

sapa:

buildingsystem

ARCHITECTURAL ALUMINIUM SOLUTIONS

# INSPIRATIONS

Curtain walling, windows, doors, façades and protection systems





## CONTENTS

Our Credentials	5
Our Products	6
The Environment	10
Accreditations and Testing	12
Specifier Interface	16
Finishes	20
BIM Modelling	23
Sectors	24
Project References	31

**Sapa Building System's mission is to provide our customers with leading architectural aluminium solutions that are innovative, energy efficient and environmentally sustainable.**



## OUR CREDENTIALS

Sapa Building Systems Ltd is a major force in the UK fenestration industry. We offer architects, contractors, developers, fabricators, installers and clients a wide range of innovative solutions for curtain walling, doors, windows, façades and specialist applications.

Backed by the resources of a major European group, we develop and market high value-added profiles in aluminium. Our business concept is built on a close co-operation with our customers in Europe, North America, the Middle East and Asia. In the UK, Sapa Group has extensive multi-site extruding, re-melt, anodising and polyester powder coating facilities, offering total control and a fast and co-operative response.



# OUR PRODUCTS



NRGY 62  
Passivhaus Curtain Walling



Avantis 95  
Passivhaus Window



Artline  
Sliding Door

Sapa Building System's products are specifically designed to answer every architectural need. From aesthetics and thermal or weather performance, to off-site and unitised manufacture, we have a solution to every application.

**The increased demands that will be placed on future projects motivate us to think ahead, to anticipate future laws and regulations in a global context.**

Every new product line is subjected to stringent in-house tests in addition to independent external research bodies. In conjunction with pan-European standards agencies, we aim for an objective and undisputed evaluation to ensure that each and every one of our product ranges can be specified with total peace of mind.

*Detailed CAD drawings are available for all of our ranges, including individual profiles or general assemblies.*



Project: Oasis Academy  
Architect: Ian Simpson Architects

## Windows

- Dualframe 75mm Casement
- Dualframe 75mm Reversible
- Dualframe 75mm Si Casement
- Dualframe 75mm Si Reversible
- Dualframe 75mm Si Pivot
- Dualframe 75mm Si Tilt/Turn
- Crown Casement
- Avantis 95

## Curtain Walling

- Elegance 52 ST (Fully Capped)
- Elegance 52 SG (Structural Glazing – Carrier Frame)
- Elegance 52 SX (Structural Glazing – Toggle)
- Elegance 52 SGV (Structural Glazed Vent)
- Elegance 52 HL (Horizontal Lining)
- Elegance 52 GF (Cassette Glazing)
- Elegance 72 (Unitised)
- NRGY 62 Passivehaus Curtain Walling
- Elegance 52 Sloped Glazing

## Ground Floor Treatments and Façades

- 202 Ground Floor Framing
- Dualframe Window Wall
- Stormframe ST II Thermally Broken Framing

## Sliding Systems

- Dualslide Windows
- Confort 125 Sliding Doors
- Confort 160 Sliding Doors
- Dualfold Sliding Folding Doors
- Crown Sliding Folding Doors
- Artline Sliding Doors
- Crown 98 Sliding Doors
- Crown 120 Sliding Doors

## Protection Products

- Secur II Fire resistant screens
- Secur II Fire Resistant Doors
- Powerframe Blast Resistant Windows
- Powerframe Blast Resistant Doors
- Powerframe Blast Resistant Curtain Walling

## Doors

- Dualframe 75mm High Performance Doors
- 202 Commercial Doors
- Stormframe STII Thermally Broken Commercial Doors

## Solar Control Products

- Elegance SC solar shading
- Built in Photovoltaics



# THE ENVIRONMENT, PRODUCTION AND RECYCLING

Environmental issues are, justifiably at the forefront of thinking across the building industry right now. Within Sapa, we are actively looking at responsible and ethical sourcing of raw materials and manufactured products, designing for deconstruction, minimising in-process waste and maximising reuse of building products at the end-of-life stage.



## Mining

The International Aluminium Institute monitors the performance of the overwhelming majority of global bauxite mining and aluminium smelting operations. 97% of these mines are subject to formal rehabilitation plans and agreements, with around 80% being restored to the natural landscape on completion. The area of mining land rehabilitated each year is equivalent to the area of new mining land (EAA 2012 report)

## Smelting

Aluminium is smelted from bauxite and, since the inception of the process, improvements in technology have reduced the energy required by almost 70%. Extensive use of renewable energy in the form of hydroelectric power has enabled the industry to deliver a reduction in CO<sub>2</sub> equivalent emissions of 53% since 1997, despite an increase in primary aluminium production over the same period (EAA 2012 report)

## Sustainable Buildings

Modern aluminium fenestration systems, with their enhanced thermal break designs, provide excellent insulation levels that exceed current energy saving requirements as well as maximising natural light and solar gain potential. Our products and materials are compatible with the requirements of environmental assessment and ratings schemes for buildings such as BREEAM or LEED. Dualframe 75 Si fulfils the Green Guide to Specification criteria for an "A+" rating.

