



EDUCATION

Innovative window, door and curtain wall solutions
for new-build and refurbishment **primary, secondary**
and **higher education** projects



SENIOR ARCHITECTURAL SYSTEMS



our **innovative** products enjoy a proven heritage within the education sector

Senior Architectural Systems offer a complete range of integrated windows, doors and curtain wall systems, alongside product experience, training, support and sourcing, to ensure an end to end solution.

Our team of experienced architectural advisers, together with our technical services department, are always available to advise on all issues relating to specification, technical data and calculations, value engineering options and any other matters that aid in taking your project from concept, through design and specification, to completion.

We are well known for our unique down-to-earth cooperative approach. Fabricators, architects and contractors around the UK tell us that's why they choose to deal with Senior rather than anyone else.

Providing nationwide coverage in every aspect, we are happy to meet to discuss your project, whether you are planning a classroom extension, a modular school building, or a regional schools programme. Our range of innovative, high performance systems offer many design options, whilst maintaining a market leading competitive edge, enabling us to bring savings to overall build costs where we are involved from an early stage.

For more than thirty years we have been successfully involved in many educational projects, both new build and refurbishment, and are always pleased to be associated with bringing aesthetically pleasing, comfortable, low maintenance buildings to fruition, aiding the education of today's students, from primary school through to university degree.

primary education

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secondary education

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higher education

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a focus on education

The classroom environment continues to evolve with the increased use of technology and networking. The classroom is no longer limited by physical walls, but all schools still have them!

The built environment provided in schools continues to be subject to study, to ascertain what factors influence the learning process and students' perception of their learning environment. As such, the classroom environment has seen dramatic changes in recent times, with designers looking to provide a far more stimulating and engaging atmosphere.

With the ever increasing consumer and technological age we all live in, the impact on certain elements of a building have proved a challenge for architects and designers.

The team at Senior enjoy the challenge of helping to solve these problems and revolutionising the industry, challenges such as:

- / **Daylight** - increasing need for natural daylight
- / **Noise** - location of a building from traffic or aircraft noise
- / **Ventilation** - the provision of adequate ventilation is now paramount
- / **Durability** - the use of suitable hardware for high use
- / **Automation** - entrance doors
- / **Access** - disabled and visually impairment assistance
- / **Security** - restricted access and enhanced security features
- / **User safety** - anti-finger traps
- / **Flexible environments** - the ability to use areas flexibly
- / **Thermal performance** - the increasing need to provide improved performances





after more than thirty years in
business we are known for
the **effectiveness**
of our approach



Senior Architectural Systems is one of the largest and most respected fenestration systems companies in the UK today.

We offer an extensive range of Aluminium architectural façade systems, plus we have our own powder coating facilities, and fleet of eco delivery vehicles. So whatever your budget, deadlines, performance specification or design, we have an answer to fit.

