Responses to the Office of Rail and Road's periodic review of HS1 Ltd 2019 (PR19) draft determination consultation – December 2019

PR19
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11 November 2019

2019 PERIODIC REVIEW OF HS1 LTD (PR19) – DRAFT DETERMINATION

This letter constitutes the response of DB Cargo (UK) Limited ("**DB Cargo**") to the document entitled "*2019 Periodic Review of HS1 Ltd (PR19) - Draft Determination*" issued by the Office of Rail and Road ("**ORR**") on 30 September 2019 ("**the draft determination**").

Whilst it is recognised that the draft determination covers a multitude of different aspects of the Periodic Review, DB Cargo's response concentrates mainly on its key concern which relates to the charging framework for freight traffic together with the principles that have been used to derive the proposed freight access charges from the relevant costs.

Introduction

1.1. DB Cargo remains of the view that the High Speed 1 Line ('HS1') continues to present a unique opportunity of a fast link from the Channel Tunnel to London enabling the transit of international rail freight services to/from the UK via the Channel Tunnel to be accelerated, consequently helping to attract further modal shift from road to rail. HS1 also presents the UK's only realistic opportunity to accommodate larger gauge traffic to/from Continental Europe which will also further promote the growth of international rail freight through the Channel Tunnel. In addition, with the prospect of the UK's exit from the EU, international rail freight through the Channel Tunnel offers a distinct advantage of being able to cross the border without additional delay as customs formalities would be permitted to be carried out at destination terminals inland.

1.2. With these factors in mind, DB Cargo has been operating regular services on HS1 for around eight years now, including services which convey larger gauge wagons that cannot be accommodated on the UK national railway network. Whilst it is disappointing that the number of services DB Cargo operates on HS1 has reduced in recent years, this is primarily the result of factors outside the control of the rail industry; the most significant of which being the migrant crisis in Calais which caused considerable disruption to Channel Tunnel rail freight services. This disruption led to a loss of confidence by end customers as poor levels of reliability and performance were experienced as a result of trains being delayed in Calais. These factors particularly affected intermodal services which have now all but ceased. However, the number of Channel Tunnel rail freight services is now starting to grow again which, in turn, will allow for the possibility of increased usage of HS1.

Key concern

2.1. In DB Cargo's view, the fundamental issue in ensuring that the regular operation of rail freight services on HS1 not only continues at its current level but also grows over time relates to the price of access. The current access charges for HS1 are already significantly higher than the equivalent charges that would apply to those same rail freight services if they were to operate on the UK national railway network. Consequently, DB Cargo was extremely concerned when it received, HS1 Limited's ("**HS1 Ltd**") proposed "*Five Year Asset Management Statement for Control Period 3*" ("**5YAMS**") which set out proposals to increase freight access charges on HS1 by a staggering 74% from £7.54 to £13.10 per train km (2018/19 prices). DB Cargo considers that such a proposal would result in access to HS1 for freight services becoming unaffordable, thereby not only discouraging growth but also excluding current services from using the line.

2.2. DB Cargo understands that the dramatic price increase set out in the 5YAMS is almost wholly due to the way in which HS1 Ltd has proposed to recover its renewal costs (including what those renewal costs encompass) over a 40-year period by incorporating them within the OMRCA1 category. It appears from this "Base Case" as set out in the 5YAMS that HS1 Ltd views the calculation and setting of its access charges as a purely mechanistic process of turning costs into charges. However, DB Cargo considers that the principles of deriving freight access charges for HS1 (as in the case of the UK national railway network) must conform to the relevant legislation set out in the Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 ("**the Regulations**"), including those relating to the principles of charging. DB Cargo submits that the Regulations intend that the setting of access charges is not merely a mechanistic process but must also take account of the effect the setting of such charges will have on relevant railway undertakings.

2.3. Consequently, DB Cargo was encouraged by HS1 Ltd's subsequent efforts to devise and propose alternative options that would lessen the impact on railway undertakings of the dramatic price increases generated by its mechanistic "Base Case". These alternative options put forward by HS1 Ltd received DB Cargo's support, particularly the "Buffer" approach which it understands, unlike the other options, is not inconsistent with HS1 Ltd's Concession Agreement. Unfortunately, much to the disappointment of DB Cargo, it appears that ORR has, for various reasons, discounted all of these alternative options, including the "Buffer" approach.

2.4. Despite this disappointment, DB Cargo was somewhat relieved to note from the draft determination that following ORR's review of HS1 Ltd's "Base Case", its preliminary view on the appropriate level of HS1 Ltd's CP3 freight track access charge is not to support HS1 Ltd's figure of £13.10 per train km. Instead, ORR is proposing to determine that a much lower figure of £8.35 per train km would be appropriate. Although, this still

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reflects a concerning increase of around 11% on current track access charges it is admittedly far lower than the “Base Case” proposal calling for a 74% increase but not as low as HS1 Ltd’s alternative “Buffer” option which, if accepted, would have resulted in an increase of around 6%.

2.5. DB Cargo remains of the view that despite ORR’s draft determination resulting in a lower proposed freight track access charge of £8.35 per train km, this level of charge remains at too high a level as it still includes ‘mark ups’ levied under the second exception to the charging principle set out in Schedule 3 of the Regulations. DB Cargo considers that the traffic it operates on HS1 should not be liable to pay any ‘mark ups’ under either exception to the charging principles in the Regulations, let alone the second exception relied upon by HS1 Ltd which enables infrastructure managers to set, or continue to set, higher charges on the basis of the long term costs of a specific investment project (in this case the construction of HS1).

2.6. DB Cargo understands that to enable an infrastructure manager to rely on this provision, certain criteria must first be met. These are set out in sub-paragraph 3(2) of the Regulations as follows:

(a) The effect of the higher charges must be to increase the efficiency or cost effectiveness of the project; and
(b) The project could not otherwise have been undertaken without the prospect of such higher charges.

2.7. Whilst DB Cargo could understand how these provisions could apply to high-speed passenger train operation on HS1 (hence the levying by HS1 Ltd of an infrastructure recovery charge on such services), it submits that the provisions cannot similarly be applicable to conventional speed rail freight operation on HS1. DB Cargo has seen no evidence to suggest that the construction of HS1 would not have been undertaken if HS1 Ltd was not allowed to levy higher charges on the very small number of conventional speed rail freight services that have operated on the line using marginal overnight capacity that would otherwise remain unused, particularly if the prospect of those higher charges effectively excluded such services from using the line.

2.8. DB Cargo notes ORR’s view set out in the draft determination that it does not believe DB Cargo’s interpretation is supported by the Regulations (i.e. that the prospect of levying higher charges should be tested separately on different classes of traffic), However, DB Cargo considers that its interpretation is sustainable when taken into account with all of the other charging principles which generally allow for traffic not being excluded from any network provided it can pay its direct costs, and that differentiation between types of user and different market segments is permissible.

2.9. Furthermore, now that it has been clarified through the Commission Implementing Regulation 2015/909 concerning ‘modalities for the calculation of the cost that is directly incurred as a result of operating the train service’ (“**the Modalities CIR**”) that OMRCA2 costs have previously and erroneously been considered as ‘direct costs’, DB Cargo considers that such costs falling under this category should also no longer be applied

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to conventional-speed rail freight services unless it can be demonstrated that a ‘mark-up’ is justified under a ‘market can bear’ test (i.e. under the first exception to the charging principles in the Regulations). As the rail freight services currently operating on HS1 do not belong to market segments that ORR has determined are able to bear a ‘mark-up’, DB Cargo submits that such costs should accordingly be removed from the proposed charges.

ETCS

3.1. DB Cargo strongly supports ORR’s view that the future introduction of ETCS on HS1 constitutes a “Specified Upgrade” and not a “Renewal and Replacement” which results in the removal of such costs from the renewals annuity.

Ripple Lane Exchange Sidings

4.1. DB Cargo is pleased that the proposal it first raised over 5-years ago during the CP2 consultation process concerning the transfer of Ripple Lane Exchange Sidings from HS1 Ltd to Network Rail Infrastructure Limited (“Network Rail”) is now being considered by Department of Transport (“DfT”). DB Cargo notes that ORR will consider whether such a change, if proceeded with, would trigger an Interim Review under Schedule 10 of HS1 Ltd’s Concession Agreement.

4.2. DB Cargo would urge DfT to approve and implement this change to enable Ripple Lane Exchange Sidings to once again form part of the UK national railway network, given that the infrastructure is:

- not ‘high speed’;
- remote from the HS1 main line;
- used by significantly more domestic freight services than those emanating from HS1; and
- already operated and maintained by Network Rail.

Conclusion

5.1. DB Cargo hopes that ORR takes account of DB Cargo’s representations above and ensures that its proposal to determine the level of the CP3 freight access charge at £8.35 per train km (Feb 2018 prices) represents the ceiling (‘worst case’) for rail freight access charges on HS1 for CP3.

Yours sincerely,

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11 November 2019

FAO: The ORR's PR19 team

2019 Periodic Review of HS1 Limited – Route Review

Thank you for the opportunity to respond to the ORR's draft determination regarding the HS1 route, which was published on 30 September 2019. More generally, we are very grateful for the positive way which the ORR has engaged with the Department during the review to date.

Overall, we consider that the draft determination provides an appropriate basis for the future, effective operation of the very important HS1 route infrastructure, which is clearly important for domestic and international passenger services, and for freight. We welcome the scrutiny that the ORR has undertaken of HS1 Ltd's proposals and the changes that the scrutiny has provisionally led to. However, we do have some areas which we consider it is important that the ORR further considers – most particularly in relation to ensuring effective and efficient delivery in CP3, alongside the responses from other stakeholders, as it finalises the determination. This response briefly sets out the Department's overall interest, the areas we particularly welcome and the limited areas which we consider would benefit from further consideration in advance of the final determination.

The Department's overall position

We strongly support the continued success of the HS1 infrastructure, ensuring that it both delivers efficiently and effectively for users. In doing so, we recognise that an appropriate balance must be struck between short term charges and ensuring the efficient long-term utilisation and funding of this important asset. The deliverability of efficiencies is also very important. We therefore look to the ORR to ensure that HS1 Ltd's plans are consistent with its General Duty within the Concession Agreement. Ensuring that there is strong and robust scrutiny, as well as challenge, of these plans, informed by evidence and stakeholder engagement, is vital to this.

Areas we particularly welcome

Against this background, we welcome significant elements of the draft determination. We welcome the clear evidence of balanced and effective challenge of HS1 Ltd's proposals, engaging closely with HS1 Ltd and broader stakeholders, in particular:

- The clear evidence of challenge in relation to HS1 Ltd's asset management plans, the efficiency overlay (which we consider below) as well as the approach to the classification of the European Train Control System, which together drives the reductions in the annuity from £38.2m to £26.1m - and therefore lower charges to operators to assist affordability and the continued growth and development of these important services. We should stress that the key issue here is not just simply that this has resulted in lower charges, but that the ORR has articulated its rationale for those changes.

- We particularly welcome the ORR's consideration of overall freight affordability and welcome the revision in the increase in the level of track access charges from 74% to 11%. Government recognises the importance of long-term stability of charges as an important enabler of freight growth and modal shift as set out in our Rail Freight Strategy, particularly given the importance of HS1 as a strategically important route. We also welcome that lower charges, than those proposed in the original HS1 Ltd submission, will provide some support to international rail operators as they seek to develop and grow their important businesses.
- The ORR's approach to safety and the reassurance that HS1 Ltd's plans are sufficient to maintain compliance with safety requirements. We also welcome the ORR's clear requirement for the safety plans to be specific, measurable, realistic and time bound, with this being important for the final plans.
- The agreements reached on the performance and possessions regimes, given the importance of creating the right incentives to ensure that there is an effective incentive to operate trains on time, and to plan possessions efficiently and minimise disruption.

