

Don Valley Railway Newsletter

August 2013



Special Edition

HS2: Opportunities for the Sheffield City Region



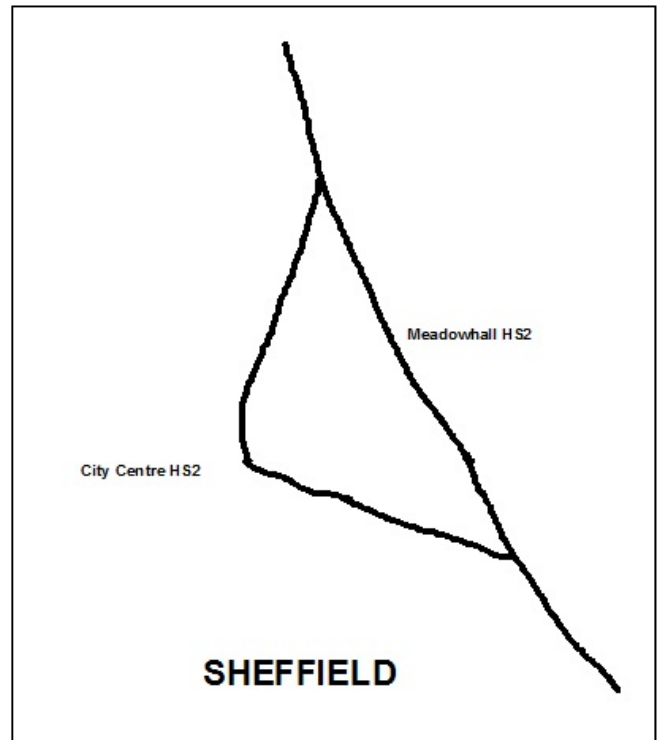
Special Report: HST Phase 2

The Government views a high speed rail network from London to Birmingham, Manchester and Leeds as the best solution for enhancing rail capacity and performance on the key north-south rail corridors.

On 28 January 2013 the Government announced its initial preferred route for Phase Two of High Speed 2 (HS2) from Birmingham to Manchester and Leeds.

Meadowhall was identified as the preferred location for the Sheffield station. The alternative City Centre option of using the site of the former Victoria Station was rejected on the grounds of additional cost, longer journey times and a lower traffic output.

It is anticipated that Phase One of HS2 from London to Birmingham will be opened in 2026 and Phase two, the extension of the line from Birmingham to Manchester and Leeds by 2033.



City Centre Masterplan 2013

In May a six week public consultation was started by Sheffield City Council on the City Centre Masterplan 2013.

The 2013 plan sets out the Council's latest vision for the development of Sheffield City Centre over the next decade. The vision includes an increase in the number of people staying and spending money in the city as well as developing new business districts and improved transport links.

The plan points out that being a transport hub is one of the key functions of a City Centre. It also places a greater emphasis on greener transport than previous plans due to the rising need for action on reducing air pollution and fossil fuel consumption.

The plan makes a clear commitment to a City Centre HS2 Station which would be located at the site of the former Victoria Station.

The Benefits of High Speed Rail

The government's case for the need for HS2 includes:

- **Capacity issues on the rail network**
- **Faster rail journeys**
- **Improved links for business travellers**
- **Job creation and regeneration around station sites**
- **A release in space on the classic rail network to enable new commuter, regional and freight services**
- **Improved intercity and international connections**
- **An alternative to domestic aviation and car journeys**

For Sheffield, the proposed HS2 journey times are 25 minutes to Leeds, 38 minutes to Birmingham and 69 minutes to London.

Location of Sheffield HS2 Station

Though a number of sites in Sheffield were considered, the final options were either a new parkway type station at Meadowhall or a new station on the site of the former Victoria Station on the eastern edge of the City Centre.

Meadowhall was the Government's preferred station location in the Sheffield City Region.



Both Sheffield City Council and South Yorkshire Passenger Transport Executive (SYPT) welcomed a station in Sheffield.

However, the Council preferred a station located in the City Centre and identified a loop off the main line serving the site of the former Victoria Station as the most suitable way forward.



City Centre HS2 Station

Sheffield City Council has expressed a distinct preference for a City Centre Station on the site of the former Victoria Station on the Eastern Edge of the City Centre. The site is currently poorly connected to Sheffield (Midland) Station which is approximately 1km away.

The Council are of the view that building a loop off the main line through Sheffield would generate £5bn of economic benefits to Sheffield. The cost of building the loop which would utilise some existing railway alignment would be £1bn.

Construction of a new station at Victoria would require extensive remodelling of the listed Wicker Arches and also demolition of the listed Royal Victoria Hotel and some residential properties on the approaches into Sheffield.

