



The refurbishment included a new solar installation and a green roof replacement to improve biodiversity.

### Project Data

Area: ca. 2,200 m<sup>2</sup>

Refurbishment Year: 2015

Planning of solar installation:  
AMA Electrical Services, Brighton

Contractor:  
Solinium Ltd., High Wycombe

System build-up: Solar installation  
with ZinCo Solar Base SB 200

Coordinates:  
51°31'00.5"N 0°05'27.1"W

### Conception

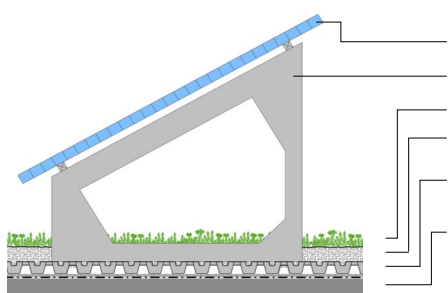
This roof refurbishment on the Chartered Bank headquarters building in London was part of the bank's ongoing energy efficiency projects aiming at creating a low energy and low carbon building. The refurbishment included a new solar installation as well as the replacement of the old sedum roof by a wildflower roof providing more biodiversity. To avoid the need of penetrating the roof waterproofing, a ballasted system with ZinCo Solar Bases SB 200 was chosen to mount the PV panels.

The solar frame inclinations and the distance between rows had to be carefully planned by the ZinCo technical department to avoid shading of the solar panels and reducing their efficiency. For the same reason suitable plants not growing too high had to be selected. Evapotranspiration from the green roof helps to keep the ambient temperature on the roof below a max. of approx. 35° C thus increasing the PV panels efficiency.



This biosolar roof, as it is called by [livingroofs.org](http://livingroofs.org), celebrates the synergies between renewable energy and green roofs.

### System Build-up



- Solar Panel
- Solar Base Frame
- Plant layer
- System Substrate
- Solar Base SB 200
- Roof construction with root resistant waterproofing



During refurbishment the old sedum roof was adapted to take a greater variety of vegetation.



100 ZinCo Solar Bases SB 200 and Solar Base frames SGR 35/80 were installed without penetrating the waterproofing. They served as a basis to mount the solar panels with an overall performance of 30 kWp. The refurbishment was meant to improve the energy efficiency of the building.

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