Areas of further consideration

As we describe above, we welcome many elements of the draft determination. However, we suggest the following areas would benefit from further consideration in advance of the final determination.

- **Ensuring effective accountability for delivery in CP3:** We very much agree with the ORR that the monitoring and reporting in CP3 for HS1 Ltd in relation to cost base, delivery of efficiency, and the resulting impact on the escrow balances should be strengthened. We consider that it would be helpful, as the ORR has done in relation to Network Rail in PR18, to be clear about its specific expectations for what effective monitoring would look like and to be clear how HS1 Ltd will be held robustly to account – doing so is clearly critical for the effective delivery of the determination. Similar views about enhanced monitoring were expressed in the Department's Final Decision on the CP3 HS1 Stations Review.[1] and we welcome further consideration with the ORR to align monitoring and reporting to ensure an effective, robust approach which effectively holds HS1 Ltd to account. More generally, we think it is essential that we fully take account of the lessons from CP2 and both the Stations and Route Reviews, to ensure that the system as a whole works effectively for all stakeholders into the future. We would welcome further discussions on this matter with ORR.
- **Efficiencies**: As we note above, we welcome the clear consideration that the ORR has already given in relation to efficiencies. We have scrutinised the ORR's helpful supporting documents published alongside the determination and have the following comments:
    - We noted that the ORR indicates that it has taken a "cautious" approach in relation to efficiency over the 40 year period. We absolutely recognise the importance of ensuring that efficiencies are deliverable, but we consider that an approach which

[1]https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/840470/hs1-stations-review-cp3-final-decision.pdf

is "stretching, yet realistic" is an appropriate approach, consistent with the General Duty and also with the approach taken to assessing Network Rail's efficiency in the Periodic Review 2018 process. We would ask the ORR to ensure that they fully consider that a stretching, yet realistic approach is the one that has been taken – most particularly in setting the efficiency overlay, most particularly by reference to the benchmarking information.

  - With respect to the efficiency overlay, we were unclear from the material presented, the extent to which the overlay fully addressed the potential 18% efficiency gap identified in the Rebel report and consider that this should be fully addressed for the final determination. It was also not clear why the lower efficiency overlay for CP3 was adopted (compared to future control periods), beyond that it was considered "sufficient".
  - With respect to deliverability, we note the ORR's comment that "*we have not fully reviewed all of NR(HS) proposed initiatives in terms of realism and deliverability [but] we did challenge NR(HS) on its confidence that they were achievable. It confirmed that they were*." We do consider, given the vital importance of delivering efficiently, it is important that the ORR has appropriately reviews the proposed efficiencies, both to ensure their deliverability and to ensure that they are sufficiently ambitious.
  - More generally, we recognise that stakeholders who are closer to the detail may be in a stronger position to identify further stretching, yet realistic efficiencies, so we very much encourage the ORR to fully consider any further efficiency opportunities that they may identify in the consultation process.
  - We also support the ORR in seeking clarity on HS1's research and development that could help deliver future efficiencies.

- **Train charges**: We understand the ORR's legal argument on the issue of train per minute charges on directly incurred costs. We note the ORR's "*understanding*" that changing to train per km charges does not affect the overall level of direct charges paid by existing individual operators. We consider that it is important that the implications of this charge are fully understood by the time of the final determination.

Areas for further consideration in CP3

Alongside these areas there are a number of further areas we consider that it is important are subject to further consideration.

We note the considerable time and effort undertaken in relation to issues related to the escrow account. We recognise the importance of an appropriate investment strategy to secure the maximum appropriate returns in an efficient manner. We welcome continued consideration of this issue during CP3, working closely with stakeholders and will play our full role in the ongoing work on this issue.

Moreover, we welcome HS1 Ltd's suggested review of its structure of charges in CP3 and the understanding that any changes to the recovery of non-direct costs could impact on operators. We agree with the ORR that the basis on which it charges non-direct costs should form part of this review.

Concluding remarks

Thank you again for the opportunity to participate in the consultation and for the approach that the ORR has undertaken to many of the issues under consideration. We would be very happy to discuss any of this response or to further engage on any aspect of the review as the ORR finalises its approach to the final determination.

Yours sincerely

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EUROSTAR™

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London, 11th November 2019

EUROSTAR RESPONSE TO PR19 DRAFT DETERMINATION

Context and Challenge

The HS1 charging proposals for CP3 and beyond seek extraordinary and unprecedented price increases. Even following the scrutiny of the ORR, the draft determination still anticipates real increases of 18%[1]. HS1 has been operating this railway for 10 years (a significant proportion of the concession). Such radical variation speaks to weaknesses in asset knowledge and/or forecasting that should not simply be passed through to operators. The was reflected in the findings of the Frazer Nash report which said: "*The need to improve basic estimating processes and capabilities within the industry are key requirements moving forward.*" Consequently, we agree with the ORR that "*The incentives surrounding the financial framework require strengthening to encourage greater ownership of financial risk and delivery*". But the strengthening needs to start with this determination – it is not just an agenda for the future.

[Redacted]

In these circumstances Eurostar believes that it is incumbent on HS1 to be as ambitious in seeking efficiency as they have been to provide for its own contingency and risk. It is disappointing that they have not been. As the ORR found in its own draft determination "[we] *did not observe much evidence of any challenges to established practice that might introduce efficiency benefits*".

This is not good enough and, in the absence of sufficient incentive and action on the part of HS1, it falls to the Regulator to protect the interests of passengers by providing that challenge. The draft determination starts this process but does not yet go far enough. It falls short of balancing the extraordinary level of proposed price increases with an equally challenging approach to efficiency and risk. The Annex to this letter summarises Eurostar's comments on the draft determination, which have been supported in extensive analysis provided to the review team. But we would highlight three key areas:

[1] It is argued (and EIL acknowledges) this figure includes an element of "catch up" for CP2 under-funding. However, it is possible to overstate the materiality of this. Even without the catch-up the increases are 16.7% or eight times the rate of inflation.

1) Efficiency

The Draft Determination is – in every year – less challenging on efficiency than Network Rail or any other benchmarked comparator. On a like for like basis, it requires just 5.3% efficiency in CP3 in relation to operations and maintenance (vs 6% net efficiency for NRIL). Renewals is even weaker, requiring just 1.8% flat over 5 years in CP3 and 0.5% thereafter, despite the fact that the ORR found that "[whilst we are] *in agreement that the HS1 network is unique in the UK, we are also of the view that the renewals being put forward for CP3 are in the main of a similar nature to that previously carried out in the UK*".

Eurostar believes that minimum efficiencies of 2% p.a. in CP3 and 1% p.a. thereafter are required. This would simply require HS1 to match for track the efficiencies the Department for Transport (which has been more challenging than the ORR in this regard) has considered appropriate for stations; the efficiencies that are being achieved by its customers (including Eurostar); and those identified by HS1 in its own commissioned study (the Rebel report). **It cannot be acceptable that an IM proposing record costs increases is held to an efficiency target that is "worst in class" despite having never market-tested their main operating contract.**

2) Risk Premium

The Draft Determination continues to permit NR(HS) to charge (and HS1 to pass-through to operators/passengers) a 4.33% "risk premium" on all operating charges that is neither evidenced, nor justified. Historically, this has been explained to Eurostar as the risk premium charged by NR(HS) to accept that the Operating Agreement is "fixed price" to HS1. If so, it offers no benefit to Eurostar or its customers. A basic tenet of the regulatory protections is that, once made, the determination is itself fixed. So, this would amount to HS1 charging 4.33% to hedge for its own purposes a determination which is already "fixed price" for users.

When challenged, it has latterly been suggested that this is simply an element of risk contingency. But NR(HS) has already built risk/contingency into its underlying figures. On top of this they also receive an annual 1.1% uplift in the contract and an operating margin of 8%. So, even under this explanation, the 4.33% appears to be double-counting contingency.

The bottom line is that after two years of preparation for the review NR(HS)/HS1 has failed to adequately evidence or justify this charge. Frazer Nash identified this trend throughout the process when they said: *"Clarity at source would have made this process…more straight-forward and provide greater confidence to all Stakeholders, in particular, ORR and HS1".* We agree and believe that part of the necessary culture of challenge and ownership is not to simply approve costs which cannot be suitably evidenced. **Given the pressures on affordability and efficiency, this inadequately explained and justified risk-premium should not be passed through to passengers.**

3) Escrow

The methodology adopted by the ORR in relation to escrow does not satisfy the General Duty in relation to best practice and economic efficiency. The ORR has chosen to interpret a Concession Agreement requirement to "look forward" over 40 years for renewals as a requirement to "pay forward" over the same period – eight times longer than any comparable IM. In fact, 58% of work being charged is after the end of the Concession and 31% of work in the last decade (% by value). The argument is that spreading the costs makes them more affordable. However, forecasting over this period is inherently unreliable, so operators are being charged now for costs that simply may not materialise, under a new concession which may be economically very different and to which contingency and risk have also been added.

Furthermore, the ORR has applied its methodology so as to avoid any (nominal) moment of deficit in the Escrow account *at any time* during the 40 year period. The consequences of this are twofold:

- The Escrow account ends up carrying **balances of more than £100m for 31 consecutive years, more than £200m for 13 consecutive years and more than £300m for 8 consecutive years**. This is a grotesquely economically inefficient way of tying up capital which might otherwise be invested in the development of the railway and of services to passengers and grow the business to support future affordability.

- The Escrow account now ends with a carrying balance of £64m which is explained as being for beyond-horizon renewals. So, in actuality, operators are pre-paying for even longer that the already inefficient 40 year horizon that is the ORR's own interpretation of the Concession Agreement.

Eurostar believes that the whole structure of the Escrow account requires change and we are responding to the separate consultation about this. But, as a minimum, **the Draft Determination needs to reduce the level of carrying balance in the account** (and allow for any nominal deficit to be financed, which would be cheaper and more efficient, given it is not otherwise projected to exceed £13m real in any given year)**. The end balance should be returned to zero (as per CP2).**

Conclusion

It is essential the railway is funded and sustainable, but it is equally essential that operators can afford to use it. The General Duty reflects this by requiring the ORR to take proper consideration of affordability, as well as best practice and economic efficiency. There is a balance to be found. In the context of these record proposed price increases, that balance is more important than ever. The affordability squeeze on operators, and the uncertain trading environment, is just as real as the perennial risks to maintenance and renewal costs. Eurostar believes that the right balance has not yet been struck.

Frazer Nash said: "*As a thin client company managing a 'new' railway, HS1 has been wholly reliant on a number of suppliers and sub-suppliers to determine asset plans, work volumes and costs...**HS1 has largely been as much a customer' of the review as ORR.***" This speaks strongly to an absence of asset understanding and cost challenge from HS1. Too much has simply been about passing through the costs with which their contractor feels comfortable. ORR needs to correct this balance. The Draft Determination makes are start but needs to be far more challenging, especially in the key area of efficiency.

