

## Applying an ecosystems approach in urban settings

### Project visit to Mayesbrook Climate Change Park and opportunity for shared learning, 25<sup>th</sup> June, 2012

#### Summary

The Ecosystems Knowledge Network provided an opportunity for people interested in applying an ecosystems approach in urban settings to visit the highly acclaimed Mayesbrook Climate Change Park Project in the London Borough of Barking and Dagenham on 25th June 2012. Twenty Network members with backgrounds in urban regeneration, green infrastructure, sustainable communities, urban nature conservation, landscape design and environmental education came together to learn more about the project, its development and lessons learned.

Robert Oates, Project Leader and Executive Director of the Thames Rivers Restoration Trust gave a presentation on the development and the works of the first phase of the project as well as an outlook to the future, outlining how an ecosystems approach has helped in its development and delivery. The presentation is available for download at:

[http://ekn.defra.gov.uk/wp-content/uploads/2012/07/EKN\\_Mayesbrook\\_overview\\_RobertOates.pdf](http://ekn.defra.gov.uk/wp-content/uploads/2012/07/EKN_Mayesbrook_overview_RobertOates.pdf)

The presentation was followed by a guided visit of the Park. In a workshop session participants then explored the application of an ecosystems approach in the Mayesbrook Park project as well as their own work in more depth.

#### The Mayesbrook Climate Change Park Project

The Project is the largest river restoration project in London and the flagship project for the **London Rivers Action Plan**. Mayesbrook Park is situated in the London Borough of Barking and Dagenham,



east London. The Borough is one of the twenty most deprived boroughs in the UK. The 48 hectare park, one of the largest in east London, used to be mostly short mown grass and lacking amenities, was used little by people. When the park was laid out in the 1930s, the Mayes Brook river was pushed to the west side of the park and put into a deep concrete channel behind a high metal fence which limited its functions to a road drain and as flood water channel. The two lakes in the park were originally used for boating and angling. However, the lakes are now so polluted through brook waters being diverted into them by the flood management that these activities are no longer possible. Neither the park nor the river was of much value to wildlife.

Above: Robert Oates, Executive Director of the Thames River Restoration Trust introduces the field visit.

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Despite the state of the park, a significant driver for the project was that the existing flood management infrastructure which is 50 years old in parts was coming to the end of its useful life. Predictions showed that it would not be able to cope with the future flows predicted for the catchment resulting from climate change. Instead of replacing it with a similar infrastructure which would incur high costs, the Thames Rivers Restoration Trust suggested an alternative approach of creating a one hectare floodplain to increase the flood water storage capacity in a safe and cost effective way, with benefits to biodiversity, landscape and recreation. At the same time, the floodplain design would reduce the risk to properties bordering the park, giving a level of protection greater than the 1 in 100 year event of the concrete system. The Environment Agency agreed to this natural flood management approach and funded the baseline studies needed to prove its viability.

Mayesbrook Park became a flagship project for river restoration as part of the London River Restoration Strategy. Studies conducted in 2008 by the River Restoration Centre and Environment Agency showed that Mayesbrook had the best potential in London for demonstrating the greatest number of benefits to people and wildlife.

The objectives of the project were set as:

- To demonstrate better flood management through natural techniques
- To provide outdoor recreation in an inspiring landscape
- To create the UK's first climate change park
- To contribute to regional plans, such the Thames River Basin Management Plan for the Water Framework Directive & the Mayor's London Plan
- To provide a long-term, sustainable asset in an area of social deprivation
- To show innovative partnership and joint funding for river restoration and natural flood management
- And to show that what might be a disproportionately costly for one organisation to do for one benefit, could actually be a bargain when done by a partnership of organisations for multiple benefits

Below: Event participants explore Mayesbrook Park



The project attracted £1.4m of funding for Phase 1, which includes the river restoration, floodplain excavation and landscaping elements of the master plan. Robert Oates sees the secret of this success in designing a river corridor project at the landscape scale with multiple benefits that help all partners to achieve their business objectives. The master plan was developed in consultation with local communities. The partnership also developed the idea of linking the improvements in park and river to climate change adaptation –

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Mayesbrook Park was developed as the first Climate Change Park in the UK.

Launched by Richard Benyon MP (Parliamentary Under-Secretary for Natural Environment and Fisheries), work in the park started in April 2011 after three years of technical investigations, partnership formation, consultation, fund raising and planning permissions. Works included the construction of new sinuous channels, re-grading of river banks, restoring natural floodplain, planting of new reed beds, construction of six Sustainable Urban Drainage Systems (SUDS)<sup>1</sup> for an Olympic development in the Park, increasing woodland and tree cover and enhancing and managing two hectares of acid grassland<sup>2</sup>.

