

# Liverpool Metropolitan Catholic Cathedral: Lantern repairs scoping and side entrances repair (1 of 3 projects funded)

Awarded £191,168 in March 2015

## The need

The crowning lantern of Liverpool Metropolitan Cathedral consists of *dalle de verre*, a 20th-century technique in which thick slabs of coloured glass are set in resin and concrete. This innovative construction and work of art by John Piper and Patrick Reyntiens had suffered leaks almost continuously since completion: previous patch repairs had not addressed the underlying problems, and at the time of the application a major leak during heavy wind and rain had drenched an area close to the raised dais in the centre of the worship space. In addition the side entrance doors, designed by William Mitchell in fibreglass and bronze, had developed defective pivot mechanisms which prevent them from opening properly.



Inspecting the lantern. Photo credit: Purcell Architects

## Outcomes

The east and west entrance doors, which could not be used previously, even in emergencies, are now operational. This has made the building safer in managing flow in and out of the building, particularly for large events, as well as presenting a more open and welcoming aspect to visitors. The lantern repairs scoping research helped the cathedral with a successful application for £139,000 from the Getty Foundation for further work. The projects have raised the staff's awareness of the importance of their building and how they market it. They have developed greater knowledge of how to assess cathedral works, knowing the right people to get on board, formulating clearer procedures and developing a conservation management plan. The projects have also led to a reevaluation of Liverpool Metropolitan's contribution to post-war architecture, helping it to gain international recognition.

## Economic and social impact

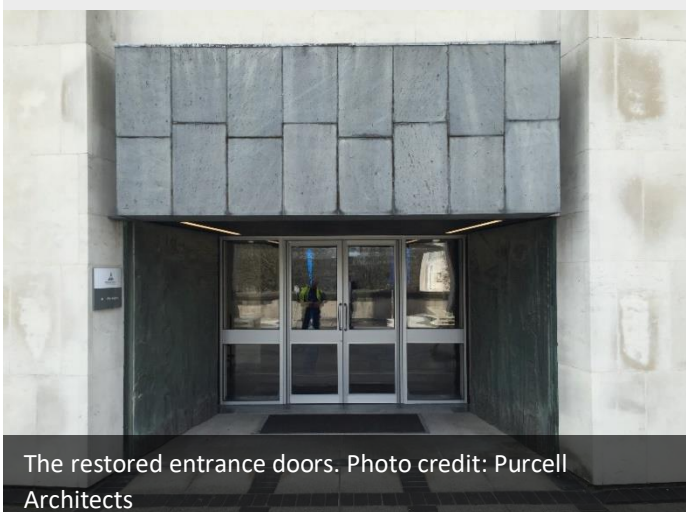
This project has supported specialist knowledge and skills in conserving a post war piece of art. It has also, in conjunction with the other projects at this cathedral, increased the cathedral architect's understanding of post-war architecture, having developed their expertise around how to apply basic conservation principles to modern buildings.

## Works completed and timescale

The lantern part of the project consisted of research, investigation and analysis to understand the materials and construction techniques used. The second part involved restoration and repair of the east and west entrance doors, namely fixing defective pivot mechanisms, and associated internal glazed screens, to provide better access to the main cathedral church.

## The Cathedral

Liverpool Metropolitan Cathedral is the largest Catholic cathedral in England. The striking design of the present cathedral, by Sir Frederick Gibberd, followed three previous attempts to build a mother church for the Liverpool diocese, including crypts put in place by Lutyens. The main church was built in less than five years and completed in 1967.



The restored entrance doors. Photo credit: Purcell Architects

# Liverpool Metropolitan Catholic Cathedral: Approaches and main entrance (2 of 3 projects funded)

*Awarded £369,000 in July 2016 towards a £492,000 project*

## The need

As with other parts of the building, the podium, or platform, on which Liverpool Metropolitan Cathedral stands had suffered from water leaks since completion in 1967. In the late 1990s a new waterproof membrane was installed but failed to fully resolve the problem, with water tracking particularly severe around the new rotunda link to the Lutyens Crypt, which was the focus of this application. The quantity of water entering the cathedral archive below was so severe that the suspended ceiling tiles had been removed to install polythene sheeting in the form of a makeshift internal gutter to catch the water, which needed to be emptied frequently by the maintenance team. At podium level, standing water was also an issue, with large areas of ponding preventing access down the east and west of the podium during heavy rainfall. There was also an urgent need for improvement to access to the cathedral for disabled people, and to the steps of the its four approaches.

