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Director, Planning and Performance



Rob Cairns
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Dear Rob

Potential contravention of Network Rail's network licence relating to facilitation of railway service performance in Wales & Western

On 29 November 2023, I wrote to Michelle Handforth (who, at the time, was Managing Director, Wales & Western) to advise her that ORR was initiating an investigation into whether or not Network Rail's Wales & Western region has contravened or is contravening the Network Licence.

Our investigation reflected that Network Rail's contribution to train service performance in Wales & Western has been on an overall worsening trend since 2021. The performance experienced by railway passengers and freight customers has not been good enough.

Our investigation has focused on whether Network Rail has contravened or is contravening the Network Licence, with particular reference to conditions 1 (network management), 3 (sufficient resources) and 5 (asset management) of the Network Licence.

The investigation has required the provision and review of large amounts of information. Thank you for Network Rail's cooperation in providing this information and engaging in the wider investigation. We have considered the submissions provided on 29 January, 20 February and 13 March 2024, material provided to us during or after meetings related to the investigation and information from relevant passenger and freight train operators, funders and passenger groups. We have also considered material provided through periodic reporting of Wales & Western's Performance Recovery Plan.

Areas of potential contravention

Subject to considering any further representations from Network Rail, our preliminary view is that Network Rail has contravened, and is contravening, its Network Licence, primarily condition 1 and, in particular, conditions 1.1 to 1.3 and condition 1.9, in that it is failing to achieve to the greatest extent reasonably practicable, having regard to all relevant circumstances, its obligations to:

- Operate, maintain, renew, replace, improve, enhance and develop the network, in accordance with best practice, to meet the reasonable requirements of persons providing services relating to railways in respect of the facilitation of railway service performance.
- For a route/region business, comply with the core duties, which includes the Network Management Duty as summarised in the previous bullet, in the performance of its functions.

We consider there is evidence to suggest a past and current contravention primarily in the following areas:

1. **Network Rail did not sufficiently plan for the cumulative changes on the network, including as a result of Great Western Electrification Project (GWEP) and Crossrail.** It appears that it did not fully understand and articulate the impact of increased services and tonnage on effective management of network assets and therefore did not develop appropriate asset management plans and engineering access plans. The emergent Project Brunel (aimed at addressing longer-term asset sustainability, asset reliability and operational practices on the Western route out of Paddington) is intended to partially address this, but it must be further developed. As part of this, the region must provide a clear, timebound plan for renewing the overhead lines from Paddington to Airport Junction and a maintenance plan to ensure reliability until that work is complete.
2. **Wales & Western does not fully understand to what extent different operational factors are driving increased delay when incidents occur.** This hampers its ability to target improvements effectively. The region has not yet delivered an effective business change programme that will promote operational success of the Western route. From the evidence we have seen to date, Project Brunel is still under development and currently has far greater focus on asset interventions rather than operational measures to manage and reduce delay. It is not yet fully scoped with clear, timebound milestones for all aspects of delivery. It is also unclear how Project Brunel's benefits and any structural improvements from this project will be incorporated into the region's wider route-wide and regional performance recovery plan, to deliver sustainable improvement.
3. **There are weaknesses in Wales & Western's processes for learning lessons from incidents.** There is an urgent need for it to review lessons from the introduction of major network changes on Western (including GWEP and Crossrail) to ensure that it applies that learning in managing HS2 interfaces. We have also identified specific instances of lessons from major disruption events not being fully learnt and implemented. These include lessons from the 19 September 2022 overhead line failure not being fully reflected in Wales & Western's response in the 7 December 2023 overhead line failure incident, including the management of stranded trains. We also found that lessons relating to the management of Nuneham Viaduct, in particular the impact of its

closure on passengers and freight, have not been fully reviewed. These examples indicate that Wales & Western needs to improve governance around incident learning reviews to make sure they are fully and effectively implemented, and knowledge is shared across the industry.

