



House of Commons
Transport Committee

Trains Fit for the Future? Government Response to the Committee's Sixth Report of Session 2019–21

**Third Special Report of
Session 2021–22**

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Transport Committee

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Third Special Report

The Transport Committee published its Sixth Report of Session 2019–21, [*Trains fit for the future?*](#) (HC 876) on 23 March 2021. The Government response was received on 20 May 2021 and is appended below.

Appendix: Government Response

Preface

The Government welcomes the Transport Select Committee's report that was published on 23 March, following their 'Trains Fit for the Future' inquiry. We are grateful to the Committee and to all those that provided evidence for their work.

We agree that, although rail is already a relatively green mode of transport, we need to make it even greener if we are to hit our legally binding target of reaching net zero carbon emissions across the entire UK economy by 2050 – and we have been making good progress. In the last three years (for which data is available), we have completed almost 700 miles of electrification in England and Wales. Since the start of 2019, the Government has also contributed over £6 million to eighteen First of a Kind (FoaK) projects that will help decarbonise the railway and reduce harmful emissions.

But there is still more for us to do. Our forthcoming Transport Decarbonisation Plan (TDP), informed by the Network Rail-led Traction Decarbonisation Network Strategy, will set the necessary scale and pace of rail decarbonisation that we need to see between now and 2050. To decarbonise the railway and help meet our net zero by 2050 target, we will support a mix of further electrification of the network and the deployment of hydrogen and battery trains on some lines. As set out in Recommendation 1, we will undertake bottom-up analysis and development work for each part of the unelectrified network covered by TDNS to ensure that we implement the most appropriate and most cost-effective decarbonisation solution in each case.

The Williams-Shapps plan for rail, as set out in the White Paper published on 20 May, will provide an improved industry structure. Great British Railways (GBR) will provide a joined-up approach to delivering a cleaner, greener railway. This will include ambitious commitments to decarbonisation, improving air quality, reducing waste and supporting biodiversity. Unlike in today's fragmented railways, GBR will have clearer accountability for delivering environmental objectives, including net zero. It will have improved oversight of cross-industry investment and planning, and closer alignment of track and train will enable more efficient decarbonisation. GBR will marshal the rail industry through its 30-year strategy, developing a long-term plan for delivering net zero and other environmental objectives.

Recommendation 1: *We recommend that the Department for Transport publishes a long-term strategy for decarbonising the rail network as a matter of priority. This should include a vision for what proportion of the future network will use electrification, battery and*

hydrogen. That strategy should be supported by appropriate costings, a credible delivery plan, and enabling targets and milestones. These targets and milestones should clarify how the 2040 and 2050 targets will fit together. (Paragraph 29)

The Government partially agrees with this recommendation. The Department is developing a TDP and a Rail Environment Policy (REP) document. Taken together, these will set the Government's long-term strategic direction for decarbonising the railway between now and 2050 and our intended carbon reduction pathway. A comprehensive environment plan for the rail network will be published by 2022 and will form a key part of the 30-year strategy for the railway.

Through the Network Rail-led Traction Decarbonisation Network Strategy (TDNS), Network Rail and industry have developed a vision for what the technological mix of trains operating on the railway could look like in 2050, based on today's technology. While TDNS offers one such technological vision, further bottom-up analysis and discussion will be required for each part of the network as those technologies continue to evolve to ensure that we implement the most appropriate decarbonisation solution on each part of the network, including looking closely at affordability and value for money.

Recommendation 2: *We call on the Department to work closely with other Government departments, including the Treasury, to secure agreement for the levels of funding necessary to begin implementing a long-term decarbonisation programme of the rail network. (Paragraph 31)*

The Government agrees with this recommendation. We will work closely with other departments, including the Treasury, to secure the necessary funding to deliver the policy that we will set out in TDP.

Recommendation 3: *We recommend that the Department implements an enhanced financial mechanism beyond that contained in the Rail Network Enhancement Pipeline process. That enhanced financial mechanism must be designed to ensure that strict transparency and adherence to cost discipline are maintained in any electrification programme. (Paragraph 57)*

The Government partially agrees with this recommendation. After the cost challenges that we experienced with previous electrification schemes in Network Rail's Control Period 5, we introduced more robust financial mechanisms, including the Rail Network Enhancement Pipeline (RNEP) process, to ensure that, as far as is possible, future rail enhancement schemes are developed in a way that is affordable and represent value for money. In principle, we agree with the need for financial transparency as much as possible, but this must also be balanced with any commercial sensitivity implications.

