Maintain Our Heritage

Maintaining Value

Module 5:Demand and Supply: Building the Business Case for Planned Maintenance

Contents

1 Context

1.1 Introduction

The objective of this study is to consider the business case for developing structured maintenance services for heritage buildings. This will incorporate a review of the existing market and how it could develop, with differentiation of possible suppliers and customers.

Since the late Victorian era and the time of William Morris, one of the founders of the Society for the Protection of Ancient Buildings (SPAB), people have actively sought ways to conserve and protect cultural elements of the built environment. Organisations like SPAB have matured and seek to protect heritage buildings from the natural affects of time and the unnatural elements of poor renovation and neglect. Thus, another word has become linked with preservation and conservation, in terms of heritage buildings, and that is maintenance. The idea behind the concept of maintenance is that with proper care buildings should not fall into disrepair and will limit costly repairs and heritage loss.

In this respect, a sound maintenance regime could lead to savings and reflect a value to the consumer. Already there are numerous firms that specialise not only in repair and maintenance in its most general sense, but also those that are skilled in the materials and techniques used 50, 100 and 500 years ago.

This report is part of Maintaining Our Heritage's Maintaining Value programme, which incorporates the development of 5 additional modules. Each of these individual modules focus on differing aspects of maintenance in regards to heritage buildings and combine to give an overall view on the industry and opportunities within it to achieve better care of UK heritage buildings. This report builds upon the research in modules 1 – 3 [see http://www.maintainourheritage.co.uk/findings.htm], developed by the University of the West of England (UWE) and was developed in conjunction with Arup's module 4, Technology, and De Montfort University's module 6 [see http://www.maintainourheritage.co.uk/findings.htm], Training and Skills.

Very important to the development of this module was Maintain Our Heritage's Bath Pilot Programme, which tested the interest level for inspection services in the Bath area and provided indicative figures as to the costs of such a service and how one may be structured. This report goes into more detail about this programme and its findings in later sections.

1.2 What is a Heritage Building?

It is impossible to consider a business case for maintaining heritage buildings without first defining what they are. The Planning (Listed Buildings and Conservation Areas) Act 1990, Part 1 Chapter 1 designates what constitutes a listed structure. English Heritage, the Government's statutory adviser on the historic environment, has come to use the term 'listing' as shorthand for describing the legal procedures that help them to protect the best of England's cultural heritage.[1] English Heritage defines listed buildings as those that are found to have 'special architectural or historic interest' by the Secretary of State for Culture, Media and Sport under the Planning Act of 1990. The main criteria include: architectural interest, historic interest, close historical association with nationally important buildings or events and group value such as squares, terraces and model villages.

There are three grades of listed buildings and include: Grade I buildings of exceptional interest; Grade II* buildings that are particularly important and are of more then special interest; and Grade II are of special interest and warrant preservation. Within these categories are buildings and structures that include private homes, gas lamps and telephone boxes. The age of a building does influence the likelihood that it will be listed. All buildings before 1700 that still resemble their original condition are listed. Buildings constructed between 1700 and 1840 are also highly likely to be listed. After 1840 the

[1] English Heritage Web Site. (2003) www.English-heritage.org.uk

criteria for listing becomes stricter and those constructed post-1945 have to be exceptionally important.

In England there are approximately 370,000 listed structures, 92% of which are considered to be Grade II. In actuality, there are other structures constructed during the same time periods of listed buildings that for various reasons are not listed. However, these buildings still may require some of the specialist attention warranted to the listed buildings as particular techniques or materials may be needed to ensure that they retain their character.

How to Insure Your Period Home, a guide funded by Heritage Information, RICS, SPAB and the Fire Protection Association (FPA)[2] notes that, from sourced data from the Department for Education and the Environment (DFEE), there are 10.6 million pre-1944 buildings in the UK. Thus, there could potentially be a very large number of structures that are not listed but may require specialist attention in the UK, and England more specifically.

1.3 Scope of the study

For the purposes of this study, we will develop the case for new and/or existing businesses shifting to the provision of structured maintenance programmes for heritage buildings. We have opted to only consider listed buildings as opposed to all heritage sites. Listed buildings like any other building can be owned publicly or privately through differing structure, for example they may be owned by central or local government, a private business or corporation, a charity such as The National Trust or by private individuals or families. Yet regardless of the type of private ownership, each owner must consider how best to maintain the properties either for the pleasure and security of their families or as a business investment that could appreciate in value.

As owners these persons or entities are solely responsible for the cost of repairs. Many of these owners are also not trained in maintenance or the special requirements of listed buildings and may not immediately understand that repair to their building is different and can be more costly. These are the people who would most likely benefit from structured maintenance plans. Furthermore, these owners may be in possession of these buildings today, but listed structures in a sense belong to the wider community, and it is therefore even more important that these buildings are kept in good repair.

Section 1.5, below, will specify our working definition of maintenance for this study.

1.4 Methodology

Development of Module 5 was a 3-step process. The first step included a review of available literature on maintenance programmes and the construction industry. Review of the University of the West of England's Modules 1, 2, and 3 [see http://www.maintainourheritage.co.uk/findings.htm], were incorporated within this research, as were numerous electronic sources. In order to establish reasonable cost considerations for the business case, we included questions on costs, profit margins, and frequency of repairs to the De Montfort University survey informing Module 6 [see http://www.maintainourheritage.co.uk/findings.htm], training and educational requirements for maintenance, of this study.

The second element of the preparation focused on interviews with those involved with the Bath Pilot Programme and various building and heritage organisations. In addition, several specialist contractors were consulted. Key information sourced from this step included the expected costs and profits associated with maintenance programmes and inspections and experience with these issues in the market.

[2] William Thatch Ltd. (2003), *How to Insure Your Period Home, 2nd Edition*. William Thatch Ltd. Period Homes Policy. Sevenoaks, Kent.

The third step was the development of several possible business model scenarios. An attempt was made to consider the case from the vantage point of a single business and a single client over a number of years in order to incorporate large and smaller scale inspections and their related costs. Some existing providers use a 'loss leader' business model, meaning that they offer the inspection at a reduced cost with the hope of generating additional work through the inspection. To represent this structure a loss lead or lower priced inspections have been incorporated into the scenarios. The differing scenarios consider various levels of additional work to be generated from the inspections.

1.5 Maintenance Guidelines for Heritage Buildings

There is no one set of maintenance guidelines, nor is there one clear definition of what constitutes maintenance. Maintenance and more specifically conservation was considered at an international level with the view of protecting sites with not only national, but also global significance, and led to the International Charter for the Conservation and Restoration of Monuments and Sites in 1964. Since that time, there have been formal revisions of this charter, which has come to be known as the Burra Charter. The Burra Charter, initiated in Australia, aimed to set a standard practice for those who provide advice, make decisions about or undertake works to places of cultural significance.

The Burra Charter has set the standard for conservation of a building. It denotes that conservation "requires a cautious approach of changing as much as necessary but as little as possible.[3]" With this in mind it moves on to state, "maintenance means the continuous and protective care of the fabric and setting of a place, and is to be distinguished from repair. Repair involves restoration or reconstruction.[4]" The distinction between maintenance and repair is specified as maintenance would include the regular inspection and cleaning of gutters and repair would involve the restoration and returning of dislodged gutters, e.g. actions that will affect or change the actual material (fabric) as opposed to only cleaning the material.

However, as wear and tear is something that afflicts all buildings, regardless of age, in this report we are taking a broader look at maintenance to include "all practical and technical measures that are needed to keep the site in condition at a standard that permits enjoyment of the cultural resource without damage. It is a continuous process.[5] Thus, some minor forms of repair as defined by the Burra Charter will be included in this business case analysis.

We have chosen specifically to include some minor repairs in the maintenance case as regular inspections do perform a key service but would most likely be less marketable then an inspection service that carries out some basic maintenance activities such as cleaning gutters. The additional services would offer more benefits to the consumer and it seems sensible that while one inspects the gutter to also remove leaves that may be blocking water flow.

This philosophy is indirectly advocated on the Maintain Our Heritage website through the endorsement of adages such as a 'A Stitch in Time Saves Nine.' Thus, repairing items such as slipped roof tiles, clearing gutters, checking and repairing down pipes, repainting woodwork and inspecting external fabric constitutes maintenance as 'the damage will have to be put right sooner or later,' e.g. keeping the external envelope in good order.

