DB SCHENKER

By Appointment to Her Majesty The Queen Royal Train Operator English Welsh & Scottish Railway Ltd Doncaster

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Dear Valentina,

4 September 2013

**PERIODIC REVIEW 2013: DRAFT DETERMINATION OF NETWORK RAIL'S OUTPUTS AND FUNDING FOR 2014-19**

This letter contains the response by DB Schenker Rail (UK) Limited ("DB Schenker") to the document entitled "Periodic Review 2013: Draft Determination of Network Rail's outputs and funding for 2014-19" ("Draft Determination") issued by Office of Rail Regulation ("ORR") in June 2013.

## Introduction and General Comments

DB Schenker is pleased to respond to the Draft Determination. This response may be placed on ORR's website in full.

DB Schenker supports the Draft Determination as providing a broadly balanced and achievable outcome for the next Control Period. DB Schenker acknowledges that Network Rail regards at least part of the Draft Determination as a significant challenge but, given Network Rail's recent achievements, DB Schenker is confident that, provided Network Rail seeks proper industry support and co-operation, ORR's requirements can be achieved.

Stability is important for all parts of the rail industry but none more so than freight. ORR has ultimately proposed a financial framework that ought not discourage continued rail freight growth, and in so doing should enable rail freight to continue to contribute to increased transport sustainability and improve the competitiveness of UK industry. It would not be helpful if this stability was undermined by further uncertainty about the industry's financial framework and DB Schenker urges all industry parties to accept the determination.

If the determination was rejected, DB Schenker would not expect additional funding to be available. Instead it would envisage a reduction in outputs, an outcome which would satisfy nobody.

Overall the level of charges faced by freight operators in CP5 represent a level of cost which, whilst significantly higher than in CP4, should enable DB Schenker and other freight operators to help sustain and grow the rail freight business.

DB Schenker has made extensive input to the ORR's Periodic Review process and its contributions are mostly available on the ORR's website or are contained in minutes of the various industry Working Groups that have been set up. It does not, therefore, intend to repeat its earlier submissions. Instead, this response will focus on the ORR's conclusions based on the work that it has had undertaken and the information it has drawn from various submissions, including those by DB Schenker.

PR13 Process

The PR13 programme has been very extensive despite a compressed timeframe following the McNulty Rail Value for Money Study, and DB Schenker hopes that ORR will review the programme to look at what has worked well and what was been problematic. DB Schenker would urge this to be concluded ahead of the proposed long term review of charges.

DB Schenker would be happy to participate in such a review of lessons and would urge consideration of:

a. The scale of consultations and other activities, apparent duplication of issues and the late notice of some key elements (e.g. the Serco work on track damage).

b. Whether the ORR's expectation that train and freight operators should have to undertake the primary response to the level and scale of Network Rail's submissions was reasonable.

c. The need for early holistic analysis of the cumulative effect on operators of the myriad of charging and other issues under review, in time for this to be clear as part of the debate on individual elements.

d. How ORR could have done more to maintain confidence and reputation in the wider industry including with end customers and investors.

e. Network Rail's ability to provide adequate data and information on costs and their relationship to physicals / assets to support the charging proposals under debate.

**Specific Comments by Chapter**

*Chapter 3 - Outputs*

Performance

DB Schenker supports the use of the new Freight Delivery Metric as the regulated output for freight performance. However it is not clear to DB Schenker why ORR has concluded that a level of 92.5% is appropriate, given that current Network Rail freight performance (measured in delay minutes) translates to a level higher than 92.5%.

Whether concluded deliberately or inadvertently, ORR is signalling that a lower level of Network Rail freight performance than today is acceptable across CP5. DB Schenker accepts the need for ORR to retain some flexibility before taking regulatory enforcement action but it would suggest that FDM should be set at 95% whilst noting that for CP5, regulatory enforcement action would be unlikely if FDM was between 92.5% and 95%. This would have the benefit of the headline freight number being 95% which would have presentational advantages to customers, and especially potential customers.

It is not clear to DB Schenker what ORR means by "*we will also define other indicators to measure FOC caused delay*". DB Schenker has had no discussion on such matters and it is a matter of concern that any such ideas or proposals are not set out in the Draft Determination. It is not clear to DB Schenker what, if any, status ORR would propose such indicators to have – but if they are intended to be anything other than very informal, they should be set out and consulted upon in the Draft Determination.

Network Availability

DB Schenker supports the proposed PDI-F output of 0.593.

Capability

Critical to the soundness of the baseline as out in the Draft Determination will be the confidence that there are few, if any, discrepancies between funded, advertised and actual network capability. Recent work on Network Optimisation as part of the RDG Asset Management work stream suggests that this long-running problem remains. In the event of dispute and in the absence of Network Change having been undertaken, then it may be necessary to refer back to earlier baselines.

Journey Time

It is important that as this work develops, both ORR and Network Rail recognise that journey time is as critical for some freight customers as it is for some passengers. The velocity of freight trains on average is less than 25mph, which compares poorly with comparable road freight movements.

Asset Condition and performance indicators.

DB Schenker supports ORR's commitment to improve Network Rail's capability for, and delivery of, asset management performance. Clearly data quality is vital. Whilst DB Schenker has some sympathy for Network Rail's concerns that the range and scale of proposed indicators risks significant regulatory creep, the issues are so important to GB Rail that they have to be vigorously addressed.

System Operator Capability

For a national operator such as DB Schenker, good system operation is critical. This criticality is magnified given the continued development of devolution. ORR's four principles are a starting point, but DB Schenker is increasingly rather concerned at the potential impact of devolution.

For freight, the establishment of the central Network Rail freight team was the major response to this concern. So far the team has worked hard to establish itself within Network Rail, but the increase in pace of devolution that is anticipated over the next couple of years will test the effectiveness of these arrangements.

A dashboard of indicators will be all very well, but will be of no practical use if by the time the dashboard is produced the issue highlighted has been overtaken by events – especially if customers have decided to use road rather than rail transport.

In addition, the dashboard has to be capable of illustrating qualitative issues – e.g. over the quality of paths offered. A path on paper is of no commercial use if it does not allow a customer's business to be served – but might appear to demonstrate that the system has worked.

Customer Service Maturity

DB Schenker considers that some care is needed with respect to freight customer service measurement. There is a risk that three or four elements of the rail freight supply chain will seek to survey the same customers on much the same issues – and nothing would be guaranteed to irritate many customers more than such repetition.

Cross-border service indicator

DB Schenker was supportive of the need for one cross-border route to be open at all times; it is a good litmus test of the system operator function and DB Schenker welcomes the focus that such an indicator will bring.

*Chapter 9 – Enhancements Expenditure*

Enhancements

DB Schenker is supportive of the overall approach to enhancements which is pragmatic and recognises that enhancement activity does not fit into neat five-year "chunks". Leaving time to develop some of the scopes and budgets is sensible and should offer Network Rail the opportunity to work more closely with operators as part of this process. However, it is not clear to DB Schenker how Network Rail will involve national operators in developing enhancements that are considered and defined at a route level, or how national operators can be properly involved in the sort of commercial arrangements regarding enhancements that ORR suggests in paragraph 9.50. DB Schenker is of course ready and willing to discuss the potential of this with Network Rail, notwithstanding some concerns as to the risk of administrative burden.

The work of the RDG Asset Management Group has clearly articulated that early and positive involvement of all affected TOCs and FOCs is important in ensuring proper project definition both in terms of industry value for money and customer benefits. DB Schenker suggests that Network Rail should clearly articulate in the Delivery Plan how they will achieve this.

DB Schenker also supports setting enhancement milestones and using a change control process.

DB Schenker believes that clear definition of the detail of outputs is critical for all enhancements, including those covered by funds, unless the outcome of the enhancement is itself the output (for example gauge clearance). This is very important for measuring capacity improvements, and for ensuring that the intended customer benefits actually result from the investment, and should be clearly articulated in the Enhancement Delivery Plans.

DB Schenker supports the continuation of the Strategic Freight Network fund and the new Scottish Strategic Railfreight Investment fund and is heavily involved with the governance of both. The CP4 SFN experience has been useful in demonstrating the value of support from a wide stakeholder community, but there have also been important process lessons that must be used as part of CP5 fund governance. It is critical to avoid "back-end" loading of schemes, and for Network Rail to robustly manage project development, design and management resources for smaller enhancements that do not necessarily fit into neat route or IP organisational jurisdictions.

DB Schenker supports detailed governance arrangements for each fund being clearly articulated and transparent.

Electrification

For rail freight, it is both the detail of the individual electrification proposal and the connectivity across the network that determines whether greater electric haulage of freight

trains is possible. Unless all loops, sidings and crossovers on a route are electrified, then the scope for freight to take advantage is significantly reduced.

This is even more critical if Network Rail is under regulatory or political pressure to deliver electrification more quickly than proposed in the Strategic Business Plan. It would potentially be very serious for rail freight if one means of achieving such acceleration was scope/output amendment that impacted on future freight electrified network capability.

ERTMS

ERTMS is far more fundamental than retrofitting rolling stock. It is one of the cornerstones of Network Rail's Operating Strategy which in turn drives their plans for operating cost reduction. In part it does this by a transfer of activity and risk to train operators – these elements are not recognised in the Draft Determination. It is important for operator and investor confidence that ORR recognises – and is seen to recognise – the fundamental nature of this future change.

