



## Kalwall® and Low Maintenance



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One of the inherent benefits of Kalwall is its low maintenance – its life cycle cost.

A good example of this is in Stratford. This was the UK's very first experience of Kalwall's UV resistant weathering surface and is installed on the Jubilee Line train maintenance 'super-shed' at Stratford Market Depot in East London. Designed by Wilkinson Eyre Architects in the mid-90s, this exemplar project is still significant because it demonstrates Kalwall's low maintenance and cost effective performance because it has not required major attention for two decades. More recent mass transport projects include the new Translink facility in Belfast as well as many railway and bus stations.

All current Kalwall System standard exterior faces are full thickness, colour stable and include a permanent glass erosion barrier with a self-cleaning surface. Normal rainfall will keep Kalwall free of dust and dirt. In addition, as the face sheet weathers, the resin retains its colour. Periodic washing using normal detergents (without the need for heavy 'goggle and glove' cleaning materials) can help keep the surface clean.

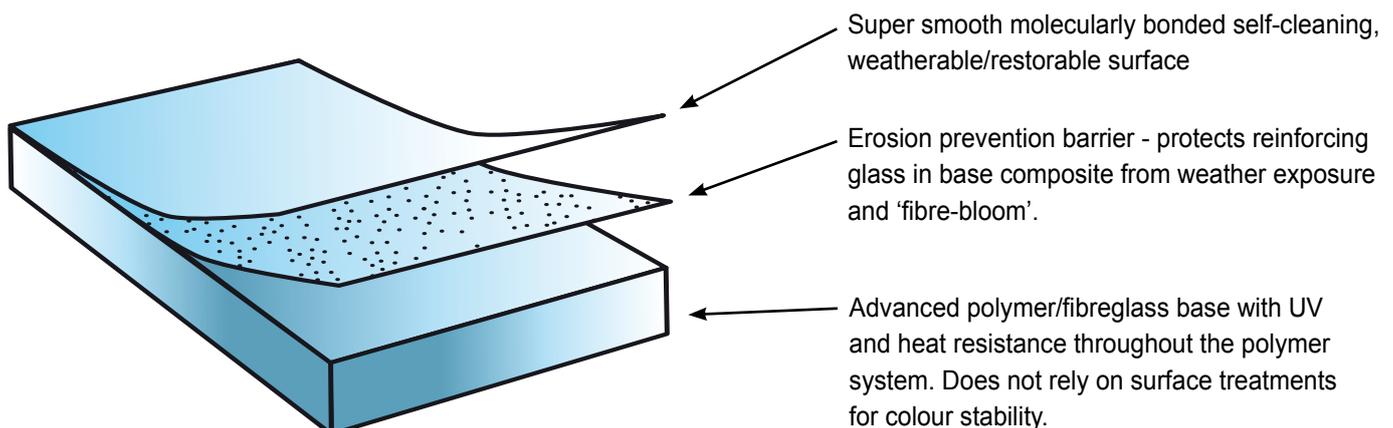
Kalwall is resistant to dirt and particulate build-up and can handle harsh chemical and environmental exposure. The system has been tested to European Technical Approval (ETA) standard and Structura offers a 25 year limited warranty.

The major causes of degradation in commercial fibreglass reinforced polyester materials, polycarbonates and other thermoplastics are ultra-violet radiation, heat, thermal shock and weathering erosion. These conditions may result in the decomposition, colour change, cracking and crazing, loss of light transmission and 'fibre-bloom' of some products.

Kalwall, however, does not rely on superficial, sacrificial coatings, films or 'gel coats' to protect the external face sheet (which would need to be periodically renewed). Kalwall's UV stability is built in to the full thickness of the outer sheet, so that unsightly yellowing and loss of light transmission is prevented.

In addition to Kalwall's excellent UV stability, the external face sheet is engineered so that the glass fibres cannot migrate to the surface or cause unsightly 'fibre-bloom'. This is achieved by the inclusion of a continuous glass veil erosion barrier under the surface of the sheet which encapsulates the fibres.

The final weathering treatment on the external sheet is the inclusion of a low-coefficient friction coating to enhance water and dirt run-off so that cleaning requirements are minimised.



# Low Maintenance in Practice

## LIVERPOOL SOUTH PARKWAY

A good example of the benefits of low maintenance Kalwall can be seen here at Liverpool South Parkway.

Given its dangerous location above railway tracks and overhead power cables, architects ESG needed to find a material which required very little exterior maintenance as this would severely disrupt services. Consequently Kalwall was specified as its impact-resistant, self-cleaning surface means there is no downtime where power needs to be shut off and platforms closed.

