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architectural engineering



Execa





EXECA

11

Engineering Solutions

architect Branson Coates Architects

client Sheffield City Council

contractor HBG Construction

Execa, the bespoke architectural engineering division of CA Building Products, continues to design and manufacture unique solutions for some of the UK's most prestigious projects. These include the Imaginarium, a breathtaking sphere containing over 10 tons of faceted polished stainless steel panels. For the Stirling Prize winning Magna Centre, steel panels were subjected to controlled oxidation to demonstrate the effect of air and water on the material, and in Birmingham, a unique patinated copper laminate developed into a precision rainscreen wall for a city centre arts complex.

As a member of CA Building Products, Execa has the support of one of the most respected and well-resourced names in the industry. With recent Group investment in excess of one million pounds in state-of-the-art manufacturing and information technology, Execa is well positioned to continue its development of innovative solutions for the building envelope.

Through its involvement with prestigious developments such as the National Centre for Popular Music in Sheffield, to other equally demanding roofing, high rise façade and cladding projects, Execa works closely with architects, specifiers and installers to deliver exciting and unusual engineering solutions.

This brochure showcases eleven of the best.



past projects ▶





5



1 Regatta Centre, London 2000; 2 3-Corn offices, Hemel Hempstead 1999; 3 Swann Morton head office, Sheffield 2001; 4 Rivermill House, London 1999; 5 National Centre for Popular Music, Sheffield 2000.



► case study

1

Imaginarium

► architect Wilkinson Eyre Architects

► client Explore at Bristol

► contractor Woolf Ltd

As part of the waterfront redevelopment scheme in Bristol, the Orange Imaginarium sphere houses a planetarium and provides a stunning focal point for this public space.

At the time of its construction, this unique project represented the largest fully clad sphere in the world. Installed by specialist cladding contractor SCS, more than 400 structurally bonded stainless steel faceted panels were fixed back to an aluminium sub-frame to a tolerance of + or - 2mm. Over 10 tons of mirror finish stainless steel panels were incorporated into the building which was designed as a contemporary focal point within a high profile development.







► case study

2

Magna Centre

► architect Wilkinson Eyre Architects

► client The Magna Trust

► contractor Schal International Management Ltd

This unique visitors attraction houses a series of pavilions dedicated to Earth, Fire and Water. Execa undertook controlled oxidation on a series of curved steel panels for the entrance to the Earth and Fire Pavilion, weathering them for three months prior to arresting the oxidation by sealing with lacquer.

A specially designed stainless steel cladding system incorporating helical, curved panels formed the skin of the Water Pavilion.

The transformation of a disused steel rolling mill in Rotherham presents a unique visitor attraction and an unusual showcase for Execa's engineering abilities.



- 1 Stainless steel cladding to flank wall and water pavillion
- 2 Oxidised steel cladding to earth pavillion
- 3 Oxidised steel cladding to fire pavillion





► case study

3

Cambridge Science Park

► architect Slough Estates

► client Slough Estates

► contractor Slough Estates

Further imaginative developments at this world class science park.

Arguably the foremost science park in the UK, Cambridge Science Park is constructed to a standard commensurate with a world-class client and tenants.

Incubator units, research and office facilities incorporate soffit panels in Alucobond® and curved extruded aluminium fascias, specially designed with a projecting 'C' shaped channel feature which, due to its size and complexity had to be carefully engineered.

The result is a near floating, crisply detailed, lightweight leading edge to the structure, reflecting the precision of the works that are undertaken within.



- 1 Alucobond soffit panels
- 2 Bespoke extruded Aluminium feature channel





► case study

4

Highbury College

► architect Studio 4

► client Highbury College

► contractor Welbro

Completed in just 6 months, around 6000 square metres of Alucobond® was incorporated into this overclad of a 1960's college administration block. In addition to the striking silver cladding panels to the main elevations, a dramatic curved stair tower in contrasting blue and silver Alucobond® has been added.

Green powder coated aluminium fin panels sweeping into a projecting full height soffit panel detail give a futuristic appearance to the building. Alucobond® was selected for its flatness and for its ability to withstand the rigours of a hostile marine environment.

A stunning overclad scheme exposed to the rigours of a coastal environment.