For freight and other national operators, maintaining sufficient operational flexibility is vital. Given freight operators' key role in supporting Network Rail's engineering programmes, fleet deployment flexibility on a scale simply inconceivable in the rest of the railway is "business as normal". It is for this reason that freight operator fleets need early and comprehensive retro-fitment.

*Chapter 10 – Deliverability of Engineering Work*

DB Schenker concurs with ORR that there remain very significant challenges still to be overcome. It is not clear to DB Schenker whether or how Network Rail regards the emerging plans for enhancement, renewal and maintenance delivery to be compatible with a 24/7 railway which is what customers want and need.

Route and regional concentrations of work present very considerable challenges for freight operators. At the same time that there are increased demands on resources to operate services for customers via diversionary routes or to amended timetables, there are frequently surges of demand of resource for engineering trains. This is not helped by frequent and sometimes fundamental late changes to the engineering train plan.

For national operators, it is critical that there is some national overview by the system operator to ensure that there are not simultaneous major disruptions to network availability across the system, especially on parallel/diversionary routes.

The current fashion for blockages amplifies this effect as it very significantly concentrates the demand for engineering train resource (whether drivers, locos, specialist wagons or other plant).

ORR's statement that "*we have concluded that the CP5 work volumes are deliverable, but this relies on a robust approach to risk management*" is not compelling.

*Chapter 12 – Financial Framework*

RAB

The proposals for the RAB roll forward policy simply underline the criticality of effective, transparent and agreed statement of anticipated outputs as part of the Enhancement Delivery Plans.

Network Grant

DB Schenker fundamentally disagrees with the ORR's theoretical inclination to route all public money via train and freight operators. Notwithstanding the adverse effect due to government reporting rules, such a move would have nothing but detrimental impact on a freight operator such as DB Schenker.

Even more seriously, it would place rail freight at a serious structural disadvantage vis-à-vis road. Until Government introduces a parallel proposal to shift the burden of highways funding onto road hauliers, and then introduce a subsidy regime to offset the effect, DB Schenker cannot see why ORR conceives there is any advantage in placing rail freight in such a position. In addition, we cannot reconcile such an approach with many of ORR's key statutory duties.

DB Schenker would urge ORR to reflect that the development of track access charges under the Access and Management Regulations, whereby rail freight access charges were based on the direct costs of the movement, has been an important factor in rail freight's success in winning traffic from road.

DB Schenker is not in any position to challenge Network Rail on its costs and efficiency any more than it does today without a very substantial increase in manpower and expertise. Routing any freight portion of the Network Grant via freight operators will not change this.

Ultimately this is not something that our competitors have to do. For ORR to introduce this would be a substantial increase in regulatory burden.

*Chapter 16 - Access Charges*

Overview

Prior to the issue of the Draft Determination, there were many policy changes being contemplated by ORR across PR13 as a whole that would have had a significant and adverse effect on the financial risk faced by freight operators. These included the introduction of a freight specific charge (in addition to the retention of the freight-only line and coal spillage charges), potential damaging effects from increases in capacity charge rates, a revised methodology for calculating usage charges resulting in a greater proportion of the costs being borne by freight operators and a tilt in the balance of financial risk inherent in the Schedule 8 performance regime towards freight operators.

Whilst these risks still remain, DB Schenker welcomes the fact that ORR has taken account of the considerable concerns raised by the rail freight industry and is proposing a number of measures that will help mitigate the financial effects of those proposals on freight operators and their customers. In particular,

- imposing a cap on the increase in the average VUC for freight that is significantly below that originally set by ORR in January 2013;
- setting the freight specific charge at a lower level than the cap originally established with a longer 'phasing in period';
- not imposing a freight specific charge on the biomass sector; and
- not implementing the recalibrated capacity charges,

will significantly lessen the adverse financial impacts from the track access charging structure on freight operators in CP5. However, DB Schenker notes that despite these helpful mitigation measures, it is still expected that freight track access charges will rise at around 4% per annum in real terms throughout CP5, all other things being equal.

DB Schenker welcomes ORR's efficiency overlays to be applied to the various charges over CP5. Whilst these are more challenging than those proposed by Network Rail itself, DB Schenker is confident that Network Rail will rise to the challenge and meet those efficiency targets, if not exceed them.

Variable Usage Charges

DB Schenker also welcomes ORR's decision not to implement variable usage charges disaggregated by geography which would have significantly added to the complexity that national operators, such as freight, already face from the track access charging regime.

Whilst DB Schenker is pleased that ORR has limited the effects of the new methodology for allocating variable usage costs (i.e. the Serco work) by phasing the increases in over a longer time frame and limiting the overall impact of the increases by setting a cap, DB Schenker remains to be convinced that the Serco work is entirely robust and will wish to discuss its concerns in this respect as part of the deliberations by the industry on the structure of charges to inform the next Periodic Review for CP6.

DB Schenker remains concerned that the default rates for freight vehicles are to be set at the highest relevant vehicle rate in the appropriate band on the CP5 price list rather than being set at an appropriate average rate as they are currently. This is because DB Schenker believes that Network Rail should bear an equal (if not greater) responsibility to ensure that relevant vehicle information is provided to enable the correct variable usage charge rate to be calculated as it is in an ideal position to require and obtain such information as part of the vehicle registration, acceptance and approval processes. In

respect of privately owned freight wagons in particular, a freight operator will not have easy access to all of the information required to calculate the variable usage charge rate and, unlike Network Rail, may not have any of the information until the wagon is introduced for operation. DB Schenker has agreed to discuss this issue further with Network Rail over the coming months through the auspices of the industry VTAC Developments Working Group with a view to putting in a process whereby the relevant vehicle information is collected at an early stage (i.e. at registration).

Capacity Charge

Network Rail asked Arup to re-calibrate the capacity charge rates for CP5 and its final report was published on 24 May 2013. As a result of this re-calibration, Network Rail has concluded that the capacity charge rates for freight should increase by some 400% (from approximately £4 million per annum to £21 million per annum). This large increase, if applied using the current method of levying the capacity charge (i.e. to all trains) would result in an unaffordable increased cost to freight operators. DB Schenker is, therefore, relieved that ORR has chosen not to apply the recalibrated capacity charge rates to the existing method of levying the capacity charge as the rail freight sector can ill afford such increases.

Instead, ORR proposes to either continue with the CP4 capacity charge rates or adopt (with or without modification) the alternative RFOA proposal as the means of levying the capacity charge for freight during CP5. DB Schenker's representations on the capacity charge, and in particular its preferred option, can be found below in the section headed "Specific consultation question".

*Chapter 19 – Financial Incentives*

DB Schenker is supportive of ORR's attempts to ensure that the CP5 industry framework contains appropriate incentives, but is not convinced that ORR's proposals fully take into account the different circumstances of national operators. DB Schenker understands why ORR has placed such emphasis on route based mechanisms, but is not convinced that ORR has adequately considered the needs of national and cross-route operators.

At a time when the railway is increasingly congested, it is important that secondary users have confidence that their services will be effectively accommodated and that they will not be treated adversely compared to the primary operator on each route. Network Rail's system operator role is key here, but so is the framework within which the system operates. It is important that ORR demonstrates, visibly, its commitment and support for secondary operators and the customers they serve.

Part of this is understanding and acknowledging the environment within which different sectors and operators are active; as an operator over all Network Rail routes, DB Schenker has serious concerns about how it will be able to take an informed view of the proposed REBS schemes, not least as it will have to take an informed view of each route's baseline and how any alliancing might, or might not, impact on the potential for efficiency.

By including exposure to Network Rail downside, the basis of the proposed scheme for CP5 has significantly changed, requiring a view to be taken of the potential of Network Rail underachieving against the baseline. DB Schenker does not readily possess the resource to analyse Network Rail's business in this way and thus needs to procure this, at considerable cost. DB Schenker also believes that ORR has significantly over-estimated the ability of any operator to influence or manage (or even understand) many elements of Network Rail's cost base. Risk should be allocated to the party best able to manage it.

Whilst DB Schenker understands the theory behind ORR's approach, the fact remains that our competitors in road haulage face no such task/burden. This is a good example of where insufficient cognizance appears to have been taken of the circumstances within which rail freight operates.

As a member of the RDG Freight Group, DB Schenker will explore whether a more practical freight equivalent to REBS is possible.

*Chapter 20 – Possessions and Performance regimes*

Overview

DB Schenker considers that the Schedule 4 possessions regime and the Schedule 8 performance regime are of great importance to freight operators as they provide key incentives for continuing improvements in performance and the efficient planning of possessions, as well as providing a level of compensation for both planned and unplanned disruption.

As acknowledged in the Draft Determination, the regimes as applied to freight operators were comprehensively updated in PR08 with the aim of providing simple and standardised arrangements so as to avoid any competitive disadvantage for one freight operator over another that could have occurred under the previous individual bespoke regimes. DB Schenker considers that this was a major step forward in improving the contractual arrangements for all freight operators (whether large or small).

The primary role of the regimes is to compensate operators for the financial impact of planned and unplanned service disruption attributable to Network Rail or other train operators. However, the regimes also provide important incentives for each party. The freight Schedule 8 performance regime, in particular, provides incentives to Network Rail to ensure that the delays it causes to each freight operator are improved over expected levels. Similarly, the regime also provides incentives for freight operators to reduce delays over expected levels that their poor performance may cause to other operators on the network.

