

The Bond Street Station Upgrade Bond Street, Westminster, London

JV – Costain - Laing O'Rourke

BIG Challenge 2015 submission category: Temporary

Project overview

The Bond Street Station Upgrade (BSSU) Project is being constructed by a principle contract joint venture team of Costain - Laing O' Rourke on behalf of London Underground Ltd. and Transport for London (TFL).

The objective of the principle contract team is to deliver to London Underground a high standard station upgrade, incorporating step free access and facilitating a 30% increase in capacity which is necessary due to evolving population dynamics and additional infrastructural demands/ needs e.g. Crossrail.

BSSU will involve the construction and installation of four new lifts, two new escalators access, 450m of tunnels and cross chambers, a new integrated ticket hall and a multi-storey shopping & residential complex.

The works are located within the urban setting of inner city London, on one of the busiest streets in the world with a number of sensitive receptors in the



Photo: Employees planting

immediate vicinity (e.g. Tanzanian Embassy, Botswana High Commission, Radisson Hotel etc.).

The construction associated cost is approximately £207m with a site footprint of merely 980m² and provides permanent employment to over 200 direct employees.

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

There was no example of any biodiversity on site prior to establishment of the enhancement. Construction takes place within a highly confined site in a heavily

urbanised area of London, where wildlife and biodiversity is minimal.

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

The work was carried out in order to create a net positive biodiversity impact on the construction location.

The garden was used as an example of how redundant materials can be reused, treated water can be recycled and even in a heavily urbanised area; vegetables can be grown and insect life supported.

The vegetable garden was used as a practical educational and knowledge sharing initiative in order to raise awareness among the workforce and influence change.

What were the biodiversity measures taken?

In essence two major biodiversity initiatives took place. The first was the development of an onsite vegetable garden and green area.

The associated site garden was developed through the reuse of waste PPE (e.g. old boots, hard hats and wellingtons), cracked scaffold boards, leaky mop buckets, broken plumbing joints, cable reels, rebar off-cuts, defective screw benches, cracked shuttering plywood etc.

The site team held a “waste to resource” day in which all potential garden construction material was gathered and assembled by operatives.

Members of staff brought seeds from home and a communal planting day was held on site. Within approximately 4 weeks the beans were climbing rebar and strawberries were sprouting from wellington boots.



Photo: Re-use of waste and productive growing

The introduction of such plants also saw the 7-spot ladybirds, caterpillars and honey bees.

The plants are watered from the local on site water treatment unit, thus providing a means of recycling treated water on site.

This initiative is totally replicable on other construction sites and has

even been taken on board and replicated at home by a number of individuals (pictures available).

The second initiative involved a site volunteer day organized in conjunction with the RSPB on Rainham Marshes.

A group of containing site engineers, foremen and office staff ventured to Rainham Marshes on the

22nd of July and assisted in the conservation of the nature reserve through the pulling of poisonous Ragwort.

Cattle grazing are an essential means of maintaining the habitat and through removing the aforementioned vegetation reduced the risk to cattle and risk of the habitat not being maintained.

In summary both the biodiversity on a local level (construction site) and broader level (RSPB Rainham Marshes) was improved or supported through the BSSU Biodiversity Challenge initiatives.

How would you best describe the project?
An enhancement.

Further information

In order for this to be a success, site construction managers and supervisors needed to be made aware of the benefits associated with increasing site biodiversity.

Biodiversity and the creation of an additional green break out area used to support welfare conditions were discussed among senior managers and the initiative was supported.



Photo: Veggie garden

The first step associated with creating the onsite vegetable green space was actually designating an area on site that could be utilized.

Due to the confined space, this was no easy task and involved night time movement of large steel containers, stored steel and electrical distribution units as Oxford Street could not be closed during the day.

Site supervisors were involved and organized the “waste to resource” day which involved site operatives being briefed on the scheme, gathering and utilizing materials that may be considered waste as a vegetable garden construction material.

Waste PPE (e.g. old boots, hard hats and wellingtons), cracked scaffold boards,

leaky mop buckets, broken plumbing joints, cable reels, rebar off-cuts, defective screw benches, cracked shuttering plywood etc. were all gathered and used in the construction phase.

Members of staff were encouraged to bring seeds from home and a project budget was allocated. Subsequently a seed planting day was held, in which site operatives, management and office staff planted seeds.

As a result of the day, awareness was raised as to how easy and affordable it is to improve biodiversity in addition to the holistic benefit – members of staff developed such biodiversity schemes in their home which confounded the success of the on-site

initiative associated education. Since the planting, chives, strawberries, runner beans, spring onions and beetroot has been harvested and used by site operatives.

7-spot ladybirds, caterpillars and honey bees have also become more abundant on site.

What was your personal motivation for carrying out the enhancement?

Motivation was based on raising awareness of the workforce, improving biodiversity on site, assisting in holistic conservation of biodiversity, ensuring that skills are gained by site associated personnel and utilized at home in order to increase biodiversity on a larger scale.



Photo: Conservation day at RSPB Rainham Marshes