

# The stained-glass windows of the Sainte-Chapelle, Paris

BY SYLVIE CLAVEL



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**In no more than five year's time, the public will once again be able to behold the symphonics of purest colour illuminated by daylight – and the Archangel Michael will yet again be able to survey the Paris skyline. This wonder will be achieved when the nearly eight centuries old Sainte-Chapelle at the heart of the French capital unveils the results of a comprehensive programme to restore the last half of the chapel's fabulous stained-glass windows and the reinstatement of St. Michael on the roof of the chapel. The restoration work is proceeding under the supervision of the French cultural heritage agency (Centre des Monuments Nationaux). Half the financing comes from a donation of Euro 5,000,000 by the VILLUM FOUNDATION.**

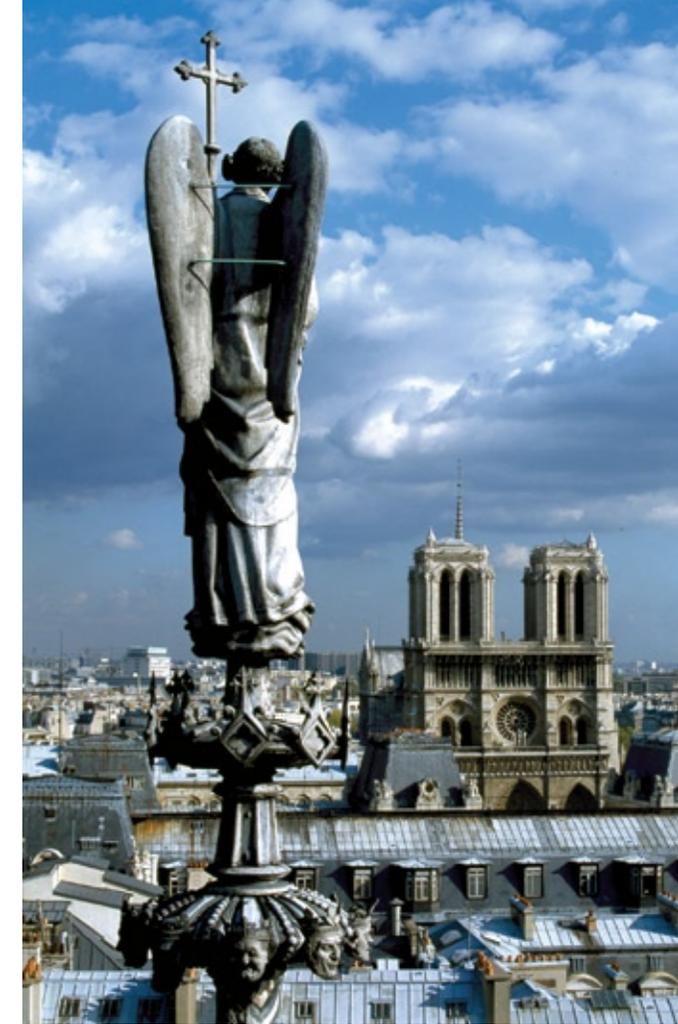
## Protection and accessibility

In France, since the act of 1913 was passed on, the protection of classified historic monuments, or those listed on the supplementary inventory and their opening to the public, maintenance and restoration operations and the cost these represent for the state, have been a constant issue. There are two aspects to the task of looking after monuments, especially national monuments: conservation, which is our obligation on behalf of our cultural heirs; and making our heritage accessible to everyone, which is our obligation to the people of our own time, but which itself frequently leads to a hastening of the deterioration.

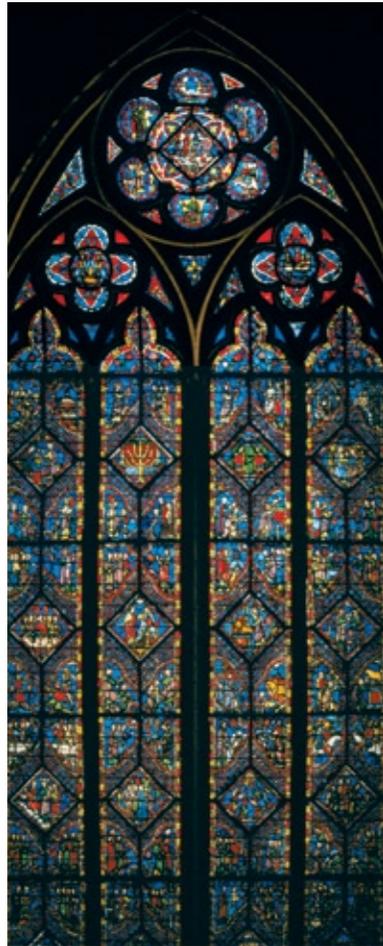
This is of particularly high concern for the Sainte-Chapelle. A major Paris monument, emblematic of Medieval Christianity, which, along with the Conciergerie, bears witness to the first royal palace, on the Ile de la Cité, in a conservation area of the capital that is a UNESCO World Heritage Site. The Sainte-Chapelle, which attracts some 800,000 visitors per year, approximately 80 % of whom are foreigners, presents us with the challenge of maintaining a balance between these two missions.

