

Appendix G: PDS – Rail

Project Definition Sheets

BCT Number and Project Name as shown in Schedules

10146 : Fleet Modernisation
Various: HEx Growth Projects
Various: HEx Renewal Projects

Header Information

BCT No.	10146
Op No.	25573
Project Name:	Connect 4 trains per hour (now Fleet Modernisation)

Project Overview, Objectives and Status

Overview:	
Description:	<p>Modernise the Hex fleet of 332 trains in order to protect its current customer base and to facilitate further volume and yield growth in the next five to ten years.</p> <p>This project is planned to be accommodated in the rail CIP for Q5, through a change of use of project BCT4133 (OP 24298) – T4 Service Enhancement.</p>
Ref. Drawings / Images: <i>(Refer to Appendix A)</i>	None
Objectives:	
BAA:	<ul style="list-style-type: none"> ▪ Creating a more desirable and comfortable fleet to improve customer journey experience and encourage usage and retention. ▪ Protect and grow future revenues. ▪ Differentiate the first class offering and align to airline premium customer expectations.
Airline:	<ul style="list-style-type: none"> ▪ Improve passenger access to airline services at Heathrow. ▪ Encourage increased use of Heathrow and rail access. ▪ Improve passenger information system (PIS), to improve links to onward journey at airport. ▪ Reduced airport charges through rail revenue improvements.

Project Benefits:

As per above objectives

Status:

Programme:	Project Gateway Stage:
Rail	BAA Exec approval at Options stage for first stage £0.8m to develop design. This should take until May 2011.

Airline Engagement:

Engaged through quarterly Rail Stakeholder Programme Board meetings. Change of use (from BCT4133 to BCT10146) presented to the airlines for the first time at CIP Working Group, December 2010.

Project Delivery

Current Control Budget:

Total Capital Budget <i>(Estimated At Completion)</i> :	£21,000,000
<i>Refer to appendix B for cost information detail.</i>	

Schedule:			
Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:
Options decision at November 2011	Subject to full approval stage – anticipated Q3 2011	Project will take up to 18 months from start of full implementation.	Carriages will be put into operational service
Assumptions:			
The following points cover the significant delivery assumptions related to this project:			
Subject to BAA funding review.			
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>			

Operational Issues

BAA Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		<ul style="list-style-type: none"> ▪ First Class volume & yield uplift potential 3.8m ▪ Revenue from reconfiguring void space (CLA) 2.4m ▪ Express Class volume potential 4.2m £4.2m
Assumptions:		
The following points cover the significant operational assumptions related to this project;		
<ul style="list-style-type: none"> ▪ Hex volume growth continues into Q6. ▪ No Crossrail service before 2018 ▪ Over a ten year period the project will deliver an IRR of 15.3% (pre-tax). 		

Airline Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		Not known; however improved Hex revenues will facilitate reduced overall Q6 airport charges.
Assumptions:		
The following points cover the significant operational assumptions related to this project:		
None		

Average Asset life:	
Average Asset Life:	N/A
Commentary:	
Various Projects	
<i>Note: Asset lives are subject to a number of complex variables and therefore information is indicative only.</i>	
Impact on User Charges:	
Estimated Per Passenger Cost Impact:	N/A
Commentary:	
Various Projects	
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only (see Section 5.3 for further details)</i>	

Non Construction Risk:

The following points cover any significant areas of risk for the Airline Community regarding this project:
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None

Appendix B: Project Delivery: Cost Information:

Project Information

Project Name: Fleet Modernisation
BCT No.: 10146

Cost Information

	Cost £
Stage 1	
Design/ Mockup	0.8m
Stage 2	
Window replacement/ traction power cable replacement	2.2m
Driver cab environment improvement	0.2m
Egress Lighting Replacement	0.1m
Other customer amenity upgrades; luggage/coat hooks/ bins	0.7m
PIS – passenger information systems, including comms backbone	1.3m
Express TV upgrade	1.0m
Convert void luggage carriage (CLA) to revenue earning area	0.8m
Fleet preparation/ strip out/ transport/ design finalisation	0.6m
Design finalisation	0.4m
External rebranding, including relivery	0.75m
First class seating/ carpeting/ power	1.5m
Express class seating upgrade	1.0m
Lighting/ ceilings upgrade	1.4m
Panel/ door upgrade	1.4m
Project Management fees	0.9m
Unfunded Excess budget	5.5m
Total	£20.55m

Commentary:

Stage1: The purpose of this first phase is to agree the scope of the class 332 fleet re-branding such that it will be possible to approach potential suppliers and obtain a fixed cost and programme to deliver the full fleet re-brand of fourteen trains. The output of this will provide a clear understanding of the costs to be included in the main business case for the re-brand. The mock-up will be supported by concept design information to include technical descriptions, suppliers, costs, fire safety approvals, procurement specifications etc to facilitate Heathrow Express to progress to stage two should it decide to do so.