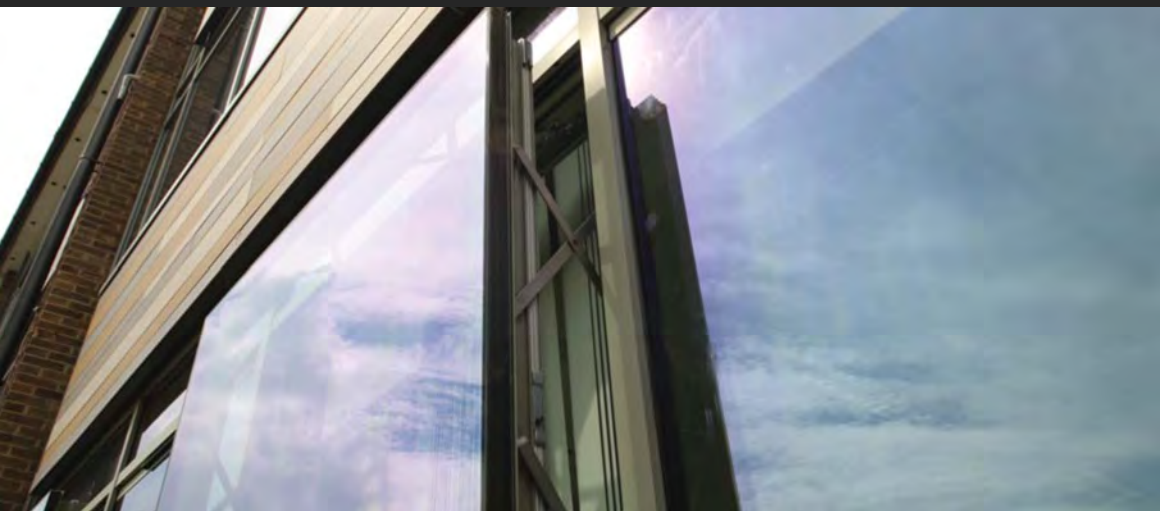


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typical products

Senior is proud to have developed one of the most extensive, innovative and effective range of products on the market today.



SPW600/e Windows

SPW600/e is a three chamber, 75mm polyamide thermally enhanced aluminium window system offering versatility (wide variety of window styles) and is available in single or dual colour.



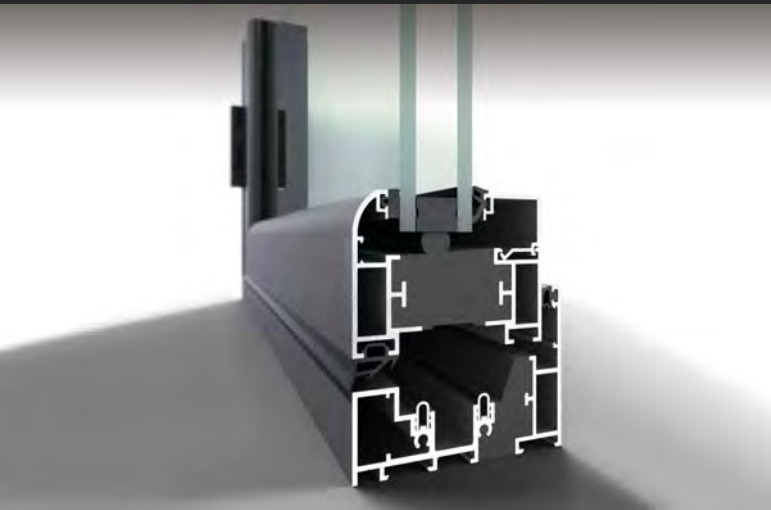
SPW501 Doors

Commercial thermally broken aluminium door with enhanced design options offered by a clip and flush mullion section in a choice of widths.



Aluminium Curtain Wall

A range of curtain walling systems, providing a wide variety of aesthetics and excellent thermal performance for both ground floor and high rise projects.



PUR^e® Windows & Doors

A revolutionary new range of aluminium windows and doors with an expanded polyurethane thermal barrier giving exceptional thermal performance.





a focus on **education**

PRIMARY EDUCATION

The Early Years form the foundations of our children's future education and the inclusion of Special Educational Needs drives the need for an adaptable and flexible learning environment. Challenges in the primary sector can be as diverse as:



The use of open out windows at lower level present a health and safety issue to passing/playing children if nearby.

Low sill heights of windows improve aesthetics and the learning environment.

Colour choice – schools can choose house colours or colour demarcation for visual impairment or way finding.

Access and inclusion issues can be addressed, such as low door thresholds, door widths and ramps, automation of doors and windows and use of Building Management Systems.

Doors can also have latch lever handles and higher thumb turns for teachers, which have been approved for use as secondary fire escapes.



case study

PRIMARY EDUCATION

ABBEY GRANGE CAMPUS

The recent refurbishment of the ageing Abbey Grange Academy in Leeds integrates subtle shades of timber cladding with Senior Architectural Systems' SCW curtain wall and parallel push casement windows. In addition to providing uninterrupted sight lines across the elevation for improved aesthetics, the parallel push window system facilitates a highly efficient natural ventilation system by drawing fresh air from the bottom of the window and expelling stale air from the top, improving air circulation in the most demanding environments. Restricted to 100mm, the parallel push casement windows offer greater security and safety.

