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Dear Emily

**Freight caps – conclusion on November 2011 consultation in relation to variable usage charge (VUC) and freight only line charge initial cost estimates**

**Purpose**

In its Periodic Review 2013 (PR13) first consultation<sup>1</sup> ORR requested views on whether it should once again place a cap on certain freight charges in advance of its final determination. It noted that such a move by ORR could be linked to commitments by the freight community to reduce whole industry costs.

In order to facilitate any decision by ORR in relation to placing an early cap on certain freight charges, we calculated variable usage and freight only line charge initial costs estimates. These cost estimates and the methodology applied in order to derive them were included in our freight cap consultation letter dated 29 November 2011<sup>2</sup>.

Our consultation on freight caps closed on 27 January 2012 and, following careful consideration of the consultation responses, this letter concludes on that consultation.

Although the primary purpose of this work is to estimate freight variable usage costs, as part of this process it was necessary to calculate an initial estimate of passenger variable usage costs. We are, therefore, copying this letter to passenger as well as freight stakeholders.

<sup>1</sup> Available at: [PR13 First consultation - Office of Rail Regulation](http://www.networkrail.co.uk/PeriodicReview2013.aspx)

<sup>2</sup> Available at: <http://www.networkrail.co.uk/PeriodicReview2013.aspx>



## Introduction

On 13 September 2011 we issued an industry letter<sup>3</sup> setting out our proposed methodology for calculating initial cost estimates that could inform caps on freight VUCs and freight only line charges in Control Period 5 (CP5).

As noted above, on 29 November 2011 we issued a two month consultation setting out our variable usage and freight only line charge initial cost estimates. During the consultation period we also hosted an industry workshop<sup>4</sup> where we discussed our initial cost estimates with stakeholders in more detail.

We received six responses<sup>5</sup> to our freight caps consultation from the following stakeholders:

- DB Schenker (DBS);
- Direct Rail Services (DRS);
- Freightliner (FL);
- Freight Transport Association (FTA);
- GB Railfreight (GBRf); and
- Rail Freight Group (RFG).

We would like to take this opportunity to thank those stakeholders who took the time to respond to the consultation and / or attended the industry workshop. We really value your feedback on our charging proposals.

This letter summarises the key points included in our freight caps consultation and the main issues raised in consultation responses. It then concludes on these issues and proposes initial cost estimates that could inform early caps on freight VUCs and freight only line charges if, subject to consultation responses, ORR considers this to be appropriate.

We have responded to the more detailed representations made in the consultation responses in Annex A, and the representations made by DBS in respect of our initial list of freight only lines in Annex B. For completeness we have included an updated list of freight only lines in Annex C. Annex D contains an extract from our recent suspension bandings consultation, setting out our initial thinking on suspension bands and VUCs in CP5.

**All terms in this paper are in 2011/12 prices and at end CP4 efficiency unless stated otherwise.** We are aware that operators will, naturally, be primarily interested in the charges that they will pay for 'access to the network'. This letter, however,

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<sup>3</sup> Available at: <http://www.networkrail.co.uk/PeriodicReview2013.aspx>

<sup>4</sup> The workshop took place at Network Rail's offices on 6 January 2012

<sup>5</sup> Available at: <http://www.networkrail.co.uk/PeriodicReview2013.aspx>

focuses on costs. Ultimately it is for ORR to determine access charges, as part of the PR13 process.

### **Freights caps consultation – summary**

In respect of our initial variable usage costs estimates, we proposed the following in our freight caps consultation:

- Adopting a methodology broadly the same as in PR08. That methodology uses a ‘bottom up’ approach to estimating track variable usage costs and a ‘top down’ approach to estimating non-track (civils and signalling) variable usage costs.
- It is appropriate to retain the 20% and 6% ‘top down’ variability assumptions applied to metallic underbridge and embankment renewals respectively. That the 20% variability assumption applied to metallic underbridge renewals should be extended to cover masonry and brick underbridge renewals, and that a 5% variability assumption should be applied to culverts.
- It is appropriate to increase the PR08 ‘top down’ variability assumption in respect of signalling maintenance costs from 5% to 6% and that a 44% variability assumption should be applied to minor works points renewals.
- Based on the relationship between gross and equivalent tonnage in the CP4 VUC model we estimated discrete average vehicle cost rates for freight and passenger traffic of £1.51 per kgtkm and £1.62 per kgtkm respectively. Both of these rates are slightly higher than the respective CP4 average vehicle costs rates<sup>6</sup> and a key driver of these increases is the inclusion of variable usage costs in respect of cost categories that were excluded in CP4 (i.e. brick and masonry underbridge renewals, culverts renewals and minor works point renewals).
- That the most appropriate way of placing a cap on freight VUCs would be to set a maximum £ per kgtkm rate. Moreover, there is considerable merit in using the freight average vehicle cost rate (£1.51 per kgtkm) because it will reflect more closely the average variable usage costs that freight vehicles are likely to incur in CP5.
- Consistent with the approach in PR08, it would be prudent to place a confidence interval around our initial cost estimate of +/- 20%. Because the cap is a ‘one way bet’ it could be prudent to cap freight variable usage costs at the upper limit of this confidence interval i.e. £1.81 per kgtkm.

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<sup>6</sup> The CP4 average vehicle cost rates were £1.36 per kgtkm and £1.52 per kgtkm for freight and passenger traffic respectively.

We also proposed the following in respect of freight only line charges:

- Retaining the existing definition of a freight only line and estimating initial freight only line costs using broadly the same methodology as is PR08.
- Basing our initial cost estimates on the assumption that freight only line charges will continue to apply to ESI coal and spent nuclear fuel only. In reality, however, ORR's market analysis will determine the commodities that are able to contribute towards fixed costs, and we will refine our analysis accordingly.
- The total cost to be recovered annually in CP5 through the freight only line charge for ESI coal and spent nuclear fuel would be £6.79m and £1.54m respectively. These initial cost estimates are higher than those calculated in CP4 and a key driver of the increases is an increase in the number of ESI coal and spent nuclear fuel track kilometres included in our draft freight only line list.
- Placing a cap on charges in the form of a maximum £m value reflects the fact that the freight only line charge is designed to recover fixed costs that are invariant with traffic.
- Consistent with the approach in PR08, it would be prudent to place a confidence interval around our initial cost estimates of +/- 20%. Because the cap is a 'one way bet' it could be prudent to cap cost recovery at the upper limit of this confidence interval i.e. £8.15m and £1.85m for ESI coal and spent nuclear fuel respectively.

### **Consultation responses – summary**

The consultation responses that we received made a number of detailed comments in respect of our variable usage and freight only line initial cost estimates, and the methodology applied in order to derive them. These comments, and our responses to them, are set out in Annex A. However, for ease of reference, we have summarised, below, stakeholder views in respect of what we consider to be the key issues.

#### *Variable usage charge*

- Support the principle of placing an early cap on freight VUCs and are content with our proposal that the most appropriate way to do this is in the form of a maximum £ per kgtkm rate.

- Are content with our proposal to allocate variable usage costs between freight and passenger traffic, for the purpose of this analysis, based on the relationship between gross and equivalent tonnage in the CP4 VUC model.
- Consider the +/-20% confidence interval to be too high, especially given the evolution in track modelling from the Infrastructure Cost Model (ICM) to the Vehicle Track Interaction Strategic Model (VTISM) and the Strategic Route Section Maintenance Model (SRSMM). Some stakeholders suggested that a confidence interval of +/-10% may be more appropriate.
- Consider that the signalling variability assumptions should be explained in more detail and that the costs associated with road user misuse at level crossings should not be included in the variable usage charge.
- Consider that a more detailed explanation is required in respect of the 'top down' variability assumptions that we applied to civils assets.
- Expressed concern in relation to the absence of a reduced traffic scenario in our track variable usage cost modelling.

#### *Freight only line charge*

- Support our proposal to adjust for the fact that some lines carry multiple commodities using each commodities share of gross tonnage.
- Believe that the +/-20% confidence interval is too high; one stakeholder proposed that a more realistic figure would be +/-10%.
- Generally support retaining the definition of a freight only line established in PR08.
- DBS were the only operator to make detailed comments on the initial list of freight only lines, it agreed with the majority of the lines but made a number of comments in respect of certain individual entries.
- Expressed concern that we estimated related renewals costs by applying a mark-up based on PR08 data and that we did not have robust traffic data for certain freight only lines.

## **Conclusion**

This section sets out our conclusions on the consultation which we are submitting to ORR for approval.

## Variable usage charge

Following careful consideration of consultation responses, we believe that it continues to be appropriate to apportion costs between freight and passenger traffic based on the relationship between gross and equivalent tonnage in the CP4 VUC model, and cap freight variable usage charges in the form of a maximum £ per kgtkm rate.

We have explained our signalling variability assumptions in more detail in Annex A, and continue to consider that these remain appropriate. We have also reviewed our proposal to extend the 20% variability assumption previously applied to metallic underbridge renewals to masonry and brick underbridge renewals. Following further consideration, we consider that a better approach would be to apply a 14% variability assumption to masonry and brick underbridge renewals. This assumption is explained in more detail in Annex A, and reflects the fact that we consider that it is appropriate to distinguish between 'existing' and 'new' heavy freight routes because the degree of cost variability on these routes is likely to vary materially.

