

MAINTAINING VALUE

MODULE 1

Best Practice Maintenance Management for Listed Buildings

Final Report Submitted to Maintain our Heritage

by The University of the West of England, Bristol

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Executive Summary

1. Background

In 2002, Maintain our Heritage (MoH), together with a number of project partners won funding under the Department of Trade and Industry's Partners in Innovation Programme to undertake the first-ever major research programme on the maintenance of historic buildings, entitled *Maintaining Value*. The research programme was predicated on the idea that systematic maintenance is fundamental to the conservation of historic buildings.

For the purposes of this research the term historic buildings has been taken to mean listed buildings. It is acknowledged that this is a narrow definition of the term. It was decided, however, that this group of buildings as the most challenging and precious part of the sector, represented an ideal group for learning lessons applicable to the wider built cultural heritage. This term also gave a clarity and focus to the research.

The overall aim of the research programme is to support and build on the developing agenda both in government and the heritage sector that prevention is better than cure.

Maintaining Value has a number of objectives:

- to test the hypothesis that systematic maintenance is the most sustainable and cost-effective maintenance regime for listed buildings;
- to identify and evaluate examples of good practice in relation to the systematic maintenance of listed buildings and to find examples of good practice in general maintenance management which might be adapted or applied to the maintenance management of listed buildings;
- to examine the way in which individuals and organisations currently approach the maintenance of the listed buildings in their care;
- to investigate the potential for systematic maintenance management to create opportunities for the construction industry to develop new products and services.

The programme of work was divided into nine modules. The University of the West of England, Bristol (UWE), who were among the project partners, were nominated subcontractors for three of these modules:

- Module 1: Best Practice Maintenance Management for Listed Buildings;
- Module 2: Individual Owners' Approaches to the Maintenance of their Listed Buildings;
- Module 3: The Provision of Commercial Maintenance Services for Listed Buildings.

The remainder of this summary outlines the aims, methods adopted and key findings from Module 1: Best Practice Maintenance Management for Listed Buildings.

2. Module 1: Best Practice Maintenance Management for Listed Buildings

2.1 Context and aims

Since William Morris' call to establish the Society for the Protection of Ancient Buildings (SPAB), in 1877, maintenance has been highlighted as a key intervention in protecting the built cultural heritage. Despite the rhetoric of the importance of maintenance there has been no systematic investigation of:

- the case for maintenance;
- what might constitute best practice in relation to the maintenance management of historic buildings;
- how individuals and organisations currently approach the maintenance of the historic buildings in their care.

The aim of this research module was to begin to redress these knowledge shortfalls. Specifically the objectives were to examine:

- the existing and developing statutory and policy context within which maintenance of listed buildings is undertaken in the UK;
- what constitutes a best practice approach to the maintenance of listed buildings, based on the literature and from current practice;
- current approaches to maintenance of organisations whose property portfolio contains a proportion of listed buildings;
- the financial and non-financial case for maintenance.

The methods and key findings from each of these tasks are summarised in turn below.

2.2 The statutory context for maintenance

Aims and methods

This was a desk-based study, which reviewed the principal statutory and other official documents that are of relevance to maintenance.

Key findings

Lack of coherence

The statutory and policy situation is not coherent with regard to maintenance, particularly in regard to co-ordination between statutory instruments, acts and fiscal measures. Indeed some aspects, such as the VAT situation, seem to actively discourage preventative maintenance and there is little that supports the development of pro-active approaches.

Lack of leadership

Until recently there has been no clear leadership on maintenance for listed buildings at policy level. However, within the context of increasing attention by policy makers to the strategic issue of understanding cultural significance, its vulnerability and the development of appropriate policies and action, there has been increasing emphasis on the importance of maintenance as a critical conservation activity.

2.3 European maintenance initiatives

Aims and methods

This was a desk study and series of interviews with representatives of 3 European initiatives which either adopt or help to support a systematic approach to the maintenance of listed/historic buildings. The section also describes the statutory context in which these initiatives operate.

