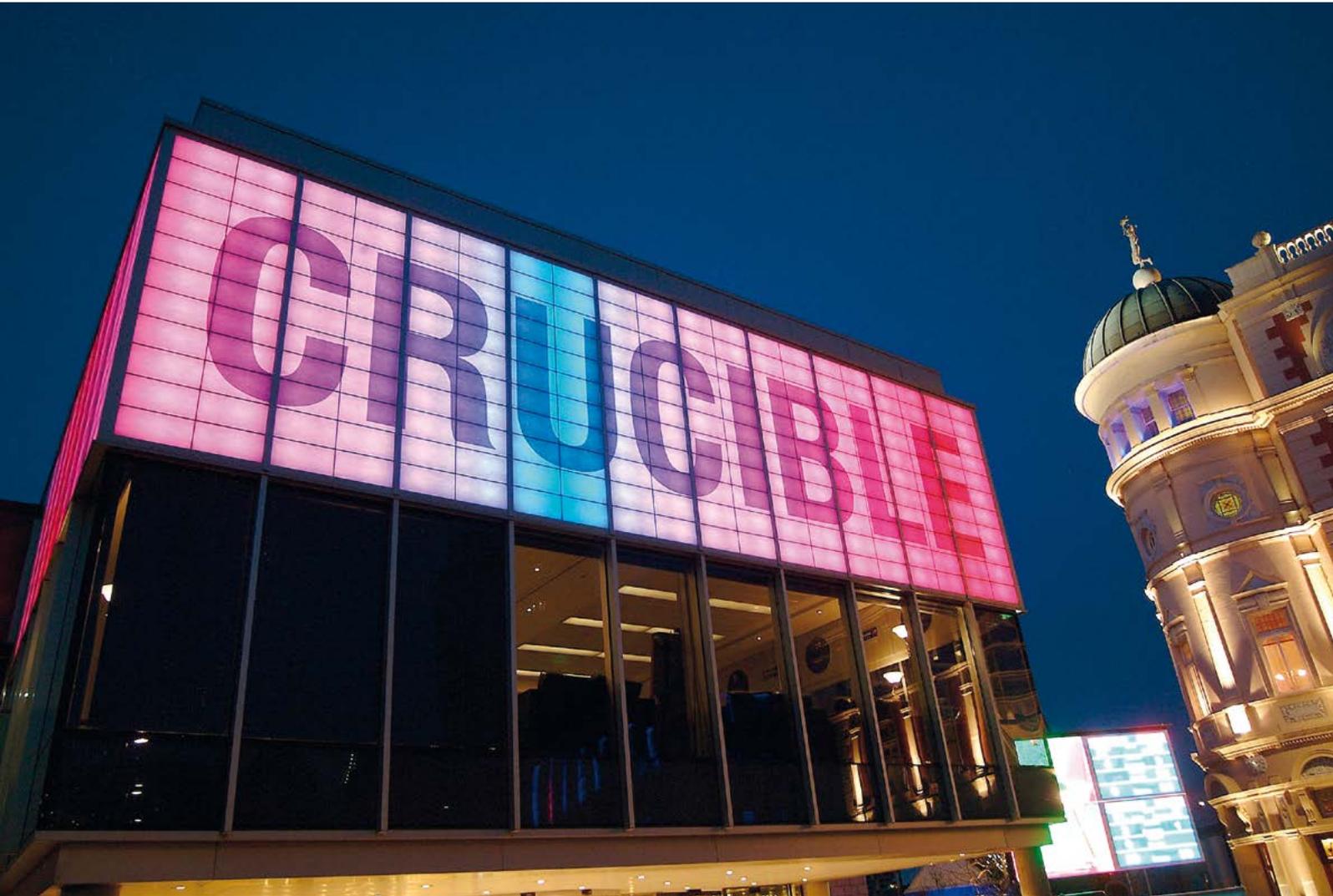




Kalwall® and Backlighting



The Crucible Theatre, Sheffield (Burrell Foley Fischer LLP)

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In contrast to high performance diffusion of natural daylight by Kalwall during the day, artificial lighting at night gives the cladding an ethereal glow. Designers are deliberately exploiting this powerful feature to create stunning and colourful visual effects for highlighting and promoting buildings. This is achieved using Kalwall with an exterior face supplied in Crystal or White. A Crystal finish provides a higher intensity light with more contrast while a White exterior face sheet reduces the visual contrast on the elevation. Backlighting can be accomplished in one of three ways:

