

Centre of Excellence Building Integrated Photovoltaic Array

client: Ford Motor Company.

client brief: Design a building integrated photovoltaic array which assists with solar shading. Write grant proposals and procure funding for the PV array.

our solution: Feasibility study into the use of PV leading to the detailed engineering design and CFD simulation of PV installation and other low-energy building mechanisms.

description: The Centre for Engineering and Manufacturing Excellence (CEME) is a low energy building design on a brown-field site in East London. It marks the first step in the regeneration of the Dagenham area, and we recognised the importance of making the development a marker for sustainable development. The project is the largest photovoltaic array in the UK (115kWp). Shane Slater and Ben Madden of Element Energy designed the building integrated array, developed the financing options (including offset costs due to the building integrated approach) wrote the successful application for government funding (£450,000) and facilitated an agreement between Ford and BP to provide match funding. The building also makes extensive use of low energy materials, natural ventilation and solar shading.

awards: Sustainable Designer of the Year 2005 award for architects Sheppard Robson – Building Magazine.



CEME roof-mounted photovoltaic array