## Recycling

Aluminium is already recognised as a valuable commodity by the construction industry and, across Europe, an average of 95% of the aluminium in buildings is collected for recycling (Delft University Report). With a proven service life exceeding sixty years, a growing worldwide demand that enhances scrap values and an industry that continues to improve its environmental profile aluminium is truly a 'green' product.



Project: Bideford College  
Architect: NPS Southwest Ltd

## Traceability

For special projects, we can offer a range of profiles that are extruded from recycled aluminium. This will enable contractors, specifiers and clients alike to benefit from using a material which has been produced using greatly reduced energy resources without compromising its physical characteristics or the fenestration design.

Within the Sapa Group, we have our own extrusion company, Sapa Profiles. We can therefore control the traceability of these recycled profiles and provide documentary evidence through the supply chain.

The Sapa Profiles Tibshelf plant houses the organisation's re-melt/billet casting operation which re-enforces Sapa's commitment to the environment in scrap recycling.

- 75% of all aluminium produced since the 1880s is still in use
- 70%-98% of aluminium used in today's buildings will eventually be recycled.
- The fundamental properties of aluminium do not change after recycling – a unique property compared to other materials.
- Recycling aluminium uses just 5% of the energy used for the production of primary aluminium.
- Primary sources Bauxite, one of the earth's most abundant natural resources, mined from resources close to the surface, 97% of all bauxite mines in the world today have formal, written rehabilitation procedures in place.
- In 2011, 11 million tonnes of aluminium was recovered globally from existing products.

Source: Council for Aluminium in Building Website, January 2015

*Windows at Bideford College were made from recycled aluminium*

# ACCREDITATIONS AND TESTING

Project: Unite Student Accommodation - St Pancras Way  
Architect: DMWR Architects

The natural result of Sapa's commitment to ongoing product development is a full complement of accreditations. From a company perspective, we are ISO9001, ISO14001, and IIP accredited. Dualframe includes Kitemark, Q-Mark, Secured by Design and Window Energy Rating (WER) approval, depending on the range. Elegance 52 and Elegance 72 Unitised curtain walling systems have both passed testing to CWCT and EN standards at the Vinci Technology Centre.

Full details of product-specific accreditations are contained in the relevant Technical Data Sheet, available upon request. The accreditations shown below are subject to change in line with amendments to British and European standards.



*Elegance 72 Unitised curtain walling undergoing full scale weather performance testing at Vinci Technology Centre.*







Project: Matchmakers Wharf  
Architect: Stock Woolstencroft Architects

## SPECIFIER INTERFACE

Our field based project consultants work closely with our in-house support team to provide specifiers with specialist advice concerning the correct application of products. We can provide guidance on Building Regulations, British and European standards and accreditations as well as BREEAM and the Code for Sustainable Homes and Lifetime Homes. We can also provide details on product performance, usage, maintenance and safety.

Our research and development programme is coupled with an in depth appreciation and understanding of what specifiers are looking to achieve with their project designs. We aim to provide architects and contractors an unparalleled choice of innovative and inspirational solutions with support services to match.

We also understand that the specification process is influenced by client demands to achieve best value and we are therefore keen to participate in site visits, design meetings and project discussions at the earliest opportunity. Design stages can be formalised through written specification documents and supported by samples, literature and drawings for consultation or planning issues.

**Sapa Building System's strategy is to work closely with customers and to identify solutions and services that generate added value**





Project: St Marys College  
Architect: Capita Symonds

## FINISHES

The colour of a façade, entrance screen or run of windows is, literally, the finishing touch to a building. Corporate colour schemes or simply breathtaking swathes of colour create real personalities for landmark projects.

Our polyester powder coating facilities can match any BS or RAL colour and, utilising the natural sheen of the base material, anodised finishes can catch the light and change the appearance of a building as the light changes during the day.

Our team of project consultants are on hand to guide you to the best solution for your needs.





Project: Broadcasting Place  
Architect: Feilden Clegg Bradley



Project: Unite Stratford One  
Architect: DDP Architects

## BIM MODELLING

Building Information Modelling (BIM) is the process of generating and managing data about the building, during its life cycle. Typically BIM uses three dimensional, real time, dynamic building modelling software to increase productivity in the design and construction stages.

BIM enables a virtual information model to be handed from the design team (architects, surveyors, civil, structural and building services engineers, etc.) to the main contractor and subcontractors and then on to the owner/operator; each professional adds discipline specific data to the single shared model. This reduces information losses that traditionally occurred when a new team takes 'ownership' of the project, and provides more extensive information to owners of complex structures.

