Case Study

Designing with Renewables

"Trying something new" wins awards on Sainsbury's building

ProLogis Developments and Sainsbury's decided from the outset that their 60,000 m² distribution warehouse at Pineham in Northampton would set new standards for sustainable construction – and the panel of judges for the World Business Green Business Awards have given their seal of approval that the mission was well and truly accomplished.

ProLogis were rewarded with two awards: "Most Efficient Green Business" and "Best Overall Green Business", while CA Group's SolarWall® perforated Transpired Solar Collector won the award for "Best Use of Product Design" for its involvement in the Pineham project.

Andrew Brewster [Technical Services Design Engineer], CA Group SolarWall® Design Engineer said "We're delighted that World Business have recognised the true value of specifying simple and effective renewable technologies like SolarWall®, which has been proven to produce annual heating cost savings of up to 64% and can provide up to 20% of a building's energy requirements. But the real praise has to go to ProLogis and Sainsbury's for their foresight in specifying the system".

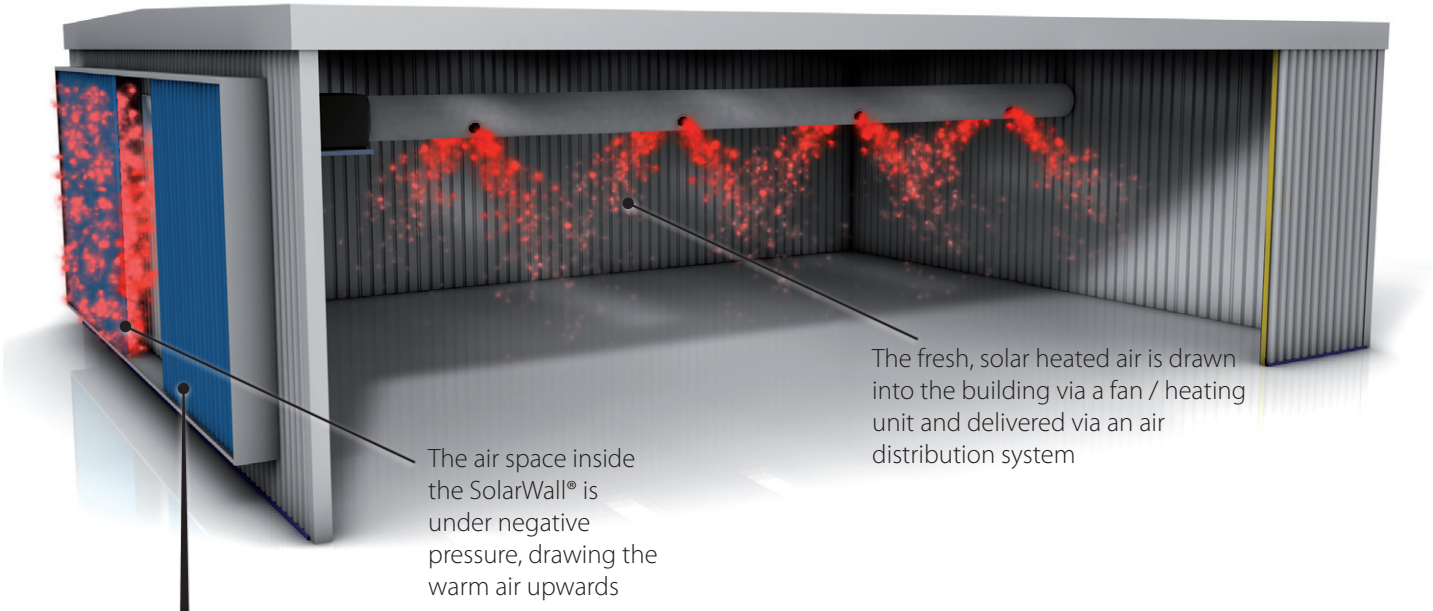
In many applications, SolarWall® more than satisfies the 10% renewable energy target set by the Merton Report by delivering up to 20% of a buildings total heat energy requirement in its own right.

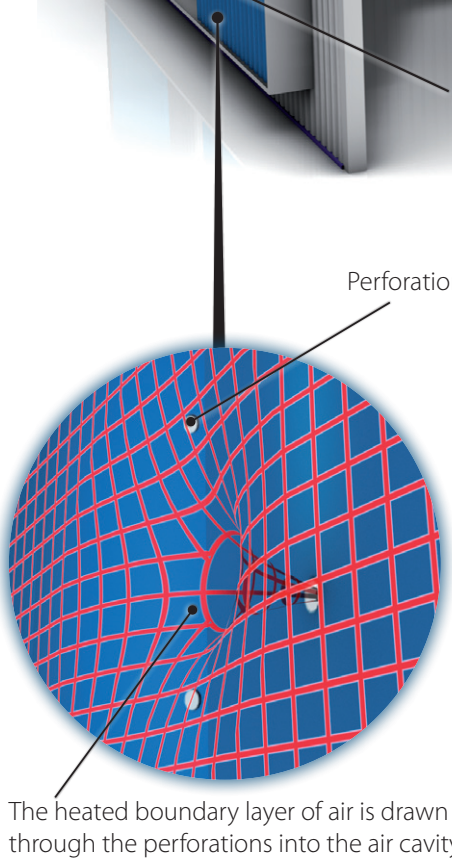
The SolarWall® perforated Transpired Solar Collector using Corus Colorcoat Prisma® in Alaska Grey and the Twin-Therm® built up roof and wall cladding system using Corus Colorcoat HPS200® Ultra in Goosewing Grey were provided CarbonNeutral as part of the Corus Confidex Sustain® Guarantee, which ensures that all of the unavoidable carbon emissions created throughout the entire life of the SolarWall® and Twin-Therm® systems, cradle to cradle, are offset by investing in environmental projects worldwide.

The SolarWall® perforated Transpired Solar Collector is an unglazed solar air heating system, which heats external air via a southerly facing solar collector. The system consists of a dark outer cladding sheet that is perforated to allow air to pass through its surface into a pre-determined cavity.

As it enters the perforations, external air absorbs heat gain from a boundary

What is SolarWall®?





air layer warmed by solar radiation. The warm air rises within the cavity to the top of the wall from where it is drawn into the building via a ventilation fan delivering free, fresh, heated air into the building. No gas and minimal electricity is required hence significant reductions in CO_2 can be gained, delivering true, economical, socially responsible, environmentally friendly heating.

During the warmer summer months the SolarWall® collector acts as a 'sun screen', shading the building from direct solar gain, significantly reducing convective heat gains through the wall. The heated air captured within the cavity is then naturally exhausted away from the building and fresh ambient air can be drawn inside through a summer by-pass damper.

Confidex SUSTAIN

The SolarWall® technology was first developed in the early 1980's but due to the low cost of energy; motivation to invest in the technology was minimal. As the product has evolved and with the upsurge in energy costs and global warming issues, demand for the product has increased significantly.

SolarWall® can be specified with Colorcoat HPS200 Ultra® and Colorcoat Prisma® from Corus. Colorcoat® benefits from Corus quality and expertise built up over 40 years of manufacture and development, and offer long-term performance with the most comprehensive guarantees available.

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