## Outcomes

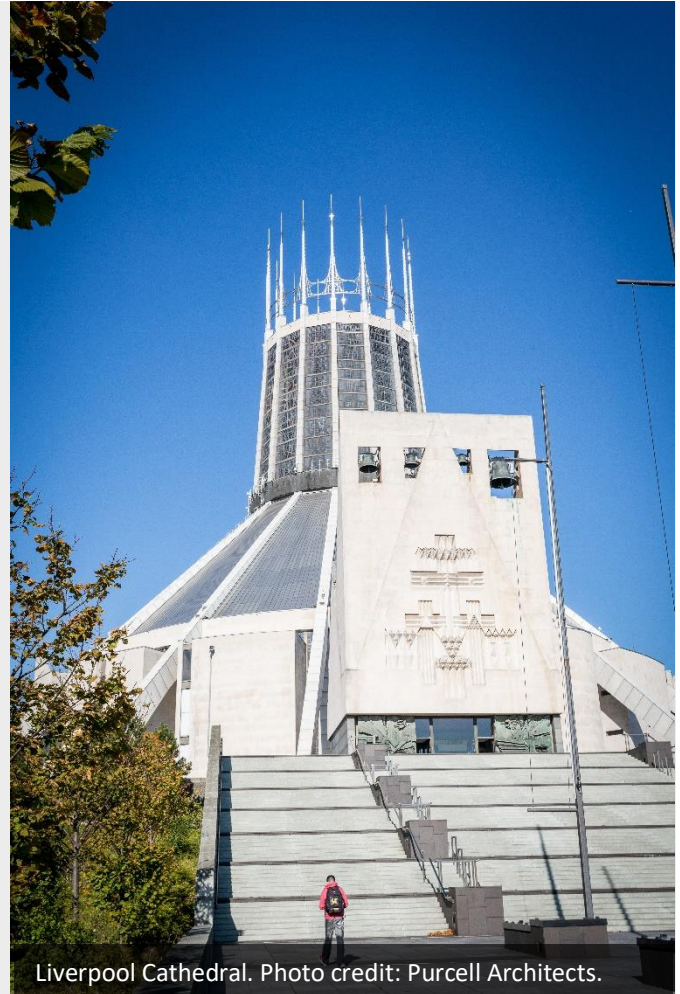
There is no longer water ingress around the podium, meaning that leaking into the Crypt has ceased and there is no longer standing water or ponding on the cathedral approaches. The works have removed the risk of water damage and the area is drier and more comfortable. The stepped approaches have been repaired so that they are safer and easier to use, and first impressions of the cathedral are improved. The modified levels have improved the disabled access. The projects at the Cathedral have raised the cathedral staff's awareness in terms of the importance of their building and how they market it. They also have developed greater knowledge of how to assess and consider cathedral works, getting the right people on board, formulating clearer procedures and developing a conservation management plan. The projects have also led to a revaluation of Liverpool Metropolitan's contribution to post-war architecture, helping it to gain International recognition.

## Economic and social impact

This project, in conjunction with the others at this Cathedral, has increased the cathedral architect's understanding of post-war architecture, having developed their expertise around how to apply basic conservation principles to modern buildings.

## Works completed

The project consisted of remedial works to stepped approaches, access routes and main entrance doors of the cathedral along with investigative work into the podium to resolve the water ingress, particularly focussed around new rotunda link to the Lutyens Crypt. There were also repairs to the steps and the modification of levels to improve access for those who require assistance in entering the cathedral.



Liverpool Cathedral. Photo credit: Purcell Architects.



# Liverpool Metropolitan Catholic Cathedral: Lantern repair research and access (3 of 3 projects funded)

Awarded £200,000 in November 2016 towards a £230,000 project

## The need

The immense crowning lantern of Liverpool Metropolitan Cathedral consists of *dalle de verre*, a 20th-century technique in which thick slabs of coloured glass are set in resin and concrete. This innovative construction and work of art by John Piper and Patrick Reyntiens had suffered leaks almost continuously since completion: previous patch repairs had not addressed the underlying problems, and at the time of the application a major leak during heavy wind and rain had drenched an area close to the raised dais in the centre of the worship space. Fragments of resin and glass had been found fallen in the same area, and the future of the lantern appeared uncertain as its unique materials and construction methods were not well understood.



Liverpool Cathedral. Photo credit: Purcell Architects

## Outcomes

The improved access system makes the lantern a safe space to get to and work in, and will reduce the ongoing costs of inspection and maintenance. The causes of the leaks are now understood. Long-term, the results of this project will support future grant applications to funders such as the Heritage Lottery Fund for repairs and other associated work. There is also an increased understanding of the lantern's architectural significance.

## Economic and social impact

This project, in conjunction with the others at this cathedral, has increased the cathedral architect's understanding of post-war architecture, having developed their expertise around how to apply basic conservation principles to modern buildings.

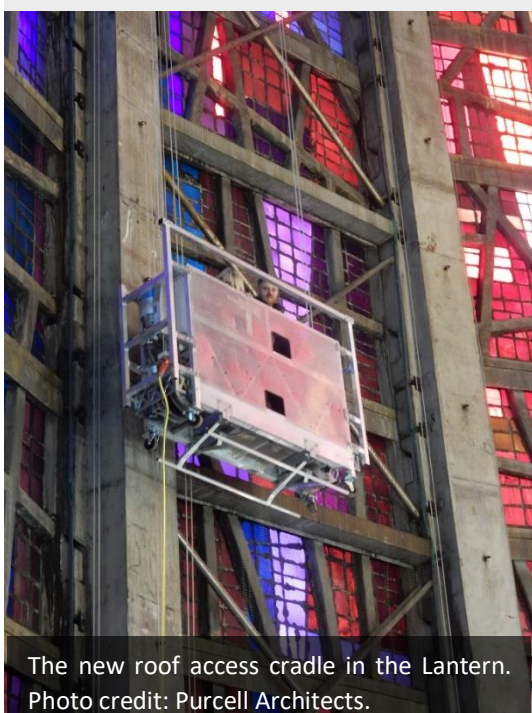
3D scans of the lantern have been made available to the public and the works have featured on the cathedral's 'storybook' for visitors. There has been increased community interest in the heritage and architecture of the cathedral, and the works to the lantern were featured on BBC's *The One Show*, in which they filmed the area around the lantern and interviewed the architect.

## Works completed

The works built on the initial lantern scoping research (see project summary sheet 1) to establish a long-term repair solution for the Piper and Reyntiens lantern glazing. This project covered monitoring of the water ingress to the lantern, movement monitoring, and experimental methods of water control. It also involved the provision of a safe method for accessing and maintaining the lantern, upgrading the existing access to current safety standards.

## The Cathedral

See previous project summary sheet.



The new roof access cradle in the Lantern. Photo credit: Purcell Architects.