

**LEEDS EAST ACADEMY, WEST YORKSHIRE**  
**BRETT MARTIN DAYLIGHT SYSTEMS**



At the new Leeds East Academy in West Yorkshire, Mardome dome rooflights from Brett Martin Daylight Systems have helped to provide a lighter, brighter and healthier, more functional internal teaching environment – whilst reducing demand for electric lighting and thereby lowering CO<sub>2</sub> emissions and running costs.

Designed by Maber Architects, the 1,100 pupil school was constructed in just 60 weeks using a revolutionary room pod system – free-standing and entirely structurally independent from the 8,450 square metre building envelope.

Aiming to achieve a BREEAM rating of Very Good, the school required a number of sustainable initiatives to keep environmental impact and running costs to a minimum.

As well as a solar PV system, lighting controls and a combined heat and power (CHP) plant, some 17 Mardome Trade rooflights, 13 measuring 1800mm x 1800mm and 4 measuring 1500mm x 1500mm were specified to provide free natural daylight in communal areas. The room pods achieve the standard required daylight factor of 2, while the corridors and communal areas – generously top-lit from the Mardome rooflights – achieve an impressive daylight factor of 5.5.

Mardome rooflights, supplied with the standard Mardome kerb and ideal for use with the single ply roofing membrane, have helped to transform the internal environment of the building. Glazed in opal, which provides a more diffused daylight and prevents solar glare, the rooflights help achieve an ideal learning environment within the school and comply with energy efficiency and performance targets in line with stringent building regulations.

For this project, Mardome Trade models were specified with their low rise glazing profile and energy efficient design. At Leeds East Academy thermal performance was absolutely crucial and the triple skin Mardomes helped satisfy the requirements of Part L with a U-value of 1.8 W/m<sup>2</sup>K and achieve the necessary BREEAM credits.

Eight of the rooflights were also supplied with acoustic packs to restrict noise from the local residential area and other school buildings. Consisting of an acoustic absorbing liner within the rooflight cavity and a clear acoustic lining panel, the acoustic pack reduces rain noise penetration (LiA) from 61.8dB to just 46.7dB, a reduction of over 15dB, reducing noise levels by two thirds.



Now complete, Leeds East Academy was successfully delivered for more than £5 million less than its original 2010 Building Schools for the Future (BSF) budget. With the specification of Mardome rooflights adding value to both the aesthetic and thermal performance of the school, Brett Martin has helped to deliver an educational facility that is fit for the future.



Daylight Systems

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