Architect:

> Farrell & Clark

Main Contractor:

> R N Wooler & Co

Installer:

> Aire Valley Architectural

Products:

> SCW curtain wall

> Parallel push windows





case study

PRIMARY EDUCATION

MARLBOROUGH ROAD ACADEMY

Senior Architectural Systems' thermally efficient SPW600 window system was chosen by Urban Vision (a joint venture partnership between Salford City Council, Capita and Galliford Try) to replace over 100 windows of various sizes and configurations, giving the school, which opened in 1880, a much needed facelift, and making it a more comfortable environment in which to learn.

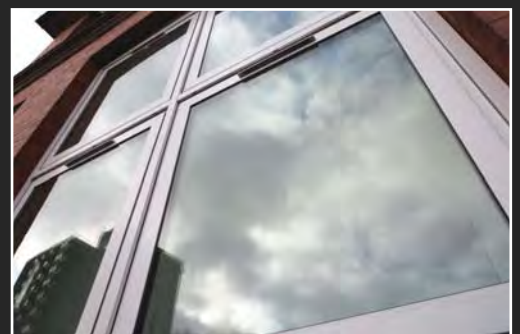
To retain the building's original Victorian aesthetics, whilst increasing the amount of daylight, bespoke vents were fabricated and glazed into SCW+ thermally enhanced curtain walling over four metres high and 2.2 metres wide with no interim supports.

The robust SD door system, which is fully compatible with both the SPW600 windows and SCW+ curtain wall was installed throughout the school.



Installer:
> T A Anders

Products:
> SPW600e windows
> SD doors
> SCW+ curtain wall





a focus on **education**

SECONDARY EDUCATION

With the foundation of education in place, students are progressing but also facing their own unique challenges as they grow and mature. Inclusion and safety are important as they are challenged to develop their potential and become the best they can be. The buildings themselves can help this by providing bright, light, flexible learning and breakout zones, with particular elements such as:

Robustness of window and door furniture.

Acoustics.

Entrance foyer and controlled access.

Flexible learning areas can impact on facade design and interface detailing.

Colour choice – school can choose house colours or colour demarcation for visual impairment or way finding.

Access and inclusion issues can be addressed such as low door thresholds, door widths and ramps, automation of doors and windows and use of Building Management Systems.





case study

SECONDARY EDUCATION

STOURBRIDGE COLLEGE

The cutting edge and bold architectural design for this 3,800m² three-storey building, featuring dramatic angles and a vast frontage, incorporates Senior Architectural Systems' powder coated aluminium range of curtain wall and window systems. The glass fronted atrium forms a gallery showcase for exhibiting college sculpture and artwork.

Achieving a 'Very Good' BREEAM rating, the building is naturally ventilated and has solar shading where required, with the whole envelope insulated to very high standards to

minimise energy costs. The remarkable design presented several challenges. Its extreme angular form is an aesthetically appealing and visually arresting piece of architecture, but it meant that each pane of glass across the nine expanses was of a different dimension.

Now complete, the 1,000 pupil campus houses the college's art and design, textiles, fashion, graphics, illustration, and digital media facilities



Architect:

> **Pick Everard**

Main Contractor:

> **BAM Construction Ltd**

Installer:

> **Acorn Aluminium Ltd**

Products:

> **SCW Curtain Wall**

> **SPW300 Windows**





case study

SECONDARY EDUCATION

LEICESTER COLLEGE

A feature entrance area dominates the unique design of Leicester College, part of the Leicester Building Schools for the Future programme (BSF). Constructed by Miller Construction and designed by Aedas architects, Leicester College is just one of a programme of 21 secondary schools in the BSF. The design was based on a T shape structure, with three skewed teaching wings protruding from the longest leg of the building.