We believe that our track, embankments, metallic underbridge and culverts variable usage cost estimates remain appropriate. However, as set out in Annex A, we have also now estimated track variable usage costs under a -10% traffic scenario. In this scenario track variable usage costs are 40% higher than under the +20% traffic scenario<sup>7</sup> due to the increased level of cost variability<sup>8</sup>. We propose retaining the track variable usage cost estimate under the +20% traffic scenario because traffic is expected to grow over CP5 and our track asset policy has been devised to accommodate this.

A summary of our updated variable usage cost estimate is set out in Table 1 below:

**Table 1: Updated variable usage cost estimate**

<b>Asset type</b>	<b>Costs (£M per year)</b>
<b>Track:</b>	<b>242.4</b>
Track maintenance and renewals	242.4
<b>Civils:</b>	<b>25.5</b>
Embankments renewals	1.9
Metallic underbridge renewals	9.7
Brick and Masonry underbridge renewals	13.3
Culverts renewals	0.5
<b>Signalling:</b>	<b>13.6</b>
Maintenance	8.2
Minor works points renewals	5.4
<b>Total</b>	<b>281.5</b>

<sup>7</sup> Track variable usage costs are £242m and £339m under the +20% and -10% traffic scenarios respectively.

<sup>8</sup> Cost variability is 27% and 37% under the +20% and -10% traffic scenarios respectively.

The lower variability assumption in respect of masonry and brick underbridge renewals reduces this cost category from £18.5m to £13.3m, and total variable usage costs from £286.7m to £281.5m. It leads to:

- The average (freight and passenger) vehicle cost rate falling from £1.59 per kgtkm to £1.56 per kgtkm;
- The freight average vehicle cost rate falling from £1.51 per kgtkm to £1.46 per kgtkm; and
- The passenger average vehicle cost rate falling from £1.62 per kgtkm to £1.60 per kgtkm.

The above rates are between 5%-7% higher than the respective CP4 rates<sup>9</sup>.

We continue to consider that it would be prudent to place a confidence interval around our updated cost estimate. However, as discussed in more detail in Annex A, we consider that it is appropriate to reduce the confidence interval from +/-20% to +/-15%. This takes into account the findings of the related Arup and AMCL reviews and the fact that that we are proposing to continue using equivalent tonnage to allocate vertical track wear costs. Uplifting the updated freight average vehicle cost rate by 15% results in a value of £1.68 per kgtkm. This updated estimate is 13p per kgtkm lower than that which we proposed in our consultation. We believe that this updated estimate could form a suitable basis for placing an early cap on freight VUCs, should ORR consider this to be appropriate.

#### *Freight only line charge*

Following careful consideration of consultation responses, we believe that it continues to be appropriate to retain the freight only line definition established in PR08, and adjust for the fact that some lines carry multiple commodities using each commodities share of gross tonnage.

We have replaced the related renewals mark-up with a 'bottom up' cost estimate based on IIP signalling renewals forecasts. The calculation involves identifying the interlockings that control each freight only line. The percentage of signalling assets in the interlocking that are on the freight only line is then applied to the signalling renewals cost of the interlocking as per the IIP forecast. This refinement in the methodology reduces the estimate of related renewals costs from £1.90m and £0.22m for ESI coal and spent nuclear fuel respectively to £0.62m and £0.07m.

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<sup>9</sup> In CP4 the average, freight and passenger vehicle cost rates were £1.47, £1.36 and £1.52 respectively.

Where we consider appropriate, we have also amended the initial freight only line list to take account of the detailed comments provided by DBS (see Annex B for more detail). In addition, for two further freight only lines we have replaced our 'top down' traffic assumptions with actual traffic data. We consider that the aforementioned adjustments to our initial analysis give rise to more robust updated cost estimates of £4.94m and £1.27m for ESI coal and spent nuclear fuel respectively<sup>10</sup>. Therefore, we consider that a narrower confidence interval of +/- 15% to be appropriate. We still believe that it would be prudent to cap charges at the upper limit of this confidence interval. Uplifting our updated ESI coal and spent nuclear fuel cost estimates by 15% results in respective estimates of £5.68m and £1.46m<sup>11</sup>. We consider that these updated estimates could form a suitable basis for placing an early cap on freight only line charges, should ORR consider this to be appropriate.

For the avoidance of doubt, in the unlikely situation that our final variable usage and / or freight only line charge cost estimates exceed any caps determined by ORR, we would still expect to receive the difference in revenue as part of the Periodic Review settlement. We would be grateful for confirmation from ORR in this respect.

### **Other work**

We note that the independent reporter, Arup, is currently in the process of reviewing the initial cost estimates contained in our freight caps consultation. However, Arup is not due to conclude its review until early April 2012 and thus the revised cost estimates, and confidence intervals, included in this report cannot take account of any recommendations from Arup. We would expect ORR to take account of the findings of the Arup review when placing any caps on freight charges.

A related piece of work currently being undertaken by ORR is market analysis in respect of segments of the freight market that are able to bear more than the marginal cost of operating on the network. The revised freight only line cost estimates set out, above, assume that charges will continue to apply to ESI coal and spent nuclear fuel only<sup>12</sup>. However, ORR's market analysis will ultimately determine the commodities that are able to contribute towards fixed costs, and thus we may have to refine our analysis accordingly.

It should also be noted that in the context of the 'freight package' ORR has requested that we estimate "freight avoidable costs" i.e. the theoretical cost savings that would result from removing freight traffic from the network in its entirety. This cost estimate could inform any contribution from freight operators towards network-wide fixed

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<sup>10</sup> The initial cost estimates included in our freight caps consultation were £6.79m and £1.54m for ESI coal and spent nuclear fuel respectively.

<sup>11</sup> In our freight caps consultation we proposed applying a +/-20% confidence interval to our initial cost estimates and capping ESI coal and spent nuclear fuel at £8.15m and £1.85m respectively.

<sup>12</sup> In PR08 ORR determined that ESI coal and spent nuclear fuel were the only two commodities capable of contributing towards the fixed costs of freight only lines.



costs, subject to the results of ORR's market analysis. In 2005 AEA Technology (now Delta Rail) investigated the feasibility of developing an avoidable cost approach to allocating and recovering fixed costs<sup>13</sup>. This exercise evaluated the avoidable costs associated with removing each TOC in turn and assumed that freight operators were a single operator. Network Rail subsequently refined the work carried out by AEA Technology to calculate its own estimate of freight avoidable costs of £275m-£325m (including freight only line costs and variable costs)<sup>14</sup>. We propose revisiting this work in order to produce an updated estimate of freight avoidable costs. We will be transparent about the proposed methodology for developing this cost estimate and engage with the industry in relation to this issue.

As noted in our consultation letter, separately and as part of our response to ORR's first PR13 consultation, we proposed that where segments of the freight market are deemed to be able to bear more than the marginal cost of operating on the network, consideration should be given to these segments contributing towards network-wide fixed costs and not just the fixed costs of freight only lines. We are, however, mindful of the fact that some rail freight customers contracts run for several years and thus consideration may need to be given to any new charge in this respect being phased in. If it is concluded that certain segments should contribute towards network-wide fixed costs, we would anticipate that the freight only line charge would be replaced with a mark-up on variable usage charges for journeys made by those commodities.

## Next steps

In summer 2012 we are aiming to issue a detailed consultation that explains how we propose translating our variable usage and freight only line cost estimates into indicative individual vehicle charges. This consultation will inform the proposed individual vehicle charges in our January 2013 Strategic Business Plan. Please note that as part of our recent consultation on a revised approach for allocating freight vehicles to suspension bands<sup>15</sup> we set our initial thinking on suspension bands and VUCs in CP5. For ease of reference we have included the relevant extract from the suspension banding consultation letter in Annex D.

If you would like to discuss any aspect of this letter please do not hesitate to contact Ben Worley (Ben.Worley@networkrail.co.uk) or myself.

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<sup>13</sup> Available at: [http://www.rail-reg.gov.uk/upload/pdf/aea\\_recov\\_fixed\\_rep-oct05.pdf](http://www.rail-reg.gov.uk/upload/pdf/aea_recov_fixed_rep-oct05.pdf)

<sup>14</sup> Available at:  
<http://www.networkrail.co.uk/browse%20documents/regulatory%20documents/access%20charges%20reviews/consultations%20on%20future%20charging/freight%20charges/f%20-%20freight%20costs%20update%20151106.pdf>

<sup>15</sup> Available at:  
[http://www.networkrail.co.uk/browse%20documents/regulatory%20documents/access%20charges%20reviews/cp4%20charges/h%20-%20cp4%20suspension%20banding%20review/allocating%20freight%20vehicles%20to%20suspension%20bands%20-%20consultation%20on%20a%20revised%20approach%20\(march%202012\).pdf](http://www.networkrail.co.uk/browse%20documents/regulatory%20documents/access%20charges%20reviews/cp4%20charges/h%20-%20cp4%20suspension%20banding%20review/allocating%20freight%20vehicles%20to%20suspension%20bands%20-%20consultation%20on%20a%20revised%20approach%20(march%202012).pdf)

Yours sincerely,

**Peter Swatridge**

Head of Regulatory Economics

## **ANNEX A – RESPONSES TO DETAILED REPRESENTATIONS**

The purpose of this annex is to set out the detailed representations made by stakeholders and our responses, shown in *italics*, to those representations. We have grouped the representations under what we consider to be suitable headings.

### **General**

DRS, GBRf, RFG, DBS and FL support the principle of placing an early cap on certain freight charges. GBRf noted that the freight cap, once agreed, is an important tool for FOCs to try to fix their costs for both their existing and, importantly, new customers.

