

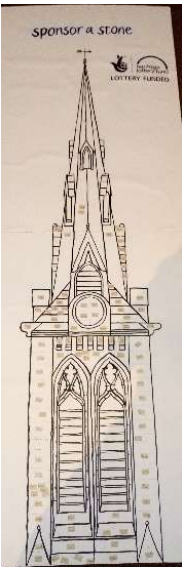
Extensive stonework repairs to spire and pinnacles at Christ Church Highbury



Church:	Christ Church Highbury, 155 Highbury Grove, Highbury East, London N5 1SA													
Designation:	Grade II listed and in a conservation area													
Total project cost:	The Spire Project (repairing the tower) : £308k. Subsequent pinnacle repairs : £56k to date. One pinnacle out of six is now underway, and investigations are commencing into the second one (as at Dec 2018).													
Cloudesley grant:	<p>This complex series of stonework repairs has required several grant applications, as different areas have been tackled and new problems identified. The bulk of the work, the Spire Project, was delivered during 2016. Cloudesley grants have been;</p> <table border="0"> <tr> <td>June 2016</td> <td>£26,975</td> <td>Unexpected urgent repairs to damaged corbels and corroded iron cramps on church spire, including scaffolding.</td> </tr> <tr> <td>Spring 2017</td> <td>£14,000</td> <td>Inspection of pinnacles and items of structural stonework; repair and replacement.</td> </tr> <tr> <td>Spring 2018</td> <td>£18,000</td> <td>Repair and replacement of stonework, mortar and iron cramps on the South East pinnacle.</td> </tr> <tr> <td>Autumn 2018</td> <td>£16,000</td> <td>Structural movement investigations, pinnacle works.</td> </tr> </table>		June 2016	£26,975	Unexpected urgent repairs to damaged corbels and corroded iron cramps on church spire, including scaffolding.	Spring 2017	£14,000	Inspection of pinnacles and items of structural stonework; repair and replacement.	Spring 2018	£18,000	Repair and replacement of stonework, mortar and iron cramps on the South East pinnacle.	Autumn 2018	£16,000	Structural movement investigations, pinnacle works.
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Contractors used:	QI / architect – Spire repairs - Intricate stone carvings - Quantity surveyor - Structural engineer - Steeplejacks - CAD drawings -	Nicholas Weedon D.B.R. Ltd Katherine Worthington Robert Lombardelli Ellis and Moore Rodalls Shaw Colegate
Background	<p>The Spire Project</p> <p>In the Quinquennial Review the architect identified inspection of the spire as a priority, as significant vertical cracks and some erosion to joints were visible. Corrosion had resulted in expansion of the original iron cramps and cracks had developed in the stonework.</p> <p>Christ Church commissioned an inspection of the spire by a company using specialist steeplejack equipment in order to gain the necessary access for a full survey. This survey generated a detailed photographic record showing the defects and provided information on the urgent action required for safety reasons. Repairs to the spire would involve repairing the eroded stonework and replacing the original iron cramps with non-ferrous materials, making the spire safe.</p> <p>To minimise immediate risks to the general public, loose masonry was removed and safety fencing installed around the base of the tower, whilst plans were made.</p> <p>After the initial shock, the church began fundraising, and a successful application was made to the Heritage Lottery Fund in autumn 2015. The Spire Project was launched.</p> <p>Once enough funding had been raised to start work on site, scaffolding was erected and additional inspections were carried out. Further significant damage was discovered. Many of the stone corbels and supporting metal cramps needed replacement, on all four faces of the spire; in total 28 extended corbels and 32 intermediate corbels needed repair or replacement.</p> <p>Whilst the church was very happy with their existing stonemason, the scale of the new work was beyond the firm at that time. The work went out to tender, and the project was won by DBR; they inspired confidence, and they had a lot of relevant experience.</p> <p>It took 7-months of work to repair and conserve the crumbling stonework on the 35 metre high spire. Throughout, the project was managed by volunteers; there was no paid staff involvement. The day-to-day liaison with the stonemasons, architect and other contractors was undertaken by the Church Warden, Michelle Paton, on behalf of the Spire and Heritage Steering Committee. The project management was undertaken by Evelyn Thomas, liaising with the two Church Wardens, volunteers, community groups and the Heritage Lottery Fund.</p> <p>The scaffolding was finally down and the church garden cleared up the week before Christmas 2016, three months late, due to the greater than expected scale of works.</p> <p>Pinnacle repairs</p> <p>In 2017, a pinnacle inspection identified damage from the rusted iron cramps within each pinnacle, causing much of the stonework to fail. Christ Church are taking a systematic approach to addressing these repairs, taking the pinnacles in order of priority. Their architect recommended that the South East Pinnacle was prioritised as it posed the greatest safety risk due to its position directly over the footpath.</p>	