4. **There are weaknesses in leadership and governance.** We consider that the region is not currently set up to drive optimised train performance outcomes. Network Rail has not demonstrated how the region's overarching strategy and governance for delivering good train performance provides clear line-of-sight and appropriate accountability. We consider that the high-profile incident at Nuneham Viaduct demonstrated substantial weakness in the region's approach to understanding and managing the network effects of engineering decisions, and also in how it identifies and escalates resultant performance risks both internally and with operators.

I summarise the broader findings from our investigation in the annex to this letter. These are set out against the following key themes: understanding of performance issues and development of performance recovery plans; leadership and governance; preparation for and delivery of major network changes; asset management; operational management; and resourcing.

Next steps

We invite Network Rail to make any further representations by noon on 29 April 2024. We will then consider the recommendations that we make to our Board about whether or not Network Rail has contravened or is contravening its Network Licence and, if so, whether it is appropriate to take formal enforcement action. This is likely to be at the ORR Board meeting in May 2024.

We may use any information you provide in response to this letter in our evidence report, which we will send to you to check accuracy and will publish once we have made our decision on licence breach. We will publish this letter and your response on our website at the same time as the evidence report.

I am copying this letter to Andrew Haines.

Yours sincerely



Feras Alshaker

Director, Planning and Performance

Annex – Summary of investigation findings

A summary of our broader findings from our investigation is provided below. These are set out against the following key themes: understanding of performance issues and development of performance recovery plans; leadership and governance; preparation for and delivery of major network changes; asset management; operational management; and resourcing. The primary evidence suggesting contravention of the Network Licence is indicated in **bold**.

With respect to understanding of performance issues and developing performance recovery plans:

1. Wales & Western has produced and iterated a performance recovery plan that includes actions aimed at causes of delay from its analysis of attribution data. However, it has not reversed the decline in overall train performance. Performance has remained at unacceptable levels (including being below regulatory targets) which is impacting passengers and freight customers.
2. The deterioration in train service performance in Wales & Western is driven by many different factors, including those within Network Rail's control as well as wider industry factors and external causes (such as extreme weather). There is not one simple or quick solution. While there are some strengths in Network Rail's management of performance, there are also clear opportunities to improve its asset management and network operations to deliver improved performance.
3. Wales & Western has analysed the causes of delay and quantified their impact (using delay attribution data). The most significant contributors to Network Rail-attributed delay in the region include fatalities/trespass, track faults, points failures, severe weather, axle counter failures and delays associated with signalling. Wales & Western has produced improvement plans that include actions aimed at these sources of delay. **However, it still does not fully understand the operational factors that are driving increased delay associated with each incident. This means that it does not have all the information it needs to target the factors within its control effectively.**
4. Wales & Western has recently been developing an additional plan, called Project Brunel, aimed at addressing longer-term asset sustainability, asset reliability and operational practices on the Western route out of Paddington. **From the evidence provided during the investigation, the project is still in development and currently has far greater focus on asset interventions rather than operational measures to reduce delay. We have therefore not seen evidence to date that this plan is fully scoped with clear, timebound milestones for all aspects of delivery. It is also unclear how its benefits and any structural improvements from the project will be sustained and incorporated into its wider performance recovery plan to deliver sustainable improvements across the wider route and region.**

With respect to leadership and governance on train performance:

1. Wales & Western has, previously, lacked sufficient focus through leadership and governance on delivering strong train service performance to passengers and freight. The consolidated performance recovery plan that the region produced in August 2022 was only in response to scrutiny from ORR.
2. There are opportunities to deliver improved train performance which rely on cross-industry collaboration. These include strengthening contingency plans for dealing with delays while retaining flexibility in their application, further roll out of technology to improve incident response and service recovery (such as Integrated Timetable Service Recovery) and improving the robustness of implementing learning from the industry's response to major delay incidents. We consider it is an important enabler to set up a regional cross-industry forum focused on creating the strategic conditions that allow collaborative delivery of strong train performance. While Network Rail can take a lead, it is reliant on proactive input from across the industry.
3. **Wales & Western's regional accountability structure does not always drive joined-up decision making on performance, for example ensuring engineering decisions are cognisant of optimising train performance outcomes. We consider that the management of the Nuneham Viaduct incident demonstrated substantial weakness in the region's approach to understanding and managing the network effects of engineering decisions. It also demonstrated weakness in how it identifies and escalates resultant performance risks both internally and with operators. With safety remaining a prerequisite, the region's new leadership team must ensure strong governance and accountability to drive a more performance-led culture and to ensure that risks are managed across the full range of the region's activities.**

