

Exeter Cathedral: Repairs to cresting of high roofs (1 of 5 projects funded)

Awarded £60,000 in July 2014 towards a £90,000 project.

The shortfall was met by a grant from the Friends of Exeter Cathedral.

The need

Repairing the lead crestings on the high nave, quire and transept roofs had been identified as an urgent need by the cathedral architect. The crestings have formed a significant feature of the roofs since the medieval period and are made of lead in a fleur-de-lys design. Each piece of cresting is substantial, being approximately 30cm in length and weighing about 6 kilos. Defects in their re-fixing during a previous phase of roof repairs commenced in the 1980s meant that many had already fallen, creating a health and safety risk as well as damaging the lead roofs below. The collapsed cresting was clearly visible from the Close and all the long views of the cathedral. The application was to re-fix all the crestings and take preventative measures to prevent those which were still in-situ from falling.



Exeter Cathedral crestings. Photo credit: Acanthus Clews Architects.

Outcomes

The projects supported by the First World War fund have encouraged greater investment in the maintenance of the cathedral. The cathedral bought its own scaffolding to support the multiple high-level projects, saving an estimated £70,000 to £100,000 overall.

Economic and social impact

Jobs were supported during the project including in roofing, timber and leadwork. Skills were also developed in external stone cleaning, which can be used in the future. The safety of staff working at height and visitors on roof tours has been improved, allowing for easier maintenance and enhanced income generation for the cathedral. With a safer and well cared-for cathedral building, more tourists will be encouraged to visit, therefore resulting in a great economic benefit for the local community including hotels, restaurants and shops and more events able to take place in the cathedral. The community has been supportive during this process and they feel safer in their cathedral with the works that have taken place.

Works completed and timescale

The work was carried out by contractors Mike Light Leadworks. It began in late May 2015 and was complete by July 2015. The work included crestings, timber and stonemasonry. Changes to the scaffolding design to achieve a safe working platform increased the original costings, with the balance being met by the Friends of Exeter Cathedral.

The working platform. Photo credit: Acanthus Clews Architects.



The Cathedral

Exeter Cathedral has Norman origins, still visible in the exceptional towers over the transepts. Most of the rest of the building is 13th – 14th century. It has an elaborate west front with many original statues. Internally it has a hugely long 300ft tierceron ribbed vault in a rich Gothic style, and the original 1325 pulpitum screen, with a much newer organ on top. The misericords in the choir are some of the earliest in England, dating from 1260-80.

Exeter Cathedral: Chapel of St Andrew repairs (2 of 5 projects funded)

Awarded £277,547 in November 2014

The need

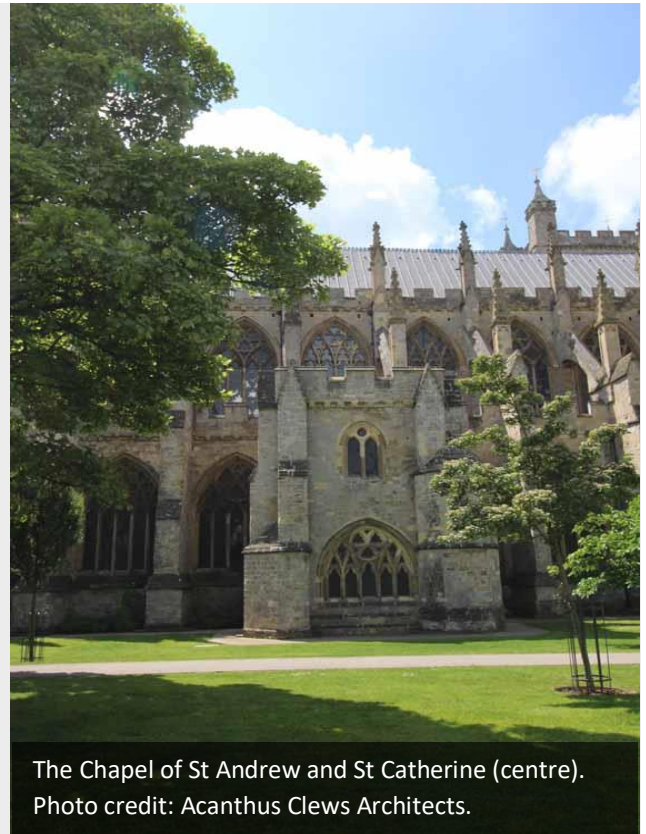
Essential work was required to conserve masonry and medieval stained glass in the Chapel of St Andrew and St Catherine, which were under threat from water ingress and damp caused by poor drainage. The Chapel is a good example of part of a medieval chantry, with an unusual triple canopy and remains of original paint. The problem with rainwater disposal and water ingress was raised in the 2012 Quinquennial Inspection and was linked to the poor condition of the roof over the Chapel. This was being exacerbated by rising damp thought to be caused by failures in the below-ground water drainage system and confirmed by imagery taken as part of wider environmental monitoring. Loss of fabric due to water and salts penetrating the walls had been occurring over the previous 40 years.