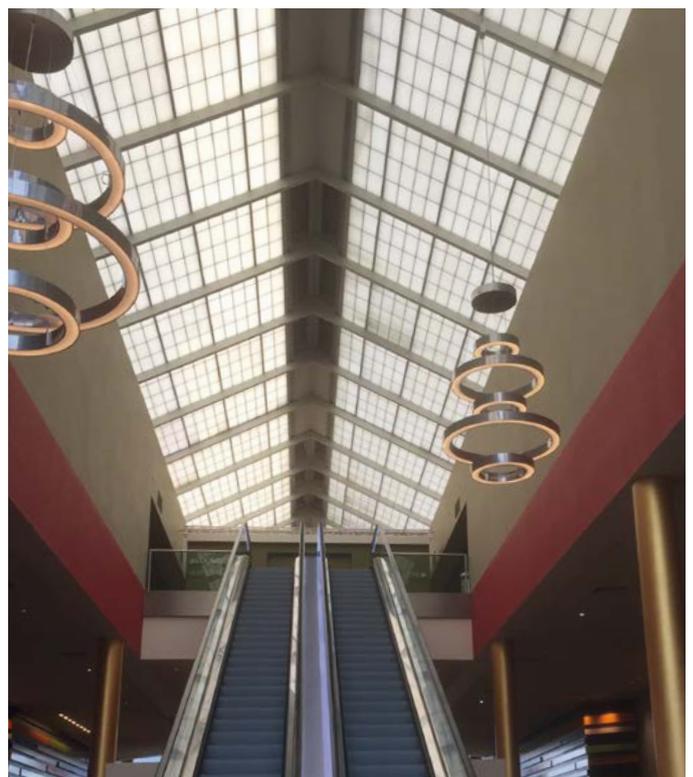
At night, the facade is transformed by its artificial light into an attractive glowing feature.



## A SHOWCASE FOR KALWALL

Another great example which highlights Kalwall's life cycle and low maintenance is the Showcase Cinema in Reading. The picture on the left shows Kalwall after installation in 1999 and below right shows the system in 2016.

Seventeen years on and the Kalwall is as bright as ever - all with minimal maintenance!

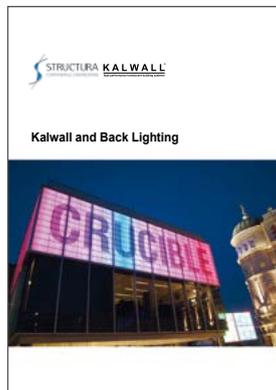
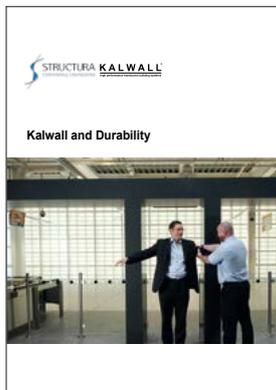
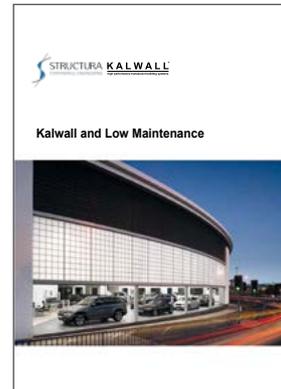
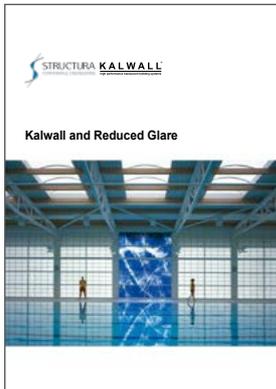
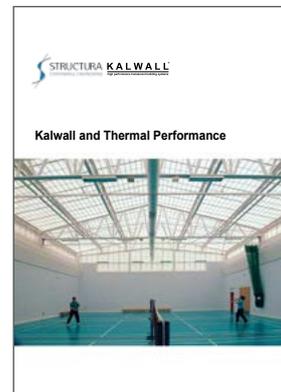
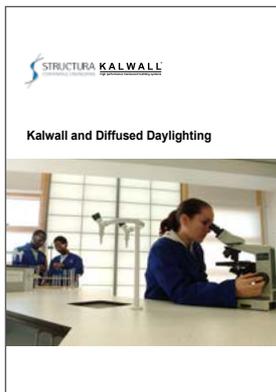


# What is Kalwall?

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 (from small units up to 30 metre monumental daylighting). 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.



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Structura UK is the leading supplier, fabricator and installer of glass curtain walling, rainscreens, glass atria, windows and other architectural glass building products. The company is also the exclusive distributor for Kalwall translucent daylight building systems in England, Wales and Northern Ireland.