# Historic England commentary on The Value of Maintenance? Project Report

## 1. Introduction

### 1.1 The Value of Maintenance? research project

In 2019, Historic England commissioned research into the economic value of maintenance and repair on a sample of 30 listed church buildings across England. The research aimed to:

- Estimate the current repair cost for capital works to these buildings;
- Estimate the cost for maintenance and minor repair when issues had been first identified in the fabric reports;
- Establish whether prompt attention to minor repair and maintenance would have slowed the development of major repair needs.

### 1.2 Main findings of the research

The report's Executive Summary drew out four main findings, which broadly confirm the views Historic England and many others have held for some time. Our comments are set out in the main body of the commentary below.

1. Poor maintenance results in increased cost liability, prone to rapid escalation
2. Delaying repair results in significant costs associated with consequential damage
3. Roofs and rainwater goods are the primary causes of defects and consequential decay
4. Buildings of different ages experience broadly the same issues

The report was able to provide answers to the main research questions above. Using the expertise of the project's Quantity Surveyor, the research found that the total cost incurred if all defects had been rectified when first identified is approximately £6,950,000. The total estimated cost associated with delaying repair is £1,200,000, increasing the total cost of repair to £8,150,000.

Additionally, the report calculated the cost of consequential damage, where an initial defect causes further issues elsewhere in the building, at £1,800,000. This is an additional 25% of the cost of repairing defects when first identified.

### 1.3 Historic England's response to the report

This commentary is Historic England's response to the findings of the research report. It highlights areas of particular importance and sets out our views on these. This document is likely to be of use to those carrying out further research in this area, denominational bodies and those involved in the care of historic places of worship.

Although the sample of buildings consisted of churches due to the availability of regular maintenance reports, it is our opinion that the findings of the report are generally applicable to all historic places of worship.

This research will help Historic England and other organisations to make the case for the value to places of worship of carrying out regular maintenance and minor repair. The conclusions of the research report indicate that delaying maintenance and repair can lead to significantly increased costs and highlights the danger of consequential damage and associated additional costs caused by not repairing defects in a timely manner.

The research provides a methodology which could be used to explore this topic further and provides valuable evidence supporting the importance of regular maintenance and minor repair of historic places of worship.

### 1.4 Project background

Historic England selected the sample buildings with kind assistance from the Church Buildings Council and liaised with Dioceses involved to collect a series of Quinquennial Inspection Reports (QIRs) for each building. The buildings were randomly selected to meet certain criteria as described in the Methodology section of the research report (3.1).

Following a public tender process, APEC Architects Ltd (APEC) and Greenwood Projects Ltd (Greenwood) were awarded the contract for the project. The main output was a research report produced by APEC.

The research report sets out the project scope and the methodology used. It then outlines the conclusions drawn about the sample by building element. This covers: masonry, roofs, rainwater goods and drainage, structural stability, interior, windows, services and sundry items. Finally, it summarises the findings to cover the value of repair and maintenance; the cost impact of not carrying out repairs in a timely manner and further general observations.

There are caveats on the limitations of the data, which should be noted. The research report notes that its conclusions are only based on the data gathered from the sample QIRs. The information produced is for guidance only and should not be extrapolated beyond the context of this project.

## 2. Thematic commentary on research report

The report categorises defects by building element (e.g. masonry, roofs, etc.) and draws conclusions about the rate of decay and cost analysis. It is not the intention of this document to cover the detail of these findings, but to provide our views on particular areas of the report and its findings.

The numbered information in brackets refers to the relevant sections of the research report.

### 2.1 Methodology

APEC and Greenwood established a methodology for analysing the data from the QIRs to identify defects, track these across the QIRs for each building and cost the repair of each identified defect. The Methodology is set out in Section 3 of the research report.

Historic England, working with the Church Buildings Council, had already selected the sample of 30 buildings randomly from the following categories:

- Those that have been on the Heritage at Risk Register (HAR) for more than three years;
- Those added to the HAR in 2018;
- Those assessed by Historic England for inclusion on the HAR in 2012 but were not considered to be at risk so were not added to the Register;
- Those not assessed by Historic England in 2012 because the most recent quinquennial inspection report indicated that they were in good or fair condition.

