

Appendix H: Surface Access

10146	Fleet Modernisation & Connect
Various	HEx Growth Projects
Various	HEx Asset Replacement

Header Information

BCT No.	10146
Op No.	25573
Project Name:	Fleet Modernisation & Connect

Project Overview, Objectives and Status

Overview:	
Description:	<p>Modernise the HEx fleet consisting 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's budget has been accommodated by a change of use of project BCT4133 (OP 24298) – T4 Service Enhancement.</p>
Ref. Drawings / Images: <i>(Refer to Annex A)</i>	None
Objectives:	
HAL:	<ul style="list-style-type: none"> • To creating a more desirable and comfortable fleet to improve the customer journey experience, encourage usage and customer retention. • Protect and grow future revenues. • Differentiate the first class offering to align with 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 the onward journey at the airport. • Reduced airport charges through rail revenue improvements.

Project Benefits:

As per above objectives

Status:

Programme:	Project Gateway Stage:
<p>The project is being undertaken in two stages:</p> <ul style="list-style-type: none"> • Stage One: £0.80m (completed). <p>Comprised of trialling a number of train interior designs and features, viewed and assessed by key Heathrow Express stakeholders, and final design agreed, with a fixed price and programme developed.</p> <ul style="list-style-type: none"> • Stage Two: £14.9m <p>Implementation of the modernisation programme based on the final design, programme and costs.</p>	<p>Project implementation is on-going; units 1 – 11 in service by the end of Q1 CY 2013.</p>

Airline Engagement:
Engaged through quarterly Rail Stakeholder Programme Board, and now via the Surface Access Stakeholder Programme Board meetings. Change of use (from BCT4133 to BCT10146) and CIP Working Group in Q4 2010 and Q1-2 in 2011. Airlines were invited to view a mocked up carriage in June 2011.

Project Delivery

Current Control Budget:
Total Capital Budget (<i>Estimated At Completion</i>): Q5: £15,700,000:

Refer to Annex B for cost information detail.

Schedule:			
Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:
Options decision at November 2011	Commenced Q3 2011	Project will take up to 2 years from start of full implementation.	Carriages will be put into operational service upon completion of each unit.

Refer to Annex C for programme information detail.

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

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

Operational Issues

HAL Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		<p>Revenue impacts over five year period- Underpins CY2011 long term business plan. The following revenue outcomes over the first five years of the project are realistic and conservative:</p> <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 <p>Over a ten year period the project will deliver an IRR of 15.3% (pre-tax).</p>

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.

Airline Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
		Not known.
Assumptions:		
The following points cover the significant operational assumptions related to this project;		

Average Asset life:	
Average Asset Life:	Modernisation assets will have lives up to 10 years.
Commentary:	
<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:	
Commentary:	
None	
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only.</i>	

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

Annex B: Project Delivery: Cost Information:

Project Information

Project Name: Fleet Modernisation
BCT No.: 10146/ OP: 25573

Cost Information

	£m
Fleet Modernisation	
Mockup	0.7
Design finalisation	0.4
Fleet Preparation/ strip out/ transport	0.7
Lighting/ Ceilings upgrade	2.2
Flooring upgrade	0.8
Express seating upgrade	1.8
First class seating upgrade/ power	1.9
Panel upgrade	1.4
PIS passenger info system, including comms backbone upgrade	1.7
Customer amenity upgrades: luggage racks/ coat hooks/ bins	1.1
Toilet refurbishment	0.7
External rebranding/ livery	0.8
Project Management Fees	0.9
Contingency	0.7
	<u>15.7</u>

Commentary:

Stage 1: Agreed the scope of the class 332 fleet re-branding to facilitate a fixed cost programme to deliver the full fleet re-brand of fourteen trains. This provided a clear understanding of the costs to be included in the main business case for the re-brand.

Stage 2: Approval obtained from HAL Board in July 2011. Full implementation of the modernisation project commenced in Q3/4 2011 with final unit rolled out mid-2013.