1.6 Maintenance of Heritage Buildings: Public and Private

Government plays two crucial roles in the maintenance of heritage properties as it can either be the owner of heritage property, through central government or local authorities, or the enforcers of existing regulations in respect to the care and maintenance of heritage or listed properties. The powers of enforcement that local authorities have in regard to privately owned heritage sites are detailed in

[3] International Charter for the Conservation and Restoration of Monuments and Sites. (1999) The Burra Charter. Article 3.1.
[4] International Charter for the Conservation and Restoration of Monuments and Sites. (1999) The Burra Charter. Article 1.5.
[5] Feilden, B. and Jokilehto, J. (1993) *Management Guidelines for World Cultural Heritage Sites*, ICCROM, Rome.

Planning Policy Guidance 15 (PPG 15). However, there is little written policy that depicts actions against a local authority owners for poor maintenance and upkeep of listed buildings. PPG 15, 1.6, states that:

> "The Government urges local authorities to maintain and strengthen their commitment to stewardship of the historic environment, and to reflect it in their policies and their allocation of resources. It is important that, as planning authorities, they adopt suitable policies in their development plans, and give practical effect to them through their development control decisions…Above all, local authorities should ensure that they can call on sufficient specialist conservation advice, whether individually or jointly to inform their decision-making and to assist owners and other members of the public."

Consideration of local authorities as owners, and sometimes as the culprit of poor upkeep, is crucial to this study because they own a significant portion (approximately 30%, according to English Heritage) of heritage buildings. As they are most likely to be responsible for numerous heritage sites and because maintaining heritage buildings is only one of their responsibilities, it is very likely that they could benefit from a structured maintenance programme. According to the English Heritage Register of Buildings at Risk, 2002, "About 17% of grade I and grade II* listed buildings at risk of loss from neglect and decay are in the ownership of central or local government."

The maintenance guidelines for local authority owned heritage properties is relatively weak in comparison to the powers that local authorities can exert upon private owners. There are guidelines that local authorities should follow as put forward in English Heritage's *Managing Local Authority Heritage Assets* (2003). For example, the document emphasises that one key rationale for good upkeep from local authorities is that they must set a good example, it states "It is essential to local authorities' credibility as stewards of the historic environment that they set a good example in the management of their own heritage assets. This means demonstrably achieving the standards they expect of others." It also furthers that a council-wide strategy needs to be in place that will be instrumental to keeping heritage assets in compatible uses or determine appropriate disposal and will be regularly reviewed within the overall strategic plan. For the most part, care of heritage properties falls under a local authorities' asset management planning responsibilities of which, according to English Heritage 2003, ODPM is requiring that they improve the quality of their asset management plans and capital strategies.

Taking into consideration the very general guidelines local authorities have in regard to the maintenance of heritage properties, there is little doubt that they would not want to give the needed funds to these projects; however, there is a cost involved and there are times when key repairs and maintenance are simply not affordable. *Heritage Under Pressure*[6] notes "there is no formal statutory requirement for a local planning authority to make provision for conservation of the historic environment apart from the general duties in the 1990 Act." This document furthers that in regard to financial resources that "net expenditure on historic environment conservation by local planning authorities has declined by 8% in real terms over the last five years...English Heritage's conservation grant expenditure has dropped by 23% in real terms since 1996, reflecting the reduction in its resources." These funding cuts are being juxtaposed against the factor that "the number of designated buildings, scheduled ancient monuments, registered Parks and Gardens and conservation areas is increasing by 1% per annum. Much of this is in response to public demand."[7]

When local authorities are the owners of listed properties then they have their own internal maintenance regimes. Local authorities either conduct maintenance through an in-house team or contract for outside assistance. In the cases where outside resources are used there is usually a

[6] English Heritage (2002). *Heritage Under Pressure*, Hawkshead Archaeology & Conservation/Historic Environment Conservation, page 5.
[7] EH (2002). *Heritage Under Pressure*, page 5.

tendering process, which could be open to specialised heritage contractors or to other people/firms given that they possess the necessary skills. This being said, the University of the West of England's (UWE) report[8], found that many non-heritage organisations did not operate separate maintenance programmes for listed and unlisted stock.

Enforcement of good maintenance policy for heritage buildings located within the jurisdiction of a local authority is part of their responsibility to national heritage. PPG 15 as quoted above reflects stewardship of publicly owned sites, but it (paragraph 7.4) goes into further detail over the actual role of a local authority in regards to a privately owned building, it states that:

> There is no specific duty on owners to keep their buildings in a good state of repair (though it will normally be in their interests to do so), but local authorities have powers to take action where a historic building has deteriorated to the extent that its preservation may be at risk.

Local authorities' powers to enforce maintenance include their ability to give urgent works and repair notices and if necessary they can through compulsory purchase laws to acquire the property and carry out the necessary works.

When local authorities find or are alerted to listed buildings that are falling into disrepair it is best practice for them to add the building to the Buildings At Risk Registrar and then to take appropriate action. Local authorities have the statutory powers, as outlined in PPG 15 to take action and ensure that necessary repairs are made to heritage properties, yet this issue circles back to one of costs and the tightening budgets faced by individual authorities.

The University of the West of England, Faculty for the Built Environment (2003), found that the majority of heritage organisations carried out condition surveys at five-year intervals or 'quinquennial inspections'. English Heritage's *Managing Local Authority Heritage Assets* supports this general structure as it notes on page 38 that one of the co-ordinated approaches to management of heritage sites would be "a programme of quinquennial condition surveys, resulting in reports and up to date conservation management plans for major heritage assets, is sustained, to ensure that 'good housekeeping' becomes a matter of routine." The concept of carrying out a more detailed condition survey every 5 years, while also ensuring that the gutters are cleared and any minor issues are dealt with on a more regular basis, appears to be best practice within the industry. Thus, in developing the business case a more substantial inspection/survey is to be included every 5 years.

[8] The University of the West of England, Bristol (2003). *Best Practice Maintenance Management for Listed Buildings (Module 1)*. Faculty of the Built Environment, Bristol.

2 Building the Business Case: experience to date

2.1 Case Studies

2.1.1 Review of the MoH Bath Pilot Programme

Maintain Our Heritage structured an inspection pilot programme for the Bath Area based on a model developed by Monumentenwacht in The Netherlands. The programme targeted some 5,000 listed buildings in the area through direct mail shots. The programme was slow to start, but reached its target of 72 completed inspections. The pilot programme was not expected to be commercially viable as it was designed to introduce the concept and benefits of structured maintenance to area owners rather then to make a profit. Most inspections were priced between £150 and £250 and an exception was made for churches, which were offered a standard price of £50.

Take-up of the programme was quite low; as fewer then 2% of listed building owners opted to participate, even with the much reduced cost and backing of heritage bodies. The Monumentenwacht programme, as will be discussed in Section 2.1.2, has significantly higher take-up. However, there are key differences between incentives to maintain buildings in the UK and The Netherlands. The UK Government does not offer tax incentives to any degree like those offered by the Government of The Netherlands. Thus, there cannot be a direct comparison between the take-up of the two programmes.

MoH has stated in the pilot's interim report that the inspection programme as offered was not commercially viable due to the heavy reliance on subsidy. MoH furthers that in order to cover its costs there would need to be some combination of greater economies of scale, a more attractive package and more effective marketing.

Interviews with those involved in the MoH pilot programme have separated the three core parts of an inspection service. These steps include, 1. programme marketing and set-up 2. conducting of the inspection and 3. write-up of findings. Interviewees were also able to give some time-based cost estimates for each step. The key steps and their related costs are listed below:

- Inspector's time: 12.5 hrs. (the time includes 1 hr for travel, conducting the inspection and write-up) at £17.00 per hour;
- Assistant's time: 5 hrs. (organisation and assistance during the inspection) at £7.00 per hour;
- Marketing: £100 per inspection;
- Total: £347 per inspection; and
- MoH estimates that with overheads and other costs each inspection costs approximately £1,070.

We have assumed based upon these cost guidelines that without overheads (rent, salaries and benefits, insurance etc.) the total cost per inspection was approximately £350. MoH has estimated that the real cost inclusive of all overheads is approximately £1,000. The difference is approximately £700. With a total cost of over £1,000 and a charge rate of £150 - £400 it is clear that the pilot scheme could not be viable.

However, it should be taken into consideration that this was a new programme and that time lags are an expected part of new business development. Take-up increased towards the end and there has been particular interest in the programme from local churches. Given this information it is fair to conclude that take-up rates would most likely have increased should the programme have continued after its target of 72 inspections was reached. However, even with increased take-up the costs are still far too high for there to be a possibility of financial viability – this is crucial given that the fees are

already charged well below the market price and an increase in costs should dampen the demand for inspections.

