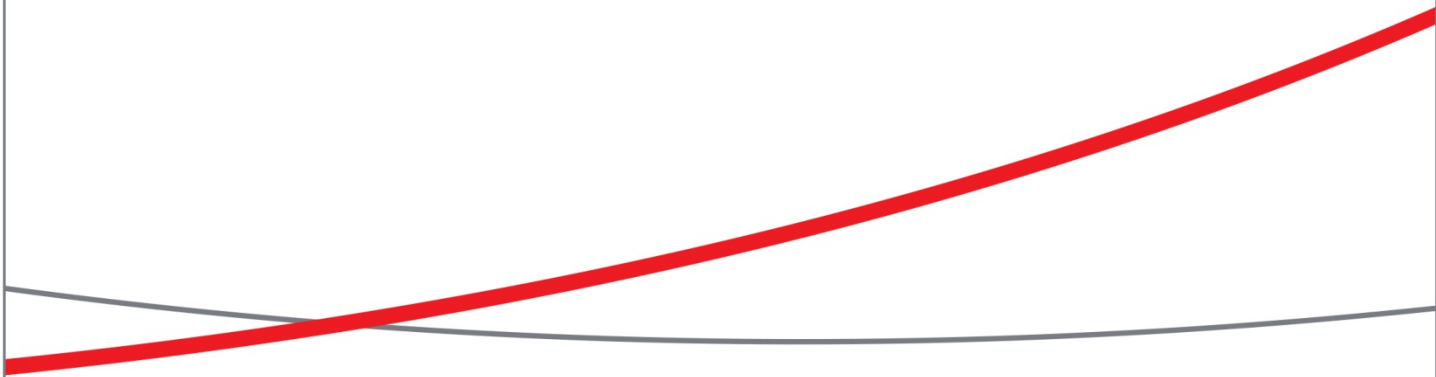


Department for Transport

Technical Advice to the HS1 Government's Representative

ADDENDUM | Review of the International Stations' CP2 Proposals

August 2014



Contacts



Eur Ing Dr Vicky Vassou
Commission Manager

dd +44 (0) 121 503 2774
df +44 (0) 121 503 2701
m +44 (0) 786 746 9909
e vicky.vassou@echarris.com

EC Harris LLP
Baskerville House, Centenary Square
Broad Street, Birmingham B1 2ND
United Kingdom

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1 Introduction

1.1 General

This document has been prepared for the Department for Transport (DfT) under an on-going commission for the provision of Technical Advice to the HS1 Government's Representative. The document forms an Addendum to and should be read in conjunction with the report titled: *Technical Advice to the HS1 Government's Representative, Review of International Stations' CP2 Proposals, 21 August 2014*, hereafter referred to as '**The Report**'. The Addendum reports on the findings of a brief review of the documentation that was provided to the DfT soon after the completion of the review and verification review of the CP2 Package. In addition, it provides an update with regards to the impact the additional documentation had on the status of the relevant actions, recommendations and/or obligations previously included in **The Report**.

1.2 Scope of the Brief Review

The documents considered during this brief review are listed in Table 1 below; documentation that is not listed below has been excluded from the brief review being reported in the Addendum (this document). It is noted that the numbering in the 'ID' column in Table 1 below continues sequentially from the numbering of the documents listed in Appendix A of **The Report**. Detailed review of the Asset Management Strategy and the Life Cycle Reports, i.e. documents 074 – 078 in Table 1, has not been undertaken during this short review; spot checks of a limited number of relevant sections were performed.

Table 1 – List of Documents and Files Considered during the Brief Review

ID	Title	File Name / Ref.	Doc. Date
074	Asset Management Strategy International Stations	Asset Management Strategy_1 August 2014 submission.pptx	1 Aug 2014 [11 Aug 2014] ¹
075	Ashford International Station Lifecycle Report	Ashford International LCR_1 August 2014 submission.pptx	1 Aug 2014 [11 Aug 2014]
076	Ebbsfleet International Station Lifecycle Report	Ebbsfleet International LCR_1 August 2014 submission.pptx	1 Aug 2014 [11 Aug 2014]
077	St Pancras International Station Lifecycle Report	St Pancras International LCR_1 August 2014 submission.pptx	1 Aug 2014 [11 Aug 2014]
078	Stratford International Station Lifecycle Report	Stratford International LCR_1 August 2014 submission.pptx	1 Aug 2014 [11 Aug 2014]
079	Enhanced Life Cycle Works Descriptions for CP2	Station LCC review Aug 2014 v0.1.xlsx	8 Aug 2014
080	Responses to EC Harris Comments	Appendix CD_HS1 LCRs Review - DRAFT All Comments 040714 v5_HS1 markup.xlsx	11 Aug 2014

1.3 Cross-Referencing Convention

Sections, Figures, Tables and Appendices contained in the previous EC Harris report, **The Report**, are referenced in this Addendum as follows:

- Section _._. of **The Report**
- Figure _ of **The Report**
- Table _ of **The Report**
- Appendix _ of **The Report**

¹ The date that appears on the document is different to the date of issue. The date of issue is provided in square brackets. This applies to the documents with number 074 – 078.

Cross-references to new Sections, Figures, Tables and Appendices contained in this Addendum are referenced as follows:

- Section _._._ of this Addendum
- Figure _ of this Addendum
- Table _ of this Addendum
- Appendix _ of this Addendum

2 Findings

2.1 Overview

This section summarises the findings from the brief review of the documentation that was provided to the DfT soon after the completion of the review and verification review of the CP2 Package, and covers the following themes:

- Reclassified Life Cycle & Maintenance Activities
- Cost Rates
- Updated Asset Management Strategy and Life Cycle Reports
- Updated Comments and Recommendations Listing

2.2 Reclassified Life Cycle & Maintenance Activities

Section 3.2 of **The Report** presents the findings of the review under this theme including an observation with regards to inconsistencies in the assignment of lifecycle (L) and maintenance (Q) activities and costs against items that had similar descriptions. Two examples of these inconsistencies were provided in Figure 7 and Figure 8 of **The Report**, for St Pancras and Ashford Stations respectively.

In the relevant verification review section, Section 4.1.1 of **The Report**, the following recommendation under this theme was marked as 'Outstanding' because a response or other statement was not received by HS1 Ltd before the completion of the verification review.

Recommendation 1: Investigate possible inconsistencies in the designation of elements with the same description and cycle summary and ensure they are allocated to the 'correct' activity (L/Q).

