Activating Liverpool's railway heritage

Integrating historical rail assets for modern sustainable transport and communities

Dr Chia-Lin Chen and Dr Junjie Xi

Series 3 Briefing 20

March 2025

Activating Liverpool's railway heritage: Integrating historical rail assets for modern sustainable transport and communities

Key takeaways

1. The drastic reduction in rail networks, combined with a shift to car travel and decades of underinvestment, has resulted in disused rail infrastructure in post-industrial cities in the UK and elsewhere. This has caused accessibility barriers, fragmented urban fabrics, and socio-economic challenges for nearby communities, tied to deprivation and physical decline.
2. Revitalising disused railway heritage is vital to reconnect the rail network, restore regional pride, support communities and drive sustainable development. This can be aligned with Net Zero goals through 'active heritage' – utilising rail heritage assets and bringing them into use in the modern rail network.
3. This study examines Liverpool's railway heritage, focusing on Edge Hill Station, Wapping Tunnel and Crown Street Park. It offers insights into the causes of the current state of railway heritage in Liverpool, and identifies strategies to revitalise rail heritage assets and reconnect them with the local community.
4. We recommend four policy actions to utilise railway heritage in Liverpool. First, develop a strategic framework that evaluates both construction and territorial impacts, integrating tangible and intangible factors; second, create a long-term vision that reuses disused railways, linking heritage with regeneration objectives; third, revitalise the key disused rail corridor from Edge Hill to Wapping Tunnel exit; and fourth, establish clear implementation strategies.
5. These actions can contribute towards the UK Government's missions of improving economic growth and achieving Net Zero, and local objectives in Liverpool City Region to increase the use of public transport and regenerate brownfield sites.

1. Introduction

'Railway heritage' refers to the legacy of rail systems, both tangible (e.g. buildings, structures, rolling stock, signalling systems and engineering) and intangible (such as the social and cultural impacts of these assets). It holds significant cultural and historical value, recognised by major international and national institutions. The International Council on Monuments and Sites (ICOMOS) advocated 'Railways as World Heritage Sites' for their social, technological and cultural significance, emphasising the inseparable socio-technical legacy of railways (Coulls et al.,1999). In the UK, railway heritage gained prominence in the 1950s with the volunteer-operated Talyllyn Railway in

Wales. In recent years, Historic England has developed a detailed audit of historic railway structures across the country (RPS, 2016), and the Rail Heritage Trust (Network Rail, 2020) provides guidance on maintaining heritage rail assets to preserve operational and cultural integrity.

The 1830 opening of the Liverpool and Manchester line marked the birth of the 'modern railway' (Coulls et al., 1999). Its bicentenary in 2030 will be commemorated with events planned by cultural and local authority partners in the Liverpool City Region and Greater Manchester. While some historic infrastructure has disappeared, remnants of the railway remain, and much work is needed to fully understand and restore the heritage, including addressing flooding

issues. These efforts could help regenerate less developed areas in Liverpool, strengthen communities and attract new generations to railway heritage.

Much of Liverpool's 1830 railway heritage remains in use, showcasing the original engineering's durability and offering a model for adapting historic assets. Revitalising this heritage can integrate rail assets into modern transport and support the circular economy through repair and restoration. As part of its efforts to achieve Net Zero by 2040 (ten years before the UK-wide 2050 target), Liverpool City Region has plans to improve public transport infrastructure. For instance, the newly planned Liverpool Baltic Station is an example of using rail heritage in an active way by bringing the former St James Station in the south of the city centre back into use via a new transport hub, promoting public transport and transit-oriented development.

This briefing sets out an implementation strategy for integrating railway heritage assets in Liverpool City Region into the public transport strategies currently being developed.

2. Understanding tangible and intangible railway heritage

Rail infrastructure needs to adapt and modernise over time, but high maintenance costs often lead to neglect and decay (Llano-Castresana et al., 2013), disconnecting it from surrounding communities. There is an urgent need for strategies that respect and integrate the value of railway heritage to promote sustainability, regional development and community cohesion (ibid.).

In addition to physical assets, the definition of heritage is increasingly shifting towards the inclusion of intangible aspects. Therefore, an analysis of rail heritage should encompass both tangible

and intangible values – for example, its physical infrastructure as well as cultural and social practices. A classification of railway heritage incorporating tangible and intangible assets is illustrated in Table 1.