The Sainte-Chapelle has been an exceptional illustration of all the problems of conservation since its very origin. Louis IX, the future Saint Louis, had the Sainte-Chapelle built to house the holy relics of the Passion of Christ which he had purchased from Beaudoin II, Emperor of Constantinople. It was built in less than seven years. The presumed architect, Pierre de Montreuil, minimised the stonework and created immense openings to house fifteen large stained-glass windows illustrating the Old and New Testaments. Skilfully using iron to reinforce the stone, he designed light vaults which, by transferring the load onto exterior buttresses, enabled him to build a tall and vast single nave with four bays. He thus created an overall design that gave the appearance of great lightness in which the walls disappear to make way for the stained-glass windows. The effect has led to its being aptly described as a shrine of light.

The building is understandably fragile. Aware of this fragil-



The archangel Michael on the top of the roof of the Sainte-Chapelle with a view of the towers of the Cathedral of Notre-Dame de Paris. Modelled in the 19th century by Adolphe-Victor Geoffroy-Déchaume, this angel was placed at the top of the building, level with the apse and revolves on its axis by means of a clock mechanism. The statue is to be cleaned and returned to the top of the Sainte-Chapelle, once the rotation system has been restored. Photo: Michel Setboun © CMN, Paris



The stained-glass windows of the Sainte-Chapelle, often described as a “Bible of light”, recount episodes from the Old and New Testament. The Exodus stained-glass window, second window in the north and part of the current restoration programme, can be read, like almost all those in the upper chapel, in successive rows from the bottom to the top and from left to right on each level. Photo: Bernard Acloque © CMN, Paris

ity, before he set out on the 7th Crusade, Louis IX instituted the office of “master glassmaker”, quite remarkable for the time, fulfilled by canons responsible for looking after the stained-glass windows. This office, which involved conservation, but also some creation, ensured the preservation of all the windows until the Revolution of 1789. Put another way, and in the vocabulary of the 21st century, the building’s contractor had set up the conditions for its maintenance right from the time it was built.

As the centuries passed the building has been altered by additions or repairs (sacristy, outside staircase, spire, etc.) then sometimes by their destruction. The deconsecration of the Sainte-Chapelle in 1793 after the Revolution, and the conversion of the Upper Chapel (1803-1837) into a repository for the state’s archives gave rise to refurbishments and the removal of the lower part of the stained-glass windows. But in 1837 the first major restoration project of the Sainte-Chapelle was undertaken in an atmosphere of ideological controversy around Viollet-le-Duc, which is fascinating to read today, since the arguments pose the question of reconstruction that remains topical today, as we shall see in relation to the current project for restoring the stained-glass windows. This major campaign of restoration was carried out by the architects Duban and Lassus who did not necessarily respect the original form, and who introduced changes in style and decoration belonging to their own time.

### Restoration today

This is precisely the issue faced today by Alain-Charles Perrot, ACMH (chief architect for historic buildings), whom the state has entrusted with the task of continuing the campaign of restoration of the stained-glass windows begun over thirty years ago on the south side of the Sainte-Chapelle. He has been confronted with the contemporary problem of progressive deterioration to the stained glass and its luminosity due partly to pollution and the natural and man-made air-borne particles on the outside and partly to the interior condensation resulting from high visitor numbers.

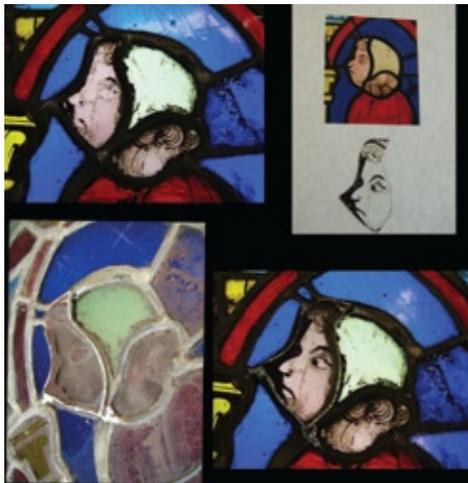
He decided in favour of “preventive” conservation and proposed to the state, which has agreed, that the stained-glass windows be lined with thermoformed protective glazing on the outside in order to deal with the effects of condensation. The deterioration of the



Three of the four large stained-glass windows of the nave and the three small stained-glass windows of the apse which will be restored thanks to the VILLUM FOUNDATION are visible on the right of this photo. Photo: David Bordes © CMN, Paris



