

Jonathan Rodgers
Senior Executive, Access & Licensing
Office of Rail and Road
25 Cabot Square
London E14 4QZ

29 July 2022

Dear Jonathan,

**First Trenitalia West Coast Rail Limited new Track Access Contract Section 17 Application:
Response to Network Rail's further representations**

Thank you for the opportunity to respond to Network Rail's (NR) further representations (dated 15 July 2022) regarding Avanti West Coast's AWC Access Rights aspirations.

Executive Summary

We are pleased NR supports the December 2022 quantum, reflective of the Offer received from NR on 1 July 2022; noting the quantum overall (excluding proposed additional off-peak Liverpool services) is lower than that operated pre-Covid in December 2019. We continue to work together via our fortnightly Joint Virtual Team meeting and industry assurance processes to identify and mitigate risks to ensure robust delivery of the December 2022 timetable, whilst co-ordinating communication with stakeholders.

However, we would challenge NR's position regarding the introduction of our additional off-peak Liverpool services from December 2023. The performance modelling undertaken demonstrates these services can be delivered robustly. NR has also not yet shared analysis to demonstrate that the agreed operational mitigations are insufficient to mitigate power resilience risks in the Bushey Feeder area.

NR has not clearly demonstrated rationale behind their requirement for the quantum limit to mitigate the risks stated, and in neither case of performance or power supply has the impact of the quantum limit been evidenced.

In many cases, NR states further modelling or reviews are required to inform its position on AWC's additional rights underpinning the off-peak Liverpool services; however, it does not share any scope or timescales. This gives us significant concern given the need for clear and timely decision making, together with the previous modelling already demonstrating the services will operate robustly.

As noted previously, we intend to date the Rights associated with the additional off-peak Liverpool services within Schedule 5 of the TAC to be valid from December 2023, when we are looking to phase in the additional services.

The connectivity benefits delivered by the additional Liverpool services are key to deliver on our contractual Franchise requirements (specifically Train Service Requirement 3) as committed to the Department and reflects the design and use of capacity of the December 2022 Concept Train Plan. This approach will enable AWC to introduce the capacity and customer connectivity benefits and return on investment, including in new rolling stock in line with ORR's Track Access Guidance (The Use of Capacity 28 July 2021) and is supported by DfT. DfT supports this service being introduced as soon as capacity is available.

Performance Modelling:

As noted previously, the modelled On Time figure of 81.3% for the December 2022 timetable represents a good achievement of the industry in developing the Concept Train Plan.

We concur with the comment that the difference between base and option(s) T-3 is where the most value is added. This shows that whilst the AWC modelled train km increases by over 8%, the T-3 improves by 0.5% for Avanti and 1.2% for all Operators. This includes the impact of 15 Platforms at Euston, new non-tilting Class 80x rolling stock and the removal of pathing time. We would therefore agree with the comment in the Simulation Modelling for Dec 22 WCML ESG Report which states, 'It is recommended that if additional services are desired, the Dec 22 timetable is the optimum timetable to deliver these additional services'.

For the avoidance of doubt Sensitivity 2 includes services not operating in December 2022 (e.g. direct Blackpool services) and some of the second Liverpool services to reflect what operated pre-Covid. We therefore require clarity on whether NR will support these services when AWC plans to reinstate services which were included within the on-time figure of 76.1% between Rugby and Euston.

Euston Platforming analysis – 16/15/14 Scenarios:

NR's Euston 14 Platform Capacity Analysis (June 22), states 'Performance modelling using delay data that represents minor perturbation, which reflects performance on a good day, shows that train performance with fourteen platforms is not materially worse than the December 2022 Base.' This includes additional proposed AWC Liverpool and GUT services with four of the additional AWC Liverpool services temporarily removed during the six month period from December 2023. We continue to work with NR to resolve some issues as this plan is developed, and have shared our preference with NR for the stated Option 2 because it offers more resilience. NR states it has 'not yet been able to fully conclude the number of services that the station may be able to reliably accommodate during this timetable period' however this is demonstrated clearly by the analysis. It is now key to understand, if NR is not satisfied this is sufficiently detailed, when this will be the case?

The work on the Euston 14 Platform Capacity Analysis and the production of the December 2022 timetable have been aligned. This means that no services will be introduced or operated in the December 2022 timetable that cannot be accommodated in December 2023. Where it states that it will require a temporary reduction in services compared to December 2022, we require clarity on which services over and above those referenced in NR's Euston 14 Platform Capacity Analysis are being referred to?