In addition, the freight Schedule 4 possessions regime also provides a key incentive to freight operators. If a freight operator knows that it will receive compensation for the effects of disruptive possessions, it is more likely to co-operate with Network Rail's proposals to plan such possessions rather than challenging them through the industry

dispute resolution processes set out in Part D of the Network Code. DB Schenker considers that the value to Network Rail of being able to take more efficient possessions due to the existence of an effective freight Schedule 4 possessions regime must far outweigh the liquidated compensation sums paid to freight operators.

With these incentives in mind, DB Schenker is supportive of ORR's proposal to leave the current structure of the regimes intact. However, it is very concerned that a combination of the changes ORR is intending to make to the metrics of the regimes (e.g. the various benchmarks and payment rates under Schedule 8) will have a damaging effect on the financial position of freight operators when compared to the current position in CP4. In particular, ORR has estimated that Network Rail will reduce its out payments under the freight performance regime by £10.3m, which will have a significant impact on freight operators' costs. In addition, without cognisance of the overall effect all of the individual changes taken together may have on each regime as a whole, the key incentives mentioned above may be reduced considerably.

For example, rebasing the Schedule 8 performance regime benchmarks to reflect performance during certain years over the previous Control Period will penalise those parties that have improved their performance with lower benchmarks whilst at the same time rewarding those parties that have worsened their performance with higher benchmarks. Such action can only undermine the incentive to strive for continued improved performance by reducing the likelihood of long term investment in relevant equipment and processes.

Schedule 4

DB Schenker is pleased that ORR has taken account of previous representations made by freight operators, including DB Schenker, that reducing the liquidated compensation sums in the Schedule 4 possessions regime will increase the tension between Network Rail and freight operators during the possessions planning process as freight operators are more likely to oppose and challenge possessions that cause material disruptive effects given that they will receive insufficient compensation. ORR's decision to increase the amount of funding required by Network Rail to cover the expected increase in the level of disruption faced by freight operators from possessions in CP5 instead of keeping the funding level the same and reducing the liquidated sums is, therefore, welcomed.

However, that said, DB Schenker considers that the current liquidated compensation sums for freight operators are still too low and do not fully compensate freight operators for the costs and losses caused by possessions or the wider societal impact of traffic returning to road, particularly in light of the increasing size and value of freight trains. The current sums, and their continuation in real terms for CP5, should be taken in the context that these sums had already been reduced from their original level as implemented at the start of CP4 as a negotiated settlement for the removal of the Network Change provisions for possession disruption. This downwards adjustment followed a high number of possessions occurring early in CP4 that triggered a review mechanism resulting in a 30% reduction in the sums. Therefore, the current sums should be considered "artificially" low and should, therefore, be reconsidered.

Even if the level of funding did require to be increased further to support a rise in the compensation sums, DB Schenker believes that this would be more than sufficiently funded through the cost reductions that could be achieved by Network Rail taking possessions more efficiently as a result of increased co-operation from freight operators. If freight operators have sufficient comfort that in return for accepting an increased level of disruption, they are likely to receive compensation that is more closely aligned to their resulting costs and losses incurred, they are much more likely to collaborate with Network Rail's possession plans rather than being forced to continuingly challenge them.

Schedule 8

During CP4, Network Rail has generally failed to meet their performance regime benchmarks whilst freight operators have generally outperformed theirs. It is disappointing, therefore, that ORR has seemingly rewarded Network Rail by increasing its benchmark whilst penalising freight operators by making theirs more onerous. Recalibrating the benchmarks in this way every 5 years will do nothing to encourage investment to improve performance and could lead to future perverse behaviours. DB Schenker, therefore, disagrees with ORR's view that "*updating the freight operator benchmark every five years at periodic review achieves the right balance between maintaining the financial neutrality of the delay minute element of the freight Schedule 8 and incentivising investment to improve performance*" and instead urges ORR to consider the performance regime over the longer term.

As already indicated above, it does not appear that the effects of the changes to the various metrics of the performance regime (i.e. the benchmarks and payment rates) have been considered holistically so that the financial impact on freight operators can be considered as a whole. The proposed step changes in the freight operator benchmark and the freight operator payment rate coupled with a higher Network Rail benchmark and static Network Rail payment rate will result in increasing significantly the risks faced by freight operators, a view reinforced by ORR's calculation that the changes will likely result in Network Rail reducing its out payments to freight operators by around £10.3m.

DB Schenker would, therefore, wish ORR to consider 'phasing in' the reduction in the freight operator benchmark over CP5. This would be consistent with ORR's proposals to introduce changes on access charges where the impact of introducing the proposals immediately has been deemed too great for freight operators to bear.

In addition to proposing to increase Network Rail's benchmark, DB Schenker is disappointed that Network Rail has been further rewarded by the removal of the current strong incentive to make continuing performance improvement throughout the Control Period by means of a 'year on year' reducing benchmark. DB Schenker considers that an improving performance trajectory applied to Network Rail's benchmark should be retained in CP5.

Through the auspices of the Freight Schedule 8 Working Group and in response to relevant consultations, freight operators have drawn ORR's attention to the increase in the value of freight trains over time that has been achieved through productivity improvements. Freight operators have argued that this should be factored into the Network Rail payment rate for CP5. Thus far, this has been demonstrated through statistics showing increases in gross tonne miles per train. However, to give further credence and support to freight operator submissions in this respect, LEK has now been commissioned to consider how this increase in value might be best evidenced to support an increase in the Network Rail payment rate. LEK undertook two pieces of work:

- To consider the constituent elements of the current Network Rail payment rate and how those are affected by an increase in train value, as expressed by the increase in net train weight (tonnes per train); and

- To source independent expert opinion on the extent (%) to which freight user costs are passed back to, and therefore borne, by freight operators.

From the start point of the Network Rail payment rate at the commencement of CP4 (i.e. £17.47), the key findings are:

- Over CP4 the average rate has been undervalued by £1.28 per minute.
- Applying the proposed RPI only adjustment to CP5, the average rate will be undervalued by £5.61 per minute.
- The rail freight users pass back nearly all the freight user costs to the freight operators.

The full report and independent expert opinion are attached to this response as Appendix 1 and 2 respectively for consideration. DB Schenker contends that these provide a significant step forward from the current ORR proposal for Network Rail's payment rate. As such, as a minimum, DB Schenker proposes a rebasing of the exit CP4 rate from £19.74 to £22.49 (a CP5 entry value of £23.95 following the RPI adjustment).

DB Schenker submits that it is important that there is an accurate valuation of freight as possible in light of the diverging delta between passenger and freight payment rates. This is because it believes this will incentivise a negative Network Rail behaviour towards freight (i.e. there is a risk that Network Rail will default delay/disruption towards freight as the cost to Network Rail of delaying freight services is substantially below that of delaying passenger operations).

Consequently, DB Schenker requests that ORR adjusts the Network Rail payment rate on the basis of this further evidence submitted with this response and that this is reflected in the Final Determination.

The significant change to the balance of risk from far higher out-payments due to considerably increased passenger payment rates coupled with ORR's proposal to leave the Network Rail payment rate alone (with the exception of applying RPI) does not appear

to have been holistically considered. The risk to freight operators from the considerable increase in the freight operator payment rate could outweigh any profit made from running the service itself and could result in freight services being unable to bear such a risk.

DB Schenker supports ORR's proposal to align the payment and bonus rates at the same level.

Summary

Many of the changes proposed by ORR to the metrics of the freight possessions and performance regimes impact adversely on freight operators and substantially benefit Network Rail. Given that Network Rail's underperformance against the CP4 regulatory output resulted in enforcement action, and that Network Rail continues to underperform against the regulated freight output, it seems bizarre that ORR has sought to rebalance the regime in such a way that operational failure is apparently financially rewarded.

Given the emphasis placed by ORR on the value and importance of incentives as a key element of PR13, DB Schenker considers that the incentives ORR has sought to apply with respect to freight Schedules 4 and 8 are insufficient. DB Schenker, therefore, urges ORR to consider the additional actions set out above i.e.:

- Phasing-in the reduction in the freight operator benchmark across CP5.
- Applying a performance improvement trajectory to Network Rail's benchmark.
- Increasing the Network Rail payment rate in light of the new evidence attached to this response.
- Increasing the Schedule 4 liquidated compensation sums.

**Specific consultation question**

*Q. We would welcome views on whether the alternative proposal on the capacity charge for freight operators proposed by the Rail Freight Operators' Association should be adopted as a substitute to retaining the existing capacity charge in CP5 (see paragraphs 16.110-16.116. We also seek views on:*

*(i) whether this mechanism should be adopted only for freight operators or whether it should also be adopted for passenger open access and/or franchised passenger operators; and*

*(ii) what the implications of its adoption for these operators would be.*

DB Schenker strongly supports the alternative proposal put forward by the RFOA as it applies the recalibrated capacity charge rates to additional traffic over an appropriate baseline (i.e. the traffic which supposedly generates the cost to Network Rail) and, therefore, does not have the effect of breaking the association between the capacity charge and the Schedule 8 performance regime which would occur if the existing capacity charge rates were to be continued.

DB Schenker understands that the capacity charge was introduced in 2003 to recognise the increased performance penalty risk that could arise for Network Rail from increased freight and passenger services on the Network. It, therefore, helps to ensure that Network Rail is not disincentivised to accommodate additional trains on the network which may bring wider economic and social benefits.

