The regeneration at Clapham Park involved the demolition of old housing stock to make way for new affordable homes. The 5-storey building with 21 dwellings incorporating the latest rooftop technology which blends a biodiverse green roof and unified solar PV array. This approach met the planning requirements and maximised the limited roof space to generate energy for the residents. The development was certified BREEAM ‘Outstanding’ due to its environmental, economic and social sustainability attributes.

The Bauder BioSOLAR system has National House Building Control (NHBC) approval and meets local authority building control (LABC) requirements. The system was installed on zero falls roof deck, making it a very cost-effective solution.

The biodiverse green roof which includes 35 plant species recognised by the RHS as Perfect for Pollinators, covers the totality of the roof area and offers a large variety of vegetation. The building reduces its carbon impact with the highly efficient PIR insulation and generates approximatively 10% of the flats usage with a maximum possible output of 75kWp from the 70 PV modules. The solar PV mounting units are ballasted by the substrate and vegetation, removing the need for any penetrating products in the waterproofing.

Visit bauder.co.uk/biosolar for more information on the system.

One of the major challenges of the project was the roof area, which at only 500m² needed to include a green roof and a renewable energy system to meet the main objectives of sustainability and energy efficiency of the development highlighted by the planning committee. The roof contributed towards requirements under National Planning Policy Framework (NPPF) Chapter 11: Conserving and enhancing the natural environment and The London Plan 2011 Policy 5.2 – Minimising Carbon Dioxide Emissions, Policy 5.3 – Sustainable Design and Construction and Policy 5.7 – Renewable Energy. The green roof is layered with a raised PV array so that the entire roof qualifies as a green roof whilst also providing energy generation.

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