Stage 2: Final costs for the second stage, full implementation of the modernisation project, will be firmed up as part of stage1. Estimated scope and cost are as follows:

Cost Benchmark Comparisons	
Project Name:	Fleet Modernisation
Total Capital Budget (<i>Nominal Prices</i>):	£21,000,000
Guidance Notes:	
<p>As part of the project an expression of interest letter and ITT had been sent out by Siemens to test the market and undertake a high level benchmarking exercise. Three tender responses were received from Railcare, Brush Barclay and Wabtec. Following an extensive tender review process, Railcare was chosen as the preferred bidder with whom we intend to work with to develop the full scope of stage two. Brush Barclay were discounted on price and Wabtec on the quality of their bid in terms of no innovation and a non compliant programme.</p>	
<p><i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i></p>	

Header Information

BCT No.	Various
Op No.	Various
Project Name:	0000 : Hex Growth Projects

Project Overview, Objectives and Status

Overview:	
Description:	Projects to improve revenue earning opportunities for Heathrow Express
Ref. Drawings / Images:	None
Objectives:	
BAA:	<ul style="list-style-type: none"> ▪ Increase revenue earning through: ▪ Improving customer experience ▪ Make it easier to buy tickets and travel on HEx/ Connect services – ▪ Exploit non fare revenue earning opportunities ▪ Wayfinding improvements to ensure ease of location of HEx network
Airline:	<ul style="list-style-type: none"> ▪ Improve passenger access to Heathrow ▪ Encourage increased use of Heathrow airlines

Project Benefits:

As per above objectives

Status:

Programme:	Project Gateway Stage:
Rail	Projects at varying stages of completion

Airline Engagement:

Engaged through quarterly Rail Stakeholder Programme Board meetings, which commenced November 2009.

Project Delivery

Current Control Budget:

Total Capital Budget (<i>Estimated At Completion</i>):	£19,400,000
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Refer to appendix B for cost information detail.

Schedule:

Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:
N/A	N/A	N/A	N/A

Assumptions:

The following points cover the significant delivery assumptions related to this project:

Delivery of projects depends on availability of assets, supplier availability, and service scheduling.

Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.

Operational Issues

BAA Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		None
Assumptions:		
The following points cover the significant operational assumptions related to this project:		
Each project is evaluated on the basis of its revenue return on capital spend.		

Airline Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		None
Assumptions:		
The following points cover the significant operational assumptions related to this project:		
Impacts on airlines considered/ discussed as part of capital disclosure for the RSPB meetings.		

Average Asset life:	
Average Asset Life:	4+ Years
Commentary:	
<i>Asset lives in this section vary from 4 years upwards.</i>	
<i>Note: Asset lives are subject to a number of complex variables and therefore information is indicative only.</i>	
Impact on User Charges:	
Estimated Per Passenger Cost Impact:	N/A
Commentary:	
Various Projects	
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only (see Section 5.3 for further details)</i>	

Non Construction Risk:
The following points cover any significant areas of risk for the Airline Community regarding this project.
None

Appendix B: Project Delivery: Cost Information:

Project Information

Project Name: Hex Growth
BCT No.: Various

Cost Information

Key growth projects in Q5 include the following:

Project	BCT	£m
Digital Conversion escalators	8871	1.7
T5 Infrastructure	7626	1.3
Ticketing / Technology upgrade	10018	1.2
HHT renewals (incl. E-ticketing)	4122	1.1
T5 Strategic Spares	5919	0.8
Wayfinding	8180	0.8
Stations Upgrade - Heathrow	10019	0.7
Internet site upgrade (New Web Platform)	8179	0.6
Gnosis- Process Mapping system	8840	0.5
Media server upgrade - Express TV	10344	0.5
Competence Management system	8182	0.4
Energy efficiency improvements	5921	0.4
HR database	6629	0.4
		<hr/>
		10.3
Other smaller projects/ provision for projects not yet started		<hr/>
		8.7
		<hr/>
		19.0

Commentary:

Growth projects are designed to increase revenue earning through Improving customer experience; Make it easier to buy tickets and travel on HEX/ Connect services; Exploit non fare revenue earning opportunities; Signage improvements to ensure ease of location of HEX network; Improve passenger access to Heathrow; Encourage increased use of Heathrow airlines

Cost Benchmark Comparisons:	
Project Name:	Hex Growth
Total Capital Budget (<i>Nominal Prices</i>):	£19,400,000
Guidance Notes:	
Growth projects are usually procured through key business partners Siemens Rail fleet), Amey (Buildings & infrastructure) and JC Decaux (media), who will undertake appropriate tendering and cost/ value for money reviews as part of scoping out the projects.	
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>	

Header Information

BCT No.	Various
Op No.	Various
Project Name:	0000 : Hex Renewal Projects

Project Overview, Objectives and Status

Overview:	
Description:	Projects to renew Heathrow Express rail assets through Major Replacement/ renewal.
Ref. Drawings / Images:	None
Objectives:	
BAA:	<ul style="list-style-type: none"> ▪ Maximise useful asset lives ▪ Ensure asset availability and reliability is maximised ▪ Protect customer experience ▪ Minimise on-going cost of maintenance through proactive identification replacement needs
Airline:	<ul style="list-style-type: none"> ▪ Maintain/ improve passenger access to Heathrow ▪ Encourage increased use of Heathrow

Project Benefits:
As per above objectives

Status:	
Programme:	Project Gateway Stage:
Rail	Individual projects at varying stages of completion

Airline Engagement:
Engaged through quarterly Rail Stakeholder Programme Board meetings, which commenced November 2009.

Project Delivery

Current Control Budget:			
Total Capital Budget (<i>Estimated At Completion</i>):		£36,500,000	
<i>Refer to appendix B for cost information detail.</i>			
Schedule:			
Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:
N/A	N/A	N/A	N/A
Assumptions:			
The following points cover the significant delivery assumptions related to this project:			
Delivery of replacement projects depends on availability of assets, supplier availability, and service scheduling.			
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>			

Operational Issues

BAA Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		None
Assumptions:		
The following points cover the significant operational assumptions related to this project:		
None		

Airline Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		None
Assumptions:		
The following points cover the significant operational assumptions related to this project:		
None		

Average Asset life:	
Average Asset Life:	N/A
Commentary:	
Asset lives in this section vary from 4 years (mechanical elements) to 50+ years (tunnel infrastructure).	
<i>Note: Asset lives are subject to a number of complex variables and therefore information is indicative only.</i>	
Impact on User Charges:	
Estimated Per Passenger Cost Impact:	N/A
Commentary:	
Various Projects	
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only (see Section 5.3 for further details)</i>	

Non Construction Risk:
The following points cover any significant areas of risk for the Airline Community regarding this project:
None

Appendix B: Project Delivery: Cost Information:

Project Information

Project Name: Hex Renewal
BCT No.: Various

Cost information

Project	BCT	£m
Rolling stock - mechanical: provision for projects to be undertaken later in Q5		6.0
Track/ signalling: provision for later in Q5		6.0
Control/ IT systems: provision for later in Q5		7.3
Class 332 Door overhaul	7065	2.7
Fleet overhaul- 1.3m mile	5954	1.4
Fleet overhaul - M&E	2552	1.3
T5 Glass Floor Repairs - Design/Specification	9240	1.1
S&C / Rail / signal renewals, incl conversion to LED signals	4116	1.0
GSM-R	2565	0.9
332 refresh	4126	0.8
Structural Repairs (based on GL Hearne Report)	7066	0.8
Class 332 Gangways	10259	0.8
332 Exterior Door Button	9435	0.6
Asset Life Extension Project	10256	0.6
Track Slab Repairs/ replacements	5930	0.6
Class 332 Batteries	10258	0.6
Building Asset Upgrade/ Undercroft	10257	0.5
		<hr/>
		32.9
Other smaller projects		3.1
		<hr/>
		36.0

Commentary:

Maximise useful asset lives; Ensure asset availability maximised; Protect customer experience; Minimise ongoing cost of maintenance through proactive identification replacement needs; Maintain/ improve passenger access to Heathrow; Encourage increased use of Heathrow.

Cost Benchmark Comparisons:	
Project Name:	Hex Renewal
Total Capital Budget (<i>Nominal Prices</i>):	£36,500,000
Guidance Notes:	
Renewal projects are usually procured through key business partners Siemens Rail fleet), Amey (Buildings & infrastructure) who will undertake appropriate tendering and cost/ value for money reviews as part of scoping out the projects.	
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>	