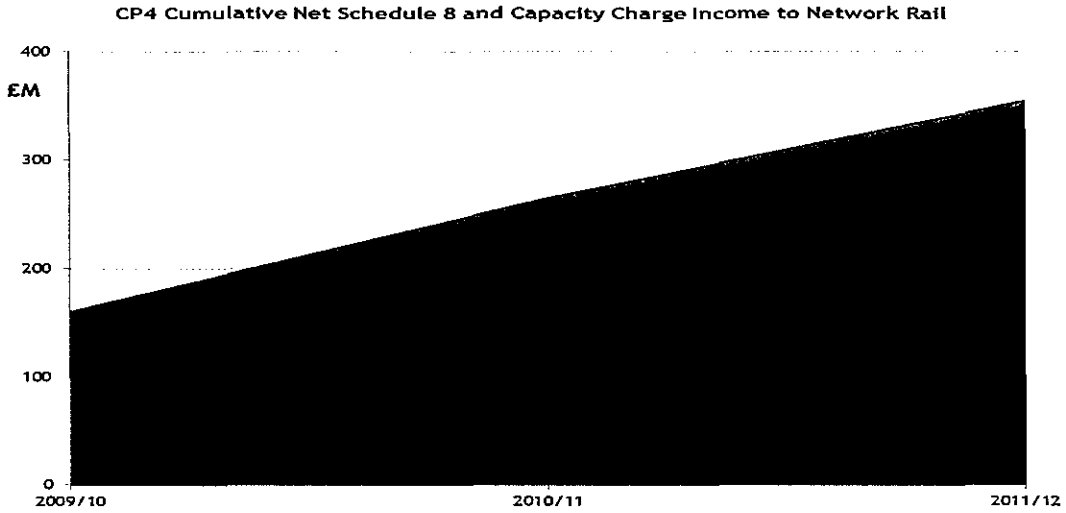
However, since 2005/6, freight train miles have actually reduced by 34.7% as freight operators have become more efficient in conveying more goods in a fewer number of trains. It could be argued, therefore, that based on the original policy, rail freight should not be paying any capacity charge until its usage of the network (measured in train miles) has returned to 2001/02 levels as the performance risks from freight services have reduced. In addition, Network Rail is keen to secure a much higher unit rate per mile for capacity charges to reflect the increased financial risk accruing from the proposed higher performance regime delay minute rates for CP5.

Based on these factors, DB Schenker understands that RFOA's alternative proposal involves the creation of a baseline of train miles calculated by reference to the number of train miles generated by freight services that have been taken into account in the Schedule 8 performance regime benchmarks over which any additional train miles would attract the recalibrated (higher) rates.

Since its inception, the freight capacity charge has been levied on the basis that the same rate applies to all train miles, whether it is existing trains or additional trains. This methodology results in fundamental overcharging as the calculated marginal rate for additional trains is applied to all trains. This methodology does not take into account the fact that the Schedule 8 performance regimes are benchmarked or that the marginal rate for additional trains on a busy network is higher than the cost of trains already on the network as congestion results in increased secondary delay.

DB Schenker believes that this has resulted in approximately £400 million over-recovery by Network Rail in the first 4 years of Control Period 4 (CP4).This level of over recovery is despite the fact that the capacity charge rates have not been recalibrated for many years whereas performance regime payment rates have been updated over this time. If the capacity charge rates had been increased in line with the performance regime rates, the over-recovery would have been even higher.

The graph below shows Network Rail's income from the capacity charge net of Schedule 8 payments for the first 3 years of CP4:




It is noted that in the case of franchised passenger operators (who pay around 97% of the total value of the capacity charge) Network Rail does not benefit financially from this over recovery as the capacity charge income is offset against income from fixed charges.

However, freight operators only pay an equivalent to a fixed charge (the Freight Specific/Freight-Only Line Charges) on those market segments that are deemed by the ORR to be able to afford a "mark-up". Therefore, there is no equivalent off-set for freight operators and the capacity charge is a real cost to freight operators.

Track access charges are required to conform to the principles set out in The Railways Infrastructure (Access and Management) Regulations 2005 ("the Regulations"). As a substantial amount of capacity charge is levied in effect in lieu of fixed charges, the charge must constitute a "mark-up", which can only be levied on market segments that are deemed able to afford a 'mark-up'. Therefore, arguably the current methodology for calculating the capacity charge does not seem to be compliant with the Regulations.

DB Schenker considers that the alternative RFOA proposal on the other hand, is more closely aligned with the Regulations as it does not involve levying 'mark ups' on all services whether or not they have been deemed to be able to afford them.

DB Schenker understands that the alternative RFOA proposal is that a baseline of freight train miles is established based on the same year as is being used to calibrate Schedule 8 performance regime benchmarks. At the end of each year this is compared to the actual freight train miles operated in that year by all freight train operators. Assuming this is a positive number the difference is multiplied by the capacity charge rate per train mile and then is charged to each freight train operator in proportion to the total number of freight train miles that they have each operated (ensuring no discrimination between operators). If the number of train miles has not increased over the baseline, or has reduced, the payment would be zero. The mechanism is in practice similar to other "wash-up" mechanisms such as the calculation of the EC4T charge, which is adjusted for actual use after the end of each financial year.

This methodology, therefore, supports the principle of levying a capacity charge on every new train mile operated on the network. It applies equally to all trains and is a transparent and simple with low administration costs. It avoids over-recovery as capacity charges are not applied to train miles below the baseline as these are already incorporated within the Schedule 8 performance regime benchmarks.

In the Draft Determination, ORR has proposed changes to both Network Rail and freight operator performance regime benchmarks. According to ORR's calculations, at current performance levels the combined impact of these benchmark changes would be a reduction in Network Rail's out payments under the freight performance regime by £10.3 million. Therefore net of the reduction in capacity charge should RFOA's alternative proposal be adopted (which DB Schenker firmly believes it should), Network Rail's net out payments would still reduce by £6.3 million assuming no change in actual performance levels.

In summary, freight operators have contributed to reducing congestion on the rail network rather than causing additional congestion. Network Rail's exposure to Schedule 8 payments has reduced, but a capacity charge has still been levied on all trains (freight operators have not been rewarded for their contribution to reducing congestion).

In its separate letter to the industry entitled "PR13: capacity charge and alternative RFOA proposal", ORR has set out its comments and suggested a number of possible variations on RFOA's alternative proposal. DB Schenker wishes to make the following representations on these variations:

ORR suggests that the impact of RFOA's alternative proposal on incentives to operators is problematic because an operator increasing its train miles would not pay for the estimated performance cost of that increase but would pay only a proportion through the year-end 'wash-up' process (i.e. all freight operators would pay a share of any increase in freight train miles over and above the baseline whether or not their own particular train miles increased). DB Schenker recognises that this could be viewed as a problem but given that the benchmarks in the freight Schedule 8 performance regime are set at an aggregated level of the performance of all freight operators, such a scenario is not without precedent. In fact, given the close relationship between the performance regime and the capacity charge, applying both regimes at an aggregated freight level would be entirely logical and sensible in DB Schenker's view and not a significant disadvantage as suggested by ORR.

*RFOA proposal as an overlay to the capacity charge* - ORR suggests that RFOA's alternative proposal is applied as an overlay on the current capacity charge rates rather than as a replacement. ORR further suggests that as no payments are made below the baseline, the RFOA proposal has poor incentive properties. DB Schenker disagrees because freight operators will still be incentivised below the baseline to make efficiencies to ensure that they remain below the baseline (i.e. they will do their utmost to accommodate additional traffic on existing services rather than adding to their train miles). This is beside the fact that freight operators are already incentivised by commercial and

financial principles to reduce costs from the operation of trains. Whilst DB Schenker acknowledges ORR's point that RFOA's proposal would reduce the revenue that Network Rail received from the capacity charge, DB Schenker views this as a reduction in the over-recovery currently enjoyed by Network Rail and will be more than counter balanced by the reduction in out payments Network Rail is expected to make through changes to the freight performance regime in CP5.

*Disaggregation* - Whilst disaggregation of the baseline by operator or commodity grouping would increase the complexity of RFOA's alternative proposal, DB Schenker is not opposed to such a variation in principle.

*Using value rather than train miles as a baseline metric* - DB Schenker considers that the issue of separate capacity charge rates for weekend/weekday services could be better addressed using a blended average rate rather than changing the metric from train miles to value.

*Incorporating passenger services* - DB Schenker has no concerns with RFOA's alternative proposal being adapted and extended to passenger services.

*Open access* - DBS also has no concerns with RFOA's alternative proposal being adapted and extended to open access passenger services. ORR mentions that if each open access operator had its own baseline, new entrants would face higher capacity charges and might be deterred. Whilst this is always a possibility, it would depend on how the new entrant's performance regime benchmark was set as the principle behind RFOA's alternative proposal is that services included within the performance regime benchmark do not pay a capacity charge as they constitute the baseline.

For the above reasons, DB Schenker strongly supports the RFOA alternative proposal as originally proposed (i.e. not as an overlay on CP4 capacity charges, based on train miles not value and applies across all freight services and not as a baseline incorporating both freight and passenger services combined). It is not, however, opposed in principle to a commodity disaggregation within freight.

