

REPORT

Design Panel meeting to discuss Schedule 17 stage designs for Interchange Station

Wednesday 29 January 2020
Arup Campus, Blythe Valley Park, Solihull B90 8AE

HS2 Independent Design Panel

Prof. Sadie Morgan (chair)
Adam Brown
Mike Martin
Martin Stockley

Attendees

Tom Wilne	Project Director N3 Area North, HS2 Ltd
Hala Lloyd	Lead Architect (N3 / N4), HS2 Ltd
Laura Kidd	Head of Architecture, HS2 Ltd
Kim Quazi	Lead Architect, Arup
Guy Stabler	APM Design Lead, Arup
Richard Jackson	Design Manager, Arup
Claire Bishop	Solihull Metropolitan Borough Council (SMBC)
Julia Sykes	SMBC
Deborah Denner	Frame Projects

29 January only

Cameron Thompson	Project Manager, Area North, HS2 Ltd
James Mumby	Town Planning Manager Area North, HS2 Ltd
James Dearing	Design Manager, HS2 Ltd
Jeff Upton	SMBC
Edward Bailey	Frame Projects

22 October only

Niki French	Senior Project Manager, HS2 Ltd
Jiten Davdra	Lead Senior Project Engineer, HS2 Ltd
Kay Hughes	Design Director, HS2 Ltd
Biljana Savic	Urban Design and Integration Manager, HS2 Ltd
Andrew Lloyd	Project Director, Arup
Peter Evans	Lead Design External Works, Arup
Chris Jackson	APM Lead Civils Designer, Arup
Richard Brown	Town Planning / Consenting Lead, Arup
Karen Wilson	Associate Director, Arup



Chris Churchman	Landscape Lead, Churchman Thornhill Finch
Paul Stewart	Phase One Sponsor Team, DfT
Matthew Game	Urban Growth Company
Gary Palmer	SMBC
Michael Eastwood	SMBC
Elisabeth Pywell	National Planning and Development Team, CBRE
Tessa Kordeczka	Frame Projects

Apologies / copied to

Richard Smith	Phase One Birmingham Stations Sponsor, DfT
Lisa Chaney	Senior Development Manager, Urban Growth Company
Sandeep Magar	SMBC
Sarah Ridley	Phase One Birmingham Stations Sponsor, DfT
Simon Atkinson	Birmingham & Black Country Wildlife
James Danby	Head of Commercial Development Phase 1 North, HS2 Ltd
Alice Williams	PA to Design Director, HS2 Ltd
Clive Green	Senior Communications Manager, HS2 Ltd
Giles Thomas	Phase One Engineering Director
Joanna Averley	Head of Urban Design and Integration, HS2 Ltd
Christoph Brintrup	Head of Landscape, HS2 Ltd
Bernadette Hurd	Head of Benefits Realisation, HS2 Ltd
Mike Luddy	Director of Stations, Commercial, HS2 Ltd
Paul Gilfedder	Head of Town Planning Technical, HS2 Ltd
Tom Venner	Commercial Development Director, HS2 Ltd
Sam Wilkinson	Commercial Development Manager, HS2 Ltd
Zoe Stewart	Lead Design Manger, HS2 Ltd
Nicole Linney	PA to Design Director, HS2 Ltd

Note on Design Panel process

The HS2 Independent Design Panel was established at the request of the Department for Transport in 2015 to help to ensure that HS2 – through great design – delivers real economic, social and environment benefits for the whole country.

The HS2 Design Vision sets out nine principles around three themes: People; Place; and Time. The Design Panel uses this framework to help the HS2 Ltd leadership, project teams and other partners to make the right design choices. This also informs its advice on designs to be submitted under Schedule 17 of the High Speed Rail (London – West Midlands) Act 2017.

The panel plays an advisory role, providing impartial and objective advice, to support the design process. At pre-application stage it is for HS2 Ltd to decide what weight to place on the panel's comments balanced with other considerations. Once a Schedule 17 application is submitted, the panel's advice may inform the local planning authority's decision making process. The panel may refer to opportunities for refinement as design work continues following submission.

