

Project Profile

The Derbyshire ECO Centre: Green Roof Creation

Background

BSG Ecology was commissioned by Derbyshire County Council Property Services Division to assist in the design of a green roof at The Derbyshire ECO Centre in Derbyshire as part of the development for a new educational building that promotes rural crafts, in particular those relating to construction, a sustainable environment and renewable technologies.

Our BREEAM assessment identified an opportunity to enhance the site through the addition of a green roof on the new building and we provided advice and ecological input into the green roof specification.

The Derbyshire ECO Centre is located within the White Peak area of the Peak District National Park. The surrounding area is characterised by disused limestone quarries, many of which are now designated as Sites of Special Scientific Interest (SSSI). Limestone grasslands are characteristic feature of the local area

BSG Ecology's role in the project

The brief for the new building was to create large, species-rich, calcareous grassland on the roof of the new centre to tie in with and complement the local area. Green roofs are an innovative approach to sustainable design in new buildings providing opportunities to mitigate for the loss of ecological features within a development site and for enhancement of local biodiversity.

The aim of the green roof specification was to create a calcareous grassland habitat which is characteristic

of the local area and provide a suitable habitat for invertebrates and other local fauna. The key factor in the successful establishment of calcareous grassland vegetation is the composition and depth of the substrate. The substrate used on the roof was designed to mimic the free draining, low nutrient status and high pH characteristics of these local grasslands.

The substrate on the roof is 100mm deep, although local variations in substrate depth were incorporated to provide a range of growing conditions. This variation in depth will help maintain to a variety of grasses and herbaceous species on the roof and provide a range of micro-habitats. A calcareous grassland species mix was developed based on the species occurring within the local area. This locally appropriate mix contained 5 grass species and 21 herbaceous plant species.

BSG Ecology assisted Derbyshire County Council in the selection of the successful green roof installer, Green Estate, through attendance at a series of interviews with three potential green roof suppliers and installers.

Outcomes

Following the first monitoring visit, a 5 year monitoring and maintenance programme was agreed. The project positively contributes to the biodiversity interest of the local area.