Birmingham Hippodrome

► case study

5

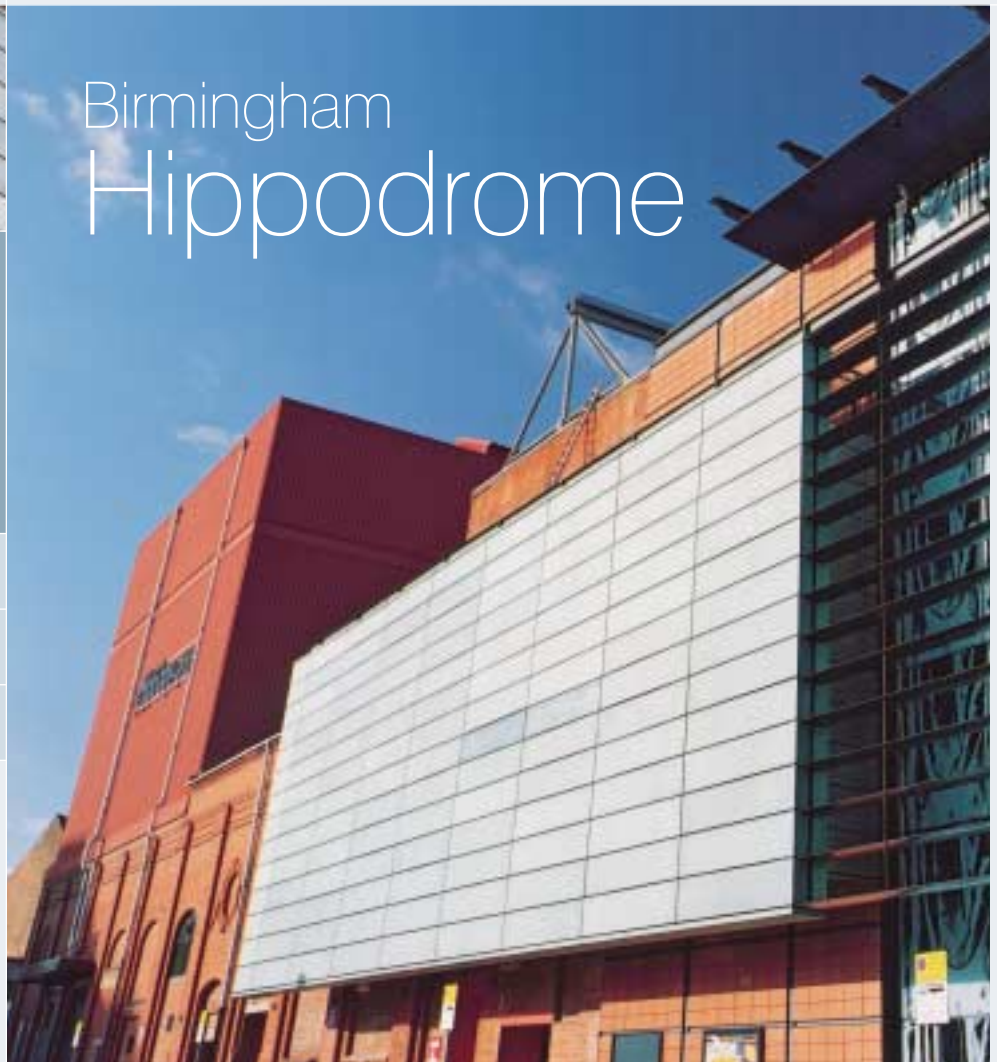
► architect Associated Architects

► client Birmingham Hippodrome Theatre Trust

► contractor HBG Construction (Midlands)

A feature façade of patinated copper panels was used to dramatic effect on this major refurbishment of the historic Hippodrome theatre building in Birmingham city centre.

Designed and developed by Execa, the panels were fabricated from specially constructed oxidised copper laminate. The copper can be factory or on-site patinated to exhibit a variety of ageing effects, using a unique patented chemical process. In this instance the client requested a light patina bloom, that would



continue to evolve and develop with exposure to the natural elements.

Northgate House

To maximise on the commercial value of this prestigious, listed office building in London, a further three floors were planned as part of a major refurbishment programme. The additional loading demanded a lightweight

solution that could only be achieved with the use of aluminium. The façade was designed to complement the original stone clad elevations, and included column casings, cornices and balustrading.



