

Corpus Vitrearum
Guidelines for the Conservation and Restoration of Stained Glass
Second edition, Nuremberg 2004

1. INTRODUCTION

- 1.1 These guidelines outline the ethical principles underlying the conservation and restoration of stained glass of all periods. They serve as a reference for conservators/restorers and consultants, as well as an introduction and source of information for individuals and organizations responsible for the preservation of stained glass.
- 1.2 The guidelines were first established in 1989 by the International Committee of the Corpus Vitrearum for the Conservation of Stained Glass in association with the Stained Glass Committee of ICOMOS. The original versions of the current edition are in English, French, and German. Translations into other languages must be undertaken by the National Committees of the Corpus Vitrearum and approved by the International Committee for Conservation. The Corpus Vitrearum is an international scholarly organization whose aim is to research and publish historic stained glass. Its Conservation Committee promotes conservation and restoration in accordance with these guidelines, coordinates research, and encourages professional exchange.
- 1.3 These guidelines specify principles unique to the conservation of stained glass and do not restate general conservation principles that are already enumerated in other internationally accepted guidelines and codes of ethics. For the latter purpose, reference is made to the *International Charter for the Conservation and Restoration of Monuments and Sites* (Charter of Venice, ICOMOS, 1965), *The Conservator-Restorer: A Definition of the Profession* (ICOM Committee for Conservation Working Group "Training in Conservation and Restoration," Copenhagen, 1984), the *ICOM Code of Professional Ethics* (ICOM, Buenos Aires, 1986), and the *Guidelines on Education and Training in the Conservation of Monuments, Ensembles and Sites* (ICOMOS, Colombo, 1993).
- 1.4 For the purpose of this document, the term "stained glass" covers painted and/or stained glass as well as plain leaded lights, copper-foiled glass, *dalle de verre* and other types of architectural glass, whether *in situ* or after removal to a museum or private collection.
- 1.5 The intrinsic value of stained glass is equivalent to that of any other work of art or cultural heritage, therefore its conservation merits the same degree of attention and professionalism regardless of its date or monetary worth. Stained glass cannot be considered in isolation. Its historical and physical context, including its architectural and environmental setting, must be taken into account in the planning and execution of any conservation program. The conservation of stained glass thus involves the collaboration of a team of specialists including, but not limited to, conservators/restorers, art historians, architects, scientists, building technologists, and, where they exist, governmental organizations responsible for the protection of cultural heritage. The choice of the professionals involved in the conservation process should be based on their education, their continuing professional development and their experience, favoring quality over financial considerations.
- 1.6 Each of the subjects outlined in this document is a required component of any stained glass conservation project. While minor aspects may not be relevant in a given project, none of the following principles can be excluded from the outset and must remain an integral part of a holistic project conceptualization.

Corpus Vitrearum
Guidelines for the Conservation and Restoration of Stained Glass
Second edition, Nuremberg 2004

2. RESEARCH AND DOCUMENTATION

- 2.1 The first step in a conservation project includes research on the history, function, materials and techniques, past treatment, and current condition of the stained glass. This corresponds to the type of research regularly undertaken on behalf of the Corpus Vitrearum, therefore, it is mutually beneficial to coordinate such work with the Corpus. When appropriate, technological studies and scientific analysis of the component materials, alteration products, and accretions must also be undertaken. The results of this preliminary research form the basis of a conservation concept, which defines the aims and steps of any conservation treatment, as well as a long-term preservation strategy. From this a specification is formulated which can also serve as a basis for the evaluation during and after the intervention.
- 2.2 Full documentation of the preliminary research and of all steps, methods, and materials of a conservation process is obligatory. Written condition reports prepared by a conservator/restorer must accompany any stained-glass panel on loan. The long-term preservation and accessibility of the documents must be ensured by the owner, a public institution, where it exists, and the conservator/restorer.

3. PREVENTIVE CONSERVATION

- 3.1 Preventive conservation is fundamental to the preservation of stained glass, whether *in situ* or after removal from its architectural context. The creation of an appropriate and stable environment is a principal aim in this regard. Regular monitoring of stained glass and its environment and the establishment of a detailed maintenance plan are essential components of preventive conservation.
- 3.2 *PROTECTIVE GLAZING*
- 3.2.1 The installation of a protective glazing system is a crucial part of the preventive conservation of architectural stained glass, which is vulnerable to both mechanical and environmental damage. The principal aims of a protective glazing system are to relieve the stained glass of its function as a weather shield, to protect it against mechanical and atmospheric damage, and to prevent condensation on the surface of the stained glass. Every window installation is unique, and therefore the design of its protective glazing must take into account the particular preservation needs of the stained glass and its architectural setting, as well as the physical and aesthetic impact on the building. Protective systems vary according to these needs, and may range from an externally installed and ventilated layer to the internally ventilated isothermal glazing system, which is the most effective method currently available. Knowledge about the functioning and effects of protective glazing is necessary to make the right decisions. A protective glazing system can minimize the extent or even eliminate the necessity of interventive conservation treatment and will facilitate removal of the stained glass panels. Wire guards can provide additional protection against mechanical damage, although their potential visual impact must be considered.