Yours faithfully,

Gareth Williams

ANNEX

SUMMARY OF EUROSTAR COMMENTS ON THE DRAFT DETERMINATION

1) Efficiency

ORR is making a determination contrary to its own evidence. It is insufficiently challenging. The draft determination evidences:

- A series of top-down reports showing significant efficiency gaps since 2013 (latest report showed 18% gap)
- A series of Benchmarks ranging between 2%pa and 10%pa
- A NRIL efficiency target of 6% (10% with "headwinds") for the next 5 years

But then settles for 5.3% exit for O&M efficiency in CP3 and 1.8% flat over 5 years for CP3 renewals. Flat 1.8% efficiency across CP3 compares poorly with 13% 'exit' value for NR in CP6 and 0.5% p.a. efficiency from CP4 onwards compares poorly with the 2% p.a. settled on HS1 stations' LTC by the DfT

2) Charging Operators to Hedge HS1 own risk (or double-counting contingency/risk)

The draft determination ignores a key element highlighted by Eurostar. The fundamental structure of the Concession is that ORR sets a fixed determination and HS1 is "on risk" to secure the delivery within that envelope. It is a key protection for operators that the regulatory determination is fixed. There is <u>no</u> benefit to operators/passengers of paying an additional 4.33% on OMR to hedge an outcome which is already determined. This is HS1 charging passengers to hedge its own risks.

Latterly, this has been explained as managing risk and contingency within the contract. But no evidence has been shared for this by way of a breakdown of the underlying costs from NR(HS) which have – in every other instance – already included risk and contingency. And NR(HS)
is also receiving an 8% management fee and 1.1% real escalation. At best this looks like double-counting. It must be incumbent on HS1 to properly evidence these charges. They haven't and it should not be permitted.

3) Pass-Through Costs

§4.29 appears to establish a perverse and unreasonable precedent that if costs are uncertain, they can be passed through. This is the only explanation given for allowing the pass-through of market-testing the operator agreement. The need to market test this agreement has been understood from the start of the concession. For most businesses, market testing key suppliers is just best practice "Business as Usual" not some exception. Again, this doesn't satisfy the "best practice" requirement of the General Duty or the principle (set out in§2.41) that 'risk is best placed with those who can control it'.

4) Escrow

A range of issues where the draft determination is factually inaccurate or presenting imbalanced arguments.

1) As a matter of fact, the Concession Agreement does not require a 40 year pay forward. "Look forward" and "pay forward" are not the same; the draft determination elides this.

2) Neither does 40 years relate to any particular asset type – it is an open choice as to what an efficient pay-forward should be.

3) So, the arguments become ones of efficiency. The draft determination does not present these is a balanced way. It focuses on the (reasonable) argument that:

- It is more cost-efficient to spread payments over a longer-period for long-run assets. BUT then largely ignores –

- That is only an efficient way to pay if the forecasting of work/costs is accurate. Here the track record is poor and the findings in the DD about the proposed 40 year renewals forecast cast general and specific doubts on its accuracy and reliability. We think it is NOT 'fit for purpose', that little reliance can be placed on Escrow and annuity results derived from it. Using it to project and eliminate negative balances more than two decades away is an example of "spurious accuracy" with real costs attached.

- Intergenerational inequity risk if today's operators are paying the future costs we may not exist to enjoy or which may be shared (as HS1 own forecasts propose) by other competitors.

4) The 40 year renewals forecast used by the ORR is 'back ended': 58% of work after the end of the Concession and 31% of work in the last decade (% by value)

5) Despite the inherent uncertainty in any 40 year forecast, the specific uncertainties in HS1's 40 year renewals forecast revealed by Frazer Nash and the low level of asset knowledge displayed by HS1 (Frazer Nash again), ORR treats the forecast as a series of annual point estimates which are accurate, for the purpose of recovering 'historic underfunding', to within 5.5% over 20 years (dubious) and, for the purpose of removing negative Escrow balances, to within 1% over 35 years (incredible); overall, treating the forecast in this manner is an example of spurious accuracy but against which real costs are now being levied.

6) Forecast escrow balances of £400m (nominal - £208m in Feb 2018) are not an efficient commitment of funding. Could easily do ETCS + Station rebuild for this. In fact, the escrow account carries balances of more than £100m for 31 consecutive years, more than £200m for 13 consecutive years and more than £300m for 8 consecutive years. This is grotesquely inefficient.

7) Renewals efficiency of 0.5% pa from CP4 onwards is undemanding – especially since CP3 is even less demanding. Why is the "long run" efficiency target only one quarter of that demanded from NRIL when all the studies say HS1 has more of a gap to close? See for comparison the 2% p.a. for stations' LTCs or the helpful comparator table in the Frazer Nash report. 0.5% p.a very much a low outlier.

8) Delivery integrator costs are too high. And the determination is arbitrary. §1.5(c) proposes that the "*integrator costs should be 20% of renewals (10% of the renewals costs and a 10% mark up for the integrator)*" i.e. for each £10m of renewals, the DI is paid £1m (presumably for its own direct costs) PLUS £1m of 'mark up', i.e. a mark up of 100% on its own costs!

9) §2.50 clearly indicates an element of Escrow funding which is even longer than 40 years since it talks about the closing balance being justified to part fund beyond horizon renewals. (The escrow is cash not accruals). This just looks like post-hoc justification for having a closing balance of £64m which is the consequence of a methodology which is unnecessarily purist about avoiding any negative balance. Taking the additional funding costs of borrowing against a negative balance may be more efficient than holding £208m (real) tied up in Escrow or finishing up with £64m "left over".

10) There is inconsistency with PR14. Compared to PR14, the scope and details of the calculation have changed: indirect costs (management fees, risk, contingency) are now included and negative projected balances have to be removed; each of these in in favour of the IM and increasing the annuity

11) Eurostar accepts historic underfunding but does not accept how estimates of this have skyrocketed in just five years. The CP2 'steer' for the CP3 annuity was £18.4m; the draft 5YAMS had £38.2m (108% up on the 'steer') and the ORR's DD adjustments reduce this to £26.1m (42% up) [all in Feb 18 £m]. Even if these estimates are now accurate, why should operators bear all the cost of HS1 getting it so wrong last time?

5) Forecasting Risk (and, more generally, risk ownership)

On what evidential basis do ORR believe that "reputational incentives" (§5.12) and reporting are sufficient to drive HS1 to better forecasting? Examples of this working please. Especially in light of the counter-evidence that:

- These incentives exist now and have not delivered accurate forecasting to date (stations or track)
- The information reported (station and track) has been weak.
- Reputation didn't stop HS1 proposing price increases of 78% indifferent to affordability and criticised in Parliament.

How is it "best practice" and economically efficient for the body with responsibility for forecasting to bear no financial risk for the accuracy of its forecasting (even to the extent of being able to pass through its own hedging costs)?

ORR's proposal is strengthened reporting, but no details provided … this needs to be clearer and more structured.

6) Structure of Charges

The ORR appears to be cherry-picking its enthusiasm from amongst the regulations and duties. On the one hand:

- The draft determination has dismissed the need for action on affordability "based on the evidence provided to us" (§6.15). Other than that provided by EIL (which showed the opposite) what is this evidence – or what were the weaknesses in the EIL evidence?

- The determination is completely silent on the adequacy (or opposite) of HS1's compliance with the need to target the optimal competitiveness of international rail services.

By contrast:

- The draft determination presses ahead with proposals to recommend a shift from "per minute" allocations to "tonne km" despite strong (and rare!) alignment of objection from HS1 and EIL. This is a fundamental change and NOT one which is required in regulation. Eurostar simply disagrees with the ORR's interpretation of Article 6 of the modulating directives. Furthermore, the ORR approach takes a very narrow view of economic incentive focusing on short term costs (many of which are already covered by tonne/km charging under the Direct Costs) and does not even discuss the wider regulatory requirements e.g. relating to optimising international high-speed rail and ensuring predictability of investment. This is a very significant economic change which is being rushed and without the support of anyone (or at least anyone who is actually paying the bill). In short, the ORR is placing too much emphasis on the trees of maintenance cost allocations and not seeing the woods of economic and investment incentives. It is misinterpreting the regulations and urging a "fix" to a system that isn't broken.

7) Inflation

The draft determination fails to follow-through on its own convictions. Having discussed the benefits of CPI it then sticks to RPI based on three poor reasons:

a) "The IRC is unregulated and uses RPI". So what? It's a different charge for different purposes. There is no read-across.

b) "Regulated passenger fares are indexed to RPI". Eurostar's are not! The company with the regulated fares is not paying its own bills.

c) "The Contracts that support the Concession Agreement (e.g. the Operator Agreement) use RPI as their inflation basis". First, the operator agreement is up for market testing in CP3. Second, it's a dangerous precedent for the regulator to fetter its discretion based on whatever the regulated party may have chosen to previously contract. Really?

This contrasts with the switch to CPI for NRIL in PR18, with special 'transition arrangements' for CP6?. There is nothing to prevent such a change in the Concession Agreement and ORR has previously varied the inflation allowances. We agree that the underlying issue may be about input prices, rather than inflation but one way or another this should be addressed. If inflation assumptions, plus the automatic uplift in the OMR agreement enable NR(HS)/HS1 to raise charges at a level outstripping real changes to prices, this simply builds in another layer of contingency.

8) Risk Contingency (To finish on a significant and material positive!).

Eurostar strongly supports for the move to 13% and does not want to see this eroded. This is more consistent with the station position and actually places a real incentive on HS1 to improve asset knowledge. Completely agree that the correct response to perceived "high risk" is to improve control and understanding to lower the risk, not simply to layer in contingency to offset the absence of best practice.

HIGH SPEED 1

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11 November 2019

Graham Richards
Director Planning and Performance
Office of Rail and Road
25 Cabot Square
London
E14 4QZ

By email: and PR19@orr.gov.uk

Dear Graham,

Consultation – 2019 Periodic Review of HS1 Ltd (PR19)

1. Thank you for the opportunity to respond to the Office of Rail and Road (ORR) consultation on the Draft Determination Decision and Supplementary Documents relating to PR19. This letter also includes HS1's response to the ORR Discussion document on HS1 escrow arrangements - financial risk, incentives and governance.

2. HS1 welcomes ORR endorsement of most of our plans as set out in the 5 Year Asset Management Statement (5YAMs) and has collated a range of additional evidence that supports our approach. We also welcome the challenges set by ORR and agree that the process to date has been open and constructive.

3. There is no single solution to balancing the long-term stewardship of the asset with the affordability concerns of operators in the short term. It is particularly challenging given the need to forecast renewal costs over a 40-year time horizon. We are acutely aware of the need to demonstrate further efficiency and look forward to working with ORR and stakeholders throughout Control Period 3 (CP3) as our approach to asset stewardship continues to mature. HS1 sees the 5YAMs as a package of work based on a set of logical relationships and assumptions – particularly in relation to coming to a view on the approach to the annuity. We have continued this approach in responding to the challenges raised by the ORR in the Draft Decision Document.