Bringing together tangible and intangible assets provides scope to consider railway heritage as 'active' – integrating heritage assets for the purpose of achieving contemporary policy objectives and challenging traditional notions of heritage as static and separate from the present. This concept of active heritage is developed from existing literature and through findings derived from the focus group research, detailed below.

3. Researching railway heritage in Liverpool

Research has highlighted the significance but also the neglect of early railway structures in Liverpool. A study by Connelly and Hebbert (2011) noted that despite being the founding location and terminus of the pioneering Liverpool and Manchester Railway (LMR), Liverpool was omitted from United Nations Educational, Scientific and Cultural Organization (UNESCO) listings for Britain's early railways. Despite interest from local heritage experts, Liverpool's railway heritage is seen by many as "lost" or "neglected" (ibid).

To explore the challenges of developing active heritage in Liverpool, we (1) conducted a research project, *Re-thinking Marginalised Railway Heritage in England's Cities – Using Liverpool as a Pilot Study*. The research proposed a solution for re-activating Liverpool's neglected railway heritage and connect this once again with the local communities, achieving an equal, sustainable, friendly and cultural Liverpool. In February 2022, four focus group interviews were held with 19 participants (2) including government decision-makers, practitioners,

Table 1: Classification of tangible and intangible railway heritage assets

	Definition	Characteristics	Examples
Tangible assets *Type 1* Operational rail lines with some disused heritage assets	The tangible legacy of railway heritage includes buildings (stations, sheds), structures (tracks, bridges, viaducts, shafts, tunnels, etc.), rolling stock, signalling systems, and other technological artefacts (RPS, 2016).	The presence of both active and abandoned infrastructure often leads to neglect of these assets and surrounding areas.	Little Sutton Station (Ellesmere Port). The station is Grade II listed by Historic England, but is the second least-used station on the Merseyrail network.
Tangible assets *Type 2* Repurposed rail infrastructure no longer used for transport		Repurposed heritage assets can revitalise derelict sites but may lead to gentrification.	New York Highline; Castlefield Viaduct (Manchester) Science and Industry Museum/ Liverpool Road Station (Manchester) Promenade Plantée (Paris) London Low Line Camden High Line (London)
Intangible assets	Place-based cultural and social practices as a legacy of railways	Economic and geographical impacts of railways: how they shaped cities and industries (Schivelbusch, 1986; Wolmar, 2012) Historical records, both written and oral, preserving railway stories Social and cultural narratives shaping how rail systems influenced communities and daily life Traditional skills and crafts	Oral ghost stories and legends (shown for example in the popular 1950s radio ballad *The Ballad of John Axon*) Restoration practices involving volunteering or apprentices Events celebrating rail heritage, such as 'Rail Ale' festivals and the Severn Valley Railway 1940s Weekend

academics, and civil society organisations. Participants were selected for their knowledge and experience of railway heritage, with the focus groups designed to facilitate cross-disciplinary discussion. We also held a [design workshop](#) with University of Liverpool students in April 2022 where ideas were developed for regeneration of a key railway heritage site in Liverpool.

Focus group interview questions covered the following: perception of the current state of rail heritage and experiences of using, accessing and interacting with rail heritage; assessments of major reasons underlying the current situation of rail heritage; initiatives and actions taken so far to revitalise rail heritage; examples both domestically and internationally which could be inspirational for Liverpool; desired changes for local communities and wider society; the biggest challenges in revitalising railway heritage; and what actions should be taken to enable changes. The focus group discussions aimed to integrate analysis of tangible and intangible heritage assets to develop understanding of how an active approach to railway heritage could be developed. The diverse views expressed within these focus groups provided us with insight into the complex issues associated with rail heritage. The focus groups identified four main challenges.

First, participants highlighted how the decline of rail in Liverpool in the 1960s (Paul, 1980), loss of links to Wales and Scotland, and differing electrification models created technical challenges, isolating the city's railway network. Revitalising and reusing existing rail heritage assets was identified by participants as a way to expand the rail network in Liverpool to address travel constraints, particularly north–south connections within the city.

Second, many interviewees expressed concerns about funding. The bulk of infrastructure spending is financed by UK government rather than regionally, and decisions have largely favoured investment in rail infrastructure in London and the South East – research by IPPR North (2019) revealed that Northern England received £2,389 per person less on transport per year than London.