Corpus Vitrearum
Guidelines for the Conservation and Restoration of Stained Glass
Second edition, Nuremberg 2004

3.3 *HANDLING, TRANSPORTATION, STORAGE, AND DISPLAY*

- 3.3.1 Stained glass must be handled in a very specific manner. Only specially trained persons should remove or handle panels.
- 3.3.2 During transit it is advisable to crate stained-glass panels in an upright supported position. Panels with an unstable lead matrix, flaking paint, small panels and fragments can be crated in a horizontal position if they are fully supported on the whole surface. In storage either a vertical or horizontal position may be appropriate if the panels are fully supported over the whole surface.
- 3.3.3 The choice of materials for packing, storage and display of stained glass should be based on the knowledge of their chemical stability, potential for off-gassing, their moisture absorbency and abrasive properties.
- 3.3.4 For display in a museum setting, care must be taken to minimize light levels and heat build-up around light boxes, which can adversely affect some conservation materials. The stained glass must be protected from public access through the use of appropriate barriers.

4. INTERVENTIVE CONSERVATION AND RESTORATION

- 4.1 The actions undertaken as part of conservation and restoration treatments must be based on careful consideration of the history of the panel, the provision of a long-term conservation strategy, and the expectation of preventive conservation measures. They should not be carried out indiscriminately on the whole panel. Time for reflection, consultation, and documentation throughout the entire conservation process must be included in any conservation planning.

4.2 *ACCESS, CONSERVATION IN SITU, AND TREATMENT BEFORE REMOVAL*

- 4.2.1 To ensure the safety of architectural stained glass during examination and treatment, appropriate access to the window must be provided. For many situations, this requires purpose-built scaffolding on both sides of the window, however, in some circumstances, other means of access may be acceptable. Depending on the nature and extent of the required treatment, and bearing in mind the potential for damage during removal, conservation *in situ* should be considered as the first option. However, if a panel is to be removed, fully reversible and nondestructive measures may be necessary to stabilize the panel.

4.3 *TREATMENT OF GLASS SURFACES*

- 4.3.1 Any treatment of the glass surface and its decoration must be preceded by a thorough examination to identify the original materials, their alteration phenomena and products, as well as any foreign accretions. As a general rule, corrosion products are considered to be evidence of the material history of the glass. The main objective in the treatment of the surface is to conserve the glass and not to recover transparency through removal of

Corpus Vitrearum
Guidelines for the Conservation and Restoration of Stained Glass
Second edition, Nuremberg 2004

corrosion products and deposits. When called for, cleaning should always be undertaken in a localized, well-controlled manner and with full consideration of the risks posed by the methods and materials employed. Soaking or poulticing of a whole panel or an entire piece of glass must be avoided.

- 4.3.2 Paint consolidation is only recommended when paint is in imminent danger of loss. In the case of unstable – but not flaking – paint, preventive conservation methods are preferred. The refiring of stained glass is never acceptable.

4.4 *TREATMENT OF MISSING AREAS AND LATER ADDITIONS*

- 4.4.1 Losses, stopgaps, rearrangements, and later additions provide evidence of the history of a stained-glass panel and must be fully studied and documented as part of the preliminary research preceding any conservation or restoration treatment. The insertion of infills, inpainting and restoration of missing paint, rearrangements, or replacements of later additions should only be undertaken when fully justifiable based on thorough art-historical and technical research. Such treatment must be guided by the principles of minimal intervention and reversibility. Every addition of a new piece of glass must be identified in a permanent manner with a date and signature or other identifying symbols.

4.5 *STRUCTURAL CONSOLIDATION*

- 4.5.1 The conservation of stained glass includes the structural elements of the panels themselves and their related architectural fabric when the glass is still *in situ*. For this purpose the involvement of specialists in other materials may be required.
- 4.5.2 The supporting matrix of a stained glass panel may consist of comes of lead, zinc or other metal, copper foil, concrete, putty, or another material. Regardless of its date, this matrix is an integral part of the artistic design of a panel and contributes to its historic value. Conservation of the supporting matrix is an essential aim, although some intervention, including replacement, may be warranted by its state of preservation and/or the conservation needs of the glass. Exceptional and selective interventions may also be justified by the need to regain some of the legibility of the artwork. A bent or bowed panel should be straightened in such a manner as to retain its current matrix rather than replacing it. Soaking and/or warming stained glass panels is not acceptable. (Re)puttying is not always necessary or desirable and depends on the condition and future placement of the panel. When at all required, it should be done by hand in a localized manner.
- 4.5.3 When the repair of broken glass is warranted, the choice of materials must take into account their aging properties as well as the future placement of the panel.

5. These guidelines have been drawn up by a working group of the International Committee for the Conservation of Stained Glass and were approved by the General Assembly of the International Corpus Vitrearum at the XXII. Colloquium in Nuremberg on the 1st September 2004.