



OFFICE OF RAIL REGULATION

# ORR's Annual Report on HS1 Ltd 2012-2013

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# 1. Summary

1.1 This document comprises ORR's annual report on HS1 Ltd for the year 2012-13. Previous ORR reports on HS1 Ltd are available from the [HS1 regulation page](#) of ORR's website.

1.2 HS1 Ltd has a 30 year concession from the Secretary of State to operate and manage the HS1 network. ORR is the health and safety regulator for HS1 Ltd, and has economic regulation responsibilities through the concession agreement and the [Railways Infrastructure \(Access and Management\) Regulations 2005](#) ("the Regulations").

1.3 HS1 Ltd has operated very well in the previous year, and we are pleased with the progress made – particularly with regard to the ongoing Periodic Review of HS1 Ltd.

1.4 This report focuses on key areas of HS1 Ltd's work, and on ORR's regulation of it, as well as a general chapter on HS1's business (including unregulated aspects) to add context to ORR's regulatory work. As Those areas are:

- (a) The periodic review of HS1 Ltd;
- (b) Performance and data monitoring;
- (c) HS1's general business;
- (d) Track access;
- (e) Asset management; and
- (f) Safety

1.5 Further questions or comments on this report should be directed to:

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## 2. Periodic Review

### Overview

2.1 The 2014 periodic review (“PR14”), which will be the first periodic review for HS1 Ltd, will cover the period from 1 April 2015 to 31 March 2020, control period 2 (“CP2”). We have a legal duty under Regulation 13 of the Regulations to ensure that HS1 Ltd is provided with incentives to reduce the cost of provision of infrastructure and level of access charges, through a periodic review of access charges.

### Periodic Review

2.2 We are required by the Concession Agreement to review HS1 Ltd’s operation, maintenance and renewal charges (“OMRC”) every five years and reach a final determination based on a Five Year Asset Management Statement (“5YAMS”) submitted by HS1 Ltd, which outlines its plan for the forthcoming control period. The Concession Agreement requires HS1 Ltd to produce, and ORR to approve, the 5YAMS.

2.3 Regular workshops and meetings have been held between key stakeholders to gather opinions and share views on a number of key issues. We are pleased with the proactive and collaborative approach which HS1 Ltd has adopted so far for the PR14 process, and expect it to continue for the duration of the review. We are also pleased with HS1 Ltd’s continuing commitment to openness and transparency both with ORR and its stakeholders.

2.4 ORR has consulted on its approach to PR14, and has received positive responses from stakeholders in respect of HS1 Ltd’s conduct and transparency, as well as its progress on the review to date.

2.5 In carrying out PR14, we are likely to focus on (amongst other things) compliance of HS1 Ltd’s proposed strategy with contractual requirements such as the need to carry out activities in accordance with best practice in a manner that is efficient and economical and which delivers hand-back condition requirements. HS1 Ltd has produced an asset management “roadmap” which sets out a series of tasks in the lead up to CP2.

### Key areas of the review

2.6 The key areas of review are:

(a) CP2 outputs. HS1 Ltd will be consulting the industry on its 5YAMS which sets out its plans to ensure safety, deliver excellent customer service and performance, and deliver on its long term asset obligations, including its asset stewardship duties and General Duty in respect of the HS1 network. HS1 Ltd has undertaken a significant number of discussions with its customers in this area.

(b) Benchmarking and efficient costs. Benchmarking is one of a number of inputs in generating cost proposals to deliver the outputs agreed with operators. HS1 Ltd has undertaken a lot of work to provide a line-by-line description of where the costs lie, and what initiatives are being pursued for CP2. This reduces the reliance on benchmarking results and allows more targeted discussion around specific areas where costs can be optimised. HS1 Ltd is carrying out both top-down and bottom-up exercises. Whilst HS1 Ltd had some initial difficulties in setting up the top-down exercise, it has been working to find a suitable number and range of comparator organisations across Europe and Asia. This workstream will help inform the ultimate level of charges for operation, maintenance and renewal on the HS1 network, in line with HS1 Ltd's asset management strategy and asset specific policies.

(c) Asset management. HS1 Ltd is undertaking a significant amount of work on whole-life cost modelling to inform its asset stewardship and degradation rates. This work will feed into the overall OMRC figure paid by users of the HS1 network. HS1 Ltd is also undertaking work on a reopener provision to be used in the event that significant increases or decreases in network traffic impact upon OMRC figures.

