



Proposed Track Access Contract Between

Network Rail Infrastructure Limited

&

First Trenitalia West Coast Rail Limited (FTWC)

Under Section 17 of the Railways Act 1993

Network Rail's Representations

20 May 2022

[Redacted]

FTWC response from NW & C Region

Introduction

The West Coast Mainline (WCML) runs between London Euston and the Scottish border, and is the busiest mixed-use railway in Europe supporting major British cities outside of London. It is central to the business of many UK and international passenger and freight operators.

The southern section of the WCML plays a crucial role in providing commuter rail services into London, whilst the North West section provides vital connections between major cities and towns such as Manchester, Liverpool, Preston and further beyond.

Over the coming years, HS2 works at Euston and in other places will be a major factor on the West Coast Main Line, with the proposed commencement of HS2 services from 2026. The contract proposed by First Trenitalia West Coast Ltd (The Applicant) will commence on the Principal Change Date Dec 2022 and expire on Principal Change Date 2031.

The contract (The Application) seeks to secure quantum rights (table 2.1, 2.2 and 4.1 of Schedule 5) as described in the draft TAC and which is based on Virgin's previous Passenger Track Access Model Contract (version published April 2019), with the addition of newly specified equipment, expressed (in the TAC) as:

- Class 80x - EMU
- Class 805 – D(iesel)

The Application has been made under Section 17 as Network Rail was not in a position to agree to all the rights sought. The Section 17 application was updated on the 26th February 2021 with a further update on changes to the table 2.1, 2.2 and 4.1 of Schedule 5 received on the 21st March 2022 to reflect the fact that FTWC is not proposing to use all rights until Principal Timetable Change Date in December 2023. This response is based on the rights tables supplied to us in March 2022 and Network Rail would propose that the ORR should only make an informed decision before December 2022 on the rights which directly affect the intended timetable for this time.

In early 2020, our analysis demonstrated that there was no available capacity on the West Coast Mainline (WCML) fast lines without impacting performance and reducing the resilience of our timetable. In May 2020, we declared the infrastructure on the WCML fast lines between Camden Junction and Ledburn Junction as Congested Infrastructure.

Following the declaration of Congested Infrastructure, NR set up an Industry Planning Group (IPG) to explore whether a timetable recast would have the potential to deliver further capacity and/or improved performance and also an Event Steering Group (ESG) to rewrite the December 2022 WCML timetable.

NR has worked with Avanti within the IPG and ESG frameworks to identify capacity for potential paths and evaluate their performance impact across the WCML. A December 2022 Risk Joint Virtual Meeting has been set up with Avanti to look at all associated risks.

NR completed a comprehensive range of analyses to evaluate this application and support our decision, including:

- WCML ESG Capacity Analysis
- Simulation Modelling for Dec 22 WCML ESG, Performance Subgroup of Dec 22 WCML ESG
- Simulation Modelling for Dec 22 WCML Timetable Re-write – Carlisle to Stirling
- Bushey PSU Neutral Section – Traction Power Modelling Report (Appendix A)
- Bushey Traction Report (Appendix B)
- Rolling Programme of Decarbonisation – Scotland, 2022 Memorandum (Appendix C)

The Application

Avanti submitted its initial Section 17 track access application to the ORR in November 2019 but did not confirm its revised access rights application with relevant Schedule 5 tables until 21st March 2022. During that timeframe, an IPG subsequently followed by an ESG was set up to look at the December 2022. There has been the added complication of COVID severely affecting passenger demand and altering the Avanti's contractual relationship with DfT.

Proposed Track Access Contract

Capacity

Network Rail is proposing a phased re-introduction of services following the COVID train service reflecting the power supply and constrained platform capacity at Euston. A Restriction of Use will apply to Platform 15 from December 2023 and it is expected that this will be reintroduced back into service in May 2024. Platform 16 will come out of use in May

2023 and be reintroduced in May 2025. Euston Station will therefore operate as a 15 platform station from December 2023 to May 2025 (for 6 months during this time as 14 platform). This introduction of service will be up to 12 trains per hour (tph) on the fast lines around Euston, rising to 13 tph if not electric, in specific hours, assumed to be peaks, where passenger demand is expected to require it.

One of the 13tph must be diesel only in the Acton Lane feeder area, until Bushey PSU is delivered. This is subject to receiving a funding decision in May 22, for expected completion spring 2024.

