Historic England

Understanding Museum Heritage Estate Management

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SUMMARY
A mixed method of an online survey and depth telephone interviews was used to collect information from a sample of ACE Accredited museums in England with a listed estate. The research was steered by a partnership of HE, ACE, NLHF and DCMS. The information concerned the challenges and competing pressures faced by museums in maintaining their listed estate, the value and nature of recent and planned maintenance, and the scale of the backlog. In total, 101 museums participated with cases studies developed based on nine of those museums.

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With thanks to the expert and often hard-pressed museum staff who gave of their time to engage with the study and in some cases show us their listed estates.

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COVER: *clockwise from top left:* The Folly (Settle) in 1897, now The Museum of North Craven Life (courtesy of Historic England Archive); Gladstone Pottery Museum (Stoke-on-Trent); Wisbech & Fenland Museum (Cambridgeshire); Edgar's Farmhouse at the Museum of East Anglian Life (Stowmarket). Photos by S&B.

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EXECUTIVE SUMMARY

Overview

In 2017, the Department for Digital, Culture, Media and Sport (DCMS) published two major reports on museums in England.

The Mendoza Review identified the condition of listed buildings on museum estates as a major challenge for the museum and gallery sector. The review found substantial backlogs of repairs and maintenance are both a physical and existential threat, with some museums believing that they will not be able to remain open unless these problems can be addressed. Mendoza therefore called for a better understanding and more government support to address these issues.

The Strategic Review of DCMS-sponsored museums underscored these findings, reporting that

> "*at the 2015 spending review the museums collectively identified £142.9m for 2016/17 to 2020/21 in urgent repairs or pressing maintenance*". [1]

The report went on to speculate that this estimate was likely to be conservative and did not include 'desired improvements'.

In order to better understand the scale of the issue, Mendoza recommended that Historic England (HE), as the primary body responsible for heritage buildings, should work with other sector bodies, notably Arts Council England (ACE) and the National Lottery Heritage Fund (NLHF, formerly the Heritage Lottery Fund) to undertake research and provide support to museums and galleries with listed buildings.

HE and ACE signed a memorandum of understanding to work together on these issues. Consequently, HE commissioned the research reported here, to better understand a) the challenges experienced by museums managing listed buildings; and b) the kind of support needed by museums to address these challenges. This research is intended to support policy making and funding decisions, with particular regard to the forthcoming government spending review.

The aims of the research are to respond to Mendoza's recommendations and specifically to:

- gain a better understanding of the current condition of museums' listed buildings;
- gain an understanding of the pressures, issues and challenges facing museums in maintaining their historic built estate and their impact; and
- develop a realistic narrative around the options and issues for museums.

[1] NA (2017) Strategic review of DCMS-sponsored museums, DCMS

In October 2019, Simpson & Brown in partnership with Harlow Consulting was commissioned to conduct the research. A mixed method of an online survey and depth telephone interviews was used to collect information from a sample of ACE Accredited museums in England with a listed estate. The research was steered by a partnership of HE, ACE, NLHF and DCMS.

The research questionnaire collected information on museums' listed estate: maintenance budgets and the frequency of maintenance; the skills and knowledge available to museums for conducting maintenance; the challenges and competing pressures faced by museums; the value and nature of maintenance conducted in the last 5 years; the value and nature of any planned maintenance; and the scale of any backlog of repairs.

Fieldwork comprised stakeholder interviews (November 2019), an online survey of a sample of museums (15th November – 30th December 2019), in depth telephone interviews (1st December 2019 – 9th January 2020) and case study development (February – April 2020).

In total, 101 museums participated in the research, with cases studies developed based on nine of those museums.

Key Findings

The average[2] annual maintenance budget for museums is £13,000	Financial pressures on museums are severe. For most, funding received is insufficient to effectively maintain the listed estate.
Over three-quarters of respondents say lack of budget is the biggest issue for maintaining their listed estate	Funding is not straightforward. Many museums obtain monies from multiple sources, and it is not always ring-fenced or guaranteed from one year to the next, particularly in Local Authority run museums.
54% of museums surveyed rely on grant and charity funding as a key source of income	There is heavy reliance on grants to supplement income. The total value of grant/charity funding accessed by 43 museums able to quantify this over the last five years exceeds £35million, averaging just over £830,000 for each institution.

[2] Weighted data

50% of museums surveyed report serious maintenance issues

The majority of museums are in need of some form of repair and maintenance.

Only 4% of respondents reported no issues at all

The total value of the backlog of repairs for sampled museums exceeds £47million[3]

There is a large maintenance backlog. The scale of this problem is huge, and larger than previously thought, with substantial variation in how long it has existed. The average (median) length of the backlog is four years.

Highest priority types of repair and maintenance:

- Making buildings watertight: work on roofing, gutters, pointing, window repairs.
- Building services, ensuring efficient and working boilers and heating so they can control the environment.

The average (median) value of the backlog per sampled museum is £100,000

The total value of works undertaken by sampled museums in the last five years is just over £43million[4]. There is a substantial gap between committed funding, and the cost of works that need to be undertaken.

Over half of respondents have not had (or are unaware of) quinquennial inspections

It is not always possible for museums to accurately determine the type, scale or cost of works needed and thus prioritise corrective action. This stems from strong reliance on informal assessment where museums lack in-house skills & knowledge, and where they lack the budget to commission expert inspections.

A third of respondents say insufficient funding leads to failure to tackle all required maintenance

Museums say their budgets do not always allow for the backlog to be addressed, resulting in on-going deterioration over time. This can diminish the visitor experience and potentially create environments harmful to both collections and people.

[3] This is likely to be an underestimate as not all museums were able to answer the question
[4] Weighted data.

Competing pressures jeopardise maintenance of listed estate	Often, a focus on increasing visitor numbers and improving public engagement takes priority. Maintenance is the first casualty when budgets are cut, particularly with the visitor experience in mind.
59% of respondent say they have no policies or documentation to provide guidance on listed estate maintenance	Skills and expertise available to museums are highly varied, with no strong culture of upskilling via investment into training. This is typically due to stretched budgets, rather than a lack of desire to maintain skills and knowledge.
Over half of respondents do not record good practice in maintenance of their listed estate	70% of respondents rely on knowledge sharing in-house i.e. informal approaches to building skills and knowledge, which is developed and strengthened over time rather than embedded through formal, accredited means.

A main aim of this research was to estimate the value of the total backlog of all Accredited museums in England with a listed estate. Based on the survey results, combined with National Audit Office (NAO) data[5], **we conservatively estimate the total value of the backlog as being in the region of £337.5m**.

The true value of the backlog is likely to be higher, as many museums are unable to accurately diagnose the extent of their backlog, or to estimate a figure for how much the repairs would cost.

The nature of the backlog varies hugely in its scale and urgency. Overall, the most pressing need appears to relate to ensuring that the building is water-tight and weatherproof.

Although not all museums identify a backlog, nor do they predict an increase in maintenance and repair need, nearly half of respondents say they expect the challenges they face to become more severe over the next five years.

The evidence paints a stark picture of on-going inadequate funding leading to consequent lack of access to specialist expertise, with resulting poor diagnosis of problems and lack of advocacy for obtaining funds, and/or difficulty in accessing them.

[5] This approach was taken to counter the skewing effect of the outliers in the sample of 101 museums included in this research

1. INTRODUCTION

1.1 Research context

There has been growing awareness, over a period of at least 15 years, of the existence of a large backlog of repairs and maintenance in museum and gallery buildings in England. By 2004, it was estimated that there was a sector-wide backlog of around £150 million in repairs and maintenance, and this amount is likely to have increased further since then.[6] Many regional and local museums are wholly or partly funded by Local Authorities, which have seen sustained funding cuts in the wake of the financial crisis of 2008. There is no statutory duty on Local Authorities to provide funding for culture, meaning that museums and galleries have been disproportionately affected by consequent funding reductions: as Local Authorities have had to sustain their core statutory functions, funds have inevitably been drawn away from discretionary activities.

However, it is only recently that the condition of the nation's museums and galleries has moved to the top of the political agenda. The 2016 Culture White Paper called for a comprehensive review of the situation of the museums sector in England. This led directly to the Department of Digital, Culture, Media and Sport (DCMS) commissioning Neil Mendoza to produce 'a state of the nation report on England's museums' that would map the sector and consider how government and museums could confront challenges and opportunities facing them.[7]

The key issues identified in Mendoza's terms of reference were increasing access; improving partnership working; using digital technologies; developing museum collections and enhancing the ways they are researched, managed and accessed; developing the museum workforce; and increasing museums' international activities and profile. Museum buildings were briefly mentioned, but they were not suggested as a central theme for the review.

Nevertheless, the condition of museums' heritage buildings emerged as a key finding in the final report, and this was reiterated even more strongly in Mendoza's informal summaries to the press of his conclusions. Much money had been invested in setting up new museums, Mendoza noted, and there was now little need for further investment of this kind except where it could be very clearly justified. On the other hand, there was clear evidence that 'buildings maintenance backlogs… are a common issue'. Mendoza directed particular attention to the difficulties posed by heritage buildings:

> *"Many [museums] are housed in historic buildings, and a significant number have considerable maintenance backlogs that they cannot afford to address yet threaten the museum's ability to stay open".*[8]

[6] National Museums Directors' Council, *A Manifesto for Museums* (2004), p. 12.
[7] Department for Culture, Media and Sport, *The Mendoza Review: an independent review of museums in England* (November, 2017).
[8] DCMS, *Mendoza Review*, p. 31.

Mendoza therefore concluded that was a clear need 'to consolidate and invest in the museums that we have'.[9]

Similarly, the Museums Taskforce of the Museums Association stated that

> *"Many local and regional museums are housed in historic buildings that are expensive to maintain and in need of investment… [The government needs to] work with other funders to create a capital fund for refurbishment and repair".*[10]

The problems identified by Mendoza and by sector organisations with managing and maintaining museums' heritage buildings have important implications not only for the sector's core functions of preserving and presenting their collections to the public, but also for the nation's built heritage. Purpose-built museum and gallery buildings are often architecturally important public buildings with special significance for the communities around them. There is also a long tradition in the UK of adapting historic buildings originally constructed for other purposes (especially private houses) for use as museums and galleries. Finally, the major heritage organisations, the National Trust and English Heritage, have many historically significant properties in their care, often former private houses, that retain (or in some cases have been 'dressed' with) important fine and decorative arts collections. The result is that museums are collectively associated with one of the richest groups of heritage buildings of any major cultural or economic sector. If museums are struggling to maintain their estate, then a significant proportion of the nation's most cherished buildings are at risk.

Mendoza therefore recognised that addressing the backlog in the sector as whole would require a significant reallocation of resources, underpinned by a change of policy priorities. He recommended that sector organisations, notably Arts Council England (ACE) and the National Lottery Heritage Fund (NLHF), should target funding in ways that recognise the urgency of this need:

> *"[NLHF] should focus its museums funding on capital projects with a significant impact, whether major transformation or much-needed repair of valuable buildings. It should consider how to interpret 'additionality' in the contemporary context where museums need to use investment to tackle buildings conservation and maintenance backlogs, attract and maintain new audiences, and generate new funding streams."*[11]

Because of the high proportion of museums housed in heritage buildings, Mendoza asked that Historic England (HE), as the arms-length government body charged with supporting England's historic environment, should

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[9] H. Dixon, 'Britain should stop building new museums, Government review finds', *Daily Telegraph*, 1 January 2018, https://www.telegraph.co.uk/news/2018/01/01/britain-should-stop-building-new-museums-government-review-finds/, accessed 28 February 2020.

[10] Museums Association, 'Museums Taskforce statement on museum funding' (February, 2017), available for download from https://www.museumsassociation.org/download?id=1214840.

[11] DCMS, *Mendoza Review*, p. 15.

> *"Work with ACE and [NLHF] to review the maintenance and conservation issues for museums located within listed buildings, and how best to support them".*[12]

He also recommended that ACE should develop

> *"a clear framework for identifying and responding to museums and collections at risk, in partnership with other sector bodies, including [NLHF] with regard to capital funding and Historic England (HE) with regard to care of historic buildings".*[13]

No specific figure was identified for the cost of remedying the backlog for the sector as a whole. However, Mendoza's contemporaneous strategic review of the 16 DCMS-sponsored national cultural institutions (15 museums and galleries and the British Library) reported that they alone had identified £142.9 million of 'urgent or pressing maintenance repairs' that would need to be addressed within the next five years. He concluded that:

> *"The lack of sufficient maintenance of building fabric and services, offices and other non-public facing operations is creating significant risks. These risks represent an underfunding of the infrastructure and operations which have the potential to materially and adversely affect otherwise efficient operating models. It is difficult to determine how significant efficiencies can be made or money invested elsewhere until more of this critical work is done".*[14]

The 16 DCMS-sponsored museums are among the largest and best-funded in the sector, meaning that the challenges are likely to be even more acute among regional museums.

As a result of the Mendoza review, there is now both a clear awareness of the problems and the political will to address them. In June 2019, ACE and HE signed a memorandum of understanding to implement Mendoza's recommendation that they should work in partnership to support museums. Shortly afterwards, in October 2019, DCMS announced the creation of a £250 million Cultural Investment Fund, £125 million of which will be channelled specifically into regional museums and libraries, with a strong focus on supporting 'major infrastructure and maintenance work at local and regional museums across the country'.[15] These actions demonstrate real and meaningful collaborations between government and non-departmental public bodies, responding directly to the Mendoza review.

The potential effectiveness of targeted resource of this kind had been demonstrated by comparable initiatives to improve the condition of the nation's war memorials and places of worship. HE worked in partnership with the Wolfson Foundation (2004-2014) and War Memorials Trust (2015-2020) to provide repair grants for War Memorials.

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[12] DCMS, *Mendoza Review*, p. 16.
[13] DCMS, *Mendoza Review*, p. 14.
[14] Department for Culture, Media and Sport, *Strategic Review of DCMS-sponsored museums* (November, 2017), p. 44.
[15] DCMS, 19th October 2019 'Press release: New £250 million Culture Investment fund launched'.

This was in conjunction with War Memorials Online, an internet-based resource designed to build a complete picture of the whereabouts, type and condition of all war memorials in the UK, assembled by public contributions of information, observations and images. By enabling the scheme's administrators to assess the significance and need of the monuments, it has been possible to target resources effectively in a way that maximises beneficial impacts. The establishment of War Memorials Online was supported by not only Historic England, but Historic Environment Scotland, Cadw and the Welsh Government.

Another potentially useful model is the recent National Heritage Memorial Fund's Listed Places of Worship Roof Repair Fund. This offered grants specifically for the repair of roofs, rainwater goods and high-level pointing of masonry, to ensure that vulnerable or potentially vulnerable places of worship could remain weathertight. The evaluation indicated that the use of funds in this tightly specified way had proven effective, and had not only assured the future of buildings that benefited from a grant, with consequential beneficial impacts on their communities, but also, in many cases, enabled additional funds to be found for further repairs and maintenance. In addition, important lessons were learned between the first and second phases of the project, notably relating to the importance of making the application process as simple as possible; ensuring that applicants are aware of guidance on how to fill out the application; and the benefits of running regional advice workshops covering the application process and the best ways of commissioning and managing works, which helped build the confidence of applicants while reducing burdens on the scheme's administrators.[16]

To better understand the value of maintenance, in 2019 Historic England commissioned research into the economic value of maintenance and repair on a sample of 30 listed church buildings across England. The research aimed to: 1) estimate the current repair cost for capital works to these buildings; 2) estimate the cost for maintenance and minor repair when issues had been first identified in the fabric reports; 3) establish whether prompt attention to minor repair and maintenance would have slowed the development of major repair needs.

The report's Executive Summary drew out four main findings, which broadly confirm the views Historic England and many others have held for some time: that poor maintenance results in increased cost liability, which is prone to rapid escalation; that delaying repair results in significant costs associated with consequential damage; that roofs and rainwater goods are the primary causes of defects and consequent decay; and that buildings of different ages experience broadly the same issues. The report was able to provide answers to the main research questions above. Using the expertise of the project's Quantity Surveyor, the research found that the total cost incurred if all defects had been rectified when first identified is approximately £6,950,000. The total estimated cost associated with delaying repair is increased by circa 17%. Additionally, the report calculated the cost of consequential damage, where an initial defect causes further

[16] ERS Research and Consultancy, *National Heritage Memorial Fund: Listed Places of Worship Roof Repair fund Evaluation. Final Report* (April, 2017).

issues elsewhere in the building, as an additional 25% of the cost of repairing defects when first identified.[17]

Also, of relevance is the 2015 research which explored what it costs to repair and maintain historic church buildings across England, based on the records of the Churches Conservation Trust (CCT). The research was to identify and evaluate the impact of a significant one-off level of investment work that addresses the building's needs and make a first attempt to assess the benefits of maintenance and repair projects in these sensitive and often complex historic churches. It found a longer period of 'neglect' leads to a higher conservation deficit to a building. The research revealed that investment to achieve a sound building in good repair, results in savings being made on expenditure within 9 years of investment and a 53% saving being made within a 30-year period. It also found that churches in a better state of repair are financially more efficient in their use of utilities.[18]

Such schemes indicate potential models for the government, government agencies and museums themselves to address the major backlog of repairs and maintenance to the sector's heritage buildings. However, there is currently a lack of systematic research into the scale and nature of the problem. Much of the evidence, though compelling, is anecdotal, and quantitative data is lacking. The main metric used to indicate the potential severity of the situation is the rate of museum closure. However, museum closures can result from a diversity of factors aside from, or in addition to, specific problems with buildings and other infrastructure. By definition, moreover, they reflect problems at their most acute, making them problematically useable to gain insight into the challenges facing the sector as a whole. There is a therefore a lack of detailed understanding of key aspects of the problem, including such basic questions as: the exact number of museums housed in historic buildings; the condition of museums' historic building and structures; the impacts of condition problems on their current and future functioning; and of the obstacles that are preventing museums from dealing with such problems.

It is essential that the research deficit is addressed if measures intended to support the sector are to be appropriately targeted and as effective as possible. HE and ACE, together with the NLHF, have therefore commissioned this research to generate a robust baseline of evidence on the condition of Accredited museums' listed estates, and on the challenges the sector faces in addressing them.

[17] Historic England, *The value of maintenance?* (2019).
[18] Historic England, *Evaluating the impact of the Churches Conservation Trust model for investment in condition, maintenance and repair for historic places of worship*, Report number: 104/2015 (2015).

1.2 Research aims

The primary aim of this project is to respond to the findings of the Mendoza Review and, specifically, Recommendation 26 which asked Historic England to

> *"work with ACE and [NLHF] to review the maintenance and conservation issues for museums located within historic buildings, and how best to support them".*

The three specific research aims are to:

- gain a better understanding of the current condition of the historic built estate of museums;
- gain an understanding of the pressures, issues and challenges facing museums in maintaining their historic built estate and their impact; and
- develop a realistic narrative around the options and issues for museums.

This research, by supporting effective management of museums' listed estates, will help ensure that they are sustained and enhanced for the future. It will support effective development of government policy in this area, and help ensure that funding is directed most effectively, including where needs and impacts are greatest. It is also intended that, by understanding their own issues in context, museums will better able to support each other and share good practice.

1.3 Research scope

The broad scope of the study extends to fully Accredited museums in England which have listed estate elements of national importance. This spans heritage assets of the following statutory-designation types:

- listed buildings;
- scheduled monuments;
- registered parks & gardens; and
- registered battlefields.

Protected wreck sites were excluded from the study. Furthermore, it was decided to exclude those museums whose listed assets were in themselves the sole exhibit or the primary collections item. For example, where a museum's only listed asset was a Scheduled Monument, registered landscape or battlefield, which was the reason for the museum to exist, then this was excluded from the study. This does not, of course, imply that the repair and maintenance of such heritage assets is not important. Rather it is intended to recognise the fundamentally different nature of preserved monuments and buildings without content—most of which do not have, and are not seeking, Accredited museum status—and those institutions where core museum functions are housed within a listed asset.

However, where a museum was found to have multiple listed assets which included a listed building containing the primary museum functions (the storage or display of collections), and also included a Scheduled Monument, registered landscape or battlefield, then this museum and all its dependent listed assets were considered to be in scope.

1.4 Methodology

1.4.1 Sample selection

The first objective of this project was:

> *"To gather information on the condition of the listed estate in a representative sample population of museums."*

The scope of research was defined as fully Accredited museums which have a nationally listed heritage estate. This was to include all asset categories, except protected wrecks and conservation areas. As noted above, apart from listed buildings, museums with other assets were included on a case-by-case basis.

At the inception of the project, there was only a provisional list of museums with listed heritage estate available to the researchers. The first stage of the project was therefore to generate a robust sampling frame that included all fully Accredited museums with heritage estates.

The base source used to generate the sampling frame was the Arts Council England list of fully and provisionally Accredited museums, as of July 2019.[19] The listings were filtered to isolate:

- Fully Accredited museums
- Museums in England

It was then necessary to select only those museums with listed estates. To do this, geospatial locational data for the museums and for designated heritage assets was sourced, incorporated into a customised database, and cross-matched. Locational data for the museums was harvested from a variety of open sources and manually verified for consistency and accuracy. Locational data for designated heritage assets was downloaded from HE's National Heritage List for England (NHLE), which is the only official and up-to-date, register of all nationally protected historic buildings and sites in England.[20] Both sets of data were then displayed through a purpose-built web-based geographic interface.

[19] The latest version of the list is available here: https://www.artscouncil.org.uk/document/list-accredited-museums-uk-channel-islands-and-isle-man
[20] See https://historicengland.org.uk/listing/the-list/

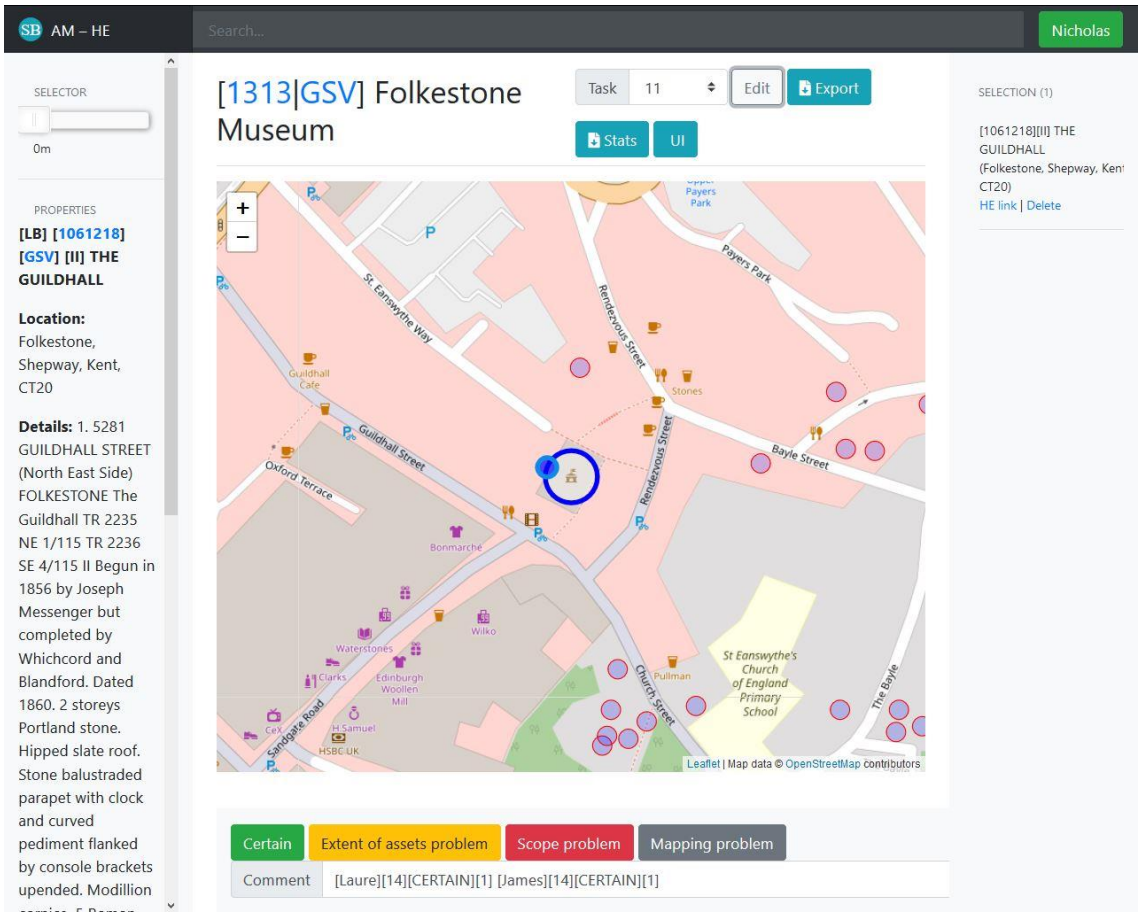


Figure 1: Screenshot of interface for cross-comparing geospatial location data for a potential participant museum.

This shows a straightforward case with direct correspondence between the location of the museum and a single designated heritage asset (blue circle indicates location of museum, shaded red circles indicate location of listed heritage assets, and light blue shaded circle indicates asset selected for inclusion as part of the estate of the relevant museum).