(d) Incentive mechanisms ("regulatory framework"). HS1 Ltd has said, in collaboration with stakeholders, that its regulatory framework items (i.e. possessions and performance regimes), will remain largely unchanged, but will be updated to reflect current circumstances, and be 'future-proofed' to reflect changes in rolling stock or new entrants to the market. NR (HS) has also offered to share outperformance benefits beyond ORR's eventual determination figure for years 3-5 of CP2. There is no obligation for such a mechanism, but ORR welcomes the initiative given the likely effect of encouraging operators, HS1 Ltd and NR (HS) to work more closely together. HS1 Ltd will be required to contractualise the outperformance benefit sharing mechanism it ultimately adopts.

(e) Structure of charges and consistency with the European legislation. HS1 Ltd will be required to demonstrate that its access charges (and their structure) are compliant with European legislation before we can approve the 5YAMS.

## **The HS1 Ltd's network stations review**

2.7 ORR, DfT and HS1 Ltd meet regularly to discuss both PR14 and the ongoing, DfT-led review of HS1 Ltd's stations, to avoid incorrect cost allocation and duplication of work.

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## 3. Performance and data monitoring

### Overview

3.1 Monitoring of operational performance is conducted on receipt of the quarterly performance report. HS1 Ltd's performance during 2012/13 has remained very good, with only 0.35% of services being delayed by HS1 Ltd-attributable incidents. HS1 Ltd also began providing disaggregated delay minutes and incidents data in 2012/13 which will improve the quality of data monitoring going forward.

### Data assurance

3.2 We monitor HS1 Ltd's data to track performance against HS1 Ltd's obligations in the Concession Agreement. We therefore need assurance that the reported figures are both accurate and reliable and, to this effect, carried out audits in 2010 and 2011.

3.3 Given the A1 rating awarded in August 2011, we did not commission a further data assurance review for 2012. We continue to actively monitor HS1 Ltd's data quality, and support its developments to further the reliability and accuracy of its systems, data and processes.

3.4 The 2010 and 2011 data assurance reviews are available on [our website](#).

3.5 Given that the second review was concluded almost two years ago, we have commissioned a new data assurance review so that we can ensure that the five recommendations from the previous review have been adopted. The scope of the review will be a high level review of the data along with the examination of progress against the recommendations. The review will cover the following performance measures:

- (a) Total number of trains timetabled
- (b) Total number of trains delayed
- (c) Number of trains delayed by an incident wholly or mainly attributable to HS1 Ltd
- (d) Number of trains delayed by an unidentifiable incident

### Monitoring

3.6 Monitoring of train performance is achieved through quarterly and annual data returns that set out HS1 Ltd train service performance against key performance floor targets. Asset management is monitored in line with HS1 Ltd's Asset Management Strategy. The annual Asset Management Statement, along with

asset stewardship key performance indicators, is used to assess HS1 Ltd's performance on maintaining its assets.

## Performance

3.7 We monitor HS1 Ltd's operational performance against the performance floor measures set out in the Concession Agreement. The performance floor threshold sets out the minimum operational standards for HS1 Ltd. Performance of HS1 Ltd is expected to be at a much higher level than the performance floor measures, which state that the proportion of services delayed by HS1 Ltd in a quarter should not exceed 15%. ORR raises any performance issues with HS1 Ltd well before it has fallen to these levels. A summary of performance for the financial year ending 31<sup>st</sup> March 2012 is provided here:

Figure 1 – HS1 Ltd's performance in 2012/13

	Total number of trains timetabled	Total number of services delayed	Total number of services delayed (attributable to HS1)	Percentage of services delayed (attributable to HS1)	Total number of services delayed (unknown incident)
Domestic (St Pancras - NKL via Ebbsfleet)	32,291	1,397	78	0.24%	3
Domestic (St Pancras - Ashford)	25,857	1,368	97	0.38%	2
International	18,408	3,299	94	0.51%	7
Freight	137	55	-	0.00%	-
<b>Total</b>	<b>76,693</b>	<b>6,119</b>	<b>269</b>	<b>0.35%</b>	<b>12</b>

3.8 The proportion of trains delayed by HS1 Ltd-attributable incidents in 2012/13 was 0.35%, which is an improvement on 2011/12 and significantly better than the performance floor target.