More broadly, NR continues to raise concerns over 15 and 16 platform operation at Euston, when modelling completed so far has demonstrated that these will robustly accommodate AWC's timetable aspirations and proposed access rights (as raised in our response to NR's representations). NR notes further performance analysis is needed for these scenarios. Again, what is the required scope for this and when does NR plan to undertake it to assure itself on its position on the Access Rights. We appreciate that RailSys doesn't model significant perturbation, but also, we do not believe many terminus stations have spare capacity for significant perturbation. If there is significant perturbation it requires Control Room Decisions set out in Section 2.4.10 of NR's Appendix 3 to manage these scenarios. This point was specifically acknowledged in the analysis undertaken for the VHF timetable introduction in 2008. How will this be modelled? To help with the scenarios Avanti would expect to work collaboratively with NR to undertake any performance analysis.

NR also states its future position on supporting these services relies on review of the actual table performance once in operation. Given the in-depth analysis undertaken so far, and lack of clarity on requirements and scope for future modelling work, we need to understand why this is the case, and what the scope and measures are for that review?

Fast Line Quantum Limit

To date there has been no official consultation of the Fast Line Quantum Limit, which should include all Operators. Version 4 of the Timetable Planning Rules 2023 was published on the 15 July 2022, this change was not included. It should have been incorporated in a similar format to NW1001, where it states no more than 13 tph on the Fast Line between Stafford and Crewe. We would ask when NR plan to include this change in the Timetable Planning Rules?

NR has not clearly demonstrated the requirement for the quantum limit to mitigate power supply resilience and performance risk - in neither case has the impact of the quantum limit of performance been evidenced or justified. This should be considered in light of the performance modelling highlighting overall improvement to performance of the timetable including the full December 2022 timetable with additional AWC services, and the impact of operational mitigations to reduce power draw. In both cases, it is not clear why the limit only applies to the Fast Lines.

The evidence for the Fast Line Quantum Limit in Appendix 1 is based on Up Arrivals at T-1 being 67.6%, however, no reference is made to the fact that T-1 in Down direction improves from 65.3% to 78.5%. Does this balance out to achieve West Coast South target of 71.9%? It should also be noted that T-3 in the Up direction is unchanged despite the additional services, which suggests that one of key reasons T-1 is worse in the Up Direction is reduced pathing allowances which are concentrated on WCML South in Up direction and act as quasi-performance allowance. It is not logical to impose a quantum limit because train paths are planned with less pathing time.

In NR's Appendix 1 it is not defined what is meant by peak. We would therefore request from NR a clear and coherent answer which hours it believes the service shall be up to 12tph and which hours shall be up to 13tph across all days of the week. This information has been previously requested from NR, because since the pandemic, we are seeing strong demand recovery in the off-peak periods, and require the flexibility to run 13 tph in the off-peak hours. If 13tph does apply across all hours, and the second Liverpool service is within this quantum limit, would NR support the additional Rights?

Power Supply Resilience

Bushey Feeder Station and Acton Lane

NR states 'the ability to reliably accommodate the additional Euston-Liverpool services on the WCML South also relies on the commissioning of the Bushey Power Supply Upgrade ('PSU') scheme', which is planned to be commissioned in May 2024. NR has not demonstrated that factoring in agreed operational mitigations to reduce EMU power draw, developed with AWC, this is the case. As noted in our previous response to NR's representations, NR's modelling into the resilience risk of Acton Lane feeder station highlighted the risk is only during perturbation, 1% of the time. NR has not demonstrated the extent of this risk following introduction of the AWC off-peak Liverpool services allowing for operational mitigations. AWC's work with NR on mitigations to protect the Acton Lane feeder in perturbation went well beyond previously established levels of power draw limitation for application to the c1390 fleet. The Notch 3 100mph approach can reduce the energy taken from Acton Lane by Avanti down services by around 25% with manageable impact on running times recovered once north of Wembley, and given that this mitigation is proposed by NR to be required only in N-1 perturbed working conditions, it is the view of AWC that Bushey and Acton Lane Power Supply is not grounds to decline services.

Harker Feeder Station

AWC has not had prior sight of the South 2022 Afternoon Peak Memorandum (NR's Appendix 4). AWC has reviewed the shorter document similarly to the previous March 2022 document. The new report conflates several N-1 scenarios into a more concerning picture that could be misunderstood by readers.

AWC has not received the Technical Note documents supporting the March memorandum. Notes at Page 3 of the new document reference back to the previous Scotland West and South memorandum and Scotland West Report - "where are provided full details related to assumptions, exclusions, methodology and assessment criteria. The MUV limit in all models is considered 22.5kV in this memorandum." The 22.5kV statement here is important because this evidences clearly that the correct voltage limits are not being applied. There are two key voltage issues being cited, Minimum Voltage and Mean Useful Voltage, and NR continue to apply BS EN 50163 and BS EN 50388 incorrectly using values we believe from their NR-L2-ELP-27275 of 19kV for Minimum Voltage and 22.5 kV for Mean Useful Voltage.