Key findings

National policies supportive of maintenance

In the Dutch case, the state's involvement in financing conservation, in particular through a system of fiscal incentives means that the state has a long term financial interest in reducing the level of tax breaks for repairs to listed buildings: it is in the states own interest to reduce this need by encouraging maintenance in order to reduce the amount of subsidy provided. Equally if the state is financing repair subsidy there is a 'best value' reason for it to ensure that the investment made is secured into the future via maintenance activity. In the Netherlands, the state's support and validation of the Monumentenwacht initiative sends a clear message to listed building owners about the importance of maintenance. Enshrining a duty of care in statute and the provision of state financial support for maintenance are key factors which have encouraged the success of the Danish initiative Raadvad Bygningsyn.

Co-operation and coordination

Cooperation between government, non-governmental organisations and the heritage sector is clearly a key feature which underpins the success of the maintenance initiative and the promotion of preventative maintenance in general in the Netherlands. This is reflected in the amount of multi-partner working and in the integration of policies at different levels.

Nationally coordinated database and monitoring system

Although maintenance has not been a significant part of the philosophical or practical approach to conservation in Italy, the national Risk Map data base has been a key factor in being able to provide evidence which supports the case for maintenance. Moreover, there is clearly enormous potential for such a national data base to play a key role in a nationally coordinated maintenance strategy, both in terms of identifying suitable frequencies for inspections and other forms of maintenance, and in monitoring the effectiveness of such strategies and adapting them accordingly.

Comprehensive maintenance services

The 'one-stop-shop' approach of the Dutch and Danish initiatives provides owners with a range of maintenance advice related services which are comprehensive, and convenient to use and which provide access range of maintenance activity related services. Support in terms of advice and complementary services also plays an important role in encouraging listed building owners to maintain their properties.

In Denmark, the setting up a new service within an existing and trusted organisation has provided a range of services that support the core inspection and maintenance planning service and provide a more rounded and integrated approach.

2.4 Best practice maintenance management for listed buildings

Aims and methods

Two methods were employed in this research in order to try and identify the elements of a best practice approach to the maintenance management of listed buildings. The first was a review of the conservation and general maintenance management literature. The second was an empirical study of three non-heritage sector organisations: a housing association; an NHS hospital trust; a commercial financial institution. These were studied through interviews with a senior maintenance manager in each organisation and an examination of their maintenance documentation including handbooks and published policy. The aim of this study was to try and identify possible areas of good practice.

Key findings

Cultural significance and minimal intervention

In addition to retaining functionality an over-riding objective of the approach to listed building maintenance should be to retain and enhance cultural significance. This should be achieved by avoiding unnecessary intervention through a process of preventative maintenance based on careful consideration of the nature and possible consequences of the defect. Where intervention has to occur this should be on the basis of doing the minimum necessary. The implication for organisations with responsibility for the care of listed buildings is that maintenance should have a greater centrality and importance, and that, where there is a mixed stock of buildings, the maintenance management service should distinguish between listed and non-listed buildings.

Integration with corporate strategy

Maintenance management decisions should be integrated with the corporate objectives. Given the importance of maintenance for listed buildings, an overarching strategic plan for heritage organisations should have a clear indication of how maintenance is to be managed and where this function resides in the organisational structure. Indeed, for heritage organisations it should be considered one of the key issues that should help drive any strategic plan. Best practice for the maintenance management of listed buildings requires the development of a plan for maintenance which integrates this activity with a wider strategy for the management of the built assets, and which recognises cultural significance and its vulnerability.

Explicit policies

Explicit policies should provide the framework for decision making and practice and should include a clear statement of objectives and methods to be employed to meet those objectives. Conserving cultural significance and minimal intervention in the fabric of the building should be the primary principles which inform the maintenance policy and its implementation for listed buildings.

Planned approaches

A planned, (that is, predictive rather than responsive) approach to the maintenance programming for listed buildings is essential. General best practice guidance suggests that the prioritisation of maintenance activity should take account of the condition of the fabric. It emphasises, however, the importance of prioritisation in the context of other factors, such as the effect of the condition on, for example, overall performance of the particular asset or the overall property strategy of the organisation. For listed buildings this context should include the relative cultural significance and vulnerability.