However in recognition of the late stage of the Draft Determination and that most of the remainder of the Draft Determination has now been resolved, freight operators have been in discussion with Network Rail through the auspices of the RDG Freight Group to agree a joint position with regard to the capacity charge. DB Schenker is pleased to report that through these discussions an agreement in principle with Network Rail has been reached and it hopes that this is helpful in enabling ORR to make a final decision with regard to the capacity charge.

The proposal is a pragmatic position intended for CP5 only and does not infer in any way endorsement of this continued approach for CP6. In DB Schenker's view, the longer term solution should be that the impacts of additional traffic are dealt with by adjustments to the Schedule 8 benchmarks (as the impact on freight operators is) and not via a separate charge (as was proposed and discussed last summer at the Capacity Charge Working Group). The proposal can be summarised as follows:

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The proposal is structured on the RFOA alternative proposal, whereby the recalibrated rates apply to all traffic at the margin. The charge would be disaggregated by commodity, with three sub-categories: coal/biomass, intermodal and other. This would avoid potential cross-subsidies between different types of traffic, which is important given that freight traffic is expected to increase in CP5 on parts of the network that are the busiest, whilst lower growth (or traffic reduction) are most likely to take place on parts of the network that are less busy. DB Schenker does not foresee the need to additionally disaggregate by freight operator principally to minimise the complexity of the capacity charge calculations and that the performance regime benchmarks are set at the same level for all freight operators.

The other key variation to the alternative RFOA proposal involves the establishment of a baseline to recover (at the GB-wide level) circa £2m per annum of capacity charge during CP5. This should provide sufficient 'headroom' for the 'downside' incentives to work (noting the range of the capacity charge in the first four years of CP4 has been between £3.9m and £4.5m pa) whilst ensuring a contribution to Network Rail's funding of £10m over CP5 compared to the RFOA alternative proposal.

There is some detail to work through, including the precise form and level of the baselines. There are essentially two options for setting the baselines: (a) to set the traffic baselines at a lower level in order to recover a projected sum of circa £2m pa or to have a 'fixed' element to the calculation of the capacity charge. These options will be considered by the parties over the coming days and DB Schenker understands that a letter will be sent to ORR by RDG.

It should be noted that this proposal reflects constructive engagement by the RDG Freight Group, seeking to identify a practical and acceptable methodology for the capacity charge for CP5 for both FOCs and Network Rail. DB Schenker would, therefore, be pleased if the ORR could consider this proposal in finalising its determination for CP5.

Yours sincerely,

pp

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APPENDIX 1

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# Train load impacts on the Network Rail Payment Rate

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## Network Rail Payment Rate – Train Load

1. Following the review of the Network Rail Payment Rate (the "payment rate") conducted during PR08, the payment rate was set at £17.47 per train minute of delay. The rate of £17.47 applied for the year 2009/10 and has since been uplifted annually for inflation. In the draft determination for PR13, the ORR propose to follow the same approach of annual uplifts for inflation such that the payment rate was £19.13 in 2012/13, is £19.74 in 2013/14 and would be uplifted for inflation in each year of CP5.

2. However, inflation is not the only factor that affects the per train minute cost of delay. Train load - i.e. the amount/volume of goods moved - is also an important factor. As train loads increase, each train minute of delay affects more goods and inflicts greater costs on both freight operators and freight users.

3. The table below shows the elements of freight operator costs (sourced from ORR research), their relative sizes and how they respond to changes in train load:[1]

| Freight operator costs | Effects of increased loads per train on delay costs | Approx. % of freight operator costs | Changes proportionally with train load? |
|---|---|---|---|
| Loco lease & maintenance | Same number of locomotives required to move load | 7% | × |
| Wagon lease and maintenance | More wagons required to move larger load | 6% | ✓ |
| Driver costs | Same number of drivers required to move load | 12% | × |
| Fuel | Fuel consumption higher with heavier load | 55% | ✓ |
| Handling | Greater staff numbers/machinery required to load/unload | 13% | ✓ |
| Repositioning | Greater logistical problems in repositioning more wagons | 6% | ✓ |
| | **Total** | **100%** | **80%** |

4. The table above shows that for an increase in train load, 80% of the freight operator costs of delay would also increase proportionally.

5. The table below shows the elements of freight user costs (sourced from the AECOM/ITS report) and how they respond to changes in train load:[2]

| Freight user costs | Effects of increased loads per train on delay costs | Changes proportionally with train load? |
|---|---|---|
| Handling | Greater terminal handling costs per load | ✓ |
| Labour | Overtime payment is greater if train load increases | ✓ |
| Short-loading | Risk of not being able to fully load wagons due to delay increases as number of wagons increases | ✓ |
| Management Time | More phone calls and administrative time spent in contingency | ✓ |
| Road Substitution | With a longer delay, more lorries would be needed to move the load | ✓ |
| Penalties | Penalties determined by size of load | ✓ |
| Collection & delivery | More drivers/vehicles waiting for train to arrive | ✓ |
| Stock out | Greater likelihood as loads increase | ✓ |
| Equipment | Extra machinery needed to unload if wagon numbers increase and turnaround time is reduced by delay | ✓ |

[1] ORR Research reported in Annex C of Review of Access Policy Consultation (2010)
[2] Rail Freight User Values of Time & Reliability (2010)

6. The table above shows that for an increase in train load, all freight user costs of delay would also increase proportionally.

7. In excluding changes in train loads from its calculations, the ORR is failing to compensate FOCs for increases in the consequences of delay. Since the entire premise of the payment rate is that it should compensate FOCs for the costs of delay and train loads are an important factor affecting those costs of delay, the payment rate should be adjusted to account for changes in train load.

8. We therefore suggest that the proposed payment rate should be adjusted for changes in train load since the beginning of CP4 and that, going forward, the payment rate should be adjusted annually to account for both inflation and changes in train load. In particular, the tables above demonstrate that freight user costs should change proportionally with average train load and that freight operator costs should change at 80% of the rate of the average train load.

9. Network Rail does not publish figures for the amount/volume of goods transported on the railway network; however, it does publish figures for the weight of goods transported. Although it is the amount/volume of goods that directly affects costs of delay, the weight of goods acts as a reasonable proxy for the amount/volume of goods. One proviso to this is that the different commodity types have different densities and so using industry-level figures for changes in average train weight will not accurately represent changes in the amount/volume of goods moved.

10. Network Rail figures show that average train loads, as measured by tonnes of cargo (i.e. net of the weight of the rolling stock itself) per train, have increased at an average rate of 3.4% per annum between 2009/10 (the beginning of CP4) and 2011/12.[3] Given the slight commodity shift towards intermodal during CP4, we believe that the average rate of 3.4% in fact masks a stronger increase in the amount/volume of goods moved per train. Consequently, the true increase in annual volume of goods per train would be higher than 3.4% p.a. However, since there has only been a slight shift in commodity mix during CP4, we use the figure of 3.4% as a proxy for the increase in amount of goods transported but note that it is lower than the true rate for the increase in amount of goods transported for these years.

11. Official figures for average tonnes per train are not available for the years after 2011/12, but the trend of increasing average tonnes per train is forecast by Network Rail to continue throughout CP5. Since Network Rail's forecast for freight traffic in total tonne kilometres is not based upon average weight per train, dividing Network Rail forecast tonne kilometres by forecast train kilometres would be misleading due to significant forecast changes in commodity mix.

12. Both track access charges and increasing network congestion incentivise freight operating companies to increase train loads rather than the number of train movements. Furthermore, the Network Rail forecast appears to assume unconstrained demand growth; this would suggest Network Rail under-estimates the growth in average train load as freight operating companies face very real constraints on their ability to add extra train movements. For these reasons, we have used the historical growth rate of 3.4% in our following indicative analysis.[4]

[3] Network Rail Long Term Planning Process (April 2013)
[4] NR forecasts set out in Network Rail Long Term Planning Process - Freight Market Study Draft for Consultation, April 2013


13. The table below sets out our proposed methodology for recalculating the payment rate from the beginning of CP4 and throughout CP5. First, we separate the payment rate of £17.47 at the beginning of CP4 into a freight operator cost component and a freight user cost component (taking the freight operator cost figures from ORR Research)[5]. Secondly, we uplift the freight operator cost component for (i) inflation and (ii) 80% of the change in average train load. Thirdly, we uplift the freight user cost component for (i) inflation and (ii) the change in average train load. We then repeat each step on an annual basis.