The interface consisted of a free-to-use OpenStreetMap scalable base layer, which was superimposed with layers showing a) a blue circle to mark the location of each candidate museum; b) one or more red circles to mark the location of all nearby listed structures; c) shaded polygons marking the extent of Scheduled Monuments and registered parks and gardens. The interface enabled the researchers make rapid assessments of whether the candidate museum was housed in, or connected with, one or more designated heritage assets. The relevant assets could then be selected, after which they were automatically pushed to the project database.

This process was supported by a series of tools built into the interface:

- a separate window that displayed the relevant Statutory List entry when the cursor hovered over the location of a heritage asset;
- a hyperlink to Google Street View to 'virtually' visit the exteriors of the candidate museums;
- a hyperlink to the candidate museum's own webpage;
- buttons to enable quick selection of potential assets that were then automatically pushed to the project database;
- a bulk selector for all listed assets within a specified radius of up to 500m (this was particularly useful for country house museums, where the mansion house was only one of a large number of designated heritage assets within common ownership or management); and
- an automatic function to digitally 'stamp' results with the time they were generated and the identity of the researcher.

A candidate was included in the sample frame where there was a close match between the circle marking the location of the museum and the circle marking the location of a designated heritage asset (Figure 1). Alternatively, it was excluded when there was no HE designation data in the vicinity.

If there was no reasonable doubt about the match, the result was marked as 'certain'. However, many candidates had multiple HE designations in close proximity. For example, some museums in listed buildings also had listed boundary features or were situated within a registered park. In these cases, each designated asset was checked and a decision taken as to whether the relevant site/structure was included in the museum's ownership and therefore would be its maintenance concern. A generous approach was taken, and the researchers included all the assets for which the museums could reasonably be expected to have maintenance responsibilities (Figure 2). If the candidate was selected for inclusion within the sample, the precise extent of assets was confirmed with the museum via the survey (either an online questionnaire or a telephone interview, as detailed below).

Some museums have designated sites extending over more than 500m, such as, for example, a preserved railway line. As it was not clear whether all listed assets were captured, the precise extent of assets was confirmed with the museum via the survey.

As explained above, where the listed asset of a museum was the sole exhibit or the primary collections item, for example, where a museum's only listed asset was a Scheduled Monument that did not appear to house any collections, then this museum was excluded from the study. For quality control purposes, all results were checked twice, by different researchers.

The total population of museums with Full Accreditation is 1206, of which 847 have listed estates; this is just over 70%.[21] The number of listings however is not known, as some listings include multiple assets.

[21] There were a further 126 museums with Provisional Accreditation on the list, of which just over 90 had listed estates. As noted, museums with Provisional Accreditation were excluded from the study.

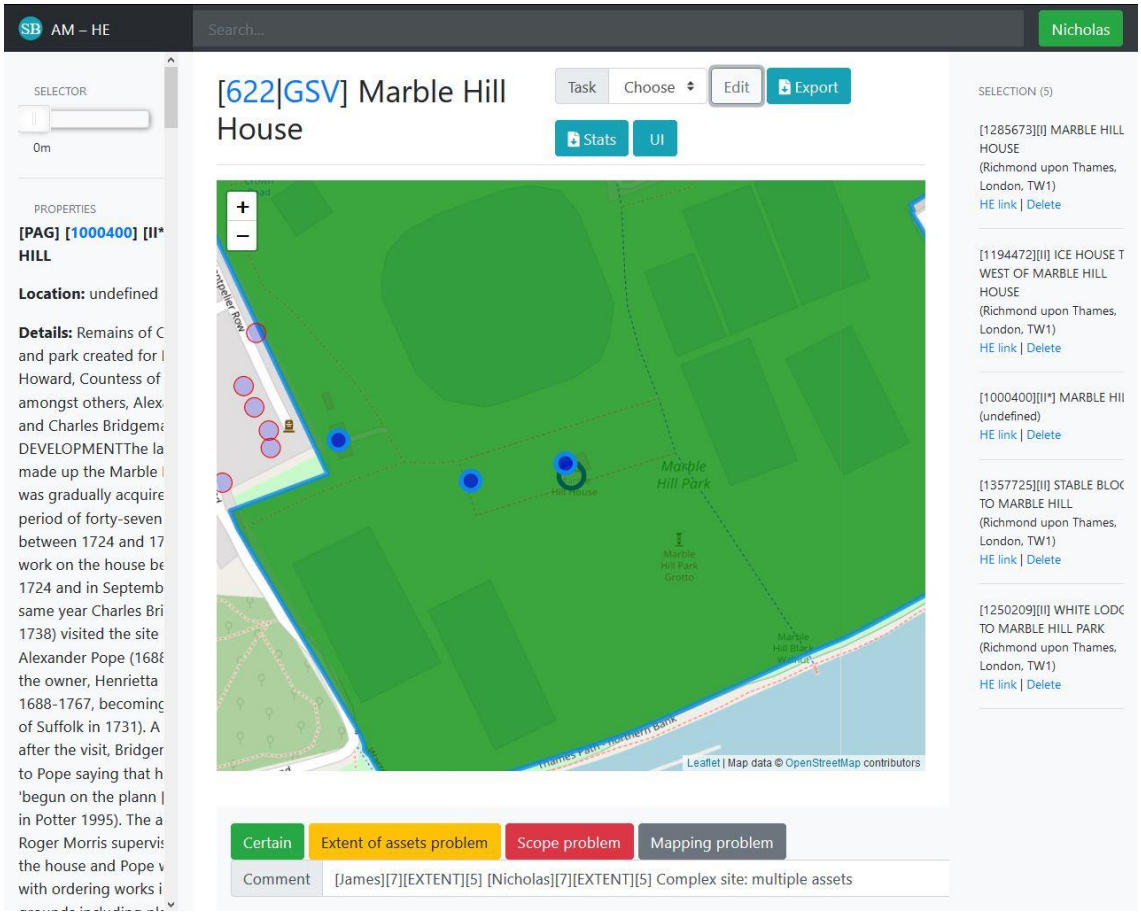


Figure 2: Screenshot of interface for cross-comparing geospatial location data for a potential participant museum.

This shows a more complex case with multiple assets selected for inclusion (blue circle indicates location of museum, red circles indicate location of listed heritage assets, the green polygon defines the area of a registered park or garden; the light blue circles and boundaries indicate assets selected for inclusion as part of the estate of the relevant museum).

However, extrapolating from the sample would suggest that the listed estates of these museums comprise approximately 2500 items. This is a high figure and demonstrates the importance of museum institutions in the management of England's historic buildings.

Furthermore, ten museums' listed estates consist of a Scheduled Monument only, with no listed building; as noted above, these were not included in the study. The 847 included 99 registered parks and gardens. Of the total number of over 1,600 registered parks and gardens, this represents around 12%. All of these included other listed assets (Scheduled Monuments or listed buildings).

The resulting sampling frame was then analysed to identify the distribution by two variables:

- ONS Region
- Museum type (as defined by Arts Council England)

These two variables, or 'strata' were then used to develop a representative stratified sample (see Table 1 for the sample stratification). A probability sampling approach was then used to draw a random sample of museums from within each stratum.

Table 1: Sample stratified by region and museum type

	Museum type					
Region (ONS)	Independent	Local Authority	National	National Trust	University	**Total**
East of England	54	25	2	10	8	**99**
	6%	3%	0%	1%	1%	**12%**
East Midlands	30	26	-	10	-	**66**
	4%	3%	-	1%	-	**8%**
London	47	12	15	6	6	**86**
	6%	1%	2%	1%	1%	**10%**
North East	16	12	1	1	4	**34**
	2%	1%	0%	0%	0%	**4%**
North West	31	42	9	12	4	**98**
	4%	5%	1%	1%	0%	**12%**
South East	87	27	3	24	4	**145**
	10%	3%	0%	3%	0%	**17%**
South West	92	28		29		**149**
	11%	3%	0%	3%	0%	**18%**
West Midlands	41	18		16	3	**78**
	5%	2%	0%	2%	0%	**9%**
Yorkshire & Humber	46	39	1		2	**88**
	5%	5%	0%	0%	0%	**10%**
Total	**444**	**229**	**31**	**108**	**31**	**843**
	53%	**27%**	**4%**	**13%**	**4%**	**100%**

1.4.2 Online survey

A survey questionnaire was developed to capture qualitative and quantitative information on the condition of museums' listed estates, as well as to capture data on the nature and value of works undertaken and planned. A key part of the questionnaire collected information on the existence of any maintenance backlog.

The questionnaire was distributed to 266 museums via an email containing a link to the online survey.

All museums were asked two initial screening questions:

1. Can you confirm whether your museum is housed in, or is responsible for, listed assets?
2. Are you/your museum organisation responsible for the maintenance or contribute to the costs of maintenance for the listed assets (excluding conservation area issues)?

Those who answered 'no' to question 1 were screened out.

Those who answered 'no' to question 2 were asked to provide contact details for the individual or organisation responsible for maintenance of the asset/s. In these cases, the contacts provided were followed-up by email and telephone to secure their engagement in the research. Six museums contributed to the research in this way:

- five museums responded to the survey by phone
- one responded via email
- 46 museums completed the online survey

This represents a 20% response rate.

1.4.3 Depth telephone interviews

To supplement the survey data a series of telephone interviews were conducted. The interview questions included those from the online survey questionnaire to increase the sample of quantitative data, but they were amplified with semi-structured discussion to allow further qualitative insight to be gained.

In total, 135 museums were invited to participate in the research via email. Follow-up emails and telephone calls were made to secure completions. Forty-eight interviews were achieved; this represents a response rate of 35%.

1.4.4 Case studies

All research respondents were asked whether they would be willing to be contacted either for further information or to take part in a case study. The majority of museums responded positively.

From those who opted-in to further contact, a long-list of potential case study subjects was selected to provide a broad cross-section of museums by:

- type
- size

- location
- condition
- whether a maintenance plan is in place
- whether work has been undertaken in the last 5 years
- whether work is planned for the next 5 years
- the nature and scale of any backlog.

A shortlist of 17 museums was then created. All museums on the shortlist were invited to be a case study subject, with the aim of securing 12.[22]

The case study museums were visited by an experienced historic-buildings architect from the project team. He visited each museum for an on-site discussion with the museum staff responsible for managing the repair and maintenance of the listed estate in their care. The visit enabled the researchers to develop a deeper and more holistic understanding of the condition of the listed assets and the challenges involved in maintaining and repairing them. As part of the site visit, the processes and documents used by each of the case study museums were reviewed, and an assessment made. The case studies were particularly intended to enable the researchers to capture the relationship between the perceptions and the realities of the condition of museums' listed estate.

1.4.5 Analysis

Following completion of the fieldwork, all survey data were checked for accuracy and cleaned. This included, for example, ensuring that all quantitative data were entered in a consistent format and verifying that any outliers had been correctly reported.

Following cleaning, survey data were weighted to be representative by region and museum type. The objective to achieve a sample size of 100 prohibited extensive cross-tabulation of data – for example by location or institution type – because analysis of smaller groupings is less robust and should be viewed as indicative.

Open questions and additional qualitative information obtained from the telephone interviews were analysed manually using keywording and frequencies.

1.4.6 Limitations

It is apparent from the research findings that a major challenge for many museums is accurately diagnosing the scale and nature of required works over and above day-to-day maintenance. Various issues contribute to this, such as a comparatively high cost of formal condition surveys when balanced with maintenance budgets, limited staff capacity and difficulty accessing some areas of the asset in order to inspect them.

[22] Due to the impact of Covid-19 pandemic, and the subsequent UK 'lockdown' being implemented mid-way through the case study visits in spring 2020, it was only possible to achieve nine of the twelve.

For this reason, some of the data on the value of the maintenance backlog is imperfect. Whilst some museums have detailed records, with cost estimates attached to each area of the building, others have only their intuition and professional judgement to go on. Anecdotal evidence from this research suggests that many of the estimates provided are likely to downplay the scale of the problems and associated costs. This is because a number of museums spoke about the difficulties of estimating cost based only on the cosmetic appearance of the building. In their experience, once a problem is investigated additional, previously hidden issues are often discovered.

The scale of the backlog may therefore be considerably higher than the figures reported.

2. THE HISTORIC BUILT ESTATE

2.1 Context

The sample of 100 museums was selected to be representative of Accredited museums in England. It clearly demonstrates the breadth and diversity of museums' historic built estates.

Nearly two thirds of the sampled museums were responsible for a single heritage asset, in most cases the main museum building. Approximately one third of the museums, however, are managing multiple heritage assets, with 12 managing five or more. One museum was responsible for a total of 63 assets, the majority of which are pieces of individually listed garden sculpture.

Of the major categories of listed assets included within the study—listed buildings, Schedule Monuments and registered parks and gardens—Scheduled Monuments make up 4% of the sample, and registered parks and gardens just 2%. The vast majority of the assets are listed buildings.[23]

Of the listed structures within museum estates, just under 60% are buildings in the conventional sense of the word, although these buildings are very varied: a museum might have a country house or rural cottage in its care but could also have a windmill, water tower, or railway signal box. Some museums are responsible for only part of a larger structure: one museum sampled occupied one wing of a larger museum complex, while another was housed in part of a cathedral. 10% of the listed assets are boundary features, most commonly walls or gateposts, while 28% are pieces of garden sculpture including decorative garden furniture; it should be noted that sculpture may have been over-represented in this sample due to the inclusion of the abovementioned sculpture-heavy site. The other remaining listed features included lampposts and bridges.

It is interesting to note that only 10% of the museums sampled are purpose-built. In the context of the museum sector as a whole this is possibly not representative. However, this study concerns listed heritage only and many purpose-built museums date from the mid and later twentieth century, and will therefore not yet have been considered for listing.

A third of the sample overall are from the nineteenth century or later, though many of the buildings of all dates are multi-phase and as such incorporate different styles and materials. This is especially true of the buildings with the earliest origins, which have often seen multiple changes of function and the incorporation of previous structures into later phases.

Just under a quarter of the museums in the sample cared for some medieval building fabric. Two museums were based in country houses that had been adapted to a

[23] For Historic England's criteria for listed buildings, see https://historicengland.org.uk/listing/what-is-designation/listed-buildings/

residential from a previous monastic use, while one medieval building had been used residentially by an academic institution. Other previous uses included civic (museums in former guildhalls being relatively common), industrial, agricultural, and military.

The most common material used to build museums' listed assets is brick, which was used at all dates from the thirteenth century onwards. Example range from a late medieval castle to a 1930s former office building. Stone was also frequently used, with the type of stone employed typically reflecting the geology and tradition of the region: for example, granite was more common in the southwest. Where buildings are multi-phase, or where there are multiple heritage assets on the same site, it is common to see a variety of materials being used. For example, one museum which was formerly a residential building was begun in the early sixteenth century as a timber-framed structure, and then completed approximately a century later in coursed and squared stonework. One large country house museum has a total of eleven listed assets; it was built over a period of 150 years or so but the alterations to the main house were typically in the same limestone ashlar so as to appear continuous with each other. More variation is evident in the ancillary buildings and other structures, where for example, brick was used on a later coach house, and coursed and dressed stone on a gardener's cottage. Higher status materials were usually used where there was a greater proximity to the main house, or where the ancillary structure would be clearly in view from it.

The great variety in size, age, and materials of museums' heritage estates means that the museums caring for them are routinely confronted by complex maintenance challenges, often requiring specialist skills and expertise from professionals and contractors in planning and undertaking the works, and in sourcing and using traditional materials which may need to be sourced from specialist sources and allowing for lead in times.

2.2 Current condition of historic built estate within museums

2.2.1 Condition assessments

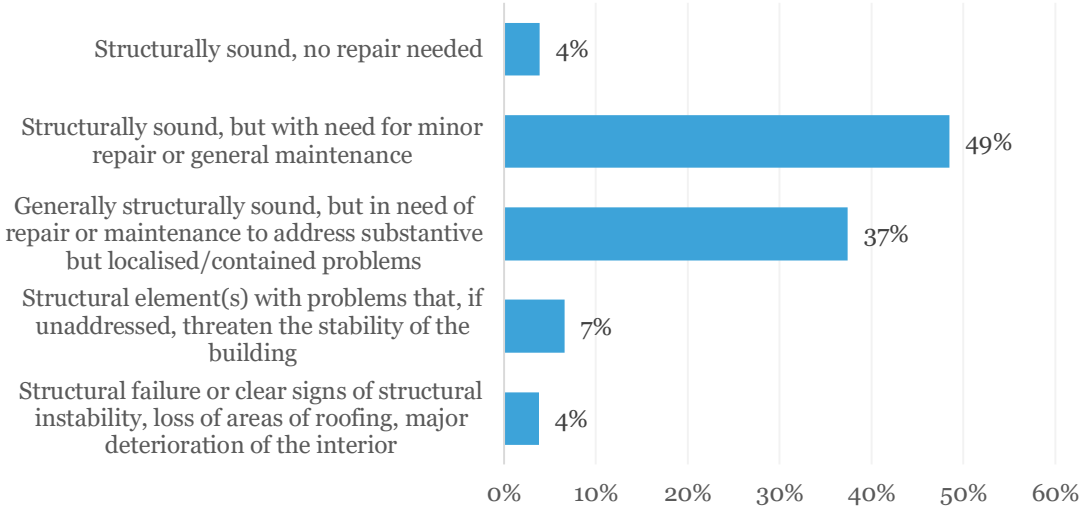
Surveyed museums were asked a series of questions about the condition of their listed estate, including whether any are on the Heritage at Risk Register.

An initial question asked museums to specify the overall condition of their listed estates, using a five-point scale developed from previous Historic England survey and condition assessment instruments. The aim was to generate intuitively clear, meaningful categories that related directly to the extent to which the physical survival of the building is under threat from condition issues. The proportions of museums in each of the five categories are presented in Figure 3.

Overall, nearly all museums surveyed require maintenance of some sort, with just under half (49%) needing minor repairs or general maintenance. An almost equal proportion

(48%) have more serious issues ranging from localised problems (e.g. dry rot or water ingress) to structural failure.

Figure 3: Museums' assessment of the condition of their listed estate



Of the different museum types surveyed, National Trust properties appear to be in the best condition (none having structural problems or structural failure). All the museums reporting structural failure (4%) are independents. However, generally amongst independents – the most common type of museum – the picture is more positive; just under half (48%) report that the museum is in the top two categories (i.e. no repair needs, or only minor repair or general maintenance required).

> *"We had a massive capital building project in 2014… Now we have this new building it's an issue to keep on top of. If we identify a need for work, we don't have anyone who can manage it. There just isn't the capacity. The building manager left in summer and hasn't been replaced. So, it's no one's responsibility."*
>
> ***Local Authority, East Midlands***

> *"In the 70s, the wrong render was put on. Also, there is a small amount of damp. If there is a downpour, there are usually a few leaks - nothing a mop and bucket can't sort out!"*
>
> ***Local Authority, North East***

> *"We have a few cracked tiles but no leaks as yet. It will be addressed when it starts leaking. We have a problem with chimneys – mortar [flaunching] is falling off. But if it's not put right, this time next year we would be facing leaks."*
>
> ***National Trust, West Midlands***

The most commonly cited maintenance needs are associated with guttering, windows (i.e. rot) and roofing. Many respondents site this as due to climate change and the increasing intensity and frequency of rain events. Gaining safe access to inspect and undertake repairs at high level is often highlighted as a barrier because of the high cost of scaffolding and access equipment and, especially in urban areas, of securing road closures to complete the work safely.

> *"When it comes to barriers, the issue isn't the work - there's nothing too intricate. The challenge is access; it needs 3 floors of scaffolding. We'd pay £9k for scaffolding and £3k for the work."*
>
> ***Independent, East Midlands***

> *"If either the west or east roof were stripped of lead in a storm it would be very expensive to fix because it's difficult to access."*
>
> ***Independent, East of England***

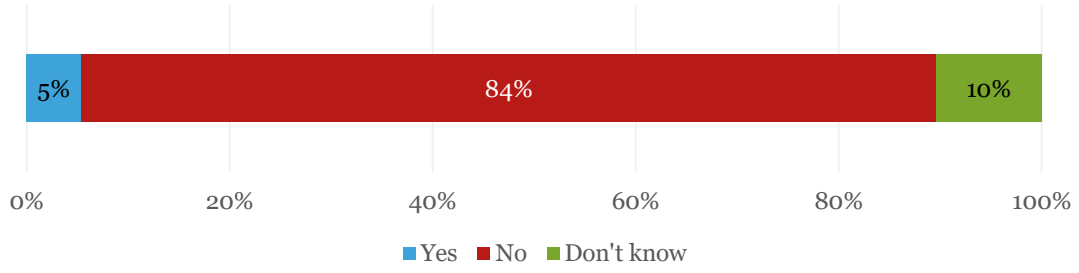
> *"[We need to repair the] windows - there is a backlog because the scaffolding costs so much."*
>
> ***Independent, East Midlands***

2.2.2 Assets at risk

A very small proportion (5%) of museums have listed assets currently on the Historic England 'Heritage at Risk Register' (Figure 4).[24] Of the six museums with assets on the register, five are independents and one is Local Authority operated. All are in the South or East of England.

[24] https://historicengland.org.uk/advice/heritage-at-risk/

Figure 4: Are any of the museums listed assets on the ‘Heritage at Risk Register’?



The assets on the ‘Heritage at Risk Register’ are:

- a Victorian gun battery;
- Grade II* listed pumping station: in poor general condition with a structural subsidence issue in a contained location currently being monitored and investigated by specialist contractors;
- the ruins of an abbey on a museum’s estate: the ruins themselves are structurally sound, following major conservation, but the wider monument is still at risk due to condition of ruins in other ownership outside the museum’s boundaries;
- a Grade II listed museum building;
- a pair of lime kilns.

At least two respondents feared that their listed assets were in such a state of disrepair that they would soon be placed on the Register. Another, local-authority operated museum, stated that if the authority did not make take steps to do so, the museum itself would seek to have the condition of its heritage assets highlighted by being added to the register. They suggested this was the only way in which they would be able to secure the support needed to begin addressing the maintenance backlog.

3. FUNDING

3.1 Funding sources

Museums obtain funding from a variety of sources, with commercial revenue being the most widely used source for most (58%) of the museums surveyed (Figure 5).[25] Over half (54%) of museums rely on charities and grant-awarding bodies for at least part of their income.

Just under half of museums (47%) obtain funding from their Local Authority, although only 27% of museums are Local Authority operated.[26] According to information provided in telephone interviews, many independents benefit from small pots of funding from their city or town council. A number of these museums noted that this source of funds has diminished in recent years as Local Authority budgets have been curtailed.

> *"Donations - we ask for £2. The average is less. We also do gift aid. We get £1,500 a year from the town trust to allow local village groups to use the reading room."*
>
> ***Independent, East of England***

> *"The town council gives us space and utilities. Wages are paid by the charity's council arm."*
>
> ***Independent, South East***

> *"Get building rent free from LA. Sell teas and other fundraising events"*
>
> ***Local Authority, South West***

> *"A third of our income comes from admissions and the shop, another 1/3 from income and another 1/3 from grants. We get a small grant from the City Council for annual maintenance."*
>
> ***Independent, East of England***

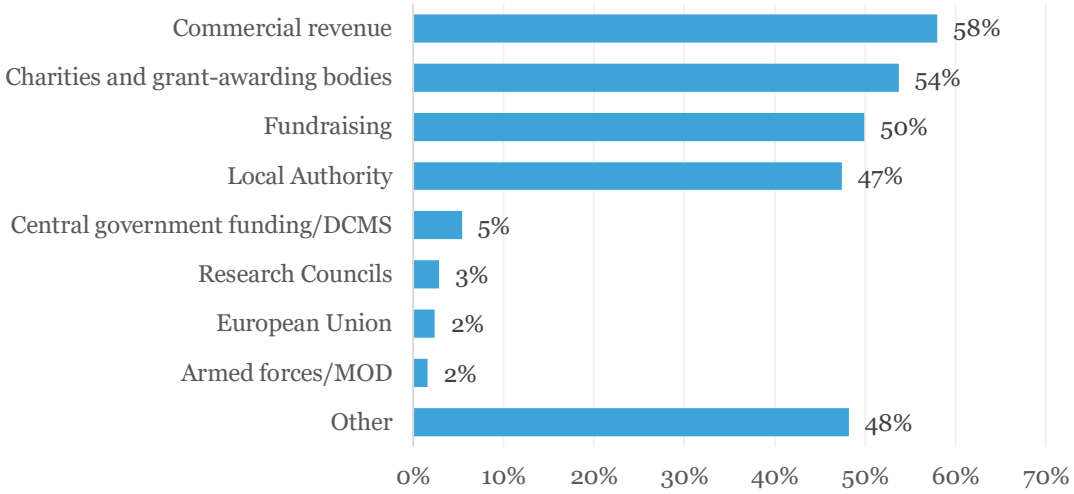
> *"[The museum] was set up as a 'friends of' originally. Shared the building with the Council, so they covered the cost of electricity etc. The South West museums officer then said 'go for accreditation', but we'd need more funding. We get £350 a year from the parish council to cover stationery etc. I have secured some wind*

[25] For example, a museum shop or café.
[26] Weighted data; the unweighted proportion is 32%. The distribution of funding sources used may differ in the overall population of Accredited museums in England

farm funding. For the last 6-7 years we've had a grant each year which keeps us going."