However, DBS stated that if the cap it set too high it would be counter-productive as it will not give the assurance that is intended. FL argued that without including capacity charges and the possible scarcity and reservation charges the desire of providing certainty to customers and investors is undermined. Similarly, DBS noted that rail freight operators and their customers view freight track access charges in the round and, therefore, any cap must capture a sufficiently large proportion of total freight charges.

RFG and DBS expect ORR to scrutinise the analysis contained in the consultation and FL emphasised the need for transparency in relation to the findings of the reporters regarding the validation of the changes in variability and unit cost assumptions.

### **Network Rail response**

*Network Rail recognises that the freight community faces significant competition from road hauliers and we continue to believe that there is considerable merit in placing an early cap on certain freight charges. As such, we have expedited our analysis in relation to VUCs and freight only line charges in order to facilitate ORR placing a cap on these charges, if it considers this to be appropriate. We look forward to continuing to work closely with the industry in respect of this issue.*

*We are mindful of the need to balance the uncertainty in relation to our initial cost estimates with the need to set any cap at a level that provides stakeholders with a reasonable degree of assurance in relation to the maximum level of future charges. We consider that our updated proposed caps, set out above, strike a reasonable balance in this respect.*

*The scope of charges potentially subject to caps is a decision for ORR rather than Network Rail. We note, however, that in 2010/11 freight VUCs made up 75% of total freight track access charge income<sup>16</sup>.*

*The analysis and assumptions contained in our consultation are currently being reviewed by the independent reporter Arup. We will be transparent about the results of the Arup review and the final report will, therefore, be published.*

## **Variable usage charges**

### **Apportioning costs between freight and passenger traffic**

DRS, GBRf, RFG and DBS are content with our proposal to apportion costs between freight and passenger traffic based on the relationship between gross and equivalent tonnage in the CP4 VUC model.

#### **Network Rail response**

*We note that stakeholders are content with our proposed approach to apportion costs between freight and passenger traffic based on the relationship between gross and equivalent tonnage in the CP4 VUC model. We do not intend to revisit our analysis in this respect. For the avoidance of the doubt, this split is indicative and has been calculated for the purpose of this analysis, the final split will be determined following the development of the CP5 VUC model.*

### **Form of the cap**

DRS, GBRf, RFG, DBS and FL support our proposal that the most appropriate way of placing a cap on charges is likely to be to determine a maximum average £ per kgtkm rate for freight traffic. However, DBS stated that the variable rate should be expressed in terms of 'kgtms' rather than 'kgtkms' as this would be consistent with the way in which freight variable track access charges are currently levied.

#### **Network Rail response**

*We note that stakeholders support our proposal to place a cap on VUCs in the form of a maximum average £ per kgtkm rate. We are, therefore, proposing to ORR that any cap on VUCs takes this form. We have continued to express rates in terms of 'kgtkms' rather than 'kgtms' in order to aid consistency between documents but note a conversion factor of 1.609 can be applied to get from one to the other.*

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<sup>16</sup>Network Rail, Regulatory Financial Statements Year Ending 31 March 2011

## Confidence interval

DRS, GBRf, RFG, DBS and FL consider our proposed +/-20% confidence interval to be too wide and argue that given the evolution in track modelling (from the ICM to VTISM and the SRSMM) a narrower confidence interval should be applied. DRS and RFG believe that +/- 10% would be more appropriate, similarly GBRf, DBS and FL consider that the confidence interval should be no wider than +/- 10%.

DBS noted that capping charges at the upper limit of our proposed +/- 20% confidence interval represents a 33% increase over the average CP4 vehicle cost and, in its view, this sends entirely the wrong signal. FL also stated that the proposed level of the cap does not provide freight operators a sufficiently small departure from current charges to feel comfortable with its release to the wider market.

### Network Rail response

*It is important that the confidence interval reasonably reflects the uncertainty associated with our initial cost estimates and, therefore, appropriately reduces the risk that the final level of charges will exceed the caps that we propose. When we proposed the +/-20% confidence interval the results of the Arup IIP Tier 0&1 Model Audits and Asset Management Consulting Limited (AMCL) review of our asset policies were still outstanding. We have now received the results of these pieces of work. The Arup model audits summarised results for computational integrity and data inputs using the following traffic light system:*

- **Green:** No errors or small number of superficial errors found;
- **Amber:** Minor errors found that have a small but detectable impact on volumes and costs; and
- **Red:** Major errors found that have material impact on volumes and costs.

*In respect of computational integrity the track models received a green and green/amber rating. For data inputs they received a green and an amber rating. Furthermore, and perhaps more importantly, the AMCL review concluded that our track asset policy (including associated activity volumes and expenditure estimates for CP5) fully meets the criteria for robustness. It is this policy and the associated activity volumes and expenditure estimates that are incorporated into VTISM and form the basis of our track variable usage cost calculation.*

*There is greater uncertainty, however, in relation to track policy delivery (e.g. planning capability and workforce competence) but this is unlikely to affect our track variable usage cost estimate. Given track costs account for the vast majority of variable usage costs; the findings of the Arup and AMCL reviews provide us with*

*reasonable comfort in relation to the robustness of our initial track variable usage cost estimate.*

*The Arup model audit gave signalling a green rating for both computational integrity and data inputs. Moreover, the AMCL review found that the signalling asset policy fully meets the criteria for robustness. Earthworks received a green rating from Arup for computational integrity and a green/amber rating for data inputs. Arup gave structures a green rating for computational integrity but a red rating for data inputs. The red rating for structures data inputs indicates greater uncertainty in relation to our initial variable usage costs estimates for these assets. One could also argue that the 'non-track' assets are subject to greater uncertainty generally because the 'top down' variability estimates are more subjective than the 'bottom up' track calculation. However, as noted above, track comprises the vast majority of variable usage costs and the Arup and AMCL findings provides us with reasonable comfort in relation to the overall robustness of our initial estimate of variable usage costs.*

*In addition to the uncertainty in respect of our initial variable usage cost estimate, the confidence interval must also take account of the uncertainty in relation to the final apportionment of these costs between freight and passenger traffic. This will be determined when the final CP5 VUC model is developed (for the purpose of this work we apportioned costs based on the relationship between gross and equivalent tonnage in the CP4 VUC model). This apportionment represents a considerable uncertainty; however, following the publication of the freight caps consultation we met with stakeholders to discuss this issue further<sup>17</sup>. Based on these discussions, and subject to further consultation, we propose continuing to allocate vertical track wear costs<sup>18</sup> to individual vehicles based on equivalent tonnage<sup>19</sup>. If this approach were to be adopted in CP5, it would mitigate against a materially different apportionment of variable usage costs between freight and passenger traffic.*

*Considering the uncertainty in relation to our initial variable usage cost estimates in the round, taking into account the findings of the Arup and AMCL reviews and our proposal to continue using equivalent tonnage to allocate vertical track wear costs, we believe that it is appropriate to reduce the confidence interval from +/-20% to +/-15%. Because any cap would be a 'one way bet' we continue to consider that it would be prudent to cap charges at the upper limit of this confidence interval. Uplifting our updated freight average vehicle cost rate by 15% results in a proposed cap of £1.68 per kgtkm.*

*As noted above, this view cannot take into consideration the findings of the Arup review of the initial costs estimates contained in our freight caps consultation*

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<sup>17</sup> The meeting took place at Network Rail offices on 13 February 2012 and was attended by ATOC, DBS, FL and NR.

<sup>18</sup> In CP4 vertical track wear accounted for 70% of all track damage.

<sup>19</sup> Equivalent tonnage takes into account axle load, speed, un-sprung mass and bogie suspension.

*because of the timing of that work. We would expect ORR to take account of these findings when placing any caps on freight charges.*

## **Signalling assumptions**

DRS and RFG consider that the difference between the 18% variability assumption applied to points costs within signalling maintenance and the 44% variability assumption applied to minor works points renewals should be explained in more detail. DBS considered the 44% variability assumption applied to minor works points renewals seems extremely excessive for what is in effect a track asset that DBS would expect to be covered in the 'bottom up' approach.

DRS, RFG and FL believe that costs associated with road user misuse at level crossings as a result of frustration at the increased frequency of closing due to increased rail activity should be treated as fixed costs.

### Network Rail response

*We have analysed the impact of increased rail traffic on the various assets and identified the principle drivers of increased maintenance, failures and reduction in asset life. There are a multitude of minor impacts where it was not considered cost effective to attempt to analyse or quantify the impacts. Whilst it may be argued that those items identified could be reduced marginally, we consider that our initial signalling variable usage cost estimates are a reasonable portrayal of the relationship between costs and traffic.*

*We explain the difference between the 18% variability assumptions applied to points costs within signalling maintenance and the 44% variability assumption applied to minor works points renewals in more detail, below.*

*The 18% variability assumption applied to points costs within signalling maintenance is made up as follows (assuming a 100% traffic increase and a linear relationship between costs and traffic):*

- We expect a 50% increase in reactive works resulting from additional remote conditioning monitoring (RCM) system alarms and works arising following planned maintenance visits. RCM alarms require a measured and appropriate intervention response to system change alerts that require staff to check the system and either reset or plan minor tasks. The numbers of both positive and precautionary alerts from condition monitoring are expected to increase with traffic since the weight, speed and consequent vibration of trains leads to alarms. Whether requiring remedial work or not, the alerts require analysis and in most cases site attention. These activities divert response staff from other work and require extra resource to maintain the expected response times to incidents. Works arising are minor tasks identified during planned inspection*

*that cannot be addressed at the time, are not immediately impacting the assets performance but require remedial works to ensure the asset continues to function reliably (e.g. replacement of a worn crank). We consider that 20% of maintenance time on points is currently due to some factor of RCM response and reactive (work arising) maintenance and, therefore, this leads to a 10% (50%\*20%) increase in maintenance costs.*

