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New Clement steel windows conserving Britain's industrial past

The Industrial Revoluton of the eighteenth and nineteenth centuries famously led to Great Britain being referred to as 'the workshop of the world' by its European neighbours. The complete transformation of the British economy from a rural crafts base to one of mass production was certainly fast-paced, but unfortunately the decline seen since has been even quicker. The large number of buildings which survive from our glorious industrial past are many and varied, comprising railway stations, water mills, processing plants, factories and warehouses among them, but they were allowed to fall into disrepair and disuse while globalisation and technology took over from traditional business. In recent years, however, several ambitious urban regeneration schemes have got underway and these former monuments of industry are being repurposed as residential developments, bright, airy offices and other state-of-the-art facilities for a new generation.

Industrial buildings have great potential for a variety of uses while still celebrating their original function. These structures share a number of architectural characteristics such as cubic forms, an absence of ornament, brick and concrete facades and uniform rows of windows, and these features arose out of the engineering capabilities which were finessed during the Industrial Revolution. As these buildings have been renovated and so-called 'loft-style' living and working has become popular, demand has risen in interior design for 'the industrial look' – stripped back architectural details such as bare bricks, natural materials and salvaged or recycled furniture and furnishings which reflect the mechanics of the original building.

A lot of industrial buildings were constructed with steel-framed windows, following the development of a process for hot rolling steel by Sir Henry Bessemer, which

Below, a wall of Clement patterned glass windows at 10-11 Clerkenwell Green, London, allows light to enter the building while providing privacy for the neighbouring properties. Photography: Matt Chisnall.

made steel windows possible. The inherent strength of steel meant these frames could support the large expanses which are frequently a striking feature of such buildings. The refurbishment of these buildings today often includes the replacement of the original windows with new double-glazed steel windows which match the original fenestration, complementing the industrial character of the building, while also bringing modern benefits such as better insulation, weatherproofing and security.

The buildings at 10-11 Clerkenwell Green in London are a great recent example of former warehouse buildings which have been repurposed as stunning offices with new steel windows and doors and interiors that showcase the best of the industrial aesthetic.

The buildings were occupied from around 1910 until the 1990s by The Uniform Clothing & Equipment Company (Uniquip), a well known supplier of band uniforms, and are located in the centre of Clerkenwell Green, a formerly busy centre for specialised crafts and manufacture.

Stagg Architects obtained planning permission to refurbish and extend the original 13,000 sq ft building by an additional 7,000 sq ft. The renovated building comprises a new roof extension, flexible spaces on the ground and lower ground floors and offices at the upper levels.

A four storey side extension infill was constructed and Clement Windows Group was selected to manufacture the new and replacement steel windows and doors throughout the building. It was very important that the new windows were in keeping with the original building and did not detract from the character and appearance of the surrounding Conservation Area and adjoining Listed Buildings.