Alongside many other factors, like sharing costs between and pooling staff, expertise and data from various partners as well as involving the local community, applying an ecosystems approach to the project was a major factor in the success of the project, as it demonstrated the environmental, social and economic benefits of the planned improvements. An Ecosystem Services Assessment conducted by Dr Mark Everard from Environment Agency in cooperation with Queen Mary University of London, quantified the benefits from the proposed work. The report shows benefits worth up to seven times the estimated £4 million cost of the whole scheme; a fact that proved to be very useful in convincing funders to contribute to the Project. The report, **The Mayes Brook Eestoration in Mayesbrook Park: an ecosystem services assessment**, is available for download here: <http://ekn.defra.gov.uk/resources/examples/mayesbrook/>

The Project demonstrates how common barriers and risks can be overcome. For example, clearly demonstrating the benefits helped to obtain the first bit of funding, involving the Environment Agency helped to get the numerous approvals needed (flood risk, contaminated land, soil disposal etc.) and continuously consulting residents helped to address concerns of the local community. Worried councillors could be convinced of the value of the project through demonstrating ecosystem benefits.

Phase 2 of the Project will start shortly. It includes the restoration of the two lakes in the park, one for boating and the second one for angling; restoration works in both lakes will also improve habitat conditions for wildlife. A centre building will be built to provide much needed facilities for visitors and wardens, and a café with a climate change garden and a permanent exhibition on the impacts on climate change and what the park does to help with adaptation to these changes.

## Shared Learning

After the visit to the Park, participants reflected further on lessons learnt from the Mayesbrook Project. Working in groups, participants reviewed a summary of the methods and timeline for the Project and discussed:

- 1) Which aspects of the Project could be applied elsewhere?
- 2) What challenges does the process highlight?
- 3) Is there potential to improve the project process?

<sup>1</sup> SUDS are a sequence of management practices, control structures and strategies designed to efficiently and sustainably drain surface water, while minimising pollution and managing the impact on water quality of local water bodies. For more information see <http://www.ciria.com/suds/background.htm>

<sup>2</sup> A type of grassland that develops on soils that are naturally acidic. They are found typically on sands, sandstone, granite or acidic clays. For more information see <http://www.grasslands-trust.org/acid-grasslands>

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See **Annex 1** for each group's feedback on the Mayesbrook Park timeline and process.

Participants then used Ketso mind-maps ([www.ketso.com](http://www.ketso.com)) to record information on their own experiences or ideas for using an ecosystems approach in practice. On separate 'branches' of the mind-map, they explored best practices, challenges, transferable core principles and how to better enable projects using an ecosystems approach. The feedback from each group is summarised below

## 1) What works well?

- An accessible "language" of environmental benefits
- Partnership
- Holistic approach

## 2) What are the challenges?

- Valuation (and confidence in it)
- Objective valuation techniques
- Valuing non-market goods/services
- Risk management

## 3) What core principles of an ecosystems approach can be transferred between projects?

- Good practice experiences from other schemes
  - The need for partnership
  - Everything!
  - Suggestions for avoiding the parts that went wrong

## 4) How do we better enable projects applying an ecosystems approach?

- Get ecosystems ideas into education
- Learn from successful existing projects
- Make it understandable and practical for people to adopt and take action
- Demonstrate to organisations / Government, etc, how they can work together to get more done for less

See **Annex 2** for a full transcript of each group's mind mapping results.

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Above – sample portion of the mind map produced by participants.

## Annexes

These are available as separate files for viewing or download at:

[ekn.defra.gov.uk/events/past/mayesbrook](http://ekn.defra.gov.uk/events/past/mayesbrook)

### About the Ecosystems Knowledge Network

The Ecosystems Knowledge Network is a resource for anyone wanting to share knowledge or learn about the practical benefits of an ecosystems approach to both people and nature. An ecosystems approach is a holistic and inclusive approach to looking after the natural environment. The Network is being developed by an independent partnership involving the NERC Centre for Ecology & Hydrology the Natural Capital Initiative, Fabis Consulting, the University of Exeter (Centre for Rural Policy Research) and Countryside.

For further information about the Network or to register your interest in joining, please visit [ekn.defra.gov.uk](http://ekn.defra.gov.uk). You can also contact the Network Co-ordinator by email at [ekn@naturalcapitalinitiative.org.uk](mailto:ekn@naturalcapitalinitiative.org.uk) or telephone **0333 240 6990**.