UPLIGHTING:



TFL International, Preston (Studio BAAD)



WALL WASHING:



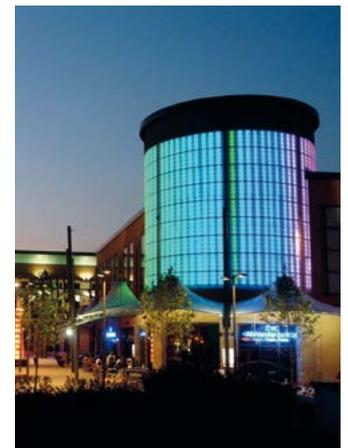
Regional Traffic Control Centre, Haydock (Atkins)



RGB COLOUR CHANGING BACKLIGHTING:



Dominoes Pizza, Milton Keynes (Q2 Architects)



Merry Hill Shopping Centre, Brierley Hill (FSC Consulting)

Backlighting in Practice

LIGHTING UP RESEARCH

The Design Prototyping and Testing Centre (DPTC) is one of the latest buildings in Rotherham's Advanced Manufacturing Park. Founded by the University of Sheffield in association with companies such as Boeing and Rolls-Royce, it was built to establish new standards for manufacturing research facilities worldwide.

Designed by Bond Bryan architects, the building's BREEAM Excellent rating was achieved using a variety of concepts including Kalwall translucent wall cladding.

The Centre is designed as an office contained within a single rectilinear volume. Here researchers working at their desks are able to view the large scale workshops from a high-level office mezzanine thereby giving an intimate relationship between the two types of space.

Widely used for cladding and roofing, the highly insulating Kalwall system is unique in the way in which it transmits Museum-Quality Daylighting™, flooding the interior with natural diffused daylight while reducing the reliance on artificial lighting. It not only eliminates glare and shadows but creates a stunning interior ambience.



A GREAT PICTURE INSIDE AND OUT

Following the complex extension and conversion of an existing office block in London's Crouch End, a new Picturehouse Cinema has been created by Panter Hudspith Architects. The project forms part of a wider initiative within the Borough of Haringey, designed to re-establish the area as one of London's cultural and arts centres and has been nominated in the New London Architecture Awards for Culture and Community projects.

The unique style of this four-screen cinema has attracted much interest, not only because of the dramatic transformation but also because of its new external elevation. Here, Panter Hudspith Architects have replaced the original curtain wall and specified Kalwall. Unusually, this unique translucent cladding is fitted with a tight 150mm wide grid, known as Verti-Kal. On this scheme the Kalwall panels reduce Solar gain to a G value of just 0.12, reducing the reliance on the air-conditioning systems to maintain a comfortable internal environment.

Unlike conventional glazing, Kalwall eliminates shadows and glare and the stark contrasts of light and shade. The system also enhances simplicity by eliminating the need for blinds, curtains or solar control. Even on cloudy days, the interior is bathed with natural daylight, which means less artificial lighting therefore reduced energy costs.



What is Kalwall?

Kalwall, developed and manufactured in the USA for over 60 years, is a highly insulating, diffuse light transmitting building panel system for walls and roofs and can be used for daylighting spaces from small units to large areas of up to 30 metres. The primary component is a translucent structural composite sandwich panel formed by permanently bonding specially formulated fibreglass sheets to a grid core constructed of interlocking thermally broken extruded aluminium 'I-beams'.

Panels are factory prefabricated to the exact size and configuration for each project. Panels can be flat or

curved while opening or fixed glazed window units can be incorporated using the integral Clamp-tite™ installation system. Kalwall's unique composition combines to reduce solar gain while at the same time maximising thermal insulation. Kalwall diffuses light so efficiently that even direct sunlight is converted into even illumination with reduced glare. Kalwall is able to transmit large amounts of usable daylight into a space with relatively low levels of light transmission. Panels can be selected to transmit various percentages of light according to individual project requirements. Kalwall has been tested according to the procedures of EN13830:2003 – Curtain Walling Product Standard for CE Marking.