Outstanding

Following the completion of the verification review HS1 Ltd provided the following explanation:

"Most of the rationale behind each of these decisions is recorded in the models. The fire resistant doors, which is the specific example raised, were originally classified as all being "L". As part of the interim review (during 2013) it was suggested that they should all be "Q". These were modified so that some (i.e. those in the common area) were designated "Q" because they will be replaced on an "as needed" basis, while some (i.e. in the back of house) are designated "L" because they form part of the fire protection programme and hence fall within a scheduled replacement. This is a distinction that was set out where planned replacement or large-scale replacement tends to be classified as being a renewal item where spot replacement is treated as "Q".

In terms of potential inconsistencies in cost rates for items with a similar description, one of the examples given was the door seals, the differences relate to mainly size, but are also influenced by locations and construction types. The analysis utilises SPONS cost rates; for each asset type there is a variety of cost rates within SPONS, reflecting factors such as size, material types, location etc., the most appropriate ones were selected for each item."

It was previously noted, i.e. during the review of the CP2 package of documents, that the changes in the classification of L/Q activities, and how these evolved over time, were captured in the "Elemental Inputs" tab of the LCC models. The reason that the good practice Recommendation 1 above was made was because the rationale was not fully captured, at least for the two examples provided in Figure 7 and Figure 8 of **The Report**. Figure 1 to Figure 6 of this Addendum are replicated here to demonstrate this point.

Figure 1 and Figure 2 of this Addendum show that in the September 2013 and October 2013 versions of the LCC models, respectively, the replacement of the fire resistant door seals was a designated 'L' activity. Figure 3 shows that the interim review suggested that the replacement of the fire resistant door seals was a changed to a 'Q' activity, while Figure 4 indicates HS1 Ltd's agreement with this suggestion. Figure 5 shows that in the current version of the LCC Models (April 2014) replacement of the fire resistant door seals located in 'common facilities' and 'platforms' were designated 'Q' activities but an explanation for this was not given in the models other than an 'OK' entry. The replacement of the fire resistant door seals located in other areas were designated 'L' activities; a comment was provided against each relevant item, stating: 'Fire related item LTC' (see Figure 5).

Furthermore, the 'Q' items in Figure 5 have the same 'Cycle summary', previously shown in Figure 7 of **The Report**, as the 'L' items in the same example stated as: 'Commencing yr 7 Repeating on 10 year cycle at

50%. If these 'Q' items are considered to be spot replacements that take place on an as needed basis, they are more likely to be undertaken on a reactive basis, their volume and frequency would be significantly less compared to the 'L' items and be easily identified and/or quantified in the short to medium term (e.g. in a 5-year plan). In addition, the 'Quantity' sum of the five fire resistant door seals located in 'common facilities' and 'platforms' designated as 'Q' activities in Figure 5 of this Addendum is 242nr while the 'Quantity' sum of the remaining nine 'L' activities is 356nr. This means the 'Q' activities are 68% of the 'L' activities but not classified as being 'large-scale replacement'.

Factors such as individual asset size, material types, etc., that would have a significant impact on the selected cost rates were not stated in the LCC models, for the specific items in the above example. It is therefore not possible to conclude whether the selected cost rates for the items in the example are appropriate or not.

No explanation has been provided with regards to the seeming inconsistencies in 'L/Q' activities allocation included in the second example contained in Figure 8 of **The Report**. Figure 8 of **The Report** and Figure 6 of this Addendum both show that one of the 1% replacements of the suspended ceiling tiles is assigned as an 'L' activity while the others of similar description and percentage of replacement are assigned as 'Q' activities.

Independent quantification has not been undertaken to identify all the instances where the rationale in assigning L/Q activities is unclear or has not been included in the LCC models.

HS1 Ltd has responded to one example where potential inconsistencies in the allocation between L/Q activities were identified. An investigation of how widespread this issue may be in the LCC models or a statement indicating HS1 Ltd's level of confidence was not made. The rationale and information indicated as being contained in the LCC models do not appear to be included; at least not for the examples used. Therefore, the status of Recommendation 1 remains as previously stated in **The Report**.

Recommendation 1: Investigate possible inconsistencies in the designation of elements with the same description and cycle summary and ensure they are allocated to the 'correct' activity (L/Q).

Outstanding

Location	BCIS Element No.	Description	Works	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	162	nr	£30	50%	L
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	50	nr	£30	50%	L
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	19	nr	£60	50%	L
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	5	nr	£60	50%	L
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	6	nr	£3,500	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	5	nr	£60	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	134	nr	£30	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	24	nr	£60	50%	L
St Pancras Cat B	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	10	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	4	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	148	nr	£30	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	1	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	19	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	11	nr	£60	50%	L

Figure 1 – Extract from St Pancras LCC Model | 'Elemental Inputs' Tab | Baseline values (12 Sept 2013)

Location	BCIS Element No.	Description	Works	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	162	nr	£30	50%	L
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	50	nr	£30	50%	L
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	19	nr	£60	50%	L
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	5	nr	£60	50%	L
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	6	nr	£3,500	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	5	nr	£60	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	134	nr	£30	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	24	nr	£60	50%	L
St Pancras Cat B	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	10	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	4	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	148	nr	£30	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	1	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	19	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	10	10	11	nr	£60	50%	L

Figure 2 – Extract from St Pancras International LCC Model | 'Elemental Inputs' Tab | Initial Asset Stewardship (3 Oct 2013)

Location	BCIS Element No.	Description	Works	PB / PW Notes	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	162	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	50	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	19	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	5	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	6	nr	£3,500	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	5	nr	£60	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	134	nr	£30	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	24	nr	£60	50%	Q
St Pancras Cat B	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	10	nr	£60	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	4	nr	£60	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	148	nr	£30	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	1	nr	£60	50%	Q
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	19	nr	£60	50%	Q
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	10	10	11	nr	£60	50%	Q

Figure 3 – Extract from St Pancras LCC Model | 'Elemental Inputs' Tab | Interim Review Suggestion

Location	BCIS Element No.	Description	Works	PB / PW Notes	HS1 Comments	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	162	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	50	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	19	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	5	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	6	nr	£3,500	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	5	nr	£60	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	134	nr	£30	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	24	nr	£60	50%	Q
St Pancras Cat B	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	10	nr	£60	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	4	nr	£60	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	148	nr	£30	50%	Q
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	1	nr	£60	50%	Q
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	19	nr	£60	50%	Q
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	M	OK - OK with ECH comment - replace when defective	10	10	11	nr	£60	50%	Q

Figure 4 – Extract from St Pancras LCC Model | 'Elemental Inputs' Tab | Response to Interim Review Suggestion (6 Jan 2014)