With respect to preparing for and delivering major network changes:

1. Wales & Western has been impacted by successive major changes to the railway, including GWEP, Crossrail, the introduction of Class 800 and 802 and Class 345 trains and a major increase in heavy freight from the Mendip quarries. Cross-industry processes for the introduction of these changes did not fully understand and therefore plan for the cumulative whole-system effects of them.
2. **For example, while modelling was carried out to understand the impact of Elizabeth Line timetable changes on performance, this did not account for the interdependencies between factors such as: increased wear on electrification assets that were not renewed under GWEP, changed service patterns and associated engineering access constraints, and changed operational plans (including unmodelled changes in train crew diagrams). As a result, system-wide effects and the heightened risks of delay to passengers and freight were underestimated.**

3. **Wales & Western has not evidenced that it has carried out a retrospective review of its timetable modelling for the introduction of Elizabeth Line services, to ensure it learns lessons and applies these in planning for future major changes – such as the introduction of HS2. Its timetable modelling capability does not take full account of the change’s impact on asset condition, reliability and resilience – and therefore train performance.**
4. **Network Rail underestimated the impact of these major change programmes on Western’s assets and operations in its planning. It carried out a cross-industry programme of works to prepare for the introduction of Elizabeth Line services (Project Fusion) – with partial success – but it is now clear that a programme of additional engineering work was and is required to support train performance.**
5. With the introduction of Elizabeth Line services and major increases in freight use on the Western route, there are more parties with competing interests in securing access to the network, running services and recovering services following disruption. The region underestimated the complexity of the operational culture change that these changes would require. There is an absence of cross-industry working on the Western route in a way which brings the many parties responsible for delivering train performance together.

With respect to managing assets to deliver train performance:

1. Given the increased busyness of the route out of Paddington (where there has been a large increase in traffic and tonnage), the reliability of assets has become more important to counter any increase in delay from each incident. Train performance has been particularly affected by asset failures in heavily trafficked, critical areas. Track asset failures and delays associated with them have increased on the Western route and are well above historical levels. Temporary speed restrictions (such as those to mitigate the risks of poor track condition) have continuously eroded performance and made performance recovery more difficult due to the tightly planned network. A small number of highly disruptive axle counter failures has occurred in the Thames Valley area. High-profile failures of overhead lines between Paddington and Airport Junction have led to large amounts of delay and highlighted the need for proactive interventions and a firmed-up renewal plan to support improved performance.
2. Wales & Western has allowed a backlog of maintenance and renewals work to build at critical locations on the network – and this needs to be addressed to support train performance. In some areas assets are being managed at, or beyond, their original design-life which, whilst not unsafe, is impacting performance. For example, asset condition and reliability on certain freight branches has been allowed to deteriorate to a point where there has been significant impact on freight performance (such as on the Tytherington Line prior to recent works). Further, Wales & Western’s additional inspections on