Local Authority, South West

Figure 5: Sources from which sampled museums obtain funding



Just under half of sampled museums (48%) also obtained revenue from other sources. The most common source is from donations (in place of admission fees), membership and from private individuals via personal charitable giving (supplemented where possible with Gift Aid) and legacies. Other examples of income include:

- events, such as weddings and corporate room bookings
- sub-letting
- investment income
- training courses
- filming/locations
- events (e.g. wine tasting, craft days)
- school visits.

A small number of independent museums noted they have recently changed their governance status in order to benefit from charitable status and to allow them to access grants.

"We went to a Trust on 1st November. Couldn't do fundraising as a LA building - exempt from lots of funding options."

Independent, South East

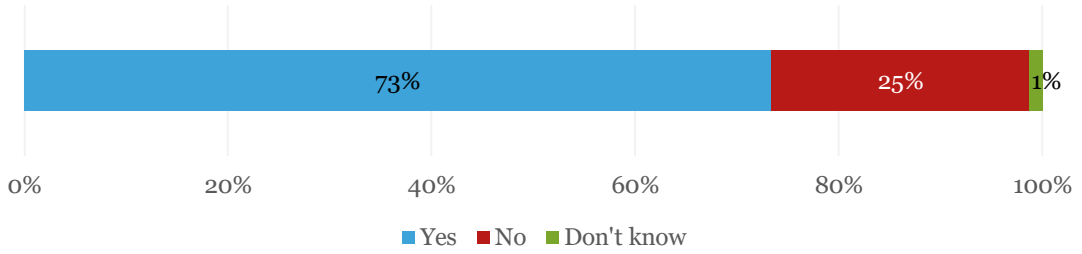
One museum noted that, even though they are part of a world heritage site, this status does not come with funding and, is having a 'detrimental' effect on their ability to maintain their listed estate.

> *"As a World Heritage Site we have no funding. We get no benefit. The museum is self-funding."*
>
> ***Anonymous***

3.2 Maintenance budgets

Most museums (73%) have a specific annual budget for buildings maintenance, including building fabric and building services (such as heating and lighting) (Figure 6). Of these museums, 58% state that this budget is ring-fenced.

Figure 6: Does the museum has a specific budget for buildings maintenance?



Weighted base: 98

Not all museums were able to answer the question about maintenance budgets, usually because they did not own their building and were not directly responsible for maintenance. In nearly all such instances, these museums leased their buildings from the Local Authority; almost all these museums are classified as 'independents'. Arrangements vary, and in some cases entailed fairly complex approaches to apportioning responsibility for repairs and maintenance; overall, however, there appear to be two main leasing models:

- the museum pays a 'peppercorn' rent and in exchange takes responsibility for day-to-day maintenance and works to the building; or
- the museum pays a more substantial rent to the Local Authority which is responsible for day-to-day maintenance as part of the Council's property, but the museum is responsible for any works over and above routine maintenance.

The only other examples of leasing were between museums and Cathedrals, where the museum is situated either within the Cathedral building itself or in a structure within the Cathedral's estate.

"The budget comes out of two pots of money: [the] Council – the corporate landlord. Routine maintenance goes through that. We have a small pot of money that we use for anything outside of that."

Local Authority, North East

"The burden for repairs is the Borough Council[']s]. The museum looks after the internals. The lease is non-specific about windows and doors."

Independent, East of England

While the second model may seem to be optimal, in that it relieves the museum of day-to-day responsibility for repairs and maintenance, this research revealed a number of issues with such arrangements. As the property remains fully part of the Local Authority's property portfolio, it must compete for a share of the Council budget. The result is that the museum has little control over the timing or nature of the repair and maintenance undertaken. The telephone interviews also highlighted ambiguities over which types of works are regarded as day-to-day maintenance and which are less routine. A handful of cases were described where disputes had arisen between the museum and the Local Authority over who was responsible for funding repair and maintenance work.

In these cases, although museums were aware that their buildings were allocated an annual maintenance budget by the building landlord, not all knew what the actual annual spend was. A small number of other museums were only able to provide the figures after interrogating their annual accounts.

"No, I don't know because everything is in one pot"

Local Authority, North West

"We spend very little on maintenance"

Independent, East Midlands

"We have a small revenue budget which includes an income target linked to the £1 fee. General maintenance has a budget of £11k a year that's allocated - it includes energy etc."

Independent, East Midlands

"Different factors determine the budget, e.g. the number of visitors, cultural significance etc. We then identify key jobs and discuss with the surveyor. We have a 5-year building plan/budget linked [to] the quinquennial survey. Then we develop a longer term 10-year plan."

National Trust, West Midlands

"Our public funding is £16,000 p.a., our running costs are £350,000 and our operating deficit is £90,000. Building maintenance is a luxury we can ill afford and only when urgent will it make an attractive case for funders."

Independent, South West

In total, 78 of the 101 respondent museums were able to provide their annual spend on buildings maintenance. As would be expected of such a diverse sector, maintenance spend varies hugely: from £0 to £1.2m. The largest spend is by national museums.

The average (weighted) annual maintenance budget of museums is £13,000.[27]

Amongst surveyed museums, the highest annual spend is by Universities; the lowest spend is by museums operated by Local Authorities (Table 2).

Table 2: Annual spend on building maintenance by museum type

Museum type	Weighted base	Annual spend
Independent	46	£11,000
Local Authority	18	£5,000
National Trust	11	£200,000
University	3	£250,000
National	3	£248,892

Note: due to the low base numbers, these figures should be treated as indicative.

The survey also asked museums for their annual spend on the listed estate. In total, 66 museums were able to provide this figure – others were not able to isolate a specific spend.

The weighted median average spend was £13,000, indicating that the total maintenance budget for most museums is spent entirely on the listed estate. This finding should be treated with some caution as it is unlikely that 100% of museum budgets are spent on their listed assets; museum estates of many respondents are composed of both listed and non-listed structures.

[27] The median. This is calculated on a weighted base of 80.1 respondents.

3.3 Grant funding

54% of museums rely on grant and charity funding as a key source of income (Figure 5).

- 43 of the respondent museums stated that in the last five years (i.e. since 2014) they were in receipt of grant/charity funding specifically for conducting maintenance on the listed estate
- 15 museums had accessed more than one source of grant/charity funding

The total value of grant/charity funding accessed by these 43 museums in the last five years totalled £35,741,973. This equates to just over £830,000 for each museum that received such grants.

The range of sources most commonly accessed were:

- National Lottery Heritage Fund (19 awards)
- Council/District Council (9 awards)
- Historic England (6 awards)
- Arts Council (5 awards)
- DCMS (3 awards)
- National Trust (2 awards)
- Tesco Bags for Help (2 awards)
- Woolton Foundation (2 awards)

Numerous other sources were also cited – each source accessed by one museum:

- Association of Independent Museums
- Biridual Credits
- Bristol Museum Development Trust
- Eric and Salome Estorick Foundation (USA)
- Friends of Nottingham Museums
- NLHF WWI Fund
- Hedley Trust
- Landfill tax credits
- Museum Development Yorkshire
- Pilgrim Trust
- Settle-Carlisle Railway Trust
- Sir George Martin Trust
- War Memorial Trust

The NLHF was by far the largest contributor to museums' revenues and spend (Table 3).

Table 3: Top five one off grant/charity awards to surveyed museums in last five years

Individual grant/charity awards	**Value**
NLHF	£10,000,000
NLHF	£8,500,000
Arts Council Strategic Fund	£1,800,000
National Lottery Heritage Fund	£1,670,000
DCMS Emergency Fund	£1,500,000
Total	**£23,470,000**

Although two fifths of surveyed museums have been successful in accessing grant/charity funding in the last five years, many museums contributing to this research highlighted the various difficulties they had experienced. These difficulties included being entirely unsuccessful in competing for funds, or only being able to access small pots of money which were insufficient for the required maintenance works identified.

> *"We haven't received any grant funding, we had money for projects that have enabled us to redecorate rooms. We have a lot to do. It's easier to get funding for projects, e.g. to involve young people, but it's harder for maintenance and core funding."*
>
> ***Independent, West Midlands***

> *"Grants are very difficult. In the last 5 years, we've only an indirect one - from Tesco Bags for Help, we got £4,000. It's very difficult and time-consuming. We get just under £3,000 a year in donations. To run it costs a minimum of £6,000 a year. We have a very active fundraising effort, selling second-hand books. We also sell bric-a-brac. This brings in about £9,000 income. We find that's a better use of our time."*
>
> ***Independent, South West***

In the telephone interviews, respondents repeatedly lamented the lack of appropriate sources of funds specifically for maintenance or improvement works to their listed assets.

4. RESOURCES, SKILLS AND KNOWLEDGE

4.1 Staff and volunteers

A striking feature of the museums sector is its reliance on a large and diverse pool of volunteers in terms of the roles undertaken, volunteers' backgrounds, and their skills and knowledge.

In total, 10,101 volunteers are involved with the museums that responded to this research.[28] **On average, each museum works with 40 volunteers.[29]**

Twenty museums contributing to this research are run solely by volunteers.

In contrast, only 1,637 full-time equivalent (FTE) staff are employed by the museums, with an average of 4 FTE per museum.[30] This equates to a ratio of 10 volunteers for every one member of FTE staff.

When it comes to those working in maintenance-related roles, these are most typically carried out by employed members of staff; however, volunteers clearly make a substantial contribution. Telephone interviews revealed the range of maintenance-related skills available to museums from their volunteer base. In many cases this volunteer base consists largely of retired individuals from professional backgrounds and often includes people from disciplines with direct relevance to building maintenance, such as engineers, surveyors and architects.

It is apparent from the telephone interviews that museum staff are concerned about losing these skills as their current volunteer base ages and as they struggle to attract appropriately skilled new volunteers.

> *"The committee is fairly aged - youngest member is 65! The architect is 80! Succession planning is very difficult. It's hard to attract young people into voluntary roles."*
>
> ***Independent, South East***

On average, each museum employs one member of staff in a maintenance-related role. The picture is not straightforward, however, and does not always account for the staff and expertise available to museums with Local Authority links. For example, some respondents included Local Authority staff (e.g. those working in Property Services, Estates, or Commercial Services) when asked how many individuals currently work in maintenance-related roles in the museum.

[28] Based on a weighted base of 101 museums.
[29] The median average based on a weighted base of 101 museums.
[30] The median average based on a weighted base of 101 museums.

Across the museum estate a wide variety of roles are responsible for buildings maintenance. These roles include: caretaker; curator; engineer; facilities manager; museum manager; surveyor.

It is evident from the research findings that in most cases the member of staff responsible for building maintenance is not a specialist in historic buildings and is therefore likely to lack appropriate skills and knowledge of how to care for a listed asset. This inference is supported by Figure 7, which illustrates very clearly the relative lack of specialist skills and knowledge in relevant domains available to museums. In a small number of cases, generally where the museum is operated by a dedicated core of volunteers, maintenance is the responsibility of someone with a background in professional building services, such as architecture or engineering (as described above).

Anecdotally, museums spoke about losing maintenance staff in recent years and their concerns about the impact this is having on the museum's ability to maintain its listed estate adequately.

> *"We used to have a good team, but now we only have about five people and we work through the list of work to be done. We're trying to increase numbers as part of increasing membership. The team could do painting and decorating and general repairs"*
>
> ***Local Authority, East Midlands***

> *"We do intermittent maintenance - we only do maintenance in the winter - one volunteer does it."*
>
> ***Independent, South West***

> *"We have no designated staff for maintenance. Our perimeter fence was vandalised in September - there is an ongoing dispute over whether we or the council are responsible. We are covered by the Borough Council's insurance."*
>
> ***Independent, East Midlands***

In smaller museums, those responsible for maintenance often perform this role as part of another function.

> *"25-30% of my time is spent on buildings maintenance. I'd like to increase it to 50% to keep on top of things, but you can unveil hidden costs if you spend more time looking"*
>
> ***Independent, East Midlands***

4.2 Availability of skills and knowledge

> *"Typically, museum professionals are not experts in maintaining buildings - in fact throughout the entire history of the museum since 1860 I don't think there has been anyone who really grasps how to manage historic buildings! The priority has always been on collections and public engagement. When independent organisations such as ourselves are faced with the crippling financial constraints that we operate under there is literally no scope for doing anything with our building other than be reactive. We neither have the staff or the resources to do anything more."*
>
> ***Local Authority, South West***

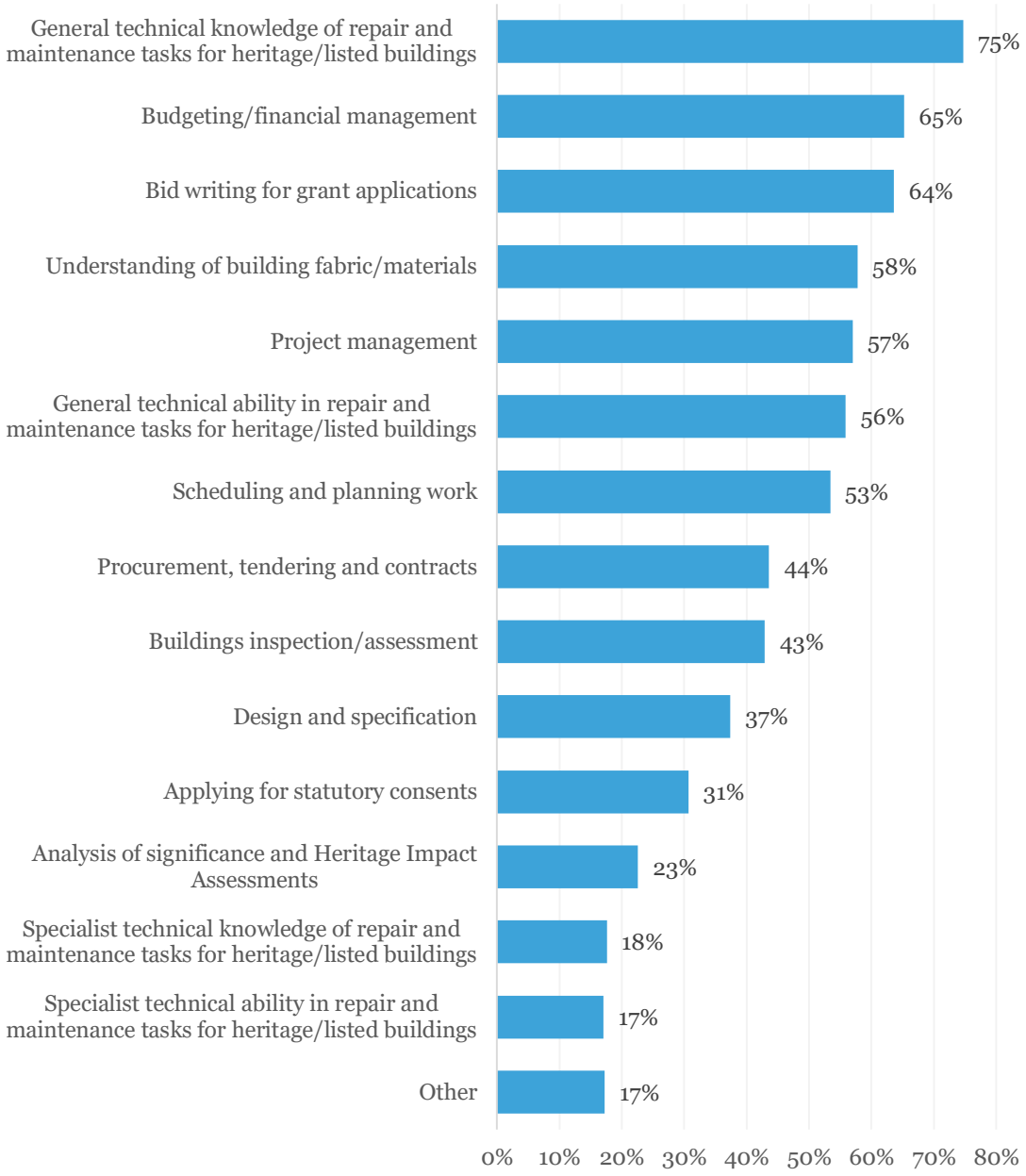
The range of skills and knowledge available to museums from those working in maintenance-related roles typically includes general technical knowledge of repair and maintenance tasks (Figure 7).

Skills associated with project-management type tasks also appear to be in fairly good supply, such as budgeting/financial management (65%) and grant funding bid writing (64%). Although just under two thirds of museums suggest they have bid-writing skills available to them, telephone interviews revealed various frustrations with the bidding process. These museums suggested that, despite investing substantial amounts of time and resources in writing bids for grant funding, they were often unsuccessful.

The 'other' types of skills and knowledge available to museums include:

- Building surveyor
- Computing
- Conservators
- Electricians
- General checking / reporting of maintenance issues to central council helpdesk
- Shipkeepers
- Technologists (digital)
- Woodworking/carpentry

Figure 7: Skills and knowledge available to museums



Museums with premises leased from the Local Authority or other corporate landlords highlight the availability of a wide range of skills and expertise, most typically from Council-employed surveyors. In some of these cases, the museum staff has limited knowledge or ability in maintenance-related tasks, but they have sufficient capability to tentatively diagnose an issue and report it to a helpdesk or surveyor.

"We have the skills to recognise when there's a problem."
Independent, North West

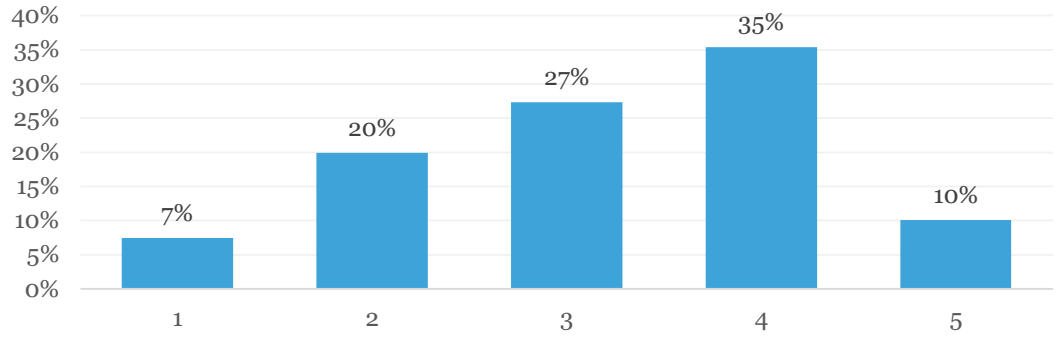
"The corporate landlord deals with maintenance. I've been on Construction (Design and Management) Regulations training.[31] Our technician has years of experience. Anything big goes to the corporate landlord. The council would check with a conservation officer that we're doing things the right way."
Local Authority, North East

"We'd have a general idea, but no specialist knowledge of design, specification, project management etc. Large-scale projects we stay away from."
Independent, London

"All the capital works we project manage. We're keen to get a conservation architect on site. I've built up my knowledge by working with them and I'm much more aware of the techniques. Now I understand lime mortar works etc. and I know what to look for. We've employed external consultants where needed - design and spec is done externally on big jobs."
Local Authority, West Midlands

Museums tend to rate fairly highly the skills and knowledge available to them internally within the museum (Figure 8). Just under half (45%) rate their skills and knowledge as either a 4 or a 5 out of five. Only 7% of museums suggested they had challenges accessing appropriate skills – giving themselves a rating of 1 out of 5.

Figure 8: Ratings of maintenance-related skills and knowledge available internally within the museum



Respondents who gave a rating of 3 or less were asked to describe the skills or knowledge that they felt were lacking in the museum. The main areas of deficit relate to specialist technical knowledge, rather than skill or ability – this may be because where

[31] The Construction (Design and Management) Regulations 2015 are intended to improve health and safety in the construction industry. Available here: https://www.hse.gov.uk/construction/cdm/2015/index.htm

the need for specialist works is identified, this sort of work is usually contracted to specialist trades and the skills are therefore not needed in-house.

For many museums, the issue is largely related to being able to correctly determine the type and extent of any problem. Just under half of museums who gave themselves a low rating suggested they were lacking in knowledge specifically around maintaining a historic building. For this reason, some museums answered that this question was not applicable to them, because the Local Authority is responsible for the maintenance of the museum.

> *"We can do some general maintenance ourselves but haven't the skills for specialist work"*
>
> ***Independent, London***

> *"They do not understand it's a listed building, the Local Authority just send anyone out."*
>
> ***Local Authority, East Midlands***

A handful of museums also reported a lack of knowledge and capability relating to specialist areas, such as:

- How to look after a dry dock
- Knowledge of listed building consent
- Funding/project management
- Conservation methods

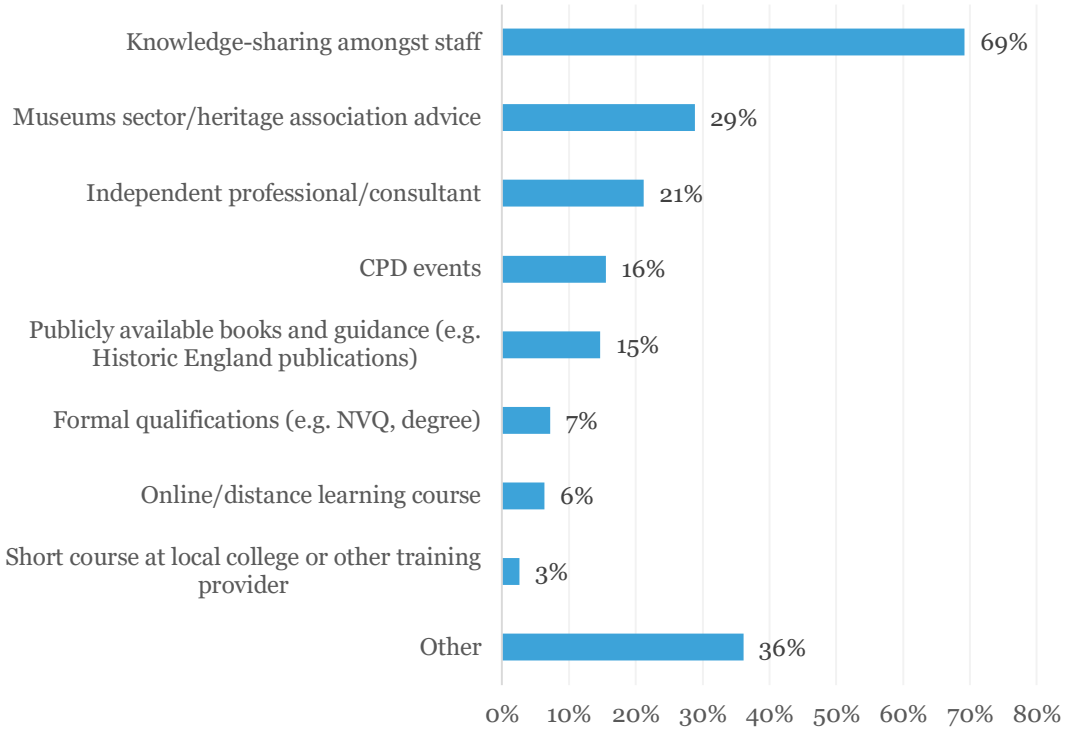
4.3 Maintaining skills and knowledge

Museums take an informal approach to maintaining skills and knowledge related to historic building maintenance. This is perhaps not surprising given that few staff members are assigned to maintenance-related roles, and that many museums struggle to fund maintenance work.

Knowledge-sharing amongst staff is the most common form of skills/knowledge development (Figure 9), followed by museums sector/heritage association advice. Only 10% of museums make use of formal qualifications or courses.

Where maintenance is undertaken by the Local Authority, museums tended not to answer this question as they rely solely on expertise from a source external to the museum.

Figure 9: How skills and knowledge are maintained



Various other means of maintaining skills and knowledge are employed by museums, with a handful noting that they have built up knowledge over time by working with skilled trades, or skills and knowledge have been gained on the job.