Regular inspections

Regular inspections are a fundamental part of a preventative maintenance programme. Clarity about the purpose and uses of condition surveys is essential. A condition survey should provide an assessment of condition, identify the optimum moment for intervention, and aid the prioritisation of actions and planning for the future. It is also seen as a useful opportunity for a strategic review of the management of maintenance. Best practice also suggests that there should be interim surveys between the more formal condition surveys. The literature says that condition surveys for listed buildings should be informed by an assessment of cultural significance and that the frequency of inspection should relate to this assessment of significance and the vulnerability of the element/component. Best practice suggests that for listed buildings there should be an emphasis on greater incidence of inspections of the fabric with the aims of reducing physical intervention, 'As much as necessary and as little as possible'. This 'just-in-time' approach implies frequent inspections which are tailored to the significance and vulnerability of the element or material.

Casual inspection

Dealing effectively with condition information from building users other than those directly related to the maintenance department is an important part of recommended good practice. The presence of non-technical staff and other users and visitors on a daily basis can provide the maintenance function with vital information regarding condition which would otherwise wait until a subsequent inspection cycle, or until failure becomes impossible to ignore.

Information management

Good information and records are vital for the effective maintenance management of listed buildings. This is because, in addition to enabling good management practice, effective records detailing the historical development of the building, are an integral part of the cultural history of the building and they also help explain how and why the building is significant. A major responsibility for a maintenance manager is to manage the collection, storage, and retrieval of suitable information to ensure efficient and effective maintenance management. Because the nature and form of information produced and required by maintenance activity is extremely diverse, maintenance information should be stored on an integrated database. The information stored should also be easily retrievable and amenable to manipulation in order to inform both tactical and strategic processes.

Financial planning and budgets

Monitoring and review of the maintenance function with regard to the principal aim of protecting cultural significances is essential. Long term financial planning and ring-fenced budgets for maintenance are also essential if coherent and comprehensive maintenance management systems are to be implemented successfully.

2.5 Organisational approaches to the maintenance of listed buildings

Aims and methods

A key aim of module 1 was to develop an understanding of the way organisations approach the maintenance management of the listed buildings in their care, and to identify the key factors which constrain or support a best practice approach. These issues were investigated using two methods. First, a questionnaire to a sample of heritage organisations (defined for the purposes of this research as organisations that included the care of listed buildings as one of their primary purposes) and non-heritage organisations (defined as organisations whose primary purpose did not specifically include the care of listed buildings, but that had responsibility for the care of listed buildings within their portfolio). Second, follow-up semi-structured interviews were conducted with maintenance managers from 11 of the organisations that had returned the questionnaire. Organisations' practice was assessed in relation to the

best practice criteria established through the literature review and case study work of good practice maintenance management in a non-heritage context.

Key findings about current practice

Introduction

The results of this research suggest that at present both heritage and non-heritage organisations are falling short of a best practice approach to maintenance, when measured against all of the criteria identified in the literature search. The areas for potential improvement differ both between heritage and non-heritage organisations and between the commercial and non-commercial non-heritage organisations.

Heritage organisations, as would be expected, were generally better informed about what constitutes good conservation and there is encouraging evidence of increasing awareness about the relationship between maintenance and retaining cultural significance. There is some evidence that this is being translated into management action in some organisations.

Conservation consciousness

Conservation principles did not guide the approach of all the public sector organisations. Only the governmental organisations and one of the universities had these as part of written guidance. There is a worrying absence of conservation consciousness among the commercial non-heritage organisations. For these organisations the primary value that ownership of a listed building contributed to the organisation was related to image. The priority for maintenance activity was, therefore, focused more on retaining the aesthetic appearance of the building and less on a sophisticated assessment of their cultural significance.

Formal policies

Whilst many non-heritage organisations said that despite the absence of formal policies, in practice they would treat their listed and non-listed stock differently, such reliance on informality is clearly of concern. At best it encourages an ad hoc approach to maintenance and makes a formal monitoring and evaluation process difficult if not impossible to implement. At worst it allows a disregard of the particular maintenance requirements of listed buildings. Even some heritage organisations lacked of formal written policies in regard to maintenance. Whilst many heritage organisations had written conservation principles, none we interviewed or surveyed were able to provide us with hard copies of their maintenance policies. In general there was great reliance on getting on with things the way they were, with a 'we know what is significant' 'we know the stock' 'we know what we do and how we do it' attitude prevalent. Potentially dangerous assumptions were made about what maintenance teams know, for example, about cultural significance. This was illustrated by the comments of the maintenance manager of a large national heritage organisation who said that cultural significance was 'well known' to site teams and would thus be used in identifying site management proposals.

