smart
architectural aluminium

Working with Specifiers Towards A Sustainable

BUILT ENVIRONMENT

WINDOW AND CLADDING TECHNOLOGIES
CAB
bsi. ISO 9001 Quality Management
bsi. ISO 14001 Environmental Management
bsi. OHSAS 18001 Occupational Health and Safety Management

OUR DETERMINATION

to continually develop new, exciting designs and innovative production methods is matched only by our ongoing commitment to the environment and our community.

Environmental Policy & Accreditations

Over 35 years, Smart Architectural Aluminium has grown to become the UK's leading aluminium systems company, earning a reputation for product innovation, design and technical expertise and quality service.

Located in Yatton, North Somerset our impressive 45,000m² purpose-built premises house our extrusion, powder coating, warehousing and distribution facilities. Employing over 300 people, we have an annual turnover in excess of £80 million.

We are fully committed to working towards a greener environment and to ensuring that every aspect of our activities, from the procurement of raw materials to the delivery of finished goods, is conducted in accordance with sound environmental practices and in line with UK and EU environmental regulations and legislation.

We aim to promote an understanding of environmental issues among our staff, customers, suppliers and stakeholders in the context of our business, recognising our responsibilities to deliver long term, sustainable benefits to our people and the local community.

Our common task is to ensure that we continually improve the environmental impact of our total global activities.

This policy has been developed by the company in recognition of its responsibility towards safeguarding the environment, and we publish this statement as a shared commitment by both the directors and staff to minimise the environmental impact of our operations.

Eddie Robinson
Managing Director

In recognition of the impact of our activities Smart has attained and continues to maintain the following accreditations:

ISO 9001:2008 Quality Management Systems

ISO 14001:2009 Environmental Management Systems

ISO 18001:2007 Occupational Health and Safety Management Systems

Environmental Principles at the Heart of Development

Following our relocation to a green field site in 2005, and subsequent expansion in 2011, the third phase of our long-term expansion programme will be completed in 2015. With the installation of a third aluminium extrusion press and second paint line, the development will add around fifty percent to our overall manufacturing capacity.

Throughout each of these development phases, the potential impact on the local environment was placed at the heart of the planning process. We undertook extensive reviews to evaluate all aspects of the development works, including the impact on local wildlife and habitat, the safe capture of waste materials and the impact of our additional activities on the local community.

This process led Smart to make a serious commitment to the environment and to apply for, and successfully attain ISO 14001:2009 Environmental Management Systems certification. As an ISO 14001 company, we regularly re-evaluate our procedures and working practices to ensure that we continually work to minimise the impact of our activities on the environment.

WORKING TOWARDS A CARBON **NEUTRAL OPERATION**

achieved through a combination of efficient machinery, effective environmental management systems, waste capture and recycling and the use of sustainable power generation.

Efficient and Environmentally Friendly Production

Our Aim

We plan to achieve this through a combination of investment in efficient machinery, effective environmental management systems, waste capture and recycling and the use of sustainable power generation.

- **Working Towards Carbon Neutral Production**
  It is our aim to achieve a carbon neutral production operation.
- **Sustainable Power Generation**
  As part of our aim, we are committed to generating 100% of our power requirements from renewable natural resources.

MAXIMISING QUALITY WHILST MINIMISING ENVIRONMENTAL IMPACT

Smart Architectural Aluminium are leading the way with the greenest manufacturing operation of it's kind in the country.

Extrusion Press

Smart continues to invest in state of the art extrusion equipment. Operating one 8" 2,200 tonne and one 8" 2,500 tonne extrusion press, the installation of our third extrusion press (a 6" 1,500 tonne press) in 2015, sees our total production capacity increase to 30,000 tonnes per annum.

Our extrusion presses utilise state of the art manufacturing software to minimise production waste, whilst maximising the efficient use of aluminium billets. 100% of waste aluminium from the extrusion process is captured and recycled into aluminium billets ready for production.

- **Reducing Energy Consumption**
  We have invested in the most modern extrusion presses that recycle the heat generated in the aging furnace to pre-heat extrusion dies. This significantly reduces the equipment's power requirement.
- **Recycled Aluminium Billet**
  Up to 30% of the aluminium used in our profiles is extruded from recycled aluminium billets.

Powder Coat Paint Line

Our two horizontal powder coating paint lines are the most advanced of their kind in the UK, with a combined production capacity of 630m² per hour. We are able to offer a range of standard and non-standard finishes including RAL and metallic fishes, in addition to our own Naturals, Sensations and Alchemy ranges.

- **Chromate Free Pre-treatment**
  Our pre-treatment process is alkaline-based and 100% chromate free.
- **Rainwater Capture and Filtration**
  Our rainwater capture system holds 220,000 gallons of rainwater which is filtered for cleaning prior to use in the pre-treatment process.

  Following use, the water is filtered again before being released into the environment - at this stage, it is cleaner than mains drinking water.
- **Recycling of Ionized Water**
  We continually recycle and reuse the ionized water used in the pre-treatment process.
- **Capture of 98% Excess Powder Used in Powder Booth**
  Using advanced technology, we capture 98% of excess powder sprayed in the powder both – this is then reused in the coating process.

Waste Capture

As an ISO 14001 company, we take the recycling and reduction of waste material very seriously. It is our policy to undertake a regular review process to monitor and identify possible sources of waste material and then put into place systems to capture and recycle this waste where possible.