4. The Draft Decision Document sets out several areas where the plans proposed in our 5YAMs were not accepted at this stage. Our detailed responses to the consultation are contained in the Attachments to this letter but I set out our high-level views to each item below;

    a. HS1 understands the work ORR presented on sensitivity and what it is seeking to test in terms of forecasting future renewals. HS1 has carried out sensitivity analysis and reassessed the evidence and approach taken in relation to asset lives in response to ORR's challenge – particularly in relation to track assets. HS1 remains of the view that the direct costs as included in the 5YAMs are supported by this evidence and analysis and we will provide this to the ORR. We will therefore maintain the work bank set out in our 5YAMs when we resubmit to ORR on 30th November. While HS1 understands the ORR's view and fully intends to work with stakeholders to best represent the difficulties of forecasting volumes and cost this far in the future, we consider we have adopted best practice in coming to our view. As HS1 has said throughout the process there is strong evidence to support the engineering work bank, particularly for track assets. Given their critical nature we do not think it appropriate to reduce volumes as suggested by the ORR or come to an alternative position.

b. HS1 accept the ORR view regarding the classification of future signalling renewals but notes we will need to bring forward proposals in CP3. At this stage this means the future signalling system on HS1 is unfunded. In order to bring forward proposals HS1 will require input from the Department for Transport (DfT) and operators. If the project does go ahead, operator charges will increase unless the project is fully funded by the DfT. In particular, the DfT position on funding the European Train Control System (ETCS) on HS1 will need to be clarified by them before HS1 can bring forward detailed financing proposals. It is important to note that while the Concessions Agreement sets out obligations on HS1 to bring forward specified upgrade proposals HS1 cannot be held responsible if a decision is taken not to fund them;

c. HS1 recognise it is typical for regulators to include frontier shift efficiency assumptions in their forecasts so we will include this in our updated 5YAMs, but we remain disappointed ORR has not placed enough weight on the proposed productivity improvements already built into our plans. HS1 plans include up to 30% productivity assumptions in delivery of the workbank over 40 years;

d. HS1 recognises the challenges in forecasting risk over such a long-time horizon and has been open about this throughout PR19. We are disappointed the ORR has rejected the buffer approach which we think appropriately deals with managing uncertainty over such a long-time frame. However, HS1 recognises this is an estimate of risk for the purposes of prefunding and there is a great deal of uncertainty. Regarding CP3 we have therefore looked at the challenge set by ORR. Working in partnership with NR(HS) we have developed a P50 estimate of portfolio risk as a proxy for the expected value of risk in CP3. This however should not be a 'cap' on a project by project basis. HS1 has therefore applied a risk figure of 12.6% to CP3 and CP4-CP10 for the purposes of funding the annuity. This is slightly below the figure adopted by ORR and reflects our position of maintaining the engineering workbank (item a). This however should not be seen as a precedent – as risk materialises, we will review our approach and update it in CP4.

e. HS1 has updated its interest rate assumptions and will include a 1.22% assumption for CP3 as it remains consistent with the Escrow Investment

Strategy agreed with the Department for Transport (DfT). For CP4 onwards HS1 has included an interest rate assumption 1.92% which reflects the best data at this time (updated to September 2019); and

f. HS1 welcomes the recognition that the escrow account has been underfunded in CP1 and CP2 and fully supports the uplifts proposed by ORR.

5. In addressing the concerns raised by the ORR we therefore expect the 5YAMs proposal presented to the ORR on 30th November will result in an annual renewals charge of between £28 and £28.5 million although this is an indicative number that is still subject to internal review and final modelling.

6. There are number of further issues HS1 would like to address in our response. HS1 notes that in the ORR coming to its view on the annuity method it has set clear expectations for the future given the extensive work done during PR19 to model different approaches that have subsequently been rejected on compliance grounds. In future HS1 will continue to use a 40-year annuity and fully fund expected costs.

7. HS1 is disappointed ORR has not accepted the view that charging direct costs on a train per minute basis is consistent with the exceptions allowed under the Railway Access Management Regulations 2016. HS1 will adjust its charging structure accordingly and although this will have no direct impact on Eurostar there will be minor adjustments to the charges faced by London Southeast Railway.

8. As ORR is aware HS1 is a uniquely regulated rail asset in that HS1 and NR(HS) work in partnership. It is therefore important that when ORR comes to its final decision targeted efficiencies, particularly in relation to the costs of each organisation, are clearly articulated and directed to the organisation able to control and deliver the efficiency.

9. Finally, HS1 notes that the degree of regulation over the asset (both route and stations) is increasing significantly both through the PR19 process and the growing expectations ORR and the Department for Transport (DfT) has set for increased monitoring. To do this efficiently and effectively it is important to rely on the effectiveness of the process (such as the project governance process) and contemporaneous decision making during the control period. It will be important that ORR, DfT operators and HS1 work together to ensure regulatory monitoring is clear, proportionate and targeted and organisations are able to effectively resource and manage regulated activity. Consistency between the DfT and ORR approach will be important. HS1 has been working with Heathrow Airport to review its approach as well as the lessons we have learned during CP2 and will bring proposals to ORR and DfT early in CP3.

10. The remainder of this response is broken out into five attachments addressing each of the three PR19 supplementary documents and Escrow Investment Consultation as follows:

A. PR19 supplementary document: charging and incentives;

B. PR19 supplementary document: asset management findings;

C. PR19 supplementary document: financial framework;

D. PR19 Draft Determination: health and safety section

E. Discussion Document: HS1 Escrow Arrangements.

11. We would be pleased to discuss the contents of this letter further with you. In the first instance, please contact James Mackay with any follow-up queries you may have.

Yours faithfully

Dyan Crowther
Chief Executive Officer

ATTACHMENT A: PR19 supplementary document: charging and incentives

Reference	ORR Determination	HS1 Response
3.21	HS1 to adjust OMRCA1 calculation to a per train kilometre basis	HS1 is disappointed ORR has noted it has a ‘better’ interpretation of the regulations and that the ORR does not recognise per train minute charging based on an economic model as a legitimate use of the exceptions allowed in the *Railway Access Management Regulations 2016.* As set out in our Structure of Charges Paper, HS1 and our stakeholders recognise that the HS1 model does consider train speed and weight through a calculation of equivalent gross metric tonnes per annum. This calculation looks at specific train types and the impact they have and then allocates direct costs accordingly. It sets out a clear method for calculating direct unit costs and is a recognised approach so we cannot see why the ORR would determine it is inconsistent with Article 6. All the HS1 model does as a final step is rebase the calculation into minutes so it is consistent with the calculation of the Investment Recovery Charge (IRC), Additional Investment Recovery Charge (AIRC), and other elements of the OMRC charges. Consistency and simplicity so operators can clearly understand the charging structure is also an important consideration in HS1’s view. However, HS1 will adjust the model to reflect ORR’s interpretation and resubmit the 5YAMs to ensure OMRCA1 (Direct Costs) is charged on a per train kilometre basis from the commencement of CP3. On a point of clarification - HS1 notes that while it is correct the adjustment required by ORR will not impact Eurostar there will be

		incremental differences in charges faced by London Southeastern Railways (LSER) given the minor differences in timetabled services from Ebbsfleet and the kilometres traversed on the network. This will not however impact the overall amount of costs recovered from LSER.
3.25	HS1 should consider the treatment of non-direct costs as part of its Structure of Charges Review	HS1 will consider the treatment of non-direct costs in its structure of charges review. HS1 is concerned by the commentary set out by the ORR in paragraph 3.24. While HS1 accepts that faster heavier trains cause higher levels of direct costs than slower lighter trains this is dealt with in the treatment of OMRCA1. It does not follow that non-direct charges also need to always reflect this relationship, and this could set an unhelpful expectation. HS1 does agree that non-direct costs should also be cost reflective and this will be a focus of the Structure of Charges Review. In some areas the type of train may be relevant, but this will not be a principle applied to all non-direct costs. It would be helpful if the ORR could confirm our understanding of the regulations in its final determination and we look forward to working with the ORR during the review of our charges.
3.44	HS1 structure of charges review should be a thorough overhaul of its charging model reflecting best practice and the engineering relationships between vehicle type, wear and tear costs and how it allocates appropriately to the operators that cause them	HS1 welcome the ORR's endorsement of a Structure of Charges Review. It is important to note HS1 has not funded this activity which will include the development of a new charging model and independent studies to assess in greater detail the impact of specific train types on the network. HS1 notes this is critical detailed evidence that will be required in order to justify potential

		changes from the current approach and to demonstrate to the ORR compliance with the regulation. We intend to bring forward costs for this activity in the 5YAMs.
4.7	HS1 to remodel charges and resubmit in revised final 5YAMS by 30 November 2019	HS1 remodelled the charges based on the adjustments made by ORR and provided the model to ORR on 31st October for its review and dispatch to toher interested stakeholders. Adjustments based on HS1's updated views will be resubmitted with the 5YAMs by 30th November.
9.7	HS1 to remove UKPNS proposal from 5YAMS	Agreed. HS1 will update the charging model and 5YAMs to reflect this.

ATTACHMENT B: PR19 supplementary document: Asset Management

Reference	ORR Determination	HS1 Response
1.9	HS1 develops an action plan and set milestones for implementation in CP3 of the recommendations contained within the AMCL report.	HS1 will continue to improve Asset Management capability in-line with other leading asset practitioners and will follow the principles of ISO55001 asset management best practice. HS1 will collaborate with NR(HS) to translate the recommendations from the ISO55001 AMEM assessment and any other wider industry learning into an asset management maturity improvement plan. Delivery success against this plan will be reported on within the AMAS. HS1 agrees with the timeframe proposed by ORR.
1.10	HS1 undertakes a followup review during CP3 to establish progress and set themselves a goal of obtaining accreditation.	HS1 will undertake a further review of its asset management capability/maturity to confirm progress against the principles of ISO55001 (asset management best practice) by end 2023 and HS1 will seek to close out any identified improvement areas in order to meet ISO55001 certfication on route by the end of CP3.
1.11		Agree – HS1 already undertakes extensive assurance activities as evidenced throughout the PR19 process. HS1 recognises it can always improve and enhance its approach and work with

	HS1 in future 5YAMS submissions, HS1 fully documents and demonstrates that the assurance activities it has undertaken on NR(HS).	ORR to understand the documentary evidence it requires. HS1 hope this will be agreed and clearly set out in the monitoring and reporting guidance ORR is proposing.
1.19	HS1 to update Asset Management Policy with current status and CP3 target / milestones	The NR(HS) SAMP is the most suitable document to contain details of the current asset management status and the improvement targets/milestones for CP3. The SAMP will be revised before the end of year 1 of CP3 (March 2021). Please also see item 1.55.
1.22	AMOs should be subject to review at a suitable frequency	A review of the AMOs will be undertaken to enable a better understanding of the relationship between the AMO weightings and the renewals workbank. HS1 will use the learning from this review to feed into the production of new AMOs for use in CP4. HS1s aspiration is to create different weighted AMOs (scenarios) which will be used in the Decision Support Tool to enable stakeholders to understand the tradeoffs/impacts from these different AMOs - this will enable even better and more informed decisions to be made by key stakeholders.

1.38	HS1 / NRHS should perform its own sensitivy analysis around critical design lives which are based on engineering judgement (rail, ballast,sleepers)	HS1 believe the approach taken in the generation of the CP3 submission is robust as it utilises the asset information currently available supplemented with engineering knowledge and where necessary judgement. HS1 and NR(HS) have undertaken scenario and sensitivity modelling in determining the renewals volumes and then overlaid a challenging and efficient deliverability plan which uses leading industry best practise. HS1 will provide ORR with an evidence pack that reflects our position and therefore not incorporate ORR's proposals in it 5YAMs of 30th November 2019. As discussed with stakeholders throughout the PR19 process, HS1 and NRHS fully understand that there is uncertainty in forecasting renewals 40 years out, and as such it is not possible to provide detailed evidence now that demonstrates the life of assets 40 years from now, and as such it is not possible to come up with alternatives to that offered by ORR in any meaningful way. HS1 accepts ORR's view that it is virtually impossible to accurately predict asset life so far out and philisophically – it is true both HS1 and ORR's predictions aren't going to be correct. HS1's concern however is that costs could go either way and the best evidence available now suggests HS1 has

		developed a robust 40 year plan. In adopting ORR's approach the best evidence today suggests the annuity will need to increase in the future to make up for underfunding renewals volumes now. HS1 believes this would be inconsistent with with logic and approach ORR is adopting in the annuity – to fully fund all expected long terms costs. HS1 and NR(HS) consider that any opportunities to challenge the 40 year renewals cost profile should be achieved through financial modelling and not via amendments to work volumes, especially for the track assets which are so critical to the safe and reliable performance of a high speed railway. For these reasons HS1 and NR(HS) have updated the approach ORR is suggesting in relation to risk for this control period.
1.39	HS1 / NRHS to demonstate how it will ensure evidence-based condition based renewals and include this in long term planning. Should focus on track assets.	NR(HS) are continually improving the quality of asset condition data held for route assets. Over time, with the ongoing capture of condition data, an improved understanding of degradation rates will be created - this will improve the quality of information available for use in the Asset Decision Support Tool. This will permit more informed decisions in relation to the future condition/performance (long term workbank) which will be aligned to the Asset Management Objectives.

