Green Roof

Biodiverse re:centre, Bradford University, UK

CASE STUDY

Project Information

Client	Bradford University
Contractor	Geogreen
Product	ABG Roofdrain 20, ABG Biodiverse Growing Media, ABG Plug Plants
Quantity	150m²
Benefits	• Significant contributor towards BREEAM rating • Replaced lost habitat and enhanced biodiversity • Complete ABG service from design support to installation

Project Description

The new build £5.2m re:centre, Bradford University, comprises a four-storey, 2,000m2 building, containing workshops, business units, an open-plan office and a multi-function space, all of which will provide learning facilities and teaching resources aimed at promoting sustainable living. The re:centre has been designed to the University's target driven sustainability specification, delivering the world's highest ever pre-construction BREEAM rating of 94.95%. The building's design showcases several highly sustainable low energy features, including a full height sun space providing natural ventilation in the summer and heating in the winter, PV panels, hempcrete walls, rainwater harvesting, and a biodiverse green roof system.

The Challenge

Given the nature of the project, it was important from the outset that the building and its construction embraced sustainability. It was decided that all usable space, including at roof level, would be used to its maximum potential. It was critical that the biodiverse system provided the necessary contribution towards achieving this and the associated BREEAM credits. The biodiverse system was required to replace lost habitat (LE04: 2 credits), enhance ecology and increase the number of native or beneficial plant species present on site (LE05: 3 credits). This is relevant to BREEAM primarily within the Land Use and Ecology section, although it does also directly impact other considerations, including flood risk mitigation and, indirectly, in thermal comfort, acoustic performance, responsible sourcing of materials and waste management.

ABG Biodiverse Green Roof System

ABG LTD

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The Solution

ABG worked closely with the landscape architect to create a system to meet the stringent criteria. The roof installation comprised a wildlife pond planted with native marginal plants, a native wildflower area, matrixes of sedums, grasses and herbs, insect hibernaculas. Also included were bird feeder tables, pebble areas and coiled hemp rope, specially designed features to encourage the development of flora and fauna on the roofing area. A lightweight **ABG Biodiverse Growing Media** was used to minimise the roof loadings whilst providing a nutritionally rich base for the specially selected vegetation. Beneath this surface finish, ABG Roofdrain drainage and attenuation geocomposite was used to create a free-draining void that also allowed for the storage of collected rainwater to irrigate the vegetation during dry periods.

Cobbles, logs and a hibernacula to encourage insect life as part of ecology enhancement, as well as bringing aesthetic benefits

The ABG Service

ABG's in-house technical expertise and on-site installation experience provided the client with a solution that maximised the roofs contribution to the development.

Matrixes of sedums, grasses and herb plug plants

Wildlife pond planted with native marginal plants

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