	<p>As at December 2018, work on this SE pinnacle is beginning. As with the spire, once the scaffolding was in place, the architect and contractors were able to make a closer inspection of the damage and identified further areas which required repairs, increasing the cost of the project.</p> <p>The next step is to erect scaffolding and make a thorough assessment of the extent of the damage and the repair works necessary to the next two pinnacles (North West and Central West). Proper access to the pinnacles will ensure that the church can receive accurate quotations for the next phase of work and plan and prepare for this accordingly. The scaffolding will remain in situ until the repair works can be carried out.</p>
<p>Benefits:</p>	<p>The main benefit from these extensive stonework repairs has been the confidence that it is safe to walk around the outside of the church. The crumbling stone has been repaired and there are no longer loose pieces at risk of falling.</p> <p>There is also the knowledge that the historic fabric of the building has been maintained for generations to come. The requirements of the heritage bodies have been met, and the church has been removed from the “heritage at risk” register.</p>
<p>Challenges:</p>	<p>The HLF fundraising process was demanding. The form was complex and the process was highly competitive. The requirement for a linked community project took time to plan and organise, although in the end the church and the HLF were very happy with the Highbury Heritage Project (https://www.highburyheritage.net/).</p> <p>The biggest single challenge was not knowing the extent of the work until work had started on site; until the scaffolding was up and the stone masons could test each piece of stone with a specialist hammer, the church could not be sure how widespread the damage was. The potential for unforeseen problems in the condition of the stonework had been identified by the church as a risk, and they had built in a 10% contingency, but even this amount proved insufficient, and further fundraising was required.</p>
<p>Top tips for other churches:</p>	<p>Do a spire inspection and a pinnacle inspection regularly (every c.10-15 years). Christ Church Highbury had not done one since the 1980s and problems had built up. The inspections aren’t as costly as you might think; the spire inspection was done by steeplejacks and the pinnacle inspection using a cherry picker, so neither required scaffolding.</p> <p>Have a good relationship with your Quinquennial Inspection architect. Find someone you trust and be guided by them. If they don’t have stonework experience, ask them to link you to someone who does.</p> <p>Speak to the Diocese early on; use contractors that they recommend.</p> <p>Choose contractors that you have confidence in, that you are sure you can have a good working relationship with, because these are long and complex projects.</p> <p>Ask around, see if you can get support from members of the congregation, for example with fundraising or project management. An artist in the Christ Church congregation created the Sponsor a Stone artwork, for example (seen on the right here).</p> <p>Be prepared for the required work to change; have contingency plans, discuss them as a PCC, and do not be afraid to call a halt and regroup if necessary. Until scaffolding has been erected and the stonemasons are on site, you will not be entirely sure what is needed.</p> <p>The key thing is to make the site safe first, by removing loose stone and by fencing off areas of the churchyard which are at risk of falling stone.</p>



The Cloudesley perspective – why did these projects gain support?

Christ Church, with support of the project manager, developed a clear plan of action which included seeking necessary professional advice and developing a fundraising campaign. The church contacted Cloudesley at an early stage, before the extent of the required repairs was fully known, to discuss the work. However, as it turned out they were able to make significant progress in their fundraising before they approached Cloudesley for a grant towards the spire project.

They applied to Cloudesley's 'Enabling Major Developments' funding stream to contribute towards the cost of the additional investigations to the pinnacles. The surveyors report was used to tender for the works and this was the basis of a further application to Cloudesley for the ensuing works.

Christ Church kept in close contact with Cloudesley whilst the spire and pinnacle's projects were underway, and updated us when the extent of the works, timescales and cost changed.

A short monitoring report was submitted (including photos) after each stage of works, funded by Cloudesley, was completed.

The photos below are taken from the detailed evaluation report on the Spire Project, written for the Heritage Lottery Fund. You can download the full report here: <http://www.christchurchhighbury.com/wp-content/uploads/2018/08/Spire-and-Heritage-Evaluation-report-October-2017.pdf>. It includes details of the community project that ran alongside the repairs.



Scaffolding arrives Feb 2016



Tower fully wrapped May 2016



Work complete and scaffolding down, December 2016