Location	BCIS Element No.	Description	Works	DW / JN comments 17/01/2014	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	OK	10	10	162	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	OK	10	10	50	nr	£30	50%	Q
St Pancras - Common Facilities	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	OK	10	10	19	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	OK	10	10	5	nr	£60	50%	Q
St Pancras - Platforms	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Price aligned from £3,500 to £60	10	10	6	nr	£60	50%	Q
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	5	nr	£60	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	134	nr	£30	50%	L
St Pancras Cat A	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	24	nr	£60	50%	L
St Pancras Cat B	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	10	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	4	nr	£60	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	148	nr	£30	50%	L
St Pancras Cat D	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	1	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	19	nr	£60	50%	L
St Pancras Fabric Variation July 2010	2HR1.03	2HR1.03 Fire Resistant Doors Replace seals	replace	Fire related item LTC	10	10	11	nr	£60	50%	L

Figure 5 – Extract from St Pancras LCC Model | 'Elemental Inputs' Tab | Asset Stewardship (7 Apr 2014)

Location	BCIS Element No.	Description	Works	DW / JN review 17/01/2014	Base Start Year	Cycle	Quantity	Unit	G&T Cost Rate Q2 2013	% of Replace per event	L - LTC Q - QX D - Delete	
Ashford - Common Zone First	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace	OK	40	40	255	m2	£	65	100%	L
Ashford - Common Zone First	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace missing/damaged tiles	OK	1	1	255	m2	£	35	1%	Q
Ashford - Common Zone Ground	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace	OK	40	40	564	m2	£	65	100%	L
Ashford - Common Zone Ground	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace missing/damaged tiles	OK	1	1	564	m2	£	35	1%	Q
Ashford - Common Zone Service	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace	Cost aligned with similar activity	40	40	195	m2	£	65	100%	L
Ashford - Common Zone Service	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace missing/damaged tiles	Cost aligned with similar activity	1	1	195	m2	£	35	1%	Q
Ashford - International Zone First	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace	OK	40	40	1922	m2	£	65	100%	L
Ashford - International Zone First	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace missing/damaged tiles	OK	1	1	1922	m2	£	35	1%	Q
Ashford - International Zone Ground	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace	OK	40	40	472	m2	£	65	100%	L
Ashford - International Zone Ground	3C2.03	3C2.03 Suspended ceilings Metal tile suspended ceiling, ex	Replace missing/damaged tiles	OK	1	1	472	m2	£	35	1%	Q

Figure 6 – Extract from Ashford LCC Model | 'Elemental Inputs' Tab | Asset Stewardship (7 Apr 2014)

2.3 Cost Rates

Section 3.4 of **The Report** presents the findings of the review under this theme including an observation relating to some items with similar descriptions having different cost rates. Examples of these were provided in Figures 9 and 10 of **The Report** alongside a recommendation for the enhancement of the descriptions provided.

In Section 4.1.2 of **The Report** the following recommendation under this theme was marked as 'Partially Complete' because it was considered that the enhanced descriptions received by HS1 Ltd before the completion of the verification review would benefit from further expansion as follows:

- What is the individual item, its basic dimensions and material type (e.g. internal door, 1.8 x 0.7 m, wood)?
- Where is the item (e.g. 3-level location with reference to drawings)?
- What is the work (e.g. replace an asset or part of an asset)?

Recommendation 2: Ensure correct unit rates are applied in the LCC models. Enhance descriptions and provide a detailed explanation of how each of the rates was derived.

Partially Complete

Following the completion of the verification review HS1 Ltd provided an updated version of the file containing the enhanced descriptions of the lifecycle activities^[079], as suggested in Section 4.1.2 of **The Report**. HS1 Ltd has also provided the following explanation:

“EC Harris raised a query around whether we should go down to giving each asset an individual coding. We haven’t done this, and don’t consider it would add any value at this stage as the level of spend is limited (<£100k across CP2 as a whole), the cost of doing so would be disproportionately high (effectively requiring a further site survey), detail will be provided in any specific escrow withdrawal submission, and most importantly, we are completely revamping the asset management system in any event in conjunction with DfT. Any work to modify the current system would just be redundant.”

The LCC models contain a CP2 expenditure forecast of £10.1m at St Pancras, £1.7m at Stratford, £1.8m at Ebbsfleet and £3.1m at Ashford. It is not known why HS1 Ltd believe that the anticipated spend across CP2 is less than £100k as included in the above statement.

It was not envisaged that a survey would be required or necessary in order to assign a unique ID to the assets already included in the LCC models. Instead it was anticipated that assets would already have unique IDs and listed in existing systems, i.e. Concept and Maximo used by NR(HS) and MITIE. It was thought that the asset data used in the LCC models were extracted from those systems and could transfer over the same IDs.

Alternatively the “BCIS element” string used in the models could be expanded as shown in the ‘suggested Unique ID’ column in Figure 7 of this Addendum, i.e. the fourteen entries of ‘2HR1.01’ could be converted to 2HR1.01_01, 2HR1.01_02, 2HR1.01_03, etc. This would aid asset identification, for instance, for the purpose of future funding discussions. Currently the only way to refer to the assets listed in the LCC models is to quote the row number, which could change if a new row is inserted.

Suggested Unique ID	BCIS element	LCC model description
2HR1.01_001	2HR1.01	Fire resistant door Ironmongery
2HR1.01_002	2HR1.01	Fire resistant door Ironmongery
2HR1.01_003	2HR1.01	Fire resistant door Ironmongery
2HR1.01_004	2HR1.01	Fire resistant door Ironmongery
2HR1.01_005	2HR1.01	Fire resistant door Ironmongery
2HR1.01_006	2HR1.01	Fire resistant door Ironmongery
2HR1.01_007	2HR1.01	Fire resistant door Ironmongery
2HR1.01_008	2HR1.01	Fire resistant door Ironmongery
2HR1.01_009	2HR1.01	Fire resistant door Ironmongery
2HR1.01_010	2HR1.01	Fire resistant door Ironmongery
2HR1.01_011	2HR1.01	Fire resistant door Ironmongery
2HR1.01_012	2HR1.01	Fire resistant door Ironmongery
2HR1.01_013	2HR1.01	Fire resistant door Ironmongery
2HR1.01_014	2HR1.01	Fire resistant door Ironmongery

Figure 7 – Suggestion for Addition of Unique ID

The updated version of the file containing the enhanced descriptions of the lifecycle activities^[079], mainly provided further location attributes against each asset, i.e. it did not include basic dimensions and material types for each asset and/or group of assets. This is considered a significant omission as it would aid understanding when comparing costs between different line items that currently have similar description(s).