A review of financial governance mechanisms for rail enhancements is already underway within Network Rail. Where necessary, we will continue to enhance our financial governance processes to provide reassurance that lessons from previous electrification schemes have been learned.

Recommendation 4: *We recommend that the Department commits to a 30-year rolling programme of electrification projects and sets this out in its long-term rail decarbonisation strategy. (Paragraph 59)*

The Government partially agrees with this recommendation. We agree that a visible pipeline and smooth delivery profile of electrification schemes will help to enable Network Rail (and subsequently Great British Railways) and the supply chain to deliver electrification more efficiently, and so we will endeavour to deliver that pipeline of schemes over the next 30 years. However, having learned the lessons from Network Rail's Control Period 5 where we overcommitted to a number of electrification schemes before they had been sufficiently developed, we now have the RNEP process in place to ensure that future schemes can be properly developed before we commit to them. It is right that we both continue to develop schemes through the RNEP process, to ensure that future schemes are affordable and provide value for money, but also that we balance this with the need to give the rail industry the sufficient pipeline of projects, and the certainty, that it needs. We will seek to balance both of these needs in our future approach towards decarbonising the railway between now and 2050.

Recommendation 5: *We recommend that Network Rail and the ORR continue to explore the potential for an extension in third-rail electrification capability and that the Department, as the overall sponsor of rail decarbonisation, proactively monitors this development in the event that Network Rail and the Office of Rail and Road are unable to reach an agreement on whether to proceed with further third-rail electrification projects.”* (Paragraph 61)

The Government agrees with this recommendation where it is appropriate. The Department is proactively and carefully monitoring the work that Network Rail and ORR are currently undertaking to look at the potential for third rail electrification extension. We are also funding a project, led by the Rail Safety and Standards Board, to look at further technical mitigations that could be implemented to improve the safety of third rail electrification.

Recommendation 6: *In responding to this Report, if not earlier, the Department should publish the list of “no regret” electrification schemes identified by Network Rail and confirm which schemes they intend to deliver as a priority, the costs of doing so, and the timeframes.* (Paragraph 62)

The Government partially agrees with this recommendation.

Having learned the lessons from Network Rail's Control Period 5, where we overcommitted to a number of electrification schemes before they had been sufficiently developed, we now have the RNEP process in place to ensure that future schemes can be properly developed before we commit to them. The Department works closely with Network Rail's regions to develop enhancement schemes, including electrification schemes. The status of each scheme can be seen in RNEP updates as they are published. The RNEP will be republished with updates as soon as is possible. Different projects are at different stages in the RNEP process, with some projects at a very early stage of pre-RNEP development.

When referring to a list of “no regret” electrification schemes to this Committee, Andrew Haines was referring to interim TDNS analysis that was requested by the Department in the first part of 2020, to give some early insight into some of the most likely TDNS recommendations on electrification, to support policy development in this area. That interim analysis, which is attached as an annex, included a list of unelectrified lines where, based on Network Rail's own view, and the current state of available rail decarbonisation technologies, electrification would likely be the most appropriate decarbonisation option.

This interim TDNS analysis, which has helped to inform the schemes in RNEP, has since been superseded by the TDNS Interim Programme Business Case, which was published by Network Rail in September 2020.

Recommendation 7: *The Department must make the case within Government to ensure that hydrogen trains are fully incorporated within the forthcoming national Hydrogen Strategy. This will help ensure the roll out of this new technology is properly co-ordinated and supported by appropriate infrastructure. (Paragraph 79)*

The Government agrees with this recommendation. We are making the case across government for hydrogen trains to be included to an appropriate level in the forthcoming national Hydrogen Strategy.

Recommendation 8: *In its response to this Report, the Department should provide more information on how it intends, working with other Government departments, to support the growth of a domestic battery industry to ensure this form of technology can be utilised on the railway. (Paragraph 80)*

The Department will work with the Department of Business Energy and Industrial Strategy in supporting the growth of a domestic battery industry.

The Government is investing £318 million from the Industrial Strategy Challenge Fund in the Faraday Battery Challenge, to put the UK at the global forefront of the design, development, manufacturing, and recycling of electric batteries. The Faraday Battery Challenge is creating the research, innovation and commercialisation pathways, and ecosystem that is establishing the UK as a battery science superpower, growing innovative companies and attracting large scale battery manufacturing to the UK.