► case study

6

► architect Siddel Gibson & Partners

► client SCS

► contractor Costain Skanska

Manchester United Training Facility

► case study

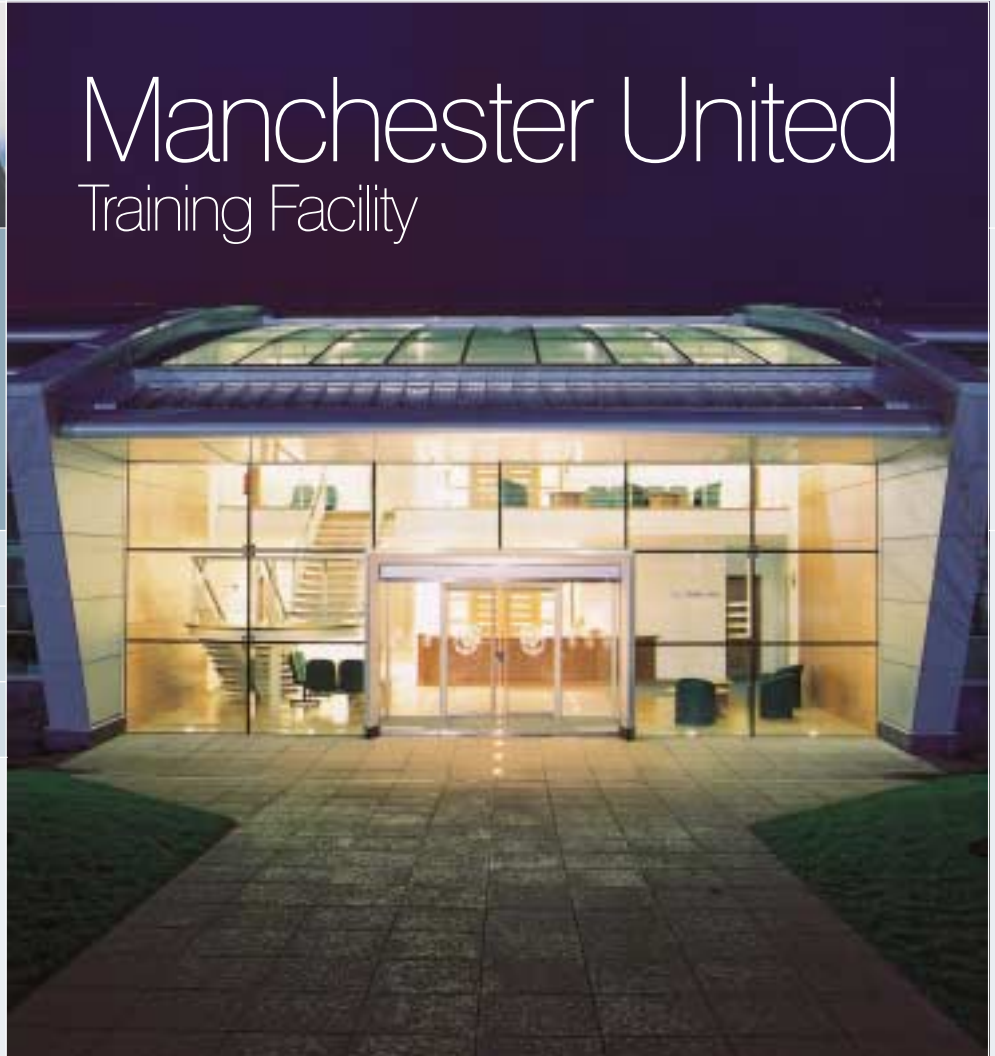
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► architect Atherton Fuller

► client Manchester United

► contractor Laing

A state-of-the-art training facility for Manchester United incorporating powder coated aluminium feature fascia panels to the sloping entrance columns, together with curved bullnose and soffit detailing.



Canada Water Underground Station

► case study

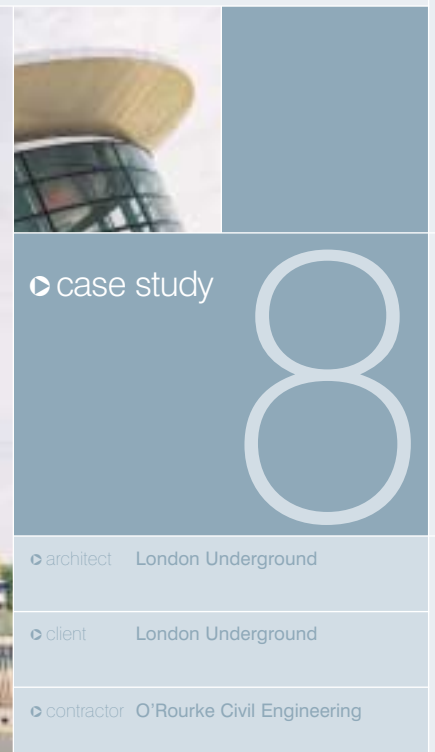
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► architect London Underground

► client London Underground

► contractor O'Rourke Civil Engineering

One of London's new underground stations on the Jubilee Line, Canada Water is a delicate, curved curtain wall façade, surmounted with an apparent 'floating' roof. The mill finish aluminium fascias and soffits are faceted to approximate a true smooth curve.





