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Dear Brian,

East Coast Main Line Capacity Report

Thank you for the opportunity to submit formal comments on Network Rail's East Coast Main Line capacity assessment report which was published on 26th September 2008.

As franchising authority for most services on the ECML and as the principal funder of the rail network, the Department for Transport has a clear interest in your forthcoming decisions regarding future access rights on the ECML. Those decisions will have a major impact on the ability of the route to handle growing volumes of passenger and freight traffic and on the level of public sector funding required, and it is vital that they are informed by a thorough and objective analysis of the capacity of the route and the options available for efficient use of that capacity. The DfT believes that Network Rail's report makes an important contribution to that analysis and points towards some preliminary conclusions, but the limitations of the approach adopted mean that it cannot provide the level of certainty necessary to support approval of future access rights. I set out below our more detailed comments on the report and describe the further work that appears to be necessary before firm decisions can be taken.

Network Rail's Approach

DfT notes that Network Rail has concentrated on the period between December 2009 and approximately 2012 when various infrastructure enhancements will start to be delivered. We agree that this is the right approach as the most urgent capacity allocation decisions relate to that period. In the longer term the DfT expects that comprehensive revision of ECML services will be necessary to realise the benefits of major investment in IEP trains, the Thameslink programme and other infrastructure enhancements.

Network Rail has sought to assess the capacity of the route in December 2009 by development of a repeating pattern timetable including 6 passenger and 1 freight paths per hour using the current infrastructure. We are pleased that consultation with train operators and DfT took place at several points during the development of that timetable and there was an opportunity to comment on an early draft of the timetabling section of the report which appears to have had a significant influence on the final report.

Given the limited time available, DfT believes that the timetable that has been produced is a reasonable illustration of the kind of service that might be possible, though we would expect further improvements to emerge in the course of detailed development. However, whilst a single timetabling solution can positively demonstrate the feasibility of various aspects of a service specification, it does not conclusively show what cannot be achieved. Network Rail recognises this important point in paragraph 4.11 and acknowledges that a different timetabling solution might result in different findings. Therefore we believe that it would be wrong to use the report to rule out capacity allocation options simply because they are not delivered by Network Rail's timetable.

It is unfortunate that Network Rail's assessment of the performance implications of their timetable was not shared with industry parties before publication. Given that Network Rail's view of the performance impact of a '6+1' timetable gave rise to an objection to the recent ECML RUS, the DfT is surprised that Network Rail did not attempt to obtain a consensus on this aspect of the report, particularly as some of the evidence presented appears to be open to different interpretations.

The Capacity Assessment

I confirm that the repeating pattern timetable developed by Network Rail is generally consistent with the DfT's aspirations for service frequency and calling patterns. The timetabling work appears to have been carried out to a high standard and the DfT believes that it demonstrates beyond reasonable doubt that an acceptable '6+1' off-peak timetable can be written. We expect that a production version of the timetable would deliver improved journey times for the major long-distance passenger flows by using a greater amount of off-route re-planning to reduce pathing time and would address other unsatisfactory features such as the reduced number of calls at Durham.

Network Rail demonstrates that it is possible to serve most of the origins and destinations proposed by the various applicants and where satisfactory paths have not been found in this version of the timetable (e.g. to/from Bradford Forster Square) the DfT notes that paths were found in previous versions of the timetable. Therefore we suggest that ORR ought not to rule out any of the proposed origins / destinations on timetabling grounds at this stage. We are concerned by the extent of the pathing difficulties highlighted in Scotland. We believe that further journey time reductions south of Edinburgh might be achievable in a production timetable and that this might go some way towards resolving the problems, but there does appear to be a significant risk that adopting a regular pattern timetable will lead to sub-optimal paths for ECML trains to/from Glasgow, Aberdeen and Inverness unless a recast of services within Scotland takes place.

The DfT is pleased to note that Network Rail's timetable provides good quality freight paths which avoid looping of class 4 services and require looping of class 6 services for a single 15 minute stop in each direction. Although trailing loads are limited to 1200t for class 4 and 1600t for class 6, alternative paths are available for a class 6 of up to 2400t via Gainsborough. The fact that a class 6 path is only available in alternate hours will restrict flexibility for freight operators on the route; however Appendix G confirms that all existing flows can be accommodated (though 4E25 11.25 MWFO Bow-Heck and 4D56 1341 TTHo Biggleswade-Heck appear to have been omitted) and that there is scope for some traffic growth by using up to 6 northbound and 10 southbound vacant paths. This is consistent with our view that some traffic growth is likely in the short term and can be accommodated. Longer term growth, particularly in intermodal traffic, will require capacity enhancements to the 'GN/GE Joint Line' via Lincoln, the upgrading of which is included within your draft determination of Network Rail's funding for CP4.

The Performance Assessment

The DfT is concerned to ensure that service changes do not result in a significant deterioration in performance and that progress continues to be made towards our HLOS PPM targets of 92% for long-distance and regional services and 93% for London & south east services by the end of CP4. We note Network Rail's concerns, but we believe their analysis is unduly pessimistic, over-stating negative factors and ignoring important mitigations. Network Rail acknowledges that a '6+1' timetable can be written to comply with the current Rules of the Plan, but contends that poor performance is likely to arise from increased frequency, reduced departure intervals from Kings Cross, congestion between Peterborough and Doncaster, and congestion south of Peterborough. This will be partially offset by the change in the mix of services.

