

Written submission from the Institution of Mechanical Engineers to the House of Commons Transport Select Committee's 'Railways Bill' call for evidence

26 November 2025

Background:

The [House of Commons Transport Select Committee is calling for evidence](#) to influence Parliament's scrutiny of the [Railways Bill](#), published by the government on 5 November 2025. The inquiry covers three key themes: (A) Improving rail travel for passengers, (B) Network access, and (C) Devolution.

The following submission from the Institution of Mechanical Engineers (IMechE) focuses on aspects of the inquiry where we are most qualified as engineers:

- **Improving rail travel for passengers:** how the Bill balances accountability for improving standards with operational autonomy, and whether sufficient provision is made for improving accessibility.

About the Institution of Mechanical Engineers (IMechE):

IMechE represents 110,000 engineering professionals and students in the UK and across the world. The Engineering Policy Unit (EPU) of the IMechE informs and responds to UK policy developments by drawing on the expertise of our members and partners. This response has been prepared by the IMechE's Railway division and the EPU. Given the crucial importance of rail reform for our members, we would welcome the opportunity to engage on this topic further. You can contact the EPU via policy@imeche.org.

Introduction

Mindful that the Committee is asking if the Bill balances accountability for improving standards with operational autonomy, we question the appropriateness of the General Duties and the lack of detail for day-to-day effectiveness set out to date for the proposed structure. As railway managers and professional engineers from across the industry (some of whom with experience of privatisation in the 1990s, some new to the industry), we are concerned that the very considerable challenges of running a well-performing railway from an operational and engineering perspective will not be well accommodated in the new structure.

Passengers say that performance ('punctuality and reliability' at 19.6%) and 'sufficient room to sit or stand' at 12.7% (impacted by short-forming and cancellations – a double-whammy from reliability issues) are the two issues most important to them (see Table 3 from [Rail factsheet: 2024 - GOV.UK](#)).

And yet, it seems that whilst train service performance is not addressed directly in the proposed legislation, it is likely to be put at risk. It is internationally exemplified that the best train service performance is most efficiently delivered by railway engineers and operations professionals with the available resources where:

1. There is a coherent organisational structure with aligned incentives – see Incentives below
2. There is stable multi-year funding – see Funding below
3. There is a joined-up long term strategy with a robust, independently verified mechanism to ensure implementation – see Long-Term Rail Strategy (LTRS) below
4. There is a good understanding of the fundamental engineering risks and how best to ensure they are well-managed – see Risks below

This submission supports and builds on our 15 April 2025 response to the Department for Transport’s consultation (covering questions Q1 Incentives, Q2 ORR, Q3 long-term strategy, Q12 Funding and Q20 Transitional risks) – and the government response to it.¹

Fresh from publishing our policy report *En route to inclusive public transport*, we also offer engineering input on:

5. whether sufficient provision is made in the Bill for improving accessibility – see Accessibility below

¹ <https://www.imeche.org/docs/default-source/1-oscar/reports-policy-statements-and-documents/imeche-response-to-dft-consultation---a-railway-fit-for-britain's-future-final.pdf?sfvrsn=2>

1. Incentives

1.1 Passenger growth and the Environment should be General Duties too

Omitting environmental and passenger growth from the list of General Duties on GBR, ORR and the Government lacks ambition to improve rail travel, given the climate emergency and the imperative to facilitate modal shift to rail from air and road for passengers and freight. The promotion of rail freight is welcome and supports the demand for rail from non-rail bodies such as MakeUK.² But how do the omissions of passenger growth and explicit references to the environment align with the government's decarbonisation strategy?

The needs of rail travelers (and taxpayers) are consistently undervalued in the development of rail improvement schemes (HS1, light railways, track enhancements), which are made slow (and expensive) to implement by pressure from local vested interests. Adding an environmental duty would rebalance the equation and facilitate the development that wider society needs (and that rail travelers enjoy, once any scheme is finally implemented, with patronage consistently exceeding expectations).

Further, the system impact of rail improvements should be understood. An ostensibly environmental enhancement such as electrification infill to enable more electric traction, will bring passenger benefit by creating network capacity. This is because electric freight trains can deploy more installed power, so they can run faster up inclines and accelerate faster from standing than diesels can, freeing up paths for more passenger trains, and being less likely to augment network delays.