The enhanced description is provided in the “In depth description” column and the “Detailed location” column (for example see Figure 8 of this Addendum). However, the “In depth description” column repeats information which can be found in the existing “Description” column of the LCC models and the “Sub-

location” column. For example, the “Internal fire door ironmongery replacement”, shown in Figure 9, has an identical description in the “LCC model description column” and the location information which can be found in the “Sub-location” column (e.g. Deck extension). In Figure 9, there is little information in the “In depth description” column, which does not already appear in the other columns. “Internal” could be used in a separate column to describe the door type.

BC S element	LCC model description	In depth descr pt on	Locat on	Sub locat on	Detailed locat on
2AR.03	Painting	Painting scheme for the main Barlow Shed truss	St Pancras - external	Barlow shed roof	North and South gable ends
2ER.18	External Enclosing Walls - ground level	Coping and parapet repair at roof level	St Pancras - external	Roof	West and East side buildings
2FR1.01	External windows	Replace window seals on the deck extension	St Pancras - platforms	Deck extension	East and West curtain walling window seals
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - deck extension	St Pancras - platforms	Deck extension	Bothy doors on LSER and Eurostar platforms
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - Barlow shed	St Pancras - platforms	Barlow shed	Platform 10A transition to station building
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - automatic doors in glazed screen deck extension	St Pancras - Cat A	Deck extension	East, West and coach road
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - metal glazed doors deck extension	St Pancras - Cat A	Deck extension	Ground level, East and West curtain wall
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - glazed doors in glazed screens - deck extension	St Pancras - Cat A	Deck extension	Platform level to stair well access
2HR1.03	Fire Resistant Doors Replace seals	Internal fire door ironmongery replacement of seals - automatic doors in glazed screen deck extension	St Pancras - Cat A	Deck extension	East, West and coach road
2HR1.03	Fire Resistant Doors Replace seals	Internal fire door ironmongery replacement of seals - metal glazed doors deck extension	St Pancras - Cat A	Deck extension	Ground level, East and West curtain wall
2HR1.03	Fire Resistant Doors Replace seals	Internal fire door ironmongery replacement of seals - glazed doors in glazed screens	St Pancras - Cat A	Deck extension	Platform level to stair well access
2HR1.01	Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - fire resistant doors to WC lobby - deck extension	St Pancras - Cat B	Deck extension	Circle toilet
2HR1.03	Fire Resistant Doors Replace seals	Internal fire door ironmongery replacement of seals - fire resistant doors to WC lobby - deck extension	St Pancras - Cat B	Deck extension	Circle toilet

Figure 8 – St Pancras Extract of Enhanced Descriptions with 3-level Location Attributes

LCC model description	In depth description	Location	Sub location
Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - deck extension	St Pancras - platforms	Deck extension
Fire Resistant Doors Ironmongery	Internal fire door ironmongery replacement - Barlow shed	St Pancras - platforms	Barlow shed

Figure 9 – St Pancras Extract of Enhanced Descriptions with 2-level Location Attributes

Although the “Detailed location” column is useful it provides no references to drawings (e.g. room number) or similar type of information, which is considered to be good practice. This makes it difficult to identify which specific item is to be replaced, e.g. there are 10 and 11 “Circle toilets” at St Pancras, as shown in Figure 10 of this Addendum. These items have the same “In depth description”, “Location”, “Sub-location” and “Detailed location”; however the item on the second row has a lower cost whilst having a greater quantity than the item on the first row. Based on the descriptions provided it is not possible to understand why the cost of these two items is different.

In depth description	Location	Sub location	Detailed location	Number	2015/16	2016/17
Internal fire door ironmongery replacement - fire resistant doors to WC lobby - deck extension	St Pancras - Cat B	Deck extension	Circle toilet	10		£ 3,240
Internal fire door ironmongery replacement - fire resistant doors to WC lobby - deck extension	St Pancras - Cat B	Deck extension	Circle toilet	11		£ 2,376

Figure 10 – St Pancras Extract of Enhanced Descriptions that are Similar

Therefore, given the above deficiencies the status of Recommendation 2 remains as previously stated in [The Report](#).

Recommendation 2: Ensure correct unit rates are applied in the LCC models. Enhance descriptions and provide a detailed explanation of how each of the rates was derived.

Partially Complete

In addition, this action is also linked to obligation 5.2.4 – b. HS1 Ltd’s compliance against this obligation remains unchanged as previously stated in [The Report](#).

2.4 Updated Asset Management Strategy and Life Cycle Reports

Following the completion of the verification review HS1 Ltd provided an updated Asset Management Strategy and Lifecycle Reports, i.e. documents 074 – 078 listed in Table 1 of this Addendum. Detailed review of the Asset Management Strategy and the Life Cycle Reports has not been undertaken during the brief review reported in this Addendum. HS1 Ltd stated that the substantive change is the inclusion of the 2010/11 and 2011/12 performance data in each of the LCRs.

The Ashford LCR provides a very brief summary but does not report any specific performance values. It makes reference to the AMAS with regards to performance information at the station.

Section 3.3 of the St Pancras, Stratford and Ebbsfleet LCRs all contain a summary of the performance for years 2010/2011, 2011/12, 2012/13 and 2013/14. It is not clear why the KPIs for the M&E and Building Fabric Assets were combined for 2013/14 (see Figure 11 of this Addendum).

Section 3.3.1 of the St Pancras LCR states that *'the total number of lift, escalator and travelator faults in 2012/13 was 697 compared to 867 in 2011/12, a decrease of 20%.'* However, Figure 11 in this Addendum shows 2.54% overdue faults in 2012/13 compared to 0% in the same period in 2011/12.

Asset	% overdue faults at P13 end			
	2010/11	2011/12	2012/13	2013/14
M&E	0.4%	2.0%	2.93%	0.46%
Building Fabric	1.4%	0.0%	0.29%	
Communications and Data	0.0%	1.0%	3.70%	1.39%
Lifts, Escalators and Travelators	0.0%	0.0%	2.54%	0.39%

Figure 11 – Extract from St Pancras LCR | 'Table 13 – Key Performance Indicators'

Obligation 5.2.1-g requires *'an analysis of breakdown frequencies and the performance of the Elements of the Station which were identified in the Asset Management Strategy as being monitored'*. Although the information currently contained in the LCRs it is sufficient at this point in time HS1 Ltd's compliance against this obligation remains 'Partial' as a future action is anticipated and stated both in the compliance matrix and in Recommendation 11 of **The Report**:

Recommendation 11 full trend analysis of breakdown frequencies and performance of the monitored station elements.

