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Dear Colleagues

Network Rail consultation on the phasing in of the freight-specific charge, applying the variable usage charge cap, updating our estimate of freight avoidable costs and updating / phasing in the freight-only line charge

On 11 January 2013 ORR decided that it will introduce a new freight-specific charge (FSC), during CP5, on certain rail freight market segments. The purpose of this letter is to seek your views on the profile of the phasing in of the FSC. We also set out our interpretation of ORR's cap on the average freight variable usage charge (VUC) rate and our proposed approach to updating our estimate of freight avoidable costs, including freight-only line costs. In respect of freight-only line costs, we also highlight an apparent significant error that has recently come to light in relation to the current charge rate for spent nuclear fuel, and our proposed approach to remedying this during CP5.

Unless stated otherwise all values in this letter are in 2011/12 prices and at end CP4 efficiency.

Background

In May 2012, ORR consulted on introducing a new FSC that would recover freight avoidable costs that are not currently recovered through existing track access charges. Consistent with relevant legislation, ORR also proposed only levying the charge on market segments that are able to bear the cost. Based on market analysis carried out by MDS Transmodal (MDST) and NERA, it proposed levying the FSC on ESI coal, spent nuclear fuel and iron ore. It stated that it was also considering levying the charge on coal transported for other purposes (e.g. steel and cement production) and was not planning on levying the charge on biomass because the market is not sufficiently developed. In its May 2012 document ORR also consulted on placing an early cap on the average freight VUC rate in CP5.

To inform ORR's decision on the FSC, Network Rail commissioned L.E.K. Consulting (L.E.K.) to estimate and allocate freight avoidable costs between freight market segments. Freight avoidable costs are defined as the long-run average annual cost saving that would result from removing commercial freight traffic from the network on a permanent basis. L.E.K. estimated long-run gross freight avoidable costs (i.e. including costs currently

recovered through existing freight track access charges) of £152m-£377m[1] p.a. and net freight avoidable costs (i.e. excluding costs currently recovered through existing freight track access charges) of £42m-£249m.

ORR and Network Rail appointed the independent reporter, Arup, to review key aspects of L.E.K.'s estimate of freight avoidable costs. Following this review, ORR adjusted L.E.K.'s cost estimate and derived its own estimate of gross and net freight avoidable costs of £278m-400m and £200m-312m respectively.

In January 2013 ORR concluded[2] on its May 2012 consultation. It confirmed the following:

- The introduction of a new FSC on the ESI coal, spent nuclear fuel and iron ore freight market segments (it is consulting further on also levying the charge on biomass). It also stated that this charge will be phased in during the last three years of CP5; and

- An early cap on the average freight VUC rate in CP5 of £1.68 per 1,000 gross tonne kilometres (kgtkm). The cap incorporates a 15% mark-up to reflect the uncertainty regarding the VUC cost estimate and the allocation of variable usage costs between passenger and freight services.

In relation to the FSC, ORR stated that it will take a conservative approach and base the charge on its adjusted 'low' estimate of freight avoidable costs of £278m per annum. Based on this 'low' estimate, ORR included the, below, table in its decision document which shows the level of the cap for each commodity in each year of CP5, assuming a gradual introduction over CP5. ORR also confirmed that the FSC would be levied in addition to current track access charges (including freight-only line charges).

Table 1: ORR example of the profile of the FSC in CP5

£/1,000 gross tonne mile (kgtm)	Current track access charges	FSC cap 2014-15	FSC cap, 2015-16	FSC cap, 2016-17	FSC cap, 2017-18	FSC cap, 2018-19
ESI coal	£2.83	£0.00	£0.00	£0.80	£2.40	£4.04
Spent nuclear fuel	£9.83	£0.00	£0.00	£2.15	£6.98	£11.64
Iron Ore	£2.28	£0.00	£0.00	£0.59	£1.77	£2.96

In its conclusion document, ORR requested that we consult on the phasing in of the FSC during CP5. We do this, below, based on the profile set out in ORR's decision document (see Table 1, above).

The remainder of this letter is structured as follows:

- Phasing in the FSC;

[2] ORR's full conclusion document entitled; 'Periodic Review 2013, Rail freight: conclusion on the average variable usage charge and a freight specific charge (January 2013)', can be found here: http://www.rail-reg.gov.uk/pr13/PDF/freight-conclusions-jan-2013.pdf

- Cap on average freight VUC rates;
- Updating our freight avoidable cost estimate;
- Remedying the spent nuclear fuel charge rate error;
- Updating our freight-only line cost estimate;
- Interaction between the freight-only line charge and FSC;
- Next steps; and
- Appendix A: Summary of consultation questions.

