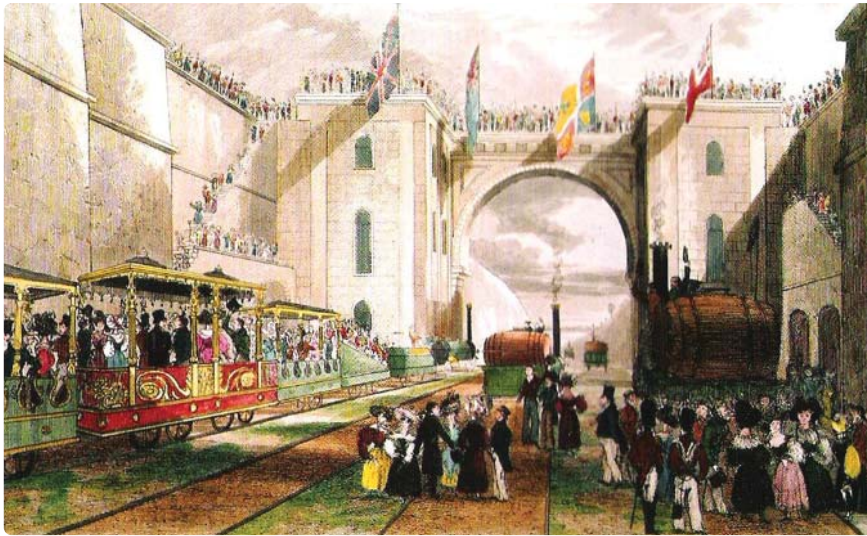


rocket 200

David Thrower and **Ian Wray** argue that the coming bicentenary of the Liverpool and Manchester Railway could become the catalyst for a multi-faceted regeneration plan

https://en.wikipedia.org/wiki/Opening_of_the_Liverpool_and_Manchester_Railway



Opening of the Liverpool and Manchester Railway, in September 1830

Original artist unrecorded; reproduced in R Gibbon: *Stephenson's Rocket and the Rainhill Trials*. Shire Books, 2010

Started on site in 1826 and completed in 1830, the Liverpool and Manchester Railway was the world's first inter-city passenger and goods railway. If only we could build at that speed these days. Of course, there had been other early railways, of which the Stockton and Darlington is the best known. But it was the Liverpool and Manchester Railway which set light to the fire. Engineered to high standards, it was a hugely ambitious mega-project, with an almost straight alignment (found today on new high-speed railways), gentle gradients (early engines were not powerful) and thus advanced engineering in tunnels, massive earthworks, the first stations, deep sandstone cuttings, and daring innovation in crossing the notorious Chat Moss bog.

Recently electrified, increasingly busy, and thus easily overlooked, the line is a tribute to the brilliance of its engineers—and, more than that, to the workers who built it, mostly using raw muscle power, picks, shovels and wheelbarrows, and to the women and families who supported and fed them. Few of the railway navvies lived beyond their 40s—such was their hard life.¹

The railway connected Manchester, widely regarded as the world's first industrial city, with

Liverpool, Britain's greatest imperial seaport. Its leading engineer, George Stephenson, whose Rocket was selected as its first motive power at the famous Rainhill Trials, has found a place in the history books. Its development and financing was closely woven with the best and the worst of Britain's 19th-century global role, as an engineering innovator and a colonial power, part of whose elite wealth was generated by the cruel trade of slavery, abolished in 1833. Some of the men who financed the railway were beneficiaries of the slave trade.² Arguably, 21st-century Britain needs to know more about both these subjects. We cannot build a new future for ourselves unless we understand where we have come from, both the good and the bad.

In 2011 the UK government considered a review of potential World Heritage Sites, including a proposal for six sites across the North of England which embraced the Liverpool and Manchester Railway terminal in Manchester. The review concluded that from its launch there was universal recognition of the benefits of the Liverpool and Manchester Railway:

'The railway was to become the single most important technological, social and economic



Train crossing Chat Moss—as trains pass, the ground gently quakes, presumably on its original 1830s brushwood mats and foundations

*force that shaped the nineteenth century, global in its impact and in the advantages it conferred on humankind. The railway unified the markets of the world, spanned continents, forged nations. It became the first form of transport accessible to the common people... the evolution of land transport from its pre-industrial form into the era of cheap mass transport for people and goods [...] was the key to worldwide industrialisation and urbanisation.*³

Writer Christian Wolmar sees the Liverpool and Manchester Railway as a far more significant milestone than the Stockton and Darlington:

*'The Liverpool & Manchester was conceived as a freight railway but in fact developed its passenger business far more quickly, demonstrating the huge latent demand for travel which, it seems, nearly two hundred years later we have yet to satisfy.'*¹

Railways are not about the distant past, a 19th-century technology built on dirty steam engines and an old-fashioned industrial work ethic. Steel wheels on steel rails have a bright future across the world. Powered by electricity from sustainable sources, with regenerative braking systems, trains can be fast, comfortable, and completely carbon-neutral. It is easy to work, read and relax on a high-speed train. Electric trains do not emit fumes, and they do not have rubber tyres which emit polluting micro-particles. Regenerative braking does not release polluting particles from brake shoes.⁴