Designed with sustainability as a key issue, emphasis was placed on natural ventilation and solar shading. Senior's SPW600e windows were chosen for the 12,700m² building, together with large expanses of SCW curtain walling. To assist in the solar shading, a large overhang by way of the steel frame was constructed to the south facade. This enabled the designers to achieve the demanding targets set by the Council for carbon reduction thereby reducing U-values, improving the quality of natural light and ventilation, and reducing heat loss.



Architect:

> **Aedas Ltd**

Main Contractor:

> **Miller Construction Ltd**

Installer:

> **Acorn Aluminium**

Products:

> **SPW600e windows**

> **SD doors**

> **SCW+ curtain wall**





a focus on **education**

HIGHER EDUCATION

Choices are in place, and young adults are now furthering their education in the hope that a longed for career will ensue. Higher education facilities now offer much more both in and out of term time, including conference facilities to the business sector, dedicated faculty needs, sport and leisure facilities and refectories. The adaptable environment needs remain:

Larger budgets can offer bespoke buildings at the cutting edge of design and architectural capabilities.

More adult occupants throughout the year for both educational and conferences mean break out areas, quiet zones and technology zones become more important.

On campus outdoor areas and social needs also play a part in design, and the use of sliding folding doors can make flexibility simple.





case study
**HIGHER
EDUCATION**

BROOKFIELD BUSINESS SCHOOL

The new Brookfield Business School 7-acre Campus brings together a sympathetically restored, 19th century mansion with a new three-storey three-gabled, copper clad extension and elliptical lecture theatre. Senior's slim profile SF52 thermally enhanced curtain walling and SPW600 Windows were used throughout the extension to create a comfortable, light and airy environment.

For the main entrances, Senior's robust SPW501 Commercial Doors provide both security and longevity for these high traffic areas. This was a complex project which required precision, close co-operation between all sub-contractors and 3D BIM modelling to ensure co-ordination of all the elements involved.

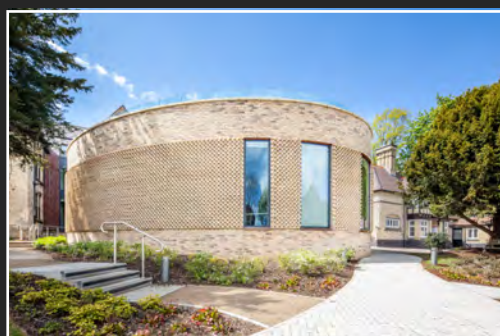


Architect:
 > **Shepherd Epstein Hunter PLC**

Main Contractor:
 > **Henry Boot**

Installer:
 > **Unique Window Systems**

Products:
 > **SPW600 Windows**
 > **SPW500 Doors**
 > **SPW501 Doors**
 > **SF52 Curtain Wall**





case study

HIGHER EDUCATION

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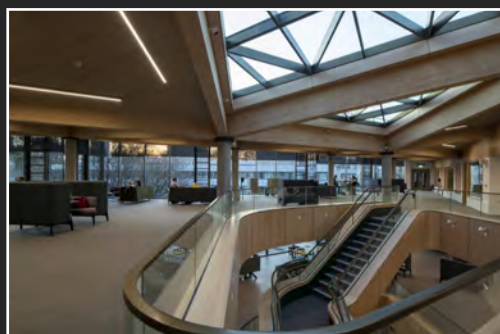


