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Paul Chapman  
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**By e-mail to paul.chapman@highspeed1.co.uk**

## **HS1 benchmarking**

Dear Paul

1. Following our helpful initial discussions, I am writing to you to outline our expectations for the efficiency benchmarking we expect you to develop and undertake.

### **Context**

2. As you know, and as we confirmed in our regulatory statement for High Speed 1 published on 30 October 2009, the assessment of HS1 Limited's relative efficiency will be a key part of the 2014 periodic review ("PR14") process, which will be the first periodic review for HS1 Limited and cover control period 2 (1 April 2015 to 31 March 2020). In line with the procedure set out in Schedule 10 of the High Speed 1 Concession Agreement, your first control period (CP1) runs from 1 October 2009 to 31 March 2015 (5.5 years), giving rise to work on PR14 which we envisage to start in 2011 and conclude in October 2014. The second control period (CP2) will go live on 1 April 2015, entailing the approval or determination of new levels of HS1 Limited's operation, maintenance, renewal, and replacement charges ("OMRC"), as well as other aspects of the review.



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3. Our regulatory statement sets out that we expect HS1 Limited, during the first control period ahead of PR14, to establish a robust programme of benchmarking work to compare itself to other railways and other relevant organisations, as appropriate.
4. In the first instance we expect you to develop and undertake the programme of benchmarking work, but engaging with us as you undertake it. As necessary, as part of PR14, we would undertake our own work to supplement your work.
5. In due course, we will expect your PR14 submissions in respect of efficiency to be based on comprehensive and robust evidence which will crucially include a forward looking element: on the scope and pace for efficiency improvement in the 2015-20 period. Two years ahead of starting PR14, the aim of your work programme should be to develop a programme of work that provides comprehensive and robust comparisons between HS1 Limited and the comparator set at the current time.
6. We expect you to produce robust evidence, set out transparently, in support of your assumptions on efficiency, showing quantitatively the magnitude of the savings you identified, as well as evidence showing the period over which those efficiencies can be achieved.
7. We have had an initial discussion with you on benchmarking earlier in the year and note your commitment to establishing a programme of work, which should be of benefit to you for your own management purposes as well as providing important evidence for PR14.
8. There will be other information that is relevant to PR14, which we will discuss with you and confirm in due course: this letter purely covers establishing an efficiency benchmarking programme. Furthermore, this letter represents our expectations at this point in time. As the benchmarking work is established and develops we expect to continue to engage with you and provide comment and further guidance as necessary.
9. As part of PR14 we would expect to approve or determine OMRC that assumes HS1 Limited is as efficient as other comparable high performing rail infrastructure managers (with a particular focus on high speed rail), taking into account the investment cycle and scale/scope economies. We would also expect, with special reference to functions that can be compared across other relevant industries, HS1 to be as efficient as other comparable high



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performing organisations, taking into account the specific characteristics of High Speed 1. In reaching our decisions on OMRC in the periodic review, we would also take into account the pace at which it may be appropriate for HS1 to close any efficiency gap with the leading comparators.

10. At the current time we do not know what, if any, efficiency gap there is between HS1 Limited and the appropriate peer group, and hence the scope for future efficiency improvement. You know that we reviewed the level of your OMRC for the first control period, including the international benchmarking evidence that you had available. We did not consider the OMRC for the first control period to be unreasonable, although as part of this review we did not consider that the benchmarking was sufficiently robust to allow firm conclusions to be drawn on the relative efficiency of HS1 Limited to the comparator railways. The work did indicate, in our view, that there could be opportunity for further efficiency improvement beyond the first control period, based on the cost base and comparisons undertaken at the time.
11. You will also be aware that we have set out in our regulatory statement our expectation that you will review the freight avoidable costs this year and if appropriate review the level of freight charges. Benchmarking may be relevant to that review, but we expect that to be focused and separate from wider and longer term programme discussed in this letter.

### **Benchmarking work – overview**

12. We would expect you to establish your benchmarking programme to compare HS1 Limited against the best comparable railways across the world, and other relevant organisations (domestically or internationally), using both quantitative and qualitative analysis. We would want to discuss with you further appropriate comparators in other sectors, as well as your choice and justification for railways to include in your benchmarking. International benchmarking will be important, but international benchmarking raises greater challenges than domestic benchmarking due to the need to have consistent data. We expect HS1 to identify the criteria for choosing international comparators in the forthcoming 2010 HS1 benchmarking plan and to discuss these criteria with ORR before proceeding with the final choice of benchmarking comparators, having consideration for data availability.
13. We would expect you to develop your programme of work on a number of fronts: "top-down" statistical/econometric analysis, "bottom-up" engineering



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and process benchmarking, and "gap analysis", which is a means to understand and explain top-down benchmarking.