The phased re-introduction should deliver

- improved performance in accordance with the modelling, and
- headroom to account for days of severe disruption, which impact our overall performance metrics
- traction power system resilience at Acton Lane

The December 2022 timetable is designed to be scalable, so that whilst paths have been identified, some services could potentially be introduced at a later date if necessary. The selection of services to include and/or exclude from the timetable will follow the Network Code and the standard timetable production processes. Network Rail intend to review our position regularly and in particular with the return of platform 16 at London Euston, expected in May 2025.

Performance

Our network performance levels on the North West & Central region (NW&C) have been on a downward trend since 2014, reaching a low point in December 2019. We accept that our performance levels in December 2019 were inadequate. In fact, performance is still poor and a phased re-introduction of services will give the best chance of reversing the performance trend and allow operators to change passenger's perception of performance.

There is a predicted incremental improvement in network performance for December 2022 when compared to the December 2019 timetable, with our Concept Train Plan overall *On Time* (T-1) figures increasing by 5.3% at all stations, despite additional services operating and fewer available platforms at London Euston in December 2022 (Table 1). This is a significant achievement for the industry and reflects the strong focus on performance embedded in the timetable development process.

The NW&C regional *On Time* target for 2022/23 is 70%. The overall performance analysis for December 2022 suggests an *On Time* figure of 81.3% with all services operating. However, it is important to note the modelling only models performance on a 'good day' and does not include days of significant disruption, which impact our overall performance metrics. Further analysis shows that nearly half of the days in 20/21 cannot be deemed as "above average". There are also some specific challenges with the WCML South in the Up direction, for which the analysis suggests an *On Time* figure of 67.6%.

FTWC response from NW & C Region

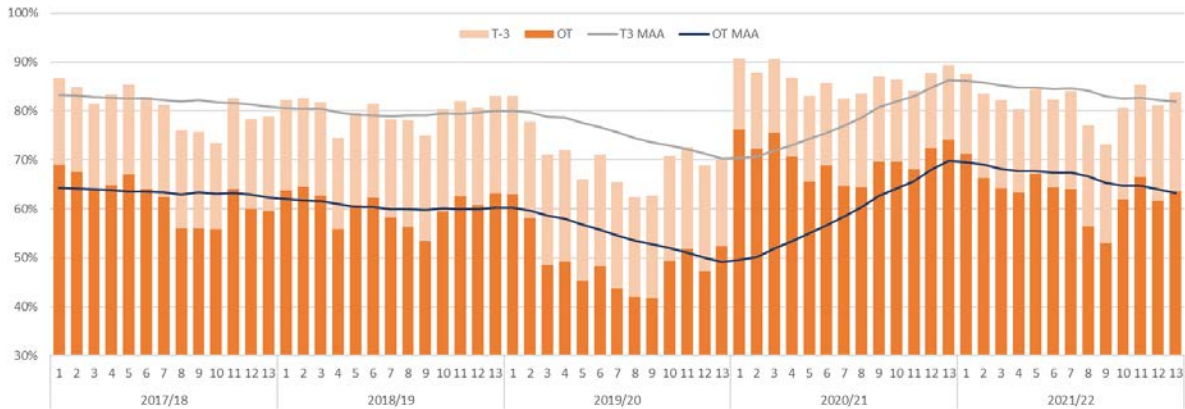
Metric	Operator	Dec-19		Dec-22 Difference to Dec 19			
		T-1	T-3	Full Timetable		Without Additional Identified Flows	
				T-1	T-3	T-1	T-3
All Stations	Overall	76.0%	91.1%	5.3%	1.2%	7.7%	2.4%
	Avanti West Coast	66.2%	84.7%	3.6%	0.5%	11.6%	5.6%
	West Midlands Trains	75.2%	92.3%	9.5%	2.1%	10.6%	2.7%
	Cross Country	66.2%	88.1%	10.3%	2.3%	13.7%	2.3%
Up Euston Arrival	Overall	67.2%	85.9%	0.4%	0.5%	8.9%	3.6%
	Avanti West Coast	66.8%	81.6%	-5.2%	-0.1%	6.3%	3.6%
	West Midlands Trains	68.9%	90.1%	6.0%	-1.7%	8.9%	0.3%
	Arriva Rail London	66.7%	88.6%	14.4%	4.1%	14.6%	4.1%

Table 1: Punctuality Impacts on Dec 22 Timetable Options

As a sensitivity test, the analysis was also conducted without the Grand Union services and the Avanti second train per hour to Liverpool. This led to a modelled *On Time* figure of 76.1% between Rugby and London Euston.

