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Subject: Royal Albert Basin Decentralised Energy System
Report No: Public Item 2.4.3
Meeting date: Wednesday 16th September 2009
Report to: Board
Report of: Peter Bishop, Director DDE
Key Theme: 2. Climate Change
Programme: 4. Energy and waste

Confidentiality Status: This document will not be treated as confidential.

1. Purpose

- 1.1. To gain board approval for the LDA to invest in the up front development of a low carbon decentralised energy system at the Royal Albert Basin in the London Borough of Newham. The Royal Albert Basin is owned by the LDA.

2. Recommendations

- 2.1. The board is requested to approve expenditure of £6,001,000 required to proceed with this project.

3. Summary

- 3.1. Upfront investment will create a low carbon energy infrastructure that developers will be mandated to fully utilise for the provision of low carbon energy to their respective developments on the site (Investment Committee requirement). This will future proof low carbon energy supply for the site.
- 3.2. The LDA will create an SPV to deliver and manage the operation of the system. The investment in the system will be £6,001,000.
- 3.3. The LDA will exit the project through the sale of the SPV to private investors at an advantageous time.
- 3.4. This project will demonstrate that the early provision of low carbon energy infrastructure prior to site development is both economically and environmentally advantageous to developers through the generation of carbon savings and CSH levels that pound for pound exceeds that of their required investment in a stand alone development (Investment Committee requirement that developers at minimum meet the equivalent investment of the LDA least cost option).

- 3.5. This project has been developed in consultation with the LDA Land team and supports the Clinton Climate Initiative designation of the site as “Carbon Positive Development”.

4. Background

4.1. Project Outline

To construct, operate and exit a Low Carbon Energy System for the Albert Basin area, consisting of an Energy Centre generating heat and electricity, and of an area wide District Heat (DH) distribution network. The network would comprise pipework to each of the development sites in the area. The aim is to deliver "low carbon" heat to the new developments coming forward in the future and to meet London Plan policy by allowing developers to link up to the network for a fee, thereby meeting their renewable obligations. The end customers are initially the developers with whom the LDA Land Team is negotiating land deals and ultimately, the new and existing occupants. Developers will be mandated to utilise the low carbon energy system and existing occupiers would be strongly encouraged to connect.

The investment in this project will pay-back within the investment life-cycle through the income received from heat and electricity sales. The LDA investment life cycle has three phases:

1. Project development and construction
2. Operation: heat and electricity generation and supply and sourcing new business
3. Exit: LDA selling-off, refinancing, partnering or transferring the business and assets

After the construction is completed, the LDA (SPV) continues to own and operate the system until the transfer or refinancing. A transfer would take the form of competitive bidding to a suitable energy market stakeholder, eg. to a power company, electricity distributor or ESCO.

This funding application relates to Phase 1, development and construction. The costs of Phase 2, operation, will be met by income from heat and electricity sales. Phase 3, the LDA exit timetable is dependant upon future legislative and regulatory changes and the success of the SPV to expand the service offering and attract new revenue streams.

Initially the LDA will establish and capitalise a Special Purpose Vehicle (SPV) to own and operate the system and sell energy. The SPV will be established before entering into heat supply agreements, preferably

before start of construction. The use of an SPV is recommended for several reasons:

1. As a 100% owner LDA would maintain full control over the SPV
2. Clear ring-fencing of risks and liabilities, transparent accountability.
3. Operating the system and selling heat and electricity is a commercial business by nature. The corporate governance, management and organisation needs to be structured accordingly.
4. SPV structure provides a clear basis for LDA's exit.

The SPV will then be sold.

4.2 Objectives

That the anticipated 1700 new housing units and commercial and public space in Albert Basin (AB) will create 40% less CO2 emissions compared to conventional heating and in so doing help achieve the Mayor's targets for stabilising London's CO2 levels to below 60% of 1990 levels by 2025.

That 100% of the Royal Albert Basin developers will have signed up to the system and that they find it a sustainable and lowest cost solution to fulfil the low carbon requirements set for new developments.

That all local residents, commercial and public activities are continuously provided with a reliable energy supply on competitive long term price.