		The Specific Asset Strategies (SASs) will be updated to reflect the evolving asset knowledge and this information will be used to drive the CP4 long term plan. HS1 will continue to work with NR(HS) to drive research and development initiatives, with particular focus on condition monitoring capability for track assets.
1.55	SAMP should outline how the stated aims will be achieved and by when.	The NR(HS) SAMP will be revised before the end of year 1 of CP3 (March 2021). The revision will include details of the current asset management status and the targets/milestones for improvement within CP3 (please also see item 1.19).
1.60	SASs should present the expected asset condition at end of control period handback and end of the 40 year plan.	NR(HS) are continually improving the quality of asset condition data held for route assets. Over time, with the ongoing capture of asset condition data, an improved understanding of degradation rates is created. HS1 will work with NR(HS) to enable future versions of the Specific Asset Strategies to include the forecast condition at key future time points, e.g. end of the Concession and the end of the 40 year indicative plan. HS1 will work NR(HS) to provde new SASs by December 2021.

1.72	Regular feedback of ADST outcomes should be shared with stakeholders by HS1 (plan and programme).	HS1s aspiration is to create a set of different weighted AMOs (scenarios) which will be used in the Asset Decision Support Tool to enable stakeholders to understand the tradeoffs/impacts from different Objectives - this will enable even better and more informed decisions to be made by key stakeholders. HS1 will provide an update to stakeholders by June 2022 with potential options as a starting point for considering different options in CP4.
1.84	Additional consideration of remote or automated monitoring should be given by HS1.	HS1 agrees and support the proposal from NR(HS) in their SAMP which is to assess the viability of remote condition monitoring in the first year of CP3 for certain assets.
1.85	Additional consideration of efficiencies, outside normal railway practice should be undertaken by HS1.	HS1 and NR(HS) undertake a series of benchmarking sessions to review cross industry comparisons. We will make this work clearer in future documentation submitted to the ORR. Further benchmarking and knowledge gathering will evolve in CP3 and HS1 will demonstrate that has fed into our future plans.

1.87	HS1 to set out minimum asset data requirements and then report on data quality annually.	HS1 are working on a number of improvement areas for asset information capability. An asset data quality standard is already one of the key documents planned for production in the first year of CP3. HS1 will report in the AMAS on progress against the approach to the future quality of asset data.
2.28	HS1 to review operations and maintenance risk ownership with funders (plan and programme).	Agree – we will provide a plan to ORR in the first six months of CP3 in relation to how we will review operations and maintenance risk ownership with funders.
2.37	NR(HS) provide a resource programme with milestones for NR(HS) resilience of key risk workstreams.	HS1 supports the NR(HS) approach to introduce NR Business Continuity by 2020 and incorporate this into its future operational strategy. HS1 expects NR(HS) has fully funded these activities within its fixed price.
2.49	Maintenance frequencies to be revised as more HS1-specific failure data becomes available	HS1 supports NR(HS) approach where frequencies are reviewed by Professional Heads, informed by faults, inspection, desktop review and engineering assurance. As more specific data becomes available maintenance frequencies will adjust accordingly.

2.50	HS1 to follow-up on water ingress issues identified on site visits.	HS1 notes NR(HS) is already following up on this request and supports the approach adopted.
2.51	HS1 to review incentives and monitors of efficiency maintenance (plan and programme).	Agree – we will provide a plan to the ORR in the first six months of CP3.
2.54	HS1 to review incentives used to maximise asset life before required renewal.	HS1 does not believe that maximising asset life necessarily achieves best practice or be consistent with the AMOs. HS1 has worked with NR(HS) to develop a whole-life cost model designed to identify the best approach to managing each asset. This could include in some instance maximising asset life.
2.56	HS1 to commission an independent review into the effectiveness of their Quarterly Assurance Board.	HS1 has commissioned an independent chair. We are happy that the chair provides a report on their findings in accordance with the dates set by ORR. We do not propose a further indepenent review.
2.70	HS1 to explore with stakeholders if network optimisations could yield lower overall	Agree – we will provide a plan to the ORR in the first six months of CP3.

	maintenance costs and lower performance penalties (plan and programme).	
3.17	HS1 to review how it incentivises cost reductions for renewal projects, including use of target costs for large projects or programmes of similar projects.	HS1 is reviewing how to implement a target cost approach but notes in CP3 there a few projects of sufficient magnitude that are likely to warrant investing in this type of approach.
3.18	Mechaniscal and Electrical Costs should be corrected if incorrect.	NR(HS) have confirmed that the cost of this project is £410,000. No correction is required.
3.19	Reduce CP3 renewal costs by 1.8%	We believe this double counts as their approach was already incorporated into the QCRA. NR(HS) will remove this element of the QCRA and apply the 1.8% separately.
3.29	HS1 to provide further evidence to substantiate a number of highlighted renewals in CP3, should they still believe they are critical.	We are working to finalise this with NR(HS). Most projects in CP3 are justified. We expected a number of E&P projects will be removed. These adjustments will have very minor impacts on our charges.

3.31	HS1 to ensure flexibility and resilience to changes to renewals programme (within CP3 and to/from CP4) (plan and prgramme).	HS1 do not accept the ORR position in relation to moving these projects but do accept that flexibility and resilience in delivery is important. Working with NR(HS) we have applied a delivery overlay to CP3 which has the effect of reducing the funding figure that goes into the annuity. HS1 does not think this is a cap. NR(HS) can plan and deliver beyond the requirements set through the application of this overlay (based on justication and deliverability). HS1 is encouraging NR(HS) to overplan in CP3.
3.32	HS1 to make adjustments to 5YAMs for CP3 renewals.	See response to 3.31.
3.39 - 3.42	NR(HS) Headcount appears excessive - HS1 to review as costs in the region of 15% - or would expect 10%	HS1 has re-reviewed the NR(HS) proposals on project functions. In terms of Headcount we think NR(HS) has provided good analysis of requirements moving forward. We have taken a bottom up approach reviewing roles and rates. There are two roles HS1 disagrees with - NRHS are also looking to employ a clerk of works type role and a safety adviser. HS1

		have rejected both these roles as they can be covered off by existing staff within the organisation. In HS1 safety leadership on projects is an integral part of the project managers role supported by the HS1 safety manager NRHS should adopt a similar approach. Engineering assurance (the clerk of works type role) needs to sit down in the supply chain and not within NRHS. HS1 has also reviewed the rates applied by NR(HS) and believe they are high. HS1 has applied rates that better reflect the market in our view based on similar activities we have undertaken. We believe this is the right thing to do and sets NR(HS) the challenge of efficiently incurring these costs. As a result of HS1 adjustments we believe the NR(HS) costs should be reduced to £7.6 million over CP3. This would achieve project management costs of approximately 11% for the CP3 portfolio.
3.57	HS1 should further reduce the proposed risk allocation for CP3 (13% for renewals)	HS1 has worked with NR(HS) to finalise a P50 risk number for CP3 which amounts to 12.6%. We propose using this number (as updated) in our annuity calculation.

3.70	HS1 to establish R&D panel to review benefits and investments (plan and programme).	Agree. HS1 will be forming and chairing a new Innovation Panel. The panel will have representation from the HS1 Engineering and Operations teams, NRHS Route and Stations (both Engineering and Operations), Connect Places Catapult and representatives from operators. The Panel will add the requisite level of governance to the identification and delivery of the innovation through a research and development portfolio process. In addition HS1 will be working with NRIL and HS2 where synergies exist to deliver research and development through their delivery mechanisms. HS1 will provide further details on these plans to ORR at the start of CP3.
3.71	HS1 to commit to investment in R&D through a reliable funding mechanism.	Agree. HS1 has reviewed its approach. In HS1's view the best way to fund R&D is through HS1's own costs – recovered through the OMRC – rather than through an additional pot of money recovered through the renewals annuity. HS1 will release this money for R&D in accordance with the processes noted in 3.70 above. HS1 will include a figure of £2 million over the life of CP3 for R&D. We base this figure on the following approach. HS1 has reviewed potential R&D projects already discussed with NR(HS) and is particularly interested in activities to

		innovate our approach to monitoring track geometry and work to extend track life with a focus on track train systems. HS1 notes this is consistent with the ambition set by the ORR to ensure there is robust evidence to ensure particularly sensitive assets such as track are well justified. Operators can play an important contribution in this area and this is why HS1 would want them more directly involved in innovation activities. A figure of £2 million would not fully fund these activities but it provides a secure funding base to ensure work can be taken forward in CP3.
4.19	HS1 to ensure awareness that Bechtel's CP4-CP10 direct costs contain a number of omissions and assumptions that will need to be quantified during CP3.	Agree – HS1 will discuss this further with ORR and ensure any omitted costs are included in future plans.
4.34	HS1 should begin planning ETCS signalling replacement as a specified upgrade (plan and programme).	HS1 agrees it will commence planning during CP3. HS1 anticipates finalising early proposals by the end of 2022 with a view to submitting a proposal to the ORR in 2023. HS1 notes this will require a decision by DfT on its approach to funding in

		advance of any application to the ORR. HS1 also notes that this project is now unfuded.
4.40	HS1 to review blanket 30% risk.	See response to 3.57.
4.49	HS1 to agree business case with stakeholders for CP4-CP10 PMO model (plan and programme).	HS1 will consider its approach with stakeholders before the end of 2020 but this will be contingent on the approach set out in 4.55 below.
4.55	HS1 Ltd to aim to conclude market study as soon as possible, to allow time for investment in CP3 to be ready for start of CP4 (plan and programme by March 2020).	NR(HS) is our contracted supplier until 2046. HS1 has the ability to market test once during the concession. HS1 is currently engaging the ORR and other stakeholders to consider how it should take a decision to exercise this option in the Concession Agreement. HS1 will come to a view in the first year of CP3.

ATTACHMENT C: PR19 supplementary document: financial framework

Reference	ORR Determination	HS1 Response
1.3	Total renewals expenditure should be £68m for CP3. This would be comprised of £53m of CP3 direct costs, approximately £5m preparation costs for post CP3 renewals, £6m for risk and contingency priced at 13% of renewals, and £5m for PMO costs.	HS1 does not agree with ORR's total renewals expenditure of £68 million for CP3. Working with NR(HS), HS1 has made several amendments to the annuity calculations based on the challenges set by ORR. - Direct costs of £57.3 million (after an efficiency (1.8% and delivery overlay (8%)); o HS1 will provide comment on where in the portfolio delivery we believe NR(HS) may not deliver and assess it against the ORR's recommendations. We may need to update our models accordingly to reflect moves into CP4. - Maintaining CP4-CP10 preparation costs; - Risk priced at 12.6% in CP3; and - PMO costs of £7.6 million. Specific details of these adjustments are set out in Annex B.
2.22	REBEL proposed an efficiency improvement of 18% on total costs. But it is not clear how renewals contribute to the efficiency challenge for CP3	Please see above and response in Annex B in relation to the treatment of the 1.8%.

	included in HS1 Ltd's final 5YAMS. So, based on our analysis, we have included an additional 1.8% challenge for CP3 (not per annum).	
2.31	HS1 Ltd's final 5YAMS noted improvements to project delivery and governance by NR(HS). However, there does not appear to be a strong incentive to drive efficiency in NR(HS) / the delivery integrator. We welcome views on this in addition to other issues raised in our Escrow discussion document	Please see HS1 comments in Annex E.
2.32	For our 2024 periodic review (PR24), we expect HS1 Ltd to build its own evidence base for productivity.	HS1 is happy to work with ORR on guidance that will inform how to demonstrate efficient delivery of the renewals portfolio. HS1 has already entered conversations with other regulated utilities (Heathrow Airport) to consider what learning can be applied.
3.14	We would expect HS1 Ltd to provide a comprehensive WACC analysis as part of its PR24 submission	HS1 agrees to this approach but will need to work with ORR so there is a clear understanding of expectations.