However, the line through Sheffield would be a loop off the mainline with only 1-2 trains per hour running into Victoria. It is improbable that the mainline itself would be diverted to run through Sheffield as there would be a time penalty of 6 minutes when compared to trains that take the direct route through Meadowhall. In addition, less traffic is generated from Sheffield compared to Leeds to justify slowing down the longer distance trains by routing them through Sheffield.



The Don Valley Railway View



The Government proposals for the route of the second phase of HS2 announced in January 2013 include a Sheffield Station at Meadowhall.

Sheffield City Council, though welcoming the proposed station at Meadowhall, wish to see a station in central Sheffield running on a loop off the mainline. The Council's preference is for the site of the closed Victoria Station in its City Centre Masterplan 2013 as the location of a City Centre Station. The station site is also part of the Don Valley Railway's (DVR) plans.

Although it won't be until 2033 before the first trains run through Sheffield, the Council may have to move quickly to test their alternative proposals. This will have to demonstrate that any additional cost to the scheme as part of the plans which are currently estimated at £1bn are met by improved connectivity and economic benefits in order to justify them.

The proposal of using the site of Victoria Station is one way of getting trains into the city centre. It is unclear whether the Council has considered other alternative route options. A further option may be to change the main route and for it to go into central Sheffield. That way all HS2 trains would be in the right place to connect in Sheffield City Centre, as they would be under the current proposals to connect at Meadowhall.

Although a station at Victoria may offer a direct connection to the Don Valley Railway, its East - West aspect means a greater deviation for HS2 Trains from their North- South routing.

Therefore, the existing Sheffield Station is an option that needs to be considered in more detail.

The alignment at the rear of Sheffield Station which is currently used by Supertram may also provide a suitable location if the tram was diverted to the front of the station. This may encroach into the newly created South Street Park, however the impact of that would be manageable.

The revised tram route could then run from the railway station via Sheffield Interchange, giving a seamlessly integrated transport infrastructure in Sheffield City Centre.

The hillier topography of a route to access the city centre is likely to result in increased costs of the construction of HS2. However if economic benefits are greater in the longer term, then the short term cost would be justifiable. The number of properties affected is unlikely to be any greater than under the preferred current route as the line would run in tunnels under the city.

An alternative option to moving HS2 to the city centre is to instead move the city centre closer to HS2. Meadowhall is already a well established retail centre and would be the central hub of a Greater Sheffield if Sheffield and Rotherham were viewed as a single city. Therefore a station at Meadowhall is fairly central too. So would the simplest strategy be to redefine Meadowhall as not being out of town?

Perhaps in exchange for introducing parking charges to the centre, could further expansion be allowed, including non-retail commercial city centre type functions?

A further option would be to consider classic compatible services. Some HS2 trains will be designed to run on High Speed lines only, but High Speed services to Liverpool, Newcastle and Scotland will run on existing electrified intercity lines.

Could a connecting link allow a similar service to serve Sheffield City Centre in not much over the 1 hour 09 minutes journey time to London via Meadowhall?

In addition, the Hitachi Javelin trains which operate on HS2, the Pendolinos and the Intercity 225 trains currently used on the West and East Coast Mainlines respectively are all capable of 140mph working, as will the new Hitachi IEP trains.

These trains are restricted by track, Overhead Wire or signalling constraints. Further upgrades to the East Coast would probably result in only marginally different timings between London and York and therefore Newcastle and Scotland from London, compared to the longer but faster HS2 route.

It is also interesting to note that Sheffield Meadowhall, approximately 170 miles from London Euston, is being timed at 1 hour 09 minutes on HS2. In the May-December 2013 timetable, Retford, 139.5 miles from London is reached in 1 hour 21 minutes by more than one service.

There is a long time until completion of the HS2 project and a lot could happen in the meantime so HS2 project managers will have to deal with risk.

Perhaps the original project will have to change before construction to make it worthwhile. In terms of its effect on the DVR, only a small proportion of journeys on the DVR will be for onward travel via HS2.

However, DVR recognises and welcomes the opportunities that HS2 will provide when it is built.



Free support from International rail experts

Don Valley Railway has been offered free services of rail consultants by Mott MacDonald who are a leading international planning and engineering consultancy with offices in Sheffield and around the world.

Mott MacDonald have offered to assist us in the delivery of our business plan for our project of bringing a passenger rail service to the Upper Don Valley.

Business Plan Project Group

We held a further meeting with SYPTE at which they stated their support in principle to the further development of the Don Valley Railway.

SYPTE also advised us to continue the future development of the Don Valley Railway Business Plan focusing on Ultra Light Rapid Transit.

We have set up a Business Plan Working Group which is tasked with overseeing the ongoing development of a Business Plan and is planning a key stakeholder event in the near future.

