National Federation of Glaziers
Excellence and Integrity in Glazing

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UPGRADING EXISTING DOUBLE GLAZED WINDOWS

Over the past 35 years, tens of millions of windows in the UK have been replaced. Many of these windows are still sound and serviceable but could benefit from modern upgrades.

In the 1970s and 1980s, aluminium was the most common material for replacement window frames. Initially, these frames featured anodised finishes in silver, which were later replaced by electrophoretic colour finishes and then by more durable polyester powder finishes in the 1980s.

During this period, uPVC (unplasticised PVC) materials began to enter the UK market from Europe and eventually became the predominant material. The adoption of Building Regulations for replacement windows in 2002 provided a significant incentive for the development of more efficient windows.

Aluminium frames were improved over the previous two decades with the addition of polyurethane thermal breaks, enhancing their efficiency and reducing condensation. Some uPVC frames were also modified with extra chambers.

The introduction of double glazing with glass sealed units marked a significant advancement in reducing heat loss and noise. These initial replacements offered the most substantial increase in energy efficiency and represented a major step in improving window insulation.

Nevertheless, there have been considerable advancements in the energy efficiency of glass sealed units. These improvements include low emissivity coatings on the inside of one of the panes, the use of inert gases like Argon as an infill, and the replacement of aluminium spacer bars with insulating material.

These technologies have been available for a while, but the introduction of Part L of the Building Regulations in 2002, with subsequent revisions in 2006, 2010, and 2016, has spurred their use and development. Replacement windows, regardless of material, are designed to last for decades; it's interesting to consider the longevity of the original windows. Typically, both uPVC and aluminium frames won't require replacement.

Upgrading the original replacement windows to benefit from the improved insulation offered by recent technological advances may be a viable option.

Four components should be considered:

Locking mechanisms: With regular maintenance, these can last many years and are usually replaceable if necessary.

Hinges: Often the most vulnerable part of the window, they can provide good service for much of the window's life if maintained regularly. They are also easily replaced if needed.

Glazing gaskets: The "wedge" or "fir-tree" gaskets on older windows often shrink but can be easily replaced.

Sealed units: Typically, the simplest to replace, they offer the greatest efficiency gains.

A skilled glazier should inspect all four components before providing a quote. The cost savings over full replacements and the sustainability benefits could be significant.

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