Bakerloo Line Link
RMG Building, Paddington Station London
Costain Skanska Joint Venture - CSJV

BIG Biodiversity Challenge Award, Category: Temporary Award

Project overview
The aim of the Bakerloo Line Link project is to provide a pedestrian tunnel link between the Paddington Crossrail Station and LU Bakerloo Line platforms. The link passage will include access for people with restricted mobility, ease congestion on the existing LU infrastructure and minimise journey time between Crossrail and the Bakerloo Line.

The project is based adjacent to Paddington Station in a fully enclosed site below the old Royal Mail building on London St. Construction began in June 2015 and planned completion date is November 2017

The complex £40 million project is being completed by Costain Skanska Joint Venture (CSJV), it is a civil engineering and tunnelling project.

What were the biodiversity conditions on site, prior to the enhancement?
The project is entirely internalised so biodiversity conditions were non-existent. The site is surrounded by buildings with no vegetation in the immediate area. Building the rooftop garden allowed for enhanced biodiversity in a dense urban environment, an overall net positive biodiversity for the project and improved the overall building aesthetics.

Were there any specific conditions that led to you carrying out this work?
The challenge with the BLL site was the limited existing biodiversity and environmental setting. The Environmental management team decided that the rooftop garden would create a positive sustained environment.

A large incentive was the ability to re-use construction waste materials resulting in minimising costs and waste outputs.

Furthermore it aids in meeting CEEQUAL targets, helps to promote biodiversity with staff and provides an area separated from the office to relax.

BLL Rooftop Garden

What were the biodiversity measures taken?

Selection of pollinating species, vegetables and installation of bug houses encouraged new habitats to be created.

The CSJV rooftop garden is innovative because it uses materials that would have otherwise ended up as construction waste. We have re-used and re-vamped old materials to create a biologically diverse environment that is also aesthetically pleasing and has minimal ongoing maintenance or costs involved.

The design is 100% replicable and can be altered to suit any sized environment. This simple and cost effective solution has created am ecologically valuable habitat that was previously missing. The design and implementation of this project have resulted in a net gain for the Biodiversity Action Plan and a great way to engage and collaborate with the local community. CSJV staff are allowed to utilise 1-2 days per year to work on Volunteer projects such as the 'Meanwhile Gardens' located adjacent to the Paddington canal where CSJV staff helped to build bug houses and insect hotels to help increase the local biodiversity. As the BLL has minimal opportunity for biodiversity this was a great way in which staff could help to offset the projects carbon footprint and implication on the environment. It also helped to equip CSJV staff with the skills to go on and build our own rooftop garden.

The design and build encouraged staff who had never worked on biodiversity measures to collaborate with environmental staff whilst sharing ideas and understanding.

Biodiversity 'stepping stones' such as BLL rooftop garden or Meanwhile Gardens insect hotels help to provide cohesion between fragmented urban environments.

Volunteer Day at Meanwhile Gardens in WCC.

How would you best describe the project?

Enhancement project on existing asset.

Net biodiversity gain to an area with minimal prior biodiversity.

Further information

Roof top garden was built by CSJV employees and components were built using offcuts and waste material. Plant boxes and picnic tables were built on site and installed by staff.
Long term benefits include:

- Provides an important 'stepping stone' for other biodiversity projects and green spaces throughout the city of London.
- Directly increases biodiversity in the area.
- Aesthetically pleasing area to be enjoyed by staff.
- Plants and vegetables that can be eaten.
- Sustainable garden, fed by captured rainwater and sunlight.

Rooftop garden was installed by CSJV staff with the design being overseen by management and CSJV's Environmental Manager. Since its installation in March increased biodiversity has been observed. The area previously had no detected biodiversity whilst to date, ducks, various birds, insects and bees have been observed utilising the garden.

Using construction offcuts minimised waste, carbon outputs and saved costs.

What was your personal motivation for carrying out the enhancement?

To build a place of value that would add to the project and local environment whilst utilising existing employee skills and materials. Project is resulting in a biodiversity net gain and thus a positive contribution to the local environment.

Rooftop Garden - built using construction waste materials.

Reuse of site waste materials.