4.3 Rationale

- The rationale for the upfront investment in a low carbon decentralised energy system at the Royal Albert Basin is:
- The delivery of an addition 3100 tonnes lifetime saving in carbon emissions.
- The creation of a Special Purpose Vehicle to manage the operation of the system that will be sold to private investors at the most advantageous time.
- The facilitation of the construction of homes to code for sustainable homes (CSH) level 4 and beyond.
- The implementation of one low carbon energy system at a lower cost than numerous smaller individual systems.
- The mandating of use of the system as part of development agreements to ensure that the site is energy future proofed and

is ready to accept low carbon heat from the Thames Gateway Heat Network.

- To demonstrate that the early provision of low carbon energy infrastructure prior to site development is both economically and environmentally advantageous to developers through the generation of carbon savings and CSH levels that pound for pound exceeds that of their required investment in a stand alone development.

5. Programme & Project Approval

Project approval	Date of approval
Investment Programme Board	6 th July 2009
Committee for onward recommendation to the Board (if required)*	23 rd July 2009
Board (if required)	16 th September 2009
Mayoral approval (if required)	
CPRG/Treasury approval (if required)	

6. Consultation & Communication

6.1. This project has been developed in consultation with the LDA land team and the GLA environment team. The site has been designated as a Clinton Climate Initiative (CCI) "Carbon Positive Development" and has been supported by the Mayor. Representatives of CCI have been consulted on this project. Ongoing consultation with developers is taking place in order that confidence and support in this project is achieved.

Mayoral Advice & Direction

6.2. None

7. Equality, Sustainability, Health and Community Safety implications

This Project is based in Newham. This project is a pathfinder to test the viability for the early development of a decentralised energy infrastructure to support future residential and commercial development. Specific needs and composition of equalities groups; especially old, disabled and BAME groups, from a resident and worker perspective with respect to decentralised energy are not understood. Decentralised energy is however viewed as a positive strategy with

positive outcomes and outputs. The experiences of other UK and European decentralised energy strategies will be explored with a view to ensure unexpected negative impacts do not materialise. This will be important for informing potential design and technical specifications.

This project will have positive sustainability and health impacts. There will be no community safety implications.

8. Implications for Our People

8.1. None

9. Risk implications

Risk	Level (1-5)	Action Taken	Action Owner
The energy sales revenues remain low due to changed or delayed building volumes	4-3	LDA has knowledge and some leverage on timing and amount of buildings. Investments will be phased, delayed or scaled down depending on heat load. Further customers can be sought within and outside of the RAB region.	Simon Tilleard
LDA financing may not be possible due to State Aid issues	3-5	Inside and outside legal advisers to be used to clarify and solve the state aid issue, before investment decision.	

10. Financial implications

Total budget by financial year

10.1. This project will be funded from the Decentralised Energy budget. This budget is £28.4 million over four years. This project will require £2,004,000 within this period.

	Financial Year	Financial Year	Financial Year	Total (£'000)
Expenditure	2009/10	2010/11	Future Years	
Capital	134,000	870,000	4,997,000	6,001,000

Revenue				
Total expenditure	134,000	870,000	4,997,000	6,001,000
Income				
Capital				
Revenue				
Total income				
Net total	134,000	870,000	4,997,000	6,001,000

10.2. Comments of the Director of Corporate Finance

Sign off was provided at IPB and IC stage

11. Comments of the Director of Law & Governance

11.1. Sign off was provided at IPB and IC stage

12. Appendices

- Appendix 1 - Albert Basin De-Centralised Energy System (Part 1)
- Appendix 2 - Albert Basin De-Centralised Energy System (Part 2)

13. Background documents

Athena Docs #3048370 Gateway B Workbook part 1, #3048274
Gateway B Workbook part 2

Report approval checklist

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Head of/Director(s): Marin Powell
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This checklist must be completed for all reports to the Board, GMT Committees and Advisory Groups.
Please click on the relevant box to select it.

	Yes	No
Approved by Director of Finance and Performance or nominee (please state): Caroline Mikado, Director of Finance and Performance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approved by Director of Law and Governance or nominee (please state): Debbie Adams, Director of Law and Governance	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Approved by Group Director (please state): Peter Bishop, GD Design Development and Environment	<input checked="" type="checkbox"/>	<input type="checkbox"/>