Phasing in the FSC

As noted above, ORR has confirmed that for CP5 a new FSC will apply to the following freight market segments:

- ESI coal – with a maximum FSC cap of £4.04 per kgtm;
- Spent nuclear fuel – with a maximum FSC cap of £11.64 per kgtm; and
- Iron ore – with a maximum FSC cap of £2.96 per kgtm.

The ORR has determined that the FSC should be phased in gradually during CP5 to allow businesses time to adapt to it. In its decision document ORR included an example of the profile of the FSC in CP5. It assumed a gradual introduction of 0% in years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5.

Using our SBP freight traffic forecast, we have estimated the income that we would receive through the FSC based on the profile of the charge set out in ORR's decision document, see below:

Table 2: Estimate income in CP5 from the new FSC (2011/12 prices and end CP4 efficiency)

FSC – phasing in profile in CP5					
Market segments	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
ORR phasing in profile	0% of FSC	0% of FSC	20% of FSC	60% of FSC	100% of FSC
Total ESI coal, spent nuclear fuel and iron ore forecast traffic (kgtm)	7,244,623	7,244,560	7,244,498	7,244,437	7,244,377
ESI coal	£0	£0	£6.0m	£17m	£29m

Spent nuclear fuel	£0	£0	£0.06m	£0.2m	£0.3m
Iron Ore	£0	£0	£0.09m	£0.3m	£0.5m

This analysis shows that, in the last year of CP5 (2018/2019), after the full FSC has been phased in, we would receive approximately £29m, £0.3m and £0.5m from ESI coal, spent nuclear and iron ore respectively. The final level of the FSC will be determined by ORR (incorporating an end CP5 efficiency overlay) and income will vary in line with outturn traffic volumes, so these figures should be treated as being only indicative.

Consultation question 1
What is your view on the illustrative profile of the FSC shown in Table 2, above (i.e. 0% in years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?

Cap on average freight VUC rates

As noted above, as part of its January 2013 freight decision document, ORR has set an early cap of £1.68 per kgtkm on the average freight VUC rate in CP5.

We thought that it would be helpful to set out in this letter our interpretation of how the cap would apply in determining CP5 charges, if required. We understand that ORR may provide further guidance on this issue in due course.

Before we set out our interpretation of the cap, we consider that it is important to note that it is not yet clear whether the cap on the average freight VUC rate will be 'hit' in CP5. A key factor which is likely to determine whether the cap will be applied is the potential introduction of a new 'equivalent track damage'[3] equation in CP5. Network Rail commissioned Serco to develop an updated equivalent track damage equation with the intention of using this to allocate variable usage costs between freight and passenger vehicles in CP5. We developed the remit for the Serco work collaboratively with an industry working group. If the new equivalent track damage equation were to be implemented in CP5, it would allocate a greater share of variable usage costs to vehicles with a high axle load and un-sprung mass. Hence, it is likely to result in higher VUC rates for laden freight vehicles, particularly bulk traffic. We are due to conclude on this issue to ORR by the end of March 2013. Ultimately, however, the final decision rests with ORR.

ORR has provided guidance to us on this issue, stating that in developing charges for CP5 we should seek to improve cost reflectivity.

[3] Equivalent track damage is a measure of 'track friendliness' which is used to apportion variable usage costs on a cost reflective basis between different vehicle types.

We view the cap applying *ex ante* and relating to the average freight VUC rate in the CP5 VUC model, rather than the average outturn freight VUC rate, for example. If, following the population of the CP5 VUC model, the average freight VUC rate exceeds the cap set by ORR, our view is that all freight VUC rates would be reduced by the same percentage (i.e. the percentage difference between the average freight VUC rate in the model and the cap set by ORR) so that the average charge does not exceed the cap. We also consider that any difference between the average charge and the cap would be recovered through passenger fixed track access charges (or any network grant income received in lieu of fixed track access charges), rather than passenger VUCs.

By way of an example, if following the population of the CP5 VUC model it was the case that the average freight VUC rate was £1.78 per kgtkm, £0.10 per kgtkm (6%) higher than ORR's cap of £1.68 per kgtkm. We would propose reducing all freight VUC rates by 6%[4], irrespective of how rates for individual vehicles have changed relative to CP4. We consider that this approach would avoid unduly discriminating between different vehicle / commodity types and retain the relative price differential between different vehicle / commodity types, reflecting their relative 'track friendliness'.