Third, participants highlighted challenges related to governance and land ownership. For example, on the City Line connecting Liverpool with Manchester, Northern Rail manages most stations (with the exception of Lime Street) whilst Network Rail oversees track maintenance and operations. However, it is often unclear who is responsible for the upkeep of rail assets no longer in operation. Devolution was highlighted as an opportunity, with suggestions that the elected metro mayor of Liverpool City Region should gain greater powers to bring disused rail infrastructure back into use.

Finally, there is a limited appreciation of rail heritage and its educational significance among policymakers and the public. Liverpool's waterfront heritage zoning has disconnected it from the city and the link between maritime trade and railway heritage is poorly recognised. Railway heritage lacks clear definition and legislation, and public awareness of sites like the Wapping Tunnel, Crown Street Station, Moorish Arch and Huskisson's memorial is poor. Lime Street Station, despite Liverpool's status as home to the first inter-city railway, reflects the missed opportunities to utilise this heritage.

Figure 1: The Strategic Map of Rail Heritage in Liverpool. Credit: Chia-Lin Chen, Chien-Yi Liao, Junjie Xi, Francisco Mejias Villatoro & Eddy Taylor
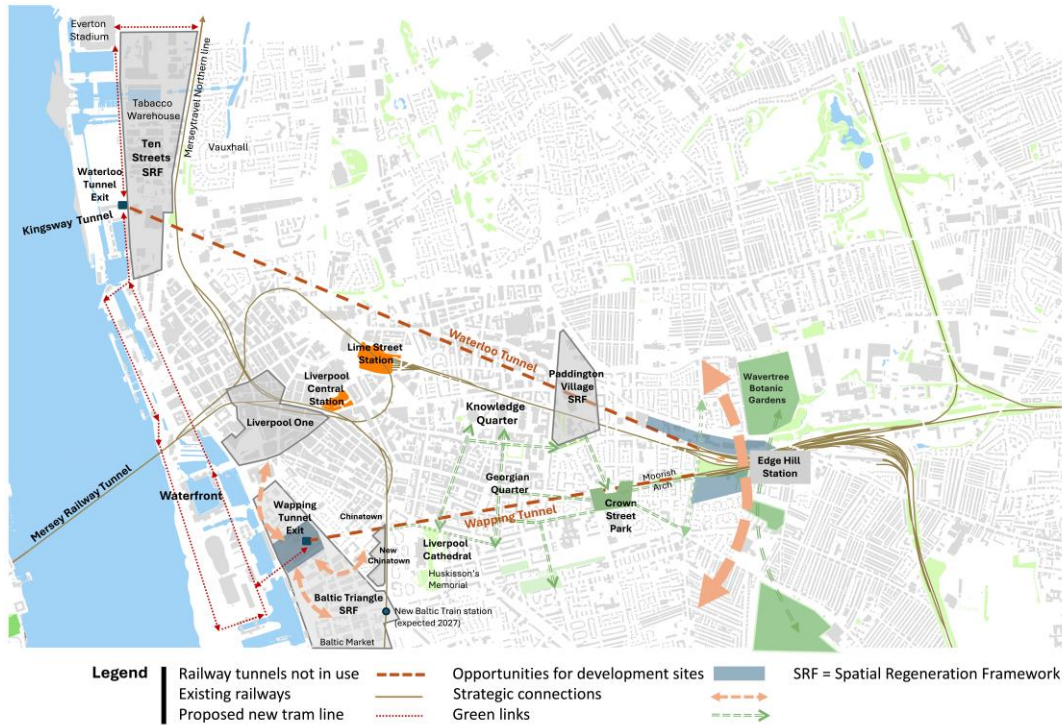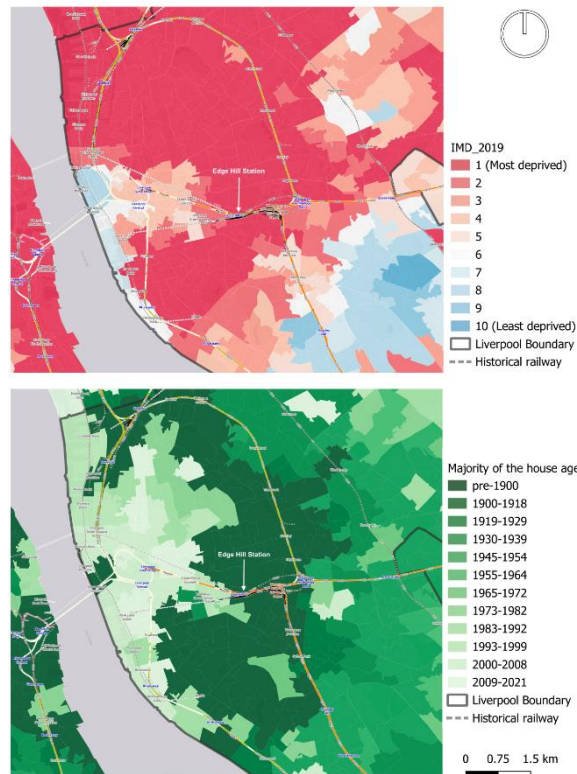