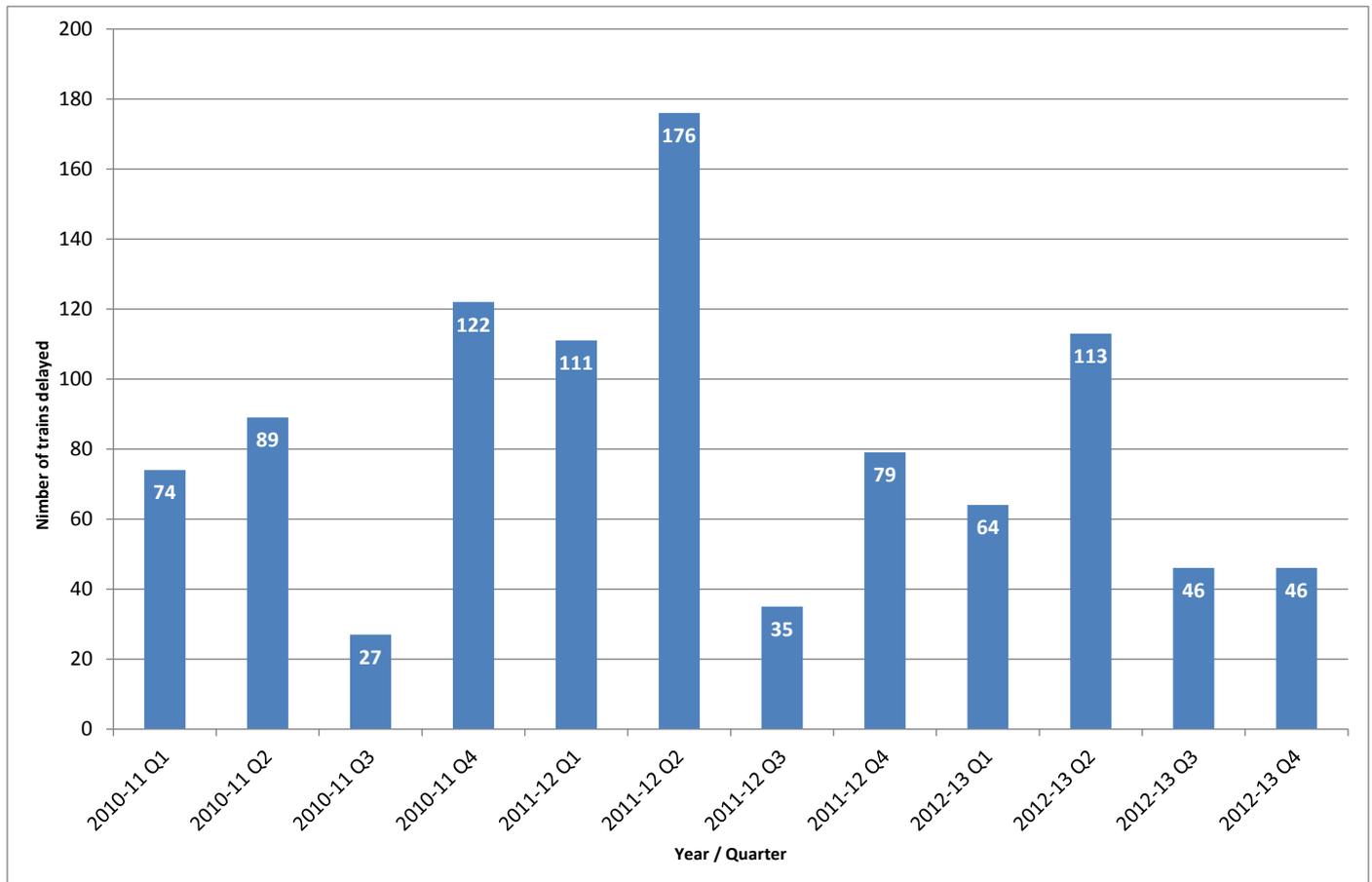
**Figure 2 - Delayed trains broken down by causes for which HS1 Ltd are wholly or mainly responsible.**

<b>Category</b>	<b>Incident description</b>	<b>Total number of services delayed (attributable to HS1)</b>
Track	Track Faults including Broken Rails	1
Non-track assets	OLE/Third Rail faults	6
	Points failures	115
	Signal Failures	19
	Signalling System & Power Supply Failures	6
	Telecoms failures	4
	Track Circuit Failures	17
Network management	Network Rail Operations - control	4
	Network Rail Operations - other	15
	Network Rail Operations - signalling	65
	Possession overrun & related faults	4
	Problems with trackside signs including TSR boards	2
	Timetable Planning	10
	Track Patrols & related possessions	1
<b>Total</b>	<b>Total</b>	<b>269</b>

3.9 Figure 2 shows the number of trains delayed by an incident wholly or mainly attributed to HS1 Limited, displayed by cause. Non-track assets were responsible for the majority of trains delayed (167) in 2012/13 that were attributable to HS1 Ltd. Within that category, points failures were the cause of 115 delayed trains.