Outcomes

The result of this work has encouraged greater investment in the maintenance of the cathedral. It has also supported the in-house team's skills.

Economic and social impact

Jobs were supported during the project in stonemasonry and timber, flashings and drainage repairs/replacements. Skills were also developed in external stone cleaning, which can be used in the future.



The Chapel of St Andrew and St Catherine (centre).
Photo credit: Acanthus Clews Architects.



The clerestory stained glass window above the Chapel. Photo credit: Acanthus Clews Architects.

The chapel was dedicated to the Royal Navy and Royal Marines in 2014, making them a focus for remembrance of conflict. The repairs have left it in much better condition, warmer, drier and more welcoming for carrying out First World War and other commemorations.

Works completed and timescale

Repair work, recording and conservation was carried out to the Chapel and the associated clerestory window (left). The works included general security, access and protection, stone cleaning, external drainage, flashings, waterproofing, timber repairs, and stonemasonry repairs.

The Cathedral

See previous project summary.

Exeter Cathedral: East End conservation (3 of 5 projects funded)

Awarded £275,000 in March 2015 towards a £307,000 project

The need

The repairs consisted of three elements of critical repairs, grouped to make efficient use of scaffolding:

- the Great East window
- the stonework and structures of the East Gable end
- the lead roofing of the Lady Chapel.

The Great East Window, c.1300, is of national significance, incorporating important examples of early 14th and 15th century craftsmanship. The existing 1980s polycarbonate protection system was damaged and discoloured, allowing damage from salts and damp penetration. There was also a range of critical work required to the stonework and structures of the East Gable end, where vertical cracks in the north and south stairs turrets were visible and being monitored, and to the lead roofing of the Lady Chapel.



Exeter Cathedral East Gable end under scaffolding. Photo credit: Acanthus Clews Architects.

Outcomes

The projects supported by the First World War fund have encouraged greater investment in the maintenance of the cathedral. The cathedral bought its own scaffolding to support the multiple high-level projects, saving an estimated £70,000 to £100,000 overall.

Economic and social impact

The project supported jobs in stonemasonry and timber repairs. Skills were also developed in external stone cleaning, which can be used in the future. The project enabled the cathedral to increase engagement between the wider community and the building's heritage. For example, the stonemasons carved four stone corbels: a crown, a poppy, an Eagle Owl and the Exeter Chiefs rugby club symbol. They invited the Exeter Chiefs team up to look at the work and this generated considerable press coverage.



Replacement carved stone. Photo credit: Acanthus Clews Architects.

Works completed

The failing 1980s polycarbonate projection system on the Great East Window was removed and replaced with an externally ventilated isothermal protection system. The external face of the glass was inspected, recorded, cleaned and repaired. On the East Gable end, stonework was repointed, sections of decayed masonry conserved, the diamond leaded lights restored, high-level working access to the east wall and associated turrets provided and bird mesh and netting installed. At high level in the Lady Chapel, rainwater drainage was improved, roof voids were cleared for safer maintenance in future, ventilation to the lead roof was improved, and damaged and decayed weathering coping stones were replaced.

The Cathedral

See previous project summary.

Exeter Cathedral: North side drainage (4 of 5 projects funded)

Awarded £170,000 in July 2016 towards a £239,000 project

The need

Critical repair work was required to the drainage to the northwest side of the cathedral and to fill a related void below the West Front apron that had been discovered during earlier drainage repairs in 2014. This posed a high risk to visitors, staff, vehicles, business and the cathedral fabric should it collapse: access for fire engines would have been restricted in an emergency, such as occurred soon after the application with the major fire at the nearby Royal Clarence Hotel fire in October 2016, and the fire strategy for the cathedral would have been seriously compromised. The work was therefore felt to be key to keeping the cathedral safe and open.