Process drivers

In the organisations studied the approach to maintenance management tends to be driven by process (that is optimising the efficiency of the process) rather than by a clear strategy about what that process is serving. This tends to be the same whatever the sector. Aspects of maintenance management are imported from elsewhere without re-contextualising them for the needs of historic buildings. This may cause problems because, for example, whilst planned maintenance programmes can provide cost savings, they may work against the principle of minimal intervention where they develop a logic and momentum of their own. This is particularly significant for non-heritage organisations, many of which do not have conservation ideals as an anchor. Minimal intervention at times was at odds with the 'lets do something' attitude of the non-heritage organisations. For some there was a fit between

minimal intervention and the notion of generally reducing costs, but there was little evidence to suggest that such a form of prioritisation acknowledged cultural significance.

Maintenance programmes should be set within the context of rigorous policies such as the need to retain cultural significance and minimal intervention. Even heritage organisations, however, do not seem to have made best use of the idea of cultural significance as a driver that gives clarity to their maintenance objectives. The findings suggest that there is a clear need for a step-change to ensure that the retention of cultural significance and minimal intervention, set the context for the maintenance strategies of both heritage and non-heritage organisations.

Information management

The non-heritage organisations often have relatively sophisticated information systems. However use of these has not been developed to specifically identify, and therefore address, the particular maintenance management requirements of listed buildings.

The lack of crossover of best practice maintenance management from sectors such as Housing Associations to the heritage sector is illustrated by conditions surveys. Whilst the former have developed a condition survey technology and format (particularly in relation to the development of digital data on spreadsheets) which enable 'what if?' enquiries, the heritage sector has continued to use textual documentation which is hard to interpret and impossible to manipulate. Although the current condition survey format used by many heritage organisations does have value as an historic record of the building and its condition, the format is not useful as a management tool.

The level of understanding of the importance of records from a cultural heritage point of view was poor. Within heritage organisations there is also a sense that records of contemporary decisions regarding the fabric are not as important as past decisions.

Status

Lack of status of the property management function within organisations has traditionally been a problem and within property departments the maintenance role lacks kudos. It might be expected that this would be different in heritage organisations, but the findings suggest that this is not necessarily so. For the larger heritage organisations, however, there does seem to be evidence of an increasing emphasis on the importance of maintenance. This is reflected in the fact that the maintenance service appears to have an increasingly strong voice within these organisations and there is evidence of increased resources being allocated. It is not enough, however, to have representation of the maintenance function at board level, there also needs to be someone who is able to fight the case.

Finance and budgeting

It is clear that some aspects of the financing and budgetary processes conflict with, rather than support, the stated policies of minimal intervention and the protection and enhancement of cultural heritage. Whilst annual budgets are the norm, the failure to consider and provide for the longer-term militates against an effective strategic approach to maintenance. There is a dual problem with annual budgets; they are easy targets for cuts (justified by promises to reinstate them in the following year); conversely, they encourage those managing them to ensure that they are spent. In heritage terms this motivation to spend a budget allocation might result in works being undertaken which are unnecessary. The counter argument to this is that the frequent re-prioritisation of planned maintenance may have the effect of producing a minimal intervention approach by default.

Key findings about factors influencing a best practice approach

Mindset

For all types of organisations it is clear that a change in mindset is required. Commercial non-heritage organisations in particular, and to a lesser extent the non-commercial organisations, need a much greater awareness and understanding of the cultural significance of the listed buildings within their care. Such an understanding needs to be organisation wide. For heritage organisations the trend towards a greater understanding of the significance of retaining cultural heritage and the important role of maintenance for this needs to be consolidated and developed. Best value from programmes of awareness raising and education to bring about greater understanding of these issues in organisations that have responsibility for listed buildings is more likely to be achieved if these are accompanied by ‘carrot and stick’ initiatives at statutory level. These initiatives will be particularly important for non-heritage (particularly commercial) organisations, which have no organisational rationale for maintaining in order to retain cultural significance.

