

Chobham Manor Olympic Legacy Biodiversity Boost Stratford, London

The Ecology Consultancy (TEC), Green Infrastructure Consultancy (GIC), Taylor Wimpey (TW), London & Quadrant Housing Trust (L&Q). Additional support was provided by PRP Architects, J&L Gibbons and Muff Architecture/art, with further multi-disciplinary involvement provided by RSK Environment Limited, Mott MacDonald Fulcrum, Quod, Karakusevic Carson, Make and Haworth Topkins.

BIG Challenge 2015 submission category: Large scale permanent

Project overview

Taylor Wimpey and L&Q are delivering over 800 new homes at Chobham Manor, a residential development in Queen Elizabeth Olympic Park, east London.

The mixed-use urban regeneration project uses the Lee Valley to draw the rural into London, comprising 13.5 hectares divided into three development phases.

Phase 1, comprising 2.8 hectares, will include extensive biodiverse green roofs of four different types, on all buildings and in 11 locations, in total creating 2700m² of biodiverse habitat.

The Ecology Consultancy and The Green Infrastructure Consultancy worked closely with PRP Architects to provide detailed specifications for these four green roof types and the installation of 34 bird boxes at roof level.



Photo: Chobham Manor aerial

Ground level green infrastructure elements include rain gardens, wildflower grasslands, green walls, bee-hotels and an urban orchard.

Planting in 'parklets' has also been designed to increase biodiversity. The value of biodiversity and GI services for Phase 1 to date is £30K.

What were the biodiversity conditions on site, prior to the enhancement?

The site had very low biodiversity value prior to enhancement. The site was decontaminated as part of the works for the London 2012 Games and later prepared as an un-vegetated development plot surrounded by access road and pre-installed utilities.

Were there any specific conditions that led to you carrying out this work?

As part of the Olympic Legacy, the neighbourhood must meet stringent Biodiversity Action Plan

targets and numerous planning conditions relating to landscape and biodiversity.

This includes compensatory habitat for species-rich brownfield and new urban wetlands.

Taylor Wimpey initially commissioned TEC, GIC and J&L Gibbons as part of a multi-disciplinary team working on the 2013 Green Infrastructure Statement and Landscape Strategy.

Further collaborative work (with PRP Architects) included CfSH and BREEAM assessments, green roof specification, bird box specification and an overarching landscape management plan.

A workshop with L&Q was carried out to up-skill staff about management of green roofs.

What were the biodiversity measures taken?

Substantial areas of new habitat will be created as part of Phase 1, providing diverse conditions for wildlife within a densely developed scheme.

This includes 3500m² tree cover, 260m² native scrub, 310m² hedgerow, 720m² of species-rich grassland, 670m² of shrub and herbaceous perennials and 30m² of green wall.



Photo: Biodiverse green roof cross section

In addition, 82% of all plant species used in landscape planting are of recognised wildlife value and 100% of green roofs plants are native.

The specifications for biodiversity enhancements include 11 biodiverse green roof locations across three buildings, a green wall, landscape planting and habitat creation at ground level including rain gardens, wildflower grasslands, fruit trees, hedgerows, bird boxes and bug hotels.

Four types of green roof were designed to accommodate different sustainability requirements such as 'biosolar roofs' and to deliver a mosaic of habitat types at roof level including 'ephemeral pools' of water.

The biodiverse green roofs follow green roof guidance provided by the UK Green

Roof Code and Buglife.

All elements are based on best practice guidelines and are therefore easily replicable.

The project is innovative in its approach to benefiting biodiversity across the whole development site at all levels, including the roofs as well as ground level.

Consequently the net gain in biodiversity will easily exceed the Olympic Biodiversity Action Plan (BAP) targets.

Community and staff engagement will help ensure successful long term maintenance using the 10 year management plan. L&Q, who are responsible for managing the estate, have been involved from the design stage.

L&Q and Chobham Manor residents will have the opportunity to join and build on the programme of volunteer and community engagement for conservation and wildlife surveys already established by Queen Elizabeth Olympic Park.

Effort is being made to link the community orchard to similar schemes across East London and share knowledge on management.

How would you best describe the project?

An enhancement.

Further information

Phase I is currently under construction with specifications for biodiversity and landscape completed and provided to contractors for implementation and to L&Q for future management.

A 10 year landscape management and maintenance plan will be used by L&Q to manage the site.

Additional support will be provided through community engagement and from specialist sub-contractors such as arboriculturists to maintain biodiverse plant and tree structure habitats.

There will be a long term biodiversity maintenance

and monitoring programme, which will be attuned to the objective of increasing the biodiversity value of the site and the continuing engagement with residents.

Olympic BAP targets for Phase 1 of Chobham have been exceeded through strategic planning and multi-disciplinary efforts within the Design Team.

This scheme will benefit the following target species: black redstart, terrestrial insects such as brown banded carder bee, toadflax brocade moth and specialist beetles and bugs.

The project will result in an increase in key BAP habitats, with open mosaic habitats/wasteland, park squares and amenity spaces and urban wetland all present within the scheme.

The design for biodiversity and green infrastructure will also deliver ecosystem services including alleviation of urban heat island effect and storm water attenuation.

Green spaces and planting in the streetscape were designed to increase connectivity across the site, adjacent parklands and the wider landscape.

Early involvement and close collaboration with the design and sustainability team has led to greater success in achieving biodiversity targets, in addition to successful delivery of programme to cost.

What was your personal motivation for carrying out the enhancement?

This has been an opportunity to deliver ecology as part of green infrastructure measures and be involved in the successful regeneration of East London.

Through close collaboration the scheme demonstrates that biodiversity is central to this sustainable development and the community, binding it together and promoting growth.