3.10 The 2012/13 total of 269 HS1 Ltd attributable delayed trains is better than the number recorded in both 2010/11 and 2011/12.

**Figure 3 - No of trains delayed wholly or partly due to HS1 Ltd, by quarter 2010/11 to 2011/12**



3.1 Figure 3 shows the number of trains delayed by HS1 Ltd by quarter since the beginning of 2010/11. The highest number of HS1 Ltd attributable delays in 2012/13 occurred in Q2 when 113 trains were delayed, mainly as a consequence of points failures. It is worth noting that this period covers the Olympic and Paralympic Games, when many more trains were running than would normally be the case; therefore a peak in delays in this period is perhaps to be expected.

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## 4. HS1 business

### Refinancing

1. HS1 Ltd recently undertook a refinancing exercise to convert the short-term debt of £1.3bn it incurred during the sale process in 2010 into longer-term debt. HS1 Ltd carried out this process in two stages, the first stage took place in North America late in 2012 and raised a total of £565 million in private placement notes. The second in the UK bond market, raised £760 million.

2. HS1 Ltd has made consequential amendments to its Direct Funders Agreements. The changes have been approved by ORR.

### Olympics and Paralympics 2012

4.1 HS1 Ltd is to be commended for its work during the 2012 Olympic Games and Paralympic Games in maintaining a high level of reliability and playing its part in the successful delivery of the Games. The preparations that HS1 Ltd undertook in terms of preventative measures ensured that the infrastructure was able to meet the demands placed on the assets. There was only one asset related service affecting issue caused by defective points detection but this was resolved quickly. All preparations, including alterations to the restricted zone at St Pancras were completed in advance of the Games. The number of passengers using the stations during the period increased very significantly. We received no complaints from passengers during the period.

4.2 We monitored the arrangements for the Olympic and Paralympic Games in terms of crowd management, infrastructure maintenance arrangements and communications and noted that the railway operated safely during the period. There were no safety related events reported to us during the period of the games.

4.3 HS1 Ltd has undertaken a detailed review with NR (HS) and operators, and agreed the lessons learned as a result of the Games. These lessons, including topics such as the signage at its stations, the way in which HS1 Ltd markets its stations, and the importance of continuing the close working between NR (HS), HS1 Ltd and operators, are already being applied in practice.

## Revisions to the Operator Agreement

4.4 HS1 Ltd has renegotiated certain provisions of the Operator Agreement, which governs HS1 Ltd's relationship with NR (HS). The Operator Agreement has been tied in until at least the end of HS1 Ltd's CP3, but has not been market tested.

4.5 Under the revised terms, HS1 Ltd secured a 10% reduction of the price paid to NR (HS) under the Operator Agreement, for the remainder of CP1. Under the regulatory framework such out-performance could be kept entirely by HS1 Ltd, but 60% of the savings have been shared with operators.

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## 5. Track access

### Access rights reopener

5.1 In December 2012, ORR informed stakeholders on the GB national network of the requirement for an access rights reopener provision for all track access contracts. This was done to ensure consistency with the requirements of the Regulations, and to strike a better balance between the needs of both infrastructure manager and operators, given the increasing scarcity of available capacity.

5.2 This provision will allow access rights to be purchased and specified in such a way to ensure that they are fair and proportionate, stop the use of blocking rights, and allow greater flexibility for infrastructure managers to develop timetables and train operators to make changes to their services. We are currently considering how and whether HS1 Ltd's current access terms are consistent with the Regulations, in terms of providing the infrastructure manager with the right to review access rights to take account of major projects or developments. HS1 Ltd is currently engaging openly on this matter.

### Criteria and Procedures for the approval of framework agreements

5.3 We have recently revised our Criteria and Procedures for the approval of framework agreements on the HS1 Ltd's network ("the C&Ps") document in consultation with HS1 Ltd and other industry stakeholders. We have published the revised C&Ps on our website. The revised C&Ps include the recent revisions to Part D of the HS1 Ltd's network code. It also includes revised application forms for Passenger and Freight Framework Agreement or an amendment to an existing framework agreement under the Regulations, as well as a number of other minor amendments to reflect current circumstances, including the fact that HS1 Ltd has this year published its standard freight framework agreement and freight access terms documents.

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## 6. Asset Management

### Overview

6.1 The Concession Agreement requires HS1 Ltd to secure the operation, maintenance, renewal, replacement and planning and carrying out of upgrades in accordance with best practice and in a timely, efficient and economical manner, to the greatest extent reasonably practicable having regard to all the circumstances.