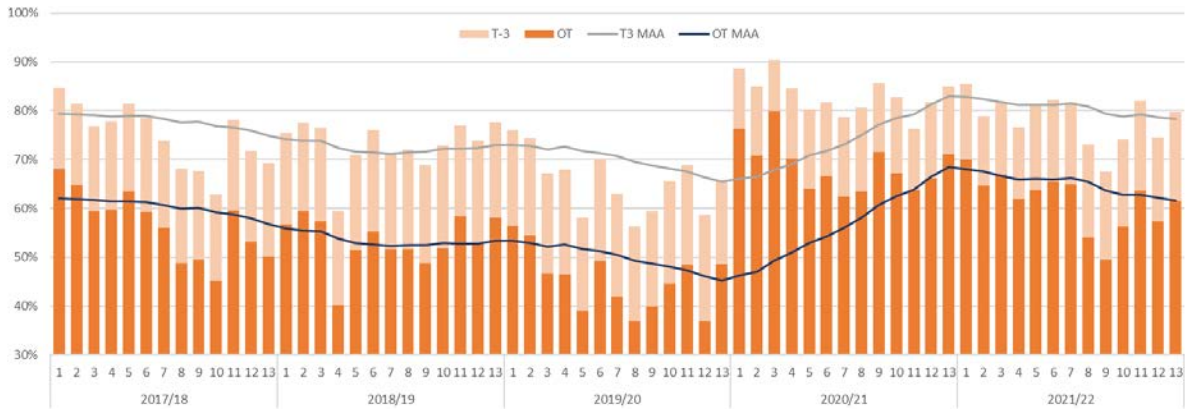
Below is a graph that shows performance across West Coast South including Avanti West Coast and West Midlands Trains:

Both operators on WCS

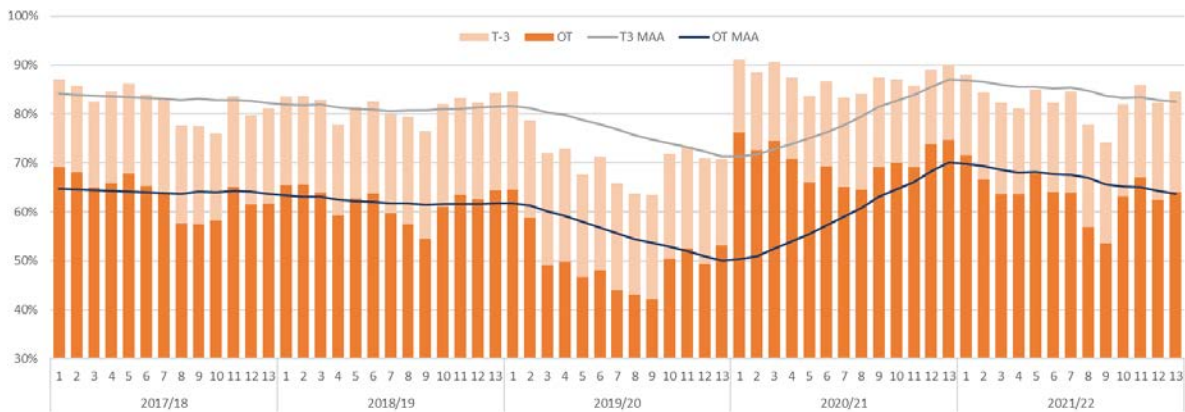


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Avanti West Coast on West Coast South –



West Midlands Trains on West Coast South –



The graphs show that the On Time and Time-3 for both operators on West Coast South were on the decline prior to Dec 2019 implementation, this was exacerbated by the timetable change in 2019 where both struggled significantly to deliver high levels of consistent performance.

Period 1 in 2020/21 was the first full period of the COVID-19 lockdown, where it can be noted that there was a significant improvement for both On Time and Time-3 for both operators. This was due to minimal passengers and reduction in quantum of train services. The reduction in quantum and the slow recovery in passenger numbers has seen the high performance being maintained since then albeit with some slight drop however not back to the poor performance of 2019/20. This is to be expected as passengers return and quantum of trains increase. The moving annual average has also seen a significant climb and is currently maintaining our position from 2017/18.