3.16	We expect HS1 Ltd in due course to propose how it will determine the WACC for Specified Upgrades, such as ETCS, which we will consider in reaching our opinion of whether HS1 Ltd's submission is reasonable.	HS1 does not expect the WACC to be a relevant consideration for CP3. HS1 agrees with the ORR position on financing negative escrow balances, that this should not happen in practice given the rolling 5 year review of the escrow requirements and funding required. Further HS1 does not anticipate there will be any small scale specified upgrades during CP3, given the work done so far on renewals and current information. HS1 however, does recognises the ORR's request that HS1 develop a company specific WACC for CP3 that can be used for small scale specified upgrades. In the event there are small scale projects HS1 would expect to use the simple WACC value of 5.1% as set out in the ORR Draft Determination. We believe this is appropriate because in practice HS1 would fund small scale investments through operating revenue – and in this situation this is money forgone by shareholders who would otherwise receive a return. HS1 accept this is a simple WACC calculation and as a result we are working to develop a more detailed assessment of the cost of capital, although this will not be finalised before the Final Determination. HS1 is happy to agree an approach whereby ORR review and endorse a WACC for small scale projects in CP3 after the Final Determination although for the reasons noted above we do not think it will be required.

		HS1 does expect to bring forward major Specified Upgrade proposals in CP3 (subject to clarification of DfT's position on funding (ETCS) but the financing costs will be highly specific in nature driven by the detailed arrangements of this project – for example if Government funding is part of the investment. HS1 notes ORR will have the opportunity to review the specific merits of large scale Specified Upgrades and will be able to determine the provenance of financing costs at that time. We anticipate a Specified Upgrade proposal on ETCS will be submitted in 2023.
3.28	We consider that a 2.5% interest rate is an appropriate forward-looking assumption to use for the purposes of the renewals annuity calculation. So, we recommend that HS1 Ltd further considers its interest rate assumptions.	HS1 has built a detailed Escrow Investment Strategy for CP3 based on a series of assumption agreed with the DfT and TOCs. In our view this represents a detailed and more accurate view of the likely rate of return over the next 5 years, based on current rates. As such we have kept the interest rate at 1.22% for CP3. The escrow investment strategy was actively trying to learn from the challenges with the simplified CP2 forecast by having an agreed strategy upfront that could be executed more regularly to balance the cash required to fund renewals with the need to earn the maximum returns possible given the current concession agreement investment rules.

		More generally however, HS1 recognises the approach adopted by ORR for beyond CP3 but notes the forward interest rates used in coming up with the calculation of 2.5% are from an older model. They have since been updated and based on that we believe the more accurate forecast (using the ORR's approach) is 1.92% p.a. HS1 has modelled the annuity on that basis. HS1 notes that in order to achieve higher levels of return in the future the DfT will need to review the current 'authorised investment' provisions in Concession Agreement as part of the PR24 process, which HS1 would welcome. Further comment is also found in Attachment E.
4.11	HS1 Ltd stated in its final 5YAMs that UKPNS additional costs will be passed to operators with the effect of reducing HS1 Ltd internal costs. HS1 Ltd has now said that this will not happen, which will mean that its internal costs will increase by £0.5m and pass-through costs will reduce by the same amount. We expect HS1 Ltd to clarify this updated position in its revised final 5YAMS.	HS1 will provide an updated clarification and position in the revised final 5YAMS.

4.26	HS1 Ltd acknowledges that there could be two business rates revaluations during the CP3 period, now that the valuations take place every three years instead of five but has assumed no increases in CP3. This could be optimistic, especially as we note that Network Rail Infrastructure Limited has factored in one 38% increase during the next five years. So, we will discuss this assumption further with HS1 Ltd before the final determination.	HS1 had discussed its position with the ORR. HS1 will maintain the position as set out in the 5YAMS.
4.27	We think that the RPI-linked UKPNS contract which runs to 2057, should continue to be reviewed for efficiencies and HS1 Ltd should continue to work with stakeholders in CP3 to test the viability of options to reduce costs.	HS1 has set out a detailed energy efficiency strategy in its 5YAMs setting out a range of past and future activities and will continue to work with stakeholders to test options to reduce costs. As ORR would be aware the UKPNS contract is a finance lease arrangement set up by the Department for Transport (DfT) that was novated across at the point of sale. The contract is structured as a finance lease to recover the cost of building the distribution system. There is no market test provision.
4.28	For insurance, the requirements on HS1 Ltd are largely set out in the concession agreement. HS1 Ltd	HS1 has a margin clause built into the primary layer of its Property damage insurance policy. This helps to protect against

	has included an additional £0.1m per annum compared with the CP2 exit in its forecast from 2020-21 for a property revaluation. The current insurance deal allows for 20% revaluation increases (i.e. the costs will not change if properties are revalued by up to an additional 20%). It is not clear if this has been taken into account in the additional £0.1m.	specific asset revaluations. The clause allows for absorption of the increase within the margin but this is on an annual basis – not the life of the policy. When the policy is renewed in November each year any revaluation that has occurred in the last 12 months is passed through to HS1 through increased premiums. The £0.1m referred to in the question has been budgeted to allow for annual uplifts. These uplifts are based on expected valuation increases over the life of the policy. HS1 washes up the forecast recovery against actuals so operators only ever face the actual insurance costs.
4.30	HS1 Ltd's final 5YAMS explains that in CP2, freight-specific costs for NR(HS) reduced due to reduced train activity and revised mothballing costs. It then explains that NR(HS) freight-specific costs for CP3 are based on the number of trains, train weights and equivalent track-km. The lower NR(HS) costs in CP3 are not explained beyond that, so further clarity on the reduction is necessary.	At the start of CP2 expected freight specific costs were £600,000 based on a modelled allocation based on EGMTPA. As ORR would be aware freight volumes were significantly below that anticipated at the start of the control period (CP2). HS1 therefore reopened the model to take volumes into account in adjusting charges. When the model was re-opened in this way the expected freight costs (i.e. 600,000) reduced to reflect the lower volume of trains. The lower NR(HS) cost for CP3 (i.e. 400,000) is the modelled allocation based on the updated train numbers (454) whilst weight and kilometres are constant. This reflects the lower modelled costs for NR(HS) in CP3 and is consistent with the

		method for the actual re-opened outturn costs during CP2 (albeit with different inputs based on CP3 costs).
5.11	In CP3, we think that it is necessary to strengthen monitoring and reporting on its cost base, risk and contingency, escrow balance performance and efficiency. We could do this by adopting some of the tools we have used for Network Rail Infrastructure Limited, for example in depth commentary on HS1 Ltd's efficiency initiatives in CP3. This should strengthen the incentives surrounding the financial framework and encourage greater ownership of risk and contingency and delivery by HS1 Ltd.	HS1 welcomes clear and unambiguous advice from the ORR in terms of its expectations around monitor efficiency in CP3. HS1 notes however that additional requirements imposed by ORR will lead to increased costs. In addition, (as noted in Annex E) clarity around the role of operators is important as it is likely to also impose additional costs on them.

ATTACHMENT D: PR19 Draft Determination (Health and Safety)

Reference	ORR Determination	HS1 Response
4.9 (a)	NR(HS) strategy is aspirational but doesn't include sufficient measurables - these will need to be included as plans finalised	HS1 agrees - there are detailed programmes of work for the NR(HS) strategy. As plans are finalised we will ask NR(HS) to include measurables included within the Safety, Environment Assurance Report (SEAR).
4.9(b)	More forward-looking measures which could include other ways of measuring management maturity, safety culture and asset safety	HS1 has commenced the implementation of RM3 across the key tier 1 supply chain. The results of each key suppliers RM3 self-assessment will be collated and consolidated with the HS1 RM3 self-assessment. The combined assessments will identify areas for joint improvement where projects will be set up and tracked over CP3 to demonstrate improvement in capability and culture. HS1 is working with NRHS and RSSB to develop a HS1 specific precursor indicator model (PIM) which will model train accident risk through precursors in asset condition and human behaviours.
4.9(c)	Further analysis by HS1 using gross disproportion test to assess whether improvements are reasonably practicable and therefore required.	HS1 will continue to work with NR(HS) – the owner of the safety case - to encourage the implementation of industry best practice such as the application of the gross disproportion test. HS1 however, should not carry out this analysis itself and believes it is important the owner of the safety case leads on this analysis.
4.9(d)	HS1 / NR(HS) to more fully embrace RM3 will help demonstrate progress against their key objectives.	HS1 has fully embraced RM3 which was discussed by the HS1 Board Safety Sub Committee in early 2019 with the Board endorsing the RM3 approach that is being applied to all key tier 1 suppliers. To date Mitie and UKPNS have submitted their completed RM3 self-assessments. NRHS are expected to submit theirs by the end of October and HS1 will have theirs completed by the end of 2019. The self-assessments will be collated and

		presented back to key stakeholders so that common improvement projects can be initiated. progress will be tracked throughout CP3 to demonstrate improved maturity and culture.
4.9(e)	Greater distinction needs to made in health and wellbeing documents between activity required for legal compliance, and activity that delivers above legal requirements.	Agree – HS1 will ask NR(HS) to provide where possible a clear commentary on activities that meet basic compliance and those that go beyond compliance
4.9(f)	While ORR agree with strategy to build safety into design of renewals more work is needed to ensure that actions and milestones are put in place to make it happen and that it is appropriately resourced.	HS1 continues to use the *Construction Design Management Regulations 2015* as the basis for its build safety into design approach. Resource and milestones are built into the Project Gateway process. In CP3 we do not anticipate interventions that require significant novel design or construction approaches - rather the focus is on ensuring that CP3 renewals do not introduce new safety risks.
4.9(g)	CP3 plans need to demonstrate how we will avoid and eliminate risk, aiming for technical solutions to reduce risk and the need for effective monitoring and review to check whether mitigations are working as intended or whether they need to be revised.	HS1 will continue to ensure that as projects evolve through the gateway process there is evidence to demonstrate how industry learning such as Railway Accident Investigation Board (RAIB) reports, learning from other European Highspeed networks and learning from Network Rail is incorporated into proposal. Learning from these activities will also inform future projects, approaches to monitoring and any potential revisions to processes. Projects will also follow the CDM regulations throughout their development.

ATTACHMENT E: Discussion Document – HS1 Escrow Arrangements

HS1 welcomes the work carried out by Steer on behalf of the Office of Rail and Road (ORR) and the subsequent consultation to explore HS1's Escrow Framework.

HS1 notes that while it is important to set out clear guidance in relation to Escrow Arrangements and the importance of driving efficiency it is also important to understand the interests of passengers and freight users in the short, medium and long term. ORR sets out the role of the escrow is to fairly cost the spread of renewals and to ensure there isn't a backlog. HS1 supports this view and notes that while HS1 needs to demonstrate efficiency, particularly to operators, it also needs to take a long-term view. There is evidence to suggest operators do not always face an incentive to take a long-term view, for example the approach taken to the annuity during PR19, so there is danger ORR will place undue weight on operator views now, when they are in fact nor representing the interests of future users of the railway.

