



ARUP



# Heathrow Southern Access - Independent Adviser

Executive Summary

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## Heathrow Southern Rail – Independent Adviser

Arup was appointed as independent adviser to the Heathrow Strategic Planning Group (HSPG) working in partnership with Heathrow Area Transport Forum (HATF) and Heathrow Airport to review the proposed development of a rail connection to Heathrow from the south.

The HSPG, its constituent stakeholders, and Heathrow Airport Limited (HAL) wish to improve public transport access to Heathrow Airport from the south. At a Heathrow Area Transport Forum event in November 2022, various options for this connection were presented by Spelthorne Borough Council, London Borough of Hounslow, and the private Heathrow Southern Rail Ltd (HSR Ltd) consortium.

The number of schemes represents a challenge in making a compelling case to government for further consideration of the value such a scheme would present, and what the funding and delivery model might look like.

### Overall process of independent review



Previous engagement has indicated that a privately funded heavy rail scheme is an attractive proposition to several stakeholders at this stage, primarily due to a proposed funding mechanism that the promoters suggest would not require any central government funding or guarantees.

For this commission, Arup engaged with HSR Ltd and key stakeholders to understand each party's objectives and requirements of the scheme and what would be required to build consensus around the HSR option in addition to understanding the key challenges for the scheme as outlined by HSR Ltd. The intent of this work is to assess the strength of local support for the HSR scheme and enable HSPG to explore whether consensus around a single scheme could be secured. By doing so, it is hoped that this could help facilitate engagement with the Department for Transport (DfT) to secure support for further development of the scheme.





## Engagement with HSR Ltd and independent review

Arup and the client team met with HSR Ltd representatives in April 2023. HSR Ltd presented an outline of their updated proposals for a new scheme which would connect Heathrow Terminal 5 station to the national rail network to the north of Virginia Water and provide services to Reading, Guildford and Basingstoke via Woking (through the extension of the existing Heathrow Express Services), Waterloo via Richmond including stops at Feltham and Staines and an extension of the Elizabeth Line service from its current terminus at Heathrow T5 to Staines.

HSR Ltd presented two alternative funding approaches based on the Market Led Proposals<sup>1</sup> (MLPs) framework set out by DfT in 2018, and proposed routes to obtaining consent for the scheme. HSR Ltd outlined the provisionally positive responses they have had through discussions with stakeholders such as the DfT, some local authorities, and key transport stakeholders.

At the point of the study taking place, MTR were considering the business case for taking on farebox risk to contribute to the scheme

HSR Ltd outlined that they were in the process of updating their costs forecast, which previously found capital costs in the range of £1.5bn, to account for any updates

to the scheme and for inflation since the first cost assessments were prepared.

HSR Ltd believe, based on their own assessments, that the economic benefits of HSR are likely to exceed those for the Western Rail Link to Heathrow<sup>2</sup> (WRLtH) for example, predominantly by serving several markets through the same scheme. It was also noted that both the HSR scheme and the WRLtH scheme support the proposition for the third runway at Heathrow but do not rely on it. Further more, in depth work would be required to

understand the merits of each scheme or a combination of both schemes to the various markets they serve.

Overall, the analysis conducted suggests that there are significant strengths to the HSR proposal. It links the airport with key passenger and employee markets, supports connections into HS2 at Old Oak Common, and stimulates economic growth in the catchment area.

However, the independent review of the scheme identified a few elements to be prioritised and resolved to provide greater confidence in the delivery of the scheme, as shown below.



### Funding

There are significant challenges to delivering this project without commitments from government. The MLP1 option is reliant on a contribution from Heathrow Airport which is dependent on conforming to the CAA surface access policy tests and the MLP2 approach remains reliant on a government guarantee.



### Delivery

There are a number of challenges to delivery over a short period including the need to secure MTR Board approval for investment, or alternative investment in development stage and confirmation of delivery entity, as well as the current level of design.



### Consenting

Timescales assumed for consenting are optimistic, particularly given impacts on the Staines Moor SSSI which constitute a consenting risk.



### Services

Impact on reliability of existing services on the GWML and SWML and impact on any future WRLtH scheme need further demonstrating and stress testing.

<sup>1</sup> Defined by the DfT as “an “unsolicited bid”, as a project promoted by the private sector which addresses an opportunity not necessarily identified or prioritised in a departmental programme or through the Network Rail-led long term planning process (LTPP)”

[Rail market-led proposals - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/672207/rail-market-led-proposals.pdf)

<sup>2</sup> Network Rail’s proposed new direct rail link from the West to Heathrow. [Western Rail Link to Heathrow - Network Rail](https://www.networkrail.co.uk/press-releases/western-rail-link-to-heathrow)

## Stakeholder Engagement

Arup engaged with the key stakeholders identified from HSPG, HATF and HAL in order to:








- Communicate an update of the HSR scheme.
- Receive feedback and views on stakeholder's ambitions and reactions to the scheme.
- Understand stakeholder expectations for the scheme and agree suitable next steps.