Electric cars may not need oil, but they will remain polluters—and electric HGVs may never arrive. By contrast, trains are safe, efficient movers of people and goods, and do not require vast car parks or freeway systems or cause congestion. Railways

support regenerating cities—and cities support railways. Throughout the world, not least in China, the newly rising world power, there is massive investment in high-speed rail. The Chinese have built more high-speed rail lines than the rest of the world put together—over 25,000 kilometres by 2017, and they plan to reach 38,000 kilometres by 2025.⁵ Conventional railways are being built elsewhere, especially in Africa, as part of China's 'belt and road initiative'.

Truly, the invention of railways was Britain's gift to the world. In short, this is a story as much about the future as the past, with global interest, global dimensions, and, if handled professionally, global tourist and image potential.

Built fabric, assets, and opportunities

These days, the Liverpool and Manchester Railway serves a scarred post-industrial landscape. The route passes through (or by) some of the most deprived communities in UK,⁶ in six different districts between Liverpool and Manchester city centres—Liverpool, Knowsley, St Helens, Wigan, Salford, and Manchester.

Amazingly, a huge amount of the original historic fabric is still there, including earthworks, tunnels, viaducts, bridges, stations, and cuttings; but some of it is in poor condition and does not reveal its history, or in some cases its splendour. Historic stations are sometimes under-tenanted and under-used. Others are in run-down condition with little more than a 'bus shelter' and ticket office, despite the recent electrification. This is still a very busy but somewhat tired railway, with commuter and long-distance traffic (although possibly without sufficient passing places to ensure that fast trains do not get stuck behind slow ones).

The main components of the line's historic fabric and archaeology include:

- the disused Wapping Tunnel and Cavendish cutting at Edge Hill and the site of the original Liverpool station at Crown Street;
- the site of the original great Moorish Arch (the arch is gone, although fragments of stone steps remain);
- the Olive Mount sandstone cutting (much wider these days than the original);
- the colossal Roby embankment, adjacent to the M62 motorway;
- historic stations, including Edge Hill, Rainhill, Earlestown, and Newton-le-Willows;
- the sandstone Skew Bridge at Rainhill (famously carved as a model from a turnip by George Stephenson, to illustrate the form to his junior engineers);
- the Sankey Viaduct and the Newton Viaduct, and many elegant original over- and under-bridges elsewhere, including the Irwell Bridge;
- the Huskisson Memorial, commemorating the world's first railway passenger fatality;

- the great Kenyon cutting and the whole of the original alignment, including the stretch over Chat Moss, apparently still resting on Stephenson's brushwood mats; and
- Liverpool Road Station in Manchester, now the site of the Science and Industry Museum, where much investment in the original fabric has taken place and more is needed.

These are some of the most important historic engineering structures in the world, although a passer-by would not know it. There is a major audit and restoration project here—understanding and interpreting the archaeology; restoring, cleaning and in some cases floodlighting the structures and stations; and associated environmental improvements for the towns. All of this would contribute to re-imagining and tourism, and to regenerating some of the poorest places in the UK, strengthening the local communities, and making them more attractive to new young families and to housebuilders. It could help to reshape the future of these 'left behind' places.

In addition, there are large numbers of paintings, drawings, photographs, documents and objects, both large and small, in collections and museums—including the original Rocket locomotive.

Objectives and projects

There were previous celebrations of the Liverpool and Manchester Railway (and the Rainhill Trials) at the 100th anniversary in 1930 and the 150th anniversary in 1980.⁷ But these celebrations appeared to concentrate on single events, featuring a cavalcade of historic trains, rather than focusing on the engineering structures, local communities, and the railway itself. A cavalcade of trains has its place, but the prospectus for a celebration set out here envisages a much bigger project over longer timescales, rather than a single event, or events, during a short period. With the right leadership, whole communities could become involved. We suggest the following objectives:

- **Levelling up:** Regenerating some of the poorest communities in the North.
- **Understanding Britain's past:** Probing the UK's industrial and imperial history.
- **Growing international trade:** A rail exposition focused on high-speed rail.
- **Developing tourism and image:** Celebrating events of world significance.
- **Showcasing science and engineering:** Putting UK engineering on a global stage.
- **Boosting morale:** An engineering equivalent of the Olympic Games opening ceremony.

Grouping potential project ideas around these objectives suggests the following possible components (this list is purely illustrative):

- **Levelling up:**
 - Restoration, floodlighting and improvements to stations, towns, historic buildings, viaducts, etc.