Future Action

2.5 Updated Comments and Recommendations Listing

Following the completion of the verification review HS1 Ltd provided an updated version of the listing containing good practice comments and recommendations. This has been reviewed and an updated version is included in Appendix F of this Addendum.

Appendix F of this Addendum provides an updated version of Appendix C of **The Report**. The actions marked as 'Outstanding' therein do not influence HS1 Ltd.'s compliance to its obligations.

3 Conclusions

The additional material provided by HS1 Ltd following the completion of the verification review has been considered during the brief review reported in this Addendum. The material provided was not found to have any impact on the recommendations contained in Table 14 of **The Report**, HS1 Ltd.'s compliance included in Appendix B and Appendix E of **The Report** or EC Harris concluding recommendations to the DfT.

Appendix F of this Addendum provides an update of Appendix C of **The Report**. The actions marked as 'Outstanding' therein do not influence HS1 Ltd.'s compliance to its obligations.

Appendices

Appendix F – Comments & Recommendations

HS1 International Stations - Review of CP2 Proposal

Comments and Recommendations

Doc. ID	Section (s) / Paragraph (s)	Comments No.	Observations and Comments	Recommendations	HS1 Ltd response	EC Harris Verifications Comments - Round 1	Status	Model(s) / Functional Unit(s)	HS1 Ltd response post completion of the verification review	EC Harris Comments	Status
029	§1.3.1, §1.3.2	1	The switching system is now considered obsolete as it is envisaged that the models remain in Asset Stewardship state. May lead to incorrect results in the LTC model if all the LTC models are not all switched to the same model/efficiency over time.	Remove switching capability.	Response received on 01 July 2014	Comments made on 04 July 2014 and do not take into consideration documentation and/or other communication received after this date	04 July 2014	Yes	Response received on 11 August 2014	Comments made on 28 August 2014	28 Aug 2014
024, 029	§5, p 57	2	Impact of efficiency over time can be challenging (e.g. technology breakthrough is expected to reach a limit during the length of the concession hence limited efficiency during this period)	Agree with DfT to revise efficiency over time during the length of the concession	Already agreed and noted. All assumptions are necessarily reviewed as part of the CP process.	Suggest DfT and HS1 Ltd should discuss/agree the most appropriate time for producing the next generation of LCC/LTC models to address the potential risk of the 'desirable' model features (such as the approach to smoothing, variance analysis, etc.) that were identified during this review, not before release for CP2.	Deferred	Yes	NOT CLEAR WHY THIS HAS BEEN LABELLED DEFERRED - THE COMMENT RELATES TO ACTION DURING THE CURRENT REVIEW AND THIS HAS BEEN ADDRESSED. GIVEN CONTINUOUS IMPROVEMENT THEN WE COULD PUT ALL STATUS AS DEFERRED WHICH SEEMS TO DEFEAT THE PURPOSE	This was a 'good practice' suggestion for future improvement of the models. HS1 Ltd stated in their response of 01 July that 'We do for 'batter' version of model...' which is why it was marked as 'Deferred'. It does not impact the current review or HS1 Ltd's compliance to their obligations.	Deferred
025, 026, 027, 028, 030	§2.1.1, §4	3	The number of items for St Pancras (largest station) and Ashford (lowest station) are lower (602 and 658 respectively) than for the newest stations Stratford and Eboufard (774 and 791 respectively).	Check/confirm the number of items are correct for the 4 stations	Checked and consider appropriate. Happy to address any concerns about specific items considered to be erroneous.	Suggest annual review / monitoring, if it does not already occur, rather than a 5 year review	Closed	Yes			Closed
029	LCC Input tabs	4	Historic records of what Halcrow had used for upSR (i.e. BMRC) not relevant for current models/calculations	Group the historical calculations so they only appear on a need-to-know basis	Will do for 'clean' version of model. Again, these are important to provide a transparent record of changes made so consider they are important to be retained.	Fully agree with transparency issue but going forward a 'clean' version of the model(s) would be preferable.	Deferred	Yes	SAME COMMENT RE DEFERRED STATUS AS ABOVE	This was a 'good practice' suggestion for future improvement of the models. HS1 Ltd stated in their response of 01 July that 'We do for 'batter' version of model...' which is why it was marked as 'Deferred'. It does not impact the current review or HS1 Ltd's compliance to their obligations.	Deferred
025, 026, 027, 028, 030	Report tab	5	Smoothed LCC does not provide an accurate picture of the spend profile as it is unrealistic to expect high spend increase for particular years (e.g. year 37 for SPI) vs. and no spend for certain years (e.g. years 34 & 35 for SPI)	Reconsider the approach for smoothed LCC results	Agreed and addressed separately	As per comment under item 1 above	Deferred	Yes	SAME COMMENT RE DEFERRED STATUS AS ABOVE	It was recommended that an alternative approach to smoothing expenditure profiles is considered before the commencement of CP2. See Recommendation 6 in The Report. This is why the status is marked as a 'Deferred'. It is a 'good practice' recommendation not done for HS1 Ltd's compliance to their obligations.	Deferred
029	LCC Input tabs	6	Where is the statement behind the use of the RPI index? LCC model, notes tab states use of BCIS BM A+B in maintenance cost index.	Clearly state assumption(s)	Addressed separately	A satisfactory explanation has been provided but the documentation submitted was not updated to include this (this was indicated in the relevant part of the compliance matrix)	Outstanding	Yes	OUTSTANDING IS THE WRONG STATUS. WE CONSIDER THE ASSET MANAGEMENT SUITE AS A WHOLE ADDRESSES THIS ISSUE APPROPRIATELY	The versions of the LCC models provided on 30 June 2014 was date stamped 07 April 2014. In the 'Notes' tab of the LCC models under item 1 the following is stated: 'Price Base Date @ 2013 - upSR to 2020/5 (using BCIS BM A+B Maintenance Cost Index - value shown on Assumptions)' the second part of which (i.e. after the hyphen) is not correct as the model actually uplifts by 2.75% and not the BCIS BM A+B Maintenance Cost Index. This may be a historical statement left over as the models evolved. The previous comment was suggesting was for the correct assumption to be stated in the interest of clarity. As no attempt was made to revise the statement the action is marked as 'Outstanding', however the issue is minor.	Outstanding