Figure 2: A map showing the status quote of the surrounding communities of Edge Hill station against Index of Multiple Deprivation (IMD) 2019 and housing age. Credit: Zi Ye

4. Findings and policy recommendations: developing active railway heritage

Below are four key policy recommendations, developed from the focus group findings.

Evaluating rail heritage in Liverpool and elsewhere

The value of rail heritage includes reusing disused railways within modern networks and leveraging heritage for community regeneration. Some interviewees highlighted that heritage is often undervalued and poorly interpreted, emphasising the need to embed it within communities and design its reuse around their needs.

Active heritage requires evaluating the scope and status of railway heritage at both urban and city-region level. This assessment enhances understanding of its *use value* in transport networks (such as rail, cycle paths, and walkways) and its *residual value* (including its historical and cultural significance). Such evaluation would guide informed decisions on preservation, repurposing, or redevelopment.

Listing assets through Historic England is a common way to prevent them from demolition and does not prevent reuse, but it is not always the best solution. Railway heritage should be incorporated into the DfT's Integrated Transport Strategy, currently in development, with particular potential to develop disused networks that could provide benefits for Liverpool and other UK cities. In addition, a comprehensive classification of rail heritage could be developed by the newly created Great British Railways.

Strategic spatial planning with a long-term vision

Cooperation and a clear vision were identified within the focus groups as key to balancing heritage conservation with urban vibrancy. The lack of an overarching vision at the city-regional level for railway heritage remains a major barrier to securing funding and support.

Next steps involve identifying key intervention areas at the local level and creating spatial regeneration frameworks to revitalise neglected rail heritage. These should repurpose tunnels and neglected spaces into functional transport routes, accessible public spaces, and vibrant communities, aligned with principles of sustainable and inclusive development.

Interviewees suggested establishing a dedicated 'triangle' zone for railway heritage, linking the Tobacco Warehouse, Edge Hill, and Crown Street, with the potential to extend to the Ten Streets Spatial Regeneration Framework, next to the exit of the disused Waterloo tunnel.

We encourage an update of the Liverpool City Region Long-Term Rail Strategy (LCRCA, 2018) to incorporate disused rail tunnels through spatial regeneration frameworks. Figure 1 shows a strategic map which integrates spatial regeneration frameworks, output from a design workshop (detailed below), findings from the focus group interviews and recent development schemes.

Revisioning the key rail heritage corridor: From Edge Hill to Wapping Tunnel exit

Edge Hill station is the oldest inter-city station in the world, yet lacks connection with surrounding communities. While Metal Liverpool, a creative and arts hub located at the site, has fostered community engagement since its establishment in 2004, much of the

station's surrounding space, including disused tunnels, remain underutilised.

The Liverpool Local Plan (2013–2033) envisions this area as a district centre, but it suffers from car dependency, unsafe road crossings, and disconnection from nearby disadvantaged and deprived neighbourhoods. The abandoned Wapping Tunnel and Crown Street Park are part of this fragmented site (see Figure 1).

In April 2022, we hosted a design workshop to reimagine the area's potential. Students proposed a strategic corridor linking Edge Hill station, Crown Street Park, Wapping Tunnel and Liverpool's waterfront. This vision involves reactivating disused rail assets (3), improving connections and transforming neglected heritage into societal, economic, and environmental benefits with sites identified for development opportunities (see Figure 2).

This approach integrates rail heritage with urban development, promoting rail and public transport as competitive alternatives to cars. It aligns with Net Zero goals by enhancing transport functionality and safety, alongside developing local amenities and multimodal options. Engagement with communities and stakeholders is crucial to ensure the revitalisation meets local needs and gains support. Strategies to regenerate railway heritage in this key corridor, including the reuse of disused rail tunnels, should be incorporated into the new spatial regeneration frameworks (SRF), as identified in Figure 2.

