the proposed route and high speed station would be closely associated with the motorway and existing airport. However, the Manchester Airport High Speed Station would result in some visual impacts for local residents. Potential impacts through much of Manchester would be avoided by the route entering tunnel, but there could be visual impacts from the four proposed ventilation shafts. Later designs would seek to reduce potential impacts by introducing landscaping, including earthworks and planting of trees, hedgerows and shrubs.

Wildlife and habitats

The route has been refined to avoid impacts on the qualifying features of several important protected sites, including The Mere Ramsar site and Site of Special Scientific Interest (SSSI), and Rostherne Mere Ramsar and SSSI. The scheme would cross Hancocks Bank Ancient Woodland. We would look at ways of minimising effects whilst building the line, and then restoring the sites as far as possible.

Water

The proposed route would cross a number of rivers and streams, as well as their floodplains. The floodplains over 100m in length crossed in this section of the route include Birkin Brook, Blackburn's Brook and Corn Brook. Any impacts would be kept to a practicable minimum and we would work closely with the Environment Agency and other stakeholders in order to determine how best to do this. Crossings would be designed to minimise the effect on watercourses, their wildlife and associated wetland habitats. The design would also take future flood risk into account.

Heritage

The route would remain just south of the M56, avoiding impacts on the historic Tatton Park. This section of the proposed route would result in the demolition of the Grade II Listed Buckhall at Hale Barns, a mid-18th century brick farmhouse. It now forms part of a hotel complex and its setting has been greatly diminished.

At Manchester Piccadilly, the new HS2 station would result in internal alterations to the Grade II Listed Victorian train shed, with associated impacts on the character and setting of the station façade. There would be significant impacts on the Whitworth Street Conservation Area; the proposed train crew building

would obscure the views of the historic public façade of the existing station from the Conservation Area.

Transport networks and access

Several roads are likely to require permanent or temporary re-alignment, such as Ashley Road, the M56 and the A538, as well as additional minor roads. We are already working with the Highways Agency and, in due course, would work with local authorities to minimise any traffic disruption which might arise. Effects on cycle routes and footpaths would be addressed as more detailed planning is done. Routes would be reinstated or alternatives provided wherever possible.

Property and land

The route and new HS2 station would result in clusters of an estimated 15 residential demolitions at Manchester Airport High Speed Station, with the station at Manchester Piccadilly requiring some 48 residential demolitions. Where the tunnel emerges at West Gorton, it would necessitate around 22 residential demolitions.

In order to provide assistance to people whose properties may be affected at this early stage of the scheme, the Government has introduced a discretionary Exceptional Hardship Scheme (EHS). The EHS is designed for those who, for reasons of exceptional hardship, have an urgent need to sell their property, but have not been able to, except at a substantially reduced price, as a direct result of Phase Two. More information about the Phase Two EHS and how to apply is available on the HS2 website, www.hs2.org.uk.

The EHS is not the only opportunity affected property owners will have to sell their properties in the medium to long term. Based on the timescales of Phase One, the Phase Two EHS is expected to run until the end of 2016. A wider package of longer-term property compensation schemes would be expected to replace the EHS at that point, in addition to the statutory provision.

Noise

At this early stage of the design process, our initial airborne noise appraisal has predicted the exposure of railway noise on groups of dwellings during an 18-hour daytime period¹.

The map included with this factsheet highlights areas likely to be affected by noise based on this early appraisal. It also indicates locations at which we would explore further opportunities to mitigate airborne noise, such as the use of noise barriers and earth mounds. A factsheet providing further detail on noise has been produced to accompany the consultation.

¹ Noise is conventionally measured using the equivalent continuous sound level (L_{Aeq}) indicator. This level is defined as the constant level of sound that, over a period of time, has the same total sound energy as the actual varying sound over the same period.

Local issues

Our work with regional stakeholders has highlighted some areas in which the route could cause concern for local people, and we expect the consultation will highlight other issues not included here. We will work with local authorities, communities and stakeholders to develop the engineering design in a way that minimises potential impacts and will discuss the proposals for mitigation where possible.

Managing construction

Following Royal Assent to the Phase Two hybrid Bill, there would be a period to prepare for construction – for example, to acquire land and let contracts. Construction itself will take approximately nine years overall, although, in most places, the duration of construction is likely to be much less. This period of construction will include a period of testing from early 2031, with Phase Two expected to open in 2032/33.

We recognise that people will be concerned about the impacts of construction on their area. We are committed to managing these impacts and reducing disruption to communities, businesses and the environment in ways that reflect best practice in the construction industry. We will work closely with local authorities and communities to draw up a comprehensive and detailed package of measures to address the local effects of construction, such as the Code of Construction Practice being introduced for Phase One.

