

Case Study #2

Sheffield and
South Yorkshire

HS2 INDEPENDENT
DESIGN PANEL

The issue of where to locate the HS2 route serving South Yorkshire is the subject of a report by David Higgins, chair of HS2 Ltd, published in June 2016.

The HS2 Independent Design Panel's views are quoted in the Higgins report. Together with wider consultation responses, the panel's comments encouraged HS2 Ltd to reconsider building a station at Meadowhall, near Sheffield. An alternative route to the east of Sheffield is now proposed, with a link taking high speed trains directly into Sheffield.

This case study summarises the panel's involvement in commenting on the station serving South Yorkshire at a review meeting in December 2015.

Process

There are a number of ways that the panel provides independent advice to HS2 Ltd, from a full review to individual mentoring. In this case a full review was arranged, attended by six panel members. The panel was selected to provide a wide range of professional expertise, including: architecture; urban design and regeneration; sustainability; landscape design; inclusive design; and station design. HS2 Ltd and its design team were also at the meeting. Following a site visit and presentation by consultants there was a discussion with the panel.



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This is the second of a series of case studies about the work of the HS2 Independent Design Panel

Project headlines

- The panel commented on the proposals for an HS2 station at Meadowhall in December 2015.
- A number of concerns about the suitability of this location were raised.
- A Sheffield and South Yorkshire Report, by David Higgins, chairman of HS2 Ltd was published in June 2016.
- An alternative route is now proposed, with a direct link into Sheffield.

Panel comments

The HS2 Independent Design Panel was invited to comment on the proposals for Meadowhall Station. The panel did not think that a station in this location would meet the ambitions of the HS2 Design Vision. The panel understood that this site was proposed because of advantages in terms of rail connections to the wider region, and onward journey time to Leeds. However, the panel advised that these benefits might be outweighed by the disadvantages of this site - which is compromised by its location in a flood plain, relationship with highways infrastructure, and the existing out of town shopping centre.

There are three areas where the panel's comments have supported HS2 Ltd's recommendation to the Government for an alternative route.

1. Infrastructure constraints

Construction of HS2 parallel to the existing M1 viaduct, the tramline, the River Don and culverted Blackburn River, and close to Meadowhall shopping centre, would have presented significant challenges.

A new station in this location would have required the creation of a gyratory with four lanes of traffic, circling the new station, and

limiting pedestrian access at ground level. Air pollution would have been a problem for the station because the site is surrounded by a traffic gyratory.

2. Limited scope for regeneration

The panel raised concerns about the limited value of a station at Meadowhall in terms of urban regeneration. The land around the proposed station is a flood zone, with minimal development potential - particularly for housing.

Leftover pieces of land in between the various transport structures were unlikely to have any viable use. The panel recommended that HS2 Ltd consider alternative options for a station in South Yorkshire, to maximise value beyond its function as a transport interchange.

3. Station design challenges

Comments were also made on the microclimate of a station at Meadowhall. A station at high level, in this exposed location in the River Don valley, would have required careful design to avoid creating a windswept environment. The new station may have needed to be designed as a fully enclosed transport interchange to provide a sheltered environment.

The extent of car parking proposed was also questioned by the panel - who encouraged HS2 Ltd to take an ambitious approach to prioritising walking, cycling and public transport. However, the scope for access by walking and cycling would have been limited in this out of town location, dominated by highways infrastructure and 'big box' retail.

An alternative HS2 route for South Yorkshire

An alternative route to the east of Sheffield, initially parallel to the M18, is now recommended by HS2 Ltd, with a link taking high speed trains off the main line into Sheffield, while the main HS2 line continues to carry trains serving Leeds and further north.

This route addresses wider consultation responses, as well as the panel's concerns about the suitability of Meadowhall as a location for a new HS2 station. The new route is also estimated to achieve a £1bn cost saving.

The HS2 Independent Design Panel will have an opportunity to comment on the alternative route in August 2016.