Further details of panel membership and process are available at:
<https://www.gov.uk/government/publications/hs2-design-panel>

The HS2 Design Vision is available at:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/607020/HS2_Design_Vision_Booklet.pdf

The HS2 Independent Design Panel comments below follow on from three pre-application reviews and six mentoring sessions for Interchange Station.

Timing of Schedule 17 meeting

This report captures design panel comments made over two meetings, held on 22 October 2019 and 29 January 2019.

Both these meetings took place in advance of the Schedule 17 submission for Interchange Station. The proposals for Interchange Station are intended to be split into two separate Schedule 17 consents packs to the local planning authority, Solihull Metropolitan Borough Council:

- station building and associated external works, public realm and primary site roads
- and the automated people mover

A Reserved Matters application (under section 23 of the HS2 Act) will be submitted for the station car parks. The two Schedule 17 and reserved matters submissions are anticipated to be submitted at the same time at the end of January 2020.

This report should be read in conjunction with the separate report on the automated people mover, also considered by the panel on 22 October 2019 and 29 January.

Local planning authority views

Solihull Metropolitan Borough Council has had extensive discussions with the design team on the proposal for Interchange Station during pre-application stage, including through the value engineering process.

The planning authority has now received the draft Schedule 17 submission for the Interchange Station and Automated People Mover, including changes made since the previous design panel meeting in October. Draft drawings for the Town and Country Planning reserved matters application for the car parking have also been received. These are currently under consideration, and the council is unable to confirm if the areas it has previously raised have been addressed.

Areas previously raised by the council include: a request for additional detailed plans and working drawings for the station building, including materials; assurance on the design quality of the eastern entrance, including its legibility and distinctiveness; the ability of the station design to adapt to future growth and increased capacity; the need for a robust sustainability strategy to be included in the Schedule 17 submission; and clarification of the rationale for the proposed quantity of car parking provision at Interchange Station and clarity on why it is being submitted as a reserved matters application rather than as part of the Schedule 17 submission.

The council expect the Schedule 17 submission to clearly explain the design evolution of the scheme, and provide clarity on the accessibility to and from the scheme – in particular from Hollywell Brook.

Independent Design Panel's views

Summary

The HS2 Independent Design Panel commends the Schedule 17 submission stage designs for Interchange Station, which promises a high quality station as a focus for the development planned around it. The experience of arriving at the station at its main entrance promises to be uplifting, and the panel welcomes the improvements made to the eastern entrance across the pedestrian bridge. Overall the panel is confident that Interchange Station will meet the aspirations of the HS2 Design Vision – with continuing commitment to resolving those aspects of the designs not 'fixed' at Schedule 17 application stage. As design work continues towards construction, the panel offered some comments on details such as the articulation of podium elevations, the pedestrian bridge, entrance portals and external roof trusses. Commenting on the wider public realm, the panel finds much to admire in the landscape design. However, it recommends further work on the design of public realm around the portal at the eastern end of the pedestrian footbridge, to ensure it has sufficient generosity and prominence. Whilst understanding that the quantum of parking is in accordance with the HS2 Act and current operational requirements, it considers that 7,500 car parking spaces may be excessive. As travel ambitions and car parking local authority adoption standards change in the future this may undermine the sustainability ambitions of the HS2 project. Similarly, provision for electric vehicle and cycle use may also be inadequate in the light of emerging thinking on lower carbon travel. The panel also recommends further work on the design of the primary access route to the A452 to ensure this creates a street fit for the 21st century. It would also encourage further exploration of the experience of walking from car park to station building, and the interaction between vehicle drop off, buses, cyclists and pedestrians. This should include consideration of future adaptability to repurpose areas of the public realm. Rigorous management and maintenance of the landscape design will also be essential to securing its long term future.

Station building

Overall station design approach

- The panel commends the design team on the quality of the proposed design for Interchange Station, which promises a high quality station as a focus for the development planned around it.
- Development of the station design through its various iterations has been a constructive and positive process – despite an evolving context, in terms of both brief and cost, along the way.

- It will be essential that sufficient information is submitted as part of the Schedule 17 application to give confidence to the local planning authority that the quality promised by visualisations of the station will be delivered. This should include details of materials and construction, as well as plans, sections and elevations.
- While the panel admires the scheme for Interchange Station, its success will depend on this being followed through during detailed design and construction. The quality of materials will be critical – and the planning authority rightly points to the importance of rigorous specification.