> *"A lot of people have been here a long time. Most learned the job through experience, rather than anything listed-related."*
>
> ***University, North West***

> *"Picked up knowledge along the way from architects and the like."*
>
> ***Local Authority, West Midlands***

> *"General awareness of issues through regular informal discussions and site meetings with Corporate Property Surveyor"*
>
> ***Local Authority, East of England***

Other sources used to maintain skills and knowledge include:

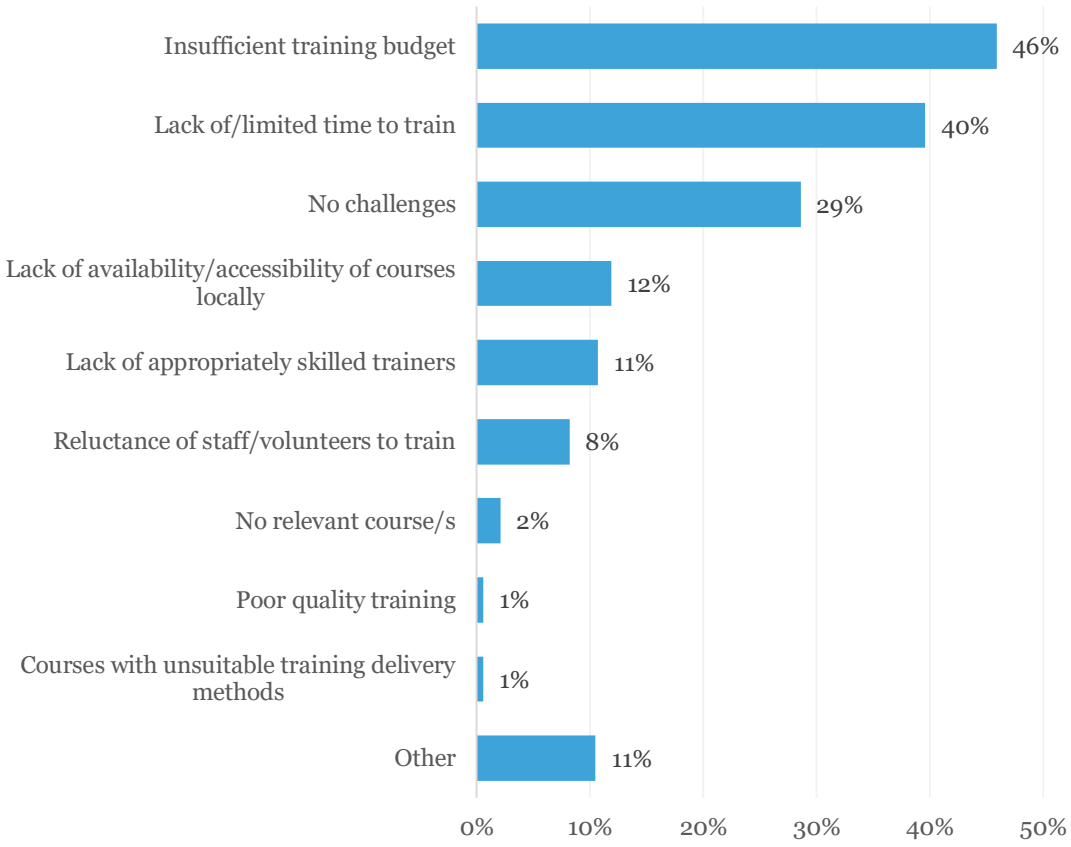
- Arts Council England
- Facilities Management Forum
- Listed Property Owners Club
- Ministry Of Defence (MOD)

- Museums Development North West
- Museum of London courses
- Professional Bodies/Institutes

Interestingly, some major sources of advice and guidance, much of which is freely available, were not specifically mentioned by respondents. These sources include material produced by organisations such as Historic England, Cadw, Historic Environment Scotland, STBA (Sustainable Traditional Buildings Association) or SPAB (Society for the Protection of Ancient Buildings).

Insufficient funding not only affects museums' ability to adequately maintain their listed assets; it also creates a challenge to maintaining maintenance-related skills and knowledge (Figure 10). Insufficient training budget is cited as the top challenge to museums in maintaining skills and knowledge (46% of respondents), followed by a lack of time (40%). By contrast, nearly a third of museums (29%) suggest they do not face any challenges at all.

Figure 10: Challenges faced by museums in maintaining skills and knowledge



Availability of provision, in terms of relevant courses and skilled trainers, does not appear to be an issue; however, it should be borne in mind that museums are unlikely to be aware of this problem if they have insufficient budget to train in the first place.

Other challenges relate to resourcing issues, with too few staff members/volunteers for the museums to consider investing in training. Linked to this are issues of staff turnover and ineffective succession planning leading to a loss of skills.

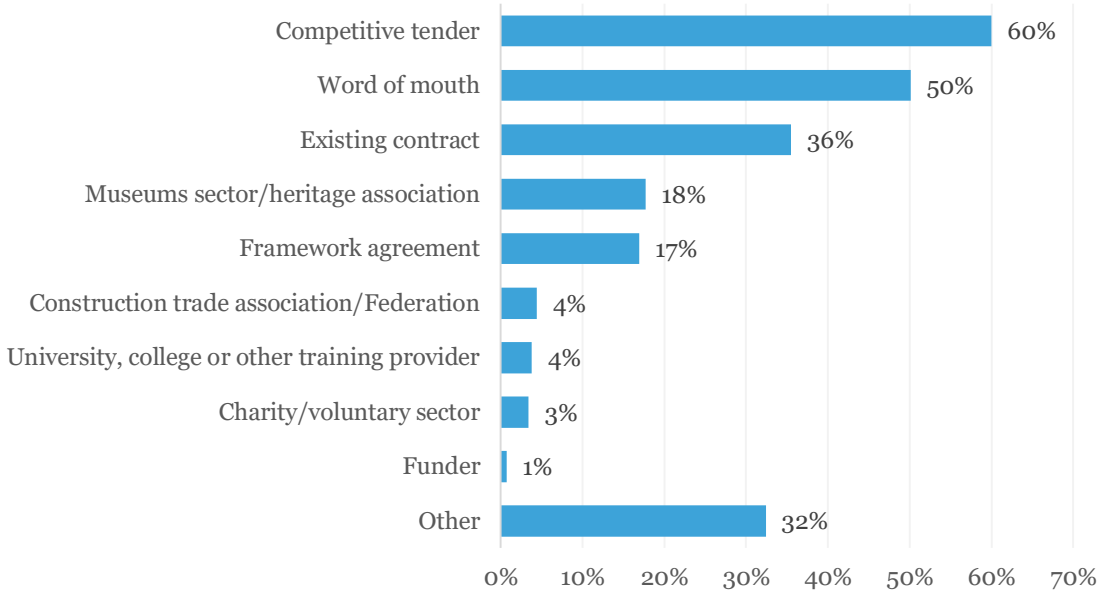
In response to this and other questions, a small number of respondents suggest that the museum does not have a training strategy, other than staff members self-diagnosing their own training needs. This leads to a fragmented approach to skills maintenance and development and the possibility of emerging and/or unidentified skills gaps.

4.4 External trades

4.4.1 Sourcing contractors

Most museums (60%) source external skilled trades and contractors via competitive tender; however, word of mouth is also a popular means of engaging trades (Figure 11).

Figure 11: How external skilled trades/contractors are sourced



Museums that are operated by a Local Authority and those with a maintenance lease report being able to access contractors using the authority's procurement department. This is likely to account for the large number of survey respondents making use of a competitive tendering process.

"Depending on the level of the contract, this can involve having to go to competitive tender and/or using other departments within the council to manage contractors

Local Authority, South West

Whilst this arrangement may appear positive in that it relieves the museum of the procurement burden, the arrangement is not always satisfactory. There are three main reasons for this, as reported by museums:

1. The Local Authority does not always recognise the importance of engaging contractors with specialist heritage skills and knowledge.

"We report issues to our maintenance department within the council and they send anyone out, despite us saying it's a listed building."

Local Authority, South West

2. The process of tendering and contracting can also be time-consuming and reactive, rather than proactive.

3. Local authority procurement processes can tend to favour cost over quality, meaning the most appropriate contractor is not always selected to undertake the work.

"LA procurement process tipped in favour of value for money. They're qualified but may not have the right knowledge"

Independent, South East

By no means all museums face these issues, however. A number report good working relationships with the Local Authority.

"The Borough Council understands the building and how things work. They are very hot on health and safety."

Local Authority, North East

"The council are very good at fixing problems. The architect is the principle point of contact on site. We are not involved day to day. Usually, we ask the council for a handyman."

Independent, East of England

Use of word-of-mouth recommendations is commonplace amongst smaller, independent museums, many of which have built up a pool of local contractors for certain types of work including electrical, plumbing, painting and decorating, security and a number of specialist trades such as stonemasonry and thatching.

For a small number of museums, the urgency of the work dictates how contractors are sought. For example, minor issues would be dealt with by local contractors who know the building. In another example, non-urgent works are deferred so that they can be discussed at the next trustee meeting and a recommended course of action sought.

> *"We have existing contracts for security. Other work depends on the urgency. The local builder usually helps out. We would go with someone we know - not necessarily getting three quotes."*
>
> ***Independent, East of England***

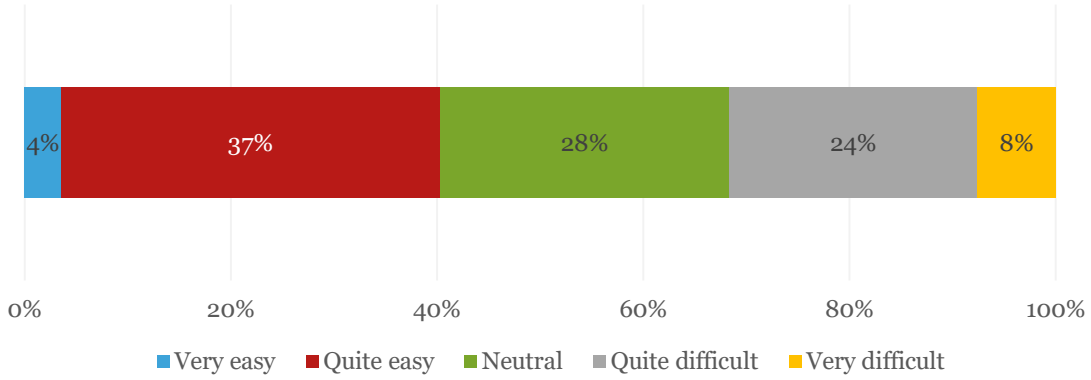
For other museums the way in which a contractor is engaged will depend on the lease arrangements and the type of work required.

> *"If it relates to fabric of the building it's the responsibility of the District Council. If anything else it could come out of my budget, but it depends. [The] only exceptions would be if we had an issue with a light in a display case, then it would be us."*
>
> ***Local Authority, East Midlands***

4.4.2 Contracting with external trades

Around two-fifths of museums (41%) suggested that they do not usually experience problems with sourcing appropriately skilled and knowledgeable external tradespeople (Figure 12). However, a considerable proportion (32%) state that they find it either 'quite difficult' or 'very difficult'.

Figure 12: Ease or difficulty of sourcing appropriately skilled and knowledgeable external trades



Where difficulties exist, this is due to:

- **The responsiveness of trades** – this relates mostly to general building services trades such as electricians, plumbers and scaffolders. A small number of museums report certain contractors being daunted by working on a historic building; others find these sorts of contractors can be in high demand, meaning a delay in the work being started.

  "We have identified contractors with the requisite skills, but they are in high demand so we cannot always call on them when we need them"

  National Trust, South West

  "We've had a problem with the roof. It was very difficult to get a quote. We say it was a Grade 1 building, someone comes out to look, then they don't come back."

  Independent, West Midlands

- **Limited accessibility to certain specialist trades, locally** – these trades include: heritage timber specialists (carpentry/joinery), building conservation advisors, stone masons, traditional plasterers, iron-mongers, structural engineers (crack and level monitoring), millwrights, historic/conservation tilers, sheet metalworkers (corrugated steel specifically), and stained-glass specialists.

  "It's usually the same people working in the industry, their skill base is really good but concentrated in a few small firms. The pool of skilled people is declining."

  Local Authority, West Midlands

- **Contractors typically lack specific heritage knowledge/ability** – many museums say they have no difficulty sourcing general building trades; however, those with appropriate knowledge of historic buildings can be difficult to find.

  "Easy to find people with the general skills but much harder for those to have an understanding of historic and listed buildings with collections to consider"

  Local Authority, South West

- **Financial limitations**: The cost of engaging some trades, e.g. joinery is considered expensive.

5. ISSUES AND CHALLENGES IN MAINTAINING LISTED ASSETS

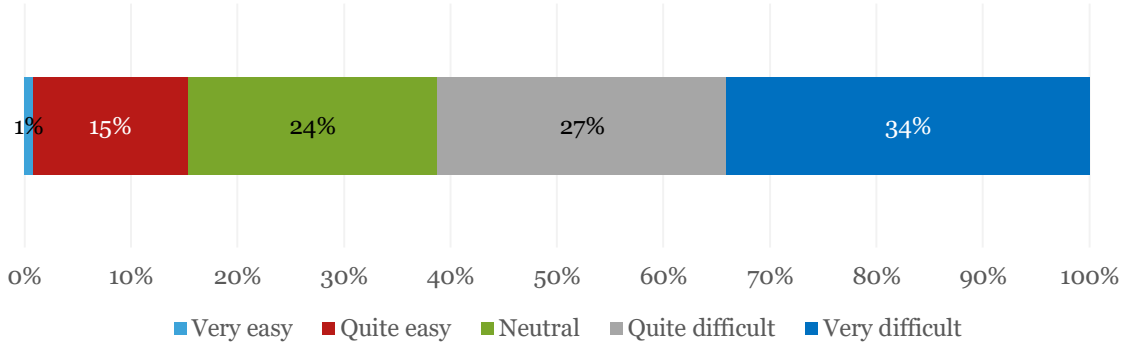
5.1 Funding and budgetary constraints

As already indicated above, this research has found evidence that some museums are under increasing financial pressure and that this is having a detrimental effect on their ability to adequately maintain their estates. This has impacts in two respects:

- It means there is not always sufficient budget for day-to-day maintenance; and
- It can be challenging to maintain buildings to appropriate standards and/or access heritage-related skills and knowledge.

Access to funding for works over and above day-to-day maintenance – i.e. funding specifically needed for major repair and maintenance that is not associated with a larger project, package or activities – is particularly difficult, presenting an additional constraint on museums' ability to look after their buildings. Just under two thirds (61%) of museums experience difficulty in securing funding for works over and above maintenance (Figure 13).

Figure 13: Ease or difficulty of securing funding for works over and above maintenance



The telephone interviews uncovered various reasons why museums find it difficult to secure funding.

- **Bureaucratic and long-winded process** – some telephone interviewees spoke about the grant funding bid application process taking substantial time and resources, with the decision often taking a long time.

"We asked for £4.9m in a bid recently. Putting together the bid took the entire summer including my summer holiday. When we didn't get it, we felt 'why bother?'. Thinking about the many wasted hours, in retrospect it would have been better applying for something else for another building."

Independent, East of England

- **Inability to access sufficient funds from a single source** – various museums stated they had needed to access numerous sources to accumulate sufficient funds for undertaking works. Others were in the process of applying for various 'pots' of money to undertake a single project.

"We're looking at £280k for the roof to replace it. We have a £160k pledge from Historic England and pots of around £30k from other sources. We need £80k so we're looking at an [NLHF] bid for £250k because we also need to replace display cases"

Independent, South East

- **Few sources for maintenance-related works** – linked to the above, many museums were frustrated at the lack of a single source of funding that they could access solely for maintenance or other building works. Often maintenance is tacked onto a larger project as this is the only means of securing funds.

"Because of the priceless artefacts, I need some capital to improve the controlled environment. The building management system needs refinement, it's very old… I'm not aware of any capital funds to enable us to invest in that sort of thing"

University, London

- **Competition from other museums** – a small number of respondents suggested the difficulties they experienced in accessing funds were because a large number of museums are competing for a small number of sources.

"The main problem we face, along with every other organisation, is the difficulty in sourcing funding. Too many of us are chasing diminishing sources of grants."

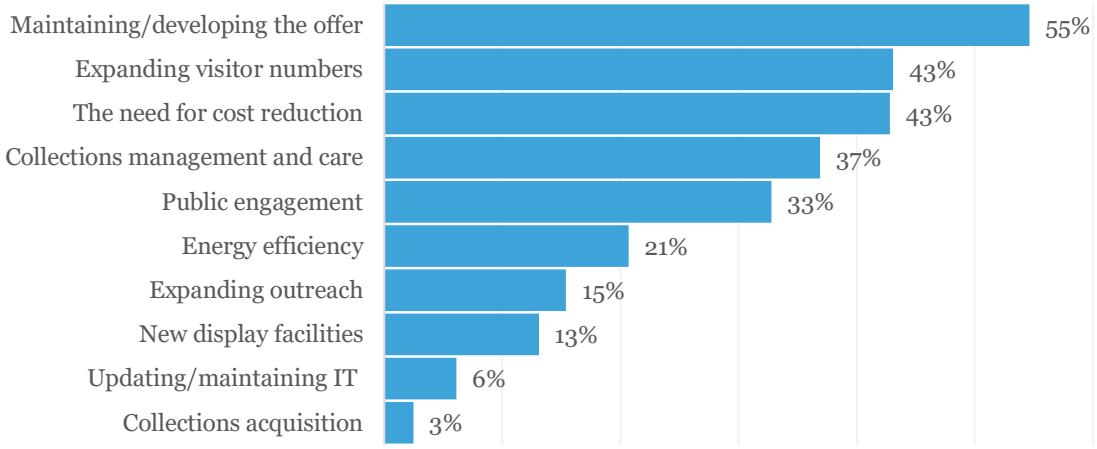
Independent, Yorkshire

5.2 Competing pressures and challenges

5.2.1 Pressures on museums

For surveyed museums, two of the top three pressures competing with buildings maintenance relate, directly or indirectly, to funding or revenue: 43% cited expanding visitor numbers and 43% identified reducing cost as greater priorities (Figure 14). The top pressure is maintaining or developing the offer (55%).

Figure 14: Top three pressures competing with building maintenance



Other pressures highlighted by museums during telephone interviews included volunteer management and dealing with service reductions (i.e. staff redundancies) resulting from budget cuts.

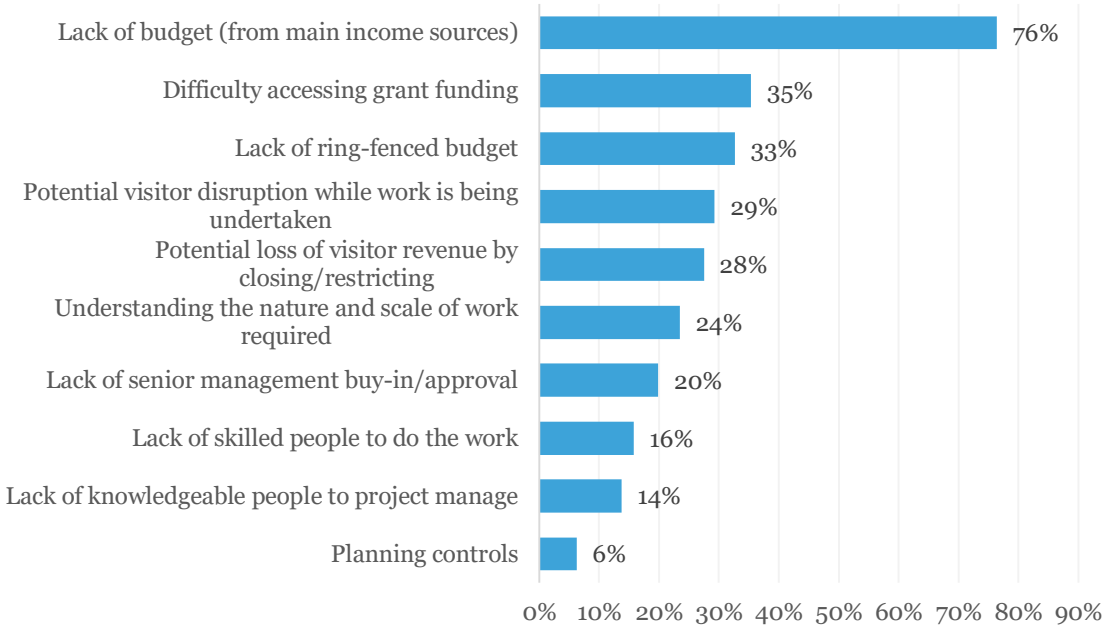
> *"We have a target to increase footfall despite [a] reducing budget. Our focus is on events, school visits, etc., so that's our main focus to ensure it's an engaging space. Just attracting people is difficult. The main challenge is that resources are stretched. So, everything has to be negotiated."*
>
> ***Local Authority, East Midlands***

5.2.2 Barriers and challenges to maintenance

When asked directly about the barriers and challenges museums face in maintaining their listed estate, a lack of budget is by far the most frequently cited: 76% of museums identify this as one of their top three barriers (Figure 15). The remaining two of the top

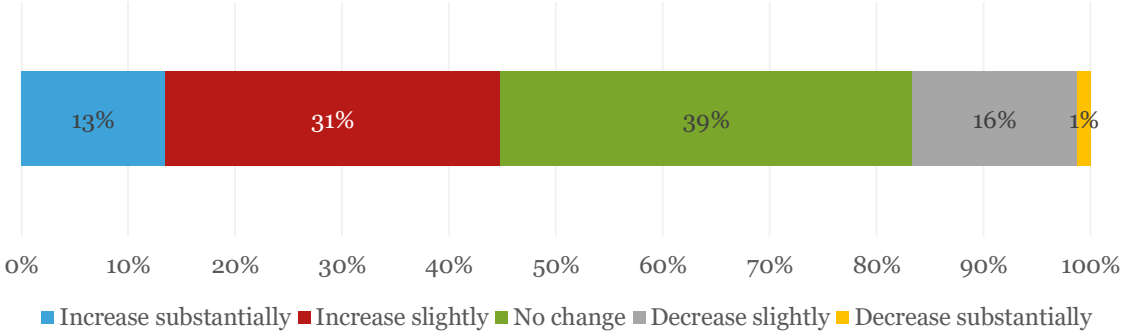
three challenges also relate to finance: difficulty accessing grant funding is identified by 35% of museums, and lack of ring-fenced budget by 33%.

Figure 15: Top three barriers/challenges to conducting maintenance



From the perspective of museums, the outlook appears to be fairly stark. Only 17% suggest barriers and challenges will decrease, either slightly or substantially over the next five years (Figure 16). The majority (44%) suggest the barriers and challenges will only become more severe. The remainder (39%) of respondents predict there will be no change to the severity of the barriers or challenges that they currently experience.

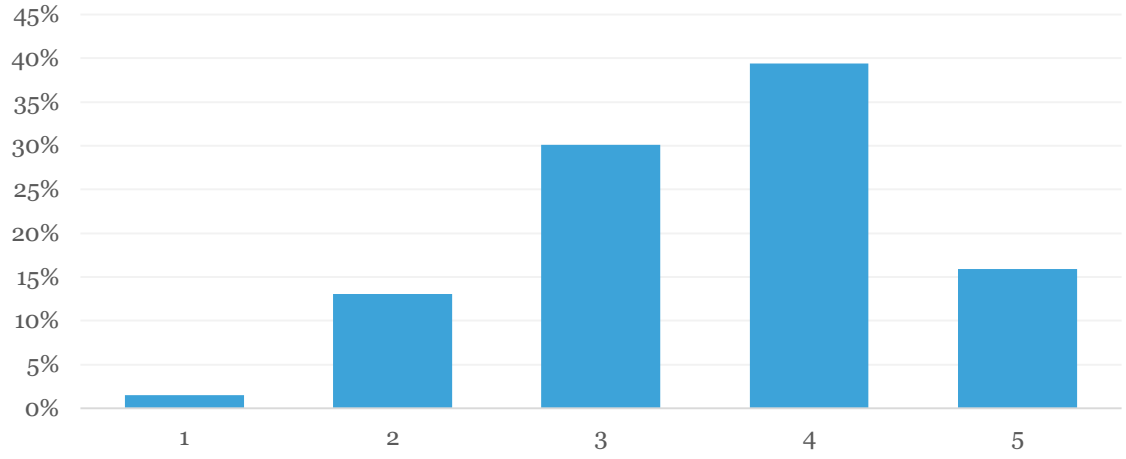
Figure 16: How the severity of any barriers or challenges will change in the next 5 years



5.3 Maintenance as a priority

Respondents were asked to identify on a scale how much of priority they give to maintenance, 1 being the lowest priority and 5 being the highest priority. Despite various competing pressures and barriers to conducting maintenance, museums count maintenance as one of their top priorities (Figure 16). Museums are clearly frustrated that they are sometimes only able to 'fire-fight', due, in most cases, to lack of sufficient funds.

Figure 16: How much of a priority is buildings maintenance?



> *"At the moment, maintenance is a very high priority. We want to ensure we put in place a maintenance schedule to make sure we keep on top of things."*
>
> ***Independent, East of England***

Some museums that lease their building/s from the Local Authority suggest the two parties often disagree about how much of a priority building maintenance is or should be. Typically, these museums compete with other listed assets in the same locality for council funds.

> *"The building has to be sound to do what we want to do as a museum. A lot of it is cyclical maintenance - that's why we do our weekly inspections to keep on top of it. But it's not being seen as a priority at the Borough Council sometimes."*
>
> ***Local Authority, North East***

6. IDENTIFYING & UNDERTAKING REQUIRED REPAIRS & MAINTENANCE

6.1 Inspections and planning

6.1.1 Condition assessments

Just over half of museums (56) either have not had a quinquennial inspection, were unsure if they had previously had one, and/or were not aware of the existence of quinquennial inspections.

Of the museums (45) that had previously had a quinquennial inspection, 38 were in the last 5 years; the remaining seven were more than five years old, suggesting that the intention to maintain a pattern of five-yearly inspections was not always being fulfilled in practice.