Historic England believes that the methodology created for this project could be utilised in further projects to assess the value of maintenance. This would potentially further the evidence base and produce comparable results for other types of building or using a different series of reports. Potential groups of buildings include 20th century churches and secular buildings.

#### Costing repairs for the sample buildings

The report explains the methodology for costing the defects identified (3.4). Costs were established and categorised by the project's conservation architect in conjunction with a quantity surveyor, set at the cost levels at the time (i.e. 1Q19) to ensure consistency and enable comparison.

The costs exclude professional fees, VAT and specialist tests and inspections (e.g. asbestos surveys). For smaller items of maintenance, access costs were also excluded since the appropriate method (and therefore cost) was not clear in the QIRs.

It should be noted that these additional figures would need to be added for those budgeting to repair and maintain their historic buildings.

In order to increase the understanding of the value of maintenance, Historic England recommends that future research uses the same costing methodology and cost levels to provide comparable figures.

### 2.2 QIRs

The use of the methodology discussed above highlighted inconsistencies between the QIRs used in the study. When extracting the data, APEC and Greenwood found that there were large variations across the QIRs, particularly in the level of detail, overall length and costing of necessary works.

They also found that it was not always possible to track the progress of defects or repairs over time. The project's Accredited Conservation Architect had to establish the most likely outcome from the evidence available. APEC developed a coding system for rating the urgency of repairs to ensure consistency across the sample. The figures from some churches were omitted from the overall results as the sample of QIRs did not provide a sufficiently clear picture of the actual condition of the church.

The report makes several main comments and recommendations about QIRs, including:

- The variations in detail and content between consecutive QIRs of the same building means that some buildings appear to have become noticeably better or worse, however this appears to be a matter of the interpretation of the inspector rather than evidence about the condition of the building (3.2.9).
- Some QIRs classify repairs to roofs or rainwater goods as 'low priority' or 'desirable'. In many cases, however, these escalate to 'urgent' within the quinquennium. The report recommends that all defects to these areas are automatically classified as having a higher urgency (7.1.5 and 7.1.11) since it is clear from the research that leaving them has significant impact on the integrity of the fabric and costs of repair.
- The report also recommends further guidance and indication of prioritisation of repairs so congregations can ensure that a building can receive the most positive impact from available funding (7.1.8).
- Many buildings were had not carried out legally required tests and inspections. The report suggests that QIRs place greater emphasis on these items and supporting information to help congregations understand which tests are legally required (7.1.10).
- A further recommendation is that QIRs track defects identified in the previous report and note those outstanding. If they also noted the level of deterioration since the last QIR, this could help congregations understand the impact of delayed repair (7.1.12).

A good Quinquennial Inspection or other Building Fabric report should not be so daunting for the congregation that it ends up on a shelf being ignored. The research found that many of the reports from the sample did not follow a clear and consistent template. Historic England believes that the use of a template, such as that recommended by the Church of England's new model diocesan scheme, would make it easier for congregations to understand and use their building fabric report. Even when a series of reports had been written by the same architect or surveyor it was often impossible to trace problems through the time period and identify whether these problems had been resolved or escalated. There are several points which would increase their usefulness, including:

- Setting out broad indicative costs for recommended work.
- Stating the time period within which works should be carried out.
- Setting out the relative priority of works.
- Informing congregations of their responsibilities regarding specialist and legally required tests and inspections.
- Tracking the progress of recommendations from previous reports. This would identify whether repairs had been carried out (and when) and, where relevant, giving a brief explanation of why works have not been done and the level of deterioration caused by the delay.

Given the report's findings on roofs and rainwater goods being the main causes of additional defects, it would benefit the building as a whole if QIRs automatically classed repairs to these areas as more urgent.

Historic England is concerned that if a very experienced architect could not discern the information he needed in many of the reports in this sample it is highly unlikely that most congregations would be able to do so. A good inspection report is meant to be a road-map for the congregation to inform regular maintenance and minor repair and encourage planning for major works in the future. If it feeds into the maintenance plan it will help the congregation to take practical steps to address immediate problems promptly and plan how to cope with inevitable larger repairs.

Above all, Quinquennial or other condition reports should be understandable by the people who are responsible for the building and written in a way that communicates to them. Congregations need to ask those who do the inspections to explain what the reports really say about the condition of the building and how they can be used to inform practical action.