029	Assumptions tab Index tab	7	What is the rationale for a 2.75% flat inflation throughout the concession period?	Please state the underlying official body source	Addressed separately	A satisfactory explanation has been provided but the documentation submitted was not updated to include this (this was indicated in the relevant part of the compliance matrix)	Outstanding	Yes	OUTSTANDING IS THE WRONG STATUS. WE CONSIDER THE ASSET MANAGEMENT SUITE AS A WHOLE ADDRESSES THIS ISSUE APPROPRIATELY	Since the last EC Harris comment was made on 04 July 2014 a satisfactory explanation has been received and the relevant parts of the AMS and LCRs revised. Also see Section 4.1.4 and Appendix B of The Report.	Closed
029	LTC Calculations tab (cell E5)	8	Switching between F&G calculations and CP2 calculations is not relevant anymore as CP2 budget is being agreed	Consider removing the switching capability in the future, i.e. work with 'clean' model versions	As above	As per comment under item 1 above	Deferred	Yes		This was a 'good practice' suggestion for future improvement of the models. HS1 Ltd stated in their response of 01 July that 'We do for 'batter' version of model...' which is why it was marked as 'Deferred'. It does not impact the current review or HS1 Ltd's compliance to their obligations.	Deferred
025, 026, 027, 028, 030	Elemental Inputs tab	9	A significant number of items were moved from L to G category (compared with previous review)	DfT and/or HS1 Ltd to note	Noted - this was done consciously by HS1 to provide operators with visibility of the LTC / Qa impact		Closed	Yes			Closed
024, 029	§7, p 84	10	Interest earned on 50% of net movement invested' is not taken into account in the LTC model	Check if statement still right and if yes, include in LTC model	Interest calculations are correct, audit has tested this.		Closed	Yes			Closed
024, 025, 026, 027, 028, 029	§7, p 84	11	Length of analysis period, i.e. 45 years, currently would reduce by 5 years in CP3 based on Schedule 10 requirements.	Consider adopting a rolling analysis period of 40 years for future evaluations.	As noted in proposals is to be considered during CP2		Deferred	Yes		See Recommendation 18 in The Report.	Deferred
024	§7, p 87, 89, 90, 91 & 92	12	Two graphs may not be necessary as they describe the same scenario (i.e. CPA actual to CP2 asset stewardship)	Delete graph without CP2 baseline. Add key: Blue=LTC value, Red=Positive change in LTC value, Green=Negative change in LTC value	DfT and/or HS1 Ltd to note	No change has been made to the relevant document but not considered critical	Closed	Yes			Closed
024	§7, p 90	13	The escrow accounts are in deficit toward the end of the analysis period	DfT and/or HS1 Ltd to note	Noted		Closed	Yes			Closed
029	Assumptions tab	14	In the CPI LTC Model, retailers made a contribution to the LTC (c. 11% for SPI). This has been removed for the CP2 model - why is this?	Please explain	Addressed separately	HS1 Ltd paper dated 26 June 2014 contains an explanation	Closed	Yes			Closed
034, 035, 036, 037	§4, p22/23	15	Cost of capital and cost of equity are not used in the right context	Cost of debt, applies to projects where not enough money is available in ESCROW to fund the works, based on the HS1 Limited's current cost of capital	Okay - but non material to outcome	No change has been made to the relevant document but not considered critical	Closed	Yes			Closed
025, 026, 027, 028, 030	Elemental Inputs tab	16	Some BCIS element can have different rates (e.g. '2HR1.01 Fire Resistant Doors Ironmongery' @ SPI has 4 different rates £200, £300, £7,200 and £100 - rows 17, 18, 19 and 20)	Clarify rates used and add further description for activities undertaken	Addressed separately	Further explanation required for CP2	Outstanding	Yes	FURTHER INFORMATION PROVIDED	Further information has been provided but the action remains 'Outstanding' as indicated in Section 2.3 of this Addendum.	Outstanding
025, 026, 027, 028, 030	Elemental Inputs tab	17	Some BCIS elements can be replaced & repaired the same year (e.g. 'Canopy to platform' @ Ashford is replaced & repaired in the same years - row 106 & 108)	Explain replaced vs. repaired BCIS elements with the same time to intervention	Addressed separately		Outstanding	Yes	FURTHER INFORMATION PROVIDED		Closed
025, 026, 027, 028, 029	Elemental Inputs tab	18	Some BCIS elements deleted ('C' category) in 6th January model and subsequently added back to 'L' category in 7th April model (except 'L' costs (e.g. 'Cost of CP' vs 'L' items @ SPI)	DfT and/or HS1 Ltd to note	Addressed separately		Closed	Yes			Closed
029	LTC Allocation to TOCs tab	19	Difficult to verify annuity allocation to TOCs based on bottom	DfT and/or HS1 Ltd to note	Addressed separately		Closed	Yes			Closed
025, 026, 027, 028, 029	Elemental Analysis tab	20	Hardwiring of threshold values	The threshold values for a number of on-costs (e.g. Safety / H&E, Procurement Management) are hardwired into the cells. Suggest put these into assumptions tab as inputs that can be amended	Will do for future versions	As per comment under item 1 above	Deferred	Yes		This was a 'good practice' suggestion for future improvement of the models. HS1 Ltd stated in their response of 01 July that 'We do for 'batter' version of model...' which is why it was marked as 'Deferred'. It does not impact HS1 Ltd's compliance to their obligations.	Deferred
025, 026, 027, 028, 029	Elemental Analysis tab	21	Management fee threshold formula	The LCC & LTC assumptions documents states that the HS1 Management Fee threshold is £500k. However, the formula has not been updated and shows differing rates for <£20k, <£500k and <£500k. The output is correct but the formula could remove the £20k rate for clarity	Will do for future versions	As per comment under item 1 above	Deferred	Yes		This was a 'good practice' suggestion for future improvement of the models. HS1 Ltd stated in their response of 01 July that 'We do for 'batter' version of model...' which is why it was marked as 'Deferred'. It does not impact HS1 Ltd's compliance to their obligations.	Deferred
025, 026, 027, 028, 029	Elemental Analysis tab	22	Design Fees	The LCC & LTC assumptions state that design fees are 10% on M&E and 5% on everything else. However, the model applies 10% to M&E and 5% to Roof and External Walls only. Which one is correct? Should the general design fees also be price dependent? i.e. for jobs under a certain threshold, whereby that design work would be required	Noted	Unclear if any action was taken to modify stated assumptions, but it is not considered a critical action	Closed	Yes	AS ADDRESSED SEPARATELY. WE CONSIDER THAT OVERALL THE MODELS WORK AS INTENDED AND THAT WE HAVE DONE ALL REASONABLE TESTS TO CHECK THE MODEL FUNCTIONALITY. SUGGESTIONS ABOUT MAKING GENERAL DESIGN FEES TO BE PRICE DEPENDENT CAN BE INCLUDED IN THE CONTINUOUS IMPROVEMENT FOR THE NEXT REVIEW	It is considered there is a discrepancy between the stated assumption and the formula used (Column AB in the 'Elemental Analysis' tab in the LCC models). This needs to be specifically checked and commented on.	Outstanding
