

Crossrail West Stations Project
Ealing Broadway, London, United Kingdom
Taylor Woodrow

BIG Biodiversity Challenge Award category: Temporary Award

Project overview

The Crossrail West Stations (CWS) project is a design and build civil engineering contract stretching along the existing Great Western Railway network from Acton Main Line to Maidenhead station. Each of the stations along the line needs to be modified to accommodate the new Elizabeth line trains. Taylor Woodrow's (TW) project scope on CWS includes extending platforms, modifying station canopies, installing footbridges and upgrading power supplies, mechanical and electrical equipment, station information and surveillance systems. To contribute to enhancing biodiversity and reduce carbon emissions on the project, a vegetable garden and food waste processor have been installed in our Haven Green site office in Ealing Broadway, London. The initiative cost the project approximately £1100 and involved the Ealing Broadway site team, environmental and stakeholder team and a local special needs school.

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

The project has a target of no net loss for biodiversity. A biodiversity action plan identifies 1.29 hectares of habitat with a permanent loss of 0.4 hectares. Network Rail (the client) will be compensating for the loss through projects with the London Wildlife Trust at the end of construction.

Were there any specific reasons that led to this project?

This initiative is not a contractual or legal requirement. This was carried out in order to enhance biodiversity and sustainability, increase our contribution to the reduction in global carbon emissions and use it as a channel to engage with the community.



Photo Description: Vegetable planters made from drainage pipes and wood pallets.



Photo Description: Planters with strawberries and lavender flower.

What were the biodiversity measures taken?

Vegetable planters were made from plastic drainage pipes and wood pallets which would have been disposed in the recycling waste skips. Spare and unwanted garden tools were donated by project staff to encourage reuse of materials on the scheme as much as possible. Vegetables, herbs and flowers, such as tomatoes, potatoes, carrots, beetroot, mint rosemary, chives, mint, sunflower, wild poppy and lavender flowers were planted in the garden by children from the Springhallow School (a local special school for pupils aged 4-16 years with a diagnosis of Autism) in April 2017. The children also planted individual sunflower pots which they took back to school with them.

A rain water harvesting system was installed in February 2017 which is used for watering the vegetables and flowers. The vegetables are maintained by a number of project staff who have volunteered to regularly water and weed them.

In addition to this, the project purchased three food waste processors called Smart Cara, an innovative way of disposing food waste. Leftover food waste produced in the project office is placed in the Smart Cara. The food waste is heated and grinded (to one tenth of its weight) to produce a soil enricher. The low energy food waste processor runs on just approximately 250W of energy, monthly. The soil enricher produced from Smart Cara was mixed with compost which was used for planting the vegetables, adding extra nutrients to the soil. Going forward additional fertiliser produced will be donated to project staff and local gardens and the produce from the gardens will be donated to Ealing Soup Kitchen.

The installation of the Smart Cara, a vegetable garden and rain water harvesting is easily replicable and can be used on other sites



Photo Description: Spring Hallow children planting vegetables and flowers.



Photo Description: Rainwater harvesting used for watering the vegetable garden.

How would you best describe the project?

Enhancement

Further information

The following are the benefits of the scheme:

- To improve local community engagement – engaging with local school and Ealing soup kitchen.
- Contribute to the reduction in global carbon emissions, reducing the number of general waste collections required.
- Contribute to biodiversity through rain water harvesting, reuse of materials, planting vegetables, flowers and herbs and production of fertiliser/soil enricher which can be used to improve vegetation or plant growth.
- Improves segregation of food waste from general waste and therefore increasing recycling rates for general waste.
- Reduce cost of waste collection on the project and number of bin liners.
- Increasing sustainability awareness – Springhallow School and the Filton Bank project are planning to invest in the use of a food waste processor, as a result of the initiative here at Crossrail West.
- Reducing carbon emissions – the food waste processor can save 425kg of carbon per household each year which is equivalent to planting three trees and reduce food waste recycling cost to landfill (Saves £46.80 per ton of landfill tax)
- The dried powder from the food waste reaches 4,000Kcal heating value and so can be used as a solid fuel.
- Raising awareness within the project team on biodiversity and the effects of food waste on the environment and climate change.



Photo Description: Food processor (Smart Cara used for processing food waste into compost/soil enricher).

What was your personal motivation for carrying out the enhancement?

To enhance biodiversity and apply a higher waste hierarchy to food waste disposal on the project. The scheme was also highly supported by the senior management team on the project.