For example, between Preston and Carlisle passenger trains typically average 80 mph with a single stop at Oxenholme or Penrith and 105 mph between Carlisle and Carstairs. On this basis, if it were possible to run freight trains at 90 mph, it may be possible to significantly increase in daytime freight paths. More importantly, 90 mph freight trains could potentially create additional train paths on the congested section of the West Coast Main Line north of Rugby. Currently no solution has been proposed to alleviate this congested line for which traffic demand is predicted to increase. As it will be at least a decade before a new line or other infrastructure enhancements can provide the required additional capacity, 90 mph freight is an option that is worth exploring. This would require electric traction (procured by the freight operators), supported by infrastructure changes to enhance power supplies, selective four-tracking at bottlenecks (like Crewe) and infill electrification schemes (like London Gateway).

² <https://www.makeuk.org/insights/reports/road-rail-optimising-goods-transport-uk-manufacturing>

We note that there does exist an environmental sustainability criterion as an objective of the LTRS, albeit the last on that list. How will the mismatch between the objectives of the LTRS and the General Duties of the organisations play out? We recommend that they are aligned and assured by ORR - and we offer more details on the LTRS in section 3 below.

1.2 Performance deficits should cost enough for them to actually be made good

‘Joining up track and train’, whilst welcome, does not solve everything, particularly since there is no one-to-one mapping for such vertical integration in the UK (with the exception of Merseyrail). We have one of the world's most highly congested and mixed-traffic railways, but least well-invested, into which we are adding further devolution complexities with local optimisation requirements.

Experience of pre-privatised British Rail, with an organisation as large as GBR and with the inevitable specialisms of expertise creating understanding gaps, ‘one entity’ at high-level does not assure joined-up behaviours throughout. Implementing high-level incentives to optimise across technical boundaries does not necessarily translate into effective mechanisms at working level. It needs to be joined-up to be effective, for engineers to be able to optimise and to deliver the performance that passengers rightly demand.

Unfortunately, we have had no response to our argument for the retention of delay minutes as a common currency to drive up performance, by insisting on root cause identification, and enabling a business case to be put for performance improvement. Engineering analysis and joined-up solutions can be delivered irrespective of contractual framework. For example, the costed performance regime (under privatisation) produced the financial imperative for the train operator to resolve the ‘wrong type of snow’ issue that was causing traction motor failures on Class 317s, by funding the required engineering change.

GBR should be held to account by the enforcement of effective delivery of performance improvement in an expanded role for the ORR.

2. Funding

We see the requirement for an increased role for ORR to hold GBR to account for delivering both GBR and open access passenger service performance

2.1 Passenger-facing operations should enjoy the same five-year planning horizon

We welcome the clarity on the Periodic Review (PR) process and that infrastructure operations, maintenance and renewal funding will be for successive five-year periods. However, we are disappointed that the route to including passenger services and enhancements is not initially planned to be taken up. It is intrinsically unbalanced to have a five-year business planning period for one part of the industry, and a 1-3 year horizon for

the other side of key physical engineering interfaces. This lack of co-terminus joined-up funding will impair the nascent GBR's ability to make optimal engineering decisions and undermine attempts to deliver joined-up performance improvements for passengers (see 1.2 above).

2.2 Differential track access charging must be retained for different rail vehicles

Passenger interests are best served by fair competition with freight and open access operators, when each operator is sufficiently financially incentivised not only to be reliable of itself (see 1.2 above), but also to tread lightly on the shared interfaces.

For example, over decades the UK has carried out and implemented world-leading vehicle-track interface research, creating the Vehicle-Track System Interface Model (VTSIM) that underpins differential track access charging. The VTSIM enables less track-friendly vehicles to be charged more for track access. It has also driven long term design changes, so today's vehicles' tread cause less wear and tear on the infrastructure because they have less stiff bogies and lower unsprung mass – bringing down whole system costs.

Again, these nuances where the funding and charging mechanisms affect the efficiency of engineering decision-making point to a bigger role for the ORR in holding GBR to account for engineering implementation to drive down costs.

