

Premier Park

SolarWall® is the premier choice



Project Type:

New Build

Scope:

Warehouse and office development

Location:

Winsford, Cheshire

Client:

Patrick Properties

Architect:

Fletcher Architects

Main Contractor:

Barkin Construction Ltd

Cladding Contractor:

GM Services

System Manufacturer:

CA Building Products

System:

SolarWall® perforated Transpired Solar Collector (pTSC.) 580m² installed using Colorcoat HPS200 Ultra® in Sargasso.

Twin-Therm® built up roof system. 9849m² using Colorcoat HPS200 Ultra® in Goosewing Grey.

Twin-Therm® built up wall cladding system. 2100m² using Colorcoat HPS200 Ultra® in Sargasso and 3341m² Colorcoat Prisma® in Metallic Silver.

Energy Savings:

130,000 kWh

CO₂ Savings:

32 tonnes per year.

When Vale Borough council granted Patrick Properties planning permission for a new warehouse and office development in Winsford, Cheshire, it came with a renewable condition. 10% of the developments energy consumption for all of the 5 proposed units of the site must be met through on site renewable energy sources.

Patrick Properties set out to find the most efficient renewable for the project, originally a Biomass system was chosen to achieve the tough renewable target, but following a feasibility study of all the buildings in question it was found to be capital intensive.

CA Building Products proposed to Fletcher Architects the use of a SolarWall® perforated Transpired Solar Collector (pTSC), to be installed onto the south western elevation of the largest unit (unit A) providing solar heated air to a combined heating and ventilation system servicing the buildings multi-story office areas.

SolarWall® is an innovative solar air heating system that uses solar radiation

to distribute naturally warmed fresh air into a building.

The principle of SolarWall® is simple. Installed as an additional skin to a building's southerly facing elevation, the system consists of a pre-finished steel sheet with thousands of tiny perforations uniformly spaced across the full face of the collector. As solar radiation strikes the surface of the SolarWall® it is absorbed. Solar heat conducts to the thermal boundary layer of air which lines the outer surface of the panel. The heated boundary layer of air is then drawn through the perforations into an air cavity which is created between the SolarWall® and the original elevation behind; it is then collected at the top of the elevation before being distributed into the building.

From the air cavity, the fresh, solar heated air can then be used directly as building ventilation air, or if required utilised as a pre-heater for the building's main heating system, thereby reducing

Twin-Therm®

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the amount of energy required to heat the building and the resulting CO₂ emissions.

The estimated potential energy savings from the SolarWall® system on this project was sufficient enough to provide the full 10% energy requirement for the whole site and not just unit A, which, as a result guaranteed Patrick Properties planning consent from Vale Borough Council.

Installed by GM Services the 580m² SolarWall® (pTSC) was supplied using Corus Colorcoat HPS200 Ultra® in Sargasso, with enhanced topcoat and primer formulation in Corus Colorcoat HPS200 Ultra® provides superior durability and colour performance.

The SolarWall® system is estimated to save Patrick Properties more than 130,000 kWh in energy and 32 tonnes of CO₂ per year.

CA Building Products also supplied 9849m² of the Twin-Therm® built up roof system using Colorcoat HPS200 Ultra® in Goosewing Grey and 5441 m² of the Twin-Therm® built up wall cladding system using Colorcoat HPS200 Ultra® in Sargasso and Colorcoat Prisma® in Metallic Silver from Corus.

The Twin-Therm® system delivers exceptional thermal performance due to the continuous insulation allowed within a construction by the unique, patented, Therma-block® and Therma-bar® spacer system, which decrease the installation time and reduce the scope for installation errors.

CA's Twin-Therm® systems are tested to BS476 and further tested to LPS1181 offering a FireTight non-combustible system build up.

Both the Twin-Therm® and SolarWall® systems are now available with the Corus Confidex Sustain® Guarantee, ensuring all of the unavoidable carbon emissions created throughout the entire life of the cladding systems,



cradle to cradle, is offset by investing in environmental projects worldwide.