THORN
LIGHTING

LADYLOAN SCHOOL, UK

Case Study

LADYLOAN PRIMARY SCHOOL

Thorn aids effective learning at Ladyloan Primary School

Thorn Lighting has supplied a range of fittings to Ladyloan Primary School, Arbroath, Angus for use throughout the facility. A key criterion for the lighting was that it should provide a comfortable and pleasant working environment for children and staff, whilst aiding effective learning and social interaction and increasing energy savings, with the use of LED's.

The school is at the heart of a project to create education facilities fit for the future and has been constructed within the existing grounds in order to minimise disruption to children and staff. This is the 99th new school to be built as part of Scotland's £1.8bn Schools for the Future Programme which is managed by the Scottish Futures Trust.

The school comprises of 11 classrooms, early years' facilities, GP rooms and ancillary accommodation alongside associated sports pitch, landscaping, parking and drop-off zone. Ladyloan also has dedicated ASN facility

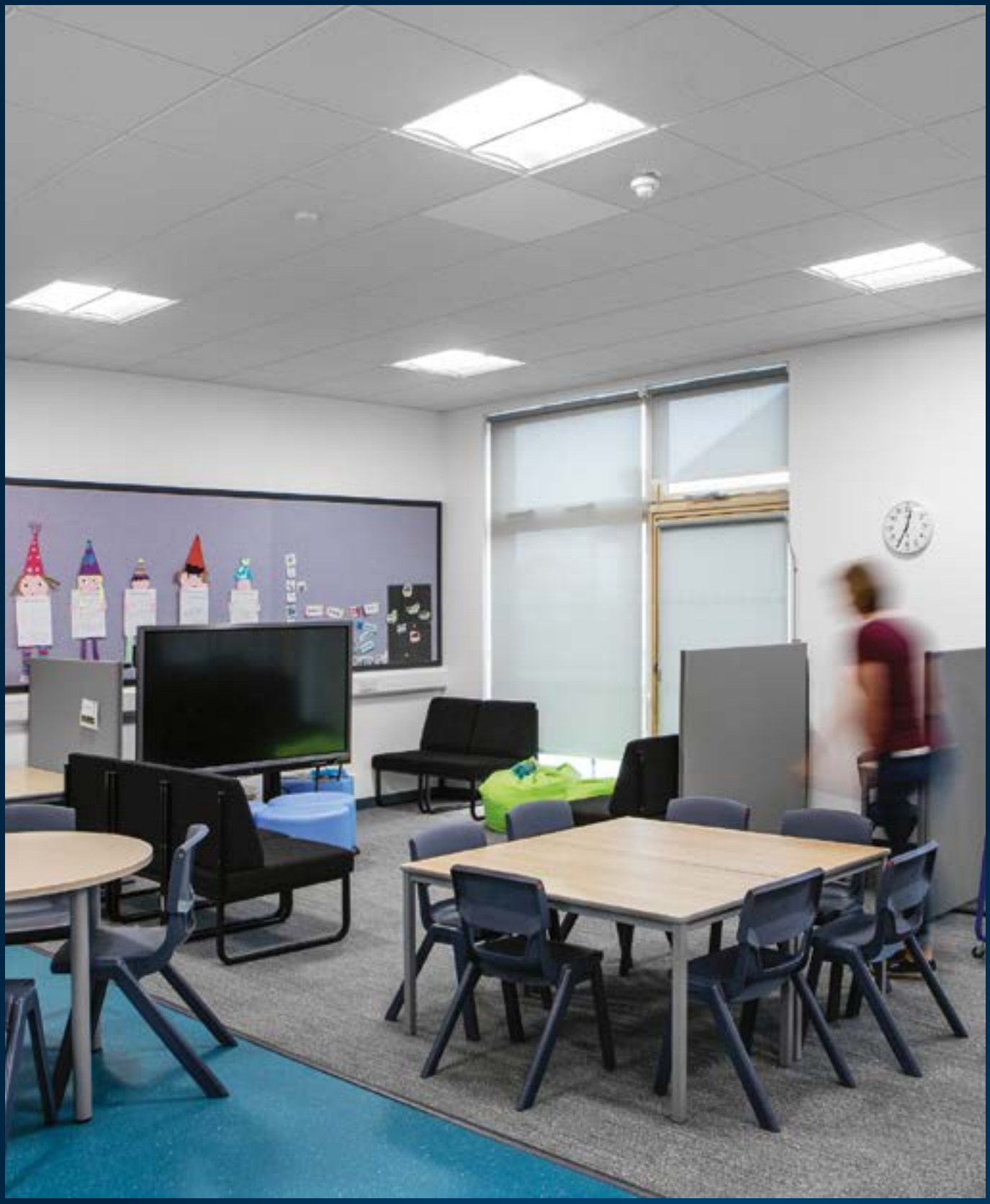
To create the desired environment, Thorn's next generation IQ Wave 600 x 600, recessed luminaires were chosen for the classrooms. IQ Wave is a smart recessed LED luminaire that focuses on intelligent controls, optics, design and installation, creating a smooth, homogenous illuminance with no visible LED. Low glare (UGR 19, <3 000 CD/m^2 at 65°) ensures a comfortable ambient light while high efficacy (>100Llm/W) achieves significant energy savings in comparison to traditional light sources. IQ Wave provides excellent lighting quality, high user comfort and a guaranteed communicative learning environment.

Thorn's Beta Office, an alternative recessed panel which bridges the economic gap between LED technology and conventional light sources, was chosen for the offices, whilst Cetus LED was installed in corridors and toilets. As a recessed LED downlight sealed to IP44, Cetus LED has been designed for one for one replacements of traditional compact fluorescent downlights. HiPak Pro LED, a highly efficient, robust and low maintenance high bay has been installed in the Gym to provide 18500 lumens and achieve significant energy savings when compared to the original high bays.

For the kitchen area, Duoproof LED sealed, recessed luminaires specifically designed for food production and clean room applications have been installed. Offering IP65 rated protection to prevent any ingress of substances from the ceiling void, Duoproof has retention cords that hold the diffuser for ease of maintenance. In other areas of the school Omega LED, Voyager, Aquaforce and Leopard LED bulkhead fittings have been installed.

PopPack LED has also been incorporated into the scheme to provide up to 67% reduction in energy consumption, when compared to the traditional fluorescent alternatives and lumen packages from 3000 to 6500lm. PopPack LED also boasts superior glare control and uniformity via a new textured prismatic diffuser. The versatile Olsys street lantern, which employs a state-of-the-art LED engine for performance and efficiency, has been chosen for the exterior of the facility. Olsys delivers exceptionally low cost of ownership with an optimised heat management system that provides a lifetime up to 80,000 hours (L70, 25°).

Thorn has achieved the cost effective, energy saving school with a high quality finish specified in the brief from Angus Council and created an educational environment that is sympathetic to all of the users. Gemma Boggs, education delivery director at Scottish Futures Trust (SFT), commented: "This is a very exciting time and Ladyloan is a great example of the evolution of school design that has been seen over the programme. They promote the creation and delivery of world-class, learning environments that not only meet future educational needs but the communities they serve as well".



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