2.1.2 Review of Demand in Holland – Monumentenwacht

Monumentenwacht is an organisation founded in The Netherlands that has been instrumental in leveraging private financial support in the maintenance of heritage buildings and has moved the Government of The Netherlands away from subsidising repairs. In Holland, there are approximately 50,000 listed buildings and 560 historic towns and landscapes. Monumentenwacht was established by a small group of listed building owners who jointly paid a subscription fee to this organisation because they realised that they themselves did not have the necessary expertise to properly maintain their buildings. Today, Monumentenwacht boasts 40 inspection teams and is present in 12 Dutch provinces. We understand from Monumentenwacht that approximately 50% of all listed building owners use their services/expertise.

It must be emphasised that in The Netherlands there is significant public financial support (indirect through tax reductions or direct subsidy or low cost loans) available to the owners of listed buildings at both the local and national levels. Thus, Monumentenwacht is operating in a highly subsidised market that cannot be recreated in the UK without policy change.

Nigel Dann's article *The Logic of Maintenance*, gives precise information on the exact types of maintenance/repair subsidies that are available in The Netherlands, including:

Benefits to the owners of nationally listed buildings: direct subsidy for specific conservation works up to 50% of total cost for private owners and up to 70% for churches and charities and maintenance costs can be offset against income tax.

Benefits to the owners of locally listed buildings: municipalities are allowed to subsidise repairs for locally listed buildings, whether or not they are a part of urban renewal schemes.

Benefits to all owners of listed buildings (national or local): owners can access a below market priced revolving loan fund.[9]

Dann states that further research into the effectiveness of the state's financial incentives for maintenance has found that the public sector, through Monumentenwacht, is leveraging private sector funds at a ratio of approximately 1 to 3.

Monumentenwacht has successfully leveraged private funds through public maintenance spending. However, as the financial incentives operating in The Netherlands are not present in the UK, it is not possible to make any direct comparisons on take-up rates. Additionally, Monumentenwacht is celebrating its 30th anniversary and has had significantly more time to develop its niche and reputation.

2.2 Existing Service Providers

There are already providers of structured maintenance programmes within the UK. Most appear to be private non-heritage specific maintenance and building firms, but there are some companies that do specialise in heritage related work and also undertake structured maintenance schemes, albeit there are significantly fewer of these firms. A rough estimate of specialist heritage contractors is difficult to ascertain. There are some indicative measures that we have used to try and ascertain an approximation of the market size. One of these indicators is the membership size of the Heritage Building Contractors Group as it is a professional/trade association for specialist heritage repair contractors that range in terms of company size and turnover. One consultee has suggested that it has about 30 members. Another indicative measure are business listings on the Building Conservation Website. This site lists 18 firms that offer non-destructive building investigations and 63 specialist contractors. Thus, as compared to the 43,330 related maintenance and repair firms and the

[9] Dann, Nigel, *The Logic of Maintenance*. Maintain Our Heritage Website, www.maintainourheritage.co.uk,.

9,332 general house builders operating in the UK construction sector (Section 5.2)[10] the conservation field remains quite specialised and small.

Within this specialised pool and among the general industry there are contractors who offer maintenance services to private individuals and companies. In some cases these services are heritage specific, whereas in some cases a heritage building is part of a larger portfolio of buildings. The range of specialisms involved is quite wide and includes general contractors who clean gutters and inspect for key problems, to specialist contractors in the historical crafts (masonry, plasterwork and lead painting for example) and have a better understanding of the fabric of listed buildings and the relevant warning signs and issues. Within this pool there are also conservationists, architects and even archaeologists.

Within the general repair and maintenance industry there is a substantial pool of experience for general repairs such as gutter clearings and drainpipe fixes. Some of the most fundamental maintenance points such as ensuring that water can drain from rooftops properly is something that can be done by a generalist in the building and repair sector. However, making repairs to listed fabric requires more skill and experience and in some cases should only be carried out by an experienced practitioner. Thus, it would be likely that many firms that do undertake maintenance inspections would probably use their lesser skilled employees for the gutter clearings and basic repairs and a specialist for identifying maintenance issues or to conduct quinquennial inspections.

[10] Department of Trade and Industry (2002). *Construction Annual Statistics*, Office of National Statistics pg. 57

3 Establishment of Supply

For this business case, the supply side of the equation comes from the private sector's willingness to deliver inspections and or maintenance services either in the form of new business or a shift away from traditional reactive maintenance. These new businesses could range in size from small one-person operations to large construction firms.

3.1 Key Issues Surrounding Supply

The number of firms operating in the repair and maintenance segment of the UK construction sector is estimated at 43,330. [11] This figure constitutes a significant portion of the overall construction market. Firms operating in this sector may have very general construction skills or niche trades, including those that could be used for heritage work. Generally, within the repair and maintenance market, one-person operations tend to work for 'wages' while slightly larger companies would strive for 5 to 10 percent profit margins. Thus an expected 5% profit would need to be a minimum to attract firms into the sector and as 10% appears to be a general profit expectation in the construction industry even higher expected profits may be needed to entice firms into this area, particularly in years when the construction market is doing well and if special equipment or training is needed. As 10% is a general expectation and because the construction market is known to be flexible, we have used 10% as a general assumption for expected profits.

The other danger inherent in offering inspections and planned maintenance is that, when there is an economic down-turn, these services may be the first to be cut from private as well as public budgets. Hot Property (2000) encapsulated this trend as "Property maintenance is frequently the first casualty if short-term revenue budget pressures, even where this runs counter to prudent asset management." [12]

3.2 Existing Supply Size

Results from the UWE survey showed that approximately 34% of the contractors interviewed provided some form of maintenance service, which could include the checking of roofs, gutters and minor repairs. Structured maintenance could offer opportunities for steady income and partial resolution of cash flow problems, which are frequently experienced in the construction sector. A few other contractors noted in UWE's survey that they would be interested in branching into such a market but had found little appetite for such a service. One of the contractors that had been successful in promoting a maintenance business thought that they had discovered a niche market. Furthermore, according to UWE's research, the actual proportion of the workload associated with the maintenance programmes was very small. Additional interviews for this module included firms that offered specialised inspections as one of their services.

Within the information gathered for this module there were both companies that priced inspections at cost and profit and those that looked towards using a reduced price inspection service as a 'loss leader.' It was not evident that there are any companies that only provide inspection services.

The fact that small businesses could be very active in this market could be positive as it could lead to a more personalised service yet smaller companies by their nature and potentially smaller cash flow may not be able to cover loss leaders if they are indeed necessary. Meaning that their size and need for work to meet payroll needs may make them more risk adverse and unwilling to take the initial loss unless there is a significant chance of additional work. As noted in section 2, the number of specialised heritage contractors appears to be quite small particularly given the overall size of the maintenance and repair market. Given the large size of the overall sector there is the possibility that

[11] Department of Trade and Industry (2002). *Construction Annual Statistics*, Office of National Statistics pg. 57
[12] Audit Commission (2000), *Hot Property*. Referenced in EH Managing Local Authority Heritage Assets. (2003)

with appropriate incentives that there could be contractors who opt to specialise in heritage buildings and that there is some shifting in the market towards maintenance. The possibility of this is further addressed in Module 6, Training and Skills [see http://www.maintainourheritage.co.uk/findings.htm].

3.3 Possible Differentiation within the Market

3.3.1 Service Providers and Interviews

Based on research carried out for this module and current construction industry structure, there appear to be three key areas or types of firms that would be best suited to carrying out inspections and structured maintenance programmes. These three groups would include:

Independent inspection body

This body would be a public or independent body that could carry out initial and quinquennial maintenance inspections. A public inspection service could take numerous forms, for example it could be structured as one agency with regional franchises or several firms around the country could be appointed to undertake this role. It is envisioned that this organisation would not carryout the actual maintenance/repairs, but would have an advisory role. They would carryout the inspections and make recommendations for immediate repairs and items that need to be considered in both the short and long terms. If companies were appointed there is a strong chance that contractors would not want to want the franchise if it would prohibit them from acquiring additional work. A company may be interested if the payment from the central authority was enough to entice them into the role. Another option would be for this organisation to retain a list of approved contractors, for which it may opt to charge a membership fee, which could carryout specific types of work.

The Bath Pilot programme has highlighted that it would be very unlikely for this type of an organisation to ever be commercially viable given the costs of inspections and the difficulties already encountered in trying to get take-up of an already subsidised programme. An alternative approach would be for this body to act as a 'seal of approval' from Government or act as an accreditation body. This stamp of approval could become an attractive branding to contractors. However, this could initiate new concerns regarding liability should the recommended contractors not abide by the principles of the organisation and price unfairly or undertake unnecessary repairs.

