

The Conservation office

Window Protection for Historic Places of Worship

Permission is needed for the provision of window protection for chapels which are listed or within conservation areas.

The protection of the windows of chapels is becoming increasingly necessary because of theft and vandalism. Such protection does, however, disfigure the appearance of buildings and therefore needs to be considered carefully.

Sometimes protection is specifically requested by an insurance company, but it is important to assess whether the scale of the problem justifies expensive protection measures. If only occasional damage occurs and the glass is not of historic or artistic importance, it may be appropriate to accept the cost of occasional replacement. Such replacement should be carried out without delay to discourage further attacks. Equally, it may only be necessary to protect particularly vulnerable windows, leaving others unprotected.

If protection is necessary, two main types are usual, mesh or polycarbonate sheet, although toughened or laminated glass may occasionally be used when the disruption of shadowing caused by wire guards to the viewing of stained glass is not acceptable. These options visually give a flat, mirrored reflection which may be undesirable in some situations. A new development in lamination has provided the option to laminate mouth blown antique glasses and kiln-distorted glasses. This option provides the protection of lamination but with an improved external appearance.

Shutters

Alternatively, some small village chapels were originally fitted with external timber shutters which may be worth reinstating, particularly if there is evidence of their design or the hinges or pins from which shutters were hung. Metal roller shutters are unlikely to be acceptable in any location

Mesh

Mesh is available in galvanised steel, copper, stainless steel and alternative materials. Galvanised steel mesh deteriorates over time however well protected, and this can cause rust staining of the walls. Oxidation of copper results in verdigris which can stain the walls with distinctive blue-green marks. Such staining is almost impossible to remove, particularly from stonework. Because of these problems, black powder-coated stainless steel is preferable. Alternatively, these can be lightly sand blasted to provide a patinated appearance. This is the least visually disruptive solution and is to be preferred to other options. Painting the mesh can create a continuous maintenance issue.

The protective window meshes should be designed in small sections to follow the tracery of the window rather than using one large mesh to cover the whole window. Fixings should be kept to a minimum, and should be fixed into mortar joints and not the neighbouring brick or stonework. This is because the mortar joints are the sacrificial element.

Polycarbonate sheet

Where vandalism is persistent mesh may provide inadequate protection and polycarbonate sheet may be necessary, for example as a deterrent to airgun pellets. In the past acrylic sheet has been used but this is flammable and should not be used. Polycarbonate sheet is normally reflective and this can adversely affect the external appearance of a building. Only exceptionally will permission be given for the use of this material. In situations when wire guards can not provide full protection, 3mm polycarbonate sheet may be directly attached to the internal face of the wire guards. This solution is more aesthetically pleasing than the use of polycarbonate on its own.

As polycarbonate sheet tends to buckle and distort, ways of minimising this problem must be made in the fixings, probably by means of a continuous shaped frame. It is also important that polycarbonate should not be fixed too tightly or sealed with mortar or mastic against the glass or adjacent wall. Such arrangements can lead to buckling of the sheets and to condensation, which creates further problems, particularly with leaded lights. Sheets must be capable of removal so that the glass can be cleaned.

It is important to note that any type of new protective external sheet overglazing incorporates adequate ventilation. An air gap of over 2.5 cm is recommended in between the original window and the new protective sheet. The protection must not be sealed to the extent that air flow is prevented.

Whichever material is approved by the Connexional Conservation Officer, the fixings must be **non-ferrous** to avoid future staining.

Permissions

Permission is normally only granted for a period of five years, before the expiry of which the situation should be reviewed and a new application submitted.

For further information see

- "*The Repair and Maintenance of Glass in Churches*" by Jill Kerr, published by Church House Publishing, Great Smith Street, London, SW1P 3NZ.
- *Looking After Stained Glass Windows*, Historic England: <https://historicengland.org.uk/advice/technical-advice/buildings/stained-glass-windows/>
- [Historic England Research Report 43/2017, Conserving Stained Glass Using Environmental Protective Glazing](https://historicengland.org.uk/advice/technical-advice/buildings/stained-glass-windows/)
- *Glazing in Places of Worship* (Historic England): <https://historicengland.org.uk/advice/caring-for-heritage/places-of-worship/making-changes-to-your-place-of-worship/advice-by-topic/glazing/>

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Rev 08/2020