This phased re-introduction is being proposed for the December 2022 timetable change to ensure that there is an improvement in performance and giving greater resilience on poorer days. There is also a need to impose this limit due to power supply concerns.

Through our risk assurance process with Avanti, it is evident that they will not be in a position to run all the services they have applied for. Network Rail is working with them to understand what it can reliably deliver whilst matching services to expected passenger demand.

Data shared with IPG/ESG highlighted the correlation between the number of services and performance showing that additional services would impact performance. The base line was pre-Dec19 timetable change which, as above, shows the route can expect 70% Time-3.

The majority of services within West Coast South originate or terminate at London Euston. This makes Euston the key location during times of perturbation for managing service recovery through the cancellation of services. As a terminus location, platform capacity when managing perturbation is vital as services have to depart before new services can terminate. Not having the flexibility to move stock in either direction as at through stations reduces the ability to free up capacity, meaning that the station can become congested quickly. Limiting the number of services in the base timetable consequently increases the ability to recover the service offering to passengers more quickly as there is more capacity operationally to absorb perturbation.

Unfortunately, performance on the West Coast Mainline remains poor with many “bad” days. 45% of the days were a below average day based on performance for the West Coast for 2021/2022. This figure is obtained using a combination of Avanti (all service groups) and WMT (London-Northampton and Trent Valley service groups only), to look at performance for each day in 2021/22 On -Time metric.

It is vital that Network Rail balances performance with the expected rise in passenger demand. It is important that an emphasis remains on performance improvement to ensure we get the best economic use of the railway and give passengers the best value for money.

Due to these performance concerns, Network Rail maintains the need for a phased re-introduction of services for December 2022 for 12 fast line Euston departures per hour, rising to 13 in specific hours (additional diesel) to maintain existing connectivity. The analysis shows that this could deliver an overall *On Time* (T-1) performance of around 83% and 75% between Euston and Rugby. Factoring in that our modelling does not take into account significant disruptions the actual performance is likely to be far lower due to the large number of incidents/events which take place on a daily basis.

Once the new timetable structure is established and actual performance is recorded, Network Rail will review its position and consider whether the actual performance has been able to both consistently achieve, and better, the projected performance. We may then be able to consider whether an increase in the limit of fast line departures per hour is acceptable, subject to power limitations. Furthermore, from May 2025 we expect the reinstatement of platform 16 at Euston to enable further performance or capacity opportunities.

There is obviously a great emphasis on good performance which is aligned to DfT and Network Rail's business objective to maintain performance. The recent William/Schapps report has also focussed on performance.

With an introduction of a new timetable structure, it often takes a period of time for the actual performance levels to settle. Network Rail therefore wishes not to introduce the full pre-December 2019 quantum of services in order to build back better. A well performing railway is fundamental to recovery of demand which in turn benefits the economics of the railway. The best economic use of the railway is therefore a timetable that supports good performance in order to bring back passenger numbers.

The Specified Equipment

Since this application was originally submitted Network Rail has become aware of, and now better understands power capability across its Network. In addition, in recent months, Avanti has clarified its proposals for the rolling stock cascade and its timing. This has led to a number of concerns in relation to the required power draw.

Power Supply

Additional traction power demand is predicted to increase as a result of proposed December 2022 changes, which include the four new electric services proposed by Grand Union between London Euston and Stirling.

Traction power analysis undertaken by Navitas Engineering (Appendix A) for Acton Lane shows that increased demand will have a detrimental impact on the resilience of the existing traction supply system. Overload failures are experienced now at a rate of around 6 per annum, normally with a duration of less than 10 minutes. It is estimated that the full train service specification would increase this frequency up to 30 per annum, representing an unacceptable risk to service delivery. A summary of the concerns can be found under Appendix B – Bushey Traction Power results. This also highlights the number of overload failures which have occurred during reduced COVID timetables.

If funding is released for an enhancement, the Bushey Power Supply Upgrade would resolve the Acton Lane resilience problem. Subject to final funding approval in May 2022, the upgrade could be delivered no earlier than Spring 2024. In the interim, our approach to minimising the risk to service delivery in December 2022 has been to verify the inputs and power supply analysis, identify operational contingency measures and consider limitations to the quantum of service.