We operate a comprehensive waste capture and recycling policy for the following materials used in production and packaging:

- Aluminium
- Cardboard
- Polythene
- Paper
- Plastics
- Batteries
- Fluorescent tubes
- PVCu

CASE STUDY

Mount Pleasant

Farringdon Rd, London EC1A 1BB

Summary

Originally built in the 1880s, Royal Mail's Mount Pleasant sorting office has now been modernised, with a major feature of the refurbishment programme being the replacement of the exiting uPVC windows in the main administration building with the Smart Alitherm Heritage window system. The new windows replicate the aesthetics of the building's original bronze fenestration, echoing its slim sight lines and finish (the building originally featured large bronze windows, but in a 1980s refurbishment, these were replaced with white uPVC units).

Each of the Smart window units is an impressive eight metres wide by four and a half metres high and was manufactured in a dual colour format, with the external profile featuring a bronze polyester paint finish and the internal profile standard white.

Given the exceptional scale of each window unit, and their corresponding performance requirement, Smart's technical services team designed and developed a bespoke, 85mm coupling mullion to reinforce and strengthen the system, while retaining its characteristic slim profile. As part of the redevelopment, new Alitherm Heritage windows were also installed around the building's stairwell – these were externally-beaded to allow maintenance to take place without having to access the lift shaft.

CASE STUDY

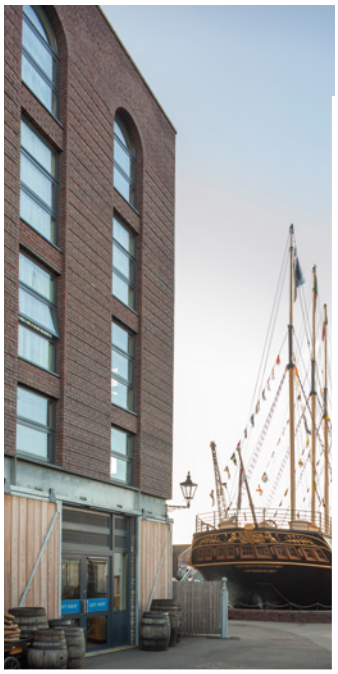
Said Business School

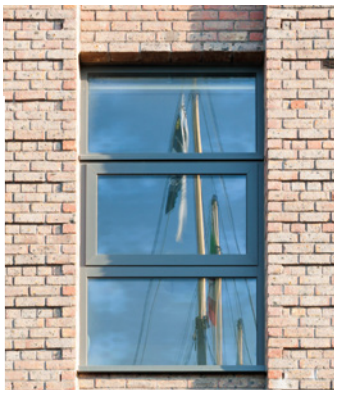
Egrove Park, Kennington Road, Oxford OX1 5NY

Summary

The second phase of Oxford University's Saïd Business School was completed in July 2012 and officially opened in February 2013. A striking feature of the building's external façade is an 8.2 metre run of Smart Visoglide sliding doors, installed in an unusual 'zigzag' formation which makes the internal space extremely flexible, allowing easy movement to a large paved terrace.

Elsewhere, Visoglide doors have also been used to add a feeling of light and space to the meeting and dining rooms, some with access to external and others to internal balcony areas. Continuing the design theme, the Visoline casement and tilt & turn windows and single and Smart Wall double doors were installed where possible without mullions or transoms to accentuate the systems' slim lines. Finally an imposing Smart Wall double door leads students, staff and visitors from the building's reception area to a central staircase and the impressive facilities beyond.





CASE STUDY

ss Great Britain Visitor Centre

Great Western Dockyard, Gas Ferry Road, Bristol

Summary

This high profile project, which was completed in 2010, was part new-build and part refurbishment, with the scheme ultimately delivering a new visitor centre and museum on the site as well as 145 apartments. The new building was designed to reflect Brunel's original Steam Engine Factory that was built in the 1830s, with the brickwork and window and door detailing echoing its original features.

A combination of some 600 Smart Visoline tilt & turn and casement windows and Visoline doors, was installed in the building, with the window combination design producing the look of 'dummy doors' on the building's balconies. The front elevation also appears to feature arch-headed windows, although these are actually square-headed on the inside, with feature panels on the external face forming the arch. Internally, the building's walkways feature narrow window 'strips' in the kitchens of the apartments, allowing light and air into rooms, without compromising privacy.

Aluminium:

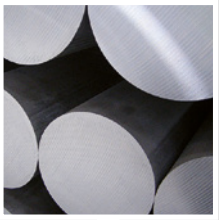
The 'Cradle to Cradle' Lifecycle

Aluminium is commonly referred to as the ultimate building material. It is durable, light-weight, resistant to both corrosion and pollutants giving aluminium products a life cycle measured in decades rather than years. It is 100% recyclable, losing none of its material qualities in the recycling process. Large reserves of bauxite ore and the high quality of recycled aluminium offer a building material that is sustainable and effectively inexhaustible.

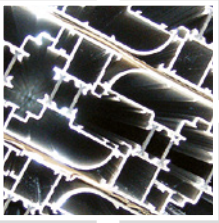
Bauxite Mining

Alumina Production

Primary Aluminium



Manufacture



Installation

Recycling

Recyling aluminium uses only 5% of the energy required to make primary aluminium

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