14. You should develop work to ensure that you have covered all the material areas of HS1 Limited's activities relevant to OMRC. The scope of the work should not be affected by the change of ownership of HS1 Limited following the completion of the current sale process or that Network Rail (CTRL) Limited is responsible for undertaking much of the work should not affect the your benchmarking: it is the underlying activities, processes, and costs that are being benchmarked. We understand the existence of temporary commercial sensitivity around some of the information, but this should not impact the overall benchmarking objectives.
15. We would envisage assessments produced each year using top-down benchmarking, supported by an ongoing programme of gap analysis and bottom-up benchmarking to support the top-down work.
16. We would expect to see your periodic review submission based for as far as possible on fully quantified evidence. However, we recognise that it is not possible to produce quantified evidence in all areas and that, in any event, qualitative work (e.g. best practice studies) are extremely useful to underpin quantified analysis as well as being essential in their own right when quantification is not possible. Where you are unable to produce quantified analysis, you will need to explain the reasons for this.
17. We expect your benchmarking activities to start as soon as possible, and certainly during this year. We welcome interim submissions leading to the periodic review. Your benchmarking submissions are in no way limited to work strictly pertaining to the periodic review, and we welcome interim discussions and preparatory studies at an early stage.
18. Benchmarking needs to be based on like-for-like comparisons expressed in a common currency and baseline/year. And it will be important for you to take account of different levels of output (e.g. performance and safety) and "structural" factors which can drive differences in cost which are not necessarily due to in/efficiency. Benchmarking results will be published at appropriate intervals (to be agreed upon with us) and data confidentiality towards third parties will be taken into account. You will share with us all data, as required, to support the periodic review submission and determination stages.



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19. Once benchmarking of HS1 Limited has been established and is producing results we would expect these to be published. In this regard, we recognise that you may need to address issues relating to confidentiality in developing your work. It is important that we see all the detailed information but anything put into the public domain could be in an anonymised or suitably redacted form.
20. As you know, we consider that the sort of work undertaken in our 2008 periodic review of Network Rail's outputs and access charges/funding should inform the design of your work programme, although there may be areas where you adopt a different approach. Our determination of Network Rail's outputs and funding for 2009-14, and the analytical studies underlying that, may be of interest to you to understand the sort of work that has been undertaken on the classic network.<sup>1</sup> In particular, chapter 7 of our determination summarises the various analysis undertaken, whilst chapter 8 explains how we used the analysis to make our judgements on the scope for Network Rail's efficiency improvement in the context of the 2008 periodic review.

### **Top-down benchmarking**

21. We would expect you to develop robust top-down benchmarking of HS1 Limited compared to other comparable rail infrastructure managers, with a particular focus on high speed infrastructure. This work will work best through establishing strong links with other international rail infrastructure managers (in particular those managing high speed lines in France, Spain, Germany and Italy; and you consider Eurotunnel also to be an appropriate comparator), either on a bilateral basis, on a "club" basis or through an organisation such as EIM or UIC. We would expect an annual assessment/update of the top-down benchmarking.
22. Our preferred approach to top-down benchmarking is through application of advanced econometric/statistical techniques, such as we used to conduct international benchmarking of Network Rail's maintenance and renewals efficiency compared to its peer group in west Europe in our 2008 periodic review.
23. Econometric analysis requires a good panel dataset, ideally comprising consistent data for a number of companies over a range of years. Such a

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<sup>1</sup> Periodic review 2008: Determination of Network Rail's outputs and funding, Office of Rail Regulation, October 2008. This can be accessed at <http://www.rail-reg.gov.uk/upload/pdf/383.pdf>.



dataset may not be currently available for high speed rail infrastructure, though you should explore data availability with UIC (as it has collected as part of its 'lasting infrastructure cost benchmarking' (LICB) dataset) and with other high speed rail infrastructure managers. If sufficient appropriate data is not currently available then we would encourage you to work to establish such a dataset going forwards. For econometric analysis you would also need to test and select the appropriate technique, which would be best aided through ensuring you have the appropriate expertise in your team or that you engage experienced external advisers.