AWC have consulted with experts and understand NR is using the standards applicable to new infrastructure under TSI and NTSN processes in the modelling of existing infrastructure. It is not surprising therefore that they then produce non-compliances on this basis. It is our understanding that only since Great Western Electrification Project has the UK been introducing into service 25kV electrification equipment that is compliant to these standards and that all "legacy" UK electrification infrastructure is in effect "EN50163 Annex B 4.1 UK" territory for Minimum Voltage and Category IV/V/VI/VII 25kV ac for the purposes of EN50388 Table 3, Mean Useful Voltage. Notably:

- NR are applying a 19kV Minimum Voltage value where they could under EN50163 use 19kV and 17.5kV and 2 minutes, or even under Annex B use 14kV and 12.5kV and two minutes
- NR are applying a 22.5kV Mean Useful Voltage value where they should use 22kV.

Harker is designed and equipped for 2 x 25kV Auto Transformer operation intended to feed some 50km north and 50km south, and in absence of the AT conductors for this mode, the system losses to the extremities of its sections (worst Penrith) are an issue.

In summary we would agree entirely with NR that the Harker (and Elvanfoot) AT system completions are strategically essential for the future operation of the WCML. We are willing to implement operational mitigations in N-1 perturbations through the area in the meantime. We do however consider that the Harker feeder section is operating tolerably for a system that has been value-engineered below true operating potential, and that it can handle the December 2022 service, noting in a number of hours AWC operate two Pendolino services in each direction across Anglo-Scot and Euston-Birmingham-Scotland services.

Duration of Contract

NR states it 'will only support an application which aligns with any proposed expiry of National Rail Contract (NRC) or December 2030 (whichever is the sooner date)', reflecting current expectation for start of HS2 Configuration State D services. As noted in the previous FTWRCL response, with the timescales of our upcoming NRC confirmed subsequent to the submission of the draft TAC, FTWCRL now intends to adjust this end date to 17 October 2032. This means the TAC expiry will be concurrent with the NRC.

Whilst this seems a sensible assumption for Configuration State D, we have not had visibility of how the Access Rights process will work. NR notes a detailed capacity modelling exercise is required to determine the impact of running HS2 services on to WCML North. It is not clear what the timescales are for this and why it is required. The proposed additional off-peak Liverpool services will not impact the timetable north of Preston

Rolling Stock

We continue to work with NR to progress the Linespeed Project as a joint scheme under our Alliance. The scheme is key to realising the benefits of the Hitachi rolling stock to operate at 125mph in certain

track sections without tilt, and ensuring the units perform to their timing load. It is therefore key to enabling the flighting of services and structure of the timetable south of Rugby operates robustly.

We are working with NR to successfully commission the scheme before the May 2023 timetable change. However, there are risks posed to this date by several factors and concerns over the pace of the governance process. These include GRIP 4 close out and effective handover to NR to undertake works at G5-8, procurement of NR framework contractor to undertake next stages of work, NR possession planning, and access to NR signalling records.

NR's ability to deliver on key milestones for the scheme, alongside AWC, will be key to successfully commissioning the scheme to support the timetable structure. We are therefore seeking assurance from NR that South of Rugby can be completed by May 2023, and the remainder of the route completed in readiness for the December 2023 timetable when we are planning to operate our additional Liverpool services.

Services north of Preston

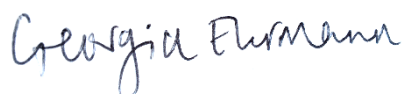
In the conclusion, NR notes they have recently been made aware of AWC's 'future May 2023 timetable aspiration for an additional service to/from Glasgow plus a number of services running there instead of Blackpool'. These services are not additional. They were included in the Dec 19 base pre-Covid as part of the WCML North service structure alternating with TPE. Paths remain for these services in the Concept Train Plan, and as demand returns and our new rolling stock is introduced, it is our intention to restore this connectivity. This will be reflected in our application.

Conclusion

December 2022 timetable readiness workstreams are progressing constructively across NR and Operators – the overall approach continues to be collaborative, incorporating lessons learned from delivering other major timetable changes. We are pleased NR supports the December 2022 quantum, however we retain our aspiration for Rights underpinning introduction of our additional Liverpool services from December 2023, which will drive significant connectivity benefit.

We remain concerned that NR has not sufficiently justified its position on several factors, including performance modelling, power supply and the Quantum Limit. We would be willing to support and cooperate on further work to be done, but we do not regard it as necessary and it is not clear what this must entail or what the timescales are for this. To enable FTWCRL with the support of the Department to plan with certainty how we optimally use capacity on the WCML to deliver service enhancements to customers, clear and timely decision making on this application will be key. We thank ORR for its ongoing engagement, and welcome any further questions.

Yours sincerely,



Head of Network Development & Planning
Avanti West Coast