This organisation would also need to have highly skilled persons knowledgeable on the upkeep of listed buildings as the initial and subsequent quinquennial inspections may be all that the owners undertake over the five years and if this organisation were public then there would be an expectation that the best advice is to be offered.

Potential Crowding Out of the Private Sector

It is crucial to consider how such a public body or subsidised company would impact the market given that some private companies already offer inspection services and planned maintenance, sometimes even at cost plus profit. One company contacted for this interview has been in the heritage maintenance business for years, the company is well over 100 years old, and does consider their services to be 'niche' and prices their services at cost plus profit. This company and others could very well lose part of their business should a public entity undercut their prices or offer a public backing. There are also organisations such as the Heritage Building Contractors Group, a professional/trade association for heritage contractors, which may be interested in moving towards accreditation for its members, which would be in direct competition with a public service.

General Contractors/Building Surveyors

Some contractors already conduct inspections of listed buildings, whether as part of a maintenance programme geared towards individual owners or as part of a contract with commercial companies that own numerous buildings some of which may or may not be listed.

It is understood from the research that many contractors would expect to carry out annual inspections, including gutter clearings, for a nominal price. They may then use this inspection as a 'loss lead' to further work where the profits would be generated. Thus, it would clearly be in the firm's best interest to recommend further work and this would of course bring into question the objectivity of inspection services (as well as introducing the danger of unnecessary work being specified and historic material being unnecessarily lost) and would underscore the benefits of a public body such as the one described above. This potential concern that additional work would be recommended to at least make up for the cost of the inspection if companies were to offer the inspection service at cost plus profit.

A basic scenario for carrying out maintenance would include an annual half-day inspection, which includes gutter clearing, with 1 – 2 days follow-up work. Most likely, a two-person team would carry out the inspection, and depending on building access, may or may not require specific equipment.

The possible upsides for contracting companies to enter the structured maintenance market include:

- Reducing cash flow volatility as inspections would most likely be scheduled well in advance, i.e. after leaves have fallen or on any appointed day;
- Opportunity for further work;
- Lesser skilled employees could carry out the basic inspections and gutter clearings, or a lesser skilled employee could be paired with a more highly skilled person and allow for some cost savings; and
- Opportunity to build long-term relationships with clients leading to further work that is unrelated to the inspections.

The possible downsides for contractors entering the structured maintenance market include:

- Inspections are carried out at a reduced cost and further work is not generated;
- Maintenance may not be considered a priority and may be one of the first items to be cut from shrinking budgets;
- Maintenance may only postpone an eventual roof replacement and may be considered to be poor value for money when large-scale repairs are still needed; and
- It is difficult to prove value for money as maintenance is stopping disrepair from occurring and thus the alternative is not known, thus it may be difficult to illustrate and market its benefits.

Highly specialised repair and consultancy service

These specialised companies would most likely employ heritage-building specialists such as conservationists or particular types of architects and builders. These groups would most likely not find good value in offering annual inspections and gutter clearing but may be more interested in pairing up with a general contractor and offer to conduct the quinquennial inspections or could be called in for highly specialised work.

These types of companies would most likely charge higher rates then a more general contractor as their time and knowledge comes at a higher price and they would not be competing against the construction industry more generally. We have assumed that they too would also expect to earn profits of 5 – 10 percent as a minimum on their time and as such may source more work from large corporate clients with a portfolio of building stock. These companies may also move more towards designing maintenance programmes for public entities. These firms may also be sourced by the UK Government for work on national cultural sites that may not fall within the remit of the National Trust or other government bodies. Another option is that these firms remain completely independent from general contractors and seek only those clients willing to invest significantly into their buildings.

Incentives for specialists to enter the structured maintenance market include:

- Known client base and planned work;

- Opportunity to develop structured maintenance plans to be carried out by lesser skilled workers; and
- Possibility for engaging further work.

Disincentives for specialists to enter the structured maintenance market include:

- Specialists may identify areas where work is needed, only for a less skilled but cheaper contractor to eventually be given the work due to the customer's price sensitivity (this could be particularly costly should a loss lead have been planned); and
- Work may not be at the appropriate level for someone with these skills and there is a high opportunity cost for their time.

Hybrid General Contractor/Conservationist

This option was briefly mentioned above, and it serves to rationalise the division of labour in regard to inspections and building maintenance. The best aspect of this scenario is that the customer would have access to expertise and get the needed maintenance work completed for what could be a competitive price. The skill level needed to carry out the most fundamental aspect of maintenance is quite low, yet making repairs to listed stock can be quite different to those of regular buildings and a high degree of skill is clearly needed in this instance. There are clearly two separate roles in the maintenance process and thus the likely answer would be to partner general contractors and specialists into a maintenance package that could be sold as an annual inspection with gutter clearing with an initial and quinquennial inspections carried out by a highly skilled conservationist.

This hybrid scheme could be marketed as a means to get the best knowledge at a practical cost and could deliver high value for money. A likely scenario for organising this approach would be for customers to sign a basic contract and make annual payments, which would be split between the two firms at an agreed rate. Should the customers require considerable more time from either party then there would need to be scope for charging the customer at a commercial or reduced rate which could either be split between the two firms or go solely to the firm doing the work. It would be likely that the contractor would work under the close supervision of the conservationist and thus split the workload and financial receipts.

3.3.2 Customer differentiation

Private Home Owners: Owners of listed houses will range from not particularly affluent to some of the wealthiest persons in the UK. Thus, there is significant range in terms of maintenance budgets, which will not necessarily correlate with the size of the home or its needs.

Not all homeowners will see the value of investing in the house: few homes are now passed through families and many owners may be planning to sell within 5 – 7 years. In these instances they will not be likely to invest more then what is needed to retain the utility of the house and its appearance. This being said, there will be some owners who opted to purchase a listed home because of their love of history and its uniqueness and they may consider themselves to be stewards of the building and hold a very long-term view of maintenance. This owner may be willing to spend a larger proportion of their disposable income on maintenance and care of the property.

It is difficult to predict the willingness of owners to invest in listed homes. Surveys carried out by De Montfort University, with Arup, found budget examples from churches, home/estate owners that ranged from £6,000 per year, with some of that going a long way towards a major repair every 10 or so years, and others have budgets that reach a million Pounds. It is not possible to tell if the budget size correlates in any meaningful way to the maintenance needs or expected costs, most likely they will not.

Commercial companies: Many companies, including the typical high street companies, may in fact be the owner of a number of listed properties. These companies may own retail stores across the UK

some of which are located in historic town centres and others in out of town shopping centres. These commercial bodies could also be real estate investment funds or the listed building could be a corporate headquarters. In each of these instances there would be consideration of the future as the building is either part of the company's identity or is an investment that is hoped to generate a financial return. Companies looking for a return on the property would be the most likely of the commercial entities to invest in its upkeep. Thus, it would be reasonable that these companies would engage in some form of maintenance or a buildings team to care for the investment and undertake the maintenance.

In the case of the retail outfit with buildings scattered across the UK, maintenance would most likely be outsourced to a number of regional firms. Thus, there may be six or seven firms that would undertake the maintenance on a regional or perhaps sub-regional level. In such an instance, one firm may be responsible for 2 or 20 buildings and as such would probably undertake a very general programme that would suit all buildings but may not be specific to listed stock.

Local Authorities and Housing Associations: There is not one prescriptive maintenance plan to which all local authorities and housing associations must adhere. However, as local authorities are public bodies it is in their best interest and that of the area to promote transparency and value for money in regards to the care of the publicly owned listed stock. Some authorities have developed detailed maintenance plans while others have not. In some cases the authorities outsource jobs to pre-approved local and specialist contractors. It may be of benefit for the maintenance firms to market to local authorities and if possible become registered on their pre-approved list. However, as each local authority has its own policy towards handling heritage properties it is difficult to make any definitive characterisations.

A benefit to companies working for local authorities and housing associations would be the more secure nature of the work. The public sector does not face the same degree of budget constraints that an individual might when there is an economic downturn, thus funds from these organisations may be more reliable then those from private customers.

3.4 Insurance - related products

The insurance market is known for its adaptability to market changes and the needs of its private clients. In fact there are already insurance companies that either focus on insuring listed buildings or have a special policy to suit the needs of owners of listed stock. Most insurance companies would consider good maintenance to be a fundamental aspect of owning a listed building. However, none of the insurance companies researched or contacted actually provided a maintenance service.