025, 026, 027, 028, 029	Elemental Analysis tab	23	Access costs	Should be pointed out on assumptions tab that this applies to Roof & External Walls and that a minimum of £500 applies (as defined in the formula)	Noted	Unclear if any action was taken to modify stated assumptions, but it is not considered a critical action	Closed	Yes			Closed
025, 026, 027, 028, 029	Elemental Analysis tab	24	There is no satisfactory variance approach to meet Schedule 10 obligation to allow for modelling of acceleration / deferrals / omissions. For instance, if a specific renewal was delayed by a year due to good management, but the general forecast of that life was not amended, then the LCC or LTC model could not accommodate this	For the CP2 submission the process for manually calculating the variance should be described in the LCRs. However, the LCC/LTC models should be revised in the future so as to undertake modelling of acceleration / deferrals / omissions in a more automated fashion.	Addressed separately	The first part of this comment was addressed for CP2. The second part is as per comment under item 1 above	Deferred	Yes		See Recommendation 9 in The Report.	Deferred
029	LTC calculations tabs	25	Escrow balance actual vs. forecast	Consider replacing the forecast escrow opening balance with the actual escrow balance as of March 2014 to calculate the annuity	Addressed separately	The relevant sections of the LCRs have been updated	Closed	Yes			Closed
032	Figure A	26	To meet obligations the AMS must cover the Life Cycle Period and Overhang Period (45/50 years, or such like as agreed between DfT and HS1 Ltd)	Delete 5 year from the blue box in the figure.	Addressed separately		Outstanding	Yes	INTENT IS THAT WE HAVE AN ASSET MANAGEMENT STRATEGY AT ANY POINT THAT REMAINS IN FORCE UNTIL CHANGED. WE HAVE USED THE 5 YEARS IN THE DIAGRAM BECAUSE IT INDICATES THAT WE ARE SETTING IT FOR THE NEXT REVIEW PERIOD. OF COURSE THESE DOCUMENTS ARE CONTINUALLY UNDER REVIEW AND WE ARE ALWAYS LOOKING TO IMPROVE IN LINE WITH ADDITIONAL INFORMATION		Closed
032	General	27	The intention to move from time-based to condition and risk based approaches is welcomed and it is appreciated that this will evolve over time.	Consider revising the Asset Management Policy to reflect the intention to move towards risk based asset management practices	We consider this is part of the strategy. But will review as part of subsequent changes to the asset management policy		Closed	Yes			Closed
032	§1.1, 1st bullet point, 4th line	28	This is a key objective and one that should be stated in the Asset Management Policy - management obligations over the 50 year concession, including...	Is the intention to state a '30 year concession' or a '45/50 year evaluation period' (i.e. covering the Life Cycle Period and the Overhang period)? Suggest revise as appropriate.	Addressed separately		Outstanding	Yes	AMENDED TO 30 YEARS		Closed
031	Fig 1	29	There are three different diagrams potentially depicting the asset management framework, two in the AMS and one in the policy	For consistency suggest use only one diagram for the Asset Management Framework throughout the documentation	Addressed separately		Outstanding	Yes	CONSIDER THEY ARE APPROPRIATE, AS SHOWING DIFFERENT THINGS		Closed
031	§4.1.1, §4.1.2, §4.1.3, §4.1.4	30	Is the hierarchy of asset management principles, objectives, targets, etc. correct? The asset policy is normally derived from the business plan and contains the key asset management principles the organisation intends to adopt. The asset management objectives are then derived from the policy taking the key principles into account. Targets can then be developed against each objective to ensure the policy strategy are delivered and can be regularly monitored. This does not appear to be the adopted sequence presented in the AMS, i.e. Table 1 lists asset management objectives/targets which is then followed by the principles in section 1.3.3. In this section it is stated that the policy supports the asset management objectives, but actually it is the objectives that should support the delivery of the policy.	Review, and amend (as appropriate) the hierarchy of asset management principles, objectives, targets, etc. Any changes should be reflected in the supporting Appendices, i.e. G and F in particular.	Addressed separately		Outstanding	Yes	CHANGED THE MISLEADING WORDS 'IN SUPPORT'. THINK IT WAS CLEAR THAT WE HAVE THE AIS AS A SUBSET OF THE AMS IN ANY EVENT. THIS IS REFLECTED IN THE DIAGRAMS, FOR EXAMPLE FIGURE 1	No changes made to §1.3.2, §1.3.3 of the AMS but considered a critical issue.	Closed
032	Figure 3, §2.2.1, §2.2.2, §2.2.3	31	How do the delivery considerations in section 5 map to the asset management objectives?	How do the delivery considerations in section 5 map to the asset management objectives?	Addressed separately		Outstanding	Yes	FULLY DESCRIBED THROUGH THE SUITE OF DOCUMENTS. NOT CONSIDERED TO BE A GOOD USE OF TIME AT THIS POINT	No changes made to §2.2.2, §2.2.3 of the AMS but considered a critical issue.	Closed
034, 035, 036, 037	Figure 3	32	Given the text that follows the asset management methodology diagram (especially in the LCRs) it is suggested that some of the terms in the diagram could be revised to better reflect the description provided as follows: - change 'Input-output relationship' to 'Decision-making' - change 'Developing our understanding of Input-Output relationships' to 'Understanding asset behaviour'	Revise text in diagram as appropriate	Addressed separately		Outstanding	Yes	FULLY DESCRIBED THROUGH THE SUITE OF DOCUMENTS. NOT CONSIDERED TO BE A GOOD USE OF TIME AT THIS POINT	No changes made but considered a critical issue.	Closed
032	§2.3.1, 6th line	33	The term 'integrated asset management system' is used to mean 'asset information system'. ISO55000 series uses the terms asset management system and asset information system. The asset management system is a set of tools, including policies, plans, business processes and information systems, which are integrated to give assurance that the asset management activities will be delivered. Asset information systems are a component of the asset management system and contain data and information about the asset base.	Suggest use the two different terms 'asset management system' or 'asset information system' to distinguish between the two, as appropriate where these appear in the document.	Addressed separately		Outstanding	Yes	REMOVED AMBIGUITY, BUT AS ABOVE, DON'T CONSIDER WE HAVE SUGGESTED WHAT IS CLAIMED. WE SEE THE AIS AS A SUBSET OF AMS	It was the terminology used that was previously queried in relation to the information system, but it is not considered a critical issue. The AIS was not questioned and it was indeed clear that it is a subset of the AMS.	Closed
