

Green Roof

Intensive Podium Deck, Deckdrain, Raithwaite Hall, Whitby, UK



CASE STUDY



Project Description

Raithwaite Hall is a 5 star, 45 bed boutique hotel set in 85 acres of wooded valleys within the North Yorkshire Moors National Park. The hotel offers terraced views of the landscape and across the Whitby coastline. A new extension was designed that is built against the hillside with stepped landscaped areas around the new building and an intensive green roof terrace to help blend the structure in with the surrounding gardens.

The Challenge

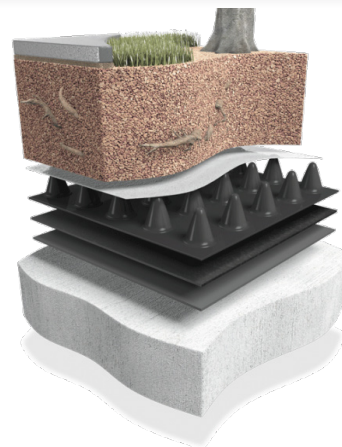
The intensive green roof terrace is installed directly above a new function and dining room and required a specialised design to accommodate the additional loading and provide the necessary drainage for the turf lawn.

The Solution

By utilising a multi purpose geocomposite roof drainage board, the green roof system could be achieved to meet the project specific requirements. The ABG Deckdrain 2540S NW20XUV product offers a lightweight option that delivers the equivalent drainage capacity of 300mm of drainage stone in a 25mm layer that weighs over a 100 times less per square metre. The lightweight drainage layer is supplied in rolls and is fast to install and move into position. The Deckdrain layer includes an integrated filter geotextile bonded to the top of the cusped core. This prevents the growing media layer from intruding into the drainage void and filters the soil to prevent clogging. The Deckdrain is made from a high strength HDPE core that supports the 200mm deep layer of growing media required for the intensive green roof installation with deeper root systems.

Project Information

Client	Raithwaite Hall Sandsend
Contractor	Tolent Construction
Architect	Brewster Bye
Product	ABG Intensive Green Roof System
Quantity	250 m ²
Benefits	<ul style="list-style-type: none">• Lightweight and easy to install drainage board layer• Integral filter textile prevents the drainage core from clogging and filters fines• Green roof surface reduces surface water run off and protects the waterproofing layer against UV degradation



ABG Intensive Green Roof System

ABG LTD

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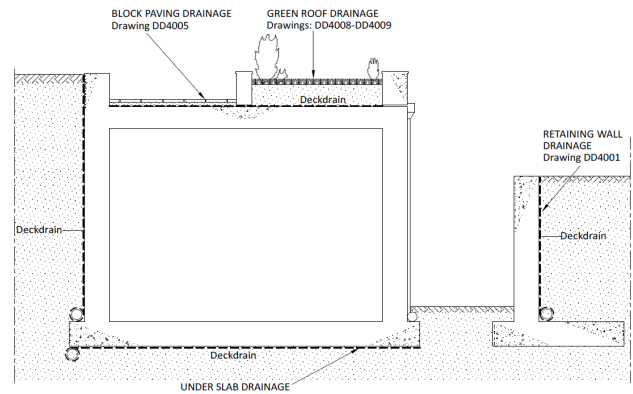
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The underside of the product is impermeable and provides additional protection to the liquid waterproofing membrane. A green roof surface finish further helps to prolong the lifespan of the waterproofing layer and prevent UV degradation of the surface. The large grassed area on the podium also reduces surface water run off and the grass is protected against waterlogging via the efficient drainage board layer. The shallow drainage build up required also reduces the height of the steps onto the terrace and the associated cost of stone flags. The completed installation encompasses a 20mm **Roofdrain** drainage & reservoir board to support a secondary smaller sedum roof area, as well as **Deckdrain** layers installed for structural drainage to the surfaces around the patio slab and retaining wall areas.



Deckdrain geocomposite layers installed for podium deck, under slab and retaining wall drainage applications.

The ABG Service

ABG provided a full green roof project design, installation and maintenance service for the project.



Completed landscaping to the terrace and gardens



Final installation of turf onto the terrace

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