Some companies noted that insurance as opposed to maintenance is their core competency and that good maintenance in a sense is already factored into the cost of insurance. Thus, a home that is in good repair would most likely get a lower insurance premium then one in disrepair if it were to be insured at all. Over time a lack of maintenance or significant improvements may warrant a reconsideration of policy prices and this would depend upon the insurer and policy selected. However, it is not possible to generalise in such cases as insurance companies consider a wide range of issues when assessing the risk of a large payout and the eventual price of the policy. In some cases insurance companies do require an inspection before giving a final premium quote.

Insurance companies have started to offer different policies to owners of listed buildings. One of these companies is Period Homes Policy, which undertook research with RICS and English Heritage and other heritage related organisations to develop a general guide on care for listed buildings and what owners need to consider when insuring these buildings. Ed Powell, Director, Period Homes Policy, stressed that their company offers policies specifically geared towards heritage properties and differs from other more general policies as it differentiates the cost or rebuilding a heritage home from its market value, which could vary significantly if very specific materials were used.

As insurance companies generally only want to insure buildings that are in good repair, there may not be much room for a 'good maintenance' discount. Insurance companies have loss adjusters and access to people capable of carrying out an inspection. They also tend to have contractors on call for emergency or planned repairs, like Build Assured that can assess and repair a range of property claims. Yet, entering the market as a maintenance service provider is entering a new area of competency. If an insurance company were to carry out inspections it could open the door for additional liability issues on which legal guidance may need to be sought. Insurance companies tend to be fairly risk-adverse and entering into a new business sector that is not a part of their core competency may not be considered by some of the relevant decision-makers to be an appropriate direction. However, there is certainly room in the market for a company that is willing to pursue innovative ideas and this could be one area with business potential.

There is a chance that additional policies may opt to deliver a policy along the lines of British Gas Three Star Central Heating Care for boiler and system. This plan offers a yearly inspection of the boiler and heating system and will cover labour and parts and potentially a new boiler if it is not economical to repair the existing system. The same company also offers similar electrical and plumbing policies, which do not include inspections. The Three Star programme offers a potential premium discount for those customers that have been policyholders for a certain amount of time and have not made more then 2 call-outs in the previous year.

In relation to a home maintenance plan a company could follow these guidelines and include an annual inspection with some repairs and possibly a discount for long-term customers. However, there are key differences between a boiler check and a building survey, one of which is clearly size and access. In addition there will be ready-made boiler parts that can be inserted into the existing system. There is less of a chance that there could be ready made 'fixes' for heritage homes and there is no option to replace the entire system should it be more economical to do so. Also it is likely that more boiler inspections could be carried out in one day then could full-scale building inspections, as they usually require a general site visit prior to the inspection and time for cleaning of gutters. These differences could significantly affect the overall viability of such a scheme yet in principle contractors could offer rapid response services and annual inspections. Heritage homes are special partially because of their uniqueness, boilers are not unique and there are probably significant economies of scale that can benefit a company working with a product which is mass produced and is built into every building heritage or not.

4 Establishment of Demand

Demand for a planned maintenance service would clearly have to come from the owners or caretakers of heritage properties. This section assesses the size and character of the potential market and the potential revenues and profitability of different services.

4.1 Market Size and Characteristics

As stated in Section 1, there are approximately 370,000 listed structures in England (English Heritage, 2003). We also understand from English Heritage, although it cannot be substantiated with an actual figure due to data protection laws, that a clear majority of the buildings – up to 80%, are privately owned. There is both a private and public market that could be tapped.

The actual number of structures worthy of listed status is more then 370,000 because many listed items are listed as a group and thus include more then one building. We have assumed that the number of listed items will not increase greatly as the Secretary of State for the Department of Culture, Media and Sport has already listed many culturally significant structures, although work is ongoing to list more post-war structures as their significance becomes apparent and/or their survival threatened by redevelopment. For the purposes of this report, to account for the grouped listings and any new listings in the near future, we will assume that there are approximately 20% more structures then the official figure: this yields a working total of 444,000 listed buildings, some of which may already be part of conservation areas.

How to Insure Your Period Home[13] sourced figures from the former Department for Education and Environment, which estimate that there could be 10.6 million pre-1944 buildings in the UK. Thus, there is the chance that the market for heritage contractors could well exceed the number of listed buildings and conservation areas. However, as we do not know much about these buildings it is difficult to assess what their needs may be. In order to reflect the possibility that there could be potential demand over and above the already slightly inflated figure of listed structures. Given that in the Netherlands where the market for inspections and heritage maintenance is highly subsidised there is only a 50% take-up rate for Monumentenwacht and given that the Bath Pilot has generated a low response rate, we will consider the business case for a 10% take up rate of the inflated figure for listed buildings.

The profile of the average listed building and owner will have an impact on the character of the market. According to responses from the UWE Survey, the average profile is as follows:

Building:

- Grade II structure;
- Built between 1701 and 1840;
- Detached structure;
- Valued between: £351,000 - £500,000; and
- Village locations.

Owners:

- Resided in the property between nil and five years;
- Aged between 50 and 64 (39%) – however, the second age distribution category was very close and it was somewhere between 35 and 49 (36%);

[13] *How to Insure Your Period Home*, Second Edition (2003). William Thatch Ltd., Period Homes Policy, Sevenoaks, Kent.

- Professional (40%);
- Achieved a minimum of a university degree (53%); and
- High-income earners – over 30% earn £70,000 or more.

To summarise, the following are our key assumptions for the purposes of the calculation of market size:

- 444,000 buildings of listed quality in England; and
- Owners seem to be generally highly educated with a good income: thus, the absolute amount of their disposable income should be higher then average.

4.2 Cost and Frequency of Repairs

It is very difficult to ascertain an average cost of repairs and/or maintenance as so much of the costing reflects the size of the project, necessary materials, relative skill level of the labourer and required access facilities.

The following assumptions are made about the frequency of maintenance:

Frequency of basic repairs (UWE Owners Survey Results):

- Painting and decorating – between 3 – 5 years (40%) average = 4 years; and
- Gutter clearings – annual (42%).

Frequency of major repairs (from various sources):

- Repointing of stone structures every 20 yrs, if well maintained possibly 50 – 100 years;
- Reridging of thatched homes – every 10 – 12 years;
- Rethatching of roofs (depends upon the type of thatch used), for example:
  - -Water reed – 50 years or more
  - -Combed wheat reed – 25 – 30 years
  - -Long straw – 15 – 25 years[14];
- Thatchers cost, on average, for one square 10 ft. by 10 ft. between £600 – £700[15];
- Thatching materials for a 3-bedroom cottage (approximately 5 tons of straw) cost: long straw £2,000 and combed wheat reed – 3,000 GBP; and water reed – £5,000[16]; and
- Timber frames – 50 yrs with good maintenance.

Ideally it would be best to consider the frequency of repairs with and without maintenance. This could possibly show opportunities for cost savings over a 20-year period. However, as some of the major repairs need only be taken every 80 – 100 years and because so much depends on materials used and even the location of a building, it is difficult to assess the value on a 20-year scale or a scale in which a homeowner would be able to personally benefit.

4.3 Potential Revenues

Revenues could be generated from two core parts of a maintenance programme: first, a fee for the initial, annual and quinquennial inspections; and second, a fee from the additional work suggested through the inspections. As discussed in Section 2.1.1, the Maintain Our Heritage pilot study found

[14] Thatching Advisory Service, www.thatchingadvisoryservices.co.uk, September 2003
[15] Period Property UK, *Living Under Thatch*, www.periodproperty.co.uk, September 2003
[16] Telegraph (7 September 2003), *New Rules Are Thatchers' Final Straw*, www.telegraph.co.uk.

that there is not a significant chance that profits will be made from an inspection but certainly some degree of revenues would be generated. However, through research for this module we have identified at least one company that offers inspection services priced at cost and profit and this is one key part of the services offered. If the inspections are carried out as a loss-lead then a certain amount of work must be generated to offset the initial costs and loss of profit. We have developed three scenarios in which to consider the related business case.

Scenario 1: Fixed price thorough inspection service (Appendix A)

This scenario considers the case for an inspection only service that charges a set £500 for each inspection even though the cost to conduct the inspection is £850. Thus, these companies are taking a 'loss lead'. The information below sets out the key assumptions in this scenario.

Key Assumptions for Scenario 1:

- All inspections will be charged at a standard £500;
- Break even for the company is £850; and
- Standard day rates for a two-person team are £1,000 (inclusive of a 15% profit).