This is particularly relevant now as HS1 is delivering a high performing service which has been consistently measured across route and stations throughout the life of the concession. This is a legitimate expectation for current users of the railway but as renewals volumes increase HS1 will need to be able to take decisions that may not reflect current operators expectations.

Issue 1: The Incentive on HS1 to spend efficiently on renewals

HS1 recognises that the efficiency of renewals expenditure has a significant impact on the charges faced by operators now and in the future, as recovered through the annuity.

With regards to the options proposed, working collaboratively with ORR and operators, we would welcome clear guidance regarding the delivery of efficient renewals. Guidance would need to set out ORR's expectation on the market testing of renewals costs, explaining how financial risk is allocated through the Concession, and the ORR defining the role of the operators in developing proposals (see Issue 2). Guidance from the ORR on assessing the potential impact on future users would also be welcome as this is an important longer-term consideration.

In relation to future ORR guidance, it also needs to be recognised that HS1 has not been set up to undertake extensive market testing of renewals proposals or assessment of the impact on current and future users, neither have we allowed costs to do so in our 5YAMS submission. Our 5YAMS submission reflects a level of operator involvement that was identified in our draft CP3 governance proposal that was released to the ORR in early 2019. While we welcome increased monitoring from ORR, with clear an unambiguous guidance it is important to reflect the cost this imposes and not accept this can simply be dealt with as an efficiency.

HS1 would also like to point out that the project process and control that it uses to undertake asset renewals are the same as those HS1 uses to control its own commercial projects. We believe the process is efficient, aligns with best practice and has been benchmarked with other organisations. While we accept processes need to continuously improve, we do not accept the ORR assertion that the process remains overly cumbersome. We do accept however that complication is added where work must be given to NR(HS) to manage under the operator agreement set up by the Department for Transport (DfT), and HS1 therefore loses some ability to manage contracts directly with suppliers.

We will actively explore ways to incentivise NR(HS) in CP3 to contract more efficiently but as ORR would be aware the contractual arrangements set up by DfT at the point of sale offers NR(HS) no incentive to do so, any efficiencies in the out-turn spend in the control period are shared by HS1 and the train operators.

Issue 2: Ability of operators to influence the renewals profile

We would welcome the ORR sharing their expectations for sharing information tailored to operators need and the ORR's expectations around explanation of changes in plans. HS1 would draw the ORR's attention to the route Asset Management Annual Statement (AMAS) which already contains much of this detail and this has not been questioned by the ORR or the operators since we started to include this information mid-way through CP2. We are happy to involve operators in developing proposals providing it is recognised that ultimately the decision to undertake a renewal rests with NR(HS) and HS1 in line with our asset stewardship duties and our ownership of the safety of the railway. Operators requests for information must also be reasonable. Operators will need to effectively build the capability and resource to effectively engage in the process as renewals volumes increase.

HS1 also notes that operators are not always as well placed to engage in scrutiny of capital projects. In several sectors independent scrutiny is provided through an advocate representing operators at each stage of the project lifecycle (for example Heathrow) to review scope and proposed spend. The advocate signs off (or not) at each gate and reports to both the regulator and operators (airlines). This may be an appropriate model for HS1 for future large-scale projects as a means of demonstrating efficiency.

Issue 3: The process for determining renewals expenditure

We would welcome the ORR's view on how best to use the quarterly periodic review process and agree that an approach based on reporting by exception would be a good idea. We are currently in the process of amending our governance to make this easier to manage, recognising that ultimately it is not the ORR but the Secretary of State who determines the information that they require to approve funding. HS1 would like to highlight that at the start of CP2 every item of project expenditure, for example commissioning a £500 piece of consultancy work to undertake a piece of design, had to be pre-approved by the DfT before we could place orders with suppliers. HS1 working with the DfT have improved this process significantly. Any proposed changes by the ORR should demonstrate how it will more effectively improve the process the current much improved arrangements.

HS1 does not understand the references made by the ORR in relation to paragraph 3.15 (c) - "the majority of risk sits with the operators regardless of timing". It would be useful if the ORR could spell out clearly as the example given by ORR does not reflect practice.

HS1 has agreed with the ORR and DfT that where risk events occur then monies can be drawn down from a centralised risk pot (of ring-fenced funds in the escrow) that is managed by the HS1 renewals board. Where there are cost increases post agreement of the price that are due to poor project management then NR(HS) bear the risk. However, if the cost increase is due to something that could not have been foreseen then the cost is paid from the risk pot and carried by the operators. The risk pot is determined at Gate 4 where the price is fixed through inclusion of a sum based on a QCRA in the business case.

HS1 does accept that NR(HS) may not be contracting in a similar way with its suppliers and therefore some risks could be built into their bids and agree that this does need to be explored further. This move to a centralised risk pot however, is a good example of where HS1 is ensuring money is spent efficiently as opposed to simply passing the risk money to NR(HS) in a fixed price agreement and the spend occurring regardless of if risks occur or not.

We would welcome a clear view from the ORR on its requirements for qualitative reporting that is in line with the value of the portfolio.

Issue 4: Risk of inadequate return on funds

HS1 recognises the limitations of the Concession in constraining the investments that can be made with Escrow Funds. The proposals being explored by ORR are not likely to deliver significant additional returns. HS1 does accept small incremental gains are important. HS1 explores each of the ORR’s options in turn:

(a) **More generalised obligations** for authorised investing are unlikely to deliver significant additional benefits. Above all else HS1 will continue to seek security in its approach to investing as it cannot risk funders capital or accept an approach whereby HS1 must provide a guarantee. Secondly HS1 will prioritise liquidity to ensure funds are readily available to support the draw downs required by the Escrow Account. Finally, HS1 will consider yield. HS1 recognise that under a generalised obligation this could lead to small gains.

- If ORR did adopt this kind of approach HS1 would need to build up resource and capability to manage a portfolio of investments or bring in third party support to do it. This would come at a cost that we expect would outweigh the benefits.

(b) **Outside investments -** HS1 purchased a very clear risk profile when it bought the rights to the Concession. This included the principle that HS1 would not be exposed to capital risk. The business is financed on this basis. Given the way debt is structured to reflect this agreement it is highly unlikely that an approach where HS1 must guarantee a return (even with the potential for upside) would be consistent with our credit rating obligations.

(c) **Operator investment –** allowing operators to invest escrow funding is unlikely to work unless there was an explicit guarantee that funding would be available to ensure HS1 could fully meet its asset stewardship obligations. As noted above operators are not necessarily well places to represent the interest of passengers and freight users in the long term.

Kent County Council PR19 draft determination response – 7 November 2019

Dear Colleague

Kent County Council (KCC) had previously responded to HS1 Ltd's consultation on its Five Year Asset Management Strategy (5YAMS) for CP3. The principal concern raised by KCC in our response was the proposal to substantially increase the access charges for international passenger, domestic passenger and freight services. The increases proposed would have had a detrimental effect on passenger fares, both for Eurostar and Southeastern High Speed services, and would also have decreased demand for freight paths from the Channel Tunnel via HS1.

The Council therefore supports the proposals contained within the ORR's Draft Determination for HS1 Ltd for CP3 that HS1's base proposal for charges should be reduced from £38.2m pa to £26.1m pa. This would have the effect of reducing the proposed increases in HS1's access charges in CP3 from 43% to 18% for international passenger services; from 25% to 17% for domestic passenger services; and from 74% to 11% for freight services.

These lower increases in access charges represent a much more realistic proposal, which will provide HS1 Ltd with additional revenue while retaining demand for use of paths on HS1 from both passenger and freight sectors.

Regards

Stephen Gasche

London Sleeper Company PR19 draft determination response – 22 October 2019

1. Asset Management with respect to Best Practice

Further to a meeting with the ORR Asset Management team, LSC are reasonably reassured that HS1 and NR(HS) have been maintaining the asset to a reasonable standard, but understand that as the asset is not properly understood with respect to ongoing maintenance and planned renewals, there is still a good deal of known unknowns on the ultimate costs. The LSC business model is more sensitive to HS1 charges than EIL, and so the risks and sensitivities of these unknowns is concerning. However, given the advice in the meeting with the ORR Asset Management Team, LSC are more reassured that it is probable that no future extreme access charge hikes are likely.

2. OMRC Differentials

LSC completely understand that in order to simplify the way tariffs are applied that the only distinctions are made between International, Domestic and Freight operations. In the HS1 5YAMS increased PW damage by Class 374 Velaros was identified as a contributory factor in the need for 'early' renewals. In a meeting with HS1 several years ago they said that they were willing to apply different tariffs based on an understanding of differences in track wear. For LSC this was a major incentive in looking at rolling-stock that would attract a lower OMRC. Since that conversation, HS1 have deferred any discussion on a reduced OMRC based on 'actual-damage-caused'. Given that the Concession Agreement sets out the principle that the user pays for the upkeep of the infrastructure, surely that should be pro-rata, that is operators should be charged in proportion to the damage they cause; that is, the tariffs should be further differentiated with respect to train classes. It is this engineer's estimate that the track forces imposed by the 1088T unarticulated e320s are 50-70% higher than the 760T, articulated e300 and should perhaps reflected in different tariffs.

3. Access Charges/km, not per min.

In principle LSC think the change would be a good thing, though it would make ostensibly little difference to the bottom line. LSC is currently undertaking a capacity study of HS1 and already it is notable that any small increase in the number of services operating greatly increases the number of ECS movements between St Pancras and Temple Mills to enable sufficient platform access. HS1 do not currently charge for ECS, which may provide an opportunity to change the tariff system completely to charge by passenger-km, so excluding ECS but then allowing operators to charge for tickets more evenly (the per passenger-km would also greatly advantage sleeper operators and LSER off-peak services!).

On a more serious note, the issue of pricing per km does allow the introduction of less discriminatory charges for slightly slower services, e.g. for 250km/h off-peak runs, like late sleepers that may run on classic in France (i.e. not running on LGVs). 250km/h trains are a different class of train that falls between classic (<200km/h) and highspeed (>270km/h). Talgo specialise in dual-gauge trains that have 250km/h wheelsets that are not allowed on the French LGV network but can operate on both standard gauge, Iberian (1668mm) and Russian/Finnish (1520/1524mm) gauge networks. LSC have looked into a number of classic-only routes that do not run on French LGVs (taking either the old classic boat-train route via Amiens or the northern freight line via Metz). The benefit of these routes is that they are commercially possible due to much lower classic night access charges (some less than a quarter/km of LGV). The sleeper model is very sensitive to access charges due to the lower passenger density, so pricing per km could allow the development of service alternatives that would not need highspeed investment.

The blind pursuit of highspeed may be a dead end in a post-aviation future. As we have said before, trains are subject to Newtonian physics, meaning that running at highspeed (which is commercially required as competition to aviation) may no longer be necessary. The specification for 360km/h trains for HS2 (which also required the very large track radii that forced the route to damage so many AONBs) means that the trains would need 44% more energy than a train that only ran at 300km/h. In a low-carbon energy-poor future, with little aviation competition, the highspeed argument will no longer have the same currency, and so moving to a per/km charging regime rebalances that.

