

BeeOmonitoring at Hallsville Quarter (HQ) development
Hallsville Quarter | Canning Town | London
 Bouygues UK and Linkcity

BIG Biodiversity Challenge Award Category: *Construction Phase Award*

Project overview

Bouygues UK and Linkcity via their partnership with BeeOdiversity are implementing BeeOmonitoring at Hallsville Quarter development. BeeOmonitoring uses bees that act as natural drones, collecting billions of samples from the local area. These samples are then analysed by BeeOdiversity to identify onsite diversity quality and level of air pollutants.

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

Hallsville Quarter consists of five phases of development. Phase 1 and Phase 2 have been completed and Bouygues UK is currently building Phase 3. The core objective of the current phase is to create the heart of a town centre for Canning Town (London). The project site was dominated by buildings and hardstanding with smaller areas of introduced shrub, amenity grassland, tall ruderal, scattered trees and ephemeral perennial.

What were the reasons behind this project?

Bouygues UK and Linkcity's ambition is to integrate initiatives that will enhance biodiversity in all projects they delivered in line with Bouygues Construction's Responsible and Committed Policy and the UN Sustainable Development Goals.

Other drivers to implement this initiative included:

- Obtain scientifically validated on-site metrics, which will assist Bouygues UK and Linkcity understand the impact that Hallsville Quarter development has in the local area. The data collected will also influence the design of the future project phases.
- Improve relations with stakeholders like local authorities by implementing measures that create awareness and improve local biodiversity.



Bee colonies at Hallsville Quarter Phase 3 site

What were the biodiversity measures taken?

As Hallsville Quarter is surrounded by major transport hubs and infrastructure (i.e. the DLR, A13), a key focus for the development was to improve citizen and resident’s wellbeing in the neighbourhood through the inclusion of extensive planting and natural environments in this otherwise urban landscape. An ecologist was appointed at an early design stage to provide advice on enhancements within all phase of the development. Opportunities for local biodiversity improvements were incorporated in the design and included among others:

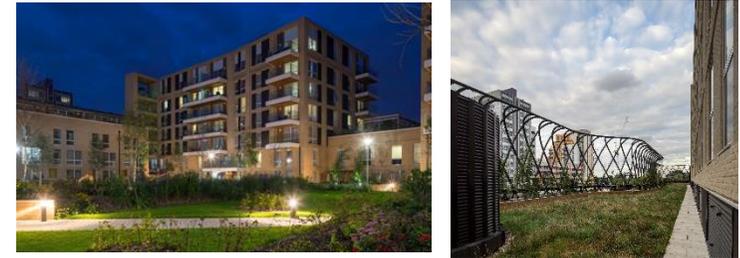
Phases 1&2: A carefully selected palette of plants that provide nectar and berry sources for invertebrates and birds. Communal podium garden as large as a football pitch with an orchard and recreational facilities. Extensive green and brown roofs that provide foraging opportunities for local wildlife and communal spaces for residents. Inclusion of bird nesting boxes on the building facades and invertebrate boxes on the podiums.

Phase 3 (currently on site under construction): Biodiverse rooftops (brown and green roofs), provision of native fruit-bearing species within planting, nesting boxes, and intensive planting to podiums to create new habitats for the local invertebrate and bird species. Overall, soft landscaped areas at street and podium level represent 23% of the total site. This approach to urban greening, and the ‘low ecological value’ of the site prior to development, enables Hallsville Quarter Phase 3 to significantly enhance its immediate biodiversity and provide valuable habitats for local fauna.

Additionally, a ‘**BeeOmonitoring**’ initiative is in place to understand key air quality and biodiversity indicators like plant diversity and level of local pollutant.

This ‘BeeOmonitoring’ initiative uses bees which report to beehives installed at Hallsville Quarter development, fitted with BeeOdiversity's BeeOmonitoring tool.

BeeOdiversity is a Belgian start-up that works to regenerate biodiversity by combining innovative tools based on nature (like BeeOmonitoring) and unique biodiversity expertise.



Communal podium gardens and biodiverse roofs of at Hallsville Quarter Phases 1 and 3.

Photos 1 and 2 by Simon Kennedy

CGI 1 by Hawkins\Brown architects



Further information

The bees act as natural drones, collecting billions of pollen samples from the local area of around 700ha. These samples are then analysed at BeeOdiversity’s facilities to identify the origin and level of heavy metals and pesticides as well as the plant diversity quality. Bouygues UK and Linkcity are also working with Local beekeepers, Bushwood Bees, which are providing their own bees to work on this project.

Thanks to the BeeOmonitoring scientifically validated metrics, Bouygues UK and Linkcity will be able to understand the impact that the landscape and green roof at Hallsville Quarter have on the local area. Therefore, being able to make improved decisions and implement actions to enhance biodiversity in future phases of the development. Bouygues UK and Linkcity selected Hallsville quarter site because of its unique characteristics that will benefit from BeeOmonitoring. Bouygues UK and Linkcity selected Hallsville quarter site because of its unique characteristics that will benefit from BeeOmonitoring. More specifically:

1. Early in the construction phase: The BeeOmonitoring will allow Bouygues UK (Main Constructor) to understand key air quality indicators during this phase and implement targeted actions to protect local biodiversity.
2. Large areas of vegetated landscape: BeeOmonitoring will allow Bouygues UK and Linkcity to have scientifically validated data of the project’s impact on the local biodiversity and air quality.
3. Synergies with future project phases: The outcome from the BeeOmonitoring analysis will be used to influence the design of subsequent phases 4 and 5 of the development.

Project Team

- Bouygues UK – Main Contractor
- Linkcity – Developer
- BeeOdiversity – BeeOmonitoring Consultants
- Bushwood Bees – Beekeepers

What was the motivation for carrying out the enhancement?

The motivation was down to Bouygues UK and Linkcity’s commitment to using innovative nature-based tools to improve local biodiversity, coupled with the goal of applying lessons learned from BeeOmonitoring that will enable a better ecology and landscape design in the future phases of development.

Another motivation for Bouygues and Linkcity was to positively contribute to the socio-economic development of the area by employing a local small business like Bushwood Bees.

All being very much in line with Bouygues’ Responsible and Committed policy and the UN 2030 Sustainable Development Goals.



Beehive installation works at Hallsville Quarter Phase 3 site



“It is so rewarding to be working with nature to support key pollinators whilst also building an exceptional project that will have a positive impact on the local community. Through this collaboration with BeeOdiversity, we are helping not only to bring about ecological change to the local area, but we are also supporting local business owners like Bushwood Bees; it is a pleasure to do so.”

Geoffroy Bieth, Senior Manager at Bouygues UK