### 2.3 Poor maintenance leads to increased cost liability, prone to rapid escalation

Delaying repair and maintenance costs more in the long-run (1.4.1 and 1.4.2). The figures show that delaying work might lead to an increased cost of 15% – 20%. The research also found that the rate of deterioration in poorly maintained buildings escalates rapidly from one QIR to the next. Once this reaches a critical point, costs also increase to the point where major schemes of work are required.

Issues do of course still occur in well-maintained buildings, but regular repair and maintenance keeps these at a stable rate (1.4.1).

The report also notes that unexpected events such as lead theft result in difficulties in dealing with ongoing maintenance and defect repairs, due to diversion of limited resources to deal with these urgent issues (6.3). It also notes that the aim of the research was not to find fault with congregations trying hard to grapple with maintenance of their places of worship (6.1.5).

The report gives a very broad estimate of the costs associated with typical repairs to a well-maintained building over a five year period (5.2.6). These figures should be treated with caution as they are only based on the study sample:

- Medieval church: up to £35k
- Victorian church: up to £20k

**NB These costs do not include VAT, professional fees, specialist tests and inspections (e.g. electrical tests, asbestos surveys) and other tasks not identified in the maintenance reports.**

**They exclude major repairs caused by material or design failure or works caused by an unexpected problem such as metal theft, lightning strike, subsidence.**

Historic England agrees that these figures are a useful indicator of the cost of maintenance for a building which is in relatively good condition. Historic England also thinks it is important to note that spend is unlikely to be equal every year across a quinquennium as it is likely that works such as decorative works to rainwater goods, specialist inspections and so on will be required at least once every five years.

In light of these findings, it is clear why Historic England strongly promotes the use of costed maintenance plans. These enable congregations to budget for and prioritise maintenance and repair. Maintenance plans also help to make the most effective use of very limited resources, focussing money and effort where they will have the biggest impact.

### 2.4 Delaying repair results in significant costs associated with consequential damage

This research demonstrates the truth of the old saying 'A stitch in time saves nine'. Even if the cost of doing apparently minor repairs seems disproportionately high, it is still a good investment and a responsible use of funds. Delaying maintenance leads to additional consequential costs over time because issues escalate and damage other parts of the building, increasing the number of problems. Across the sample, these consequential costs resulted in a significant proportion of the total cost of repairing all the defects (25%). It is clear that there is less cost associated with buildings which have a good track record of basic regular maintenance (1.4.2 and 6.2).

This research has also demonstrated that increased deterioration is sometimes a result of a congregation prioritising other areas of work e.g. re-ordering, over necessary repairs to defects. Putting the repairs off caused significant increases in costs (6.3.2).

### 2.5 Roofs and rainwater goods are the primary causes of defects and consequential decay

Problems with these areas often escalated rapidly between QIRs, resulting in an increased cost liability for congregations. These areas are also the most common cause of consequential damage to masonry and interiors (1.4.3, 4.3 and 4.4).

#### Roofs (4.3)

This research demonstrates that keeping a roof well maintained is crucial. Primarily because roof defects are a major cause of consequential damage (4.3.12) but also because the data showed that patch repairs can effectively delay the need for a new roof for approximately 5 - 10 years (4.3.3 and 7.1.4). The findings note that congregations only tend to deal with roof repairs when they become urgent, which means the problems have escalated and the costs increased.

Historic England understands that it can be difficult for congregations to carry out maintenance and minor repairs on roofs due to the cost of access. However, by identifying the cause of problems like slipped slates as they occur and carrying out stitch-in-time repairs, congregations will get a clearer idea of when a roof covering might start to fail. By continuing to carry out minor repairs and maintenance in the interim, a congregation would probably gain valuable time in which to plan and fundraise for eventual replacement.

The case study at 4.3.11 highlights the importance of ensuring that works to replace roof covers are carried out to the appropriate standard and design by a suitably experienced contractor. The church in this example had a new roof installed just prior to the study period, which was found by the subsequent QIR to be causing numerous problems due to being poorly installed.