Here at Sapa Building Systems, we are currently in the process of developing our own BIM models for our products. If you require any more information or access to these models, please contact us on 01684 853500 or email [info@sapabuildingsystems.co.uk](mailto:info@sapabuildingsystems.co.uk)



# SECTORS

We pride ourselves on our ability to work in close partnership with our clients and within their specific areas which, over four decades, has given us vast experience in many different market sectors. Whether you are involved in new build or refurbishment projects, in building maintenance or speculative developments, we have a product solution to meet your requirements. These can be tailored to suit your specific project objectives (whether they be security, safety, durability or thermal efficiency) without compromising the aesthetics of your project design.

**40 years' experience in the UK is augmented by internationally proven product ranges that lead the way in many market sectors.**

Our network of UK fabricators and installers are trained and experienced in both the nature of our products and working to exacting site conditions. We are continually developing new ways of reducing risk on site, including off-site manufacture and active energy conservation and generation.



Project: Greenwich Reach  
Architect: BUJ Architects

# SECTORS

## RETAIL

### From boutiques to shopping outlets

Our curtain walling, ground floor treatments and high traffic doors can be combined to create eye catching entrances and façades where they are most needed to attract consumers. Powder coating to match corporate colour schemes adds an extra dimension to the retail environment.

## LEISURE

### High visibility with low maintenance

Large glazed areas are essential in any sporting complex or arena. Our slim profiles ensure the maximum viewing area and can be used to create façades, atria and glazed roofs. High traffic doors including anti finger trap stiles and low thresholds can be integrated seamlessly.

## RESIDENTIAL

### Bespoke build to multi unit developments

We work closely with our nationwide network of specialist subcontractors to provide locally based manufacturing and installation across the country. With carbon footprints increasingly important to specifiers, this national coverage both reduces embodied energy and ensures a fast and efficient response to changing priorities on site.

## HEALTHCARE

### Specialist hardware reduces risk

From large new build PFI projects to the unification and extension of existing tributary healthcare buildings, our products can facilitate a harmonised look with the added option of anti bacterial paint for reduced risk of infection. Special care units can incorporate anti ligature hardware and entrance doors and are Part M compliant for ease of access.

## SPECIALIST APPLICATIONS

### Safety and security are paramount

Personnel protection is essential in many walks of life these days. Whether the requirement is for fire resistant doors and screens, blast resistant windows, doors and curtain walling or ballistic resistant windows, we have the solution to meet your needs. Our specialist projects division can provide further details on projects completed and test data for all of our Protection Systems.

## SOCIAL HOUSING

### Driving ahead for decent homes

Life cycle costings, durability and ease of maintenance are all core aluminium values. With a wide choice of window and door configurations and locking options, you can be sure that safety and security stipulations can be met.

## OFFICE

### Speculative new build or brownfield redevelopment

Office refurbishments, industrial units and new business parks may have different fenestration prerequisites, but using our versatile, cost effective systems, a corporate appearance can easily be achieved in terms of finish and design.

## HOTELS

### Bespoke solutions to corporate scale

Corporate image is a vital tool in this competitive sector. Our contracted powder coaters will ensure a perfect match for your colour scheme. Meanwhile our thermally broken façade systems will meet current U –Value targets as well as providing stylish entrances and screens.

## EDUCATION

### Market leaders in the sector

As market leader in the education sector, we have an enviable track record in both refurbishment and new build. Our specialist subcontractors are able to work to tight deadlines both during holidays and term time, using decanting schemes to minimise disruption. Robust hardware and fit-for-purpose design help to minimise replacement costs and therefore reduce full-life costs.

## UNIVERSITY

### Building by Degrees

The availability of higher education for a growing population means increased and enhanced facilities are required. From student accommodation to campus buildings such as lecture halls and libraries, we are on fast track timetables in new build and refurbishment projects across the country.

## INDUSTRIAL

### Fast track factory and office developments

With our range of dedicated and tested profiles, functionality and form can be combined to create stunning factory and office complexes, whilst conforming to health and safety requirements as well as budgets. Windows and façade glazing can be incorporated directly into rain screen cladding systems. Elegance SC provides solar control solutions to avoid heat gain and improve the interior environment for building users as well as reducing operating costs.