Results: If the above example were carried out there would be a £350 loss, the difference between revenue and actual costs. There is an additional loss as there is an opportunity cost for not undertaking profitable work elsewhere. When the opportunity cost is factored into the equation then the company's total loss is equal to £500.

For this scenario to be profitable a certain amount of additional work must be generated through the inspection. Additional work could be anything from replacing roof tiles, gutter repair or major work such as re-roofing. If the company wanted to simply break even then it would need to acquire approximately 2.3 days of additional work (£150 profit x 2.3). If the company wished to not only break even, but also to make up for the opportunity cost of conducting the inspection, then 3.3 days of additional work would need to be generated.

If the company was already fully booked with commissions then it would be very unlikely that it would opt to take a loss-lead of this nature to generate more work. However, should the company have spare capacity then something along these lines may be considered. Either way, it is unlikely that every inspection could lead to 3.3 days of additional work for two persons.

Alternative option:

An alternative option would be for a publicly funded organisation to conduct inspection services. If this were to be the case then the scenario above would be the most relevant as it does include full costs and does not take into consideration additional work. There could be potential to brand approval from this body and that branding could have its own value – but as earlier stated, could also initiate new issues of liability. Again, this raises the key question of whether or not such a service would crowd out viable private sector companies already engaged in offering inspections.

Scenario 2: Full and reduced inspection service at fixed price (Appendix A)

This scenario represents a slightly more profit-oriented case for an inspection only service. However, in this particular scenario the initial and quinquennial inspections are quite thorough and require the labour of a two-person team for one day. In the other years, the company is offering a general inspection that can be completed either by one person in 1 day or two persons in 0.5 days. More thorough quinquennial inspections with annual general inspections, including gutter clearing, appears to be best practice. Thus, this case tries to incorporate those elements of best practice.

In order not to make the client pay a large cost for the more substantive inspections and a reduced cost for the others, this option considers a standard charge rate of £500, which would be factored into

any client contract (to ensure that the first inspection is not conducted and then the contract is cancelled before year 2).

The key assumptions for Scenario 2:

- All inspections will be charged at a standard £500;
- Break even rate for the full inspection is £850;
- Break even rate for the mini inspection is £425;
- Standard day rates for this two-person team is £1,000 (inclusive of a 15% profit);
- Standard day rate for either 1 person for a full day or two persons for half a day is £500; and
- Scenario will be considered over 5 years (1 full inspection and 4 mini inspections).

Results: If Scenario 2 were to be carried out, then over the 5-year period it would generate a £50 loss. This loss is not particularly large but given that the actual loss was in year 1 (the main inspection) that it took four additional years to almost bring the inspections to a break-even point. Thus, if the client tried to pullout of the contract after year 2 the loss would have been £275.

If opportunity costs were to be considered then the loss in year 1 would be £500 as opposed to the £350 loss correlated to the break-even point.

However, if this scenario were to be paired with additional work generation then there would be an opportunity for some profit. For example, the general inspections, if they are carried out either by a two-person team in 0.5 days or could be completed by 1 person in 1 day, are actually profit generating in that the break-even cost is £425 and the charge rate is £500 (£75 profit). The difficulty arises with the more thorough inspections as the company is taking a larger loss. In regard to the more substantive inspections, the company would need to generate 2.3 days of work (£150 profit each day) to break even and would be profitable if 3.3 days (same as scenario 1).

Over the course of five years, if only 1 day of extra work were to be generated then this scenario would be profitable although not all opportunity costs would be recovered. The key issue is that the more substantive inspection is conducted in Year 1, thus the loss is early in the contract and should circumstances change with the client and additional work is not generated early in the contract or is left unfulfilled on either side then the company would face a loss.

Scenario 3: Case for inspections and additional work (Appendix B)

In this scenario the company is conducting major quinquennial inspections and annual general inspections, the charge rates differ for the types of inspections and each inspection is followed up by additional work.

Key assumptions for Scenario 3

- Major inspections charged at £500;
- General inspections charged at £300;
- Break even costs for major inspection is £850;
- Break even costs for general inspection is £425;
- Additional work is charged at £1,000 (break even is £850); and
- Time frame: 15 years (3 quinquennial inspections).

Results: If 1 day of extra work were to be generated each year, for all years, then a total loss would be equal to: - £300;

If 1.5 days of extra work were to be generated each year, for all years, then total profit would be equal to: £825; and

If 2 days extra work were to be generated each year, for all years, then total profit would be equal to: £1,950.

General Summary of Scenarios 1 – 3

There are some opportunities for revenue generation when the inspections are paired with the acquisition of additional work. As earlier stated, if companies do not have additional capacity in which to undertake the new work then these scenarios are probably not going to be considered as the inspections do incur some element of loss/risk.

These figures are also only representative of one firm engaging one client and thus both profits and losses would be considerably larger depending upon the scenario and the number of clients. Any consideration of the opportunities for revenue generation also need to be considered in the context of the overall market and expected take-up rates. Furthermore, there needs to be consideration as to how many days each firm would have available and whether they would not prefer to try and get two full days of profit as opposed to one loss profit day and one day of profit yielding a combined smaller profit then would have been achieved with two full days of normal, profitable, work.

Health and Safety Considerations:

There could be health and safety implications that may stipulate that two persons must be involved in each inspection or there could be larger costs for the company if the building is large and access is difficult. Thus, if the company must use special equipment then the costs will only increase. There is considerable scope for health and safety issues to impact the both the equipment cost and time cost of performing inspections.

This is an issue that will need to be taken into consideration on a case-by-case basis. It is also assumed in these scenarios that the companies are adhering to health and safety regulations.

5 Merging of Supply and Demand – Is there a case for New Businesses

5.1 Is Demand Sufficient?

There is a maximum market size for heritage building related industries. According to English Heritage, there are approximately 370,000 listed structures in the UK and as earlier mentioned we are increasing that figure by 20% to 444,000 to reflect the grouping factor on the list and possible new listings. As discussed earlier, if we were to use a standard 10% take-up rate (less then the rates experienced in The Netherlands and higher then the rates seen in the Bath Pilot) then this would generate demand for approximately 44,400 inspections and possibly an additional 44,400 days work.

Actual evidence of demand for structured maintenance as a new business is not available, as by definition it is a 'new business.' However, we can consider the take-up rates from the Bath Pilot programme, 1.4% at subsidised rates, and in The Netherlands with Monumentenwacht, at 50% also heavily subsidised. Thus, a purely commercial venture would be expected to generate less interest. However, this being said there are already some players in the market that have incorporated inspections in their services and can make a profit on this portion of their time.

Furthermore, it is very difficult to demonstrate that good maintenance will significantly reduce major repairs as some things will eventually wear out and will need replacement. What maintenance may be more applicable to is pro-longing the life of certain parts of the structure and materials. For example, a thatched roof will need to be replaced possibly every 15 – 20 years if long straw is used[17]. However, good maintenance may be able to prolong the life to 25 years but the cost of replacement will still be required. Similarly, some slate roofs may need replacement every 50 years but good maintenance may mean that it lasts 85 years. Maintenance could amount to savings if a very long-term approach was used. Discussions with specialists and contractors were not able to pinpoint exactly how long a wear item (one with a fixed life expectancy, straw in this case) could last with and without maintenance. But what was a clear message was how an easily fixed problem can lead to significant costs if action is not taken early enough. This is particularly true in cases where something as simple as a clogged gutter could affect other previously sound parts of the structure and could undermine the overall state of the building. This type of neglect can cause serious problems that will not only harm the structure but could also be very costly to repair.

Contractors and specialists interviewed cited that education of the home owner was a large part of their marketing as people do not always understand that heritage buildings have different needs and that £500 today could save you £1500 tomorrow.

Considering that the Dutch have been able to enlist 50% of all listed building owners to work with Monumentenwacht, it is clear that when costs are very low that there will be a significant portion of interest from private owners. However, it also says that low cost is still not enough to get the other 50% to join. Thus, in England, without the subsidies, it does not seem possible to reach the same take-up rates. This does not mean that the very large estate owners with million Pound budgets may not have an interest in maintenance: this group may also not be as price sensitive to the initial costs.

There would most likely be more demand should the maintenance definitely include gutter cleaning or something that can be itemised in the minds of the consumer. Interviews have found that some companies already engage in maintenance inspections as a lead to additional business, thus this is not a completely new area. In regards to heritage buildings, it appears to be more of niche market.