Cost Benchmark Comparisons:	
Project Name:	Fleet Modernisation
Total Capital Budget (<i>Constant Prices</i>):	
Guidance Notes:	
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.	
<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:	Hex Growth Projects

Project Overview, Objectives and Status

Overview:	
Description:	Projects to improve revenue earning opportunities for Heathrow Express
Ref. Drawings / Images: <i>(Refer to Annex A)</i>	None
Objectives:	
HAL:	<p>Increase revenue earning through:</p> <ul style="list-style-type: none"> • Improving customer experience • Make it easier to buy tickets and travel on Hex / Connect services by: <ul style="list-style-type: none"> ○ Exploiting non-fare revenue earning opportunities. ○ Wayfinding improvements to ensure ease of location of HEx network.
Airline:	<p>Improve passenger access to Heathrow</p> <p>Encourage increased use of Heathrow airlines</p>

Project Benefits:
As per above objectives

Status:	
Programme:	Project Gateway Stage:
Individual projects to develop revenue return. Including web and e-ticketing technology development, digital advertising infrastructure, signage and customer information systems, communications development, Express TV improvements	Projects at varying stages of completion

Airline Engagement:
From November 2009, engaged through quarterly Rail Stakeholder Programme Boards (RSPB) and subsequently through Surface Access Stakeholder Programme Boards (SASPB).

Project Delivery

Current Control Budget:			
Total Capital Budget <i>(Estimated At Completion)</i> :		Q5: £19,200,000	
<i>Refer to Annex B for cost information detail.</i>			
Schedule:			
Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:

n/a Various projects	n/a Various projects	n/a Various projects	n/a Various projects
<i>Refer to Annex C for programme information detail.</i>			
Assumptions:			
The following points cover the significant delivery assumptions related to this project;			
<ul style="list-style-type: none"> • Delivery of 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

HAL Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
Assumptions:		
The following points cover the significant operational assumptions related to this project;		
<ul style="list-style-type: none"> • 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:
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:	
Asset lives in this section vary from 4 years upwards.	
<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:	
Commentary:	
None.	
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only.</i>	

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

Annex 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	OP PROJECT NO.	£m
Customer Information System	30153	2.0
Digital Conversion escalators	24456	1.7
Connect 4tph	24298	1.3
Wireless upgrade (on-board).	tba	1.3
HHT renewals (incl. E-ticketing)	23686	1.1
HHT upgrades	tba	1.0
Kiosks installation - stations (inc LUL), CTA, airside	tba	1.0
T5 Strategic Spares	23212	0.8
T5 Signage	23650	0.7
Internet site upgrade (New Web Platform)	24383	0.7
Commidea - TOM upgrade for PCI compliance	30151	0.6
CMS- Process Mapping system	24037	0.5
Growth Projects - provision for future projects	tba	0.5
Media server upgrade - Express TV	25690	0.5
Express TV - screen renewal	23832	0.5
NFR - Sidetrack	24190	0.4
Competence Management system	23581	0.4
HR database	22466	0.4
Estate rebranding	30363	0.4
Energy efficiency improvements -High Bay Lighting	23534	0.4
Provide accomodation for T5 operations	22288	0.3
PCI Security system	24382	0.3
T5 Water Ingress - tunnel seal improvement	24039	0.3
Other smaller projects		2.2
		19.2

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; and, encourage increased use of Heathrow airlines

Cost Benchmark Comparisons:		To be included in CIP 2013 Publication
Project Name:		HEx Growth
Total Capital Budget (<i>Constant Prices</i>):		£19,200,000
Guidance Notes:		
<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:	HEx Asset Replacement

Project Overview, Objectives and Status

Overview:	
Description:	Projects to renew Heathrow Express rail assets through Major Replacement/ renewal.
Ref. Drawings / Images: <i>(Refer to Annex A)</i>	None
Objectives:	
HAL:	<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:
Replacement / renewal of key strategic and operational rail assets and elements of assets such as Rolling stock, infrastructure (signalling, track, points), stations & buildings, depot, and where they have reached the end of their useful lives or are no longer providing an acceptable reliability / availability to HEx and Connect service.	Individual projects at varying stages of completion

Airline Engagement:

From November 2009, airlines have been engaged through quarterly Rail Stakeholder Programme Boards (RSPB) and subsequently through the Surface Access Stakeholder Programme Boards (SASPB).