- We expect, under the Network Rail 'RoSE'<sup>20</sup> initiative, the percentage of points subject to 6 weekly checks to increase from 10% to 20% (i.e. a 10% increase). One criterion for application of a 6 weekly maintenance regime is the number of adjustments the points have needed (either through failure or maintenance). Additional usage will cause increased need for adjustments due to increased wear and vibration. Assuming cyclical maintenance is 80% of all points maintenance, this equates to an 8% (10%\*80%) increase in these maintenance costs.*

*The sum of the 10% and 8% variability assumptions related to RCM and 6 weekly checks respectively result in an overall cost variability assumption for points costs of 18%.*

*The 44% variability assumption applied to minor works points renewals is based on extensive analysis of the requirement to replace point operating equipment and components. A decision support tool has been developed based on historic data which indicates that some types of mechanism (or parts of the system) are more prone to vibration and track impact damage. The variability assumption is made up as follows (assuming a 100% traffic increase and a linear relationship between costs and traffic):*

- We expect a 100% increase in traffic results in a 100% increase in Clamp-lock point operating equipment renewals, and a 25% increase in standard point motors renewals. Clamp-locks are more sensitive to traffic increases as they are mounted directly on the rail and are less substantial than point machines in their construction.*
- We consider that the national ratio of Clamp-locks to standard point motors is 25:75 respectively.*

*Based on the above information, the 44% variability assumption can be calculated as follows: 44% = (100%\*25%) + (25%\*75%), rounded to the full percentage point.*

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<sup>20</sup> Reliability centred maintenance Of Signalling Equipment. In CP4 RoSE has focussed on assessing the maintenance requirements of assets with frequent inspection / maintenance cycles with a view to removing unnecessary maintenance visits. For CP5, this approach will be extended further, and to new signalling equipment (e.g. lightweight / modular signalling).



*In response to the specific representation from DBS, point mechanisms are not a track asset and these costs are only included in the signalling analysis. The estimates for Clamp-lock and point machine renewals are based on experience from various sites with different traffic levels. For example, Clamp-locks in the London Waterloo area are changed, typically, every 3 years to maintain performance whereas in less heavily utilised locations such as Minster Junction in Kent, renewal intervals for the Clamp-lock exceeds 10 years.*

*We have reviewed the inclusion of costs associated with road user misuse at level crossings. An example of the misuse costs that we are referring to is motorists passing red lights and damaging barriers as they descend. Whilst we recognise that these costs are of a different nature to other variable usage costs (i.e. imposed by a third party – the motorist), we continue to consider that it is appropriate to include these costs in the variable usage charge. In our opinion, there is a clear correlation between traffic levels and misuse; therefore, it is appropriate to recover these costs through the variable usage charge. Increased traffic levels will result in level crossings operating more frequently, thus increasing the probability that barriers will be damaged as they descend. At peak times there is an additional risk that motorists will join the end of a queue at a crossing and, as a result, become frustrated making them more inclined to pass red lights and damage barriers as they descend.*

*Level Crossings are a high-profile risk issue for the whole industry and in addition to misuse, a significant change in traffic would require the safety risk at all crossings on the route to be reassessed. Of particular note is the requirement to review the safety arrangements at user worked crossings leading to increased maintenance or upgrades.*

## **Civils assumptions**

DRS, GBRf, RFG and FL consider that further analysis / justification is required in respect of our ‘top down’ variability assumptions, particularly in relation to brick and masonry underbridge renewals. GBRf requests confirmation that we have not assumed that all structures and embankments are in as poor a condition as the worst identified structure. The detail provided caused FL concern regarding the movement of absolute costs with respect to the non-track variable costs (civils and signalling). It provided the, below, table in its consultation response and requested that we complete it and explain the movement in costs:

		11/12 Prices & End CP4 Efficiency		
		PR08	PR13	Movement
Civils	Embankment renewal	33	32	(1)
	Metallic bridge renewal	95	49	(46)
	Brick & masonry underbridge renewal	#N/A	93	
	Cluverts renewal	#N/A	9	
	<b>Total</b>	<b>128</b>	<b>183</b>	<b>55</b>
Signalling	Maintenance	120	137	17
	Minor works points renewal	#N/A	12	
	<b>Total</b>	<b>120</b>	<b>149</b>	<b>29</b>

### Network Rail response

*In our freight caps consultation we proposed extending the 20% variability assumption previously applied to metallic underbridge renewals to brick and masonry underbridge renewals. This reflected our experience 'on the ground' that suggests these costs vary with traffic.*

*Masonry arches have historically been reliable because the weight of vehicles using them has been small in comparison to the weight of the structure itself. Hence, the fluctuating load was well within the capacity of the materials the bridge was constructed from. For passenger and light freight traffic we consider that this still remains the case today. However, we have observed that heavy freight traffic, composed of four axle bogie wagons with axle loadings in excess of 22.5 tonnes, causes greatly increased deterioration in arches.*

*Recently, as a result of a safety issue with arch viaducts in Scotland, we conducted research to monitor a range of structures and model the effects of this heavy traffic<sup>21</sup>. We are now able to better understand the interaction between heavy wagons and arches, the cause of the rapid deterioration, and identify the groups of structures at risk. The research has confirmed the observational evidence that heavy freight traffic is damaging many arches and that in addition to ongoing work, any new heavy freight flows will lead us to identify, monitor and undertake precautionary works to arches that fall in the highest risk groups.*

*We have reviewed our proposal to extend the 20% variability assumption previously applied to metallic underbridge renewals to brick and masonry and underbridge renewals. We now consider that a better approach would be to estimate masonry and brick underbridge variable usage costs on 'existing'<sup>22</sup> and 'new'<sup>23</sup> heavy freight routes. We believe that there is merit in distinguishing between 'existing' and 'new' heavy freight routes because the degree of cost variability on these routes is likely to vary materially. Unlike on 'new' routes, vulnerable arches on 'existing' routes will have already been strengthened; either by a large number of small repair schemes or a major maintenance/renewal intervention. Ongoing work is then a steady state process enhanced to facilitate heavy freight traffic and cover the increased rate at which minor repairs will have to be carried out. The result is that renewal costs will be considerably less variable with traffic.*

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<sup>21</sup> The research was carried out jointly by Mott MacDonald and Gifford & Partners with the prime objective of understanding the safety risk to these structures.

<sup>22</sup> Routes historically subject to significant heavy freight traffic e.g. West Coast Main Line.

<sup>23</sup> Routes not historically subject to significant heavy freight traffic e.g. the Glasgow South Western Line.

Therefore, in respect of 'existing' routes, based on engineering judgement we estimate that for a 'national average' 70 mile section of track subject to heavy freight traffic that £200K per annum would be required to remedy the effects of heavy freight traffic. This would cover minor works such as spandrel ties and fracture stitching that are typically required on 'existing' heavy freight routes. We can extrapolate this cost estimate across the proportion of the network<sup>24</sup> that we estimate, based on expert judgement, is made up of 'existing' heavy freight routes in order to derive a national estimate of £10.98m<sup>25</sup>.

In respect of 'new' routes, based on engineering judgement we estimate that for a 'national average' 70 mile section of track subject to heavy freight traffic that £2.1m would be required to remedy the effects of heavy freight traffic. This estimate is based on our annual renewals expenditure on the Settle and Carlisle Line which is approximately £3.5m per annum, reduced by 40% to reflect the fact that this line has more extreme topography with a greater number of larger structures; necessitating higher renewal costs than one would expect on the rest of the network more generally. We can extrapolate this cost estimate across the proportion of the network<sup>26</sup> that we estimate, based on expert judgement, that is made up of 'new' heavy freight routes in order to derive a national estimate of £2.35m<sup>27</sup>.

Based on the, above, cost estimates for 'existing' and 'new' heavy freight routes we estimate total masonry and brick variable usage costs to be £13.3m<sup>28</sup> per annum, this equates to a variability assumption of 14%<sup>29</sup>. We consider this revised estimate to be more robust than our original estimate of 20%. It should not, however, prejudice the outcome of any further analysis in respect of this issue, including that being carried out by freight operators, which we welcome.

Moreover, we can confirm that our 'top down' variability assumption was not predicated on the assumption that all structures and embankments are in as poor a condition as the worst identified structure. Rather, we assumed a mix of asset conditions that reflect the GB railway's estate.

Please see, below, as requested, a completed version of the table provided by FL. The 'missing' numbers that we have completed are shown in red:

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<sup>24</sup> We estimate that 40% (3920 route miles) of the network is used by heavy freight traffic and that 98% of the 40% (3842 route miles) is made up of heavy freight on 'existing routes'.

<sup>25</sup> £10.98m = (£200,000/70)\*3842 route miles

<sup>26</sup> We estimate that 40% (3920 route miles) of the network is used by heavy freight traffic and that 2% of the 40% (78 route miles) is made up of heavy freight on 'new' routes.

<sup>27</sup> 2.35m = (£2.1m/70)\*78 route miles

<sup>28</sup> £13.3m = £10.98m+£2.35m

<sup>29</sup> 14%=£13.3m/£92.7m. £92.7m is the long run average masonry and brick underbridge renewals expenditure.