3. Long-Term Rail Strategy (LTRS)

We welcome the conceptual embrace of a 30-year strategy, and we ask that it is:

- framed to start from where we are (see 3.1)
- developed with in-depth railway engineering participation (3.2)
- embedded in a strong implementation plan, where the ORR hold GBR to account (3.3)
- refreshed every five years, in line with the PRs (3.4)

3.1 The LTRS should build on the Rail Technical Strategy (RTS) and the Sustainable Rail Blueprint

We are concerned that the LTRS should engage with the detailed work of engineers and railway professionals across the industry who have created the existing industry strategies over more than two decades. The most effective whole-system work has been consistently led by Rail Safety and Standards Board (RSSB) since its formation in the early 2000s, to fulfill a deficit in the privatisation firmament. Initial work resulted in the first RTS in 2007, that has driven aligned research, development and innovation (RD&I) to deliver the core vision set out in the four 'C's that are still valid, seeking:

- More Customer satisfaction
- More Capacity (services more than doubled since privatisation and are back up to pre-privatisation levels, there is significant unmet demand, and critically, capacity overload directly impacts on service performance)
- Less Cost
- Less Carbon impact (this has always been interpreted widely, and is now explicitly set out in the RSSB-led Sustainable Rail Blueprint.³

The RTS has been refreshed approximately every five years, taking account of the RD&I delivered and the emerging landscape of customer needs and expectations, coupled with the challenges of running the railway and the opportunities of technological advances. The RTS was last refreshed in 2024 and details the programme of on-going work the industry is delivering.⁴

3.2 The LTRS should above all engage non-partisan, knowledgeable engineers

The LTRS must be developed through stakeholder engagement with practising railway engineers from all corners of the industry. The IMechE and other professional engineering organisations can readily provide this expertise alongside RSSB as an effective and knowledgeable facilitator of the collaborative cross-industry building process.

3.3 The ORR should ensure that GBR actually implements the LTRS

It takes years to make changes in railways. Sometimes this is for good engineering reasons, because the interfaces are complicated and the lifecycle of rolling stock and infrastructure is long – itself a good thing, in terms of maximising the value of first cost and embedded carbon from the design and build phases, in a long operational life. Other times, however, it is the sheer inertia and/or dysfunctional nature of big entities such as Network Rail that limits implementation. Engineers from across the industry, inside and outside of Network Rail, share concern that the part of the industry with the worst record for rolling out innovation at scale will be built upon to create GBR. GBR will be even bigger and pulled in even more directions (adding train operations and strengthened devolution as well as Routes and Regions), which will only make such implementation harder.

We foresee a key role for ORR will be to continuously challenge GBR to deliver on innovation implementation, particularly to benefit from efficiencies that impact on the ability to deliver better performance for passengers.

³ <https://digital.rssb.co.uk/sustainable-rail-blueprint/>

⁴ <https://railtechnicalstrategy.co.uk/>

3.4 The LTRS should be refreshed every five years, in line with the PRs

The 30-year LTRS will be most effective if it is refreshed on a five-yearly cycle, in line with the achievements and challenges of the PRs, and in the light of advances in technology and passenger expectations. This should build on the process that RSSB has adopted with a similar rate of refresh to the RTS since its inception in 2007 (in 2012, 2020 and 2024). At each refresh, new case studies are added as implementation exemplars, and the long-term plans are moved along as the nearer term outputs are delivered.

4. Risks

Risks to passenger service performance can be grouped into long term and transitional. Transitional are perhaps better understood, so we will not dwell on them, but we do want to draw attention to some of the underlying longer-term risks which are not yet acknowledged and addressed.

4.1 Railway standards should not be ‘streamlined’ but retained and enforced

Passenger needs are not best served by slashing ‘red tape’. Railway standards and regulations underpin safety and efficiency. As railway engineers, we must counter the popular (but erroneous) expectation that there is a ‘regulatory burden’ that needs to be ‘streamlined’ (page 36 in ‘A Railway Fit for Britain’s Future – Government Response’).

The European railway standards project was driven by the goal of economic efficiency, without diminishing safety, both in the short and long term, with a view to increasing convergence in a pan-European (and increasingly global) market. Railway infrastructure and rolling stock owners and operators benefit from reduced costs; whilst UK and European railway suppliers benefit from wider market opportunities, within and beyond Europe, as the EU standards are adopted more widely, facilitating a virtuous circle of workload-smoothing, economies of scale etc.

We noted the aspiration to have fewer variants of rolling stock in the UK in the Secretary of State’s speech to the Railway Industry Association’s Annual Conference on 5 November 2025. Retaining alignment to EU standards is a key enabler of future standardisation as well as enhancing cost-effective delivery of higher-performing, proven trains, especially given the relatively small (and particular) UK market for rolling stock, with limited commercial leverage on the world stage.

Examples of inappropriate use of standards can be cited, however, good standards include mechanisms for deviation where inappropriate: those who choose to pursue compliance where inappropriate or through their own inadequate project management wrongly malign

the standards themselves. The proactive role of the ORR in safety and performance is crucial to sound standards implementation.