Seize Strategic Opportunities

Focus group discussions identified strategies to seize opportunities to drive change, provided by national, regional and local policy objectives and recent political developments such as devolution. These centred around three key themes:

A: Raise awareness and embed rail heritage in Liverpool's identity

A targeted public awareness campaign and education initiatives can highlight Liverpool's rail heritage and the cultural and historical significance of both tangible and intangible assets. This could include integrating rail heritage into school curricula, enhancing Rainhill Station's Museum, hosting exhibitions at the Museum of Liverpool, and creating dedicated spaces and signs at Liverpool Lime Street station and the University of Liverpool where the rail tunnel cuts under the campus. Interactive exhibitions using digital tools such as augmented reality (AR), augmented virtuality (AV) and virtual tours with multilingual content at Edge Hill Station can engage diverse audiences and connect heritage with modern uses. Engaging local communities, supporting volunteers, and educating young people on issues such as engineering technology and the climate crisis are key.

B: Align railway heritage with Net Zero and sustainability goals

Railways play a crucial role in decarbonisation, and repurposing disused infrastructure as green walkways or cycle paths can enhance connectivity while conserving heritage. Successful examples include Tintern Tunnel and the Loop Line from Halewood to Aintree. Current abandoned tunnels such as Wapping and Waterloo in Liverpool hold significant potential for innovative reuse. As such, the UK National Transport Strategy should place railways and public transport at the heart of the vision for Net Zero.

C: Policy and governance reform and governance

Policy reform is essential for fair funding and appraisal models to address historical rail disinvestment. In particular, an effective governance framework incorporating Network Rail, Transport for the North, local authorities, combined

authorities and local communities should ensure transparency and equitable benefits, supporting sustainable revitalisation of rail heritage. As devolution provides more powers for combined authorities over spatial planning and economic development, it is important they are also able to evaluate and integrate heritage assets.

5. Conclusion

This research finds that the societal value of rail heritage is often overlooked, but that it has potential to encourage a modal shift from car to rail, help achieve Net Zero ambitions and rebuild community infrastructure. The decline of post-industrial cities since the 1960s, coupled with the changing role of rail transport, reflects a shared history in Liverpool and similar cities globally. Revitalising rail heritage requires innovative and collaborative approaches that can offer valuable lessons, adaptable to diverse contexts.

This direction aligns with the UK Labour government's rail strategy, which highlights rail as a key part of the nation's heritage and prioritises accessible transport to reduce barriers to work and education. Integrating neglected rail heritage into strategies for disadvantaged communities can help address 'left-behind' areas. Additionally, policies such as rail renationalisation (UK Parliament, 2024) and devolution (HM Government, 2024) may improve regional planning and coordination, enabling improved integration of rail heritage assets into the network.

Reframing rail heritage as 'active heritage' emphasises its dynamism and evolving role in urban and community planning. By bridging past, present, and future, this approach supports sustainable and equitable urban development and regeneration.

6. References

Connelly, Angela, and Michael Hebbert. 2011. *Liverpool's Lost Railway Heritage*. Manchester Architecture Research Centre, University of Manchester. Available at: https://hummedia.manchester.ac.uk/institutes/mui/marg/research/projects/past-projects/Liverpool_Lost_Railway_Heritage.pdf.

Coulls, Anthony, Colin Divall, and Robert. Lee. 1999. *Railways as World Heritage Sites*. Technical Report. Paris: ICOMOS, ICOMOS Thematic Studies, Railways. https://ticcih.org/wp-content/uploads/2014/06/railways.pdf.

Department for Transport. 2025. 'A railway fit for Britain's future' (CP 1269). Presented to Parliament by the Secretary of State for Transport by Command of His Majesty. https://assets.publishing.service.gov.uk/media/67b30e36b56d8b0856c2fd49/a-railway-fit-for-britains-future.pdf.

Harrison, Rodney 2013. *Heritage: Critical Approaches*. London: Routledge.

Heathcott, Joseph 2013. 'The Promenade Plantée: Politics, Planning, and Urban Design in Post-industrial Paris'. *Journal of Planning Education and Research* 33 (3), 280–291.

HM Government. 2024. *English Devolution White Paper: Power and Partnership – Foundations for Growth*. Retrieved from https://www.gov.uk/government/publications/english-devolution-white-paper-power-and-partnership-foundations-for-growth.

Hollingworth, Hugh 2015. *Liverpool's Railways Through Time*. Stroud: Amberley Publishing.

IPPR North. 2019. *Revealed: North set to receive £2,389 less per person than London on transport*. August 19 2019. https://www.ippr.org/media-

office/revealed-north-set-to-receive-2-389-less-per-person-than-london-on-transport.

