

CASE STUDY

GLOUCESTER GATEWAY

(GREEN ROOF)

Project Background

The brief for Gloucester Gateway was to construct a new motorway service station that wouldn't appear as typical one. A leap forward in service station engineering and design, the clients aimed to do something different from the average motorway services, no franchises, no big brands, but instead a "sense of where you are - a sense of place".

Solution

The 4,000m² state of the art green roof project was designed to disguise the new service station as a part of the landscape. Being a Greenfield site, flanked by the Cotswolds on one side and Robinswood Hill on the other, great care was required to minimise the environmental impact and blend the building into the surrounding countryside and a bespoke perennial wildflower seed mix was used that not only would match the native species but not grow excessively, keeping maintenance of the roof to a minimum.

Challenges

Due to the weight-loading capacity of the green roof, which only allowed for a thin substrate layer, hydroseeding using a 100% wood fibre hydro-mulch at a higher application rate of 3,500kg per ha. provided an ideal growing environment for germination and development of the new vegetation.



Due to the lack of topsoil and the free draining properties of the substrate, drought like conditions were a concern and to counter the risk a drip feed irrigation system was installed. Using very little water, the area retains sufficient moisture to support the wild flora whilst also conserving precious water.

Other challenges that were overcome included restricted access to the roofs and working from height, both overcome by using staff experienced in this type of work environment and also wearing the specialist safety equipment needed.

Outcome

After the hydroseeding of the main visitors centre and fuel station, both areas have established excellently, containing nectar rich species of wild flowers such as Self Heal, Yellow Rattle, Birdsfoot Trefoil and Meadow Sweet that support pollinating insects such as bees and also preserve the heritage of our UK native wild flora habitats.



Location

Gloucestershire,
M5 Southbound



Product

Hydroseeding with
Wildflower Seed



Area size

4,000m²



Client

EcoGreenRoofs



Architects

Glen Howells