

Committees:	Dates:
Finance Committee of Barbican Centre Board Projects Sub Committee Barbican Centre Board	30/09/2015 08/10/2015 14/10/2015
Subject: Gateway 7 Outcome Report: Building Energy Management System (BEMS)	Non-Public
Report of: Managing Director, Barbican Centre	For Decision

Summary

Project Status Compared to GW2	Budget : Green Specification: Green Programme: Red
Project Status Compared to GW5	Budget: Green Specification: Green Programme: Red
Timeline	The project is complete pending approval of this report and final retention payment to contractor.
Total Estimated Cost @ Gateway 5	£788,922.42 (plus staff costs of £30,000)
Currently Approved Budget	£788,922.42
Spend to date	£767,680.84 (plus staff costs of £47,466)
Spend Profile * all expenditure, where appropriate, includes amounts 'accrued' at end of year based upon the estimated outturn position at the time. Occasionally the full amount is not required and the balance is 'returned', which then shows as negative expenditure.	2007/08 - £7k (pre evaluation) 2010/11 - £41k 2011/12 - £116k 2012/13 - £588k 2013/14 - £22k 2014/15 – (£2k)* 2015/16 – (£4k)*
Overall project risk	Green

Summary of Project Completed

Please see section 2, assessment of project success against criteria.

Recommendations

It is recommended that the lessons learnt be noted and, following processing of the final contractors payment, the project be closed.

Main Report

<p>1. Brief description of project</p>	<p>This project was to migrate the remaining plant controlled by the Centre's obsolete 'Satchwell' Building Energy Management System to the new 'Trend' System, previously installed as part of an air handling replacement scheme. The scheme involved:-</p> <ul style="list-style-type: none"> • Provision of new control graphics • Replacement of 59 Satchwell Outstations with new Trend Units • Upgrade of 22 Mechanical Control Centres • Connection of 2,548 existing control points • Provision of a new Energy Monitoring and Targeting Package
<p>2. Assessment of project against success criteria</p>	<ol style="list-style-type: none"> 1. Migrate plant from obsolete to new control system – this was the main objective of the project and was achieved. 2. Project Completed within the (Gateway 5) budget - achieved. 3. Project completed on time – not achieved (see section 4). 4. Project to the required specification/quality – achieved 5. Reduction in energy costs of £72k per annum – achieved – during the 17 month period from the end of July 2013 and the end of December 2014 cost savings were £180,127 at an average of £10,596 per month. This was achieved via system 'optimisation' actions carried out by the engineering dept. 6. Reduction in carbon emissions of 500 tonnes per annum – not achieved – during the same 17 month period mentioned above the estimated reduction in carbon emissions was 305 tonnes. 7. Reduction in maintenance costs of £13k per annum – assumed achieved – because of the way the Centre is invoiced for BRM it has not been possible to confirm that this saving has been made but, as we are now using a single company instead of two, and that was the basis on which the saving was calculated, it is a safe assumption to make.
<p>3. Was the project specification fully delivered (as agreed at Gateway 5 or any subsequent Issue report)</p>	<p>Yes</p>

<p>4. Programme</p>	<p>The project was not completed within the agreed programme</p> <p>The contractor's progress on site suffered from</p> <ul style="list-style-type: none"> • The contractor being initially slow to familiarise themselves with the site and did not provide the initial graphics packages and method statements. This led to a delayed start on site. • Once on site the contractor's progress was further delayed by the required IT data points not being installed in advance of the contractor starting work. This was the Centre's responsibility. • Changes in project scope requested from the Client department which necessitated works being carried out in the subsequent summer months (because it involved taking heating units off line) following the original completion date. 																																
<p>5. Budget</p> <p>Final Account Verification</p>	<p>The project was completed within the agreed budget</p> <p>The project was commenced prior to the introduction of the Gateway process so there isn't a report that is equivalent to a Gateway 2 report. The budget at the various stages of the project are set out in the table below:-</p> <table border="1" data-bbox="568 1173 1442 1742"> <thead> <tr> <th>Ref:</th> <th>Gateway 3/4 (Evaluation) £'000</th> <th>Gateway 5 (Tender Report) £'000</th> <th>Gateway 7 £'000</th> </tr> </thead> <tbody> <tr> <td>Pre Evaluation</td> <td>6,720</td> <td>6,720.00</td> <td>6,720.00</td> </tr> <tr> <td>Works</td> <td>971,000</td> <td>656,452.42</td> <td>691,383.84</td> </tr> <tr> <td>Fees</td> <td>75,000</td> <td>75,000.00</td> <td>69,577.00</td> </tr> <tr> <td>Contingency</td> <td>60,000</td> <td>50,750.00</td> <td>0.00</td> </tr> <tr> <td>Total</td> <td>1,106,000</td> <td>788,922.42</td> <td>767,680.84</td> </tr> <tr> <td>Staff Costs</td> <td>30,000</td> <td>30,000</td> <td>47,466</td> </tr> <tr> <td>Total</td> <td>1,142,720</td> <td>818,922.42</td> <td>815,146.84</td> </tr> </tbody> </table> <p>The works and fee final accounts have been verified by the Chamberlain's Department.</p> <p>There are no outstanding issues.</p>	Ref:	Gateway 3/4 (Evaluation) £'000	Gateway 5 (Tender Report) £'000	Gateway 7 £'000	Pre Evaluation	6,720	6,720.00	6,720.00	Works	971,000	656,452.42	691,383.84	Fees	75,000	75,000.00	69,577.00	Contingency	60,000	50,750.00	0.00	Total	1,106,000	788,922.42	767,680.84	Staff Costs	30,000	30,000	47,466	Total	1,142,720	818,922.42	815,146.84
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Review of Team Performance

6. Key strengths	The project manager for taking over the project after the tender stage and resolving, as best he could, the numerous technical difficulties that arose throughout this project.
7. Areas for improvement	Communication across all parties to this contract could have been better. These communication failings led to several misunderstandings about what should have been in/out of project scope and how plant is required to operate.
8. Special recognition	The project manager mentioned in section 6. This was an exceptionally technically complex project carried out in a live operational environment

Lessons Learnt

9. Key lessons	There was a lot of confusion about what was in/out of scope and how plant is required to operate.
10. Implementation plan for lessons learnt	For future projects of this nature it is essential that the project manager ensures that the client dept. is fully aware of the project scope, and that it is signed off by the relevant manager in advance of seeking tenders for the work.

Contact

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