A small number of museums pointed to the cost of conducting formal inspections, or surveys, as a barrier.

> *"It's hard to do the building inspections regularly. They cost £10,000-£15,000 and my [entire maintenance] budget is £12,000"*
>
> ***Local Authority, West Midlands***

Cost appears to be less of a barrier to those museums who lease their building from the council. In these cases the museum spoke of being able to call on the services of a surveyor employed by the council.

However, the majority of museums conduct their own, informal building inspections on a regular basis – with 60% of museums doing this annually (Figure 17). In fact, many museums conduct weekly or monthly checks on the building/structure to keep on top of previously identified problems, such as water ingress, damp, cracks etc. The research findings suggest this is a time-consuming exercise, demonstrating that even deferred works have a direct cost implication in terms of staff time and resource for monitoring the backlog.

In just over three quarters (76%) of museums, informal condition assessments lead to a prioritised list of threats and actions (Figure 18).

The way in which threats and actions are recorded varies from museum to museum. In the most formal systems, records appear to be entered into some sort of risk register, with a traffic light system denoting the areas of the building in most need of attention. Others tend to have more ad hoc arrangements, such as a simple paper-based list – sometimes with rough, associated cost estimates – while in some cases the member of staff responsible for maintenance simply commits the issues to memory.

Figure 17: Frequency of informal condition assessments

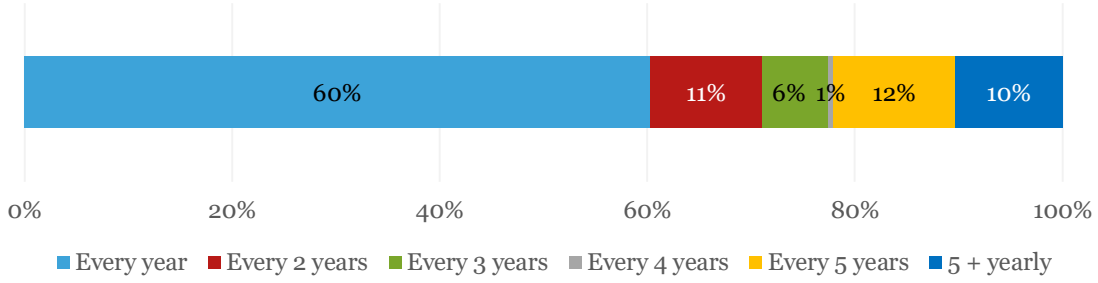
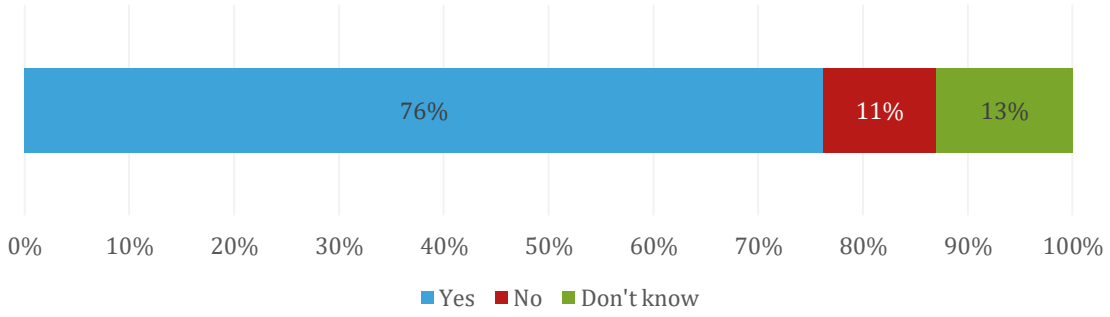


Figure 18: Do your condition assessments lead to a prioritised list of threats and actions?



An important finding is that the resulting list of threats and actions does not always discriminate between the listed estate and other parts of the estate.

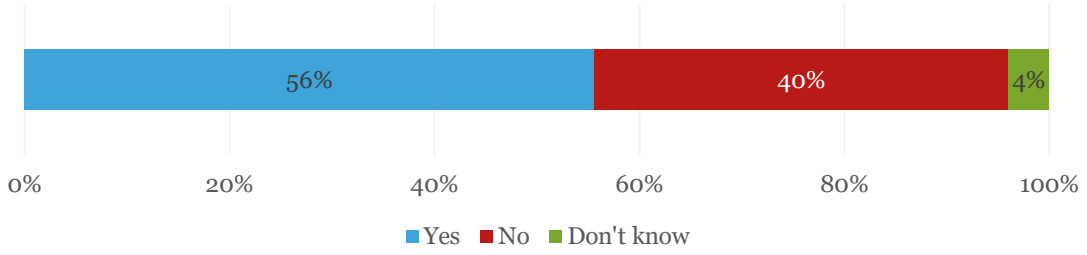
> *"We have a roughly costed list of actions. This is the driving force for works and capital funds needed for the building."*
>
> ***Local Authority, West Midlands***

> *"With our operations manager, we walk around and take an action list of priorities. The maintenance plan tends to focus on toilets rather than heritage assets, or costs would be astronomical."*
>
> ***University, North East***

6.1.2 Planning maintenance

Over half of museums (56%) have a maintenance plan for their listed estate (Figure 19). A small number of telephone interview respondents reported that this plan also includes statutory actions linked to the operation of building services and infrastructure, such as Health & Safety, security, fire safety and others such as PAT testing.

Figure 19: Does the museum currently have a maintenance plan for its listed estate?



Some museums have a maintenance plan in place because this was a requirement for receiving grant funding, specifically for NLHF monies. Therefore, it appears some plans may only cover one part of a building, structure or group of structures, where this was required for a specific project.

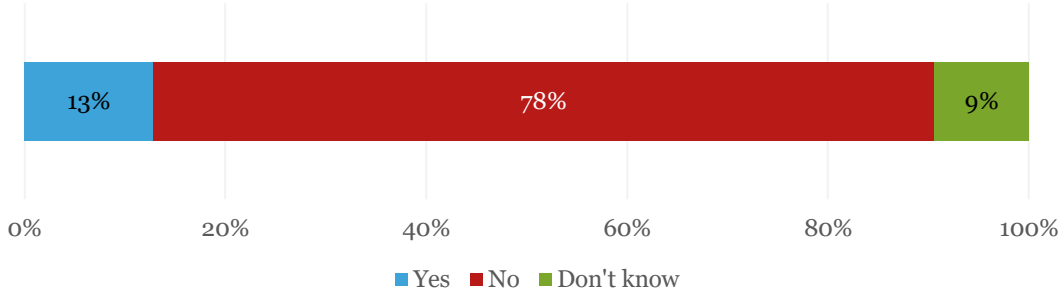
Those museums that conduct quinquennial inspections describe using the report as a basis for their maintenance plan, helping them to prioritise works over the coming years and providing them with cost estimates which help them to plan. There is some evidence from this research to suggest that even well-resourced museums face issues integrating the maintenance needs of the entire estate into a single plan. However, it is not possible to draw conclusions about how widespread an issue this is for museums with complex estates.

> *"Geared to the outcome of the quinquennial. For routine maintenance it's down to the house manager to deal with."*
>
> ***Local Authority, East Midlands***

> *"[We have a maintenance plan] for the mansion and to some degree for the visitor buildings and cottages"*
>
> ***National Trust, South East***

> *"We don't have a maintenance plan, but when we put our business plan together, we give an idea of what needs doing. Then we put together a list of work."*
>
> ***Independent, West Midlands***

Figure 20: Has the museum ever been required to carry out urgent works or repairs by an external authority?



A small proportion (13%) of museums have been required to carry out urgent works on their listed estate (Figure 20). These works are listed below.

- Breakdown of lead guttering to the front of building, leading to water ingress – a professional lead worker was employed to carry out replacement to entire gutter
- Roof works
- Flooding following heavy rainfall. Water was pumped out from the cellar
- Roof leak in a delicate gallery. Once Listed Building Consent was gained the roof was replaced matching the existing
- New sails to the windmill
- An enforcement notice would be served for repair of a garden wall, but the museum had no funds to carry this out
- Emergency repairs to a roof which was leaking into temporary collection stores
- Asbestos panels encapsulated
- Boiler was condemned
- Railings needed to be put in place after someone fell. Planning was an issue (taking up to 8 weeks)
- Gable end being pulled away by roof in 2019 - structural engineering completed in December 2019
- Theft of lead from roof, theft of lightning conductors, roof leak - had to be replaced/repaired urgently.

A strong feature of the type of urgent work carried out is the predominance of activities associated with roofs and rainwater goods. The following sections on works undertaken and planned, and the backlog, continue this theme. The most urgent works typically relate to those required for making structures water-tight.

7. WORKS UNDERTAKEN AND PLANNED

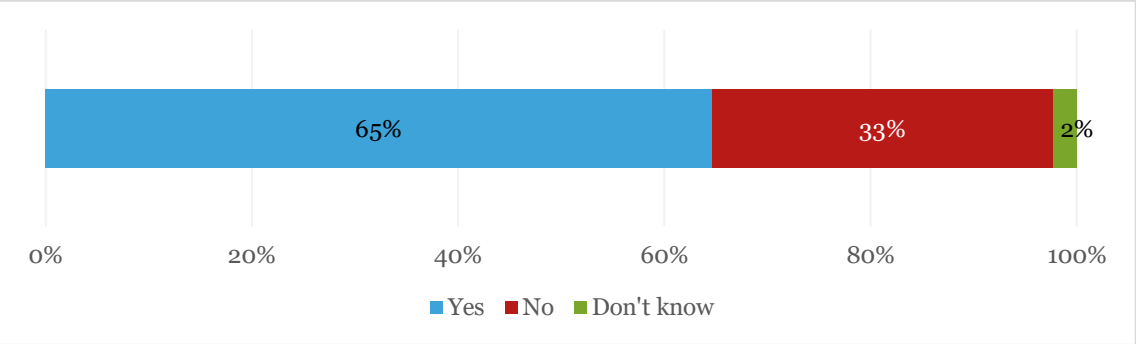
7.1 Works undertaken

7.1.1 Occurrence of works

Almost two thirds (65%) of museums have undertaken works – over and above routine maintenance – in the last five years (Figure 21).

Independent museums are more likely to have undertaken works in the last five years than those operated by Local Authorities.[32]

Figure 21: Undertaken any works in the last 5 years



7.1.2 Nature of works

The types of works conducted by museums fall into roughly 10 categories. Table 4 shows the types of work from most to least commonly undertaken by museums in the last five year. Please note that 29 museums undertook more than one type of work.

The quotes below illustrate the nature of the works undertaken.

> *"Complete restoration of the roof, windows, heating, security, damp proofing, strengthening of all floors."*
>
> ***Independent, Yorkshire***

[32] The base numbers of the other museum types are too low to make reliable comparisons.

Table 4: Nature of works carried out by museums in the last five years

Nature of work	Instances
Roofing and guttering repairs or replacements	21
General, large-scale restoration, conservation or refurbishment	16
Building fabric (e.g. stonework, repointing)	12
Building services (e.g. heating, electrical work, security, fire safety)	12
Internal cosmetic works (e.g. painting and decorating, plastering)	9
Repair or replacement of windows or doors	7
Improving access	5
Addressing water ingress, damp, flood prevention	4
Extension and/or development	4
Insulation/energy efficiency	1

"Flood prevention measures, roof repairs, stonemasonry repairs to walls and structures, improvements to heating systems, external decorations and improved wall and roof insulation."

National Trust, South East

"Reroofing, replacement of external door, upgrading of fire doors, rebuilding drains, conversion of previous holiday let to office accommodation and archival storage."

Independent, Yorkshire

"Statutory and mandatory works to ensure asset stays compliant, including electrical and fire remedials. Vegetation removal of structural surfaces and landway repairs. Ground works due to subsidence."

Independent, South West

7.1.3 Value of works

The total value of works undertaken by sampled museums in the last five years is £43,097,413.[33]

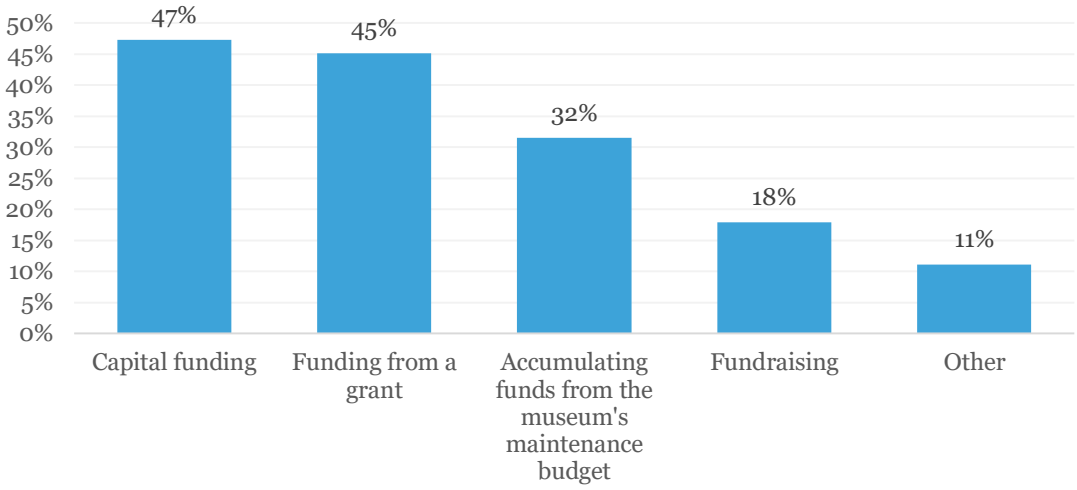
The range of spend varies enormously from £50 to £18.1m.

The average (median) spend is £72,500 per museum.

7.1.4 Sources of funding for works undertaken

The main source of funding for works undertaken in the last five years was capital funding (47%), followed by grant funding (45%) (Figure 22). Fundraising accounts for a significant minority, with 18% of museums having secured funding from this source.

Figure 22: Source of funding for works undertaken in last 5 years



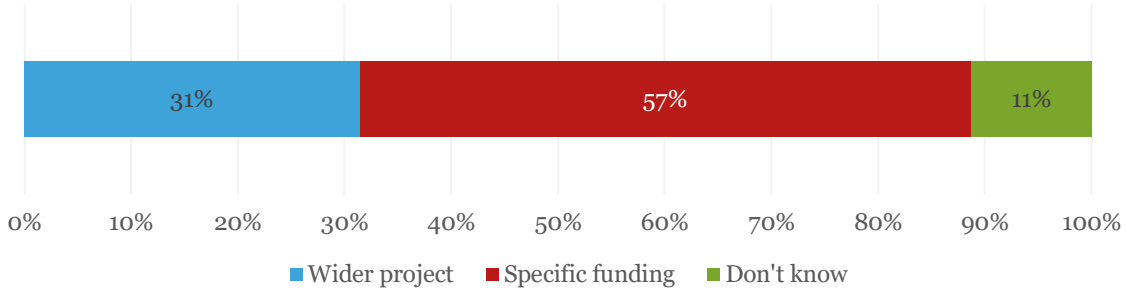
Other sources of funding include:

- council
- 'Volunteer trust donations'
- university
- museum 'friends' group.

For just under a third of museums, funding was secured as part of a wider project (Figure 23).

[33] Weighted data.

Figure 23: How funding for works carried out was secured

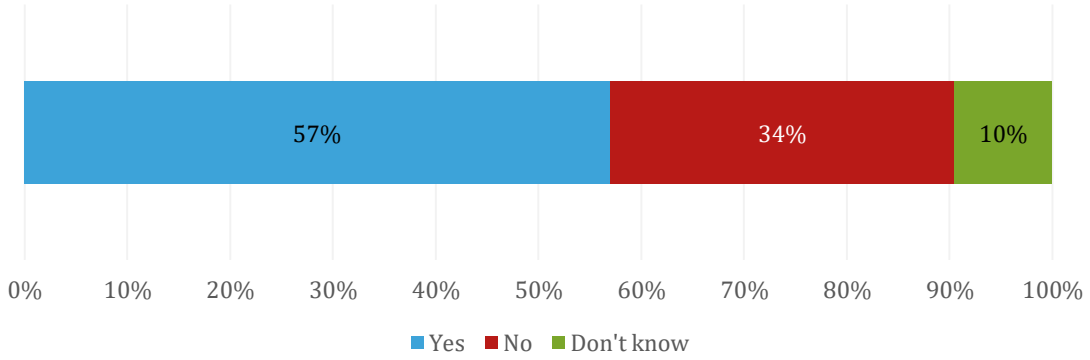


Anecdotal evidence from the telephone interviews suggests museums often have to be 'creative' in their bids in order to secure grant funding for maintenance or repair. For example, museums describe using a wider bid (such as for gallery redevelopment or increasing visitor outreach) as a vehicle for addressing certain maintenance issues for which discrete funding would not otherwise be available.

This finding does not, however, appear to be directly supported by the survey data; where capital funding was the source of recent works, around two thirds of museums suggested this funding was secured specifically for maintenance work (rather than it being as part of a wider project). Although this may be the case for respondent museums, they would still have had to demonstrate they could achieve outcomes such as outreach or increasing visitor numbers. These outcomes may well involve skills development or increasing volunteering, therefore, the project would be funded both for maintenance as well as the 'people outcomes'.

Only 57% of museums report that they were able to secure sufficient funding for carrying out all works identified for completion (Figure 24).

Figure 24: Was funding secured sufficient for carrying out all of the works identified at the time?



Just over a third of museums (34%) stated that the funds they managed to secure were insufficient. In these circumstances, some museums had to re-evaluate the works that they have planned to carry out. Anecdotally, telephone interview findings suggest that

museums understandably focused on the most pressing issues, prioritising those that were visitor-facing. Others applied for additional funds to complete the work as part of a separate project.

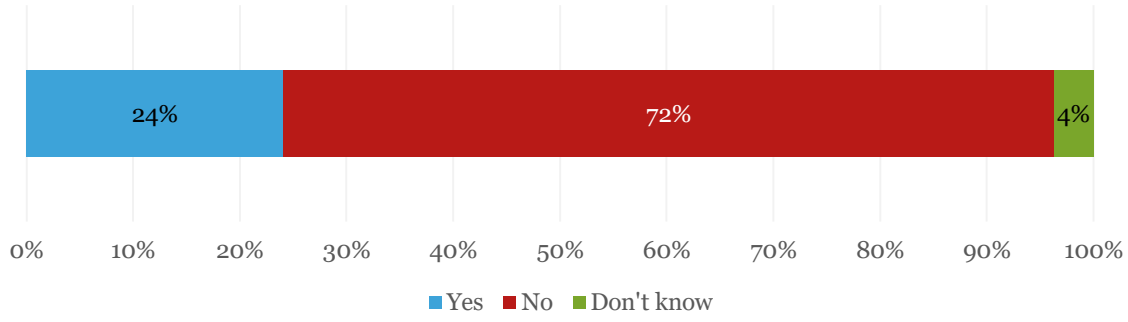
> *"We couldn't do building works in the basement - it had to be left out. The basement is used as a storage area, so it wasn't seen as a priority."*
>
> ***Local Authority, West Midlands***

7.2 Planned works

7.2.1 Nature of planned works

Of surveyed museums, just under a quarter (24%) have maintenance planned in the next five years for which funding is secured (Figure 25).

Figure 25: Whether the museums have works planned in the next 5 years for which funding is secured



The nature of the planned works is summarised in

Table 5. Of those who have planned works, nine museums plan to address more than one type of issue.

The quotes below illustrate the types of works planned by museums.

> *"Dry rot and roof leak. The latter dates back to the major project conducted 5 years ago. So, we're still snagging. We're in a park so [we get] a lot of leaf drops into gutters."*
>
> ***University, North West***

Table 5: Nature of planned works in the next five years

Nature of work	Instances
Roofing and guttering repairs or replacements	8
Building services (e.g. heating, electrical work, security)	8
Building fabric (e.g. stonework, repointing)	6
Repair or replacement of windows or doors	5
Restoration, conservation or refurbishment	3
Extension and/or development	3
Internal cosmetic works (e.g. painting and decorating, plastering)	2
Improving access	1
Addressing water ingress, damp, flood prevention	1
Insulation/energy efficiency	0

> *"There are plans to develop the site, including the out-buildings. Until people come to evaluate the site, we don't know the extent of the work. We'd also need to check with the Borough Council and Network Rail."*
>
> ***Local Authority, North East***

> *"Renewal of mechanical air handling and ventilation plant, roofing and lift refurbishment"*
>
> ***Local Authority, North East***

7.2.2 Value of planned repairs

The total value of planned repairs across the surveyed museums is £6,052,724.

The minimum value is £2,000 and the maximum is £3.7m. The median amount that each museum has secured for repairs is £20,000.

8. THE MAINTENANCE BACKLOG

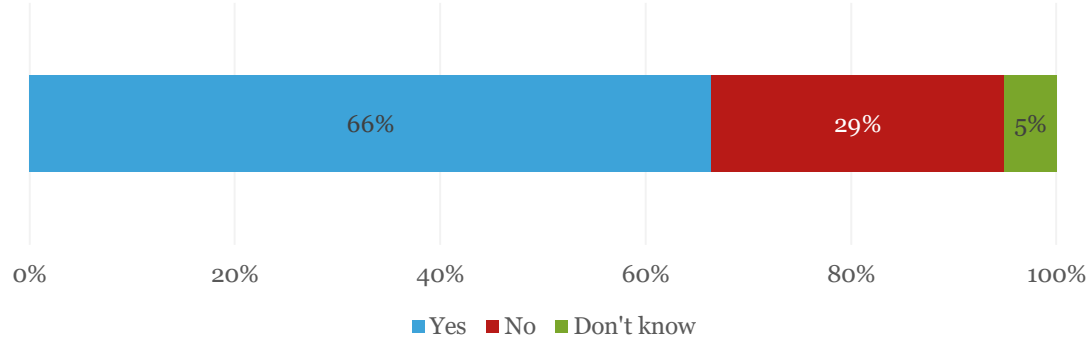
8.1 Nature of the backlog

> *"We don't need to think about the scale of the problem - we need to do something about it."*
>
> ***Independent, East of England***

Two thirds of museums currently have a maintenance backlog (Figure 26).

Of these museums, over 60% also have maintenance planned for which they have funding secured. This finding underlines the severity of the funding issues faced by museums in that many are unable to fund all of the works that are needed at any one time.

Figure 26: Is there any maintenance the museum would like to undertake but is currently unable to?



The nature of the backlog varies hugely in its scale and urgency. Most works relate to repairs or maintenance of building fabric, windows, water damage etc., with a minority identifying a need for more substantial work to improve or expand currently insufficient storage space. Overall, the most pressing need appears to relate to ensuring that the building is water-tight and weatherproof.

The general types of work are listed in Table 6.

Table 6: The nature of the backlog

Nature of work	Instances
Roofing and guttering repairs or replacements	29
Building fabric (e.g. stonework, repointing)	25
Repair or replacement of windows or doors	18
Building services (e.g. heating, electrical work, security)	13
Restoration, conservation or refurbishment	11
Internal cosmetic works (e.g. painting and decorating, plastering)	9
Addressing water ingress, damp, flood prevention	8
Improving access	6
Insultation/energy efficiency	6
Extension and/or development	0

A striking finding is the nature and extent of the backlog, which is much more extensive than any work undertaken in the last five years or any work that is currently planned.

The most common need is repair or replacement of roofs and other associated works such as guttering, flashings and so on.

> *"The work has needed to be done for about 30 years, but it's got desperate in the last 10-12 years. The roof needs to be stripped and retiled"*
>
> ***Independent, South West***

The works required to building fabric range in scale and severity and include:

- external decoration
- repair of facades
- repair of stonework
- repointing
- replacement of mortar
- general wall repairs.

Works required to replace or improve building services, such as heating/boilers, wiring, lighting and security (e.g. CCTV) and fire safety are also a feature prominently in the backlog. When compared to the works that are planned or being carried out, it appears that museums are prioritising other types of work over and above building services, leading to an accumulation of this type of work.

"There's a section that has no heating at all. It's only heated by a blower or a gas fire. We just have to use oil-fired heaters."

Independent, East Midlands

"The BM [Building Management] system needs refinement and it's very old. There is little climate control. We also have some leaks in the roof, so it affects the ambient environment."

University, London

"The building structure is not quite right for a museum – we have a damp problem. We need better and more even heating and a/c [air conditioning] in the summer".

Independent, East of England

Eleven museums suggested they have a substantial backlog of major structural work, such as extensive refurbishment, restoration and/or conservation. Not all museums were able to estimate the potential cost of this work, or to specify the detail of what would be needed, other than to describe a large-scale problem—in the case of one museum running into 'many millions of pounds'.

"The market hall is in dire need of major repairs – it would be easier to dismantle it"

Independent, South East

"Overall restoration of the building to a weathertight and structurally sound position"

Independent, East Midlands

"The structures and buildings on the Heritage at Risk Register are all in need of urgent work"

Independent, South East

Some museums describe needing to rectify previous work that had been badly performed or that had made use of inappropriate materials. Examples include needing to replace Portland cement with lime mortar and various examples of repointing. One museum spoke about needing to replace roof timbers and waterproofing to rectify previous poor workmanship.