Liverpool City Council. n.d. *Liverpool Local Plan 2013–2033*. Available at: https://liverpool.gov.uk/planning-and-building-control/plan-making-in-liverpool/the-liverpool-local-plan-2013-2033/. Accessed October 22, 2024.

Liverpool City Region Combined Authority. 2023. *Liverpool City Region Spatial Strategic Framework*. Available at: https://www.liverpoolcityregion-ca.gov.uk/growing-our-economy/plan-for-prosperity/. Accessed October 22, 2024.

Liverpool City Region Combined Authority. 2018. *LCRCA Long Term Rail Strategy (April 2018)*. Available at: https://api.liverpoolcityregion-ca.gov.uk/wp-content/uploads/2023/09/LCRCA_RAIL_STRATEGY_MAY18.pdf. Accessed 10 January 2025.

Llano-Castresana, Urtzi, Agustin Azkarate, and Santiago Sánchez-Beitia. 2013. 'The Value of Railway Heritage for Community Development.' *WIT Transactions on the Built Environment*. DOI: 10.2495/STR130061.

Network Rail. 2020. *Heritage: Care and Development Design Manual*. Available at: http://railwayheritagetrust.co.uk/wp-content/uploads/2021/01/NR-GN-CIV-100-05-Heritage-Care-and-Development-Module_19.09.20.pdf. Accessed October 22, 2024.

Paul, A. H. 1980. 'Vanishing Railways and the Urban Scene: The Case of Liverpool.' *Geography* 65 (2), 119–124

Rosa, Brain, and Christoph Lindner. 2017. 'The High Line and Post-Industrial Urbanism: From Elevated Railway to Urban Park.' In *Deconstructing the High Line: Post-Industrial Urbanism and the Rise of the Elevated Park*, edited by Christoph Lindner and Brian Rosa, 201–

225. New Brunswick: Rutgers University Press.

RPS. 2016. *Historic Railway Buildings and Structures: Overview of Development Pressure and Review of Significance, Volume 1*. Commissioned by Historic England. Available at: https://historicengland.org.uk/research/results/reports/7007/HistoricRailwayBuildingsandStructures_overviewofdevelopmentpressureandreviewofsignificanceVol1. Accessed October 22, 2024.

UK Parliament. 2024. *Passenger Railway Services (Public Ownership) Act 2024*. Retrieved from https://www.legislation.gov.uk.

Endnotes

(1) The research team members include Dr Chia-Lin Chen (Department of Geography and Planning), Dr Junjie Xi (School of Architecture), Dr Francisco Mejias Villatoro (Architecture), Eddy Taylor (planning and urban design practice PlanSpace; Manchester School of Architecture), Dr Ernie Beeston (Postdoctoral researcher) and Zhou Wei (Research Assistant).

(2) The 19 interviewees include representatives from: The International Committee for the Conservation of the Industrial Heritage; Liverpool City Region Combined Authority (conservation, transport, strategic planning) and Liverpool City Council (heritage); Mersey Travel Network Rail; Railway Heritage Trust; Civil Society and local community (Metal, Liverpool & Manchester Railway Trust, Williamson Tunnels Heritage Centre - Friends of Williamson Tunnel, University of Liverpool); Freelancer writers, consultants, practitioners and academics.

(3) Wapping Tunnel Development is included in the Long-term Rail Strategy of Liverpool City Region's Combined Authority (2018), according to the result of a feasibility study. This will potentially bring this Tunnel back into use for passenger services, which could extend the city line service to relieve the pressure of Lime Street and identify a new station with a direct link to the revitalised Knowledge Quarter.

The Heseltine Institute for Public Policy, Practice and Place is an interdisciplinary public policy research institute which brings together academic expertise from across the University of Liverpool with policy-makers and practitioners to support the development of sustainable and inclusive cities and city regions.

Our policy briefings aim to promote and disseminate creative and innovative contributions from academics, policymakers and practitioners on a range of challenges facing the UK, particularly those which affect our cities and city regions.

About the authors
Dr Chia-Lin Chen is Senior Lecturer in Department of Geography and Planning at the University of Liverpool. Her research examines transport, territorial development and strategic planning.

Dr Junjie Xi is a senior lecturer in architectural design and humanities at the University of Liverpool. Her research is focused on architecture and infrastructure, particularly railway development in China and urban sanitation in Dhaka, Bangladesh.