4. Freight on HS1

We have already said that unmaintained heavy freight should not run on HSLs for safety reasons. The issue is to do with freight wagons with tread brakes that are not regularly inspected or turned. Tread brakes wear the tyres unevenly, leading to many small wheel flats that impose a significant hammering load to the hardened (and therefore brittle) railhead gauge corner. So significant is this that for a given axle load (and remember freights can run at up to 140km/h with axle weights up to 22.5T) an uneven freight wheel can wear the track much faster than a 17T/axle HS train running at 300km/h (and presumably with regularly maintained wheels and inboard disk brakes). If there was a way of ensuring all freight wagons and traction had wheels to an agreed high standard before they were run on HS1, then the argument may be in favour of allowing them on an HSL, but as that is practically impossible, we would side with SNCF-Reseau’s position of banning them outright, instead using 00:00-05:30 as a blanket engineering possession, at least beyond Stratford.

Yes, that would mean less use for Ripple Lane (except perhaps for PW stabling), but it would remove an important variable with respect to PW damage. It would be better, in our opinion, to develop an alternate W12-gauged route with OCS to Dollands Moor from London and to have secure freight exchange facilities spread over (a gauge-enhanced) UK network, with an alternate digital registration system to being able to track cargoes and detect tampering.

Office of Rail and Road
By email only: PR19@orr.gov.uk

Network Rail (High Speed) Ltd.
Singlewell Infrastructure
Maintenance
Henhurst Road
Cobham
Gravesend
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DA12 3AN

11th November 2019

Dear Sirs,

Consultation Response – Periodic Review of HS1 Ltd (PR19)

1. Network Rail (High Speed) Ltd (NR (HS)) appreciates the opportunity to respond to the Office of Rail and Road (ORR) consultation following the issue of its draft determination and supplementary documents in relation to the periodic review process of HS1 Ltd (PR19).

2. NR (HS) would like to thank the ORR and HS1 Ltd for its continued engagement in the PR19 process to date, the challenges set by both organisations have been open and constructive which has enabled NR (HS) to focus and refine its plans to meet stakeholder requirements.

3. Following a period of update, NR (HS) has issued directly to HS1 Ltd a further appendix to its 5-Year Asset Management Statement (5YAMS) which responds to the proposed improvement areas and recommendations identified by the ORR. In addition, supplementary information has been provided to HS1 Ltd to facilitate their response to the ORR as part of this process. I understand that HS1 Ltd are currently updating their 5YAMS also and the NR (HS) document will be incorporated and appended as required.

4. Whilst the amended 5YAMS provides the full NR (HS) response to the draft determination, I attach a brief summary of the key items raised.

    a. NR (HS) has provided HS1 Ltd with further evidence to support the track end of life assumptions. This includes inputs from the knowledge and experience of SNCF on the Paris – Lille line (LN3 Nord), the technical assessment undertaken by ARUP, assurance undertaken by Network Rail Infrastructure Limited (NRIL) and the associated whole life cost analysis undertaken jointly between NR (HS) & HS1 Ltd. By supplementing HS1 data with comparator organisation experiences to support engineering judgement NR (HS) remains confident that the end of life assumptions proposed are appropriate and both generated and assured from a range of credible sources.

bsi. ISO 9001 Quality Management FS 588120
bsi. ISO 14001 Environmental Management EMS 588121
bsi. OHSAS 18001 Occupational Health and Safety Management OHS 588122

b. NR (HS) used several recognised methodologies to generate a value that can be applied to the CP3 work bank to reflect the financial impact of risk and uncertainty materialising. Following constructive discussions with both HS1 Ltd and the ORR, NR (HS) has recalculated the QCRA to incorporate the observations from the ORR cost assurance advisor and to reflect any changes since the last analysis was undertaken. NR (HS) now has a revised P80 and P50 value and as such is content that a P50 value could be used to calculate the funding model for customers. NR (HS) would like to emphasise that this is at a lower confidence level than typical railway project funding and therefore should risk materialise NR (HS) will provide a revised authority paper to HS1 Ltd and the ORR to secure additional funding as required. It is also worth highlighting that the P50 value is calculated as a % at a portfolio level and that individual schemes will attract risk and uncertainty at a value higher or lower than this.

c. NR (HS) has confidence that the proposed CP3 schemes will be delivered as planned - early contractor engagement has commenced with engineering access and plant identified to facilitate a successful delivery. NR (HS) believes that providing the market with visibility and a level of certainty is essential in effectively delivering the work bank. NR (HS) recognises that the CP3 work bank increases when compared to CP2, albeit the run rate for CP2 year 5 is comparable with the average run rate for each year of CP3, this also excludes non-escrow funded works such as Eurotunnel point replacement, Ashford spurs project and 4G tunnel installation. Despite NR (HS) increasing its delivery capabilities significantly over CP2 it does recognise the challenge of delivering the portfolio in its entirety and the need to be flexible between schemes and control periods. NR (HS) therefore proposes 'delivery overlay' calculated as a percentage of the work bank over CP3 rather than on individual schemes. NR (HS) would then 'over plan' to achieve the original work bank, whilst providing flexibility for CP3 deferred/CP4 brought forward works which would require funding from a future control period as required.

d. NR (HS) agrees that both funding and an effective framework for research and development is essential in ensuring that the long term asset management objectives of HS1 Ltd can be achieved. The PR19 process provided NR (HS) with an opportunity to reflect and restate the operations and maintenance cost reductions achieved and planned over the first 3 control periods, from circa £60m per annum in 2010/11 to £40m 2024/25 (NR HS 5YAMS section 8.7.2). Whilst this demonstrates a culture of cost efficiency, NR (HS) believes that to make the next step change in cost reduction then technology such as automation, remote condition monitoring and train instrumentation should be progressed.

As part of developing the CP3 cost efficiency plan NR (HS) has responded to and exceeded the recommendations identified in the HS1 OMR effectiveness study (NR HS 5YAMS section 8.8) for the selected High Speed comparator organisations. NR (HS) also assessed and compared the efficiency initiatives introduced by NRIL to underpin CP6 and incorporated them as applicable to HS infrastructure. It should be noted however that certain schemes could not be included as they either build on the investment made in previous control periods (Operations Strategy, Intelligent Infrastructure, ORBIS) or are not applicable due to the different characteristics of the infrastructure (property disposals, asset rationalisation, level crossings).

Whilst these are all useful inputs, they reflect only the initiatives of other organisations and exclude the opportunities that the HS1 railway has itself and could be progressed through its own program of research and development. NR (HS) remains committed to the continued provision of an efficient railway and looks forward to engagement with stakeholders on the R&D arrangements should they be put in place by HS1 Ltd.

In summary, NR (HS) notes the challenges of the ORR and has either reflected a revised position in its 5YAMS or provided supplementary information to respond or inform further discussions with stakeholders. If you would like to discuss further any matters raised in this letter or in the revised 5YAMS issued by NR (HS) then please do not hesitate to contact me.

Yours faithfully,

ABarnes.

Anthony Barnes
Network Rail (High Speed) Ltd

bsi. ISO 9001 Quality Management FS 588120
bsi. ISO 14001 Environmental Management EMS 588121
bsi. OHSAS 18001 Occupational Health and Safety Management OHS 588122

southeastern

PR19
Office of Rail and Road
One Kemble Street
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WC2B 4AN

12 November 2019

Dear Debbie,

Periodic Review of HS1 Ltd 2019 (PR19): ORR Draft Determination

Thank you for the opportunity to comment on the ORR's Draft Determination for the 2019 Periodic Review of HS1.

We support the level of challenge from the ORR on HS1's plans and budgets. It is important that HS1 is challenged to improve in the areas highlighted in your Draft Determination and to be held to account. We agree with the ORR's findings that HS1's assumptions around asset life are overly conservative, maintenance is not as effective as it should be and risk allowance is too high.

It is important that HS1 is encouraged to realise the full value of its assets rather than replacing before an asset is life expired. We strongly support the ORR's recommendation that the focus should be on condition-based renewals, supported by robust asset deterioration modelling. We agree that maintenance is not as effective as it should be and that may be a contributing factor to the need for early renewals of some assets; this is clearly a key area for improvement in CP3.

We agree with the ORR's recommendation that HS1 should review how it incentivises its delivery agents to maximise asset life through effective and efficient maintenance. HS1 must be incentivised to challenge and mitigate risks rather than passing the impact to operators; operators should not be left to pick up the cost for poor maintenance or poor procurement leading to early renewals. We would like to see metrics to drive improvements in this area included in the additional monitoring and reporting requirements imposed on HS1 in CP3. At a minimum, we would like to see a regular report which shows whether assets are deteriorating at the forecasted rate.

Given our previous feedback regarding the 40-year funding profile for renewals, we were disappointed to see this approach retained in the Draft Determination, however we are pleased to see the overall level of the annuity reduced from £38.2m to £26.1m. Southeastern is not supportive of the proposed 40-year profile as it is not appropriate for current users of the infrastructure to be required to fund the historic costs of construction (through the IRC) and the future cost of renewals (via the annuity) at the same time.

As previously suggested in our response to the HS1 5YAMS; the escrow account should target a zero balance by 2040; at this point the concession could be re-let on more of a steady state model, perhaps adopting a RAB. The renewals charges (equal to RAB amortisation) would replace the IRC as the main component of access charges at this point. There is a distinction between maintaining asset stewardship levels which consider a 40-year time horizon and pre-funding it all through the annuity.

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Given the wide range in estimates between HS1's proposal and the ORR's proposal for the overall level of the annuity, we agree with the ORR's assertion that there needs to be a strong focus on regular monitoring and reporting in CP3 to determine if the level is correct and achievable. As part of any new monitoring and reporting requirements imposed on HS1, we would like to see cost efficiency and asset stewardship reporting along the lines currently provided by Network Rail on the remainder of the rail network; such as unit costs for maintenance and renewals tasks and asset condition reports versus the 5YAMS.

We would also like to see monitoring and reporting on HS1's environmental objectives and KPIs which does not appear to be an existing requirement under the Concession Agreement or previous Periodic Reviews. In the last Periodic Review, a new requirement was imposed on HS1 to provide updates on how it is delivering its initiatives. This requirement perhaps needs to be strengthened with clear metrics to ensure HS1 is held to account for delivery, and a requirement for these updates to be shared on a regular basis with operators.

Southeastern would benefit from receiving detailed reporting on EC4T, specifically on tariffs and HS1's long-term buying strategy as this is an area we have much less clarity on in comparison with the remainder of the rail network. We receive little notice in advance of tariff changes on HS1 and no information to enable us to forecast ahead. We are disappointed that HS1 continues to buy coal-fired electricity when the rest of the rail network is powered by renewables. In line with our point regarding environmental monitoring and reporting above, a carbon intensity metric would perhaps be appropriate.

In terms of HS1's charging structure, we agree with the ORR that both direct costs and indirect costs should be charged on a per km basis rather than per minute in response to legislation and in the interest of fairness and consistency. The charges should be cost reflective; faster trains cause greater wear on the track and therefore should not be charged at a lower rate.

We agree with the ORR that ETCS should be treated as a Specified Upgrade rather than a renewal due to the increase in functionality, rather than replacing on a like-for-like basis.

We support HS1's proposal to suspend the Capacity Reservation Charge in recognition of the fact that there is currently spare capacity on the network.

Southeastern is pleased to hear from HS1 that regenerative braking capability is being pursued on the HS1 network. Southeastern is keen for this to be enabled, both to deliver cost efficiencies and to deliver environmental benefits. Investment would also be needed on the Southeastern 395 fleet to enable AC regenerative braking, for which we will work with the DfT to identify funding.

Southeastern agrees to the amendments proposed to the passenger framework agreements and Passenger Access Terms published by the ORR with the Draft Determination.

If you have any questions regarding our response, please don't hesitate to contact me.

Yours sincerely

C. Moftah

Chantal Moftah
Senior Commercial Manager