"It is structurally very poor - it's been bodged. Roof timbers need replacing and waterproofing. Re-pointing also - it's been done with Portland cement and it needs stripping out and replacing."

Independent, South West

Energy efficiency measures are also a feature of the backlog. Various museums spoke about a desire to improve insulation in walls and roofs; one respondent was keen to move to 'green energy', replacing the existing gas boiler. All of these respondents described an overarching wish to improve cost efficiency, as well as the obvious ambition to improve the museum environment.

8.2 Value of the backlog

The total value of the backlog of repairs for sampled museums is £47,260,689.[34]

The minimum value of outstanding work is £150 with the maximum being £25,000,000.

The average (median) value of the backlog per museum is £100,000.[35]

We have used two sources to estimate the total value of the maintenance backlog for all Accredited museums in England.[36] These are:

- The value of the maintenance backlog of National Museums, as reported in 2017 (£142.9m);[37]
- The total value of the maintenance backlog reported by museums sampled for this research (minus the museums in the 2017 report), extrapolated to the total population of all Accredited Museums in England with a listed estate.

On this basis, **we estimate the total value of the maintenance backlog for accredited museums in England with a listed estate to be: £337.5 million**. We suggest this estimate is likely to be conservative, as many museums were unable to accurately diagnose the true extent of works needed, or provide a value.

[34] Weighted data.
[35] This value should be treated with caution as it may be slightly skewed by the maximum figure of £25 million.
[36] This approach was taken to counter the skewing effect of the outliers in the sample of 101 museums included in this research.
[37] DCMS, *Strategic review of DCMS-sponsored museums*, p. 44. The data in the report was taken from the 2015 Strategic Spending Review in which the museums collectively identified £142.9m for 2016/17 to 2020/21 in urgent or pressing maintenance repairs. The report suggested this figure may be an underestimate. It should be noted that many, not all, of these museums occupy listed buildings.

Not all museums were able to estimate the value of the backlog because they had not had a recent survey or condition assessment.

> *"Well over half the buildings are affected! I couldn't hazard a guess at the value! You can see what the problem is, but you don't know the extent until you get into it. Half of what we do is made up on the spot. Until you start, you don't know the extent of the problem"*
>
> ***Independent, South East***

8.3 Length of backlog

There is a huge variation in how long the backlog has existed.

Of the surveyed museums, the combined total of the backlog is 312 years. The shorted amount of time a museum has needed works is 3 months; the longest backlog is 20 years.

The average (median) length of the backlog is four years.

8.4 Impact of the backlog

In most cases, the impact to date of the backlog does not appear to be too severe. However, many museums spoke about reaching a tipping point, where the backlog of works is now becoming urgent. They predict that, if unaddressed, the accumulation of works will become critical in the very near future, with significant impacts on the museum's core functions.

The type of direct impacts include:

- Health and safety risks
- Lack of security and the impending threat of vandalism
- Loss of visitors/a barrier to income
- Potential service failure and/or need to close part of the building
- Decline in staff morale
- Having to return loaned items because the museum environment is unsuitable

> *"Water coming into the galleries requires removal of exhibits, deterioration of roof timbers due to water ingress and woodworm, dormer windows are falling apart and pieces falling to the ground posing health and safety issues, mortar and stone falling from walls, rotten windows allowing further water ingress, damp ingress causing plaster to fall from walls and ceilings"*

Independent, South West

Other indirect, but no less severe, impacts include an inability to develop museum collections because the most pressing building maintenance issues have become the primary focus for attention and resources (already a situation for some museums).

> *"It puts us under strain because we're firefighting. We're putting a sticking plaster over it – it's 20-30 years old. We get by, but I don't want us to get by. I'd love to have the infrastructure in place to give everyone the confidence. I'd like to be pro-active rather than reactive"*
>
> ***University, London***

A number of museums also describe needing to conduct temporary repairs, and/or using contractors which are not heritage specialists in order to keep costs down, as well as potentially using cheaper materials.

> *"Temporary repairs fail, rain seeps in, have to be careful about the collection going on display in certain areas"*
>
> ***Independent, Yorkshire and the Humber***

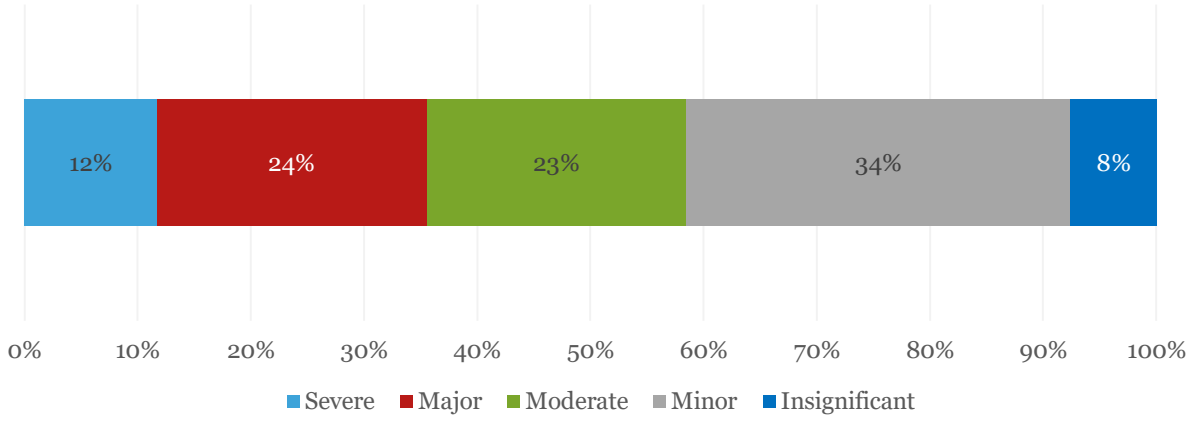
The physical impacts include a spread of damp into other parts of the building, damage to interior decoration and wall coverings, and an increase in ambient humidity, with consequential impacts for collections.

It must be stressed that not all museums are experiencing a severe backlog. Some describe addressing their backlog as a 'nice to have' rather than a necessity, with a small handful describing their backlog as 'non-urgent'. The museums are of various types: nationals, local-authority operated and independents.

Of the two thirds of respondent museums that report they have a maintenance backlog, 36% state this is having a severe or major impact on their ability to function as a museum (Figure 27). The majority of museums (42%) state that the current impact is either minor or insignificant.

However, not all museums are able to provide an assessment of the severity of the impact, because they do not have access to the expertise needed to accurately diagnose the problems.

Figure 27: Severity of impact of not addressing the backlog



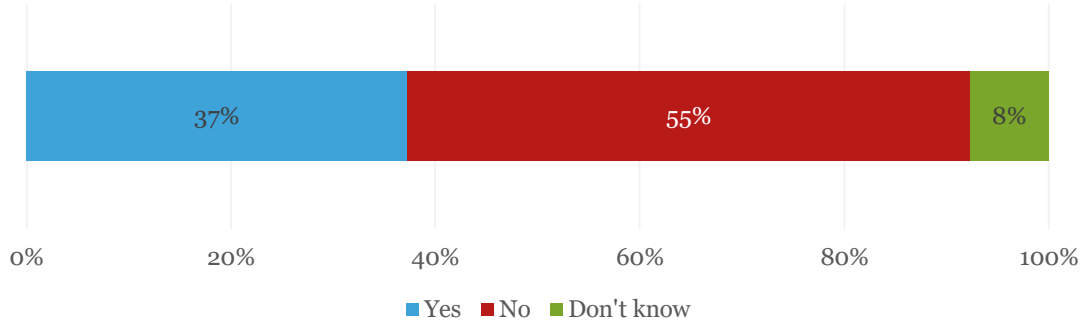
9. GOOD PRACTICE IN MAINTAINING LISTED ASSETS

9.1 Mechanisms for recording good practice

The majority of museums (55%) do not record good practice in any way (Figure 28). Of those who do, this is typically by way of keeping a record of works carried out, including a description, photographs, a note of who completed the works and the associated cost. Those with corporate landlords typically keep a record of job reports.

> *"We record the work that's done, but we're still finding our way."*
>
> ***Independent, South East***

Figure 28: Does the museum have a mechanism for recording good practice?



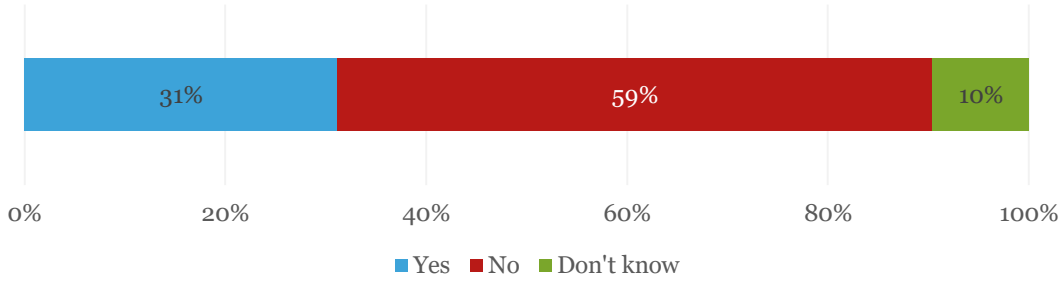
One museum spoke about monitoring building and infrastructure services to benchmark performance, for example by keeping a record of intruder alarm and CCTV use.

Other museums record good practice in less formal ways, such as via team meetings - as one museum stated, maintenance is always on the agenda at every team meeting.

A substantial minority (36%) do not keep any record.

> *"It's a tough one. Because we outsource it and we've had such a poor supplier we haven't had any best practice. We have an asset management system and an asset manager."*
>
> ***National, London***

Figure 29: Does the museum have policies for guiding the maintenance of its listed estate



Although over half of museums state they have a mechanisms of some sort for recording good practice, 59% of museums do not have specific policies that guide the maintenance of their listed estate (Figure 29).

9.2 Accessing good practice

As relatively few museums record good practice, or have specific policies to guide maintenance, it is perhaps to be expected that comparatively few (35%) actively seek out or access good practice or learnings on maintaining their listed estate (Figure 30).

Where museums do access good practice, this is predominantly via informal methods such as informal meetings and/or phone calls. Only 16% participate in CPD; telephone interviews revealed that this practice is typically undertaken by staff with professional membership or qualifications (e.g. engineers and surveyors) who are required to undertake CPD as a condition of maintaining their professional status or membership.

Only 15% of museums participate in formal CPD sessions, such as seminars or training courses.

Other sources of information about good practice include:

- Good relationships with a number of professionals (architect, structural engineer, specialist building company during)
- Trades/contractors
- The Local Authority
- Historic England
- Museums Association.

Figure 30: How the museum accesses good practice

9.3 Support for maintenance – what's needed?

> *"We'd like access to funding without spending countless volunteer hours on what seems to us like pointless questions. We tried completing an… application, but you have to use sleight of hand. We spent 1,000 volunteer hours on a recent application and gave up"*
>
> ***Independent, South West***

By far the most common request is for funds – but most typically, access to funding and grants that are specifically for maintenance-related tasks.

Other requests include:

- more resources – such as greater numbers of volunteers
- improved communication between the museum and the Local Authority
- access to expertise – e.g. a centralised resource on good practice, case studies
- a skilled person to put together a maintenance schedule
- a maintenance plan
- support, guidance, or assistance/advice from ACE, Historic England or the Museums Association
- access to project management skills.

10. CASE STUDIES

For a summary of the methodology followed to achieve the case studies, please refer to section 1.4.4.

10.1 The Museum of North Craven Life

Figure 31 The Folly, Settle, photographed in 1897. *Historic England Archive*

Information

Museum location: Settle, Yorkshire

Museum type: Independent

Annual visitor numbers: 4,500

Employee numbers: 1.7 Staff (FTE), 63 Volunteers

Number of heritage assets: 2

Type of heritage assets:

- Grade I: The Folly; seventeenth-century residential building
- Grade II: former Zion Independent Congregational Church; nineteenth-century nonconformist chapel and hall.

Current maintenance backlog value: £1,250,000

Length of time that this backlog has existed (months): 48

Description of the listed assets

The Folly: A three-storeyed former residential building with a recessed centre and two wings, constructed of coursed rubble with stone dressings and a stone slate roof. The main door, on the left side of the central section, has a highly unusual surround: fluted columns either side of the door constrict before opening out again to slightly domed moulded capitals with finials. However, the most outstanding feature of The Folly is the quantity and the quality of the fenestration. The ground-floor hall is glazed for almost its entire width and the glazing continues across all three wings; windows on the ground and first floors wrap around the building's corners with the structure at these points supported by the central mullion rather than quoin stones. On the first floor on both the left and right wings, one three-light window has a transom which rises in the centre to form an arch over the lower central light, which supports a mullion above. The interior features panelling and inglenooks with moulded fireplaces; the oak staircase has barley-sugar balusters.

Former Zion Independent Congregational Church: A two-storeyed chapel building, rendered with stone dressings and a slate roof. Three bays, with a central door; the door and windows on the main façade are round-headed. The extension to the rear of the building is single-storeyed.

History

Building history:

- 1670s: construction of the Folly for Richard Preston, lawyer (date on doorway 1679)
- 1703: the building is sold to the Dawson family
- From c.1708: The Folly is divided and let to a series of tenants. Parts of the house were used, for example, as a farmhouse, rooming house, furniture store, bank and a doctor's surgery
- 1816: Zion Independent Congregational Chapel built
- 1870s: by this date the interior of the Zion chapel had been refurbished and a schoolroom built to the rear which also served as a church hall
- 1890s: At least part of The Folly is in use as a refreshment rooms and hotel

- 1970s: restoration of the roof and leaded windows as Philip Dawson occupies the house as a whole
- c.1980: date of current doors to The Folly
- 1994: The Folly is divided into two; the hall & south range become a museum while the north range is converted to a holiday let
- 2010: two parts of The Folly reunited
- 2015: Zion Congregational Chapel closes
- February 2018: ownership of the Zion Chapel is transferred to the North Craven Buildings Preservation Trust

Institutional history:
In 1983 Mr Philip Dawson, the last member of the Dawson Family to live in The Folly, sold the house to an antique dealer. In 1990 it was sold to a developer who aimed to subdivide it into two for retail and residential purposes, but by 1996 the Hall and South Range were purchased by the North Craven Building Preservation Trust (NCBPT) and in 2001 they were opened by the Prince of Wales as the Museum of North Craven Life. In 2010 the opportunity arose for the NCBPT to purchase the north range of The Folly and an appeal for funds was launched by Alan Bennet; the range was eventually acquired.

The building has been restored by the NCBPT. The permanent collections aim to tell the story of North Craven's landscape, built heritage and people; there is also a room featuring the Settle-Carlisle Railway and a changing programme of temporary exhibitions.

The Zion Independent Congregational Chapel is recently acquired (2018), and its acquisition includes that of the chapel archives.

Key challenges as identified by museum

Funding: The museum volunteers have been successful in securing small grants for maintenance of the listed estate in the last five years and significant works over and above maintenance have also been completed in that time, including reroofing of part of the north range and drainage works. The conversion of the Zion Congregational Chapel hall to office space and archival storage is planned. However, there is still a large backlog of work on The Folly and Zion Chapel which is becoming urgent and which is a barrier to income generation as well as developing collections care. The museum finds it very difficult to source funding for works beyond basic maintenance, although even the latter is challenging in a building of this age.

Skills: The museum feels confident that it has a good range of skills in-house which allow it to identify issues with the listed estate and to pursue solutions. However it does feel that an insufficient training budget and lack of time to provide training hamper its efforts with its small staff and key volunteers. Security, plumbing, and heating and insulation are identified as trades which it finds difficult to source externally.

Management: The institution does not have a ring-fenced budget for maintenance or mechanisms for propagating, recording, and sharing good practice. However, there has been a recent change of the Board and there is a feeling that this will help to bring in a better overall strategy.

Assessment

It was found that in general, the museum's employees and Board had a good understanding of the condition of their building and the challenges that they faced in maintaining it. A detailed prioritised Condition Report was produced in 2016 by conservation-accredited Overton Architects, and plans are in place to commission a quinquennial review in 2021. A Conservation Management Plan is in progress, although this will be more focused on the collections than the building itself; there is a recognition that a Statement of Significance will be necessary although this is not currently under preparation. The CMP is being produced largely by volunteers with historical and archival expertise. The employment of a Heritage Development Officer and the recent changes in the Board do appear to have put the museum on the right track towards good management of the listed buildings, although this has not yet all been carried out.

The museum's representative mentioned that the museum does periodically have issues with its wind- and weather-tightness and that this and its internal environmental conditions can be problematic for the collections. Most of its immediate problems tend to be acute and short-term, however, and are generally manageable, although more chronic long-term problems will ultimately have to be addressed.

The building, despite being one of the key assets of the museum, is currently not interpreted for visitors to the same standard as the collections. This is recognised by the Board and is something that they would like to improve, but they currently feel that they do not have the resources to do so.

The museum's representative felt that more guidance is needed to help museums, especially those with a small staff, to put together successful grant applications, as many of the additional requirements are felt to be very onerous. There is a frustration at the administrative costs which had to be absorbed to secure money for even straightforward maintenance requirements; there can be a lot of risk involved with investing in a bid when it might be rejected. Match-funding requirements are also often very difficult for small museums to meet. A database of funders of capital works on built heritage, as well as a database of professionals, suitably qualified to work on historic buildings, including specialist consultants, suppliers and contractors, would be useful.

Overall, the museum was found to be developing good practice and taking steps towards proper maintenance and care of its historic buildings. There is considerable anxiety surrounding funding, however, and a feeling that the Board and staff are 'only just' coping with the challenges of looking after the building stock; how to deal with any unexpected issues or a long-term build-up of problems is already a real concern.

10.2 The Rochdale Pioneers Museum

Information

Museum location: Rochdale, North West

Museum type: Independent

Annual visitor numbers: 11,500

Employee numbers: 7

Number of heritage assets: 1

Type of heritage assets:

- Grade II: 31, Toad Lane; eighteenth-century commercial/residential building

Current maintenance backlog value: £40,000

Length of time that this backlog has existed (months): 84

Description of the listed assets

31, Toad Lane is a three-storeyed brick building originally built as a house. It has a stone slate roof which is hipped at the front and gabled at the rear. The ground floor has two multi-paned shop windows which are a mid-nineteenth-century addition. The main façade has two entrances: one at the right presumably allowed entry to the upper floors; another to the right of centre, between the two shop windows, opened into the store. There is evidence however that the original entrance to the building was centrally located. The 2012 extension was constructed, to the left blind wall of the building and is ovoid in plan, with a timber-and-glass panelled exterior.

History

Building History

- Eighteenth century: construction date of the original building. The building was extant by the 1780s, although it was frequently altered
- Mid-nineteenth century: ground floor altered to accommodate two multi-paned shop windows
- 1844: the building opens as the premises of the Equitable Pioneers
- 1931: the building opens as a museum, run by the Co-Operative Union
- 1970s: museum temporarily closed for a survey which resulted in the removal of some roof timbers
- 2012: modern extension by Loop Systems opens, following a period of closure during construction. The extension was partly funded by NLHF.

Institutional History

The museum celebrates the Co-Operative movement at the location of its first meeting-place and shop; the first name of the group was the Equitable Pioneers and they formed in 1844.

31 Toad Lane was first opened as a museum in 1931 and was run by the Co-Operative Union, which is now called Co-Operatives UK. The Co-Operative Heritage Trust was formed in 2007 to unite the museum with the archival and library collections which were held by the Co-Operative College (a training organisation for Co-Operative operatives opened in 1919), and which are now in Manchester. The Trust was also co-founded by the Co-Operative Group.

The collections include documents, periodicals, correspondence, film, commercial packaging, and photography as well as ephemera relating to social history and working life.

Key challenges as identified by the museum

Skills: The museum feels that it has the skills available in-house to diagnose problems, but not to fix them. There is no dedicated member of staff responsible for undertaking repairs, although operational staff are responsible for reporting and maintenance checking. There is a perception that contractors are not able or willing to work on the site, due to the challenges posed by the designation of the building as listed. The staff also feel that nearby Manchester is such a draw for contractors that it is much more difficult to find skilled tradespeople in Rochdale.

Funding: While the museum was able to secure some funding for its last substantial works (learning loft, completed in June 2019) this was not sufficient to cover the whole cost. Although the current outstanding backlog is only of minor works, the museum states that securing funding for work beyond essential maintenance is quite difficult.

Assessment

The site visit found that the museum's perception of the condition of its building stock largely reflected the reality. As the museum recently had considerable alteration works, the building fabric is currently in good repair.

There is no dedicated member of staff responsible for managing maintenance and repairs, but there is a feeling that due to the small size of the museum this is not necessary, and it forms part of the role of the curator. The museum has recently (in 2012) begun to employ professional heritage-trained staff rather than relying on volunteers, with the outcome that there is more awareness of the requirements that come with managing a listed building.

The Rochdale Pioneers Museum has a Care and Conservation Plan updated as recently as 2019, and a fifteen-year planned preventative maintenance schedule, prepared in the

same year. This was prepared by Mace Group as part of the museum Accreditation process. A formal review procedure for the new maintenance schedule is not yet in place, but there is an awareness that this was needed. In 2016 the museum commissioned a Resilience Report to address future-proofing the museum, including the potential implications for the building with regards to sustainability, energy-efficiency etc.

The Pioneers Museum works independently to action its maintenance plan, and generally relies on local tradesmen to assess and resolve issues on a case-by-case basis. If the staff were to seek overarching professional advice, they would go first to the architects who were responsible for the 2012 extension.

This museum is in a relatively privileged position in that museum staff have more varied income streams to draw from, such as appealing to co-operative societies as well as just heritage funders. The Co-Operative Group also supports the museum, for example offering to fund and carry out a full building survey. However, museum staff must still make a case to the Group's trustees which is time-consuming, especially when the museum is required to procure competitive quotes, which can be a challenge as there are not always many tradespeople in the region willing to carry out the work. There is an impression that access to funding is becoming more difficult over time, especially with regards to the volume of bureaucracy required to receive it. Constraints placed by funders on what funds can be used for can also present a challenge.

Overall, the museum is currently in good condition and there is reason to be positive about the future. There are recent plans in place which if followed should allow for good maintenance of the historic fabric, and there is an awareness of potential issues which may arise. The primary area of concern is access to professional expertise and appropriately skilled and qualified tradespeople, and in particular whether the museum is employing suitable contractors to work on the listed building. There is also a possibility that the perceived difficulty of access to funding or the complexity of putting relatively minor works out to tender may lead to their being neglected.

10.3 Colne Valley Museum

Information

Museum location: Golcar, Yorkshire

Museum type: Independent

Annual visitor numbers: 3,949

Employee numbers: 0 staff, 60 volunteers.

Number of heritage assets: 2

Type of heritage assets:

- Grade II: 22 and 24, Cliffe Ash; 26 and 28, Cliffe Ash; nineteenth-century residential cottages

Current maintenance backlog value: No backlog

Length of time that this backlog has existed (months): N/A

Description of the listed assets

The museum is made up of four former weavers' cottages constructed together. They are of hammer-dressed stone with stone slate roofs. The cottages are of three storeys, but, due to being built into a steep hill, the ground floor can be entered from the front and the second floor from the rear. Nos 24-28 each have mullioned windows of two lights on the ground floor, and eight continuous lights on the first and second floors. At 22 Cliffe Ash, the incline is such that there are only low basement windows at the ground floor level and access is to the side. At the first floor there is a two- and a four-light window and another eight-light window on the second floor; alternate mullions had been removed but have now been replaced. Also part of the museum is the terminating block adjoining No. 22, which was a shop with door and round-headed window on the end façade towards the junction with Ridings Lane.

History

Building History

- 1840s: cottages built by the Pearson Family.
- 1903: last building in the row, originally a butcher's shop, is built.
- 1910: 28 Cliffe Ash becomes the premises of the Golcar Socialist Club.
- 1970: 28 Cliffe Ash gifted to a Trust to create a museum. Nos. 26 and 24 acquired during the early years after opening.
- 2008: No. 22 and the shop adjoining the row are purchased.
- 2010-2012: NLHF project 'Realising the Dream' launched to restore the fabric of No. 22 and the shop, to create a new reception area.
- 2014-2018: Second NLHF project, 'Sustaining the Dream', launched, which restored the remaining parts of the building and recreates the interior of a full weavers' cottage.

Institutional History

The museum is made up of four cottages (22-28 Cliffe Ash) built in the 1840s by the Pearson family, cloth manufacturers. The living space was on the ground floor and the workshop above (these floors did not originally have reciprocal internal access).

The cottages were all initially occupied by members of the Pearson family. 28 Cliffe Ash, also known as Spring Rock, was occupied until 1910 when it became the premises of the Golcar Socialist Club and remained in their hands until it was gifted for use as a museum in 1970. 24 and 26 Cliffe Ash were acquired around the same time; 22 and an adjoining shop were purchased in 2008. A new project called 'Realising the Dream' was launched in 2010, primarily funded by the NLHF, and followed by 'Sustaining the Dream' in 2014; these projects restored the building fabric as well as enhancing the museum's facilities and offer.

