

## GLAXOSMITHKLINE CARBON NEUTRAL LABORATORY, MORGAN SINDALL



### BIODIVERSITY ENHANCEMENT OVERVIEW

The two-storey research and teaching facility, part-funded by GlaxoSmithKline, will be the first carbon neutral laboratory and will house the first naturally ventilated laboratory in the world. It is set to achieve BREEAM 'Outstanding' and LEED 'Platinum' certification, and features a glued-laminated timber frame with cross-laminated timber walls, upper floor and roof.

The CHP engine and 1100m<sup>2</sup> of PV panels will enable the project to repay the embodied carbon of the building materials and construction process through carbon-negative operation over an estimated 25 years.

The project also comprises the following biodiversity enhancements:

- Insect hotel (temporary): at the beginning of construction, a protected insect hotel was created adjacent to the site boundary, to encourage the developing of an insect population between the site and the River Leen.
- Wildflower roof (permanent): a North-facing extensive 1000m<sup>2</sup> ecologically valuable green roof has been specifically designed and developed for the building location, orientation and roof steepness. An agreed 38-species extensive wildflower mix has been selected specifically for use on roofs, which predominantly exhibits high drought tolerance and does not contain invasive wildflowers, thus maintaining a species balance and optimising biodiversity. The building is constructed on a previous Raleigh development, and as such provides a significant biodiversity enhancement to the plot of land and local area. The wildflower roof surface spreads from the top of the building down to ground level, enabling access to a diverse spectrum of wildlife. Installation is currently underway and is due to be completed by October 2014.

#### Fact box

**Company name:**

Morgan Sindall

**Project name:**

GlaxoSmithKline Carbon Neutral Laboratory for Sustainable Chemistry

**Location:**

Nottingham

**Biodiversity enhancement:**

- Insect hotel
- Wildflower roof

**Size:**

1,000m<sup>2</sup> wildflower roof

**Cost:**

£0 for insect hotel

**Tips:**

- Green roof: it is recommended that different seeds are not added to a green roof just for the sake of achieving BREEAM compliance, but rather a designed mix is specified to maintain a balance of species over the life of the roof that will contribute to local biodiversity

**Year completed:**

2014

#### Categories:

- Large scale permanent
- Small scale temporary
- Most innovative

Pictures of the enhancements

