

## GREEN ROOFS ON RUISLIP DEPOT, LONDON UNDERGROUND



### BIODIVERSITY ENHANCEMENT OVERVIEW

London Underground retrofits the UK's first green roof on an operational railway depot. In order for the retrofitted green roof to act as a proof-of-concept for depot roofs across the London Underground network, it was essential that LU trialed it on a structure with a challengingly low load capacity – and in a location where a real problem would be addressed. For these reasons, a lightweight flat roof of 140m<sup>2</sup> with a history of water ingress issues was selected at Ruislip Depot, situated in an area at risk of localised flooding.

By reclaiming green space on large span areas such as depot roofs, London Underground control peak drainage flows, reduce localised flooding and eliminate water ingress into the working environment. At the same time, a vegetated roof provides a host of other benefits including enhanced biodiversity, improved air and water quality, noise insulation and a reduction in energy consumption.

From this small-scale trial project, though, the most important benefit was knowledge gathering of the in-situ performance of the retrofitted green roof through monthly data collection. Experimental green roof has been tested against conventional of the shelf extensive green roof and monitored with a prototype solar powered rainfall runoff gauge developed for LU by the UEL in partnership with Thames Water and funded by GLA.

The roof got vegetated with seeds and plugs (1,200 individual ones) of annual and perennial wildflowers of conservation value to regional biodiversity.

Bee hotels have also been installed and lady birds, bumble bees along with butterflies were observed since the green roof has been completed. The newly vegetated roof acts as an 'overarching bridge' between local green spaces and provides haven for valuable wildlife.

### Fact box

**Company name:**

London Underground

**Project name:**

Green Roofs Ruislip Depot

**Location:**

Ruislip, London

**Biodiversity enhancement:**

- Green roof
- Bee hotels

**Size:**

140 m<sup>2</sup>

**Cost:**

N/A

**Tips:**

N/A

**Year completed:**

2012

### Categories:

- Large scale permanent
- Most innovative

# SUMMARY

## Photographs of the enhancement



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