24. An alternative, or complementary, approach to econometric analysis is to produce "harmonised unit costs". Whilst any benchmarking requires good quality data, this approach is arguably less demanding than econometric analysis. The UIC employs this approach in producing results using its LICB dataset<sup>2</sup>.
25. The LICB dataset, and most if not all econometric international benchmarking, covers maintenance and renewals only, so you will need to consider how you would want to develop benchmarking of operations and support functions. International comparisons and top-down benchmarking are potentially relevant but there is far less established body of work in this area as there is with maintenance and renewals. International operations benchmarking should be explored. Support function benchmarking is more amenable to comparison with non-rail companies.

### **Bottom-up benchmarking**

26. We would expect your top-down benchmarking to be supported by a range of bottom-up engineering or process based assessment. A benefit of bottom-up analysis is that it is very specific and it can highlight practical opportunities for improving business performance, as well as providing evidence for PR14. The bottom-up work should focus on management approaches, working practices and technologies used by HS1 Limited. You will want to prioritise your bottom-up benchmarking but one of the key studies we would expect in bottom-up benchmarking is on HS1 Limited's total employment costs.
27. Chapter 7 of our 2008 periodic review determination (and documents supporting that) summarises work undertaken in respect of Network Rail. In

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<sup>2</sup> Lasting Infrastructure Cost Benchmarking (LICB): Summary Report, UIC, Paris, December 2008. This can be accessed at [http://uic.asso.fr/IMG/pdf/li08C\\_sum\\_en.pdf](http://uic.asso.fr/IMG/pdf/li08C_sum_en.pdf).



addition to specific benchmarking on working practices and technologies you should also look to establish benchmarking of your asset management capability with other appropriate organisations. The asset management 'excellence model' is an approach that has been applied across utilities and in respect of Network Rail.<sup>3</sup>

## Efficiency gap analysis

28. We consider that there is significant benefit in undertaking analysis of the 'gap' that might be produced by top-down benchmarking, to confirm whether it is due to differences in efficiency or to 'structural' factors, as well as helping to identify opportunities for improving efficiency, although we would see this as being of lower priority initially to establishing robust top-down analysis.
29. Gap analysis is essentially more of an aggregated approach to bottom-up benchmarking, focusing on broad themes, such as procurement strategy or possessions strategy rather than specific processes or technologies that might be part of, say, the possessions strategy. Recent relevant studies you should consider are the ones undertaken in Network Rail's 2008 periodic review of Network Rail and the work undertaken by HS2 in respect of the investment costs of high speed lines.<sup>4,5</sup>

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<sup>3</sup> Independent Reporter Part C Services Best Practice Review - Final Report Using the AMCL Excellence Model, Asset Management Consulting Limited, London, February 2007. This can be accessed at <http://www.rail-reg.gov.uk/upload/pdf/exp-amcl-060207.pdf>.

<sup>4</sup> Rail infrastructure cost benchmarking: brief LICB gap analysis and cost driver assessment, final report, BSL Management Consultants, Hamburg/London, 1 April 2008. This can be accessed at [http://www.networkrail.co.uk/browse%20documents/strategicbusinessplan/update/cost%20benchmarking%20assessment%20\(bsl\).pdf](http://www.networkrail.co.uk/browse%20documents/strategicbusinessplan/update/cost%20benchmarking%20assessment%20(bsl).pdf).

<sup>5</sup> Comparison of High Speed Lines' CAPEX, Final report, BSL Management Consultants, Hamburg, November 2009. This can be accessed at <http://www.hs2.org.uk/assets/x/56773>.



## Next steps

30. By the time we formally commence PR14 in 2011, you should have developed your approach and started to produce results, and we expect to see significant progress during 2010-11. We do not currently plan to do any benchmarking work ourselves during this period. Over this period We envisage around four sessions a year to understand and comment on your proposed plan and emerging results. We will review the approach and engagement as we get closer to PR14, in line with further guidance we will provide for PR14.
31. Once you have considered your options and proposed approach to benchmarking, we look forward to discussing your plan with you. Your day to day contact on benchmarking issues will be Gian Carlo Scarsi, Head of Regulatory Economics ([GianCarlo.Scarsi@orr.gsi.gov.uk](mailto:GianCarlo.Scarsi@orr.gsi.gov.uk), Tel. 020 7282 2078, Fax 020 7282 2043).

Yours sincerely



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