The operational contingency would be reactive to perturbation events. It will likely take the form of instructions to drivers in the affected section to limit their power draw. Discussions with operators and regional operations colleagues have started on how this would work in practice, and there are other examples of such measures on North West & Central. This mitigation is needed now, irrespective of the timetable restructuring, owing to the current experience of power overloads. Even with this proposed limit in place, it is still expected that there will be a need for mitigations during times of perturbation as there will be unplanned occasions to reduced potential overload. Network Rail recognises that there is a balance between passenger demand and risk, therefore there will need to be a trade off between the two.

The proposed limit is expected to reduce the frequency of such events to the level experienced pre and during COVID.

We are also experiencing issues in the area supplied from Gowkthrapple feeder station (in Scotland), which the new Currie feeder station will help alleviate. Once the Currie feeder station is commissioned – planned to take place in spring 2023 – we would need to consider the following conditions:

- That it is acknowledged that we are at marginal capacity limits in normal feeding arrangements south of Carstairs.
- That operational mitigations will be needed and agreed for the rare occasions when a planned or unplanned outage is required from SP Energy Networks or us and alternative feeding (N-1) arrangements are in place; these mitigations would involve spacing electric trains or applying 'notch 3' power draw restrictions on selected services or even service reductions (as required) to limit the risk of services affecting overhead line failure/trip incidents.
- That an agreed position is established between our Scotland and NW&C Electrification & Plant teams if the Harker feeder (which feeds both into NW&C and Scotland) is subject to any constraints/feeding limitation concerns. A discussion between the two Route Asset Management teams on this issue is ongoing to agree a joint position. Additional power supply modelling is being undertaken with regards to the Harker feeder, which may result in additional electric paths not being supported. We expect to receive the modelling conclusions towards the end of May 2022.

The Rolling Programme of Decarbonisation in Scotland (Appendix C) highlights the results and area of concern.

Conclusions on the impact of the Harker feeder issues are not yet clear. Results, which are expected soon, will be shared with the ORR and Avanti as soon as known. NR is working further with Avanti and doing further analysis to understand if some of the proposed Anglo – Scottish Voyager replacements can be supported with mitigations to limit power draw at selected Scottish feeder locations in certain scenarios, e.g. notching back (reduced acceleration/power draw) of services.

Specified Equipment (5.1(a))

Network Rail does not support Avanti's continuation to hold firm rights to operate the following railway vehicles as they are no longer applicable:-

- Class 57 locomotive hauling Class 390 (9 or 11 Car), but only where required by the Applicable Rules of the Route
- Class 57, 67 or 90 locomotive and up to 9 Mk III coaches plus DVT

Contract

Network Rail would only support this application to align with any proposed expiry of National Rail Contract or December 2030 (whichever is the sooner date)

Conclusion

Network Rail has resolved to stage the reintroduction of pre-covid services in the December 2022 timetable structure. This is to promote performance and help protect traction power system resilience.

The phased re-introduction of service will be 12 trains per hour on the fast lines around Euston. This may rise to 13tph in some hours (diesel traction only) in the Acton Lane feeder area, until Bushey PSU is delivered. Subject to funding decision in May 2022, this should be spring 2024.

The quantum limit on the fast lines is expected to deliver

- improved performance in accordance with the modelling, and
- headroom to account for “bad day” performance, and
- traction power system resilience at Acton Lane

The selection of services which Network Rail will support, will be decided by following Network Code and timetable production processes. Network Rail is currently working with Avanti to understand which trains that it would wish to re-introduce. Avanti has already indicated to Network Rail that they face challenges in delivering the full quantum originally requested.

Network Rail aims to have reached a conclusion by end of June on which services it can support. This position will be subject to regular review, in particular with the return of platform 16 at Euston, expected in May 25.

As stated in the William-Shapps Review, pre-pandemic performance was disappointing and its improvement is a priority for our customers; “We want to run our trains on time”. We remain committed and indeed obliged to maintain the recent levels of improved performance to support the recovery of the railway.

Given the current power supply constraints at Harker and feeder locations in Scotland and the predicted increase in power draw required by the December 2022 project, Network Rail needs to complete further analysis to decide if it can support Anglo - Scottish Voyager replacements from December 2022, and determine in collaboration with operators any required agreed operational mitigations either in the short or longer term.

Network Rail will continue to work with operators and keep both Operators and ORR aware of any further conclusions reached.

Network Rail would only support this application to align with any proposed expiry of National Rail Contract or December 2030 (whichever is the sooner date).

FTWC response from NW & C Region

Please do not hesitate to contact me if there is any further information you require.

Yours sincerely,

[Redacted]