The museum holds collections in six categories: textiles, including looms and spinning wheels; domestic artefacts including 'the household linen collection'; costume, mainly 1870-1920; clog-making, with items from Parkins of Carr Lane, Slaithwaite and Horsfield's of Bradford; photography; political items mainly relating to Victor Grayson (b.1881, disappeared 1920) the first Socialist MP for the Colne Valley.

Key challenges as identified by the museum

Funding: The museum does not currently have any backlog because it recently completed an extensive refurbishment which included a complete restoration of the roof; work on the windows and heating; upgrading of security; damp proofing; and the strengthening of all floors. The cost of this work was £339,000. Grant funding was successfully sought from the NLHF and some match-funding from other grant-awarding bodies, but the museum characterises the securing of this funding as 'very difficult'. It was noted that 'too many of us are chasing diminishing sources of grants.'

Skills: Although museum staff feel that they have a good range of skills available in-house and that they do not have problems sourcing tradesmen etc., they do point out that as the museum is a wholly volunteer-run organisation, there is limited time available to volunteers to acquire skills and to implement plans.

Assessment

The building was found to be in good condition, largely as a result of an NLHF project carried out between 2014 and 2017. Due to the involvement of the NLHF, a professional design team with conservation experience was used and the works are competent.

Colne Valley Museum has a Conservation Management Plan and Maintenance and Management Plan completed in 2014 as part of the NLHF projects. This was put together by ArcHeritage based on information provided by museum volunteers and pro-bono input from an architect and a structural engineer. A formal Structural Survey

Report was undertaken in 2013 by a CARE-registered structural engineer. The museum has very little budget for employing professionals in an advisory capacity and as such is often obliged to rely on pro-bono contributions; this may affect the ability of the staff to choose a suitable professional adviser.

It was noted that while the museum understands the principles of best conservation practice, as evidenced by the plans and their implementation of the approach of the Society for the Protection of Ancient Buildings to repair work, staff may not be able to recognise the difference between good and bad practice as executed. For routine maintenance which cannot be carried out by the volunteers themselves, local tradespeople are called in and their knowledge generally relied on, which may not always be appropriate for work on a listed building.

The organisation is limited by its reliance on a volunteer workforce, especially in its ability to access funding. There is a perception that funding is extremely difficult to access, and that the volume of bureaucracy involved puts it out of reach for Colne Valley Museum unless the promise of reward is very great. Funding for the recruitment, training and support of volunteers would be a priority for this museum and would allow the organisation to function at a higher level in all aspects of its work, including in care of its listed buildings.

On the whole, this museum has up to this point been successful in funding work on its listed buildings and the structure as a whole is currently in a good state of repair. However, looking forward there are some causes for concern. The museum is aware of conservation best practice and seems to be doing its best to achieve it, but as a wholly volunteer-run organisation which is largely relying on pro-bono outside advice there are likely to be limitations in its ability to identify and correctly resolve any issues. While it seems probable that any major works in the future would be carried out by appropriately-trained professionals, the perception that there is a lack of access to funding and expertise, may lead to work that the volunteers consider more minor being neglected, or not completed to an acceptable level.

10.4 Shrewsbury Museum and Art Gallery

Information

Museum location: Shrewsbury, West Midlands

Museum type: Local Authority

Annual visitor numbers: 104,183

Employee numbers: 9 staff (FTE), 50 volunteers

Number of heritage assets: 3

Type of heritage assets:

- Grade II*: The hall of the former Vaughan's Mansion, a medieval hall originally part of a residential building.
- Grade II: The Music Hall, a nineteenth-century neo-classical civic hall; The Masonic Hall (part of the Music Hall), a nineteenth-century Greek Revival masonic lodge.

Current maintenance backlog value: £50,000

Length of time that this backlog has existed (months): 36

Description of the listed assets

The Music Hall: A three-storey neo-classical stone building with five bays. Rusticated at the ground floor, the first and second floors have an Ionic portico encompassing the slightly advanced three central bays. On the first floor there are triangular pediments on alternating windows. The entablature and pediment are without sculptural ornament. The interior has been converted to museum use from an auditorium.

The Hall of the former Vaughan's Mansion: The exterior can be seen from the museum courtyard and is of raised sandstone coursed in brick with a tiled roof; the exterior is whitewashed. There are timber-framed gable walls and a hammerbeam roof, which may have been brought from elsewhere, some well-preserved windows, rectangular with segment-headed rere-arches.

The Masonic Hall: This building is now part of the Music Hall complex but faces out to the rear onto College Hill. The two-storeyed façade is stucco over brick with stone dressings and is Greek Revival in style, with a triangular pediment and five narrow bays separated by pilasters. The ground floor is rusticated. There are two eighteen-pane sash windows at first-floor level. The hall is now used as the museum's main function room.

History

Building History

- 1270s: Vaughan's Mansion built for William Vaughan, wool merchant
- Fifteenth century: probable date of the roof of Vaughan's Mansion
- 1620: date on tie-beam of the existing part of the solar wing of Vaughan's Mansion
- c.1830: the Masonic Hall built; now acts as the main function room for the complex
- 1838-40: the Music Hall built, by Edward Hiram Haycock
- 1917: extensive restoration of the hall of the former Vaughan's Mansion following a fire

Institutional History

The museum was founded by the Shropshire and North Wales Natural History Society in 1835, and the collections were moved to their current location at Vaughan's Mansion/The Music Hall for the first time in 1853.

After the Natural History Society merged with the Shropshire Archaeological Society in 1877, the collections were enhanced with a large amount of material from recent excavations at Wroxeter.

In 1885 the museum moved to the old buildings of Shrewsbury School and went into public ownership.

In 1974 Shrewsbury Library and the Shrewsbury School buildings became the property of Shropshire County Council, while the museum collections remained in the ownership of the borough; this resulted in the exhibits being moved to the Rowley's House museum which was in borough hands and which had, since 1938, operated as a Roman Museum displaying items from the Virocomium Cornoviorum site near Wroxeter. Rowley's House (also known as Rowley's Mansion) was expanded to house the collections.

In 2009, Shrewsbury Museum Service merged with Shropshire County Museum Service to create Shropshire Museums, which now operates the museum. The collections moved back to the Music Hall in 2014. The museum aims to cover the history of Shropshire from the Roman period to the present day.

Key challenges as identified by the museum

Funding: Museum staff report the listed buildings as being in a good state of repair, probably due to the large grant received to assist in the transfer of the collections back into the Music Hall from Rowley's House in 2014. Nonetheless, the museum still has a backlog with a value of £50,000, and this has existed for three years. A lack of a ring-fenced maintenance budget as well as difficulty accessing grant funding have been identified as contributing factors.

Skills: The museum reported that it had a wide range of skills available in-house and that it used regular CPD events to develop and maintain maintenance-related knowledge, but that there was a lack of time to train.

Access: Museum staff identified the town centre location of the listed buildings as an ongoing barrier to the execution of maintenance works. The historic town centre of Shrewsbury around the museum has many narrow streets, meaning that a number of necessary projects for the museum require road closures.

Assessment

The museum demonstrated a good understanding of the significance of its historic building stock and of its obligations as custodians of an important set of listed buildings. Although there does not appear to be a Conservation Management Plan or formal Statement of Significance, one might have been prepared for a 2014 NLHF supported project. Staff felt that the interpretation of the buildings could be improved.

Similarly, museum staff have a strong awareness of the condition and maintenance requirements of the buildings. This is primarily based on the 'legacy' of the 2014 NLHF project, along with a recent condition report and maintenance plan prepared by the Property Services group of the museum's 'corporate landlord', Shropshire Council. However, many of the maintenance regimes put in place tend to concentrate on the service installations rather than the historic fabric.

On the whole, the perception of the condition and repair priorities of the museum buildings appeared sensible and realistic, and in line with good conservation philosophy and practice. Specific problems – such as rainwater disposal improvements, valley gutter defects and the misguided application of a lime shelter coat over cement render on the rear elevation (as part of the 2014 works) – were well understood.

One of the underlying problems faced by the museum is the split in responsibility between routine repair and maintenance, which lies with the museum itself as 'tenants', and other more long-term or fundamental packages of work which fall to the council as 'landlords' and can be affected by shifting council policy. The current policy is that only emergency or public safety work can be authorised under the council's 'repair and maintenance' budget; this is resulting in a backlog of important conservation work. The council has no specific maintenance budget set aside for the museum in isolation – only for its entire building stock.

While the museum currently employs a Facilities Manager, it will shortly be creating a new post aimed at taking a proactive approach to caring for the historic building fabric. At present the council's Property Services group would be expected to oversee the specification and execution of any significant conservation work – with input from the Conservation Officer and suitably experienced building surveyors. If necessary, external consultants would be commissioned – with guidance from Historic England – for specialist advice considered to be beyond the expertise of the council. The actual repair work itself would be tendered to council-approved accredited or framework contractors.

The museum finds it very difficult to access funding for everyday repairs to the historic fabric, except where they threaten public safety or business continuity. Identifying and securing grant-aid is time-consuming, and often escalates to include extraneous non-essential works or activities. In any event, many funders will not support Local Authorities. Securing match-funding is also a big challenge and can often scupper an otherwise perfectly worthy and necessary piece of work. What is needed is an easily accessible, 'no frills' fund to deal with pressing repairs to the historic fabric that do not fall under the 'public safety' or 'business continuity' banners, and can be dealt with in isolation if necessary.

Finally, staff stated that the museum would benefit from being able to access funding to investigate how to deal with future sustainability, climate change and resilience issues, particularly with regard to their potential impact on the historic built fabric of the listed buildings in their care.

10.5 Wisbech and Fenland Museum

Information

Museum location: Wisbech, Cambridgeshire

Museum type: Independent

Annual visitor numbers: 14,998

Employee numbers: 2 staff; 30 Volunteers

Number of heritage assets: 1

Type of heritage assets:

- Grade II*: The Museum, a purpose-built nineteenth-century museum building

Current maintenance backlog value: £600,000

Length of time that this backlog has existed (months): 240

Description of the listed assets

Three storeys, one of which is a half-basement, in grey gault brick with stone dressings. Three bays, the central narrower bay slightly recessed. Heavy cornice with dentils at parapet level. The main door case is flanked by a pair of Tuscan Doric attached columns and a further pair of pilasters, with narrow rectangular lights between. The entablature above is plain apart from the moniker 'MUSEUM'; pronounced cornice above. The rainwater head to the right of the entrance is reused, and dated 1722 with a crossed keys motif. All sash windows, of three lights, and console brackets either side support a deep cornice above. The windows at basement level have plain stone lintels. The wallheads of the building have a full dentilled entablature, though lacking a frieze. The steps up to

the front door and the low wall along the street have iron railings. There are three main rooms inside: the central hall, top-lit with skylights; the long room to the left-hand side with a gallery along three sides; and the library to the right hand side. The bookcases and display cases are original to the building.

Figure 32 Wisbech and Fenland Museum, principal elevation. *S&B*

History

Building History

- Early Eighteenth Century: construction of what would later become the Hudson Gallery
- 1846-7: construction of the museum. Architect George Buckler (1811-86)
- 1884: rear wings extended including the Library
- 1977: acquisition of the Hudson Gallery by the museum

Institutional History

While the Museum Society dates back to 1835, the current Wisbech and Fenland Museum opened in 1847 and is one of the oldest purpose-built museums in the United Kingdom.

Contributions to the design of the museum and the endowment of some of its collections are attributed to Algernon Peckover (1803-93), a member of a Quaker banking family influential in the town.

The original collections were focussed on natural history including examples of local flora and fauna; they are now more varied and include exhibits relating to abolitionist Thomas Clarkson. The museum now also houses an archive including parish registers, manorial records, historical photographs etc., and the library holds the manuscript of Charles Dickens's novel *Great Expectations*.

Although the museum is independent, it receives funding from the town, district, and local councils as well as the NLHF and Arts Council England.

Key challenges as identified by the museum

Skills: The museum staff identified a serious lack of skills relating to buildings maintenance and management, saying that there were little or no skills of this type available in-house and demonstrated a lack of confidence in the knowledge that they did have. A lack of training budget and time to train in this area were identified as the causes of this problem. Clearly, museum staff do not feel that they currently have the tools to give their listed building the best care possible.

Funding: The museum building is currently on the Heritage At Risk Register and requires substantial works for which funds are not currently secured. Issues with the fabric are having an effect on the running of the museum, with one gallery closed to the public due to roof leaks. There is a perception that funding is very difficult to access, and that this is only likely to get more difficult over time.

Assessment

There is a recognition and great appreciation of the significance of the building by the museum staff, as it is possibly the oldest purpose-built museum building in the country. A formal Statement of Significance was prepared as part of the Resilience Project carried out by professional consultants Tricolour in 2017, which considered options for the future of the museum. In 2018, a grant application to Historic England for development funding was successful. This funding enabled preparations for roof works, including some minor repairs, but was mostly for professional fees and specialist surveys, including a condition report by Ruth Brennan (a conservation-accredited architect), asbestos survey and historic paint analysis, and developing and tendering a package of works. This development funding was essential in making an application to Historic England with an accurate tender price to fund specified works (decision pending at time of writing). Therefore, there is a good and up-to-date understanding of both the significance and the condition of the building. Issues reported by staff were

found to be consistent with the situation on the ground, for example roof defects, and issues with the rainwater disposal system. What is currently still required is a better ongoing plan for maintenance and management of the listed building which would use the existing findings to create a management plan.

The financial situation of the museum has made it difficult to carry out repairs to the historic fabric. The museum receives £20,000 per annum from Wisbech Town Council towards its running costs, and raises any other money itself through shop sales, donations, sponsorships, and grants. The museum's own annual maintenance budget of £3,500 is not enough to carry out necessary works, and furthermore it is not ring-fenced. Because service contracts are ongoing, while work to the building fabric must be sourced and carried out on a case-by-case basis, the former tends to be prioritised. Because of a lack of funds, the museum is reliant on pro-bono work when staff need any advice beyond consultation with the council Conservation Officer. This is not a sustainable position in the long term.

Access to grant funding was seen as difficult. For a small museum, it is risky to devote staff time towards putting together complex applications which might not be successful. The process is also slow; for example, the museum is currently experiencing serious roof problems which have caused the closure of part of the building and this situation continues while approval is granted. Although the museum is free to enter, a temporarily-reduced offering is still likely to have an impact on donations, shop revenue etc. A streamlined application process would be very helpful, as would the waiving of VAT on repairs to historic buildings. A need was also identified for funding which is not strictly historic fabric repair, but which is nonetheless essential for the health of the building, such as asbestos removal, insulation and heating upgrades, and security improvements (the museum has experienced lead theft). A database of approved sources of professional advice would also be very useful.

10.6 The Museum of East Anglian Life

Information

Museum location: Stowmarket, Suffolk

Museum type: Independent

Annual visitor numbers: 35,000

Employee numbers: 25 Staff; 250 Volunteers

Number of heritage assets: 6

Type of heritage assets:

- Grade II* (Building): Museum of East Anglian Life Barn, a medieval barn; Abbot's Hall, an early eighteenth-century residential building; Edgar's Farmhouse, a fourteenth-century farmhouse.
- Grade II (Building): Abbot's Hall Stables, late-nineteenth-century stable block; Abbot's Hall enclosed garden walls and attached greenhouse; Abbot's Hall fishing lodge, a mid-eighteenth-century garden building.

Current maintenance backlog value: £945,000

Length of time that this backlog has existed (months): 240

Figure 33 Museum of East Anglian Life, Edgar's Farmhouse (interior). *S&B*

Description of the listed assets

Museum of East Anglian Life Barn: Thirteenth-century barn, built reusing some older timbers. Aisled plan, with a small door on the south side and double timber doors off-centre on the north side. Six full bays and one smaller one. The weatherboard cladding is later.

Abbot's Hall: The house dates from the early eighteenth century with additions to the south and west elevations 1896-1910. The extensions are in red brick, the central block in brown brick with red brick dressings. The main façade has five bays and three storeys; the central doorway has a baroque broken pediment with volutes supported by console brackets. The hipped roof has a heavy cornice with dentils, and dormer windows to the attic storey with alternating triangular and segmented pediments. There are steps up to the front door with railings. A double string course separates the ground and first floors which is continued onto the later right-hand wing. This is stepped back from the main block and attempts to appear continuous with it by replicating the string course and cornice, but the asymmetry of the fenestration affects the overall symmetry. At the rear, the central block is increasingly consumed by later extension.

Edgar's Farmhouse: Fourteenth-century farmhouse, ex situ. One windowless aisled hall, timber-framed, rendered, and whitewashed with a pantiled roof. The wall is open at the apices (although it has now been glazed). The interior is of two bays (one further bay has been lost); octagonal wooden posts with moulded capitals support the frame. They now stand on concrete plinths dating from the removal of the house to this site.

Abbot's Hall Stables: Stable block with groom's house attached to the north. Nineteenth-century red brick with a pantiled roof. Each end of the stable block has a cross-gable with decorative cupola above; each cross-gable has a window of three stepped rounded lancets with a single-lancet vent above. On the east side, three bays with depressed arches supported by red and black brick piers; two carriage houses on either side with harness room in the centre. The stables themselves are in each cross-gable.

Abbot's Hall enclosed garden walls and attached greenhouse: The walled garden dates from the mid-eighteenth century. The walls are of red brick, and there are some areas with matching red brick coping. The greenhouse is a lean-to structure abutting the wall on the north side of the garden.

Abbot's Hall fishing lodge: Mid-eighteenth century fishing lodge on an island in the fish pond to the southwest of Abbot's Hall. A small, square building, red brick with a tiled roof. Cornice with dentils below the pyramidal roof. The door on the east side is half-glazed and there were originally sash windows on all three other sides, although the west window is now blocked.

History

Building History

- c.1255: construction date of medieval barn
- c.1340: construction date of Edgar's Farmhouse
- 1709: construction date of Abbot's Hall
- Mid-eighteenth century: construction date of the walled garden and fishing lodge
- c.1800: replacement of fixtures in the fishing lodge

- Late nineteenth century: stables built
- 1896-1910: right wing and rear extension added to Abbot's Hall
- Twentieth century: most of the current rafters, as well as purlins and collars, in the barn date from this period
- 1972: Edgar's farmhouse is discovered within a nineteenth century building during demolition; the house is then moved to the Stowmarket site

Institutional History

During the 1950s and 60s various parties in the region worked to preserve traditional skills, equipment, and buildings; these included local farmer Jack Carter and the Suffolk Local History Council as well as individual collectors. Meanwhile the Abbot's Hall estate had been in the ownership of the Longe family since 1903. Vera and Ena Longe placed the site in trust for the museum. In 1964 they gave a gift of about two acres of land from the Home Close area and after this was transferred to East Suffolk County Council the museum opened in 1967. In 2004, following the death of the Longe sisters, a further gift of land including Abbot's Hall itself was passed to the Abbot's Hall Trust.

Key challenges as identified by the museum

Funding: This museum has experienced a real struggle to access funding to care for its listed estate, and it is affecting its ability to optimise the running of the museum and its profitability, which in turns increases the maintenance backlog. For example, some buildings or areas are off limits due to maintenance issues (such as the bridge to the fishing lodge being in need of repair) and this affects the perception that visitors have of the museum, including of its value for money. Most funding comes with conditions which are felt to be unhelpful; for example, many restrict expenditure to capital works only and it is difficult to find the capacity within the organisation to project manage them.

Skills: The museum feels that it has a good range of skills available in-house, but that it does not always have the resources available to use those skills to their fullest extent. For example, there is a carpenter on staff, but there is not often the funding available for them to undertake carpentry works. There is also a lack of time to develop and share the skills that staff members have, as on a day-to-day basis income-generating activities must take precedence.

Competing pressures: This museum has a very large estate including a number of buildings which are not listed, but which still require extensive maintenance and care, for example historic mill buildings and Second-World-War-era huts. The size and nature of the site also means that there are security issues, including lead theft in the past; gates and fences etc. can therefore become a higher immediate priority than the listed estate when there is money available for maintenance.

Assessment

It was found that this museum had an excellent understanding of the condition of the building stock, which is especially complex here. There is a high-quality Conservation

Management Plan from 2007 which is largely focussed on Abbot's Hall and its curtilage, as well as some more recent documents relating to some of the buildings on the site which are not listed, but there is no comprehensive plan which encompasses the whole site. There was some feeling that it was frustrating to have to spend time and resources on documents while the buildings' problems are overlooked. In this case, it was found that the museum director is especially knowledgeable regarding historic buildings and would certainly be capable of diagnosing issues without a CMP, Condition Report or R&M plan, but this approach would not be appropriate at other museums without this expertise (or indeed here, if the current director moved on and someone with a different specialism was appointed in her place). A halfway house would be a streamlined grant-application process for urgent works, without all the supporting documentation in place, where it is understood that it will be produced in the future.

The museum has a ring-fenced maintenance budget, but at £13,000 per annum it is inadequate for the needs of the building stock. There has been success in the past in procuring funding for special projects, but there are ongoing problems with getting enough money even for routine maintenance work, and many of the buildings are in need of significant attention. For example, cementitious render was used when Edgar's Farmhouse was moved to the current site in the 1970s, which needs to be replaced; the condition of the fishing lodge is poor and access to it is hampered by bridge problems; works are required to the roof of Abbot's Hall; there is a desire to reinstate thatch on the roof of the medieval barn rather than the current pantiles, etc. So little funding is available that it is extremely difficult to prioritise works, and the result is that works tend towards the reactive, as issues arise, rather than the proactive. For example, works were carried out on the boundary wall to secure access and prevent vandalism, which was at the expense of works on the listed buildings. The museum does rely on pro-bono work, for example for the maintenance schedule which was put together by a current museum trustee who happens to have the appropriate conservation experience.

This museum is a relatively unusual case in relation both to the extent and variety of its listed buildings and to their centrality to the museum's offering; it is also seems to be one of the most severe cases in terms of the work which needs to be done. There is already some recognition of the former, for example in the museum's designation as a National Portfolio Organisation, but it is clear that this has not gone far enough to support its needs in terms of caring for its building stock. All the problems that other museums have reported (the length of time it takes to make funding applications, the extraneous material which needs to be provided, the difficulty of procuring funds for peripheral works such as security which nonetheless have a major impact on the buildings, etc.) are amplified in this case. It is clear that museum staff understand very well what needs to be done but simply lack the funds to be able to do it, and by the time funding is procured for one project another issue has presented itself, or the existing problem has worsened.

10.7 Gladstone Pottery Museum

Information

Museum location: Longton, Stoke-on-Trent

Museum type: Local Authority

Annual visitor numbers: 25,000

Employee numbers: 10 staff; 11 volunteers

Number of heritage assets: 3

Type of heritage assets:

- Grade II* (Building): Former Gladstone and Park Place (Roslyn) Works, an eighteenth and nineteenth century pottery works
- Grade II (Building): The White House, an eighteenth-century residential building later used as a shop and store; The Red House, a nineteenth-century residential building later used as a store.

Current maintenance backlog value: £200,000

Length of time that this backlog has existed (months): 64

Description of the listed assets

Former Pottery Works: Main entrance block facing Uttoxeter Road is c.1860 and has three storeys and ten bays. There is a carriage entry to the left with a round-arched window and fan-lighted doorway beside. Some sash windows on the upper storey. The entry to the museum is on the rear elevation of this building. A long three-storeyed rear wing houses warehouses, offices, and administration, and attached to this to the southeast is the main range of the Roslyn works which is three-storeyed with twelve bays. A range running at right-angles to the rear left contains two biscuit kilns c.1940. The workshops of the former Gladstone works are in the rear courtyard with the earliest range c.1840; further ranges were added to the north and south later in the century. Several bottle-necked brick kilns largely of mid- and late-nineteenth century fabric, although they are probably reconstructions of early nineteenth century originals.

The White House: Late eighteenth century painted brick house with a tiled roof. A two-storey building with a central doorway with a two-light window above, and three-light casement windows on each floor. There is a single-storey wing to the rear.

The Red House: c.1840 brick house with a tiled roof. Two-storeyed building with a central door with a fanlight above. Hipped side wing. Twelve-pane sash windows in the main block; sixteen-pane in the side wing. This building was used as a pottery production unit associated with the decorating kiln.

Figure 34 Gladstone Pottery Museum, bottle kilns. *S&B*

History

Building History

- 1770s: site including what became Gladstone Works purchased from the Lord of Longton Manor by Thomas and Michael Shelley
- 1815: at this point the Gladstone portion of the site included a house, small workshops, and one bottle oven
- Early nineteenth century: the site expands from one to three ovens
- 1850s: tenant Thomas Cooper adds a classical façade to the road side of the site; properties within this frontage were rented as retail businesses
- c.1860: approximate date of most of the surviving buildings
- c.1875: the current engine house was built; steam operation begins
- c.1945: repairs were needed to return to the factory to operation after it had been closed during the war
- 1949: steam engines used for the last time; electric works introduced
- 1950: factory taken over by Thomas Poole who also purchased other buildings on the site such as the Red House (also known as the Doctor's House)
- 1950s: pitched roof of the mill replaced with a flat roof with skylights; White House was used as offices for Salisbury China
- 1956: the Clean Air Act forbids the use of coal-fired bottle ovens, which causes Poole to reduce his operations and concentrate elsewhere
- 1960: the ovens are fired for the last time
- 1960-70: only decorating and packing/despatch operations undertaken at the factory during this period
- 1970: Works put up for sale by Poole

Institutional History

The works were identified as being of historic interest by a group of local people centred on the Trustees of the Cheddleton Flint Mill Industrial Heritage Trust, which was founded in 1967 to preserve the eponymous mill complex and other similar sites in the area. Due to interest in the site from the group, which considered it to be a representative example of a medium-sized potbank, Gladstone Pottery was purchased by a local businessman (Derek Johnson of H&R Johnson Tile Manufacturers) and ownership was transferred to the Staffordshire Pottery Industry Preservation Trust. The museum opened in 1974. The city of Stoke-on-Trent took over the site in 1989 and began managing in the museum in 1994.