The stakeholder engagement activity confirmed support for the scheme across most stakeholders but logged a strong opposition from Spelthorne Borough Council who are one of the founding members of HSPG.

A key concern was also raised across many stakeholders, HAL in particular, with regards to the funding gap which may be challenging to fill by HAL due to regulatory requirements from the CAA. Stakeholders therefore expressed doubts around the overall viability of the scheme as a fully privately-funded scheme.

Throughout the engagement all stakeholders highlighted their key concerns, and these were acknowledged and taken forward for another discussion with HSR Ltd and for further consideration by HSPG. The outcome of this engagement is summarised in Table 1.

Table 1 Level of Stakeholder Support

Stakeholder	Level of support	Concerns raised
<b>Runnymede BC</b>	Supportive with minor concerns. 	HSR proposal for new station at Addlestone Parkway (between Addlestone and Chertsey) and its local impact.
<b>Surrey CC</b>	Supportive with minor concerns. 	Impact on existing and future services between London and key stations in Woking and Guildford.
<b>Heathrow Airport Limited</b>	Supportive but unable to commit to HAL funding required at the current time due to regulatory limitations. 	Use of the Heathrow Regulated Asset Base (RAB) <sup>3</sup> to fund the scheme and scale of funding required: Requirement for a full understanding of the complete business case and support for any contribution from the CAA/airlines are challenges.
<b>London Borough of Hounslow</b>	Supportive with minor concerns.  In discussion with leadership on moving on from own scheme.	New station at Bedfont Road and connections to proposed developments in the local area.
<b>Spelthorne Borough Council</b>	Opposed due to concern on local impacts and preference for own proposed light rail scheme. 	Concerns on: Local environmental impacts, Lack of local connectivity, and Costs. Also supportive of its own proposed light rail scheme.
<b>Network Rail</b>	Supportive but reservation on transport impacts such as reliability and use of paths on services into Waterloo. 	Impacts on reliability and use of capacity for HSR.
<b>Transport for London</b>	Supportive but reservation on funding and transport impact. 	Impacts on reliability and use of spare capacity, impact on Elizabeth Line and business case for extension at 2tph to Staines.

## Final assessment and recommendations

The Arup independent review was informed by a process of engagement with HSR Ltd and various stakeholders agreed with the client team. The conclusions of our review are summarised below:



The progress of a connection to Heathrow from the south has not kept pace with other nationally important projects, with minimal demonstrable progress following DfT's 2018 market sounding exercise. A new sponsorship and development model is needed with strong private sector input working in partnership with central and local government, Heathrow, and other key stakeholders<sup>4</sup>.



The HSR proposal potentially offers a new model, with a privately-financed private-sector led scheme to build and own the infrastructure that would connect Heathrow Airport with the South Western railway network and enable train services to be operated on the link in return for access charges.



The HSR scheme has been developed to a higher level of detail than other proposed alternatives and was identified by HSPG as the most relevant scheme to be reviewed independently at this stage. A full options assessment may still be required depending on the proposed delivery route.



HSPG and local stakeholders should strongly support the concept of Rail Southern Access to Heathrow. It addresses a multi-decade problem of poor rail connectivity to the south of Heathrow, unlocks economic potential, provides a new model of sustainable growth integrating across housing, transport, and economic development, and delivers a robust and compelling economic story – at national, regional and local levels.



There is a majority support for the HSR scheme from the main local and regional stakeholders and a potentially viable scheme with typical project risks at this stage that can be addressed through the scheme development process. However, we have also identified some key risks worthy of investigation and priority engagement, as well as two areas of major scheme risk that need immediate consideration and action.