		<b>(£m) 2011/12 prices at end CP4 efficiency</b>		
		<b>PR08</b>	<b>PR13</b>	<b>Movement</b>
<i>Civils</i>	<i>Embankment renewal</i>	33	32	(1)
	<i>Metallic underbridge renewal</i>	95	49	(46)
	<i>Brick &amp; masonry underbridge renewal</i>	62	93	31
	<i>Culverts renewal</i>	9	9	0
	<b>Total</b>	<b>199</b>	<b>183</b>	<b>(16)</b>
<i>Signalling</i>	<i>Maintenance</i>	120	137	17
	<i>Minor works points renewal</i>	17	12	(5)
	<b>Total</b>	<b>137</b>	<b>149</b>	<b>12</b>

*The variance between the PR08 and PR13 values primarily reflects our updated view of the costs in respect of each category based on the latest information available.*

*With respect to culverts, these are at greater risk where they are at a shallow depth below the track because they are generally of small diameter. Shallow culverts are affected by every axle as a pulsating load whereas deep culverts only see a general increase in loading as the train goes over. Only a proportion of culverts are, therefore, affected to a greater or lesser degree dependent on span and depth. The cost variability as a population of culverts is, therefore, lower relative to other structures and we continue to consider that it is appropriate to apply a 5% variability assumption.*

*We continue to consider that it is appropriate to retain the variability assumptions applied in PR08 in respect of metallic underbridge and embankment renewals.*

## **Traffic scenarios**

Broadly speaking DRS, GBRf, RFG and DBS were content with the range of increased traffic scenarios (+5%, +10% and +20%) that we selected in order to estimate track variable usage costs. However, these stakeholders, and FL, expressed concern in relation to the absence of a reduced traffic scenario in our track variable usage cost modelling.

In addition, RFG stated that the current modelling approach (applying the same growth figures for all sectors) is likely to overstate charges because heavy bulk sectors such as coal are forecast to be essentially flat, whilst lighter intermodal and retail sectors are expected to grow.

FL also expressed concern that the baseline is a forecast value for 2013/14 rather than an actual activity level, e.g. 2010/11. It stated that as VTISM and SRSMM are “new” to the process of determining activity it would expect validation of these models’ results against a known level of activity and the resulting renewal and maintenance experienced.

In respect of our choice to use the +20% scenario, specifically, to estimate track variable usage costs, responses from stakeholders were mixed. DBS, for example, considered using the +20% traffic scenario to be appropriate whereas RFG and DRS stated that it “insulates” Network Rail against a failure to achieve expected traffic growth. Whilst expressing caution about the linear relationship between costs and traffic, FL note that using the +20% traffic scenario is largely irrelevant as the £ per kgtkm rate remains materially constant.

#### Network Rail response

*We note that stakeholders are content with the range of increased traffic scenarios (+5%, +10% and +20%) that we selected in order to model track variable usage costs. We, therefore, do not intend modelling any further increased traffic scenarios.*

*Following the representations from stakeholders in respect of the absence of a reduced traffic scenario we have carried out some further analysis for a scenario where traffic decreases by 10%. This required a modification to the approach used for the increased traffic scenarios because the previous methodology did not match the track condition from the baseline scenario. Rather than changing the maximum spend in each period by a constant factor, the budget was gradually reduced over the first few years. The revised approach gave a much closer fit to the baseline track condition profile for the reduced traffic scenario.*

*We would remind stakeholders that the purpose of varying traffic volumes in VTISM is to generate a relationship between track maintenance and renewal costs and traffic. From this relationship, it is then possible to estimate track variable usage costs. The results of the -10% traffic scenario indicate a reduction in track maintenance and renewal costs as one would expect. Indeed, under this scenario cost variability increases from 27% to 37%. This gives rise to a track variable usage cost estimate of £339m, 40% higher than our original estimate of £242m based on the +20% traffic scenario. The current industry expectation is, however, that traffic volumes will continue to increase during CP5. Consistent with this our track asset policies have been devised to accommodate traffic growth. Therefore, we propose retaining our track variable usage cost estimate based on the +20% traffic scenario.*

*Whilst we acknowledge the varying growth rates for different sectors in the freight market, we do not consider that our current approach overstates variable usage charges. Our methodology was designed to establish the extent to which costs vary in response to relatively small hypothetical traffic increases. Because these traffic scenarios are hypothetical they were never intended to reflect the varying growth rates in the different sectors but to create a cost variability relationship based on different traffic levels. Therefore, we do not intend revisiting our analysis in this respect.*

*We selected an end CP4 (2013/14) traffic baseline for the purpose of this analysis because this work will inform variable usage charges to be levied from the beginning of CP5. Please note, however, that the VTISM analysis starts from 2011/12 (i.e. the current condition of the track and current traffic levels). The renewal and maintenance volumes are those proposed in our workbanks and maintenance schedules. When run through the VTISM model, the track condition is stable. Thus, there is an established relationship between the requirements of the track engineers and Route Asset Managers, their expectations of the track condition and the model predictions, which have been borne out by recent experience. The model then increases the traffic to the end of CP4, in line with expected traffic increases. The scenario assessments are then started from this point. Therefore, we do not consider it necessary to revisit our analysis in this respect.*

*It appears based on consultation responses that there is some confusion about the implications of basing our track variable usage cost estimate on the +20% traffic scenario. In response to the representations from RFG and DRS we would reiterate that this traffic scenario is hypothetical. It is also not clear to us how our decision to use the +20% traffic scenario insulates us against a failure to achieve expected traffic growth. FL correctly identify that our decision to use the +20% traffic scenario is largely irrelevant because the £ per kgtkm rate remains materially constant, however, we would point out that if we used either +5% or +10% traffic scenario total variable usage costs would be marginally higher<sup>30</sup>. We do not consider it necessary to revisit our analysis in this respect.*

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<sup>30</sup> Track variable usage costs are £242m, £243m and £249m under the +5%, +10% and +20% traffic scenarios respectively.

## **Freight only line charges**

### **General**

FTA stated that it opposes the imposition of mark-ups on traffic segments where market analysis shows that this can be borne by these markets. While it accepts that such mark-ups on charges in these market segments are allowed under the relevant EU Directive, it feels that irrespective of whether the market segments can indeed bear such mark-ups, it sends a bad signal to other market segments.

### **Network Rail response**

*Whilst Network Rail is mindful of the competitive pressures that freight operators face, it strongly considers that where market analysis demonstrates that certain segments of the freight market can bear more than the marginal cost of operating on the network a mark-up on variable costs should apply. The application of a mark-up helps to ensure that costs are recovered from those who cause them to be incurred and contributes towards reducing the subsidy required from government.*

### **Commodity adjustment**

DBS and FL are content with our proposal to adjust for the fact that some lines carry multiple commodities based on each commodities share of gross tonnage. DRS queried that if, as expected, ESI coal and nuclear are the only two commodities deemed capable of bearing the fixed costs of freight only lines and either of these commodities run over a freight only line, say, once a week but other operators/commodities travel over the line 10 times a week how visible the VUC mark-up application would be in these circumstances.

### **Network Rail response**

*We note that DBS and FL are content with our proposed approach to adjust for the fact that some freight only lines carry multiple commodities. In response to the query from DRS, the cost to be recovered in this scenario would be equal to one eleventh of the total cost associated with that freight only line (assuming identical tonnages for all journeys), less the relevant variable usage charge income. We do not propose revisiting our analysis in this respect.*

## **Confidence interval**

DRS, GBRf, RFG, DBS and FL consider our proposed +/-20% confidence interval to be too wide, DRS proposed that a more realistic figure of +/-10% should apply. Whilst acknowledging the figures proposed by Network Rail would be used solely for the purpose of placing a cap on charges, in DBS's view, a message that charges could increase substantially would send entirely the wrong signal.

### Network Rail response

*Since the publication of our freight caps consultation we have continued working to develop a more robust estimate of freight only line costs. Specifically, we have developed a 'bottom up' estimate of related renewal costs, revised the initial freight only line list to take into account comments from DBS where appropriate, and for two lines replaced our 'top down' traffic assumption with actual data. We consider our refined freight only line cost estimates to be more robust than our original ones and, therefore, consider it to be appropriate to reduce the associated confidence interval from +/-20% to +/-15%.*

## **FOL definition**

FTA, DRS, GBRf, RFG and DBS support retaining the definition of a freight only line established in PR08. However, DBS stated that the term 'freight' in the context of the definition should not include freight services operated on behalf of Network Rail to transport materials used in the maintenance, renewal and enhancement of the network. For example, a freight-only line leading to a quarry which supplies ballast to Network Rail should not be included on the list.

### Network Rail response

*We note that stakeholders support retaining the definition of a freight only line established in PR08. In response to the representation from DBS, we agree that 'infrastructure only' lines are beyond the scope of the PR08 definition and we, therefore, sought exclude them from our initial freight only line list.*

## **Related Renewals**

GBRf note that applying a mark-up in respect of related renewals costs, without the most accurate data to support this, is not the right way forward in putting together the best case for CP5 costs. Furthermore, DBS would like to understand why Network



Rail has not been capturing relevant actual data so that instead of using 'mark ups' the estimated costs could have been based on actual data.

#### Network Rail response

*We recognise that it would have been preferable to include an estimate of related renewals costs based on current data, rather than applying a mark-up based on historic PR08 information. However, at the time we published our consultation we did not have sufficiently granular information such that we could include a more precise estimate of related renewals. Since the publication of the consultation we have calculated a more robust estimate of related renewals costs based on the updated freight only line list (incorporating the comments from DBS where we consider appropriate) and IIP signalling renewals forecasts. The calculation involves identifying the interlockings that control each freight only line. The percentage of signalling assets in the interlocking that are on the freight only line is then applied to the signalling renewals cost of the interlocking as per the IIP forecast. This refinement in the methodology reduces the estimate of related renewals costs from £1.90m and £0.22m for ESI coal and spent nuclear fuel respectively to £0.62m and £0.07m.*

#### **The initial FOL list**

DBS were the only stakeholder to provide detailed comments on our initial FOL list. Although DBS agreed with the majority of the lines specified on the list, it did have a number of comments on certain individual entries (see Annex B). DBS also stated that it believes that Network Rail maintained and operated lines that run through the Port of Immingham should also be considered for inclusion in the list.