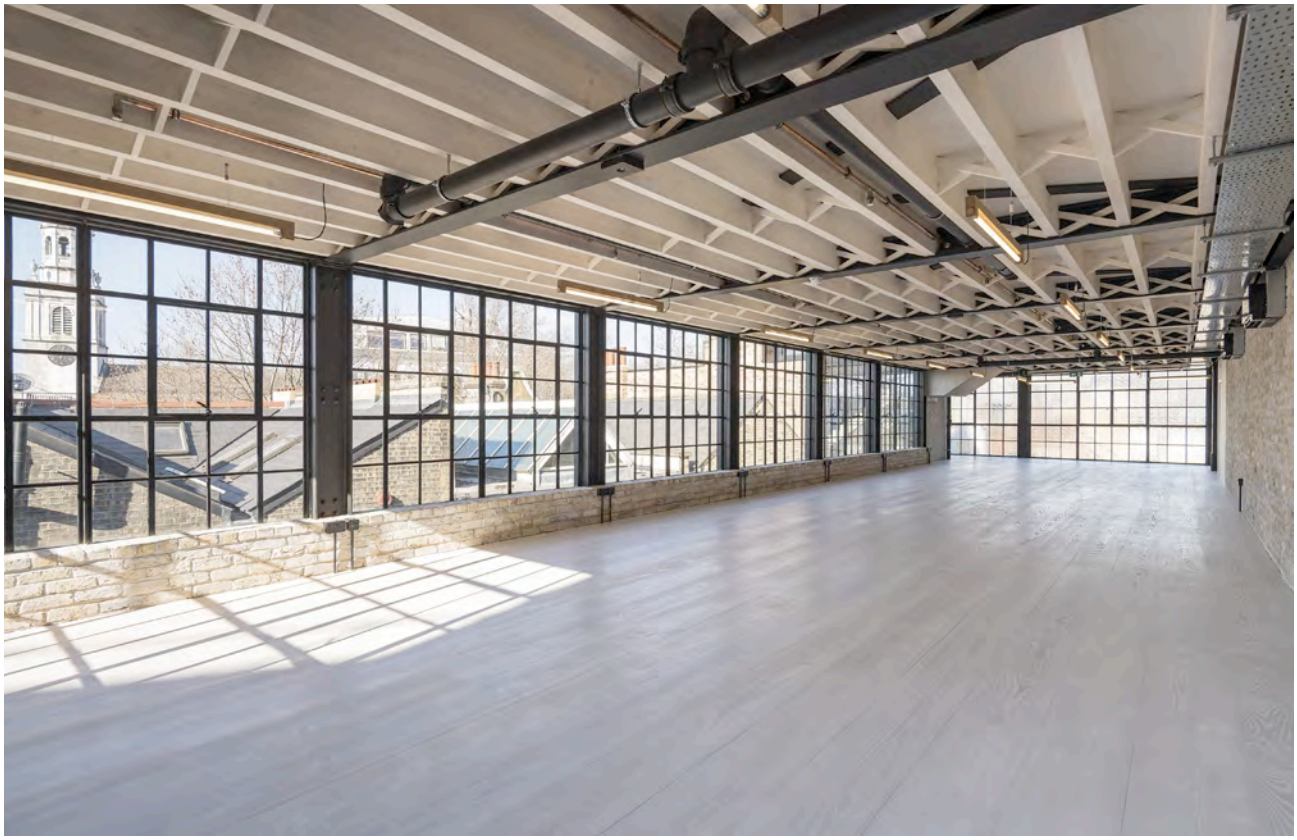
Windows and doors from the Clement EB20 steel window range were chosen and powder paint coated in black with the accompanying hinges and handles painted to match the frames. The huge wall of steel windows to the side of the building includes a patterned glass which allows light to enter while also providing privacy for the neighbouring properties.

The interior of the building consists of exposed brick walls and visible pipes and trunking, and the black steel frames of the fenestration provide the perfect accompaniment to this interior design style.

Ben Stagg, Director of Stagg Architects Ltd, commented: *"Clement Windows were selected following a lot of research, and ultimately because they were able to offer the slimmest profile metal sections. The appearance of the glazing is critical to the whole building design so we worked closely with Clement to achieve the desired appearance, with great success."*

Some buildings from the industrial age still have an industrial purpose but need to be updated to ensure their continued future functioning. One such example is the Lanark Hydro Electric Scheme, a remarkable and unique project which was completed in 1927.

Below, Clement EB20 steel windows powder painted RAL 9005 (Jet Black) at 10-11 Clerkenwell Green, London. Photography: Matt Chisnall



The Scheme refers to two hydroelectric plants in Clydesdale, South Lanarkshire in Scotland: Bonnington and Stonebyres Power Stations. They both take water from the beautiful Falls of Clyde – Bonnington's water comes from just above the Linn in New Lanark and Stonebyres' water comes from above Stonebyres Linn, near Kirkfieldbank. The abundant supply of water from the River Clyde continuously spins the power stations' turbines providing a reliable and sustainable source of renewable electricity. Combined they create enough electricity to power over 17,000 homes in the UK.