[5] ORR Review of Access Policy 2010, Annex C

| | CP4 | | | | | CP5 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 /10 | 2010 /11 | 2011 /12 | 2012 /13 | 2013 /14 | 2014 /15 | 2015 /16 | 2016 /17 | 2017 /18 | 2018 /19 |
| **Payment rates uplifted only for inflation as proposed by ORR** | | | | | | | | | | |
| Inflation - RPI (Previous year to December)[6] (%) | n/a | (0.5) | 4.6 | 5.2 | 3.2 | 3.1 | 2.7 | 2.7 | 2.6 | 3.4 |
| Operator costs (uplifted for inflation) (£) | 2.68 | 2.67 | 2.79 | 2.93 | 3.03 | 3.12 | 3.21 | 3.29 | 3.38 | 3.49 |
| User costs (uplifted for inflation) (£) | 14.79 | 14.71 | 15.39 | 16.19 | 16.71 | 17.22 | 17.69 | 18.17 | 18.65 | 19.28 |
| **Payment rate (£)** | **17.47** | **17.38** | **18.18** | **19.13** | **19.74** | **20.34** | **20.90** | **21.46** | **22.03** | **22.77** |
| **Average for control periods (£)** | **18.38** | | | | | **21.50** | | | | |
| **Payment rates uplifted for both inflation and changes in train load** | | | | | | | | | | |
| Growth in train load (Previous year) (%) | n/a | 3.2 | 3.1 | 4.0 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 | 3.4 |
| Operator costs (uplifted for inflation and partially for train load) (£) | n/a | 2.73 | 2.93 | 3.18 | 3.37 | 3.57 | 3.77 | 3.98 | 4.20 | 4.46 |
| User costs (uplifted for inflation and train load) (£) | n/a | 15.19 | 16.38 | 17.92 | 19.12 | 20.38 | 21.66 | 23.00 | 24.42 | 26.11 |
| **Payment rate uplifted for train load (£)** | **n/a** | **17.92** | **19.31** | **21.10** | **22.49** | **23.95** | **25.43** | **26.98** | **28.61** | **30.57** |
| **Average for control periods (£)** | **19.66** | | | | | **27.11** | | | | |
| **Differences between payment rates uplifted only for inflation and payment rates uplifted for both inflation and changes in train load** | | | | | | | | | | |
| **Difference between payment rates (£)** | **n/a** | **0.54** | **1.13** | **1.97** | **2.76** | **3.61** | **4.53** | **5.52** | **6.59** | **7.79** |
| **Difference in average payment rates for control periods (£)** | **1.28** | | | | | **5.61** | | | | |

14. Using this methodology to correct the Network Rail payment rate for changes in train load gives an indicative payment rate in 2013/14 of £22.49 rather than £19.74 as currently in place. By the end of CP5, further increases in train load produce an indicative payment rate of £30.57 as opposed to £22.77 and an average increase in payment rate during CP5 of £5.61. The difference in payment rates reflects the significant extra costs of delay incurred due to increases in train loads which should be factored into the payment rate.

15. We note that the table above uses industry-wide (i.e. not corrected for differences in density of commodities) figures for average train weight growth for the years 2009/10 to 2012/13 and an estimate of industry-wide average train weight growth of 3.4% to calculate the payment rate for the years after and including 2013/14. When using actual figures rather than forecast figures to set future payment rates, the ORR should beware that, due to forecast changes in commodity mix, growth in tonnes per train is likely to under-estimate growth in the true driver of user costs which is the amount of goods being carried per train.

16. In conclusion, the ORR proposes in the Draft Determination that the current payment rate, as set at the beginning of CP4 and subsequently uplifted for inflation, continue to be uplifted for

[6] ONS (RPI reference CHAW); Oxford Economics (ONS, Haver Analytics)

inflation during CP5. However, since the beginning of CP4 train loads have increased at an average rate of 3.4% and are projected to continue increasing throughout CP5. As shown in the tables in paragraphs 3-5, train load is an important factor affecting the costs of delay per train minute because almost all cost consequences of delay are linked to the amount/volume of goods that are delayed. If the payment rate is to compensate freight operators for the costs of delay, it should therefore be uplifted to account for the increase in train load.

**RFOA executive summary - Network Rail Payment Rate – Cost Pass Through to Operators**

1. As part of its draft determination[1] and supporting documents[2] on the freight performance regime, the ORR:
    - Highlights the proportion of freight user costs that are ultimately passed back to freight operators in the form of reduced revenues as a key input to the calibration of the Network Rail payment rates
    - Quotes a £3 - £25 range per minute of freight train delay (in 2012/13 pounds and at 2008/09 average loads per train), based on assuming 0% to 100% is passed back;
    - Admits that there is uncertainty surrounding the proportion of freight user costs passed through to freight operators in the form of reduced revenues
    - Asks for further evidence from freight operators, and
    - Concludes (presumably only as an interim position due to the lack of data) on the midpoint of 50%. The ORR states as follows;

      *"We assume 50% of user costs are passed on in the form of lower operator revenues for the purposes of constructing a central estimate of the total per minute value of delay to freight operators. However, we are seeking further evidence from freight operators to inform this assumption."*

2. We note that the ORR does not cite any evidence to support the assumption of 50%.

3. Given the importance of this assumption, the RFOA has commissioned a leading and authoritative economist, David Myatt, Professor of Economics at London Business School, to provide his views on the percentage of pass back.

4. Professor Myatt is an academic economist and political scientist based at London Business School, teaching both core and elective courses on its MBA, EMBA, MiM, and PhD programmes. He is also an Associate Member of Nuffield College in the University of Oxford, and is affiliated with various other academic institutions. His academic research interests lie within the broad fields of game theory, political economy, formal theoretical political science, and industrial organization. Further details of his CV and publications can be found at dpmyatt.org.

5. The RFOA asked Professor Myatt to consider the percentage of freight user costs passed back to operators. Please see Appendix A Professor Myatt's analysis.

6. Based on Professor Myatt's analysis on the proportion of cost pass-back, we submit that the following is the case:
    - Virtually 100% pass-back for intermodal, due to road competition;
    - 85-90% for other categories, in the situation where there are four competitors and road is not significant as an alternative mode; and

7. Overall, Professor Myatt agrees with the ORR's statement that, in a perfectly competitive market, 100% of freight user cost increases to be passed through to freight operators in the form of lower revenues.

8. However, in relation to the ORR's view that, in practice, this might represent a range of 0% to 100% with a central case of 50%, Professor Myatt's views differ from those of ORR. Instead his view is that *"the pass through rate substantially exceeds 50%"*

[1] Periodic review 2013: Draft determination of Network Rail's outputs and funding for 2014-19, June 2013
[2] Freight Schedule 8 performance regime - Updating the Network Rail payment rate and cancelation payments note in preparation for Schedules 4 and 8 consultation

9. Overall, therefore, we view the ORR's 50% cost pass-back assumption is inappropriate and too low. A base case estimate should instead be in the order of 90%. This clearly has implications for the level of user costs to be compensated under the Network Rail payment rate, giving higher results than those of the ORR's draft determination. The ORR should incorporate this into its final determination for CP5.

10. If the ORR were to use the pass through rate in the professor's paper (say 90%) with their estimate range of £3-£25 for the payment rate in their draft determination, the payment rate in 2012-13 prices would be £22.80. This is £3.67 higher than £19.13 as proposed by the ORR. Note that neither of these figures takes into account the growth in average train load since 2008/09 and so the actual rate should be adjusted to also take this into account.

**Annex A – Professor Myatt's responses in relation to pass-back of delay costs from freight customers to operators – see attached.**

**On the Pass-through Impact of Freight User Costs**

**Opinion**

by **Professor David P. Myatt**

September 2013

## 1. Context and Scope

1.1. **Context.** The Office of Rail Regulation (henceforth the ORR) has published proposed aspects of Network Rail's regulatory environment. One feature is the payment rate which compensates rail freight operators for delays caused by Network Rail.

The ORR's research uses, at least implicitly, the economic analysis of the extent to which freight user costs (that is, costs incurred by freight users as a consequence of the aforementioned delays) are passed back to freight operators. At the moment, the ORR's position is (or at least appears to be) that an appropriate pass-through rate is 50%. That is, for a delay cost incurred by a freight user, and following the adjustment of price, 50% of that cost falls on the user, whereas 50% is carried by the operator.

The relevant source material here is Section 3.7 of "Freight Schedule 8 Performance Regime: Updating the Network Rail Payment Rate and Cancellation Payments." In particular, items 3.7.2 and 3.7.5–3.7.7 are most directly relevant.

1.2. **Scope.** I have been asked to consider the impact on different market participants of freight user costs. Specifically, I have analysed the consequences of a delay-induced cost that is incurred by the user of a particular freight operator. This is within the context of two different (but related) scenarios: (i) firstly, a scenario in which there are no switching opportunities to other transport modes, but it is easy for freight to switch between different rail freight operators; and (ii) secondly, a scenario in which it is also easy for freight users to switch to other transport modes, such as road freight.

Although not specifically requested, I have considered also a third scenario: (iii) a setting in which users find it easy to switch to other transport modes, but where the delay-induced cost is incurred by the users of all rail freight operators.

## 2. OPINION

2.1. **Summary.** *In all three of the scenarios, described above, the pass-through rate of the delay-induced cost to the relevant operator (or operators) substantially exceeds 50%.*

I have considered the three scenarios described in the scope of this report for the relatively cautious case when the elasticity of supply is equal to the elasticity of demand.

I have assumed that the freight operators act as competitive price-takers and that there are four similarly sized competing operators.

For these cases, the pass-through rates are as follows:

| | *Cost Type* | *Relevant Market Scope* | *Rate* |
|---|---|---|---|
| (i) | Supplier | Rail Freight | 87.50% |
| (ii) | Supplier | Rail and Road Freight | 98.75% |
| (iii) | Sector | Rail and Road Freight | 95.00% |

For the avoidance of doubt, scenarios (i) and (ii) concern situations in which the relevant delay-induced cost affects only a single operator, whereas scenario (iii) is a situation in which all rail freight operators are affected by the same cost. For scenario (i), buyers are able to switch easily between rail freight operators, but are unable to switch elsewhere, whereas in scenarios (ii) and (iii) freight users are also able to switch to road freight.

