

STEEL WINDOWS REPAIR OR REPLACE

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Windows are that part of a building's fabric that so often defines the character and aesthetic of the property.

In many early-to-mid 20th Century buildings, across both public and private sectors, those windows are made of ungalvanised steel, and the passage of years may have taken its toll, in terms of corrosion, failing paintwork, broken or bent hardware. The glass and glazing compound may also have suffered.

Faced with ever more stringent Building Regulations, the owners of such properties need to decide how to proceed with improvements. They can be reassured that excellent opportunities exist for either improving the condition of what is already there, or replacing them with modern equivalents.

Crittall is the UK market leader, with 150 years' experience in steel fenestration, and has a long history of involvement in repair and replacement of windows, working closely with local authority planning and conservation officers, with architects, and with conservation bodies, such as English Heritage, to repair or replace windows installed from the early 1900s. Over 70 percent of the company's UK work falls into this category, with Crittall providing a survey, design, manufacture and installation service, acting, in many cases, as main contractor.

The decision to repair or replace depends on many factors, not least, the amount of maintenance that has been undertaken on a property. Before 1947, steel windows were only zinc sprayed, rather than hot-dip galvanised as they are today. So pre-war fenestration may be deeply corroded.

Successive layers of paintwork, bowed or misaligned sections, missing putty, and broken handles or stays are also likely to be factors.

Repair work can be of a limited nature, performed on-site to tackle light corrosion, remove minor frame distortions, and reglaze, with perhaps the addition of draught-proof gaskets and secondary glazing. Costs can be relatively modest, but, of course, the improved windows will not conform to modern performance requirements, especially in respect of energy efficiency.

An alternative approach is to remove the units and return them to the factory for total refurbishment, where the frames are grit-blasted back to the bare metal, damaged units repaired, with new sections welded-in, hot-dip galvanising takes place, and the frame is polyester powder-coated, providing 15-20 years' protection before any further painting is required. Draught-proofing and secondary glazing can be added, and new hardware fitted to match the original

All this can be costly, and the windows will still not meet modern performance standards.

However, both the current, and forthcoming amendments to the Building Regulations Part L on energy efficiency make allowances for buildings of historical or architectural merit, covering a wide range properties, either as individual structures, or within the context of their neighbourhood. So this level of repair may be adequate to satisfy the requirement of the revised Part L.

The aim, however, should be both to preserve the character of a building, and to achieve betterment wherever possible.

The answer is replacement steel windows which may be deemed a more economic solution in view of the findings of a condition survey and a desire to achieve modern performance standards. New steel fenestration will allow for double glazing that meets either a 2.2 W/m² whole window U-value, or a centre-pane U-value of 1.2 W/m²k. This will contribute towards the new requirements for reducing a building's carbon emissions total, as spelled out in the revised Part L. Weatherstripping, trickle ventilation, corrosion protection, and polyester powder coating are also part of the , while, at the same time, replicating the visual effect of the original windows.

Examples of this abound. Look at the new façade of the Boots Company's D10 building in Nottingham. This is a Grade I listed building, dating from 1932. Working with the original firm of architects, and, in consultation with English Heritage, Crittall supplied and installed its Corporate W20 windows to recreate the curtain-walling effect for which this exceptional modern movement structure is famous.

Social housing refurbishments include the high-rise Avondale tower for the Corporation of London and Northwood House for Lambeth LBC. Then there is the neo-gothic Crown Court building at Wood Green in North London, the celebrated Hoover Building alongside the A40 in West London, and the Grade II listed Viceroy Courts, a private residential block with curved fenestration overlooking Regents Park.

Crittall's current range of windows provides modern, high-performance replacements for the Universal range first seen in 1909, and the imperial SMW introduced in the 1920s. The original fenestra joint, patented in 1905, is still available. Bespoke solutions can be created as required.

Experience shows that each project must be reviewed on its own merits, and that repair, where possible, is the first option, and is preferred for aesthetic reasons. If, however, replacement is chosen, to meet cost, or performance requirements, then this can be done sympathetically with modern steel products that satisfy the regs and the aesthetic appeal of a project, in equal measure.



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Luma Tower, Glasgow



Boots D10, Nottingham



Hoover Building, Perivale



Viceroy Court, overlooking Regents Park