



Detail view of the green roofs of the "Banco de Santander" in Madrid.

### Project Data

Area: ca. 100.000 m<sup>2</sup>  
 Construction Year: 2002–2009  
 Architect/Design:  
 Kevin Roche - John Dinkeloo and Associates, Hamden, USA  
 Landscape architect:  
 Luis Vallejo Estudio de Paisajismo, Madrid  
 Contractor:  
 Aimad, Madrid  
 System Build-up:  
 "Heather with Lavender" with Floradrain® FD 25-E, FD 40-E and FD 60  
 Coordinates:  
 40°23'32.78"N 3°51'49.32"W

### Conception

The financial city "Banco de Santander", close to Madrid, is one of the largest green roof projects around the world. On around 100.000 m<sup>2</sup> of roof area, extensive and intensive green roof system build-ups, distributed on 13 buildings, were installed.

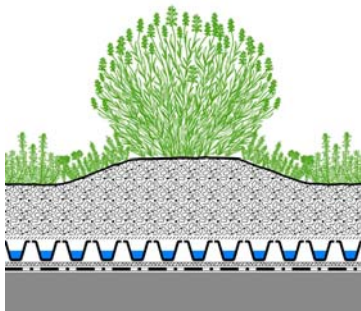
Not only is this project impressive by its huge size, but also in the planning and

design of the green roof. Designing the plant selection of the green areas was a challenge in order to meet the climatic conditions and the architectural ideas. The various green roof system build-ups were complementary to the intended planting and a drip irrigation was necessary in the central of Spain.



The aerial view shows the different planting areas with their own character.

### System Build-up



- Plant layer "Heather with Lavender"
- Vegetation Substrate "Heather with Lavender"
- Filter Sheet SF
- Floradrain® FD 40-E
- Protection Mat SSM 45
- Roof construction with root resistant waterproofing



Driveways for cars and buses under the green roof area.



Large planting beds with trees above the two storied underground garage.



A drip irrigation was installed on all roof surfaces.



The various types of grass move in the wind.