We note that ORR's cap on the average freight VUC rate is set on a tonne kilometre basis and in 2011/12 prices. However, we propose basing the CP5 VUC model on traffic data from our Track Access Billing System (TABS), which is provided in tonne miles. Therefore, to convert the ORR cap from tonne kilometres to tonne miles it will be necessary to apply a conversion factor of 1.609[5]. If one applied this conversion factor, the ORR cap of £1.68 per kgtkm translates to £2.70 per kgtm. Consistent with our SBP, we also propose that the CP5 VUC model will include cost data in 2012/13 prices. Therefore, it will also be necessary to uplift the cap set by ORR from 2011/12 to 2012/13 prices. Based on the relevant November RPI figures, the relevant indexation factor is 1.03. Applying this indexation factor to the cap determined by ORR results in a cap of £1.73 per kgtkm, or £2.78 per kgtm (2012/13 prices).

Updating our freight avoidable cost estimate

In its decision document, ORR also requested that in advance of its draft determination we update our estimate of freight avoidable costs (developed by L.E.K.), which provides the basis for the FSC. Specifically, ORR requested[6] that we:

- Follow the recommendations of Arup in revising our estimate of variable usage costs (correcting our treatment of non-commercial freight);

- Make other refinements proportionate to their impact on the determined charge, in particular the allocation of costs associated with the possessions regime (Schedule 4) with respect to spent nuclear fuel;

- Update the unit costs consistent with our Strategic Business Plan (SBP) and other best estimates (rather than low range estimates) of freight avoidable costs; and

[4] 6% reflecting (0.1/1.68)*100%
[5] Being the conversion rate for miles to kilometres.
[6] ORR, Rail freight: conclusion on the average VUC and a FSC, page 83, January 2013.

- Refine the allocation of variable usage costs and netting off of other variable charges (with updated charge estimates).

We will be asking L.E.K. to review and update its original cost estimate, consistent with the guidance provided by ORR, above. We understand that ORR is considering providing further guidance to us, as part of its consultation on levying the FSC on biomass, on how it wishes the L.E.K. freight avoidable cost estimate to be updated. We will, therefore, wait until we receive this guidance before asking L.E.K. to commence its update. However, in order for L.E.K. to be able to complete its update in time to inform ORR's draft determination, ideally ORR will need to provide this guidance by the end of February 2013. This would allow updated freight avoidable cost estimates to be provided to ORR by the end of April 2013.

Given the considerable effort that went into developing the original cost estimate we will be recommending that L.E.K. should be asked to adopt a pragmatic approach to updating its cost estimate (i.e. review each cost category and update those which are likely to have changed materially since the publication of the SBP and have a material impact on the original cost estimate). For the avoidance of doubt, and mindful of the uncertainty that the update may create, we will only ask L.E.K. to update its analysis once, prior to ORR's draft determination.

We note that in its decision document ORR decided to make some adjustments to L.E.K.'s initial cost estimate. We consider that should ORR want similar adjustments to be made to L.E.K's updated cost estimate, ORR would be best placed to make them.

As noted above, in its decision document ORR took a conservative approach to setting the level of the FSC, setting it based on its adjusted 'low' estimates, rather than its 'central' or 'high' estimates. For the avoidance of doubt, ORR has informed us that in order for the updated freight avoidable cost estimates to result in a lower FSC in CP5, the revised L.E.K. 'central' cost estimates (after any adjustments made by ORR) would have to be lower than the ORR adjusted 'low' cost estimates, which the cap is predicated on. Hence, if the updated L.E.K. cost estimates were higher than the original estimates, or marginally lower, this would be unlikely to impact the level of the FSC in CP5. Ultimately, however, it will be for ORR to set the level of the FSC for CP5.

Remedying the spent nuclear fuel charge rate error

In its decision document ORR confirmed that the freight-only line charge will continue to apply in CP5.