Areas of major scheme risks should be addressed collaboratively in order to provide enhance confidence in the scheme. In particular:

- **The investigation of alternative funding sources and associated delivery models**  
It is important to identify the potential and magnitude associated with alternative funding sources. This is of importance to HSPG and HAL in particular, as it would demonstrate wider support for the scheme.
- **The position of Spelthorne Borough Council in opposition to the scheme**  
Spelthorne is a key member of HSPG who is still opposing the scheme. Spelthorne's concerns with regards to the HSR scheme include: the impact on the SSSI, the impact of the Staines station modification, the level and times of service for HSR, and the level of fares applicable to Spelthorne residents. Spelthorne also remains committed to its own proposed light rail scheme. Whilst the HSR scheme could technically progress without Spelthorne's support, the lack of consensus on the proposal amongst all key local authorities in the area is likely to lessen the power of a coordinated lobbying programme to central government.
- **The operation of rail services on the HSR link**  
This includes impact on reliability of existing services, capacity for future growth of non-airport rail services, and viability of other potential schemes (e.g. Western Rail Link to Heathrow). We believe these concerns can be addressed through further detailed work on rail operational impacts by HSR.

<sup>4</sup> [http://heathrowstrategicplanninggroup.com/application/files/8016/3639/2219/SATH\\_Position\\_Paper\\_Final\\_Issue\\_Rev\\_Oct\\_2021\\_v2.pdf](http://heathrowstrategicplanninggroup.com/application/files/8016/3639/2219/SATH_Position_Paper_Final_Issue_Rev_Oct_2021_v2.pdf)

We have set out below our recommended action for the main parties involved to address the above issues with the aim of achieving political consensus and a funding agreement for the HSR scheme.

***Conclusion:***

Further progress to the scheme, including the mitigation of the risks identified in this commission, would require more formal involvement and support from HSPG.

***Recommendation:***

HSPG should articulate ambitions for a Southern Access to Heathrow scheme (using previous Position Paper), the rationale for pushing for consensus, the merits of a private-sector led scheme, and the crucial role of HSPG going forward - through the HATF and other relevant bodies – to build momentum and support for the scheme.

HSPG to continue collaborating closely with HSR Ltd as well as the stakeholders involved in this commission and DfT, when this becomes relevant.

***Conclusion:***

There are key risks about the operation of rail services on the HSR link and their impact on reliability of existing services, capacity for future growth of non-airport rail services, and viability of other potential schemes.

***Recommendation:***

HSR Ltd (ideally in collaboration with other stakeholders such as HSPG, Network Rail, TfL, Surrey CC) should undertake further detailed work on rail operational impacts and capacity to address concerns and build support for the scheme.

***Conclusion:***

There is a significant appeal to a privately funded scheme. However, the funding gap is a major scheme risk that may impact the proposed delivery model (MLP1).

***Recommendation:***

HAL is planning to undertake a study to understand the justifiable scale of any potential financial contribution to the HSR scheme, which is expected to complete in later 2024. We recommend this is undertaken as soon as possible. Additionally, HAL could undertake a review of Spelthorne's alternative light rail scheme if there is anything new available to review.

In parallel with the HAL study, we also recommend that HSPG and HSR Ltd work together with relevant stakeholders including local authorities to explore alternative funding sources to reduce the funding gap as much as possible.

**Conclusion:**

Spelthorne Borough Council's objection to the scheme is a major risk that creates a challenging political situation and precludes full stakeholder consensus around the HSR scheme.

**Recommendation:**

HSR Ltd should provide detailed written responses to Spelthorne Borough Council on the specific issues related to the proposed HSR scheme.

HSPG should facilitate senior level engagement with Spelthorne Borough Council to explore its opportunities for support of the HSR scheme and to request further details of the proposed light rail scheme so it can be fully and objectively assessed against the HSR scheme (by HSPG and in the HAL study).

HAL is supportive of the concept of heavy rail to the airport because this would ensure that the safeguarded station and rail infrastructure already built by Heathrow underneath Terminal 5 would be utilised to its full capacity. HAL to communicate to SBC all relevant constraints and considerations for the light rail to connect to the terminal for both the 2 and 3 runway scenarios. Spelthorne to consider whether to develop/update light rail proposal further, including its integration with the airport, within short timeframes.

**Conclusion:**

HSPG needs to plan for a scenario where consensus and funding support for the HSR scheme is not achieved.

**Recommendation:**

HSPG should consider the alternative means of delivering this scheme (likely through a more traditional public sector led approach), for example undertaking parallel work on a public- private scheme (which would require business case and engagement with DfT).

**Conclusion:**

Encourage HSPG members to take steps to further understand impacts and opportunities of the proposed scheme.

**Recommendation:**

Key partners such as NR, TfL, and Heathrow should develop their own understanding of the scheme. This could include:

- TfL developing an understanding of the business case for extending the EL to Staines and the potential for 4tph to Heathrow terminal 5 (and potentially HSR) with HAL and NR.
- NR to include the potential for HSR services in their review of timetables and understand synergies and conflicts.

NR and TfL to review the likelihood and potential timeframe for a return to 2019 timetable.