The various pieces of restored glass are replaced to recreate the original design and resealed in the restoration studios. Photo: © Vitrail France



Once the glazed panels are loosened from the original saddle bars and an assessment of the damage has been made, the master glass-maker examines and dates the panes of glass. He conserves the panes dating from the 13th century, even where they are badly damaged or discoloured. The others are restored or replaced. If the design on the glass has completely disappeared, this will be restored, not on the original glass but on the new protective glazing. Top left: the current condition of the stained-glass window. Top right: study of the features of the figure. Bottom left: re-leading of old glass panes. Bottom right: the result. Photo: © Vitrail France

stained-glass windows had already been the subject of advanced scientific studies by a team from the CNRS (French National Centre for Scientific Research) among others. Highly detailed preliminary technical studies were carried out and the result on window 101 was tested for a year by a team of Italian researchers. The same technique was used in 2007-08 for the restoration of the central stained-glass window “The Passion of Christ” and will be used again for the large stained-glass windows on the north façade.

These restorations are very difficult operations because they involve setting up a building site in the Upper Chapel with all the constraints of a monument that is still open to the public, screening it off to make it airtight and taking down the stained glass, an extremely delicate task, given that the sculpted stone elements, the iron saddle bars and the lead comes are fragile. All these pieces then have to be taken to the specialist stained-glass studio which must first, using an infrared camera, read the design through the “fossilised” dust, in order to conserve it in its entirety during the cleaning operations. In particular, it is necessary to remove a varnish that had been applied in 1945 to protect the grisaille from the bombing and which has turned black. Finally the comes, saddle bars and sculpted stone must be restored. These phases of restoration are extremely delicate and are carried out by leading specialists under the eye of the Chief Architect of Historic Monuments and the supervision of the Historic Monuments conservation department.

It is easy to understand why the complexity of this work, and therefore its cost, has in the past resulted in the work being carried out in phases, one stained-glass window at a time, sometimes with many years passing between two operations. There was no lack of determination, but these projects have had to compete for state funding with all the other campaigns for major Paris monuments that are equally important in terms of their heritage value. You only have to think of the Cathedral of Notre-Dame de Paris, another major site on the Ile de la Cité, which requires constant care and attention.

### New possibilities

We could have waited another few years for the completion of the restorations of the three large stained-glass windows in the apse (“The Book of Judges and scenes from the cycle of prophets”, “The Book of Isaiah” and “St John the Evangelist”) whose restoration using thermoformed protective glazing was planned, but with a still insufficient budget, and that of the large stained-glass windows of the north façade, representing the Old Testament. Even at the risk that the slowness of the scheduling might lead to further delays for additional studies if new technical data comes to light!

Two factors have come together to bring about a different outcome. First of all, the new context of the Centre des Monuments which is becoming, in the place of the services of the Ministry of Culture, a contractor in its own right, able to define its priorities outside the competitive context with other state operations. But that would not have been enough to bring about a rapid campaign of restoration for half of the stained-glass windows of the Sainte-Chapelle, at an estimated cost of 10 million euros. The second, and decisive, factor was the contribution by the VILLUM FOUNDATION of 5 million euros, 50 % of the entire cost, for completion within a maximum of five years.

The Centre des Monuments Nationaux (CMN), and the whole enthusiastic team from the Sainte Chapelle, which every day experiences the rhythm of light and therefore the transparency of the magnificent stained-glass windows, and for whom each day is a source of wonder, the architects, curators and historians, as well as the services of the state, have been overjoyed by the event – the signing of the equal partnership agreement between the CMN and the VILLUM FOUNDATION, to carry out the second part of the restoration begun in 1970, in just five years.

Not only for having shared the financial cost but on a more ethical level, for having turned time on its head and made it possible for a whole generation of heritage lovers and visitors from all over the world to admire the “reconstructed” stained-glass windows of the Sainte-Chapelle as early as 2014. A big thank you to the VILLUM FOUNDATION.



The agreement for the restoration of the stained-glass windows of the Sainte-Chapelle between the VILLUM FOUNDATION, the Centre des Monuments Nationaux and the Ministry of Culture and Communication was signed on 19 June 2008. The agreement concerns the restoration of 7 stained-glass windows. For this undertaking, which crowns a strong involvement in renovation and conservation projects on behalf of France’s historical and contemporary architectural heritage, the VILLUM FOUNDATION has been awarded the honorary title “Grand Mécène du Ministère de la Culture” (Major Cultural Sponsor). From left to right, the signatories to this tripartite agreement: Michel Langrand, President of VELUX France; Christine Albanel, Minister of Culture and Communication; Kjeld Juel Petersen, Managing Director of the VILLUM FOUNDATION’s and the VELUX FOUNDATION’s joint secretariat; Isabelle Lemesle, President of the Centre des Monuments Nationaux. Photo: © Didier Plowy - MCC