For completeness, let me interpret the 87.5% pass-through rate reported in the first line of this table. This says that if a delay affects the users of a single rail freight operator, then 87.5% of the associated delay cost will be passed through (in the form of a lower price) to that operator. The users will carry 12.5% of that delay cost. Furthermore, the price received by other operators will rise by 12.5%. These pass-through rates also measure the profit impact on the relevant operator. That is,

$$\text{Profit Impact} = \text{Pass-Through Rate} \times \text{Per-Unit Delay Cost} \times \text{Operator's Output.}$$

Note again that these calculations use a conservative specification in which the elasticity of supply for each operator is equal to the elasticity of demand. The pass-through rates rise if supply is less elastic. My calculations below report pass-through rates for a range of elasticities. A key feature is that those rates all significantly exceed 50%.

In Section 2.2 I mention briefly some issues that arise in oligopolistic markets, before returning in Section 2.3 to discuss the key factors that influence pass-through rates in a competitive (price-taking) market. Sections 2.4 and 2.5 are more technical: they report explicit formulae for those rates. Section 2.6 provides a more detailed table for pass-through rate effects for various scenarios of interest; this extends the table reported above.

2.2. **Oligopoly.** The calculations reported above assume that rail freight operators act as price takers. That is, this is a competitive market in the sense that each operator does not expect to exert a significant influence over the market price.

A further specification to consider is one in which rail freight operators recognise that they exert some market power. An appropriate model here is one in which operators are thought of as "Cournot" oligopolists. This is when they compete by non-cooperatively choosing their outputs, but where they recognise the price implications of output changes.

Although the details are not reported here (they are available upon request) the relevant pass-through rates are also large (typically larger) in the oligopolistic case. For example, in the simplest case when freight is supplied by a monopolist the appropriate compensation rate for delay costs is 100%. Furthermore, if a single operator in an oligopoly is hit by a delay cost then the operator's loss typically exceeds 100% of the direct delay cost. This is because of the strategic disadvantage that an operator suffers; the consequent output expansion by competitors raises the impact on the cost-hit operator to above 100%. Finally, in an oligopoly environment the total impact (on all market participants; that is, all users and all operators) of a delay is greater than direct cost of that delay. That is,

$$\text{Overall Impact of a Delay} > \text{Per-Unit Delay Cost} \times \text{Affected Operators' Output.}$$

The right-hand side of this inequality is the direct cost of a delay. In a competitive scenario (when operators are price-takers) this is also the total impact. However, in an oligopoly the delay cost induces an overall contraction of industry output. In an oligopoly the marginal units of output involve a price (representing the marginal benefit of output) that strictly exceeds the marginal cost of production. Hence, the induced contraction of industry output is costly. In contrast, when suppliers are "perfectly competitive" (that is, they are price-takers) price is equal to marginal cost and so any industry contraction (following the presence of delays) involves a negligible additional cost above the direct impact.

2.3. **Pass-Through in Competitive Markets.** The determination of pass-through rates is closely related to the economic incidence of taxes and other costs. The economic incidence of a cost is the extent to which a market participant is affected by it; this differs from (and is independent of) the identity of the participant who directly bears the cost.

In a perfectly competitive market (in which no one player substantially influences prices) the imposition of a cost on all buyers (on the demand side) has the direct effect of harming those buyers. However, the consequent reduction in demand pushes down the equilibrium price. This price reduction partially offsets the cost carried by buyers; hence part of the impact is passed through to the suppliers in the form of a lower price.

In a classic "textbook" environment the relative impact on the two sides of the market is determined by the relative size of the elasticities of supply and demand. For example, if those elasticities are equal then the overall impact of the cost is balanced across the two sides of the market: 50% is borne by the buyers, and 50% by the sellers. Precisely the same analysis applies when a cost is imposed on all suppliers in a market.

Crucially, however, this logic applies only if the cost is imposed on all buyers, or upon all suppliers, in a market. If the cost is borne by only some suppliers (or, equivalently, by buyers when they purchase from those suppliers) then the incidence effects change in important ways: the fraction of the cost borne by the affected suppliers grows substantially; the impact on buyers is lessened substantially; and suppliers who are not directly affected by the relevant cost enjoy a benefit (rather than suffer a harm) from the cost change.

For the purposes of discussion, suppose that the users of a single rail freight operator are affected by a delay cost. There are three steps that determine the final impact:

(1) In the very short run, before the freight user is able to adjust behaviour, any delay cost affecting freight users will be directly paid by those users.
(2) In the medium run, the relevant operator must set a price that is lower than the price of others' products. This price reduction exactly equals the relevant delay cost, and so at this point 100% of the cost is passed to the operator.
(3) With upward sloping supply, the affected operator contracts output. That output contraction forces prices upward. The price rises push part of the cost increase back onto users; this also raises the profits enjoyed by other competing operators.

The third effect depends upon the size of the operator's output change and the extent to which that influences the market equilibrium. Importantly, this depends upon the market share of the affected operator. If an operator represents a small fraction of the relevant market then only a small fraction of the cost shock is pushed back into the market system. Hence a relatively small operator carries a large percentage of any operator-specific cost.

Sections 2.4 and 2.5 that follow are more technical in nature: they report the mathematical formulae for pass-through effects. Numerical illustrations are provided in Section 2.6.

2.4. **Basic Formula for Cost-Shock Pass-Through Rates.** The fraction of the cost impact which is avoided (that is, passed on to others) by a particular operator (or sector of operators who are hit with the same sector-specific cost shock) is proportional to that operator's market share (or the sector's share, for a sector-specific shock).

For example, if all operators are hit by the same shock, and if the elasticities of supply and demand are the same, then the pass through is 50%. If, however, an operator affected by a cost shock represents only 20% of the relevant market, then only 10% of the cost is passed on to others, and so the affected operator carries 90% of the effect. In general, the pass-through rate (to an operator) of the cost is in this setting is mathematically

$$(\star) \qquad \text{Pass-Through Rate} = 100\% - \frac{\text{Market Share}}{2}.$$

As an illustration, consider scenario (i): a single rail freight operator is hit by an operator-specific cost shock (perhaps paid by the corresponding user), and buyers may freely switch to other rail freight operators, but not to roads. Furthermore, suppose that there are four operators. The market share of the affected operator is 25%, and so the formula $(\star)$ gives:

$$\text{Pass-Through Rate} = 100\% - \frac{25\%}{2} = 87.5\%.$$

Other operators gain (and their users lose) from a price rise equal to 12.5% of the cost.

In scenario (iii) all operators are hit with the same delay cost, and users are able to switch to other transport modes. If rail freight represents 10% of the overall freight market, then

$$\text{Pass-Through Rate} = 100\% - \frac{10\%}{2} = 95\%.$$

An associated price rise (5% of the cost) helps the non-rail operators and harms users.

2.5. **The Effect of Elasticities.** The formula ($\star$) applies if the elasticities of supply and demand are equal. Any reduction in the elasticity of supply increases the pass-through rate felt by the relevant operator. In the rail freight environment, it might be expected that supply is relatively inelastic (owing to capacity constraints) compared to both the elasticity of demand and the elasticity of other (e.g. road-based) freight operators. If this is so, then the pass-through rate experienced by rail operators would be higher.

Specifically, if all operators share the same elasticity of supply, but that elasticity differs from the elasticity of demand, then the pass-through-rate formula becomes

$$(\dagger) \qquad \text{Pass-Through Rate} = 100\% - \frac{\text{Market Share} \times \text{Supply Elasticity}}{\text{Demand Elasticity} + \text{Supply Elasticity}}.$$

This rate becomes greater as supply becomes more inelastic (the elasticity of supply is lower) which corresponds to a case where outputs react only sluggishly to price changes. It seems reasonable to think that this may apply in rail freight, which suggest that the pass-through rates are larger than those reported in the previous scenario-based examples.

Nevertheless, it is possible to compute a "worst case" specification for the lowest possible pass-through rate. Even if supply is very elastic the pass-through rate must satisfy

$$\text{Pass-Through Rate} \geq 100\% - \text{Market Share}.$$

For scenario (i) the pass-through rate exceeds 75%, and in scenario (iii) it exceeds 90%.

I have yet to discuss the second scenario. In scenario (ii), an operator-specific shock hits one of four rail freight operators within a 10% slice of the overall freight market. The relevant market share for an individual rail operator is 2.5%, and so the pass-through rate must (according to the formula above) exceed 97.5%. Moreover, if supply is less elastic than demand (as it might be expected to be) then the pass-through rate exceeds 98.25%.

2.6. **Numerical Pass-Through Rates.** It is helpful to compute numerical pass-through rates for different cases. The three scenarios that form the scope of this opinion are:

(i) A single operator is hit with a cost shock. The relevant market is for rail freight. I have been asked to consider the case with four similarly sized operators.

(i) A single operator is hit with a cost shock. The relevant market is for freight generally, where rail represents 10% of this market. There are four similar rail operators.

(ii) Here all four rail freight operators are hit with the same shock. However, they jointly form, as in scenario (ii), 10% of the relevant (larger) freight market.

I also consider here the following four configurations for the elasticity of supply:

- Supply is completely inelastic (symbolically, $\varepsilon_S = 0$).
- Demand is three times as elastic as supply ($\varepsilon_D = 3\varepsilon_S$).
- Supply and demand are equally elastic ($\varepsilon_D = \varepsilon_S$).
- Supply is completely elastic ($\varepsilon_S = \infty$).