- the overhead line equipment between Paddington and Airport Junction has revealed a backlog of defects that must be addressed.
3. Wales & Western should continue to deliver on its plans to minimise causes of delay arising from poor asset reliability. This should include continuing to target the root causes that lead to temporary speed restrictions on any line of route and to ensure it is maximising its use of leading indicators of future problems. **The region must provide a clear, timebound plan for renewing the overhead lines from Paddington to Airport Junction and a maintenance plan to ensure reliability until that work is complete.**
 4. The need to ensure enhanced reliability of assets in the Thames Valley area to cope with the increased stress was foreseeable. It is now clear that a more significant programme of asset renewal and resilience works should have been delivered prior to introduction of Elizabeth Line services to support the changed railway operational environment and to protect performance. (This is a specific focus of Project Brunel, see below).
 5. Wales & Western's management of its access to the network and approach to delivering engineering work has not allowed it to deliver all of the required maintenance and renewal works and has impacted its response to incidents to minimise delay. This is a particular issue on the busiest parts of its network such as between Paddington and Airport Junction. **Reduced access resulting from changes to train services was foreseeable and should have been planned for. The region has not demonstrated a strategic approach to planning and optimising the efficiency of its access and therefore that it can establish and then maintain a sustainable approach to delivering the required engineering works. It should review and adopt best practice, including in use of tools and technology.**
 6. We understand that, as part of Project Brunel, the region aims to address asset reliability problems between Paddington and Airport Junction and at strategic sites across the Western route and is agreeing increased access windows with operators to carry out the works. **This must be scoped and delivered effectively to address backlogs of work, improve asset condition and reliability and therefore deliver a longer-term improvement in performance on a critical part of the route.**
 7. More frequent and more extreme weather conditions caused by climate change are affecting performance and will continue to do so. Wales & Western has improved its Weather Resilience and Climate Change Adaptation (WRCCA) plans, and it has provided evidence of specific actions taken to improve resilience. It should continue to deliver on these plans and respond to emerging risks.

With respect to operational management of the network:

1. The system-wide operational plan in Western lacks resilience in both its timetable and resourcing by operators, but Wales & Western, working with Network Rail's System Operator, has been carrying out work to continuously

improve the resilience of the timetable to basic perturbation, within train service specification constraints. Performance incidents attributed to the timetable have reduced in each of the last four years. The region has provided evidence of changes made and their benefits. This needs ongoing support from passenger and freight operators.

2. Network Rail is currently taking forwards improvement under its '21st Century Operations' programme and the region should review opportunities to accelerate its adoption of the programme as part of the wider operational management changes that are required by the changed nature of the Western route, in particular. Stakeholders have expressed concerns about operational capability, and in particular the need to ensure effective and consistent use of technology and tools to support effective decision making.
3. Wales & Western should continue to deliver improved operational and signalling capability, establishing and delivering against a clear timebound plan and developing a suite of indicators to measure capability. Network Rail should ensure that future significant operational changes – such as the adoption of new decision support technologies – have appropriate business change programmes (including consideration of human factors) to support their introduction.
4. Wales & Western has processes in place to learn from incidents, with actions tracked and reported on. Most actions are completed in a timely fashion. However, its customers have raised concerns about its ability to embed lessons and provide transparency of actions taken across industry. **We have identified instances where learning has not been fully embedded, which appears to be more likely where there are complex issues involving more than one party.** For example, this includes lessons for the effective operational management of overhead wire failures and the management of stranded trains, where similar recommendations have repeatedly been made as lessons have not been fully learnt. In its review of the closure of Nuneham Viaduct, Network Rail has instigated reviews of the emergency engineering remedial works and safety decisions, but not of wider factors such as stakeholder communications and operational decisions. These examples indicate that **Network Rail must improve governance around incident learning reviews to make sure they are fully and effectively implemented, and knowledge is shared across the industry.** The process should include reviewing common themes across the portfolio of incident reviews.

With respect to resourcing to support train performance:

1. Wales & Western's management of performance has been impacted by shortfalls in its resources in critical areas. It has taken action to address shortages in delay attribution staff, operations managers and performance managers. It is also taking action to address current resource needs following implementation of its modernising maintenance programme.
2. We have seen evidence that the region recognises that core operational and signalling capability can be improved and this is a particular issue in Western



due to loss of experienced staff in the Thames Valley Signalling Centre and relative inexperience of newly recruited staff.