### Asset planning

6.2 HS1 Ltd has updated its Asset Management Annual Statement in readiness for 2013/14 under section 6.1.1 of the Concession Agreement.

6.3 Lloyds Register completed its review of the asset policies and found that the assumptions made before CP1 concerning the track asset renewals were not sufficient for the longer term. Lloyds Register has recommended that the escrow account will need to be topped up in order to cater for future renewals work in this area. The report had also highlighted that the interest rate needed to be updated to reflect the current cost of capital. This work is being considered as part of the PR14 process. HS1 Ltd is also in the process of updating its asset policies and is well advanced with its whole life cost modelling which will enable it to produce a 40 year renewal plan by July 2013, as part of the CP2 Asset Management suite deliverable due in December 2013 (for further information, see the above section on PR14).

6.4 HS1 Ltd has commissioned AMCL to consider its asset management maturity against BSI PAS55:2008 in outline terms, undertaking an assessment of compliance to that standard. The standard sets out a good practice framework to manage asset lifecycle risks through integrated planning and management control by instilling the well-known “plan-do-review quality” principles.

6.5 The present signaller to driver communication system – Cab Secure Radio (CSR) – was scheduled to have been replaced with GSM-R by late 2012 but an exact timescale for fitment is being negotiated with Network Rail. Once a commercial settlement has been reached, this will enable HS1 Ltd to comply with operating requirements.

## Asset Condition

6.6 There are already in place a number of asset indicators (e.g. number of broken rails etc.) which show that the infrastructure is in very good condition and performing well. Robust condition measures will need to be developed by HS1 Ltd in terms of a simple grading system which we would expect to be in place by the next asset specific policy (ASP) along with the 5YAMS submission.

6.7 Signalling assets make a significant contribution to the availability and reliability targets and therefore managing the system reliability is key to reducing the delays per train measure. Models are being developed in conjunction with AMCL to enable whole life cost decisions to be better quantified. Signalling and Control assets performed well with a reduction in the number of faults and delay minutes compared to last year. The work carried out to improve performance during the Olympics has improved the reliability of the line.

6.8 Track has seen the most direct interaction and subsequent effects of all of the asset groups since the introduction of the LSER high speed service in December 2009. There have been some issues to resolve such as rail profiling to accommodate the class 395 trains, the remaining rail profiling is planned to be completed by July 2013. Overall the performance of track assets has improved over 2012/13.

6.9 Electrification and Plant assets make up an average to moderate contribution to the overall reliability and availability of the railway infrastructure. Contact wire (de-wirements) represents an infrequent risk with significant consequences and hence needs to be carefully managed. Overall E&P assets have performed satisfactorily although there have been some issues arising from vandalism of Overhead Line equipment (OLE). In key risk areas the glass insulators are in the process of being replaced with a non-breakable version.

6.10 The 2012/13 AMAS notes that there are a number of civil asset condition defects which have been identified. The defects are not service affecting nor present an immediate risk of deterioration but may need to be rectified in the future. Provisions for this work will need to be factored into future plans.

## Renewals

6.11 Progress against the 5 year delivery plan for all asset groups has been good with no backlog reported (although the renewals plan for CP1 is limited due primarily to the age of the network). The current asset policies will be updated as part of the final asset specific policies being produced in 2013.

6.12 For Electrification and Plant assets, progress against the work set out in the IAMS has been good, with no backlog reported. The level of asset performance is good with a general reduction in the numbers of corrective works orders compared with 2011/12. Progress against the IAMS has been good with some renewals work having been re-scheduled due to the Olympics. There was no major corrective works order

issues noted for 2012/13. For Civils assets here are no significant issues that HS1 Ltd has reported other than the existing defects noted earlier.

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# 7. Safety

## Overview

7.1 Under the Railways and Other Guided Transport Systems (Safety) Regulations 2006, the infrastructure manager, Network Rail (High Speed) Ltd, has duties to establish and maintain a safety management system as set out in the Regulations. Network Rail (High Speed) Ltd was issued with a safety authorisation in accordance with the Regulations in October 2009, which was renewed in March 2012 for a period of five years.

### Safety Activities during 2012/13

7.2 We continue to monitor the safety performance of Network Rail (High Speed) Ltd through safety performance reports and routine liaison meetings. There have been no major incidents or accidents during the year.

7.3 We have continued to monitor the activities of the existing train operating companies using the HS1 network and have had discussions with potential new operating companies about operator certification requirements and safety authorisation for new rolling stock.

### Proposed safety activities for 2013/14

7.4 We will continue with our existing monitoring activities and carry out inspections and investigations where appropriate. We plan to carry out safety inspections of contractors working on the HS1 network.

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