

# Case Study

## Project Description

This 32 storey apartment development was constructed with the aim of creating the most desirable address in Sheffield. St Paul's Place is ideally situated to benefit from the wide range of amenities and transport infrastructure.

In order to help achieve this goal it was decided from the very outset of the project that the development had to be sympathetic to its surroundings and in line with a future plan to create a high scoring BREEAM building. The development is in the heart of Sheffield city centre where space is at an absolute premium. As with all developments, the client wished to maximise the footprint of the building but appreciated that a green amenity area for the residents' private use would add value to the development.

The ideal would be a space with trees and shrubs to give privacy around patio areas and shrubs for ornamental areas to simulate a parkland area at ground level.

## The Challenge

With any roof structure, the challenges are loading and drainage and soil and water are heavy and damaging elements. The below surface drainage system needed controlled run-off attenuation to a fixed regulated discharge rate along with sufficient storage to maintain moist conditions for optimum plant growth. Trees and shrubs need a minimum of 500mm of moisture retaining fertile soil to flourish through the seasons. This was all to be achieved in very tight working conditions with many additional service elements such as lighting cables to contend with.

## Project Information

Client	City Loftus Group
Contractor	Geogreen Solutions
Consultant	Conran and Partners
Products	bluroof Type D; Void Former; Abtex
Quantity	1000m <sup>2</sup>

- Benefits
- Light-weight and versatile
  - Slim profile
  - Load bearing
  - Integrated system
  - Quick establishment of green space
  - Meets SuDS discharge regulations



**ABG bluroof Type D ; Void Former; Abtex**



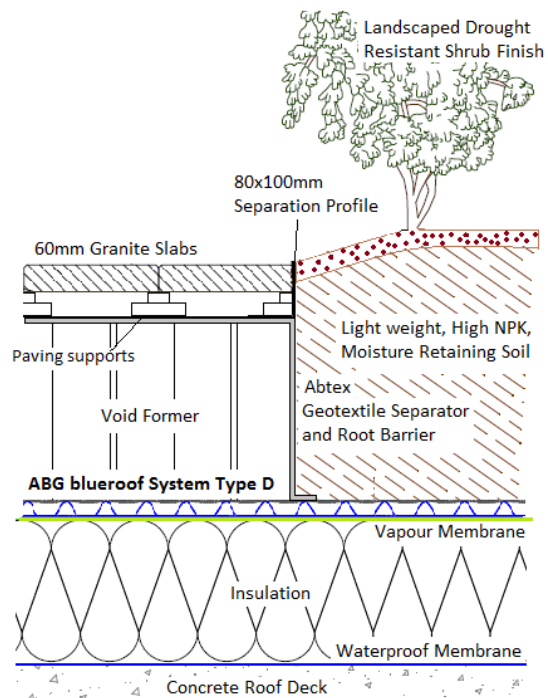
### The Solution

A pleasing green amenity space for residents was created using an Intensive Green Roof system on a second storey flat roof without impacting on the footprint of the development.

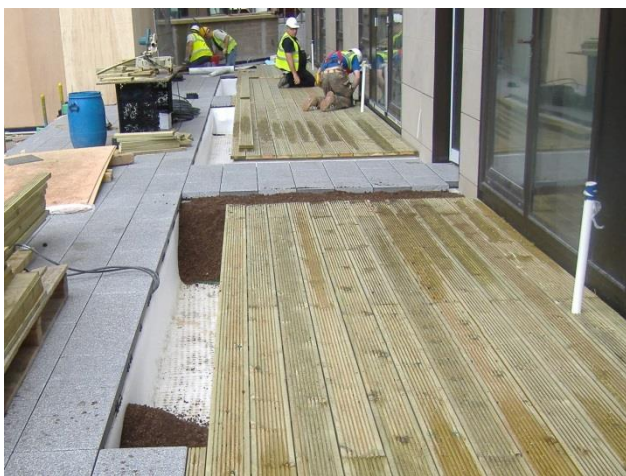
Included within the buildup of the roof was a load bearing **Void Former** SuDS tank designed to attenuate rainfall reducing flow to the level stipulated by the Environment Agency. The slim but high flow **ABG bluroof System Type D** was incorporated within the SuDS Intensive Green Roof buildup to allow free drainage of surcharge from the SuDS tank within the roof. The tanks were placed to form wells and the top and sides protected and filtered with a thick **Abtex** geotextile. Once the hard landscaping was placed around the wells these were filled with light weight high NPK moisture retaining soil. Selected hard wearing drought resistant shrubs and trees were planted to give an immediate green effect

### The ABG Service

ABG designed, supplied subcontractor Geogreen who installed and delivered the works on time and in budget.



Green Intensive Trench Construction Detail



Deep planting trenches filled with NPK light soil



Geogreen Solutions finishing planting operation

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.