Know how; process

Rather than a series of individual elements, best practice should be thought of as a coherent system that integrates the components of best practice (identified in the literature and case studies) from conception (that is, driven fundamentally by the concepts of cultural significance and minimal intervention) to inception (that is, the policies, programmes, management and practices of the maintenance function). It is perhaps not surprising that the lack of such a comprehensive and integrated model in the literature was also mirrored in the attitudes and practice to maintenance management in the organisations studied for this research. A clear implication of this research is that there is an urgent need to start developing a coherent system of maintenance management appropriate to the needs of listed buildings. The system will need to be such that it provides an effective means for highlighting cultural significance concerns when decisions relating to potentially competing organisational interests are being taken. Best practice will to some extent be dependent upon the structure and culture of the organisation concerned. Whilst a universal maintenance management model for listed buildings may not be appropriate, the development of a loose system of processes, which could be adapted to suit different organisational contexts, may be a realistic goal.

Know how; prioritisation

For all organisations there are issues beyond the identified needs of the fabric that affect the priorities for maintenance, that is, statutory and regulatory issues, users and organisational concerns etc. The conservation literature suggests that for listed buildings, the overriding priority should be the cultural significance, but it provides little discussion or guidance on managing relative priorities.

Conservation plans, which are the current benchmark for assessing cultural significance, have generally not been developed by organisations into coherent management plans to inform and develop maintenance policy. There may be an issue with the way conservation plans are currently primarily commissioned to attain funding. They may not always be briefed-for and drafted, in a way that enables useful strategies, policies and procedures to flow easily from them. For example, one heritage organisation did not see how conservation plans could be used for maintenance. There needs to be some development of the conservation plan or statement of significance and its application in order for it to act as information for, and a driver of, maintenance policies and strategies. There is also a need for awareness raising, guidance and a suitable methodological framework for non-heritage organisations to be able to have a mini conservation plan/statement for their stock.

Know how; risk management

Risk management as a maintenance management tool is being used increasingly in non-heritage sectors. Conservation plans can be seen as a risk management exercise, that is, they assess the consequences of not taking a particular action. The danger of using risk management for the maintenance of listed buildings is that it could focus maintenance attention onto risks other than cultural significance, a particular problem which is perhaps increased when organisations do not undertake assessments of significance. Where risk management techniques are applied more strategically, that is, to the whole property management side of an organisation, there could be less investment and concern to carry out maintenance generally. In order for risk management to be translated into a useful management tool for the maintenance of listed buildings, the development and use of assessments of cultural significance within such a framework becomes critical.

Resources

Long term financial planning and ring-fenced budgets for maintenance are essential if coherent and comprehensive maintenance management systems are to be implemented successfully.

Organisational culture and structure

The maintenance function needs to have greater centrality and input into the strategic decision making processes affecting historic buildings.

2.6 Examining the financial and non-financial case for maintenance

Aims and methods

The fifth research task in Module 1 was to examine the financial and non-financial case for maintenance. Rather than taking a hypothetical approach, it was decided to explore the issue by developing maintenance plans for 6 historic buildings. The technique used was to develop a survey pro-forma which could be used to assess the costs of maintenance over time and the potential repairs should maintenance not be pursued. The survey pro-forma was adapted from a stock condition survey approach. The buildings inspected were chosen to reflect a wide spectrum of the UK's historic buildings. Examining the non-financial case for maintenance involved a more discursive examination of how we can place value on cultural heritage.

Key findings

The development of the survey pro forma and using this to carry out inspections highlighted the difficulty of assessing maintenance costs over time and of the potential repairs should maintenance not be pursued. Whilst element and component costs are relatively easy to assess, assessing component life is more difficult. This is because there is little data on proven life cycles and in practice multiple factors may affect component life.