Plough Place

▶ case study

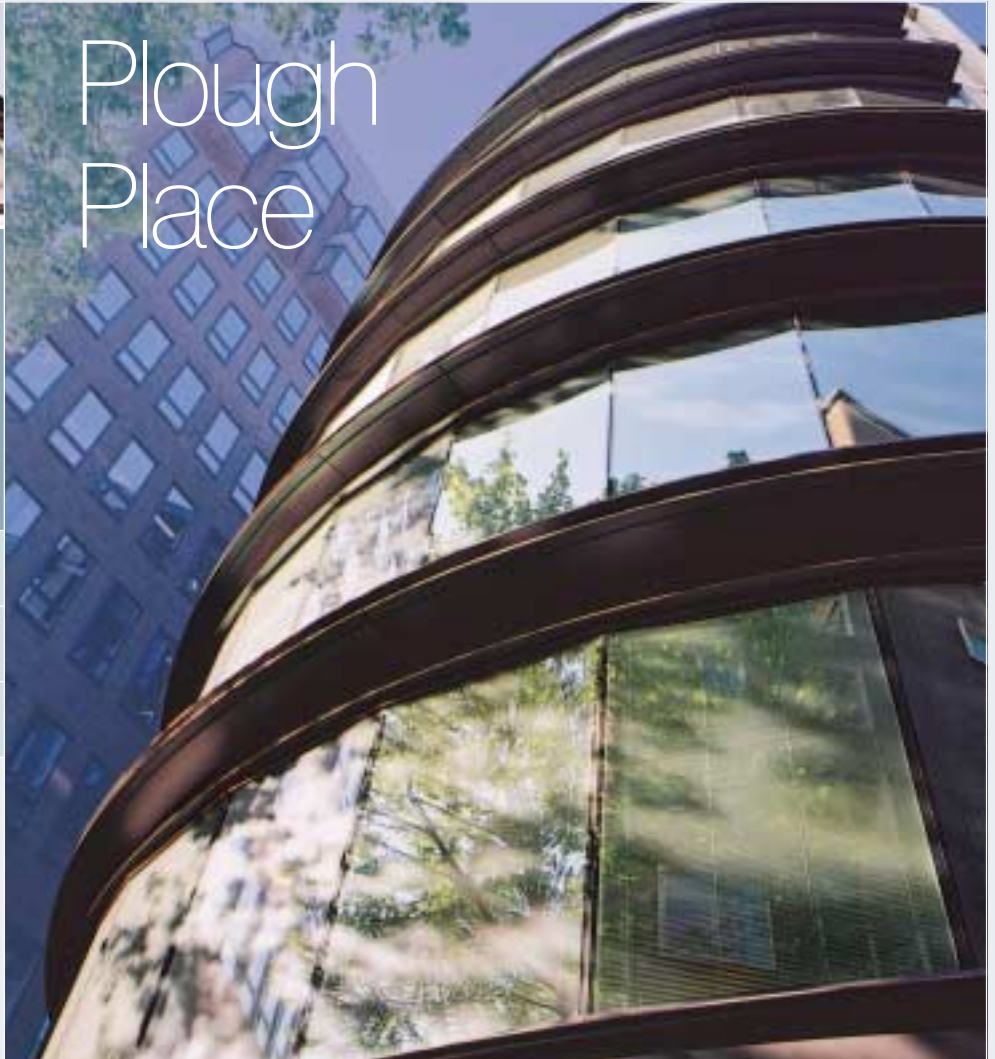
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▶ architect **Hamilton Associates**

▶ client **Contano Ltd**

▶ contractor **Mowlem**

Complex curved feature bands to each floor and feature panels to the main entrance were manufactured from extruded aluminium. The feature bands, assembled off-site, increase in depth progressively for aesthetic balance. The finish of blue grey anodising changes with the variations in ambient light to produce an interesting counterpoint to the glass mass surrounding it.



Olympia Way

The overcladding of this 1970's office block has been undertaken with a bespoke rainscreen cassette system. Over 9000 square metres of aluminium panels, anodised to a natural finish, have been installed within a tight programme to all elevations of this 12 storey building.