It is important to make sure that any repair or maintenance work is carried out to a high standard by an appropriately experienced contractor who understands historic buildings. This ensures that the repairs are as long lasting as possible. It also minimises the risk of further damage to the building as

a result of sub-standard repairs. Further information on finding professionals to undertake works on historic buildings can be found on the Historic England website.

### Rainwater goods and drainage (4.4)

Crucially, the study identified rainwater goods as the one key element of a building where regular maintenance is essential for them to function properly. Defects to rainwater goods are also the single largest contributor of consequential damage to other parts of the building (4.4.1 and 4.4.2). This is also shown in the section on Interiors, which notes that most interior defects were caused by saturation, damp or water ingress (4.6.2, 4.6.5, 4.6.7).

The striking graphs in this section emphasise the need to carry out repairs quickly or costs will escalate (4.4.13).

Historic England endorses the report's recommendation for the following:

- Regular clearance of rainwater goods of debris and vegetation (4.4.6);
- Regular checks to ensure that drains are clear (4.4);
- Carrying out decorative works such as repainting cast-iron goods at least once every five years (4.4.6).

We recognise that many congregations cannot access all roofs and gutters safely but would strongly encourage investment in a contract with an appropriate local company that can do so at least once, but ideally twice, a year. That arrangement, together with a five-yearly redecoration of rainwater goods could save congregations a lot of anxiety and money in the longer-term.

## 2.6 Buildings of different ages experience broadly the same issues

Most buildings across the sample displayed similar defects and cost of repair, suggesting that it is not age but rather the size and complexity of a building which are the most important factors in determining the cost of repair (1.4.4 and 5.2). Overall, the graphs present a similar picture of the main maintenance/repair issues facing all churches: size and complexity which most affect running costs, not age (5.2.3 and 5.2.4).

Although the study indicates that the cost of repair for Victorian churches is generally greater than that for Medieval churches, most of the Victorian churches in the sample were larger, more complex buildings. It may also be the case (QIRs did not make this explicit) that many of the construction materials used to build Victorian places of worship are now reaching the end of their sustainable lives, especially if they have not been well maintained. Equally, some construction techniques are now failing, such as iron cramps that are rusting because of water ingress and need to be replaced.

## 2.7 Masonry (4.2)

As expected, the damage observed to masonry across the sample is largely consequential. It is mainly due to saturation caused by defective rainwater goods or roof finishes. These defects were the result either of poor maintenance or repairs not being carried out in a timely manner (4.2.1 and 4.2.5).

This section emphasises the importance of keeping rainwater goods and roofs in good repair and highlights the fact that repair costs are generally lower for those buildings which are regularly maintained.

The report also highlights the need for awareness among those who look after historic buildings of the damage caused by hard cement pointing and other inappropriate past repairs (4.2.3). Historic England's guidance on repointing and stone walls is a valuable source of information on this topic. Any removal of inappropriate mortar should only take place if it can be done without causing more damage to surrounding masonry.

### 2.8 Services (4.8)

The report states that, in general, electrical systems were poorly maintained and several buildings in the sample had dangerous wiring (4.8.3). Many had also not had recent Fixed Electrical Installation tests or Portable Appliance tests (PAT), despite these being a legal requirement.

It is important to make those looking after buildings aware of the risks of fire, danger to health and the potential invalidation of insurances. Historic England recommends that legally required and specialist inspections are built into the maintenance plan for a place of worship to ensure that congregations are aware of which tests need to be carried out and when. This would also help congregations to plan budgets that include the costs of such tests and inspections.

### 2.9 Comparison of buildings by Heritage at Risk category (5.3)

The 30 sample churches fall fairly evenly into the following categories, based on their Heritage at Risk Register (HAR) status (5.3.1):

1. Buildings which have been on HAR for over 3 years (8);
2. Buildings added to HAR in 2018 (8);
3. Buildings assessed in 2012 but not added to HAR (7);
4. Buildings not assessed in 2012 for HAR (7).

In categories 2, 3 & 4, the range of cost and expenditure is in broadly the same region (£100k - £250k). In all cases the average cost of repairs is 4 to 5 times greater than the expenditure on repairs. No church in the study had spent the necessary funds to completely resolve defects at any one time (5.3.3).

For category 1 buildings, which have been on HAR for over 3 years, the most striking finding is that there comes a point where deterioration is so rapid that a rolling programme of repairs is not enough to keep the building stable. A large capital investment is required to fund a major scheme of works (5.3.4 and 6.1.4).