Arrival points

- The main entrance to the station from the west plaza promises to be highly successful – providing an appropriately distinctive arrival point.
- The panel welcomes the improvements made to the entrance on the eastern side of the station, including the angular canopy demarcating the eastern end of the footbridge. It highlights that the geometry of each element will require careful consideration to ensure they all work together.
- The panel notes that the size of the arrival space at the eastern end of the pedestrian bridge feels insufficient. Given that some 40 per cent of users will enter the station by this route, it is essential to make this as interesting and attractive as other parts of the station. It suggests the team explore how this space can be designed to be more generous, prioritising the pedestrian experience.
- Lighting will also require careful consideration and the panel suggests that the team give clarity on this as part of the submission. It also suggests the bridge may benefit from restricting lighting to a low level, keeping the focus on the portals at either end of the bridge.

Materials

- While broadly supporting the materials proposed for the station building, including the colour choices, tonality and proposed hierarchy of different elements, the following issues merit further consideration.
- Aluminium is a challenging material to detail at an intimate scale and the panel highlights that this will require careful consideration if it is to be successful.
- A single material dominates the extensive podium elevations; there may be value in thinking further about how this might be articulated. The panel understands that an arts strategy is being developed to inform the next stage of detailed design; this is an area that could be included in that strategy.
- In addition, a question was raised about the roof trusses on the exterior of the building. The panel understands that these are proposed as steel rather than timber to ensure durability. It recommends further thought about how this structure can echo the warm quality of the timber in the station interior.

- A detailed issue to explore is the materiality and detailing of the footbridge – it is important to ensure that this is durable enough to deal with the heavy footfall expected and the inevitable knocks and scrapes it will receive. The panel questions whether this will be achievable with aluminium cladding. Higher parapets could also help strengthen the sense of arrival and its distinctiveness as an entrance in its own right - separate from the railway below.

Planning process

- Clarification of the Schedule 17 planning process for Interchange Station was sought. The submission relating to the station building, associated external works and public realm, would not include the landscape design for approval. Information provided at this stage will be illustrative only.
- Details of the landscape design will be submitted to the local planning authority for approval at a later stage, as part of a later 'bringing into use' application.

Car parking

Parking strategy

- The panel repeated its serious reservations about the amount of car parking proposed for Interchange Station – some 7,500 spaces. Whilst understanding that this is in accordance with the HS2 Act and current operational requirements, it is never the less highly likely to be at odds with the ambition for HS2 to be *'the most sustainable high speed railway of its kind in the world'* (HS2 Sustainability Approach 2017).
- Provision of electric vehicle charging points also appears insufficient, failing to reflect the anticipated significant increase in the use of electric vehicles.
- The expected increase in electric vehicle use will also generate a resource requirement. For example, serious consideration should be given to the capacity for energy storage at Interchange Station.

Car park canopy design

- Insufficient detail was presented on the design of the canopies included in some sections of the car parks. The panel felt reluctant to extend support without additional detailed information of their design. It is details such as these that will contribute to the scheme's quality at a human scale.
- The panel broadly supports the intention for the canopy design to be identified as one of a number of 'art' opportunities' to allow for further interrogation of their design and would welcome further information on this at a later date. The panel suggests the canopies could also make a positive contribution to capturing HS2 sustainability ambitions and the overall narrative of the station.

Cycle storage and facilities

- The proposed amount of cycle storage at Interchange Station – estimated as 176 – is seriously questioned. Although this meets the requirements of the HS2 Act and current operational requirements, it appears to be inadequate in terms of future demand and encouraging sustainable forms of transport.
- While not included as part of the Schedule 17 submission proposals, the potential to increase this number to approximately 400 spaces within the landscape is broadly welcomed by the panel. However, careful consideration is needed to ensure this is a sufficient amount, and that the location and design of this cycle storage is designed holistically with the design and operational requirements of the station.
- Cycle facilities should be part of an overall sustainability strategy that encourages sustainable transport to and from the station. This should include consideration of the potential provision of changing and shower facilities. The priority of sustainable forms of transport should be clearly communicated to the future operator.

