

Bentley Works Redevelopment
Pipering Lane, Doncaster, Yorkshire
 Skanska

BIG Challenge 2015 submission category: Large scale permanent

Project overview

Located in a semi-urban and residential area in Doncaster, Bentley Works – Skanska UK’s northern hub – provides a modern workplace for employees, with up-to-date office space, upgraded fabrication facilities and a cutting-edge workshop environment.

£12.9 million was invested in the project, with a further £1.3 million coming from a Regional Growth Fund grant.

There has been a presence on the site for around 100 years – today’s newly improved Bentley Works is future proofed, with room for growth.

This includes a 1,800m² office building, a 5,010m² modern warehouse space and a 50,000m² storage area, with a 150-space car park, acoustic fencing and sympathetic landscaping.

By applying an internationally-recognised natural capital tool to the project has allowed ecosystem services to be measured which have been enhanced as a result of the development.



Photo: Green Roof

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

Before the redevelopment, the Bentley Works site consists of buildings and storage areas, which is generally of low ecological value.

There was limited natural habitats and vegetation on site was minimal.

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

Skanska carried out the redevelopment in order to meet planning requirements and a BREAAAM rating of excellent (offices) and BREAAAM outstanding

(workshop) was achieved. When designing and building our new Deep Green Bentley Works, local residents were consulted, education providers and local businesses got to share plans and develop solutions that serve everyone.

Given the low ecological value prior to the development it was considered an opportunity to enhance the local environment.

What were the biodiversity measures taken?

The biodiversity measures taken include:

- Green roof habitat planted with native vegetation and mosses to provide new habitat for urban wildlife.
- New landscaped area adjacent to the office building including a variety of British native shrubs and an area amenity grassland planted with a diverse sward and good wildflower cover.
- Living walls of climber plants (*Hedera helix*) at boundaries with nearby homes, providing a screen for air pollutants and a late source of nectar for pollinators.
- Grass swale sown with wet meadow wildflower seed contributes to biodiversity and SUDs by reducing volume of overland flow and filtering silt .
- A variety of native trees including *Acer campastre*, *Prunus padus*, *Betula pubescens* and *Crataegus laevigata* to provide valuable sources of nectar and fruit.

The site falls within the area covered by the Doncaster Biodiversity Action Plan and contributes to the aim to create and manage urban greenspace to benefit wildlife.



Photo: Grassy swale

It also contributes to the National Pollinator Strategy by providing year round sources of nectar for pollinators; a variety of wildflowers as well as flowering trees such as *Prunus padus*, and *Hedera helix* which provide early and late nectar sources respectively.

A biodiversity champion was appointed and was responsible for ensuring there were no detrimental impacts on local ecology during the construction phase of the entire Bentley Works redevelopment.

A five year ecological plan has been produced which details how to manage, protect and enhance existing all habitats on site.

The retrospective application of the Natural

Capital Planning Tool (NCPT) (in cooperation with the University of Birmingham, Birmingham City Council and UK BCSD) to the project has been able to demonstrate that the new features have resulted in a net gain in biodiversity and an increase in air quality regulation.

How would you best describe the project?
An enhancement.

Further information

The retrospective application of the Natural Capital Planning Tool (NCPT) to the project has been able to confirm the long-term benefits of the added features including the net gain in biodiversity and an increase in air quality regulation.

Although not measured by the tool, on the basis of current academic research, it is suspected that the green spaces created have the additional benefit of supporting and enhancing employee health and wellbeing by providing views of the biodiverse areas from the office, as well as a healthy outdoor environment.

The features can be considered innovative because they go beyond traditional ecological value provided by biodiversity enhancements in that they are inclusive of wider ecological impacts on the local environment, such as air quality and sustainable drainage.

Combined with the provision of nature based amenity areas for office workers, these added features contribute to maximise the human benefit from the enhancements.

In addition, the application of the NCPT has enabled us to demonstrate the added value that the biodiversity features add to the site and the local area.

What was your personal motivation for carrying out the enhancement?

The project was carried out to provide a modern workspace to serve as



Photo: Office garden

Skanska's northern hub to support the company's strategic ambitions to grow.

The opportunity was taken to enhance site ecological value, create additional urban green space, promote a sense of wellbeing and encouraging employees to engage with biodiversity.