Where to get further information

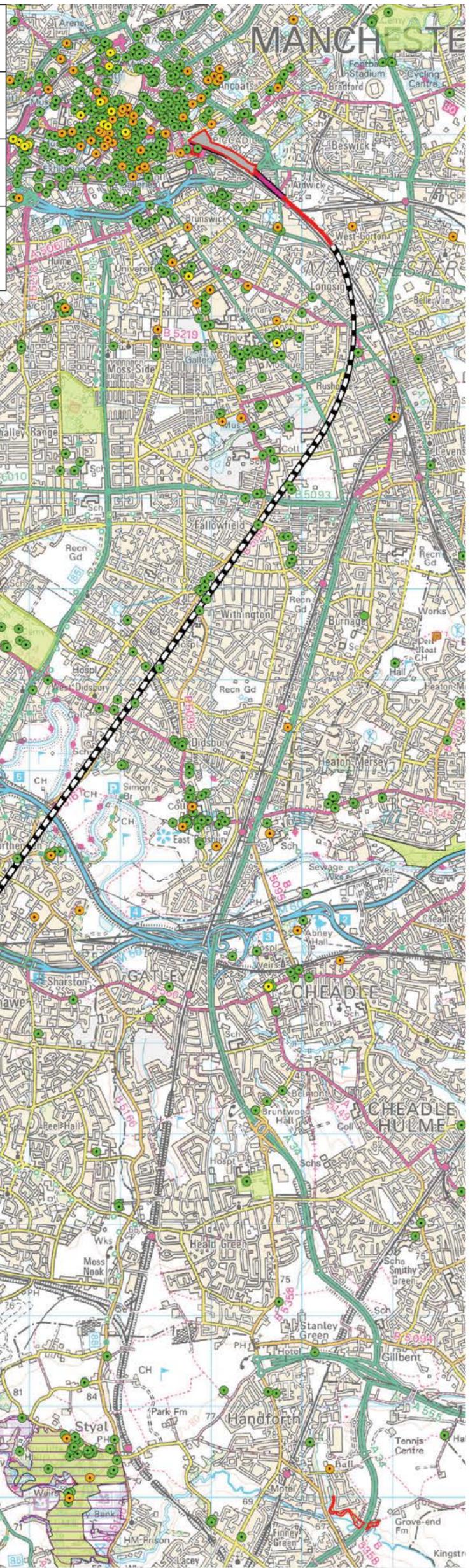
The consultation document *High Speed Rail: Investing in Britain's future – Consultation on the route from the West Midlands to Leeds, Manchester and beyond*, which sets out our proposals in detail, can be downloaded from our website: www.hs2.org.uk.

Our Sustainability Statement, which describes the extent to which the proposed scheme supports objectives for sustainable development, is available on the site, along with further supporting materials. You can also call the HS2 Enquiries line (**020 7944 4908**) for more information.

Noise Impact Key

The map gives an indication of the properties that would experience noise once the proposed HS2 services are operating, based on our noise modelling, and assuming mitigation in place

	Noticeable Noise Increase Areas which could have a noticeable change in average daytime railway noise levels where the predicted noise level is more than 50dB _{Aeq,18hr} and there has been a 3dB increase or more.
	Noise Insulation (NIRR) Areas which could have a requirement for noise insulation (based on regulations) where façade noise levels are more than 68dB _{Aeq,18hr} with a 1dB increase or more.
	High HS2 Noise Levels Within the areas which could qualify for noise insulation we have also identified locations which could be exposed to "high" average noise levels i.e. greater than or equal to 73dB _{Aeq,18hr} . This is the level taken from the Environmental Noise Regulations.



Legend

Western leg proposed alignment

- At Grade
- Cutting
- Embankment
- Green Tunnel
- Tunnel
- Viaduct
- Station or Depot Operational Boundary

Key environmental features

- Listed Building Grade I
- Listed Building Grade II*
- Listed Building Grade II

- National Trust Ownership
- Registered Park and Garden
- Scheduled Monument
- Ancient Woodland
- Country Park
- Ramsar Site
- Site of Special Scientific Interest (SSSI)
- Special Area of Conservation (SAC)
- Special Protection Area (SPA)

High Speed Two Phase Two
Western Leg

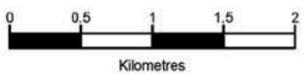
Proposed Route 2013
Key Environmental Features

Rotherne to Manchester Piccadilly Station



Scale at A3: 1:50,000





Registered in England: Registration number 06791680.
Registered office: Eland House, Bressenden Place, London SW1E 5DU.

Map Number: LMH-HS2-CN-MAP-200-000030 Date: 09/07/13

© Crown copyright and database rights 2013. Ordnance Survey Licence Number 100049190.

HS2 Ltd accept no responsibility for any circumstances which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way.