Architect:
**> Shepherd Epstein Hunter
 PLC**

Main Contractor:
> Henry Boot

Installer:
> Unique Window Systems

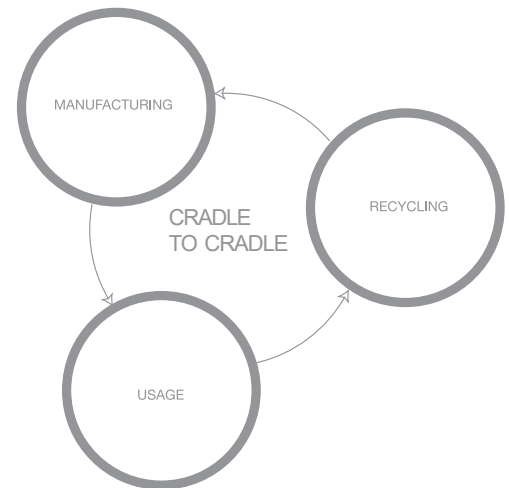
Products:
> SPW600 Windows
> SPW500 Doors
> SPW501 Doors
> SF52 Curtain Wall



protecting your environment

After more than thirty years in business we are well known for our down-to-earth, cooperative approach. Fabricators, architects and contractors around the UK tell us that's why they choose to deal with Senior rather than anyone else.

As well as being totally committed to customer service, we actively work with a green agenda, demonstrating our commitment to the environment for now and future generations.



Sustainable systems

Our systems not only look good, but are sustainable too. Extended life spans and low maintenance, with maximum recyclability and outstanding thermal efficiency, help to make the best use of the world's finite resources.

Responsible sourcing

Our materials are responsibly sourced from reliable suppliers who have good environmental credentials. Wherever possible, we use local UK suppliers to reduce transport miles.

Aluminium systems are manufactured from recycled aluminium and timber is sourced from sustainable forests in main land Europe with full PEFC accreditation. For every tree felled, four are planted to ensure no negative impact on the environment.

BREEAM

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's foremost environmental assessment method and rating system for new buildings, setting the standard for best practice in sustainable building design, construction and operation.

We help architects and specifiers to achieve up to 40 of the 119 BREEAM credits available for new buildings, by careful specification of the fenestration material and glass choice from the Senior range of products, enabling fabricators, installers and contractors to build more sustainable buildings for future generations.

Beyond Senior

Our environmental responsibilities don't end at the factory door. Our Fabricator training includes waste reduction programmes and training on product efficiency and insulation requirements in use, to make sure that current building regulations are met and exceeded where possible.

For specifiers we offer a RIBA approved CPD seminar on 'Designing Sustainable Fenestration Systems' which gives advice on how, with careful design and specification, a BREEAM excellent rating can be achieved.

A bright future

We don't rest on our laurels. Each year we review how we've done and set ourselves new environmental objectives and targets, so that we can continue to improve our environmental credentials year on year.

In addition we are investing heavily in innovative new products with improved U values, with the aim of making the passive house a future reality.



helping you achieve **BREEAM[®] credits**

What is BREEAM?

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's foremost environmental assessment method and rating system for buildings, with 250,000 buildings with certified BREEAM assessment ratings and over a million registered for assessment since it was first launched in 1990. The system sets the standard for best practice in sustainable building design, construction and operation.

Ten categories for a sustainable building

A BREEAM assessment uses recognised measures of performance, set against established benchmarks, to evaluate a building's specification, design, construction and use.

Credits are awarded across ten categories, based on the outcomes of the building assessed. The credits are then combined to provide a single score, achieving either a Pass, Good, Very Good, Excellent or Outstanding overall BREEAM rating.

Senior and BREEAM

Senior Architectural Systems' product range has been developed with BREEAM at its centre. Our systems are proven to help you achieve a credible BREEAM rating. With many BREEAM rated projects already successfully utilising Senior products, we have a wealth of experience to assist the architect/designer in meeting their sustainability goals.



Categories	Credits Available	Senior Architectural products impact
Management	11	No
Health & Wellbeing	14	Yes
Energy	24	Yes
Transport	9	No
Water	9	No
Materials	13	Yes
Waste	7	Yes
Land Use & Ecology	10	No
Pollution	12	No
Innovation	10	Yes
Total	119	

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Senior Architectural is a major UK supplier of fenestration solutions. This brochure is intended to show what makes Senior's unique and how our products and services can make a difference to customers, clients, their projects and the environment.



SENIOR ARCHITECTURAL SYSTEMS

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