Tom Macey

Sankey Viaduct—the world's first inter-city railway viaduct is a massive and resilient structure that would benefit from cleaning, repair, and lighting

- Involving local communities and people (including the railway staff).
- **Understanding Britain's past:**
 - Researching connections between empire, slavery, and the Industrial Revolution.
 - Builders—the roots of engineering excellence and the lives of the navvies, travellers, and customers.
 - Related lectures and exhibitions in galleries and museums (and online resources for schools).
- **Growing international trade:**
 - A high-speed rail trade fair, alongside historic celebrations.
- **Developing tourism and image:**
 - A festival held across both cities.
 - A cavalcade of historic high-speed locomotives in Liverpool.
 - Special trains running between Liverpool and Manchester, hauled by record-breaking locomotives.
 - An exploration of Liverpool's industrial archaeology.
 - Re-enactments of historic events, books, and TV series.
- **Showcasing science and engineering:**
 - The use of virtual and augmented reality technology to explore industrial archaeology and bring historic scenes back to life.
 - A lecture series on engineering and the future.
 - A replica Rocket in steam and the original on display.
 - An international high-speed rail exhibition (including representation from China).
- **Boosting morale:**
 - Major artistic and cultural events related to the theme of high-speed rail.

Making it happen

To move things forward, several things are needed: political support, a business plan, staff time, and money. But first someone needs to adopt the project and lead on it. That institutional lead could come from a number of places. One location (or locations) might be the Combined Authorities and Metropolitan



Olive Mount cutting—excavated by hand, with a little help from gunpowder; subsequently widened and recently electrified

Mayors for Greater Manchester and Liverpool City Region, who have the lead responsibility for local transport. Alternatively, the City Councils of Manchester or Liverpool, with their respective museums, might be well placed to bring everyone in.

The good news is that since an earlier draft of this article was first circulated as a discussion document, early in 2021, several key partners have expressed positive interest in the project, led by the two museums—in Manchester the Science and Industry Museum (part of the Science Museum Group, which includes the National Railway Museum), and in Liverpool National Museums Liverpool. Not least in significance is Network Rail, which has expressed enthusiastic support at high levels. Both Liverpool and Manchester City Councils are involved in early discussions, and a scoping study is to be commissioned early in 2022.

The bicentenary may seem a long a way off, but there is much to do. There will need to be an initial base with some immediate institutional back-up. A project officer will be needed—as will soon be a chair and project director and a business plan, as well as marketing, and the co-ordination of applications for grant support and sponsorship from among the following potential sources:

- the National Lottery Heritage Fund;
- government 'levelling up' funds for physical regeneration;
- local authorities;
- Network Rail and the Department for Transport, particularly for station and rail infrastructure improvements;
- Historic England;
- sponsorship from, especially, rail-related businesses;
- various national museums and heritage charities, plus universities;
- HS2; and
- volunteer and charitable assistance (for example from preserved railways).

Alongside institutional leadership and steering arrangements, it would be very helpful to establish

an advisory board, including project enthusiasts, especially those in high places.

This needs to be a big, international and multi-faceted effort—and it deserves to be. Otherwise, a point made by one of our consultees could ring true: beware a 'levelling up' project that is all about superficial celebrations, about bread and circuses, which neglects the underlying economic and regeneration issues. We are optimistic: it can be done. Indeed, the train has already left the station.

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Notes

- 1 C Wolmar: *Fire and Steam: A New History of the Railways in Britain*. Atlantic Books, 2007
- 2 The Curatorial Team at the Science and Industry Museum in Manchester advises:

'In 1833, Parliament abolished slavery in the British Caribbean, Mauritius and the Cape. The negotiated settlement granted £20 million in compensation, to be paid by British taxpayers to the former slave-owners. The UCL Legacies of British Slave Ownership project has assembled a list of all recipients of this compensation. The database provides a snapshot of all those who were owners of enslaved people at the time of partial abolition, as well as their financial interests. The database offers an insight into some of the links between enslavement and the development of Britain's early railways. The names of several important figures in the Liverpool and Manchester Railway appear on the list as owners of enslaved people and recipients of compensation, including Chairman and investor Charles Lawrence, Deputy Chairman and investor John Moss, as well as investors Robert Browne and Charles Turner. The LMR was made possible in part by investments by individuals who made money from the ownership of enslaved people and who received government compensation when slavery in the British Caribbean was abolished.'
- 3 *The United Kingdom's World Heritage: Review of the Tentative List of the United Kingdom of Great Britain and Northern Ireland*. Independent Expert Panel Report to the Department for Culture, Media and Sport, Mar. 2011. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/78234/Review-WH-Tentative-List-Report_March2011.pdf
- 4 *The Required Revolution: Transforming the UK's Transport Connectivity*. Final Report by Greengauge 21, for the UK2070 Commission, Jun. 2020. <http://uk2070.org.uk/wp-content/uploads/2020/09/Greengauge-Report-Final.pdf>
- 5 R Hickman and C-L Chen: 'Impacts of HSR in China: a photo essay'. *Built Environment*, 2020, Vol. 46(3), 398–421
- 6 See the 'Indices of Deprivation: 2019 and 2015'. Map. Ministry of Housing, Communities and Local Government, 2020. http://dclgapps.communities.gov.uk/imd/ioid_index.html
- 7 F Ferneyhough: *Liverpool and Manchester Railway, 1830–1980*. Robert Hale, 1980