Such investment may require several phases as it is likely to be significantly more than a congregation will be able to fund on their own. It is vital that a new maintenance plan is adopted as soon as the need for large-scale repair is identified. This will ensure that the impact of the capital work is not undermined by the lack of basic day-to-day care of the building.

Historic England recommends the use of relatively detailed and costed maintenance plans (e.g. QIRs) to allow congregations to understand what works need to be done, their priority and likely required expenditure to help with budgeting.

### 2.10 Access

The Taylor Review Pilot in Suffolk and Greater Manchester has shown that some congregations are put off doing urgent minor repairs or high level maintenance because of the cost of access e.g. scaffolding. They don't think it is worth spending a lot of money on access for what appears to be a minor job that 'can wait'. Some QIRs even advised that this was the case. However, Historic England strongly advises congregations to go ahead with such works as soon as they know there is a problem since, in the long run, it is likely to prevent further damage and increased costs.

The report recommends that congregations take advantage of scaffolding and access provided for high level works (7.1.6) by doing other small jobs that can only be reached when access is in place e.g. removal of plant growth, clearing of gutters and gullies, small areas of repointing. This will achieve savings by making the most economic use of expensive scaffolding/access to rectify as many defects and carry out as much minor repair work as possible, even if it is not identified as desperately urgent (6.3.6).

### 2.11 Importance of using suitable experienced contractors

The research showed that congregations sometimes commission work that uses inappropriate materials or is poorly executed (4.2.3 and 7.1.9). This can make a bad situation worse rather than put things right. It is important to make sure that any repair or maintenance work is carried out to a high standard by an appropriately experienced contractor who understands historic buildings.

This was particularly emphasised in relation to hard cement pointing: the report notes that in many of the sample buildings this could be causing accelerated damage to the masonry. The Historic England guidance on repointing brick and stone walls provides detailed information about repointing. Our position is that any removal of inappropriate mortar should only take place if it can be done without causing more damage to surrounding masonry.

## 3. Conclusion

This research confirms what we may have expected but could only substantiate anecdotally. Its value lies in being a systematic study based on professional reports over a sustained period of time by a conservation accredited architect used to working on places of worship, independently costed by an experienced conservation quantity surveyor.

The resulting evidence shows that carrying out regular maintenance and repair represents good value to historic churches even if minor works seem disproportionately expensive. It highlights the importance of timely repair, especially to roofs and rainwater goods. It demonstrates the increased financial cost associated with delay and the danger of consequential damage following an initial defect. We all know the concomitant price that congregations – often individuals – pay in terms of anxiety, effort and fund-raising when minor problems become major repair needs.

It also emphasises that many struggle to carry out the basic maintenance required to keep their building in a steady state. Unfortunately, it is clear that Quinquennial or other fabric inspection reports are not always of practical help in prioritising work or getting the best of scarce resources.

Among congregations, there is a need for a greater understanding of maintenance, repair and why these represent good value for money. This is the only way for the necessary culture change to take

hold - the change from “it can wait until we do a big job” to “let’s do it now so we have more time before a big job is necessary”.

Professionals and advisory bodies can help facilitate this change in several ways. They can work to ensure that inspection reports are understood by the congregation, are structured in the most helpful way and cover relevant, timely and useful information. They can also use the available templates for inspection reports, maintenance plans, and checklists and provide links to further information to ensure that support and guidance are readily available to everyone.

## 4. Additional resources

Maintenance plans
https://historicengland.org.uk/advice/technical-advice/buildings/maintenance-plans-for-older-buildings/

Maintenance checklists
https://historicengland.org.uk/advice/your-home/looking-after-your-home/maintenance/maintenance-checklist/

Repair and maintenance of places of worship
https://historicengland.org.uk/advice/caring-for-heritage/places-of-worship/maintenance/

Maintenance of historic buildings
https://historicengland.org.uk/advice/your-home/looking-after-your-home/maintenance/

Repair of historic buildings
https://historicengland.org.uk/advice/your-home/looking-after-your-home/repair/

Historic England’s technical guidance for looking after historic buildings
https://historicengland.org.uk/advice/technical-advice/buildings/