DRS, GBRf and RFG expressed concern in respect of the fact that the FOL list in CP4 contained omissions, RFG stating that there must be an assurance now that the list is accurate.

#### Network Rail response

*We would like to thank DBS for taking the time to review our initial list of freight only lines. You can find our response to the detailed representations from DBS in Annex B, below. We do not consider that the lines which run through the Port of Immingham should be included in the freight only line list on the basis that this infrastructure is owned by Associated British Ports (ABP), rather than Network Rail.*

*It is unfortunate that some lines appear to have been omitted from the CP4 freight only list. We consider, however, that the updated freight only line list (see Annex C) represents a material improvement on the CP4 one. One of the key aims of the freight caps consultation was to establish a robust list of freight only lines taking into consideration comments from stakeholders.*

## **Renewal and unit cost rates**

RFG noted that, at the industry workshop, there was discussion in relation to whether lower renewal rates have also been included recognising the fact that work is undertaken less frequently on such routes because, effectively, they are, or could be, maintained to a lower standard than mixed traffic lines.

RFG also noted that lower unit renewal costs of 80% of the average have been used, reflecting a lower cost of doing a particular kind of work on freight only lines. It considers it to be unclear why a figure of 80% has been chosen – and not a lower value, say 50% - since the timing of the work on such lines is very much more flexible.

### *Network Rail response*

*As noted by RFG, we applied a renewal unit cost rate equal to 80% of the network average in order to reflect the reduced scope of work and easier access to freight only lines. The underlying modelling (e.g. the VTISM track modelling) also takes into account the fact that activity volumes on freight only lines are generally lower than on other parts of the network.*

*Our decision to apply a renewal unit cost rate equal to 80% of the network average was a roll forward of the assumption that the independent reporter, Halcrow, advised should be applied in PR08. We do not have any new evidence to support a different number.*

## **Traffic data**

DRS and RFG expressed concern that for some freight only lines Network Rail did not have robust traffic data and stated that this issue should be addressed / remedied.

### Network Rail response

*Since the publication of the freight caps consultation, where possible, we have replaced our 'top down' traffic assumptions with actual traffic data. We were able to do this for two further freight only lines. Hence, our calculations for 22 out of 32 of the coal and nuclear freight only lines are based on actual traffic data.*

*There is no actual traffic data available for the remaining freight only lines.*

### **The 'freight package'**

GBRf, RFG and DBS made reference to the 'freight package' in their consultation responses.

Whilst supportive of the need for rail freight to play its part in helping drive whole industry initiatives to reduce costs, DBS expressed concern that the inherent complexities of developing such a package might delay decisions by the ORR on any meaningful caps on freight track access charges. DBS and RFG suggested that ORR should set out quickly and clearly its position on this issue, including how it considers that any assessment of freight sector contributions to network-wide common fixed costs should be undertaken.

RFG and GBRf also noted that this proposal would expose the freight sector to real additional costs because, unlike in the passenger sector, any increase would not be passed back to government through the franchise regime. Furthermore, GBRf stated that there would need to be absolute certainty that these costs are the most efficient possible.

### Network Rail response

*Network Rail strongly supports the idea of a 'freight package'. As noted above, we consider that there is considerable merit in placing an early cap on certain freight charges and have proposed that consideration should be given to freight operators contributing towards network-wide fixed costs, where the market can bear it.*

*The decision in respect of whether to place an early cap on certain freight charges will be made by ORR rather than Network Rail. However, Network Rail will, of course, continue working with ORR and the rest of the industry in order to progress this work in a timely manner.*

*In respect of the proposal that freight operators contribute towards network-wide fixed costs, where the market can bear it, ORR has recently indicated to us that it is*

*mindful-to base any such contribution on 'freight avoidable costs' i.e. the theoretical cost savings that would be result from removing freight traffic from the network in its entirety. As set out above, we propose revisiting the work carried out previously in order to produce an updated estimate of freight avoidable costs. We are mindful of the fact that if this proposal were to be implemented it would expose the freight sector to real additional costs. However, as stated above, we consider that where market analysis demonstrates that certain segments of the freight market can bear more than the marginal cost of operating on the network consideration should be given to these segments contributing towards network-wide fixed costs. The application of a mark-up on variable costs helps to ensure that costs are recovered from those who cause them to be incurred and contributes towards reducing the subsidy required from government.*

## ANNEX B - NR RESPONSE TO DBS REPRESENTATIONS

The purpose of this annex is to set out, and respond to, the detailed representations made by DBS in relation to our initial freight only line list.

REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
1	BRI2	LNE	Retained	Coal ESI	Immingham to Ulceby	11.39	DB Schenker considers that this line constitutes a through route to Marsh Junction and, therefore, falls outside the freight-only line definition.	<b>Disagree.</b> This may only be used as a "through" route by leaving the network to pass through ABP facilities. We believe that for a route to be considered a "through" route the journey needs to remain on our infrastructure throughout.
2	EUB	WALES	Retained	Coal ESI	Uskmouth to East Usk Junction	2.96	This line is also used for Metals traffic and, therefore, DB Schenker considers that the ESI Coal commodity (%) should be revised to 66%.	<b>Disagree.</b> We have subsequently sourced actual traffic data which identifies 99% of traffic as ESI coal.
3	VON	WALES	Retained	Coal ESI	Cwmgwrach to Neath & Brecon Junction	12.99	In terms of the ESI Coal commodity (%), DB Schenker considers that this line is similar to the line from Onllwyn to Neath & Brecon Junction and should, therefore, not be considered 100% ESI Coal as it is likely to also convey non ESI Coal.	<b>Disagree.</b> All trains from Cwmgwrach in the December 2011 timetable are shown with Aberthaw Power Station as destination.
4	LHS1	SCO	Retained	Coal ESI	Portobello Jn – Leith South Yard	4.44	DB Schenker considers that the 'kms' are overstated as it appears the infrastructure within the Leith South leased site has been incorrectly included. DB Schenker believes that the lease boundary is at Seafield LC and, therefore, the 'kms' should be 3.94	<b>Broadly agree.</b> On further investigation we believe the track length to be 2m16ch i.e. 3.54kms.

REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
5	PBY	WEST	New	Coal ESI	Parson Street Jn - Portbury	12.25	DB Schenker believes that ELR 'PBY' consists of the infrastructure between Portbury Dock Junction and Portbury (not Parson Street Jn to Portbury) and would appear to contain minimal, if any, network infrastructure. The branch line itself is contained in ELR 'POD' which stretches from Parson Street Jn to Portishead and is proposed for future passenger services. DB Schenker, therefore, considers that the 'kms' for the Portbury/Portishead Branch ELRs should be 0.	<b>Disagree</b> on the following points of principle: (a) Sectional Appendix shows the branch as POD and PBY ELRs, mileage as 120.28 to network boundary @ 126.34 with a change of ELR at 126.32 so inclusion of PBY ELR is accurate. (b) Passenger proposal is not a committed scheme
6	AFR	WEST	New	Coal ESI	Filton West Jn to Portbury Terminal Jn	19.63	DB Schenker considers that this line constitutes a through route to Bristol via Avonmouth & Clifton and, therefore, falls outside the freight-only line definition.	<b>Agree.</b> Signalling at Avonmouth has been altered to facilitate this.
7	OXO	LNE	New	Coal ESI	Seymour Jn to Oxcroft Disposal Point	1.57	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
8	SAW	WEST	New	Nuclear Fuel	Berkeley Road Jn to Sharpness	6.52	DB Schenker is unaware of any other use for this line and, therefore, questions why the Nuclear commodity (%) is not 100%.	<b>Agree.</b> We will amend our analysis accordingly.
9	SGS	LNW	New	Nuclear Fuel	Salthouse Jn - Port of Barrow	3.26	DB Schenker considers that the 'kms' are overstated as it appears the infrastructure within the Port has been incorrectly included. DB Schenker believes that the ABP boundary is at 28m 10c and, therefore, the 'kms' should be no more than 1.25 and not 3.26	<b>Agree.</b> We believe the extent of this line is from 27m 59ch to 28m 10ch, single track.

REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
10	HUN	SCO	New	Nuclear Fuel	Hunterston - Hunterston Low Level	4.65	DB Schenker considers that the 'kms' are overstated as it appears that infrastructure owned by Clydeport has been incorrectly included. DB Schenker believes that the Clydeport boundary is at 0m 3c and, therefore, the 'kms' should be 0.6 and not 4.65.	<b>Broadly agree.</b> On further investigation we believe the track length is 36 chains i.e. 0.72kms
11	BRB	WEST	Retained	Other	Southall to Brentford Goods	4.56	DB Schenker considers that the 'kms' are overstated as it appears that infrastructure within the leased sites on the branch has been incorrectly included. DB Schenker believes that the network boundary is at 2m 11c and, therefore, the 'kms' should be no more than 3.44 and not 4.56.	<b>Agree.</b> We will amend our analysis accordingly.
12	CJA2	SUSX	Retained	Other	COM to Ardingly	1.41	DB Schenker considers that the 'kms' are overstated as it appears that infrastructure within the leased site on the branch has been incorrectly included. DB Schenker believes that the network boundary is at 0m 57c and, therefore, the 'kms' should be 0.82	<b>Agree.</b> However 57 chains is 1.15km, not 0.82km.
13	COS1	SCO	Retained	Other	Garriongill Jn to COM	1.89	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
14	COS2	SCO	Retained	Other	COM to Coltness	0.18	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.

REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
15	MTL2	SCO	Retained	Other	COM – Methil	1.33	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
16	OWW	LNW	Retained	Other	Stourbridge North Junction to Round Oak	14.85	DB Schenker considers that the 'kms' are overstated and believes that they should be 11.35 and not 14.85.	<b>Agree.</b> We will amend our analysis accordingly.
17	PYE2	LNE	Retained	Other	ABP boundary to COM	7.1	DB Schenker considers that this line constitutes a through route to Marsh Junction and, therefore, falls outside the freight-only line definition.	<b>Disagree.</b> This may only be used as a "through" route by leaving the network to pass through ABP facilities. We believe that for a route to be considered a "through" route the journey needs to remain on our infrastructure throughout.
18	PYE1	LNE	Retained	Other	COM to Humber Road Jn	4.12	DB Schenker considers that this line constitutes a through route to Marsh Junction and, therefore, falls outside the freight-only line definition.	<b>Disagree.</b> This may only be used as a "through" route by leaving the network to pass through ABP facilities. We believe that for a route to be considered a "through" route the journey needs to remain on our infrastructure throughout.
19	SCN	LNW	Retained	Other	Eccles to Weaste	1.34	DB Schenker considers that the 'kms' are overstated and believes that they should be 1.18 and not 1.34 as they should not include the Down Passenger Loop or any MSC infrastructure.	<b>Agree.</b> We will amend our analysis accordingly.
20	THN	ANG	Retained	Other	Thames Haven Jn to Thames Haven	6.46	DB Schenker understands that this branch is subject of a TWAO and be part transferred to Thames Gateway Port. Therefore, the 'kms' need to be revised accordingly to take account of agreements between Network Rail and Thames Gateway.	<b>Agree.</b> The commissioning of the rail element of the LGW Port scheme should take place shortly before the start of CP5. This will shorten the extent of network to between 26m 41ch and 28m 12ch = 1m 51ch of double track. We will amend our analysis



REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
								accordingly.
21	FRY	WEST	New	Other	Friary Jn to Plymouth Friary	1.21	DB Schenker believes that sections of this line may be used by empty coaching stock movements to/from Laira Depot, particularly at the north end. If so, 'kms' need to be revised accordingly..	<b>Agree.</b> We consider that halving the mileage would be appropriate and will amend our analysis accordingly.
22	BPH	LNW	New	Other	Hardingstone LC to Northampton South Jn	2.37	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
23	FEP	LNE	New	Other	Pelaw Jn to Wardley	1.71	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
24	BOC1	LNE	New	Other	Seymour JN to former Markham Colliery Jn	0.93	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.
25	HCM	LNW	New	Other	Silverdale to Madeley	7.78	This line is currently out of use and is the subject of a Short Term Network Change. DB Schenker considers that its future should be ascertained before it should be included on the list.	<b>Disagree.</b> The current Short Term Network Change (STNC) status means that Network Rail is obliged to re-instate on demand. We, therefore, consider that it should be included.

REF	ELR	ROUTE	STATUS	COMMODITY	LINE NAME	Track Km	DB SCHENKER COMMENTS	NETWORK RAIL RESPONSE
26	MWN	LNE	New	Other	Marsh Jn West to ABP Boundaries	2.21	DB Schenker considers that this line constitutes a through route to Marsh Junction and, therefore, falls outside the freight-only line definition.	<b>Disagree.</b> This may only be used as a "through" route by leaving the network to pass through ABP facilities. We believe that for a route to be considered a "through" route the journey needs to remain on our infrastructure throughout.

## ANNEX C - UPDATED FOL LIST

### Explanatory Notes

1. Lines that carry coal ESI and spent nuclear fuel are shown separately from those carrying other commodities.
2. Lines that do not carry coal ESI and spent nuclear fuel have been attributed "Other" in respect of the commodity type.
3. A commodity % has not been included for non coal ESI and spent nuclear fuel lines because ORR's market analysis is not yet complete.
4. "Retained" lines were considered to be freight only in PR08 and are also considered to be freight only in PR13.
5. "New" lines were not included in the PR08 list of freight only lines.
6. COM = Change of Mileage.

### Coal ESI and spent nuclear fuel list

ELR	Route	Retained / New	Commodity	Line Name	Track km	Commodity (%)	Expert traffic judgement (Y/N)
AYH1	SCO	Retained	Coal ESI	Ayr Harbour to Newton Jn	1.22	13%	N
BGE	LNE	Retained	Coal ESI	Boldon East Jn and Boldon West Jn – Tyne Dock	2.53	92%	Y
BRI2	LNE	Retained	Coal ESI	Immingham to Ulceby	11.39	40%	N
BWC	LNE	Retained	Coal ESI	Marchey's House to NR/Alcan Boundary	4.37	23%	N
BWO2	LNE	Retained	Coal ESI	Butterwell Jn – Signal B1	0.97	100%	N
DRA1	LNE	Retained	Coal ESI	Drax Branch Jn – Drax Power Station	13.52	80%	N
EUB	WALES	Retained	Coal ESI	Uskmouth – East Usk Jn	2.96	99%	N
HAC	LNE	Retained	Coal ESI	Firbeck Jn – Harworth Colliery	5.52	100%	Y
HJS	LNE	Retained	Coal ESI	Hessle Road South Jn – Hull Docks	9.31	87%	N
KCH1	SCO	Retained	Coal ESI	Annbank to Killoch	8.47	100%	N

ELR	Route	Retained / New	Commodity	Line Name	Track km	Commodity (%)	Expert traffic judgement (Y/N)
KSH	SCO	Retained	Coal ESI	Bank Jn – Greenburn Jn	1.07	100%	Y
LHS1	SCO	Retained	Coal ESI	Portobello Jn – Leith South Yard	3.54	88%	N
MJI1	LNW	Retained	Coal ESI	Madeley Jn to Ironbridge	10.01	92%	N
NAB	WALES	Retained	Coal ESI	Neath and Brecon Jn - Onllwyn	16.26	43%	N
SCT1	LNW	Retained	Coal ESI	Bootle Branch Jn – Regent Road LC	3.46	80%	N
TYB1	LNE	Retained	Coal ESI	Cottam Powergen to Clarborough Jn	11.56	90%	N
VON	WALES	Retained	Coal ESI	Cwmgwrach - Neath and Brecon Jn	12.99	100%	Y
VON	WALES	Retained	Coal ESI	Hirwaun – Aberdare	5.79	99%	N
WAT	SCO	Retained	Coal ESI	Dalrymple to Chalmerston	14.81	99%	N
WKC	LNE	Retained	Coal ESI	Welbeck Colliery Jn – Welbeck Colliery	4.49	95%	N
WSB	LNE	Retained	Coal ESI	West Sleekburn to North Blyth	5.27	44%	N
MTL1	SCO	New	Coal ESI	Thornton North Jn – COM	7.52	100%	Y
OXO	LNE	New	Coal ESI	Seymour Jn to Oxcroft Disposal Point	1.57	100%	Y
PBY	WES	New	Coal ESI	Parson Street Jn - Portbury	12.25	91%	N
PTA	WALES	New	Coal ESI	Cwmbargoed - Ystrad Mynach South Jn	14.50	95%	N
TYC	LNE	New	Coal ESI	Thoresby Colliery Jn - Thoresby Colliery	1.89	100%	Y
APL	KENT	Retained	Nuclear Fuel	Appledore – Lydd Town	15.00	95%	N
SIZ	ANGLIA	Retained	Nuclear Fuel	Saxmundham Jn to Sizewell	7.22	95%	N
SOT	LNE	Retained	Nuclear Fuel	Seaton Snook Jn – Hartlepool Power Station	2.13	100%	N
HUN	SCO	New	Nuclear Fuel	Hunterston - Hunterston Low Level	0.72	100%	Y
SAW	WES	New	Nuclear Fuel	Berkeley Road Jn - Sharpness	6.52	100%	Y
SGS	LNW	New	Nuclear Fuel	Salthouse Jn - Port of Barrow	0.62	100%	Y
<b>Total</b>					<b>219.5</b>		

