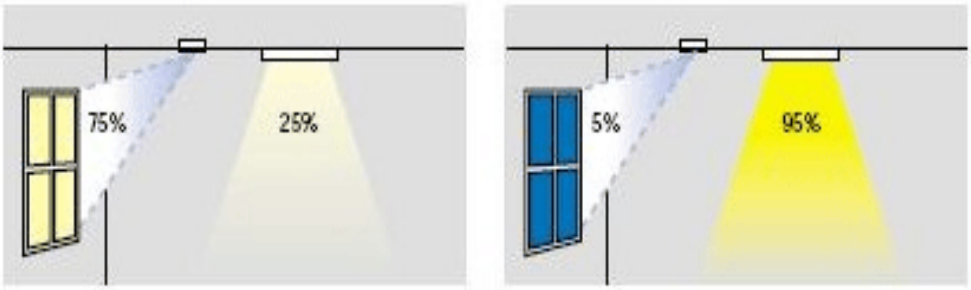
This Month

We observe the effects of Daylight Harvesting

Daylight Harvesting is an extremely useful, energy saving control that can be integrated into our LED lighting products or via a separate PIR/Occupancy sensor. Daylight Harvesting works by sensing the amount of natural light coming into a building and then modulates its power consumption to suit the Lux level required. Most buildings have natural light sources so by using Daylight Harvesting with LED lighting the savings could be huge.



Daylight Harvesting via a separate sensor

JT Atkinson in Hartlepool are a great example of savings achieved using the Daylight Harvesting system. JT Atkinson are an independent builders merchant specialising in building and roofing supplies, their Hartlepool site is one of the longest standing branches, supplying the Hartlepool town for over 35 years. Our partner Energy Oasis (an energy service company) first contacted JT Atkinson to help them find energy efficient solutions to reduce business costs and become a more profitable company. One way of doing this was by switching their existing lighting to energy efficient LED lighting.

The LumiOPTIMA and LumiROD LED products were installed throughout JT Atkinson's warehouse. The integrated Daylight Harvesting system in the luminaires provides maximum savings. The Daylight Harvesting system maximised savings by automatically dimming the light output due to the large skylights in the roof of the warehouse that provide natural daylight.
The picture (right) shows the skylights in combination with the LumiOPTIMA's.

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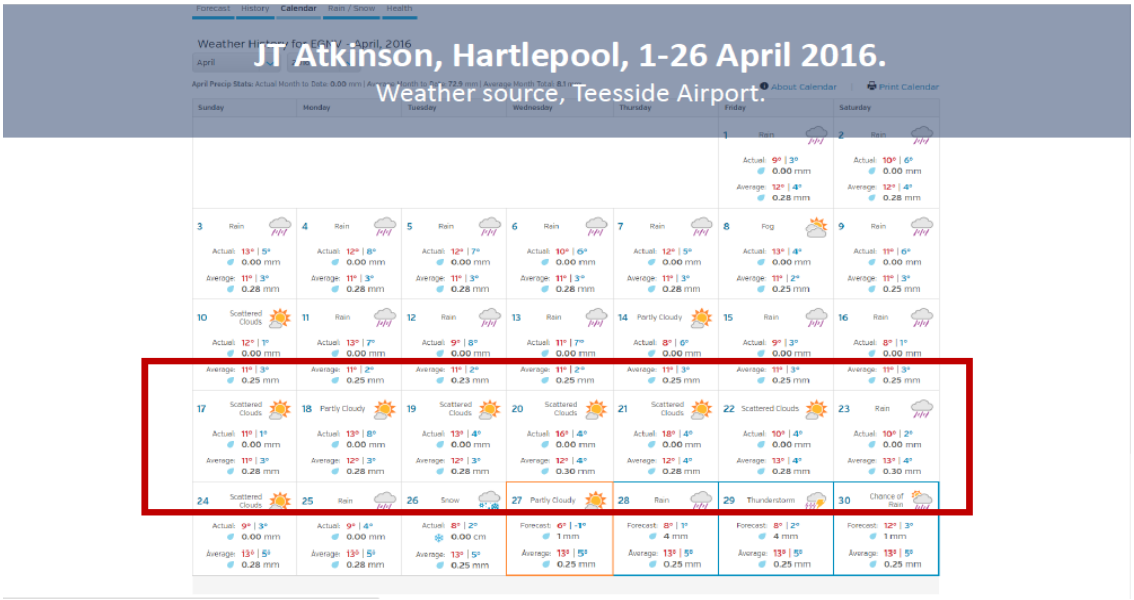
Energy Oasis monitored JT Atkinsons energy usage before and after the LED installations through an energy monitoring system.



As you can see from the data above and below, Energy Oasis monitored JT Atkinson's energy usage from the 1st—30th April 2016. To see the full effects of Daylight Harvesting there needs to be a full sun period (weather source—Teeside Airport). Using data from the 17th—23rd we can see what effects the sun had on the Daylight Harvesting system.

The table below shows the overall energy consumption in kWh (Kilo-watt hour) for the whole month. We can see between the 1st - 16th April JT Atkinson's energy usage was an average of 125kWh or above, the lowest energy usage during this period was when JT Atkinson was closed (weekends). During the full sun period (17th-23rd April) there was a decrease in energy usage of around 30%. This decrease in energy usage came from the Daylight Harvesting system adjusting the power consumption to suit the required lux level.

Therefore, by using natural resources i.e. the sun and integrating the Daylight Harvesting system with Low Energy Designs low-energy LED lights could provide huge energy reductions during sunnier periods, maximising your savings further.