Project Delivery

Current Control Budget:

Total Capital Budget *(Estimated At Completion)*: Q5: £30,400,000

Refer to Annex B for cost information detail.

Schedule:

Brief Decision:	Start on Site:	Completion on Site:	Operational Use Commences:
n/a Various projects	n/a Various projects	n/a Various projects	n/a Various projects

Refer to Annex C for programme information detail.

Assumptions:
The following points cover the significant delivery assumptions related to this project;
Delivery of replacement projects depends on availability of assets, suppliers, and service scheduling.
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>

Operational Issues

HAL Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
Assumptions:		
The following points cover the significant operational assumptions related to this project;		

Airline Financial Revenue and Operational Cost (Opex) Impact:		
Revenue / Opex Cost Area:	Revenue (+) / Cost (-) Impact per Annum:	Commentary:
Assumptions:		
The following points cover the significant operational assumptions related to this project;		
None.		
Average Asset life:		
Average Asset Life:	Various	
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:		
None.		
<i>Note: Impact on User Charge is subject to a number of complex variables and regulatory decisions and therefore information is indicative only.</i>		
Non Construction Risk:		
The following points cover any significant areas of risk for the Airline Community regarding this project.		
None		

Annex B: Project Delivery: Cost Information:

Project Information

Project Name: Hex Asset Replacement
BCT No.: Various

Cost Information

Key renewal projects in Q5 include the following:

PROJECT	OP PROJECT NO.	£m
Class 332 Door overhaul	23594	2.8
Bodyside Laminated windows	30094	1.8
Traction Power Cable Replacement	30097	1.4
Fleet overhaul - M&E	17522	1.3
Door Leaf Windows/ Plates	30086	1.0
Fire System renewal	30093	1.0
T5 Glass Floor Replacements	24321	0.9
Fleet overhaul- 1.3m mile	24954	0.9
Water Ingress Management	30411	0.9
Vent attenuator replacement - T5	tba	0.9
Door Pillar replacement	30095	0.8
332 Refresh	22286	0.8
Class 332 Gangways	25577	0.7
Spares (Overhaul)	30096	0.6
332 Exterior Door Button	24521	0.6
Asset Life Extension Project	25575	0.6
T4 Lift works	tba	0.6
Building Asset Upgrade/ Undercroft	25574	0.5
Class 332 Batteries	25576	0.5
Fleet Winterisation	25895	0.5
Fleet 'soft interior' refurbishment	24955	0.5
Depot Gantry	tba	0.5
Drum Switch replacement	tba	0.5
CTA Lift works	tba	0.5
Asset Replacement projects	tba	0.5
Vent Fan and dampers	24409	0.5
Fleet External Presentation	24402	0.5
Cab environment replacement/ improvement	30148	0.4
S&C / Rail/ signal renewals, includes conversion to LED signals in 2009	22284	0.4
Fleet Improvement Projects	tba	0.4
HVAC Tray renewal	25074	0.3
G011 traction card replacmt	24620	0.3
Fire Detection and Alarm system	24410	0.3
Contract Mobilisation assets	24674	0.3
GSM-R	24320	0.3
332 Compressor overhaul	30087	0.3
332 Coupler electrical box replacement	30248	0.3
Track Slab Repairs/ replacements	24366	0.3
Structural Repairs (based on GL Hearne Report)	23580	0.3
LED Signalling conversion in tunnel	tba	0.3
Back Office upgrade - security	30362	0.3
Lift & Escalator bearings	30473	0.3
Tunnel ingress - Shep lane: Mgmt system	30150	0.3
Stations - Back of House & Access	30247	0.3
Depot Buildings refurbishment	24457	0.3
Other smaller projects		2.1
		30.4

Commentary:

Maximise useful asset lives; ensure asset availability maximised; protect customer experience; minimise on-going 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>Constant Prices</i>):	£30,400,000
Guidance Notes:	
<i>Note: Assumptions stated here are to aid understanding and are not necessarily exhaustive.</i>	