There is some evidence to show that regular inspection and preventative maintenance will help to extend the life of many building components but depends on the nature of individual building elements. There is little evidence to suggest that regular inspections and preventative maintenance will always be a cost effective use of resources. Nevertheless, it is clear from the property surveys and associated research that regular (and possible targeted) inspections and preventative maintenance will probably be:

- cost effective for those elements near the end of their lives;
- cost effective for those elements whose premature failure or inadequate functional performance might affect other building components;
- cost effective for those elements of cultural value;
- effective for the organisation in terms of minimising risk and uncertainty.

The section of the report addressing the non-financial case for maintenance centred on an examination of a possible methodology for incorporating the principles of risk management and resource accounting into the maintenance decision process in order to take account of an historic building's cultural value. The provisional model suggested assessing the building's intangible cultural value (ICV). This is the addition to total value resulting from the building's historic significance. The ICV might then be expressed as a percentage of its total functional value allowing building managers to determine what proportion of the building's value is determined by its cultural significance. Maintenance strategy would then need to respond to protect this cultural increment.

1. Introduction

1.1 The significance of maintenance for historic buildings

In his call to establish the Society for the Protection of Ancient Buildings (SPAB), in 1877, William Morris highlighted the importance that maintenance plays in protecting historic buildings, ‘...put protection in the place of restoration, to stave off decay by daily care’ (Morris, 1877). SPAB continues to emphasise the importance of maintenance. *The Purpose of SPAB*’ (SPAB, 2003) states that regular maintenance is,

The most practical and economical form of preservation.

The importance of maintenance is emphasised elsewhere in national and international guidance. For example Semple Kerr (1995) states,

Maintenance is the single most important conservation process. Whether the place is architectural, mechanical or botanical, prevention is better than cure.

Despite the rhetoric of the importance of maintenance in protecting the built cultural heritage, it is under-supported at a number of different levels, for example:

- statute is not explicit about the need for maintenance and government provides no grant aid for maintenance;
- there is relatively little guidance about how maintenance can be conceived of, managed and integrated with other key management activities within a heritage context. This is reflected in the lack of coherence in the academic debate concerning these issues.
- maintenance management generally, and within corporate contexts, has a low status and is non strategic (see for example, Chartered Institute of Building, 1990). Even within ‘estates departments’, maintenance management is generally a low status activity. This seems to be the case even in organisations whose *raison d’être* is the care of historic buildings (Feilden, 1982).

There is evidence that some recent policy initiatives, in particular the notion of Best Value, have provided an opportunity for a consideration of the strategic issues and opportunities that the maintenance of buildings provides. These, however, are highly sector specific (Audit Commission, Housing Corporation, NHS Estates) and there is little development of such thinking regarding the maintenance of historic buildings.

In terms of the evidence base, there has been no systematic investigation of:

- the case for maintenance;
- what might constitute best practice in relation to the maintenance management of historic buildings;
- how individuals and organisations currently approach the maintenance of the historic buildings in their care.

1.2 Aims of this research

The aim of this research module was to begin to redress these knowledge shortfalls. Specifically the objectives were to examine:

- the existing and developing statutory and policy context within which maintenance of listed buildings is undertaken in the UK;
- what constitutes a best practice approach to the maintenance of listed buildings, based on the literature and from current practice;
- current approaches to maintenance of organisations whose property portfolio contains a proportion of listed buildings;
- the financial and non-financial case for maintenance.

1.3 Definition of maintenance adopted for this research

Although the term 'systematic maintenance' was used in the original research outline, this clearly required more clarification. For the purposes of the research, maintenance was defined as, day-to-day activities such as cleaning, painting and minor repair relating to elements of a building. Maintenance seeks to extend the life of such elements and hence the entire building.

Feilden (1982) suggests a hierarchy of intervention which implicitly puts processes in order of least harm to the fabric:

- the prevention of deterioration;
- protective measures;
- consolidation;
- repair.

This draws attention to the need to distinguish between maintenance and repair when dealing with historic buildings.

1.4 Structure of the report

The remainder of this report is comprised of 5 parts:

- the statutory and policy context for maintenance;
- European maintenance initiatives;
- best practice maintenance management for listed buildings;
- organisational approaches to the maintenance of listed buildings;
- examination of the financial and non-financial case for maintenance.