

Project Report

Featherstone High School

London, UK



Architecture: DSP Architecture

Photography: Alex Upton

KALWALL®

high performance translucent building systems

KALWALL SPECIFICATION:

Panel: 4" | 100mm

Grid core: shoji

Exterior FRP: crystal

Interior FRP: white

System finish: bronze #85

U-Value: 0.08 | 0.45 Wm²K

Solar Heat Gain Coefficient: 0.04

Visible Light Transmission: 5%

WHAT IS KALWALL?

A translucent, structural sandwich panel that provides:

Glare-free, balanced daylighting

Superior thermal performance

Energy + electricity saving

Low maintenance life cycle requirements

Safety + security through visual privacy

Durability + graffiti / vandal-resistance

Hurricane, explosion venting + blast rated options



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For unparalleled thermal performance in translucent daylighting, consider specifying Kalwall with **CABOT's Lumira®** aerogel insulation. Available in 2.75" (70 mm) panel formats up to: 4' x 12' (1200 mm x 3600 mm) and 5' x 10' (1500 mm x 3000 mm) maximum.

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A SYSTEM FOR CONTINUED EDUCATION

Studies show there is a high correlation between daylighting and increased human comfort and productivity. That is one reason Kalwall® translucent sandwich panels are often specified to refurbish school buildings, such as the main teaching block at Featherstone High School, providing a better environment for young students.

This 1958 concrete framed building, located in Southall, Middlesex, was failing due to decay and ingress of water, and needed structural stabilization. DSP Architecture was appointed to repair and encapsulate the frame, resulting in a stunning transformation into a very modern teaching block befitting its outstanding Ofsted rating and complementing the other new school buildings.

The renovation required the removal of the old concrete spandrel panels and repairs to the concrete structure. Kalwall panels were installed and supported on a new steel frame, which was added to extend the floor space.

The two fully-replaced elevations are a perfect example of how Kalwall can be used for the refurbishment of an older building with a failing curtain wall. The new facades allow floor to ceiling diffused and healthy daylight to flood the interior, while providing privacy for students and removing any distractions. An integrated row of clerestory windows provides ventilation and limited views to the outside. Kalwall eliminates all shadows and glare, as well as the stark contrasts of light and shade which not only reduces eye fatigue, but also enhances concentration.

The system also allows for simplicity by doing away with the needs for blinds, curtains or solar control. Even on cloudy days, Kalwall allows for ample daylighting, which means less artificial lighting. And, because Kalwall is highly insulating, energy costs are reduced.

The build was completed in two phases over the course of a year while the school continued to operate. Time and money was saved by using Kalwall Unitized Curtain Walls, which are assembled and glazed at the factory. Once delivered to the site, these large units can be installed rapidly, allowing the building to be enclosed quickly and interior work to commence earlier. The ability to keep the school functioning while the work was completed meant minimum disruption to staff and students.

Geraldine Walder project architect at DSP comments:

"The client specifically requested Kalwall for this project after seeing how well it worked on our previous project for the adjoining 6th form building. The advantage of it being fabricated off-site meant disruption and time on-site were minimized while the combination of high insulation, natural daylight and ventilation means reduced energy costs."

Awards:

Entered for The Architect's Journal:
School Project of the Year Awards 2017



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