Project: Peverell Apartments  
Architect: Godel Architects



Project: Wyre Forest Council Civic Offices  
Architect: Broadway Malyan (Birmingham)





Project: Warsaw Academy  
 Architect: Aleksander Mirek/Kontrapunkt

## PROJECT REFERENCES



Project London Gateway  
 Architect Chetwoods Architects Birmingham  
 Product Elegance 52 SX Curtain Walling, Stormframe Door  
 Location London  
 Page 2-3



Project The Panoramic  
 Architect PRP Architects  
 Product Crown 98 Sliding Door, Dualframe Si Tilt/Turn Window, Dualframe Window Wall  
 Location London  
 Page 4



Project Oasis Academy  
 Architect Aedas Architects  
 Product Dualframe Window Wall, Dualframe 75 Si Casement Windows, Elegance 52 Curtain Walling  
 Location Birmingham  
 Page 7



Project St Stephens Place  
 Architect Mountford Pigott Partnership  
 Product Dualframe 75 Si Casement Windows, Stormframe Door, Elegance 52 Curtain Walling SX sloped,  
 Location Trowbridge  
 Page 8-9



Project Bideford College  
 Architect NPS South West Ltd  
 Product Recycled Dualframe 75 Casement Windows, Elegance 52 Curtain Walling, Stormframe Doors, 202 Commercial Doors, Dualfold Doors  
 Location Abbotsham  
 Page 11



Project Unite Student Accommodation - St Pancras Way  
 Architect DMWR Architects  
 Product Dualframe 75 Casement Windows  
 Location London  
 Page 13

# PROJECT REFERENCES



**Project** Welsh Assembly  
**Architect** Austin-Smith: Lord LLP  
**Product** Powerframe  
**Location** Llandudno Junction  
**Page** 14-15



**Project** Greenwich Reach  
**Architect** BUJ Architects  
**Product** Dualframe Reversible, Elegance 52, Dualframe Door, Dualframe 75 Si Tilt/Turn  
**Location** London  
**Page** 24-25



**Project** Matchmakers Wharf  
**Architect** Telford Homes  
**Product** C125, Dualframe Reversible & Dualframe 75mm Si Tilt/Turn  
**Location** London  
**Page** 16-17



**Project** Peverell Apartments  
**Architect** Godel Architects  
**Product** Dualframe Si Casements and Tilt/Turn, and Dualsecure Doors, Curved on plan E52 Corner Windows  
**Location** Jersey  
**Page** 26



**Project** One Angel Square  
**Architect** 3D Reid  
**Product** Elegance 72 Unitised Curtain Walling  
**Location** Manchester  
**Page** 18-19



**Project** Wyre Forest Council Civic Offices  
**Architect** Broadway Malyan (Birmingham)  
**Product** Elegance 52 Curtain Walling and Stormframe Doors  
**Location** Kidderminster  
**Page** 27



**Project** St Marys College  
**Architect** Capita Symonds  
**Product** Elegance 52 Curtain Walling and Dualframe 75 Casement Windows  
**Location** Hull  
**Page** 21



**Project** JCoSS Secondary School  
**Architect** Deacon and Jones LLP  
**Product** Powerframe Curtain Walling, Dualframe 75 Casement Windows  
**Location** Barnet  
**Page** 28-29



**Project** Broadcasting Place  
**Architect** Feilden Clegg Bradley  
**Product** Dualframe Window Wall, Dualframe 75 Tilt/Turn Windows, Elegance 52 Curtain Walling  
**Location** Leeds  
**Page** 22



**Project** Warsaw Academy  
**Architect** Aleksander Mirek/Kontrapunkt  
**Product** Elegance 72 Unitised Curtain Walling  
**Location** Poland  
**Page** 30



**Project** Stratford One  
**Architect** DDP Architects  
**Product** Dualframe 75 Si Casement Tilt/Turn  
**Location** London  
**Page** 23



**Project** The SSE Hydro  
**Architect** Foster + Partners  
**Product** Bespoke Elegance 52 solution  
**Location** Glasgow  
**Page** 34-35

# INSPIRATIONS

Curtain walling, windows, doors, façades and protection systems

All of the installations featured in this brochure use Sapa architectural aluminium solutions.



## SAPA BUILDING SYSTEM

Sapa Building Systems Ltd is a member of the worldwide Sapa Group, which has over 23,000 employees, in more than 40 countries across the globe. We develop and market high value-added profiles in aluminium and are the leading independent producer of aluminium profiles in the world.

Our business concept is built on a close co-operation with our customers - in Europe, North America and Asia. In the UK, the Sapa Group has extensive multi-site extruding, re-melt, anodising and polyester powder coating facilities, offering total control and a fast and co-operative response.

**Aluminium Curtain Walling, Solar Shading, Photovoltaics (BIPV), Protection Systems, Windows and Doors**

### SAPA BUILDING SYSTEMS LTD

- Severn Drive, Tewkesbury, Gloucestershire. GL20 8SF  
T +44 (0) 1684 853500 | F +44 (0) 1684 851850 | E [info@sapabuildingsystems.co.uk](mailto:info@sapabuildingsystems.co.uk)
- The Building Centre, 26 Store Street, London. WC1E 7BT  
T +44 (0) 208 636 4186