[17] Thatchers Advisory Service, Sept. 2003

Information gleaned from other interviews has found that most homeowners do not look at the long-term costs and that they would be sceptical of such an organisation and service. Thus, to really engage the market, there would need to be sufficient and targeted marketing. The possible market size is large enough to engage many firms, but, without more evidence supporting the cost savings, it seems difficult to sell.

One interesting example, where a conservation area society tried to encourage structured maintenance was in Bedford Park. The Bedford Park Society is trying to promote some innovative ideas that will promote conservation and protection of the area's listed buildings. These ideas include:

> **Log Book:** This book will detail known past repairs and changes to the building and will give a description of the building at the time of its listing. This information will act as a guide to homeowners and should inform them of the buildings past and future maintenance needs and what changes may have already been made to the structure.
>
> **Pooled Maintenance Programme:** The Bedford Park Society has suggested hiring a building surveyor to inspect a number of homes and use economies of scale to secure a good price for the local homeowners. There are concerns about demand for such an initiative.
>
> **Informing local surveyors and estate agents:** The Society is considering ways to better inform local surveyors and craftspeople on the types of maintenance/repair issues that are frequently encountered by owners in the area. Local surveyors and architects have expressed an interest in such a seminar. The society is also seeking to educate local estate agents on what owners need to know about listed properties before they consider purchasing one.

In the case of Bedford Park there was a desire from the Bedford Park Society to band the owners together for a discounted inspection service, however demand from the owners was not high. In regards to better informing local surveyors and estate agents there is interest from these firms but the society has not yet organised the seminars. If grouped maintenance schemes were to succeed it would be expected that in a place like Bedford Park where there are numerous listed homes of similar style, age and needs, that this would be the ideal place. Again, it appears to be a question of demand.

5.2 Is Supply Sufficient? (See also Appendix C)

There are two parts to the question of supply: first, are there enough skilled persons in the field and second, is there enough of an incentive to either attract people into the sector or to entice those already operating in construction to enter into structured maintenance. In this case, we are not only considering structured maintenance but maintenance focused on heritage buildings, thus some skills will be transferable from the general construction market. For those jobs where higher skilled conservation work is necessary the skills are far more specialised and it would not be possible for any contractor to carry out the work. More information on the transferability of skills should be included in Module 6 [see http://www.maintainourheritage.co.uk/findings.htm] produced by De Montfort University.

Statistics on repair related firms

The Construction Industry Training Board (CITB) noted that repair and maintenance, including improvements to the housing sector, accounts for 46% of the value of all construction output in £m from 1990 – 2000.[18] In terms of structure of the industry, there is no classification for heritage focused contractors but they do subdivide the construction industry into basic types of firms. The most relevant trades in relation to this project are listed in the following table, Table 5.1.

[18] Construction Industry Training Board (CITB) (2002). *CITB Skills Foresight Report*.

Table 5.1: Relevant types of business to repair and maintenance

Sector	Total Number of Firms (GB):
Housebuilding	9,332
Joinery installation	17.069
Roofing	5,985
Plastering	2,712
Painting	8,232
Total:	43,330

Source: DTI, Annual Construction Statistics

Thus, there are approximately 43,330 firms in Great Britain that may have some interest or ability to offer planned maintenance schemes. Repair and maintenance is a large sector and according to the 2002 Edition of *Construction Statistics* that output for this sector reached nearly £30 billion in 2002 (in 1995 prices).[19]

Specialist heritage contractors

In terms of heritage focused contractors and building specialists, there are approximately 1,431 specialist companies and organisations listed with Building Conservation[20]. Thus, if we were to suppose that each of these companies had on average 4 (a conservative generalisation of company size) staff members then we are looking at a possible specialist market of nearly 5,724 persons. In all likelihood, the pool of companies is larger then the 1,431.

If we were to take this 5,724-person figure and consider it to be the available specialist supply then we can roughly calculate the percentage of these persons who would have to be actively engaged in inspections, if as noted in Appendix D, that 10% of all heritage homeowners were to take-up inspections. In this case 404 man-years, full-time equivalents, would be needed to conduct 1-day, two-person inspections. This figure represents only 7% of the possible supply market. However, as inspection only work is not considered to be profitable on its own, it is more then likely that more then 7% of the specialist market would have to be involved to some degree and less if the more basic annual inspections were to be absorbed by the general contractors.

Skill Shortages

There is considerable discussion within the construction sector about a possible skills gap and a decreasing interest in young people to enter the field. The Construction Industry Training Board (*Skills Foresighting Report*, 2002) noted that over the last 10 years there has been a decline in the share of 16 – 24 year olds entering the workforce and that between 2002 and 2006, approximately 76,000 new recruits will be needed, of which 65,000 will replace the existing workforce and 11, 000 will enable the sector to keep up with increasing demand.[21]

Module 6, Training and Education, [see http://www.maintainourheritage.co.uk/findings.htm] of the Maintaining Value programme has highlighted that it is clear from the responses of the three key groups surveyed (clients, professional advisors and service providers) that there is indeed a growling lack of skilled practitioners (De Montfort University, 2003). It furthers that the gap is due to a loss of experienced individuals and a lack of practical maintenance education within heritage and conservation courses.

[19] Department of Trade and Industry (DTI), (2002). *Annual Construction Statistics*. Office of National Statistics, page 31.
[20] Building Conservation, www.buildingconservation.com/directory/allco.htm
[21] Construction Industry Training Board (Feb. 2002). *Skills Foresight Report*. Pages 2 – 3.

5.3 Is the Market Flexible Enough?

The construction industry is known to be cyclical and flexible. The repair and maintenance market clearly holds considerable weight in the sector and the number of full-time equivalent persons needed to carry out all of the inspections, given a 10% take-up rate, is only 7% of the potential specialised practitioners. Furthermore, this could only be a small slice of the market given that regular contractors may absorb much of the business. This being said it seems reasonable to think that there is enough supply in the market.

What needs also to be considered is the available capacity within each firm. The construction industry is known for being cyclical and in the very good times a company may not want to risk taking on very profitable commissions for a less profitable inspection. In bad times they may be more apt to taking on lower profit jobs but not if significant equipment or training will be needed to enter the field. What is a bad time in this industry may also correlate to declines across industries and there may be little demand for such a service. Thus, it appears that companies would consider entering the inspection/maintenance market in times of average growth as a new or different service may differentiate them from other service providers or an inspection service could generate additional clients.

6 SWOT Analysis

This section is an analysis of the strengths, weaknesses, opportunities and threats involved with the business decision to engage in the supply of a structured maintenance programme. It goes without stating in this section that one clear benefit of structured maintenance programmes could lead to the best possible care of England's historic character. However, this fundamental point is not reflected in the case for new businesses entering into the heritage maintenance market.

6.1 Strengths

- Engaging in structured maintenance can lead to other work;
- Inspection and planned maintenance can reduce cash flow volatility as this work would be scheduled in advance and could be ensured through contracts or subscription fees;
- Employment for lesser skilled employees who could assist with the annual inspections;
- Opportunity to build long-term relationships with clients leading to further work unrelated to the inspections or referrals to new clients; and
- Heritage homeowners do seem to be generally more economically affluent and may have a larger absolute amount of disposable income that could go towards a maintenance programme.

6.2 Weaknesses

- Inspections are carried out at a reduced cost and further work is not generated;
- Maintenance may not be considered to be a priority and may be one of the first items to be cut from shrinking budgets;
- More stringent health and safety regulations could increase costs associated with conducting maintenance programmes;
- Maintenance may only postpone an eventual roof replacement and may be considered to be poor value for money when large-scale repairs are needed;
- It is difficult to prove value for money as maintenance is stopping disrepair from occurring and thus it may be difficult to show and market its benefits; and
- Entering into a new market and taking 'loss leads' on inspections with the hope of additional work requires a certain degree of business risk.

6.3 Opportunities

- Firms could become more specialised in heritage buildings and, if sufficient experience is gained, could seek higher fee rates;
- Changes to health and safety regulations could mean that more inspections will be required for heritage buildings;
- If legislation were ever to be introduced mandating structured maintenance, then there would be a ready-made market with increased chances for profit on the inspection side;
- It is a new business area with relatively few competitors as compared to the whole of the repair and maintenance construction sector;
- Many historic buildings are in public ownership and are less influenced by economic changes and could produce relatively steady income streams; and

- Sectoral outsourcing *e.g.* schools, hospitals?

6.4 Threats

- Skills shortages in the construction sector could mean that firms do not have the necessary appetite to try a new market, particularly if good profits are being made without taking additional risk;
- An economic downturn could negatively impact a homeowner's willingness to enter into a maintenance contract or to engage additional work; and
- An economic upturn could mean that there is a market for doing more profitable work.