5. Accessibility

5.1 The General Duty of Accessibility is welcome, and should be enforced by ORR and supported appropriately

The Railways Bill and supplementary Accessible Railways Roadmap are a step towards a more inclusive and accessible public transport network for the millions of people who currently face barriers to travel.⁵ However, operators and manufacturers must be supported by GBR and national, devolved and local policymakers to meet key requirements, with appropriate enforcement to ensure accountability.

The strengthened duties placed on GBR to promote accessibility are welcome but to ensure accountability, these will need to be properly enforced by the ORR and Equality and Human Rights Commission. Too often the burden falls to passengers to understand their rights and seek redress within a complex landscape of transport stakeholders, particularly across nations. Further guidance on the Public Sector Equality Duty specifically within a transport context should be provided to clarify how GBR and its entities should have “due regard” to equity considerations with specific examples. This will support operators to meet new requirements and provide a more consistent experience for passengers.

To ensure minimum standards for accessibility are fit for purpose, GBR should work with the new passenger watchdog and ORR to review minimum standards and tie these to unified and consistent metrics across nations. This would enable measurement of progress towards a more accessible railway.

Data collected should then be stored and shared with transport stakeholders through a single, government-owned platform that combines network data and accessibility features and measurements. Unlike the current state of fragmented, inconsistent and difficult to access data, engineers would then be able to understand and solve problems using up-to-date data to improve accessibility across the railway.

Stakeholder engagement will be included in the conditions of GBR’s license. This is an appropriate measure to ensure engagement with key disadvantaged groups is prioritised. It will be crucial for this condition to specify that co-production should be enabled from the early stages and throughout a project’s lifetime to ensure new or upgraded transport

⁵ Institution of Mechanical Engineers. (2025). *En route to inclusive public transport*. https://www.imeche.org/docs/default-source/1-oscar/reports-policy-statements-and-documents/imeche-report-en-route-to-inclusive-public-transport-2025.pdf?sfvrsn=ccf75e11_2

systems work better for disabled people and others who may experience barriers to using public transport.

Conclusion

In this submission, we have set out some of the key requirements that underpin a high performing railway. They include mechanisms to adequately engage and implement established and emerging optimisations across engineering interfaces, deploying the UK's world-leading research and development such as with the Vehicle-Track model, and exploiting new technologies. High performance also requires sufficient resources and tools to continuously refine and proactively respond to day-to-day newly emerging challenges with new and ageing rolling stock and signaling and with climate change impacting infrastructure up to 200 years old, being used way beyond design expectations.

There is an understandable focus on easier to understand concepts in the factsheets, whilst reducing the challenge of the core engineering (and ever-evolving engineering development) of the railway, and diminishing the huge potential impact that the railway could have on decarbonising UK transport (passenger and freight), with appropriate long term strategic planning and implementation.

In conclusion, we sense that the engineering needs and opportunities of the railway to deliver and improve rail travel for passengers are inadequately addressed in the Bill and associated documents and process to date. We therefore recommend that the wealth of cross-industry non-partisan experience and expertise from professional railway engineers in the IMechE would be a good resource for the government to engage with. We can help both to frame and subsequently to detail GBR and the LTRS.

We would welcome this engagement.

Summary of recommendations

Recommendations are made throughout this response. They are similar across a wide range of issues: calling for clearer incentives, greater engagement with industry and engineering professionals, and for a stronger role for the ORR to hold GBR to account for efficiency and performance.

The IMechE is ready to support the government in framing, detailing and implementing a railway truly 'Fit for Britain's Future'. To this end, our 10 recommendations are collated below:

1.1 Passenger growth and the environment should be General Duties too

1.2 Performance deficits should cost enough for them to actually be made good

- 2.1 Passenger-facing operations should enjoy the same five-year planning and optimisation horizon
- 2.2 Differential track access charging must be retained for different rail vehicles
- 3.1 The LTRS should build on the RTS and the Sustainable Rail Blueprint
- 3.2 The LTRS should above all engage non-partisan, knowledgeable engineers
- 3.3 The ORR should ensure that GBR implements the LTRS
- 3.4 The LTRS should be refreshed every five years, in line with the PRs
- 4.1 Railway standards should not be 'streamlined' but retained and enforced
- 5.1 The general duty of accessibility is welcome, and should be enforced by ORR and supported appropriately