As part of this letter we would like to highlight an apparent significant error that has recently come to light in relation to the current freight-only line charge rate for spent nuclear fuel. We have discussed this issue with ORR and note that it considers the phasing in of this mark-up to be a policy issue and that it is content for us to consult on it as such. Consistent with other decisions in relation to mark-ups on track access charges, ultimately it will be for ORR to set the level of this charge for CP5

Based on analysis carried out by Network Rail, in the 2008 Periodic Review (PR08), ORR determined that the freight-only line charge for spent nuclear fuel should be phased in during CP4 with the aiming of raising £0.3m per annum in year one of CP4 rising to £0.73m in the last year of the control period. Consistent with this it determined charge rates of £1.902 per

kgtm in year one of CP4 rising to £4.601 per kgtm in the final year of the control period (2006/07 prices and end CP4 efficiency).

As part of the work that we have recently completed in order to develop the SBP income forecast, it emerged that the income that we have received through the spent nuclear fuel freight-only line charge is materially lower than that forecast by Network Rail and ORR in PR08. In fact, in the first three years of CP4 we received £0.25m, compared to the £1.87m forecast in ORR's PR08 final determination (nominal prices).

We believe that this under-recovery of income is a result of an error in the calculation of the spent nuclear fuel freight-only line charge rate in PR08. In order to recover the £1.87m (nominal prices) spent nuclear fuel income forecast in the first three years of CP4, charge rates would have had to have been approximately 7-8 times higher than the determined rates.

We propose correcting this error for CP5 but not seeking any adjustments to address the error in CP4. Moreover, mindful that stakeholders are likely to require time to prepare for these changes, we also propose phasing in the new charge rate in CP5. We propose basing the phasing in profile on that which ORR has set out in relation to the FSC. This would mean existing spent nuclear fuel freight-only charge rates are retained for the first two years of CP5, increasing to 20% of the full charge in third year, 60% of the full charge in the fourth year, finally rising to a 100% of the full charge in the final year of CP5.

Based on our initial estimate of spent nuclear fuel freight-only line costs (using IIP cost data which we will update before concluding to ORR) we estimate, below, the impact on charge rates and income if we correct this error in line with our proposed approach set out, above.

Table 3: CP5 spent nuclear fuel charge rates and income (2012/13 prices and end CP5 efficiency)

Spent nuclear fuel phasing in profile and forecast income in CP5					
	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Phasing in profile (£/KGTM)	5.76 (existing charge rate)	5.76 (existing charge rate)	8.30 (20% of full rate)	24.91 (60% of full rate)	41.52 (100% of full rate)
Forecast income (£m)	0.15	0.15	0.22	0.67	1.12

We are mindful that correcting this error results in a very significant increase in spent nuclear fuel freight-only line charges in CP5. However, as noted, above, we propose phasing in the adjusted charge in order to provide the industry time to prepare for it. We also note that operators have benefitted from paying materially understated charges in CP4.

In addition, we note that ORR's consultation document on the VUC and FSC, indicated that an increase in freight access charges for spent nuclear fuel of £100 per thousand net tonne km would have no impact whatsoever on demand for nuclear fuel in the short to medium

term. Based on ORR's analysis, therefore, we do not expect this increase in charge rates to adversely impact the level of spent nuclear fuel rail traffic in CP5.

Consultation question 2
What is your view on the illustrative profile of the spent nuclear fuel freight-only line charge rate shown in Table 3, above (i.e. retain the current rate for years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?

Updating our freight-only line cost estimate

In November 2011 we consulted on our initial estimate of ESI coal and spent nuclear fuel freight-only line costs before concluding on this estimate to ORR in March 2012. In October 2012 we further refined our cost estimate to inform L.E.K's estimate of freight avoidable costs (freight-only line costs are a subset of freight avoidable costs).

The cost estimates that we provided to L.E.K. were based on Initial Industry Plan (IIP) cost data, which was the latest available at the time. Based on this cost data we estimated charge rates for ESI coal and spent nuclear fuel of £0.68 and £41.52 per kgtm respectively (2012/13 prices and end CP5 efficiency). These charge rates were derived by dividing the ESI coal and spent nuclear fuel freight-only line cost estimates by the respective forecasts of average CP5 traffic, these values are set out in Table 4, below:

Table 4: Freight-only line charge rate summary (2012/13 prices and end CP5 efficiency)

Category	Value
ESI coal cost estimate (£)	4,835,547
Spent nuclear fuel cost estimate (£)	1,109,371
Forecast CP5 average ESI coal traffic (kgtm)	7,059,195
Forecast CP5 average spent nuclear fuel traffic (kgtm)	26,718
Initial estimate of ESI coal charge rate (£/kgtm)	0.68[7]
Initial estimate of spent nuclear fuel charge rate (£/kgtm)	41.52[8]

Consultation question 3
What is your view on how we have calculated initial CP5 freight-only line charge rates for ESI coal and spent nuclear fuel?