### Non coal ESI and spent nuclear fuel list

ELR	Route	Retained / New	Commodity	Line Name	Track km
GNT	WALES	New	Other	Gwaun-Cae-Gurwen - Pantyffynnon Jn	10.92
AGW	KENT	Retained	Other	Angerstein Jn to Angerstein Wharf	1.23
BGL2	WEST	Retained	Other	Yate South to Westerleigh	4.46
BRB	WEST	Retained	Other	Southall to Brentford Goods	3.44
BSC	EMIDS	Retained	Other	Corby North to Corby BSC & Network Rail Boundary	0.31
BSN	LNW	Retained	Other	Carlisle Yard Recess Sidings to Stainton Jn	1.67
BUX	LNW	Retained	Other	Buxton to Briggs Sidings	7.27
CJA1	SUSX	Retained	Other	Copyhold Jn to COM	0.93
CJA2	SUSX	Retained	Other	COM to Ardingly	1.15
CNB1	LNW	Retained	Other	Chinley North Jn to Peak Forest Jn	23.90
CNB2	LNW	Retained	Other	Peak Forest Jn to Buxton	0.56
CNB3	LNW	Retained	Other	Millers Dale Jn to Buxton Curve Jn	5.99
COS1	SCO	Retained	Other	Garriongill Jn to COM	1.89
COS2	SCO	Retained	Other	COM to Coltness	0.18
CPH	SCO	Retained	Other	Craigentenny Jn – NR boundary	3.18
CRE	SCO	Retained	Other	Westfield to Redford Jn	6.92
CWR	WEST	Retained	Other	Turnchapel Branch Jn to Cattewater	1.57
ETC	LNW	Retained	Other	Stainton to Brunthill	1.29
FED	ANG	Retained	Other	Felixstowe Beach Jn to Port of Felixstowe	2.76
FNS2	WEST	Retained	Other	Frome North Jn to Ownership boundary	4.28
GJH	LNW	Retained	Other	Mossband Jn to NR boundary	4.39
GMC	LNW	Retained	Other	Woodley Jn to Bredbury Sidings	0.76

ELR	Route	Retained / New	Commodity	Line Name	Track km
GMH	SCO	Retained	Other	Grangemouth Jn to NR boundary	8.85
GOB	WAL	Retained	Other	Gulf Oil Branch Jn to Waterston, Gulf Oil Refinery	5.68
GRW	ANG	Retained	Other	Griffin Wharf Branch	1.54
HAG	WSX	Retained	Other	Hamworthy to Hamworthy Goods	1.79
HNO	LNW	Retained	Other	Hartford North Jn to Oakleigh Sidings	1.03
HUE	LNE	Retained	Other	Neville Hill West Jn to Hunslet East	1.08
JAW1	LNE	Retained	Other	Jarrow Branch	5.39
KIL2	LNE	Retained	Other	Killingholme to NR boundary (0m 00ch)	4.63
LOF	WEST	Retained	Other	Lostwithiel Jn to Carne Point, Fowey	6.54
LUD1	WSX	Retained	Other	Andover Jn to COM	2.29
LUD2	WSX	Retained	Other	COM to Ludgershall	9.33
MOB	WEST	Retained	Other	Newton Abbot East Jn to Heathfield	7.10
MTL2	SCO	Retained	Other	COM – Methil	1.33
OWW	LNW	Retained	Other	Stourbridge North Junction to Round Oak	11.35
POC1	LNE	Retained	Other	Billingham-on-Tees to Seal Sands Storage	6.78
PYE1	LNE	Retained	Other	COM to Humber Road Jn	4.12
PYE2	LNE	Retained	Other	ABP boundary to COM	7.10
RHD1 & 2	SCO	Retained	Other	Rosyth Dockyard to Inverkeithing South Jn	1.99
RIC1	SCO	Retained	Other	Kaypark Jn to Bellfield	1.73
SCN	LNW	Retained	Other	Eccles to Weaste	1.19
SCR	LNW	Retained	Other	Garston to Speke	2.66
SDS	WEST	Retained	Other	Burngullow Jn to Parkandillack	8.57
SOY	WSX	Retained	Other	Northam Jn to Canute Road	1.31
SSK1	LNE	Retained	Other	Saltburn West Jn to Boulby Potash Mine	11.75
STA	WEST	Retained	Other	West Drayton to Colnbrook	4.21
THN	ANG	Retained	Other	Thames Haven Jn to Thames Haven	5.27
THO	WEST	Retained	Other	Yate Middle Jn to Tytherington	10.11

ELR	Route	Retained / New	Commodity	Line Name	Track km
TJC3	LNE	Retained	Other	Oakenshaw S Jn to Monk Bretton	9.80
TTF	WSX	Retained	Other	Totton to Fawley	13.79
WC1	LNE	Retained	Other	ICI Wilton Jn to ICI Wilton Coal Terminal	1.67
WRO	SCO	Retained	Other	Kittybrewster GF to Waterloo Goods	2.74
ARD	WEST	New	Other	Alphington Road Goods Branch	0.89
BDO	WAL	New	Other	Barry Docks Line Jn to NR boundary	1.45
BJR	WAL	New	Other	Machen Quarry to former Bassaleg Jn	7.83
BNC	WAL	New	Other	Hereford/Brecon Curve GF to Brecon Curve Jn	0.18
BOC1	LNE	New	Other	Seymour JN to former Markham Colliery Jn	0.93
BPH	LNW	New	Other	Hardingstone LC to Northampton South Jn	2.37
BTJ	LNE	New	Other	Shepcote Lane East Jn to Tinsley	0.97
CND1	SCO	New	Other	Cardonald Jn to Cardonald North Jn	0.72
CND2	SCO	New	Other	Cardonald North Jn to Deanside	2.05
ERB	WAL	New	Other	Herbrandston Jn to Robeston	1.79
FEP	LNE	New	Other	Pelaw Jn to Wardley	1.71
FOR	WAL	New	Other	Ford Siding GF To Ford Works, Waterton	1.83
FRY	WEST	New	Other	Friary Jn to Plymouth Friary	0.60
HCM	LNW	New	Other	Silverdale to Madeley	7.78
HNB	LNE	New	Other	Ryhope Grange to Hendon	2.68
HNL	WAL	New	Other	Brecon Curve Jn to MEB Siding	0.68
HTG	KENT	New	Other	Hoo Jn to Grain	17.76
LOO	WEST	New	Other	Coombe (Excl) to Moorswater	0.74
MIT	ANG	New	Other	Kings Lynn Jn to Middleton Towers	5.31
MWN	?	New	Other	Marsh Jn West to ABP Boundaries	2.21
NOP	LNE	New	Other	Scunthorpe Trent Jn to Roxby	5.97
OVE	WAL	New	Other	Margam Yard Jn to Port Talbot Docks	1.87
RIC2	SCO	New	Other	Bellfield to Riccarton	0.54

<b>ELR</b>	<b>Route</b>	<b>Retained / New</b>	<b>Commodity</b>	<b>Line Name</b>	<b>Track km</b>
ROA	WAL	New	Other	COM to 4m 01ch	0.42
ROC	WAL	New	Other	Pengam Jn to COM	1.65
SKS1	LNW	New	Other	Skipton Middle Jn to former Embsay Jn	0.99
SKS2	LNW	New	Other	Former Embsay Jn to NR boundary	10.66
STD	WEST	New	Other	Honeybourne to Long Marston	5.75
TFN	ANG	New	Other	Trimley to NR boundary	0.36
THA	WEST	New	Other	Kennington Jn to Morris Cowley	4.83
VON	WAL	New	Other	Neath and Brecon Jn to Burrows Sidings	8.23
WVL	WAL	New	Other	Former Bassaleg Jn to Park Jn	1.51
<b>TOTAL</b>					<b>355.1</b>



## **ANNEX D – EXTRACT FROM OUR SUSPENSION BANDINGS CONSULTATION**

### *Suspension Bands and Variable Usage Charges in CP5*

As we propose earlier in this letter we consider that Suspension Factors continue to be appropriate to be incorporated as part of the Variable Usage Charge calculation for freight vehicles. The current costing tools (including VTISM<sup>31</sup>) are not currently capable of robustly assessing the effects of different bogie types. We have, therefore, developed the RFC approach for assessing different bogies and allocating individual freight vehicles to Suspension Bands. We also consider that the current range of Suspension Factors used in the Suspension Band table continue to be appropriate (i.e. 1.098 to 0.858).

As colleagues may be aware, we are currently in the process of concluding our 'freight caps' consultation that sets out Variable Usage and Freight Only Line Charge Initial Cost Estimates for CP5<sup>32</sup>. By the time that we consult again in Summer 2012, our estimate is likely to have been refined further. We hope to have concluded on the approach to allocating freight vehicles to Suspension Bands for CP5 by the time that we consult the industry on Variable Usage Costs and Charges for CP5 in the Summer of 2012.

### *Consultation on Variable Usage Costs and Charges*

In the Summer of 2012, we aim to consult on:

- Our estimate of the total size of variable usage costs;
- the proposed apportionment of track costs between vertical and horizontal damage;
- the way in which we plan to attribute variable usage costs to specific vehicles; and
- how the various factors, including the Suspension Factors, are applied to the individual freight variable usage charges.

In CP4, vertical track wear accounted for around 70% of all track damage. It is very likely that we will conclude that vertical track wear will continue to account for the

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<sup>31</sup> VTISM – Vehicle Track Interaction Strategic Model.

<sup>32</sup> The Consultation document is accessible here:  
<http://www.networkrail.co.uk/WorkArea/DownloadAsset.aspx?id=30064779042>.

vast majority of all track damage in CP5. We are considering retaining the modelling approach used in CP4 for vertical track damage which allocated vertical degradation costs based on equivalent tonnage. This approach takes account of:

- axle-load;
- speed;
- un-sprung mass; and
- bogie suspension.

For rail surface damage (horizontal track wear), we are considering using a tool called Track-Ex (VTISM applies the same underlying modelling approach as Track-Ex, but is easier to use than VTISM) to allocate rail surface damage costs to individual vehicles.

Track degradation and damage accounts for c.85% of total variable usage costs. We will also need to allocate non-track related costs, such as civils and signalling, to specific vehicles.

#### *Next steps*

We hope this clarifies the link between the work we are doing on the allocation of freight vehicles to Suspension Bands in this consultation, and the way this will fit in to the wider work we are doing on the development of Variable Usage Charges in CP5. As mentioned above, we aim to issue our consultation on Variable Usage Charges in CP5, in the summer of 2012.