7 Conclusions and Next Steps

7.1 Key conclusions

A programme of annual basic inspections and quinquennial thorough inspections can be profitable over time, as defined in Scenario 3, if additional work is generated and costs of carrying out the inspections are roughly the same for all properties on an average basis.

There are firms already involved in the heritage maintenance and repair market – they include maintenance contractors, conservationists, archaeologists and architects.

Some heritage related firms already offer structured maintenance services, in addition to other services, and consider it to be a relatively niche market. In some cases the inspections are charged at cost plus profit.

It does not appear viable to develop a business based only upon inspections. Thus, an inspection only service will probably need some element of subsidy.

If a publicly funded inspection body were to be developed, careful consideration would need to be given to how it would impact the private market. There are firms that offer structured maintenance plans and a subsidised competitor could undercut the market and take not only inspection business away from the private firms, but potentially also redirect the additional work that would normally have been generated through the initial inspection.

A 10% take-up of a structured maintenance service would generate 44,400 inspections each year and could generate a turnover of £44m and profits of up to £6,600,00 (at a charge rate of £1,000 each). *See Appendix C*

Approximately 7% of the conservatively estimated heritage contractor market would be needed to conduct annual inspections, as based on defined assumptions of 4 persons per firm (section 5.2).

Conducting of 44,400 inspections (representing a 10% take-up rate) with a one-person team would require 202 Full Time Job Equivalents (FTEs) and a two-person team would necessitate 404 FTEs, based upon one inspection requiring a full day of work (include initial site review, inspection and recommendations).

In order for firms to be interested in conducting lower cost inspections they must be able to redeem their 'loss lead' and opportunity costs in order to keep them in the business.

The maximum market size is large enough to create considerable work.

It is difficult to note if demand is sufficient as there is not much literature available on inspection services offered at cost. Take-up rates from the Bath Pilot are not promising particularly as these costs were subsidised. However, as some companies can and do offer these services there is a degree of demand among heritage building owners.

This new niche business may be very susceptible to economic up and down turns as an upturn would mean that there may be more highly profitable work available and lower value contracts would be a burden and in a downturn maintenance may be one of the first budget items to be cut. Most likely this type of business would perform better in a stable economy.

Any change in regulation or policy to the maintenance market and heritage buildings more specifically will undoubtedly affect both the market size and potential for revenues.

7.2 Next steps

Further financial analysis needs to be undertaken to assess the actual value of maintenance. Most information available is purely anecdotal. This analysis could be approached by considering the frequency of major repairs and the extended life of materials with and without proper maintenance.

Before further consideration of establishing a public inspection body, an economic impact study should be undertaken to assess its potential effect on the private companies already offering similar services. Maintain Our Heritage (MoH) could develop a programme model where public funds are used to leverage private financing for maintenance and upkeep of heritage buildings to be carried out by the private sector.

Additional options could be considered where inspections generate a couple of large-scale repair projects for one or a group of companies and its impact on their respective cash flow.

Further study could focus on how contractors and specialists could best work within the maintenance market in a co-operative and rational way.

Continuation of the Bath Pilot programme and more detailed analysis of companies that offer inspection services can provide better information on actual demand for inspections.

Appendices:

A: Scenarios 1 and 2

B: Scenario 3

C: Potential Market Size

Appendix A: Scenarios 1 and 2

Potential Revenues

Scenario 1:

Inspection - 1 full day of work with a two person team

Revenue earned:	£500
Break even cost:	£850
Loss:	-£350

Opportunity Cost:

Typical charge rate:	£1,000
Difference between op. cost and BE:	£150
Diff. Between rev. and profitable day:	£500

Days work at profitable level to make up for 1 inspection:

To achieve BE:	-	2.33
To redeem opportunity cost:		3.33

Assumptions:

Charge rate per person per day:	£500
Break even cost pp/pd:	£425
Revenue per inspection:	£500
Profits:	15%

Scenario 2:

Revenue earned:	£500
Break even cost:	£425
Profit/loss:	£75
Revenue Earned:	£500
Break even cost:	£425
Profit/loss:	£75

Over 5 years:	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	
Revenue:	£500.00	£500.00	£500.00	£500.00	£500.00	
Cost	£850.00	£425.00	£425.00	£425.00	£425.00	
Profit/Loss:	**-£350.00**	**£75.00**	**£75.00**	**£75.00**	**£75.00**	**-£50.00**

Appendix B: Scenario 3

Scenario 3: Business Case:

Assuming:

Every 5 years one full inspection at:	500
Other years semi inspections charged at:	300
BE Cost of full inspection:	850
BE Cost of semi inspection:	425
1 day of additional work for 1 person:	500
1 day of additional work for 2 persons:	2000
Break even cost of 1 days work:	850
Break even cost of 1.5 days work:	1275
Break even cost of 2 days work:	1700

No Additional Work Generated

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	
Revenues:																
Inspection	500	300	300	300	300	500	300	300	300	300	500	300	300	300	300	
Total Revenues:	500	300	300	300	300	500	300	300	300	300	500	300	300	300	300	
Costs																
Inspection	850	425	425	425	425	850	425	425	425	425	850	425	425	425	425	
Total Costs:	850	425	425	425	425	850	425	425	425	425	850	425	425	425	425	
Profit/Loss:	**-350**	**-125**	**-125**	**-125**	**-125**	**-350**	**-125**	**-125**	**-125**	**-125**	**-350**	**-125**	**-125**	**-125**	**-125**	**-£2,550.00**

1 Day Work Generated

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	
Revenues:																
Inspection	500	300	300	300	300	500	300	300	300	300	500	300	300	300	300	
1 Days Work	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
Total Revenues:	1500	1300	1300	1300	1300	1500	1300	1300	1300	1300	1500	1300	1300	1300	1300	
Costs																
Inspection	850	425	425	425	425	850	425	425	425	425	850	425	425	425	425	
1 Days Labour:	850	850	850	850	850	850	850	850	850	850	850	850	850	850	850	
Total Costs:	1700	1275	1275	1275	1275	1700	1275	1275	1275	1275	1700	1275	1275	1275	1275	
Profit/Loss:	**-200**	**25**	**25**	**25**	**25**	**-200**	**25**	**25**	**25**	**25**	**-200**	**25**	**25**	**25**	**25**	**-£300.00**

1.5 Days Work Generated																
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**Year 11**	**Year 12**	**Year 13**	**Year 14**	Year 15	
Revenues:																
Inspection	500	300	300	300	300	500	300	300	300	300	500	300	300	300	300	
1.5 Days Work	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	
Total Revenues:	2000	1800	1800	1800	1800	2000	1800	1800	1800	1800	2000	1800	1800	1800	1800	
Costs																
Inspection	850	425	425	425	425	850	425	425	425	425	850	425	425	425	425	
1.5 Days Labour:	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	1275	
Total Costs:	2125	1700	1700	1700	1700	2125	1700	1700	1700	1700	2125	1700	1700	1700	1700	
Profit/Loss:	**-125**	**100**	**100**	**100**	**100**	**-125**	**100**	**100**	**100**	**100**	**-125**	**100**	**100**	**100**	**100**	**£825.00**

2 Days Work Generated

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	
Revenues:																
Inspection	500	300	300	300	300	500	300	300	300	300	500	300	300	300	300	
2 days work:	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	
Total Revenues:	2500	2300	2300	2300	2300	2500	2300	2300	2300	2300	2500	2300	2300	2300	2300	
Costs																
Inspection	850	425	425	425	425	850	425	425	425	425	850	425	425	425	425	
2 days labour:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	
Total Costs:	2550	2125	2125	2125	2125	2550	2125	2125	2125	2125	2550	2125	2125	2125	2125	
Profit/Loss:	**-50**	**175**	**175**	**175**	**175**	**-50**	**175**	**175**	**175**	**175**	**-50**	**175**	**175**	**175**	**175**	**£1,950.00**

Appendix C: Market Size

Maximum Market - Earning for Inspection Services

Number of Buildings: *20% increase from EH's figure for listed buildings*	444,000		
Potential Take-up:	10%		
Number of work days per year:	220		
Number of inspections, per year:	44,400		
Charge rate per inspection:	£1,000.00		
Cost to conduct inspection:	£850.00		
Maximum Revenue:	£44,400,000.00		
Maximum costs of inspections:	£37,740,000.00		
Expected max. profits:	£6,660,000.00		
Number of days needed:	44,400		
Number of workers needed: 1 person per inspection	201.82 FTEs	Number of workers needed: 2 persons per inspection	403.64 FTEs