032	§2.4	34	The summary of activities for Ashford is better articulated as compared to the other stations in that it states the element where works were undertaken and briefly describes the work activity. For the other stations the elements are listed where work has been undertaken but there is limited description of the work activities.	Revise §2.4.1, §2.4.2, §2.4.3 such that they briefly describe both the element where works were undertaken and the work activity.	Addressed separately - taken from our (and NRHS) budgets		Outstanding	Yes	THIS REFLECTS THE FACT THAT MOST OF THE WORK HAS BEEN AT ASHFORD	Further information has been provided but the action remains 'Outstanding' as indicated in Section 2.3 of this Addendum.	Outstanding
032	Table 8	35	Unclear how the expenditure to the end of CP1 was derived	Add text to explain how the expenditure to the end of CP1 was derived	Addressed separately		Closed	Yes			Closed
032	Table 10	36	The escrow accounts balance is now known for 13/14	Consider recalculating available funds using the now known balance for 2013/14. Revise Table 10, as appropriate.	Addressed separately		Closed	Yes			Closed
032	Table 11	37	The total LCC values contained in Table 11 do not match with the calculated values in the LCC models, e.g. total LCC for St P is circa £10m not £6.6m as shown in Table 11.	Amend Table 11 to show the correct values	Addressed separately		Outstanding	Yes	MODIFIED		Closed
032	§ 3.3.2	38	For clarity state that the values listed in Table 12 are in nominal terms	For clarity state that the values listed in Table 12 are in nominal terms	Addressed separately		Outstanding	Yes	MODIFIED TABLE TO PUT IN FEB 2013 PRICES		Closed
032	§ 4.1.2, 1st bullet point	39	It is unclear if environment and energy initiatives, including work activities such as lamp exchange from conventional to LED, upgrade air conditioning units to direct drive, and re-engineering of existing main air conditioning units to incorporate recuperation facility, are reflected in the LCC analysis	Explain how environment and energy initiatives are reflected in the LCC analysis.	Addressed separately	HS1 Ltd paper dated 26 June 2014 contains an explanation	Closed	Yes			Closed
032	§ 4.1.2, 2nd bullet point, 2nd line	40	As comment no. 33	Replace 'Asset Management System' with 'Asset Information System'	Addressed separately		Outstanding	Yes	CONSIDER CLEAR THAT AIS IS SUBSET OF AMS	It was the terminology used that was previously queried in relation to the information system, but it is not considered a critical issue.	Closed
032	§ 4.1.5, § 3, 1st line	41	As comment no. 33	Replace 'asset management system' with 'asset information system'	Addressed separately		Outstanding	Yes	CONSIDER CLEAR THAT AIS IS SUBSET OF AMS	The AIS was not questioned and it was indeed clear that it is a subset of the AMS.	Closed
032	§ 4.2.2, title	42	This section does not include performance targets	Revise title/section to include/exclude performance targets as appropriate.	Addressed separately		Outstanding	Yes	CHANGED SECTION SO WORKS OKAY	The AIS was not questioned and it was indeed clear that it is a subset of the AMS. No changes were made in the AMS but it is a minor issue. Amendments were made in the LCRs.	Closed
032	§ 4.2.2	43	Annex 1 requires identifying elements of the Station for which HS1 Ltd will monitor breakdown frequencies and failure performance data	A full list of Station elements that will be monitored for faults, breakdown or other performance attributes is required	Addressed separately	Copies of the latest AMAS were provided and the items listed therein are consistent with those that appear in the Asset Management Strategy.	Closed	Yes			Closed
032	§ 4.2.3	44	The LCC activities are not stated	State what the LCC activities are	Addressed separately	Not clear what this comment means.	Outstanding	Yes	THE ACTIVITIES ARE THE RENEWALS OF THE ASSETS INDICATED. CONSIDER THIS IS DESCRIBED IN SUFFICIENT DETAIL ACROSS ALL OF THE ASSET MANAGEMENT SUITE OF DOCUMENTS	No changes were made in the AMS but it is a minor issue and also covered in Section 2.3 of this Addendum.	Closed
032	§ 4.2.4, § 4.2.4.1 & Table 14	45	The stated forecast budget for CP2 does not match the value(s) in the LCC model(s), e.g. total of £6.645m is stated for St P in the AMS but it is circa £10m in the LCC model	Use correct value(s)	Addressed separately		Outstanding	Yes	MODIFIED		Closed
032	Appendix F, p.51, 1st row	46	As comment no. 33	Replace 'Asset Management System' with 'Asset Information System'	Addressed separately		Outstanding	Yes	AS ABOVE, CONSIDER CLEAR THAT AIS IS A SUBSET OF AMS	It was the terminology used that was previously queried in relation to the information system, but it is not considered a critical issue.	Closed
034, 035, 036	Table 7	47	Breakdown of actuals during 2010/11 missing, i.e. only total provided	Provide break down of actual expenditure for 2010/11 as with the other two years or state why this is different. Add actuals for 13/14.	Notes inserted into documents	Do not consider that the notes added address this point	Outstanding	Yes	Notes inserted into documents. DISAGREEMENT ON THIS POINT. CONSIDER THAT SUFFICIENT DETAIL HAS BEEN INCLUDED ACROSS ALL OF THE DOCUMENTS	The AIS was not questioned and it was indeed clear that it is a subset of the AMS. The use in the relevant section(s) does not explain why the breakdown of actuals during 2010/11 are missing (e.g. column titled 2010/11 - Actual in Table 7 of the St Pancras LCR).	Outstanding
035	Table 7	48	Table missing	Add table 7	Addressed separately	Table 8 in the latest version - still missing	Outstanding	Yes		No table provided but total value stated in 3.3.1.1	Closed
034, 036	Table 7 & Table 8	49	Actual stated for 2010/11 in the two tables is not the same	Revise or state why this is	Addressed separately		Outstanding	Yes			Closed
034, 035, 036, 037	§ 4.2.3	50	What is the impact of change in demand, e.g. increase in local, beyond CP2? Also the reduced use of Ashford has not been reflected in the LCC model	Add statements to this effect	Addressed separately	Will do for future versions	Deferred	Yes		This action is marked as 'Deferred' based on HS1 Ltd's comment on 01 July, i.e. 'Will do for future versions'. The revised LCRs provided on 11 August did not contain the suggested changes.	Deferred