The challenge is split into three elements:

- support for the Faraday Institution, which is bringing together expertise from universities and industry as it endeavours to make the UK the go-to place for the research and development of new electrical storage technologies for both the automotive and wider relevant sectors;
- funding for feasibility studies and collaborative research and development projects;
- and investment in the UK Battery Industrialisation Centre, a unique open access facility to accelerate the development of cost-effective, high-performance, durable, safe, low-weight and recyclable batteries.

Recommendation 9: *The long-term rail decarbonisation strategy must explain the process by which the development of alternative technologies will be reviewed and how such technologies can be incorporated into the network strategy, if they reach the necessary level of development. (Paragraph 88)*

The Government agrees with this recommendation. The Network Rail-led Traction Decarbonisation Network Strategy (TDNS) recommends that Network Rail regional teams translate the national picture developed as part of TDNS into regional “bottom-up” assessments that support the implementation of TDNS’ recommended pathways. This work should include a review of alternative technologies where appropriate. By bringing

track and train closer together into a single entity, Great British Railways will be ideally placed to consider electrification, hydrogen and battery concurrently, determine the best option, and commission both the necessary infrastructure and the right rolling stock to deliver decarbonisation outcomes. The analysis that informs TDNS will be updated periodically to take into account the development of rail decarbonisation technologies.

Recommendation 10: *As part of its upcoming cross modal freight strategy, the Department should ensure there is a single cross-modal freight decarbonisation target including both rail and road freight. (Paragraph 98)*

The Government notes this recommendation and recognises the importance of taking a holistic, cross-modal view of freight decarbonisation. We will therefore be setting out further details on freight decarbonisation in our forthcoming TDP. As the Committee will know, the Government has legislated that the UK will reach net zero greenhouse gas emissions by 2050 and, to achieve this, is developing an ambitious plan to accelerate the decarbonisation of transport. The TDP will set out in detail what government, business and society will need to do to deliver the significant emissions reduction needed across all modes of transport, including across rail and road freight. The TDP will put us on a pathway to achieving carbon budgets and net zero emissions across every single mode of transport by 2050. Our cross-modal freight strategy will also set out the Government's objectives for the freight sector, including building on the TDP in relation to decarbonisation.

Recommendation 11: *We recommend that the Department's long-term rail decarbonisation strategy sets out how research and development will be supported and properly funded in order to deliver the scale of change required to decarbonise the rail network. (Paragraph 103)*

The Government partially agrees with this recommendation. Significant government support and funding for the research and development of new and emerging rail decarbonisation technologies has been taking place over a number of years, with the Department working closely with a range of partners in the private and education sectors to do this. While it is important that the government continues to support cross-industry research and development, it is also important that the private sector continues to work with us and invest appropriately in new and emerging technologies.

Currently, the Department majority-funds a Research & Development programme, delivered by the Rail Safety and Standards Board (RSSB) since 2003, to remedy cross-industry challenges that that cannot or would not be resolved by individual or small groups of organisations. Decarbonisation is one of the major workstreams of this programme. The Department also funds the Rail Innovation Programme, delivered through "First of a Kind" competitions run by Innovate UK since 2017/18, to help overcome practical barriers to innovation that make it difficult for new entrants to bring novel technologies to the rail market. The Rail Innovation Programme's two most recent First of a Kind competitions have included themes specific to, or encouraging of, innovative decarbonisation projects.

The Williams-Shapps White Paper sets out that research, development and innovation funding will be simplified to make it more outcome-focused and to improve collaboration. Great British Railways will become the primary public funder of research, development and innovation initiatives across the railway, delivering priorities set by ministers. Closer alignment between public sector research and development funding and the railway's long-term investment strategies will better support long-term plans for rail decarbonisation.

Stronger links with private sector innovators will be a core part of the new research, development and innovation system, seeking to align GBR's research and development schemes and funding pipelines with the supply chain. Change will be planned in close consultation with existing bodies, such as RSSB and Innovate UK.

Recommendation 12: *The Department must set out how it will ensure that train operators meet the legal requirement to make their trains fully accessible and what sanctions will be used if some train operators once again fail to meet the deadline. We will monitor this situation closely.* (Paragraph 110)

The Department is committed to making sure that trains on the mainline network comply with modern accessibility standards. Around 97 per cent are compliant, which corresponds to nearly 16,000 vehicles. The remaining 3 per cent (525 vehicles over four operators) will be removed from service as soon as possible. Approximately 133 of these vehicles will only be used when coupled to compliant vehicles. The four operators in question are prioritising the use of compliant trains in the timetable and continue to take operational mitigations – such as ensuring that the last train of the day is operated by compliant vehicles and information on accessibility features by class of train is readily available.