Network Rail's analysis of the relationship between service frequency and punctuality is shown in the barcharts in section III of Appendix B. Southbound there appears to be no impact. Northbound the chart shows a small reduction in performance between 5 tph and 6 tph, though as only 5% of services fall into the 6tph band, this result is not statistically significant.

The impact of the 3 minute interval between the 1127 and 1130 departures from Kings Cross is shown in section IV of Appendix B. Although the 1130 appears to lose some time en route when the 1127 is running, this is almost all recovered by arrival at York. It is notable that the 1127 service is operated by Grand Central and the overall punctuality of Grand Central services is very poor. The table in section VII of Appendix B shows Grand Central PPM of 68% whereas the 1130 is part of the HB01 service group with PPM of 83%. It seems likely that the impact of the 3 minute interval would be much less if the 1127 train operated at the normal level of punctuality for the route.

Network Rail's analysis of performance on the Peterborough - Doncaster section highlights the disproportionate impact of freight trains (13% of reactionary delay caused by 8% of trains). Therefore we believe it is important to understand separately the performance implications of changes in the frequency of passenger services and of freight services. There appears to be a discrepancy between Network Rail's diagram in section V of Appendix B which suggests a current delay per passenger train of around 40 seconds and the table in section VIII which quotes a figure of 36 seconds. Therefore the results in section VIII appear to be overstated. Reworking Network Rail's figures in accordance with the section V diagram and including scenarios for separate increases in passenger and freight services gives the following results:

Scenario	Passenger	Freight	Delay per Train (s)	Impact on Reactionary Delay
Current	4.58	0.35	40	
Increase in passenger services only	6	0.35	50	25%
Scenario 2 (1 freight every 2 hours)	6	0.5	54	35%
Increase in freight services only	4.58	1	58	45%
Scenario 1 (1 freight every hour)	6	1	73	83%

This confirms that the impact of additional passenger trains is lower than suggested in the report and that changes in numbers of freight trains have a proportionately larger impact on overall performance between Peterborough and Doncaster.

The evidence presented for the performance impact of high frequency south of Peterborough is not convincing. The only apparent correlation to service frequency is in respect of the down 1115 and 1145 departures from Kings Cross. The preceding services at 1100 / 1110 and 1130/1135 are the standard slots that are used in each hour and it is difficult to see how the presence of the extra departures at 1127 (GC) and 1148 (HT) could have much effect on the 1115 and 1145 services which are running ahead of them.

We note that Network Rail has identified that a change in the mix of services to include a greater proportion of shorter distance services is likely to have a positive impact on performance. However, journey length is not the only relevant factor in the mix of services and we suggest that the poor performance of the small number of Grand Central services could be having a disproportionate effect on overall performance levels.

It appears to the DfT that we might expect a significant positive impact on performance from adopting a repeating pattern service. We recognise that it may be difficult to quantify this using Railsys, but it is the accepted view of railways throughout Western Europe and we believe that it must be factored into future performance projections.

Taking account of all the above issues, it is the DfT's opinion that introduction of a repeating 6tph passenger timetable is consistent with improved performance and that a small level of increase in freight services might also be accommodated within current performance levels. The overall level of future performance improvement is of course mainly dependent on actions to reduce the primary causes of delay.

Conclusions and Suggested Way Forward

The DfT believes that Network Rail's report demonstrates conclusively that it is possible to produce a satisfactory repeating pattern '6+1' timetable that can include services to/from most of the proposed origins/destinations and that such a timetable is not inconsistent with an acceptable level of future performance. However, there are many ways in which the detailed content of the timetable might be constructed and the report does not (and could not) identify an optimum timetabling solution. Also the impact on services on other routes cannot be identified with any certainty at this stage. Therefore the extent to which a '6+1' timetable would be in conflict with train operators' current access rights and resourcing levels is unknown.

DfT is concerned that, although the analysis suggests that there is sufficient capacity for today's level of freight traffic with some headroom for growth, it does not meet the future aspirations of the freight operators and therefore long term growth is dependant on the timely delivery of the infrastructure enhancements proposed for CP4.

It appears to the DfT that many of the uncertainties could be resolved by ORR reaching a preliminary decision on its preferred option for allocation of capacity based on economic analysis and other high-level considerations such as the impact on future major investment on the ECML. The practical implications of this single option could be examined by Network Rail in sufficient detail to identify any conflicts with existing access rights and any limitations on the characteristics of the proposed new rights. We believe that this would be possible in relatively short period of time without production of a full timetabling solution and that it would enable ORR to make its final decisions with a sound understanding of the practical considerations.

Although the DfT believes that such a 2-stage process is necessary, we are concerned that any delay could impact on the practicability of introducing a revised ECML service in December 2009. Therefore we suggest that detailed development of a production-quality timetable needs to commence as soon as ORR has identified its preferred capacity allocation option. This work could run in parallel with the examination of the impact on access rights referred to above.

As always, the DfT would be happy to work with ORR to oversee the further work required to inform your decisions.

Yours sincerely,

Geoff Appleby