The two stations have been exquisitely refurbished by Drax, who acquired them as part of a £702million deal. Both Bonnington and Stonebyres are Category 'A' Listed Buildings, the highest possible grading for a site of national architectural importance. This means it was imperative the new steel windows were as close a match as possible to the originals.

The Clement W20 steel window range with genuine T bars was chosen, polyester powder painted in striking RAL 6005 (Moss Green). Lodsworth handles complement the windows with matching peg stays in Antique Bronze finish. Clement made around 120 steel windows for the power stations, including nearly 400 individual fixed lights, but most beautiful are perhaps the enormous curved head windows on both sides of the buildings, which look spectacular and let in masses of natural light.

Drax Group Senior Civil Engineer, Anne Kerr, said: *"We are delighted with the service and quality of windows supplied and fitted by Clement. The new steel windows fitted in the refurbished building look stunning and exceeded our expectations."*

A lot of former industrial sites have been transformed into vibrant residential areas, encouraging new communities and infrastructure to develop in places which have lain dormant for years. Comet Works in Birmingham is a fine example of a former industrial site which has been reimagined as a high end residential development.

During the Industrial Revolution, Birmingham was home to a number of foundries and workshops that made a variety of metal goods, including jewellery and guns. Rather than being produced in large-scale factories, the manufacture of these items required several different processes which would be carried out by independent specialists who were located in the same neighbourhood, reducing the need to travel long distances between workshops. Indeed, in the late 19th century, Showell's Dictionary of Birmingham listed more than fifty specialist trades involved in gun manufacture in the city.

Below, new Clement W20 steel windows at Bonningtons Power Station, South Lanarkshire

Comet Works is located in an area of Birmingham known as the Gun Quarter. Clement Windows was specified to manufacture and install the new steel windows required for the site. Twenty residential units including authentic lofts apartments and mews houses have been beautifully created within this historic building which dates back to the 1830s.

Sensitivity was key when choosing a replacement for the original metal windows. Clement W20 steel windows were chosen to best match the existing windows – almost exact replicas but with the advantage of double glazing and an incredibly long lasting polyester powder coating.

Nigel Birch, owner of the contractors on this project, Springworth (Building & Interiors) Ltd, commented: *"The Comet Works is a striking set of buildings that stand as a testament to Birmingham's industrial past. Clement's steel windows were the perfect product for the reinvention of these buildings, providing a strong heritage look as well as sound 21st century innovation and performance."*

The Maple Building is a fabulous warehouse conversion located in Kentish Town in North West London. Dating back to the 1890s, the building has an interesting history. It was originally home to Maple & Co, furniture makers for the Royal Family. Then in the First World War sections of the factory were secretly modified to produce fighter plane components, canvas tents and other supplies for front line troops. More recently the building was used for office space until developers The Linton Group acquired

Above, Clement W20 bespoke steel windows at Comet Works, Birmingham.

it, turning an old converted warehouse into five floors of luxury apartments and penthouses.

Interior architects, Gordon-Duff & Linton, insisted upon a high specification throughout, focusing on strong acoustic and design performance. Clement W40 steel windows were the perfect choice to replace the hundreds of industrial style steel windows, complementing the cosy, well-lit interiors that are a feature of the building, as well as offering superb quality and an impeccable match to the original fenestration.

"The Maple Building is our flagship development. It has bags of industrial charm and period character due to its many original features. The steel windows by Clement respect and enhance these while simultaneously complementing the high specification modern interior design of the project," said Gemma Gordon-Duff, Managing Director at Gordon-Duff & Linton.

Above, new double glazed steel windows by Clement at Comet Works, Birmingham

Above, one of the interiors at The Maple Building, London, where new steel windows by Clement have been installed. Below, new steel windows from the Clement W40 range at The Maple Building, London

The Clement Windows Group manufactures an innovative range of steel windows, doors and screens for both private residences and commercial projects. Based just outside London, in Surrey, Clement also supplies a selection of conservation rooflights, available from stock in either a tile or a slate profile, or made bespoke to individual requirements.

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