▶ case study

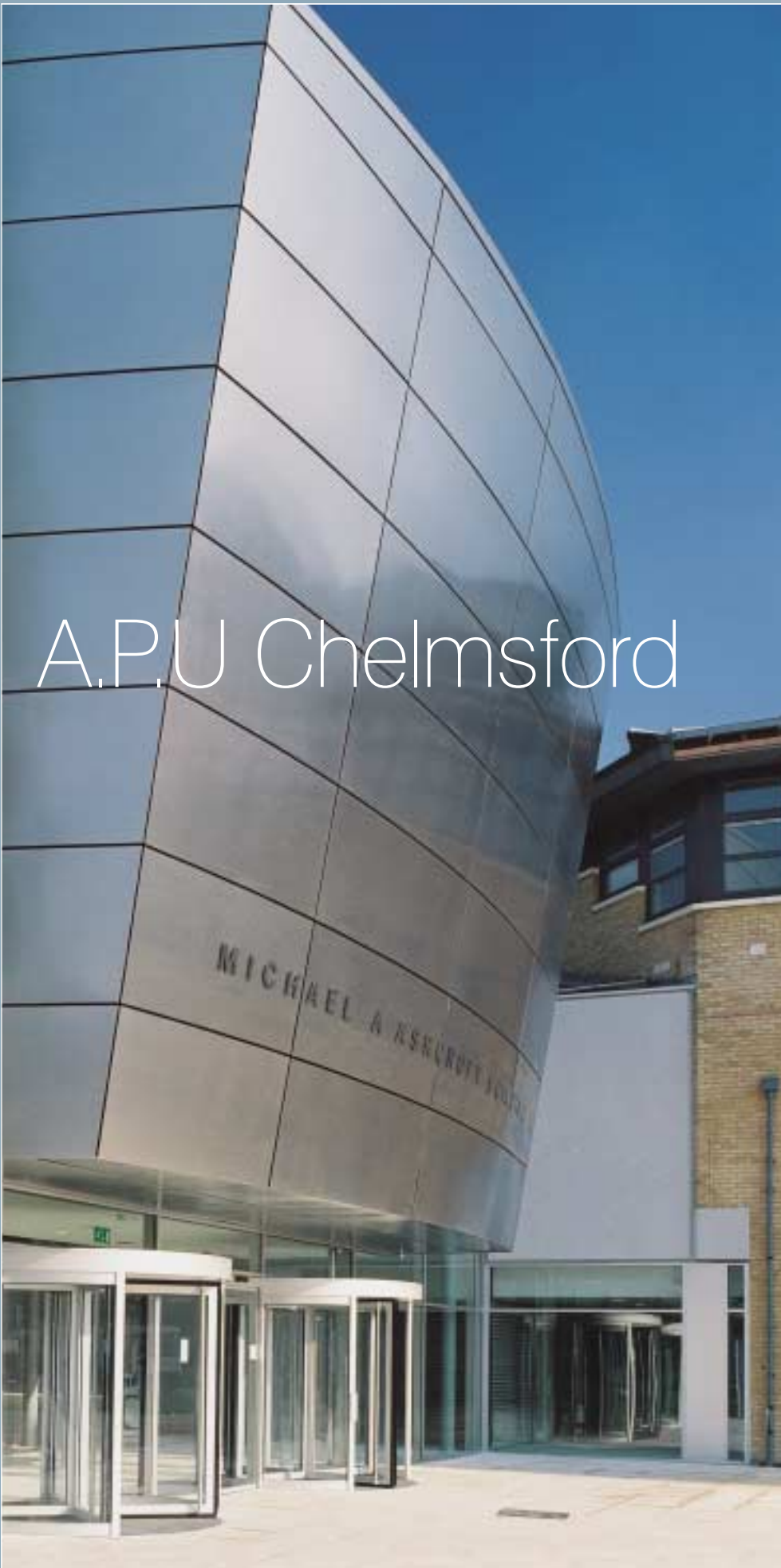
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▶ architect **Wintech Design**

▶ client **Business Environment Group**

▶ contractor **Red Architectural**





A.P.U Chelmsford



case study

11

architect Wilkinson Eyre
Scott Brownrigg & Turner

client Anglia Polytechnic University


contractor McMahon Assoc.

Utilising Textured Stainless Steel from Rimex Metals, the cladding incorporates radiused edges to maintain true horizontal joints, whilst the curved plane is tilted from vertical.



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