



Bordon, an existing garrison town, is steeped in military history and was home to the army since 1903. However, in 2011 the army will be relocated, and with the backing of its local authority, East Hampshire District Council, Bordon has recently been announced as an Eco-Town. Whitehill Town Council gave their support to a project called the 'Green Town Vision', which will ensure that new development in Whitehill and Bordon will bring about regeneration while protecting the natural environment.

Bordon Junior School has recently had a roof replacement and the installed Photovoltaic Energy Roof system was part of the "grand eco scheme". The school first became involved with Eco Schools in 2007 and has achieved the Silver Award. The national Eco Schools standards match very closely with the aims of the school which strives to promote the care of the environment. This 'green' theme has become an integral part of the school's life.

IKO PLC were asked to carry out a survey of all the roofs on the site. There were various felt repairs present, indicating historic water ingress issues. Moisture probe readings undertaken in separate locations by IKO re-confirmed that the waterproofing system was saturated in many areas. Internal inspection of the building below the roof revealed evidence of water penetration, damaging internal decorations. The repair work involved the complete stripping of the roof, including existing BUFR waterproofing and insulation.

Project Sector: Local Authority - Education

System: Built-up Felt Roofing
Photovoltaic Energy Roof System

Products Used: IKO Solar F & IKO Solar X
Ultra prevENT T-O Cap Sheet
Supertherm Torch PIR Insulation
Systems T-O VCL

Contractors: Salnor Roofing Services
OCB Energy

Started: February 2011

Completed: April 2011

Size: 550m²

The building was occupied during large parts of the installation process, so keeping disruption to a minimum was a must.

Roofing contractors Salnor Roofing Services of Alton, Hants liaised with IKO to refine the roofing specification. IKO's Systems Torch-on Vapour Control Layer was installed, followed by cut-to-falls Supertherm Torch PIR Insulation system (achieving an average U-value of 0.12 W/m²K), Systems Torch-on Underlay and finally Ultra prevENT Brown Mineral Cap Sheet. The Ultra prevENT Torch-on waterproofing system was chosen due to its speed of application and long term durability. It also features graphite firewall technology to stop the spread of fire from external sources, a popular choice of waterproofing for school / university buildings.

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ultra
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CASE STUDY

BORDON JUNIOR SCHOOL, HAMPSHIRE

School to benefit from fire protection and 'solar energy'



In keeping with the school's 'Eco' theme, OCB Energy of Caterham, Surrey, installed 114.3m² surface photovoltaic modules (IKO Solar F) providing a 6.120kWp system. These were adhered to IKO Reflect (a heat reflecting, energy saving roof membrane) that was part of a complete re-roof package including cut to falls insulation. A small IKO Solar X module was also installed to provide a visual reference point. The IKO Solar F system was chosen over other photovoltaic options due to it being easy to install, highly efficient in low light areas and extremely lightweight. The roof area to which the Solar F system was installed was of a lightweight construction, meaning a traditional ballasted crystalline photovoltaic system was not feasible due to excessive loading.

The school now has a superior roof which was installed with minimum disruption and maximum concern for safety, with Eco Schools Standards.



IKO Solar F lightweight modules guarantee the highly efficient production of electricity in the form of flexible strips which are adhered horizontally and flat onto the selected IKO roofing membrane.

With a weight of just 3.5kg/m² IKO solar modules can be simply fitted to many common roof surfaces. The weather resistant solar modules incorporate triple junction technology and are designed to capture both direct and diffused sunlight, making them ideal for areas suffering from weaker light.



- Lightweight system
- Simple installation
- Suitable for all roof types
- Ideal for low light environments
- Weather resistant with triple junction technology
- No change to architectural appearance



- White, heat reflective bituminous membrane
- Excellent energy saving properties and increased thermal comfort
- Durable and hard wearing