Landscape and public realm

- The panel repeats its strong support for an approach to the design of Interchange Station that has taken the existing landscape as its starting point – and sought to enhance it.
- There would be merit, however, in a more detailed interrogation of the experience of arriving at the station building, for example walking from car park to station building. Including how aspects such as materials, priority, and wayfinding could contribute to the overall customer journey or ‘passenger experience’. For example, the hierarchy proposed for colours / tonality could contribute to a sense of priority given to pedestrians – cars crossing footpaths rather than pedestrians crossing roads.
- While the bold design of the west plaza – including rain gardens and boulders – promises a strong sense of arrival, arrival at the station from the east – experienced as car park, pavement and hostile vehicle mitigation – appears less successful. The panel suggests a more generous space around the portal at the eastern end of the footbridge, would allow for a more thoughtful solution for the security bollards.
- Careful consideration of the interaction between vehicle drop off, buses, cyclists and pedestrians would also be helpful to ensure that conflict between different routes and users, including those who may be more vulnerable, is avoided. The priority for the landscape design must be with the pedestrian – with cyclists, cars, taxis, and buses adapting to their needs. For example, could the design of the one system for the taxi drop-off be designed so that the point at which taxis drive off is away from pedestrian movement routes and lingering spaces.

- The panel repeated its view that the appeal of the station viewing area might be diluted by the fact that it overlooks the service area, even if this were carefully managed.
- As a detailed point, the panel suggests that the ground plane of the service area would be more successful as concrete, rather than black top.
- The landscape design strategy includes retention of existing trees and extensive additional planting. It will be important to secure assurances that proposed planting will be delivered.
- While images presented show mature planting, an understanding of how the landscape might appear from day one - before trees reach maturity – would be helpful.
- The panel questions how appropriate the proposed rather rigid lines of trees along approaches to the station from the north might be. These appear to be at odds with the more natural surrounding landscape; a looser, less formal arrangement would be preferable.
- The panel also pointed to the benefits of integrating within the landscape interpretation of its various features, such as hedgerows, swales and rain gardens.
- There are significant advantages to introducing larger benches to the station and associated public realm: smaller benches are poor value for money; longer benches are more sociable.
- The panel stressed that the success of the landscape associated with Interchange Station – and the scheme as a whole – will depend on consistently rigorous management and maintenance.

Link road to the A452

- The panel identified a discrepancy between the quality of the design of the station building and associated landscape, and that of the roads serving the station – these appear highly engineered.
- Road design needs to keep pace with fast evolving vehicle design – not least electric vehicles. Both road speeds – slower – and also vehicle manoeuvrability – greater – must be reflected in the design of roads if they are not to appear outdated.
- If roads serving the station do not reflect the qualities sought for a 21st century railway, its success will be diminished. It would support negotiations with Highways England to explore a more ambitious approach to designing the roads serving Interchange Station.
- The panel welcomes the intention to give further consideration to this aspect of the station design, together with a number of other ‘future proofing’ elements such as electric vehicle infrastructure, prior to the appointment of the Design and Build Contractor.

Sustainability

- The panel welcomed the comprehensive and coordinated approach to maximising environmental sustainability, including through BREEAM assessment.
- It again commended collaboration with Birmingham City University in innovative research into air quality – which can be expected to result in valuable lessons for future infrastructure projects.

Next steps

The HS2 Independent Design Panel finds much to admire in the architecture of Interchange Station, and the illustrative landscape designs that accompany it – both promise to meet the aspirations of the HS2 Design Vision. Fulfilling this potential will depend on detailed design, materials and construction adhering meticulously to the high quality proposed in the submission.

Areas for further design work post Schedule 17 include: the design of car parking canopies; the design of additional cycle parking provision; the public realm at the eastern entrance; lighting design and strategy; the experience of arriving at the station; and the design of the A452 link road.

The panel also notes, that the landscape design associated with Interchange Station will not be included for approval in the Schedule 17 submission, but rather will be considered as part of a later 'bringing into use' application.

The panel offers its continuing support to ensure those aspects of the design not fully resolved at Schedule 17 stage meet the aspirations of the HS2 Design Vision.