Outcomes

The drains, which had been causing considerable long-term damage from decay, are now 100% functional and the fabric to the north of the cathedral is drying out. The ground water monitoring system has been successfully installed which allows the cathedral to gather further evidence.

Economic and social impact

Jobs were supported during the project in drainage repairs and ground water monitoring installations. Access to the West Front apron was made safe for processions and events as well as for vehicles. It is an important ceremonial and gathering space for the cathedral and the city, forming part of the Processional Way between the Guild Hall and the Cathedral, and is used for musters on Armed Forces Days, Remembrance Days and for larger gatherings such as the Exeter Nativity and Easter Passion plays.

Works completed

The works included drainage repairs, grouting to the West Front apron, and installation of a ground water

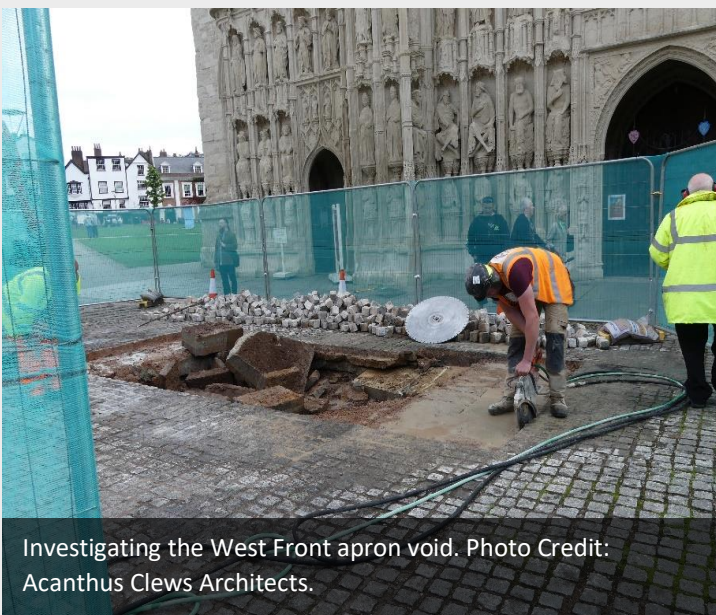


Exeter Cathedral drainage works. Photo credit: Acanthus Clews Architects.

monitoring system to provide data to evaluate the water table and its effect on the building. This project was the final piece of work needed to address significant underground drainage problems which threatened the cathedral fabric.

The Cathedral

See previous project summary.



Investigating the West Front apron void. Photo Credit: Acanthus Clews Architects.

Exeter Cathedral: Asbestos removal (5 of 5 projects funded)

Awarded £70,000 in November 2016 towards the asbestos removal element of a £272,000 project

The need

The highest priority element of the application was the removal of asbestos to enable safe access to various roof voids for maintenance and repair. A comprehensive survey had taken more than 200 samples of suspected asbestos-containing materials: key areas were inaccessible without full asbestos protection measures. As a result the condition of the fabric and associated heating systems could not be properly inspected or maintained. This created a significant risk of damage through late detection of water ingress through roof coverings and gutters or through faults and failures to the heating system pipework.

Funding was also sought to carry out repairs and access improvements to the south nave aisle walkway and window below: the shortfall was contributed by the Friends of Exeter Cathedral.



Exeter Cathedral. Photo credit: Acanthus Clews Architects.

Outcomes

Safer and easier access to these key spaces has been achieved, allowing appropriate monitoring, maintenance and assessment of future repair and conservation needs. It also allows the heating system pipework to be reached easily if a problem occurs.

The cathedral bought its own scaffolding to support the multiple high-level projects, saving an estimated £70,000 to £100,000 overall.

Economic and social impact

Jobs were supported during the project in asbestos removal, masonry and leading. Skills were also developed in external stone cleaning, which can be used in the future



Roof void with service cables and pipework. Photo credit: Acanthus Clews Architects.

Works completed and timescale

The works included leading, masonry repairs, asbestos removal and further remedial repairs.

The Cathedral

See previous project summary.