Crown Woods Way Street Trees

Crown Woods Way, Eltham, Royal Borough of Greenwich

Trees for Cities

BIG Challenge 2015 submission category: Most Innovative

Project overview

Trees for Cities and the Royal Borough of Greenwich collaborated to develop an innovative and sustainable approach to improve surface water management that would reduce flood risk on Crown Woods Way, a residential street in Greenwich, and the A2 road.

With additional concerns over high levels of air pollution and noise, as well as the environmental impact this was all having on the area, we took a holistic approach to address these issues.

This involved combining street tree planting and sustainable urban drainage systems (SuDS), such as rain gardens and specialised tree pits.

This project demonstrates how green infrastructure can be used as an effective sustainable urban drainage system on a small scale appropriate for streets and road sides.

An approach that helps reduce surface water flooding whist mitigating noise and pollution, increasing biodiversity in the area and being attractive for the local community.

Photo: Before

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

As a residential street that joins the A2 East Rochester Way, apart from residential gardens and narrow grass verges along each side of the street, there was little biodiversity on site. There are trees in Eltham Crematorium, adjacent to Crown Woods Way.

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

The area was a high flood risk area, suffering from surface water flooding. Being adjacent to the A2 there were also high levels of noise and air pollution, with NO2 levels consistently being exceeded.

There were concerns over the environmental impact this was all having on the area.

What were the biodiversity measures taken?

The project involved the following activities:

- Two rain gardens were built to mitigate flood risk whilst creating natural habitats to support biodiversity. Rain gardens are shallow depressions with absorbent, yet free-draining soil planted with vegetation that can withstand occasional temporary flooding.

The gardens fill with a few centimetres of water after a storm and the water slowly filters into the ground or is taken up by the plants and lost back to the air through evapotranspiration. Compared to a conventional patch of grass, they allow approximately 30% more water to soak into the ground. Both rain gardens were seeded with wildflower seed mix, such as poppy, mallow, cornflower and corn marigold, rather than grassing it, to increase the visual impact and biodiversity in the area.

- 11 trees were planted; three oak trees in each rain garden and five birch trees in the verges along Crowns Wood Way, building specialised tree pits to help drainage and growth.

Photo: Birch tree planting in verges

These native species will help to reduce pollution and noise levels and provide excellent habitat for wildlife, improving biodiversity. Trees for Cities consulted with local residents throughout the project, including door knocking and flyering in the area and they were invited to come and learn about street tree watering and aftercare.

The trees have all been sprayed so local residents can contact Trees for Cites with any concerns for their trees via the 'Love Trees' hotline.

Trees for Cities will maintain the trees for a three-year period before handing over to Greenwich Council who becomes responsible for tree maintenance as the landowner.

This innovative project, combining sustainable urban drainage systems (SuDS) and tree planting, promotes partnerships between tree officers and drainage/flood management teams and demonstrates a range of techniques and that can be used to encourage similar projects in the future.

How would you best describe the project?

An enhancement.

Further information

Arranging for Keith Sacre from Barcham Trees to visit the site was a really benefit to the project, helping to strengthen partnerships and offering an opportunity for peer review and to share learning from his experiences with specialised tree pits.

What was your personal motivation for carrying out the enhancement?

Trees for Cities has over 20 years experience of street tree planting, including 5 years through the Mayor's Street Tree Initiative.

We had some experience of SuDS including creating rain gardens on estates, but were keen to increase our knowledge and understanding through collaborating with the Royal Borough of Greenwich.

Photo: Rain gardens and 6 oak trees