Petition reaches 2000 signatures

2000 people have so far signed Don Valley Railway's petition that aims to get Sheffield City Council to debate returning the railway route between Stocksbridge and Sheffield back into use for passengers services.

5000 signatures are needed to get the Council debate.

The petition is available as an e-petition at:

<http://www.change.org/en-GB/petitions/government-and-rail-authorities-to-support-the-introduction-of-services-between-stocksbridge-and-sheffield>

Paper copies are also available from us via email: info@donvalleyrailway.org

Transport Minister signs contracts for first Tram-Train service

The tram-train service will start in early 2016 and run between Rotherham Parkgate and Sheffield City Centre. Tram-trains will be able to operate on both the tram and the National Rail network and as such the Vossloh supplied vehicles will be the first in this country able to run on both networks.

The dual voltage vehicles are future proofed and capable of operating at both light and heavy rail operating voltage, which could create additional journey opportunities following electrification of the Midland Main Line.

The 2 year project costing £60 million will be used to pilot the tram-train concept to help the rail industry understand and assess technical issues around the use of tram-trains which are well established in Europe.

If the pilot is successful, it could be taken forward in other parts of the country. It could also underpin the development of an integrated South Yorkshire Rapid Transport network.

Vehicles that could run on the Don Valley Railway

Don Valley Railway is very committed to exploring alternative technologies to give a low cost urban transport solution. So what options are currently available to us?

Dual Voltage Tram-Trains

The Vossloh manufactured dual voltage vehicles for the tram-train trial from Sheffield to Rotherham are able to operate on the standard 25kV ac system used on the UK rail network as well as the 750 volt dc system used by Supertram.

Each Vossloh tram-train costs £3.2 million compared to the £2 million cost of a Supertram-type vehicle. The Vossloh tram-trains also have the higher crashworthiness specifications required to enable operation on the National Rail network.

A dual voltage tram-train operating to Stocksbridge would open up possibilities for linking Stocksbridge to destinations in South Yorkshire and the Sheffield City Region.

Any electric tram-train proposal would require significant infrastructure costs, however it would result in improved connections and provide new journey opportunities.

Diesel Tram-Trains

A suitable diesel powered tram-train could operate on both the National Rail network and the Supertram network without the significant capital costs arising from the installation of extra electrification.

Network Rail could not find a suitable diesel powered tram-train for its original proposed trial on the Penistone line.

However, in Kassel, Germany, a system operates with triple-powered trams supplied by Alstom, operating on two electric systems with the addition of a diesel-electric power unit.

This type of system could extend the use of tram-trains on other non-electrified lines. The cost of a triple-powered tram-train is likely to be in excess of the Vossloh dual voltage version, although leaving out the 25kV equipment would bring the cost nearer. The additional cost and benefits of a diesel tram-train would need to be compared against the costs and benefits of new electrification.

Parry People Mover

The Parry People Mover Ultra Light Rapid Transit vehicles (PPM's) provide a lower technology and a lower price option. Parry's prototype PPM175 is a larger and faster vehicle than the vehicles currently operating in Stourbridge, West Midlands.

The prototype PPM175 offers a cost effective sustainable extension to South Yorkshire's rail rapid transit network. It may also provide a shuttle option in the shorter term as the local rail network is developed prior to the opening of HS2 in 2033.

The shuttle option of using a PPM also offers the rail industry with a test case to try a cost viable option for the development of provincial local rail services. PPM vehicles are unable to handle gradients and so would be unsuitable for operation on the tram network

Pacer DMU

Pacer DMU's which are currently used on the local network may become available for lease in the near future. These could provide a low cost vehicle option. However, the units are not compliant with strict EU safety standards coming in from 2019 and this may negate their use.

Re-engineered/Off lease DMU

It may also be possible to source DMU's that have been placed off lease. These could be re engineered or refurbished to provide a low cost solution.

Acknowledgement

All images used in this newsletter are from HS2.

Become involved with Don Valley Railway

Volunteer and attend our drop in meetings

We are always looking out for supporters and volunteers to help us.

Come along to our meetings to find out how you can work with us to make the project happen.

We meet every month in Sheffield City Centre.

Sheffield: We meet every first Thursday of the month 7-9pm at the Harlequin Pub, Nursery Street, Sheffield.

Stocksbridge: Occasional meetings are held at the Rugby Club, Park Drive Way, Stocksbridge, See the website: www.donvalleyrailway.org for announcements.

Become a member

Please complete the form below. Please state which type of membership you require:

Individual Membership £12 per year.....	
Family £18 per year.....	
Junior Membership £6.....	
Life Membership £120.....	

Name.....

Telephone No.....

Address.....

Post Code.....

Email.....

Please return your membership application including cheque to:

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Sheffield
S10 2BS