We have, however, recently published our SBP and are now in a position to refine our estimates of costs and charge rates to take into account more recent cost data. Therefore, as part of the L.E.K. workstream to update its estimate of freight avoidable costs, we will also

[7] £0.68 per kgtm = £4,835,547 / 7,059,195 kgtm
[8] £41.52 per kgtm = £1,109,371 / 26,718 kgtm

update our estimate of freight-only line costs. This updated cost estimate could then inform ORR's decision in relation to the level of the freight-only line charge in CP5.

In addition to ESI coal and spent nuclear fuel, in its decision document ORR confirmed that it considers that the iron ore, and potentially biomass, freight market segments should pay a mark-up on variable costs. It concluded that the charges payable by these market segments should cover their respective freight avoidable costs, including freight-only line costs. When we update our estimate of freight-only line costs to take account of more recent SBP cost data, we will also calculate charge rates for the iron ore and, subject to the results of ORR's consultation, biomass freight market segments. We propose calculating charge rates for iron ore and potentially biomass on the same basis as we have done for ESI coal and spent nuclear fuel.

Given freight-only line charges were not levied on the iron ore and biomass freight market segments in CP4, consistent with ORR's approach to introducing the FSC, we propose phasing in these charges during CP5. We propose that the phasing in profile for these charges should be consistent with that for the FSC. Therefore, based on the profile set out in ORR's decision document, we propose introducing iron ore and potentially biomass freight-only line charges as follows:

Table 5: Freight-only line charge phasing in profile

Freight-only line charge – phasing in profile in CP5 for iron ore and potentially biomass					
Market segments	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Iron ore	0% of the full charge rate	0% of the full charge rate	20% of the full charge rate	60% of the full charge rate	100% of the full charge rate
Biomass	0% of the full charge rate	0% of the full charge rate	20% of the full charge rate	60% of the full charge rate	100% of the full charge rate

Consultation question 4
What is your view on the illustrative profile shown in Table 5, above, for iron ore and potentially biomass freight-only line charges during CP5 (i.e. 0% for years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?

Interaction between the freight-only line charge and FSC

As part of this letter, we also thought that it would be helpful to set out our view in relation to the interaction between the freight-only line charge and the FSC in CP5. Because freight-only line costs are a subset of freight avoidable costs there could be merit in consolidating

these charges in order to simplify the charging structure. However, because the freight-only charge and FSC are not due to be introduced at the same time (i.e. the freight-only line charge will be levied in year one of CP5 onwards and the FSC will be levied in year three of CP5 onwards) we consider that it would be better not to consolidate these charges in CP5. There could, of course, be merit in reviewing, as part of PR18, whether it is appropriate to consolidate these charges in CP6.

Next steps

Following the careful consideration of consultation responses, we will aim to conclude on this consultation to ORR by the end of March 2013, as part of our work to propose a set of prices for CP5.

When we conclude to ORR we will also aim to provide an updated estimate of freight-only line costs. As noted above, we will aim to provide ORR with L.E.K's updated estimate of freight avoidable costs by the end of April 2013.

We openly welcome responses to this consultation letter. **The closing date for this consultation is 1 March 2013**.

We intend to make consultation responses public, including sharing them with ORR and publishing them on our website. Please indicate, as part of your consultation response, if you consider all or part of your response to be confidential. If you do consider part of your response to be confidential, please provide a non-confidential version suitable for publication.

Please address any responses and / or queries to:

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This consultation will also be available to download from our website here:

Yours sincerely,

Ben Worley

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Appendix A: Summary of consultation questions

Consultation question 1
What is your view on the illustrative profile of the FSC shown in Table 2, above (i.e. 0% in years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?

Consultation question 2
What is your view on the illustrative profile of the spent nuclear fuel freight-only line charge rate shown in Table 3, above (i.e. retain the current rate for years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?

Consultation question 3
What is your view on how we have calculated initial CP5 freight-only line charge rates for ESI coal and spent nuclear fuel?

Consultation question 4
What is your view on the illustrative profile shown in Table 5, above, for iron ore and potentially biomass freight-only line charges during CP5 (i.e. 0% for years one and two, 20% in year three, 60% in year four and a 100% of the charge in year five of CP5)?