Here "$\varepsilon_S$" and "$\varepsilon_D$" indicate the elasticities of supply and demand, respectively.

For the three scenarios and four elasticity configurations, the pass-through rates are these.

| | *Cost Type* | *Relevant Market Scope* | $\varepsilon_S = 0$ | $\varepsilon_D = 3\varepsilon_S$ | $\varepsilon_D = \varepsilon_S$ | $\varepsilon_S = \infty$ |
|---|---|---|---|---|---|---|
| (i) | Supplier | Rail Freight | 100.000% | 93.750% | 87.500% | 75.000% |
| (ii) | Supplier | Rail and Road Freight | 100.000% | 99.375% | 98.750% | 97.500% |
| (iii) | Sector | Rail and Road Freight | 100.000% | 97.500% | 95.000% | 90.000% |

The clear message emerging from all of these numerical exercises is that pass-through rates are high for all of the elasticity configurations documented here.

## 3. Brief Concluding Remarks

I conclude with some brief additional comments.

Firstly, the analysis here considers competitive markets. A move to consider oligopolistic markets can raise, rather than lower, the pass-through rates that apply to operators.

Secondly, in the settings where the relevant market comprises both road and rail freight, the elasticities of supply may differ. A reasonable guess is that the elasticity of rail freight operators is relatively low; this again serves to increase the pass-through rates.

Thirdly, in an oligopoly setting the total impact of a delay cost actually exceeds the value obtained by multiplying the per-unit delay cost by the volume of affected freight.

**DPM.** September 3, 2013.

## 4. Mathematical Appendix

This appendix is designed exclusively for a technical reader. It documents the formal mathematical formulae that lie behind the analysis used in this opinion.

### 4.1. Cost Shocks in a Perfectly Competitive Market.

Consider a market in which all suppliers are price takers. I write $p$ for the market equilibrium price. The demand function is $D(p)$. Supply is drawn from $N$ suppliers, where supplier $i \in \{1, \ldots, n\}$ is potentially affected by a cost shock $c_i$. The supply function of $i$ is $S_i(p, c_i)$.

My objective here is to investigate the impact of a change in the cost shock $c_j$ on buyers and on the profits of both supplier $j$ and other competing suppliers $i \neq j$. The cost shock $c_i$ is a constant additional marginal cost added to the production cost of supplier $i$. This is equivalent to a reduction in the price offered for its product. Mathematically,

$$\frac{\partial S_i(p, c_i)}{\partial c_i} = -\frac{\partial S_i(p, c_i)}{\partial p}.$$

An equilibrium is obtained by equating supply to demand, so that $D(p) = \sum_{i=1}^{N} S_i(p, c_i)$. To investigate the effect of a change in the cost parameter $c_j$ on the market price, this equilibrium condition can be totally differentiated with respect to $c_j$. This yields:

$$\begin{aligned}\frac{\partial D(p)}{\partial p}\frac{dp}{dc_j} &= \frac{\partial S_j(p, c_j)}{\partial c_j} + \frac{dp}{dc_j}\sum\nolimits_{i=1}^{n} \frac{\partial S_i(p, c_i)}{\partial p} \\ &= -\frac{\partial S_j(p, c_j)}{\partial p} + \frac{dp}{dc_j}\sum\nolimits_{i=1}^{n} \frac{\partial S_i(p, c_i)}{\partial p} \\ \Rightarrow \quad \frac{dp}{dc_j} &= \frac{\frac{\partial S_j(p, c_j)}{\partial p}}{-\frac{\partial D(p)}{\partial p} + \sum_{i=1}^{n} \frac{\partial S_i(p, c_i)}{\partial p}}.\end{aligned}$$

To move further it is helpful to work in terms of elasticities. I write $\varepsilon_D$ for the elasticity of demand and $\varepsilon_i$ for the elasticity of supply. Mathematically,

$$\begin{aligned}\varepsilon_D = -\frac{\partial D(p)}{\partial p}\frac{p}{D(p)} \quad \text{and} \quad \varepsilon_i &= \frac{\partial S_i(p, c_i)}{\partial p}\frac{p}{S_i(p, c_i)} \\ \Rightarrow \quad \frac{\partial D(p)}{\partial p} = -\frac{\varepsilon_D D(p)}{p} \quad \text{and} \quad \frac{\partial S_i(p, c_i)}{\partial p} &= \frac{\varepsilon_i S_i(p, c_i)}{p}.\end{aligned}$$

These expressions can be substituted into the the solution for $dp/dc_j$, so that

$$\frac{dp}{dc_j} = \frac{\varepsilon_j S_j(p, c_i)}{\varepsilon_D D(p) + \sum_{i=1}^{n} \varepsilon_i S_i(p, c_i)} = \frac{\varepsilon_j [S_j(p, c_j)/D(p)]}{\varepsilon_D + \sum_{i=1}^{n} \varepsilon_i [S_i(p, c_i)/D(p)]}.$$

In equilibrium, demand $D(p)$ is equal to the total supply $\sum_{i=1}^{n} S_i(p, c_i)$, and so $S_j(p, c_j)/D(p)$ is the market share of supplier $j$. Writing $\alpha_i$ for the market share of each supplier $i$,

$$\frac{dp}{dc_j} = \frac{\varepsilon_j \alpha_j}{\varepsilon_D + \sum_{i=1}^{n} \varepsilon_i \alpha_i}.$$

In fact, the summation in the denominator is equal the overall elasticity of supply in this market. That is, $\varepsilon_S == \sum_{i=1}^{n} \alpha_i \varepsilon_i$. Hence the effect of an increase in the cost shock $c_j$ associated with supplier $j$ on the overall price in the market is

$$\frac{dp}{dc_j} = \frac{\varepsilon_j \alpha_j}{\varepsilon_D + \varepsilon_S}.$$

This represents the degree to which a cost shock affecting $j$ is deflected into the market price. To obtain the profit impact on supplier $j$, differentiating $j$'s profit readily yields

$$\frac{\partial[\text{Profit of } j]}{\partial c_j} = S_j(p, c_j)\left(1 - \frac{dp}{dc_j}\right) = S_j(p, c_j)\left(1 - \frac{\varepsilon_j \alpha_j}{\varepsilon_D + \varepsilon_S}\right).$$

Summarising, and writing in terms of percentages,

$$\text{Pass through percentage} = 100\% - \frac{\varepsilon_j \times (\text{Market Share of } j)}{\varepsilon_D + \varepsilon_S}.$$

This underpins formula (†) used in my main opinion.

4.2. **Buyer-Paid Costs.** The environment of relevance to this opinion is one in which a buyer incurs an extra cost when purchasing from a particular supplier. This occurs when a freight user suffers a delay cost of $c_i$ when purchasing from operator $i$.

Given that products are easily substitutable, the direct effect of a shock $c_i$ is to shift downwards the price receive by supplier $i$ by the amount $c_i$. This is because supplier $i$ must offer a price exactly $c_i$ below the price of products offered by other competitors in order to sell. This means that $p$ can be interpreted as the price for a perfect product, whereas $p_i = p - c_i$ is the price paid to a supplier affected by a delay cost $c_i$. Hence, the cost carried directly by a buyer is equivalent to a cost paid instead by the supplier. This is in accordance with the general principle that the ultimate incidence of a cost is independent of the identity of the trading partner who directly pays that cost.

## 5. Biographical Note

**David P. Myatt** is Professor of Economics at London Business School (LBS). Amongst other positions he is also: an Associate Member of Nuffield College, University of Oxford; an Associate Fellow of the Department of Economics, University of Warwick; and a Research Fellow of the Centre for Economic Policy Research. He was educated at the London School of Economics (LSE), at the Massachusetts Institute of Technology (MIT), and at the University of Oxford. Prior to moving to LBS he held various academic positions within the University of Oxford, including Fellowships of St Catherine's College and Nuffield College.

David's academic research often uses the tools of game theory (the scientific analysis of strategic decision-making) applied to various settings in both economics and political science. In economics his research includes the study of advertising, marketing, and product design strategies; in political science, his work includes theories of leadership, strategic voting, and executive performance. His academic research papers have been published in the very top academic journals in both economics (including the American Economic Review and the Review of Economic Studies) and political science (including the American Political Science Review and the American Journal of Political Science). In an editorial capacity, he previously served the Royal Economic Society as Editor of the Economic Journal. He is currently Co-Editor of the Quarterly Journal of Political Science and Associate Editor of the Journal of Economic Theory, and holds other positions on editorial boards and within leading scientific associations.

At LBS, David's teaching ranges across the full portfolio of programmes, including the MBA, EMBA, MiM, and PhD degrees. Within the core Managerial Economics course, he teaches tools for output choice and pricing in markets where businesses seek to exploit their market power; within the elective Thinking Strategically he uses the tools of game theory to analyse strategic decision-making; and within the Business, Government, and Society course he explores the interaction of businesses with wider societal stakeholders.

David also has experience in both open and custom executive education programmes; he has served private clients in this capacity, and he is a long-standing contributor to the sixty-year-old Oxford University Business Economics Programme. In his consulting activities, David has advised clients on competition policy, auction strategy, business organisation, and various aspects of the regulatory environment.