The contents of the museum include a fully-furnished Victorian doctor's surgery, as well as exhibits on the history of ceramic tiles and of the toilet. It is also a working museum with regular pottery- and other craft-making workshops.

Key challenges as identified by the museum

Management: A number of issues have been reported to council authorities for consideration but there is often considerable delay addressing and resolving them. For example, there are loose and uneven cobbles around the museum, gas piping which needs to be replaced, and rotten window frames in the White House. In these cases, the

council's Property Services team seem to have been aware of the problem for a number of years without action being taken, even though these have all been recognised as having health and safety implications. Where problems are not considered urgent, such as cracking on the top floor of the building, no action beyond monitoring is taken. In all these cases, it is difficult to take action because resources are so limited at present. There are also few mechanisms for recording good practice or policies for guiding maintenance.

Skills: Museum staff feel that they have a good range of skills available in-house, while the sourcing of specialist outside contractors lies with the council rather than museum staff.

Assessment

The site visit highlighted the museum's strong understanding of the significance, condition and repair/maintenance requirements of the wide range of historic buildings and structures in its care. The museum has recently appointed a dedicated Heritage Manager and still calls on the services of volunteers who helped to set up the museum almost 50 years ago, thus engendering a beneficial sense of ownership and continuity.

The museum's building stock is very much part of its 'collection' – especially the iconic bottle kilns – and as such the repair and maintenance of the historic fabric is taken as seriously as caring for the other more conventional exhibits on display.

While the buildings are generally structurally sound, there are evidently serious localised problems, such as chronic water penetration through the brickwork of the bottle kilns, and an increasing backlog of general maintenance. Problems arise almost on a daily basis and the 'to do' list gets ever longer rather than shorter.

The museum generally faces the almost insurmountable challenge of trying to look after a considerable number of historic buildings, of varying types and in various uses, with limited resources in terms of financial help and expert advice. While there is a dedicated Operations Manager responsible for maintenance, and a modest ring-fenced annual budget, the work is often reactive and unpredictable in nature. However, monthly building monitoring inspections are carried out – identifying defects, actions required, responsibilities and risks – and a quarterly report is submitted to Stoke-on-Trent City Council for action. While some of the identified actions are associated with the defective historic fabric itself, the majority concern problems with peripheral (but still important) issues regarding Health & Safety, lift failures, faulty service installations and the like. As with many other museums, the regular maintenance regimes mainly concentrate on the mechanical and electrical installations which benefit from dedicated service contracts with external contractors.

Although, as noted above, there is a good perception of the condition of the buildings, and the need for well-informed repairs, the museum lacks a detailed formal condition survey and a prioritized forward-looking maintenance plan. It has benefited recently by being part of a Historic England 'Heritage Action Zone' which is considering the

condition of bottle kilns in Stoke generally, but there is currently no site-wide strategic plan to gauge the extent of long-term repairs needed by the historic fabric as a whole.

In terms of dealing with necessary repairs to the historic fabric, it is difficult for the museum to call on sustained expert advice. The local Conservation Officer is usually the first port of call, but their engagement – while always helpful and willing – is understandably limited. If the work is simple and straightforward it will be directly dealt with by the Operations Manager. If the work is more complex or extensive it is referred to the Council's Property Services department who decide on what course of action to take. It is evident that this can cause delays with necessary work becoming "stuck in the system". It is not known whether or not the Property Services department possess the conservation skills to specify and oversee sensitive historic fabric repairs, but it seems that appropriate expert advice and input would be sought if necessary, either from the conservation officer or Historic England, or indeed from independent specialist consultants.

In common with many other similar establishments, the museum finds it very difficult to access additional funding, beyond its core budget and maintenance allowance, to carry out straightforward repairs – the biggest barrier to securing financial assistance being the time, expertise and 'red tape' required to make a grant application. The procurement process for funding and indeed executing the work itself is invariably disproportionate to the task in hand, and tends to inhibit rather than promote good and effective maintenance. Museum staff suggested that the removal of the insistence on match-funding and the introduction of some 'flexibility' in the way funding is allocated should be considered.

10.8 Tate Liverpool

Information

Museum location: Liverpool

Museum type: National

Annual visitor numbers: 700,000

Employee numbers: 55 staff, 0 volunteers

Number of heritage assets: 1

Type of heritage assets:

- Grade I (Building): Britannia Pavilion and the Colonnades, Albert Dock former warehouses. Tate Liverpool is located in the Colonnades.

Current maintenance backlog value: £25,000,000

Length of time that this backlog has existed (months): 90

Description of the listed assets

A former warehouse built originally 1841-45 by J Hartley. The building is constructed in brown brick with an iron frame, and has stone dressings and an iron-clad roof. There are five storeys on an L-plan, with 47 bays to Gower Street and 55 bays on the west façade; regular groups of bays are recessed. The west façade has a Doric colonnade of iron columns with granite columns to angle, above a granite and rubble dock wall. The windows are segmental-headed.

History

Building History

- 1843-7: Albert Dock built by Jesse Hartley
- 1983-6: Tate Liverpool area (N end of the W stack) restored by Holford Associates (architects) and W.G. Curtin & Partners (engineers). All blank windows opened; window frames replaced in aluminium; loading doors replaced with recessed angle-glazing
- 1984-8: Conversion into Tate Liverpool, by James Stirling of Stirling, Wilford & Associates. Blue and orange façade with portholes set behind Harley's original colonnade; interior galleries set around central staircase and service unit; foyer with mezzanine café on curved blue balcony
- 1997-98: Phase 2 works by Michael Wilford & Partners included the replacement of the 1980s façade with glazing, and the relocation of Stirling's blue interior balconies as well an increase in the size of the bookshop and café.

Institutional History

The origin of the Tate Galleries as a whole is in the nineteenth-century art collection of industrialist Sir Henry Tate, which he gave to the nation in 1889. It was originally offered to the National Gallery which rejected the bequest, so Tate's own funds and money from a public appeal were used to build what is now Tate Britain on Millbank in London, which opened in 1897.

Tate Britain focusses on British art, but the Tate organisation has continued to collect over time, raising money through its members' scheme which was launched in 1957. As a result, the Tate also has a large and growing collection of modern and contemporary art.

The Albert Dock was selected to be the first regional outpost of the Tate in 1981. This, a project known as the 'Tate of the North', was masterminded by Alan Bowness, then director of the Tate. After renovation and conversion, led by James Stirling, the gallery opened to the public in 1988. In 2007 Tate Liverpool hosted the Turner Prize as part of the city's celebration of its year as European Capital of Culture; this was the first time that the competition had been held outside London.
Tate Liverpool shows changing displays from the National Collection of Modern Art alongside a programme of temporary special loan exhibitions.

Figure 35 The Albert Dock, photographed in 1969. © *Crown copyright. Historic England Archive*

This photograph was taken before the buildings were restored. Tate Liverpool now occupies most of the range on the right.

Key challenges as identified by the museum

Funding: The museum is lacking budget from its main income sources to complete maintenance which it classifies as urgent. These works are wide-ranging, from the redevelopment of the foyer and reconfiguration of internal space to CCTV and fire alarm work. As these are major works, they would have a significant impact on the running of the museum. Since the cost is well outside the current maintenance budget, external funding would be required to complete them.

Environment: The Tate Liverpool suffers from specific maintenance issues due to the hostile marine environment of the building. This can lead to a high maintenance spend relative to other similarly-sized institutions.

Assessment

The site visit confirmed that the gallery's perception of the condition of the building stock is generally correct and realistic. The building is structurally sound, and its historic fabric is generally in reasonable condition. A persistent problem with roof leaks appears to be associated with the 1980s building campaign to convert the dock building into a gallery rather than the original fabric.

The care and maintenance of the buildings is entrusted to an external servicing and management company with dedicated externally contracted staff and a substantial ring-fenced annual budget. This arrangement ensures that the building is regularly inspected and generally well cared for on an ongoing and proactive basis.

While the repair and maintenance programme is evidently predicated on a detailed and prioritised schedule, the thrust of the programme appears to concentrate on the service installations and other 'non-historic' works such as improving security, replacing lifts, enhancing signage, upgrading toilets, and redeveloping public and staff areas. The £25,000,000 maintenance backlog is largely attributable to the potential renewal and reconfiguration of the vast areas of mechanical plant spread over two floors of the present building.

Where work has been identified in relation to the historic fabric itself – such as essential roof repairs and repointing of brickwork – this would be managed by Tate's central Estates Team, based in London, who are responsible for Tate Liverpool as well as Tate Britain, Tate Modern, and Tate St Ives. This team is responsible for engaging and managing appropriately skilled architects, consultants, and contractors.

10.9 Abbey Pumping Station

Information

Museum location: Leicester

Museum type: Local Authority

Annual visitor numbers: 48,000

Employee numbers: 5 staff, 140 volunteers

Number of heritage assets: 1

Type of heritage assets:

- Grade II (Building): Abbey Pumping Station, former sewage works pumping station

Current maintenance backlog value: £40,000

Length of time that this backlog has existed (months): 3

Description of the listed assets

Late-nineteenth-century pumping station. Rectangular building of two storeys, red brick with stone dressings and a slate hipped roof with tent-shaped roof light at the apex. Brick angle pilasters with a projecting cornice and triglyphs in the frieze. Central pedimented stone doorway flanked by semi-circular bay windows with cornices and parapets. At the first floor, three three-light windows with pilasters, console brackets, and a frieze below. On the interior, decorated iron supporting columns. The main

building contains the four beam engines. To the left there is a lower extension, to the right a detached brick chimney with decorative stone band and stone cornice; this stands on a square pedestal with stone entablature.

History

Building History

- 1891: built as a pumping station
- 1964: ceases sewage operations
- 1972: reopens as a museum

Institutional History

Abbey Pumping Station was operational between 1891 and 1964, pumping sewage to a treatment works at Beaumont Leys. The beam engines were built locally and are rare surviving examples which have been restored to full working order; they are in steam approximately once a month. The station was re-opened as a museum in 1972 run by Leicestershire Museums (and Leicester City Council since 1997). In addition to the beam engines themselves, the technology-related collections are eclectic and include transport, domestic, and film-related exhibits as well as educational information about water and sewage. The adjacent National Space Centre (2001) is by nature also a science and technology related museum, acting as a continuation of Abbey Pumping Station's themes.

Key challenges as identified by the museum

Funding: The museum has been successful in securing grants for work in the past, but it does recognise that accessing funding is difficult, especially for any works over and above maintenance. Although the museum receives funding from the Local Authority, its maintenance budget is not ring-fenced and the museum believes that having a long-term costed and funded management plan would be of benefit.

Assessment

The main pumping station building along with its machinery, is very much the focus of the museum collection itself – indeed, it is effectively its prime exhibit. It was found that the condition of the building stock was generally sound, and matched the museum's perception of the state of the historic fabric. It would appear that the care of the property is predicated on a structured quinquennial inspection programme and maintenance plan prepared by suitably experienced consultants.

However, it was noted that both recently completed works and imminent future capital works tend to concentrate on more peripheral aspects of the museum's estate – such as external landscaping/play areas, grounds development, boiler replacements and security measures – rather than on core repairs to the historic fabric. Nevertheless, it must be recognised that some of these issues, particularly with regard to the likes of enhancing

accessibility, combatting vandalism, and improving heating, will all contribute significantly to the long-term well-being of the building stock as a whole.

11. KEY FINDINGS AND ACTIONS

"If funders understood we need the building work to do our job they might make it easier"

Independent, North West

The majority of museums are in need of some form of repair and maintenance, but it is not always possible to accurately determine the type, scale or cost of works needed.

- Around half of all museums surveyed report serious maintenance issues**.** Only 4% state their museum to be in a structurally sound condition with no issues.

- However, just over half of respondents have not had (or are unaware of) quinquennial inspections. Most museums tend instead to conduct informal condition assessments, either on an annual basis, or via weekly or monthly checks undertaken by in-house staff or volunteers.

- This strong reliance on informal assessment is problematic where museums do not have the skills and knowledge in-house to produce a reliable diagnosis of any issues, assess their severity, and decide how to tackle them. In particular, they find it difficult to prioritise corrective action – especially in the face of competing pressures such as aiming to boost visitor numbers.

- Museums report difficulties with undertaking formal, condition assessments (i.e. conducted by an external expert) because of a lack of budget and/or in-house skills and experience.

Financial pressures on museums appear to be severe, with most saying that funding is insufficient to maintain listed estate.

- Funding is not always adequate, with some museums finding it very difficult to access dedicated funding for maintenance of their listed estate.

- Over half of respondents rely on fundraising or grants for income, as their main income sources (e.g. Local Authority funding, commercial revenue) are not enough on their own.

- Funding is not straightforward. Many museums obtain monies from multiple sources, and it is not always ring-fenced or guaranteed from one year to the next. This is a particular issue for Local Authority museums, which often reported having to compete for maintenance funds against the Local Authority's other priorities.

- While there is a heavy reliance on grant funding, this process is not simple either. Respondents say it is difficult to identify grants specifically for maintenance of listed estate. Other issues relate to the time it takes to apply for funding via complex bid applications – especially if that bid is unsuccessful. There is a small number of sources offering large-scale sums of money, but most potential funders offer only smaller amounts – thereby increasing the time and effort needed to apply for sufficient monies to undertake more complex works. Access to grant funding is reported as the second biggest issue faced by museums trying to maintain their listed estate.

- There also appears to be a general lack of awareness of the diverse sources of funding. The range of funding sources is quite broad – there are numerous individual charitable trusts for example. Moreover, despite widespread belief to the contrary, many museums have been able to secure grants for repairs and maintenance without the need to package them in larger, more 'glamorous' proposals. However, many museums lack the time or resources needed to identify and apply for grants where there is no guarantee, or reasonable expectation, of their application being successful.

There is a large maintenance backlog

- Around two thirds of museums surveyed say they have a maintenance backlog. Of those museums able to quantify the extent and value of the backlog, its value ranges from £150 to £25,000,000. The average per museum is £100,000.

- **The total estimated value of the maintenance backlog for the sample museums alone exceeds £47 million.** This may be an underestimate given not all museums were able to quantify a value of works.

- Based on the extrapolated research findings, the **estimated total backlog is £337.5 million.**[38]

- By contrast, a quarter of respondents have secured funding to carry out works over the next five years – amounting to around £6 million in total. As such, there is a **substantial gap** between committed funding, and the cost of works that need to be undertaken.

- Over three-quarters of respondents say that lack of budget is the biggest issue for maintaining their listed estate.

- The scale of this problem is huge, and larger than previously thought. Museums say their budgets do not always allow for the backlog to be addressed, resulting in on-going deterioration over time. This can have substantial impacts, for

[38] This total is based for the total population of Accredited museums in England.

example by diminishing the visitor experience and potentially creating environments which are harmful to both collections and people.

- The types of repair and maintenance deemed to be of highest priority are:
    - Making buildings watertight: work on roofing, gutters, pointing, window repairs.
    - Building services, ensuring efficient and working boilers and heating so they can control the environment.

Competing pressures jeopardise maintenance of listed estate

- A third of respondents say insufficient funding leads to failure to tackle all required maintenance. Often, a focus on increasing visitor numbers and improving public engagement takes priority. Maintenance is the first casualty when budgets are cut, particularly with the visitor experience in mind e.g. if a part of the estate that requires repair is out of visitor sight, it tends to be neglected.

- The 'competing pressures' identified by museums are the typical factors that funders would look for in a bid.

- This focus on quick wins to increase footfall is clearly distracting attention from long-term security that comes from ensuring the estate is well maintained.

There are pros and cons of relationships with Local Authorities

- Where the relationship is strong, and underpinned by appropriate expertise, knowledge and good communications on both sides, there can be many advantages. For example, museums can access surveyors, a wide pool of buildings maintenance contractors, procurement and planning professionals. It can also provide a certain degree of security when it comes to funding arrangements.

  However, it does not always work as well as it could.

- Funding arrangements can be more complex and less certain for Local Authority run museums. Budgets may vary from one year to the next – if an urgent requirement emerges in another department, for example, monies which had been ear-marked for what they deem "non-urgent" museum maintenance may be re-allocated elsewhere.

- Procurement arrangements can also be problematic: they can be slow and bureaucratic; be limited to certain contractors that do not necessarily have heritage skills or knowledge; they can prioritise price over quality. Many

respondents point to in-house policies which prioritise cost over quality, effectively preventing them from sourcing the most skilled and capable contractors to carry out repair and maintenance to their listed estate. In some cases, in-house or local tradespeople are commissioned to carry out the works – but they have limited or no experience of heritage/listed buildings. This creates a risk that poor-quality work is carried out which at best needs to be corrected in due course, and at worst, causes actual damage to the building. Several respondents stated that part of their backlog is for corrective works, such as replacing mortar pointing.

- There is also evidence of lack of responsiveness to internal museum perceptions of priorities, lack of clarity as to who takes accountability for identifying and undertaking maintenance and diminishing funding overall due to budgetary pressures.

Skills and expertise available to museums are highly varied, with no strong culture of upskilling via investment into training.

- There are very varied levels of skills and expertise in building maintenance, as may be expected of a diverse sector with a mix of employed staff and volunteers. In many cases, volunteers are a vital source of expertise that could not be afforded through any other means. However, many of the skilled individuals currently volunteering in museums are over retirement age and museums are concerned that there is insufficient pipeline to replace these skills.

- There is no guarantee that all museums can retain their in-house skills and knowledge; few respondents have attended training or sent their staff on training courses. Nearly 70% of respondents rely on knowledge sharing in-house i.e. informal approaches to building skills and knowledge, which is developed and strengthened over time rather than embedded through formal or accredited means.

- Again, budgetary and time constraints are the main barrier for training.

- More than half of respondents do not record good practice in maintenance of their listed estate, and 59% say they have no policies or documentation to provide guidance on the matter. Respondents appear open and willing to engage with guidance/networks and other sources of good practice but are looking for more support to help them access and make use of such information.

- There are concerns that there are not enough new entrants to the museum sector, so there is a risk that skills and expertise developed over many years will be lost as staff move on or retire.

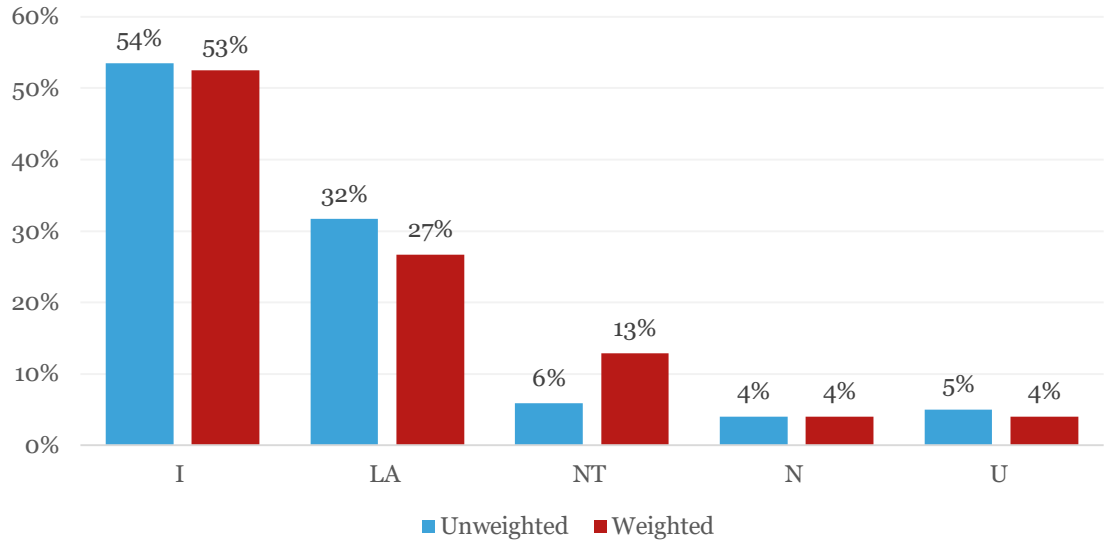
Problems are expected to get worse

- Nearly half of respondents say they expect the challenges they face to become more severe over the next five years.

- While not all museums will experience issues in the same way (for example National Trust museums report a more positive picture in comparison with other museums), the evidence points to on-going inadequate funding leading to inadequate staffing, consequent lack of access to specialist expertise, with resulting poor diagnosis of problems and lack of advocacy for getting funds.

APPENDIX: RESPONDENT PROFILE

Figure 36: Museum type



Of the 11 museums whose governance structure has changed in the last 5 years, two thirds were previously independent, and the remainder were previously Local Authority controlled.

Figure 37: Location of museums by region

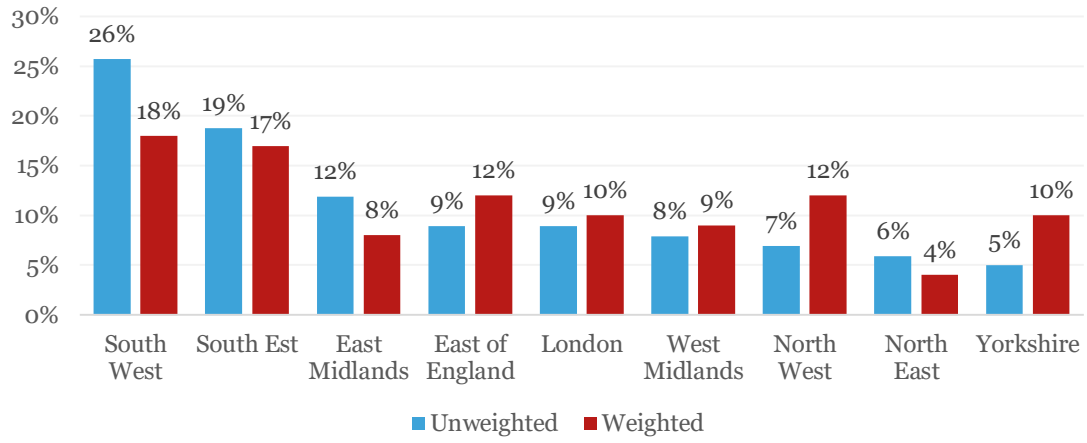


Figure 38: Statutory designations of museums' listed estates

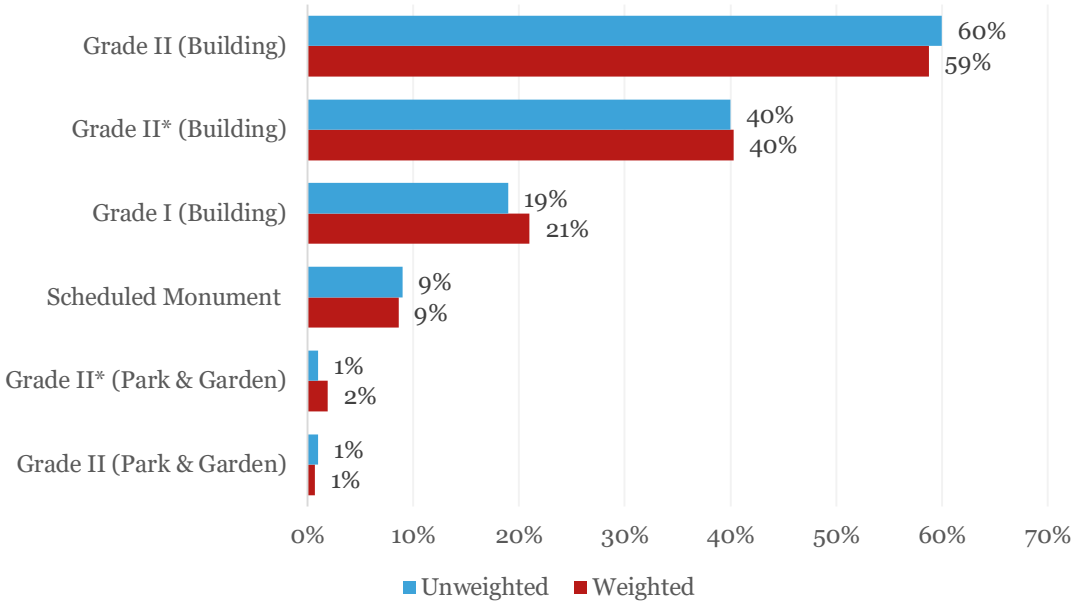


Figure 39: Collection type

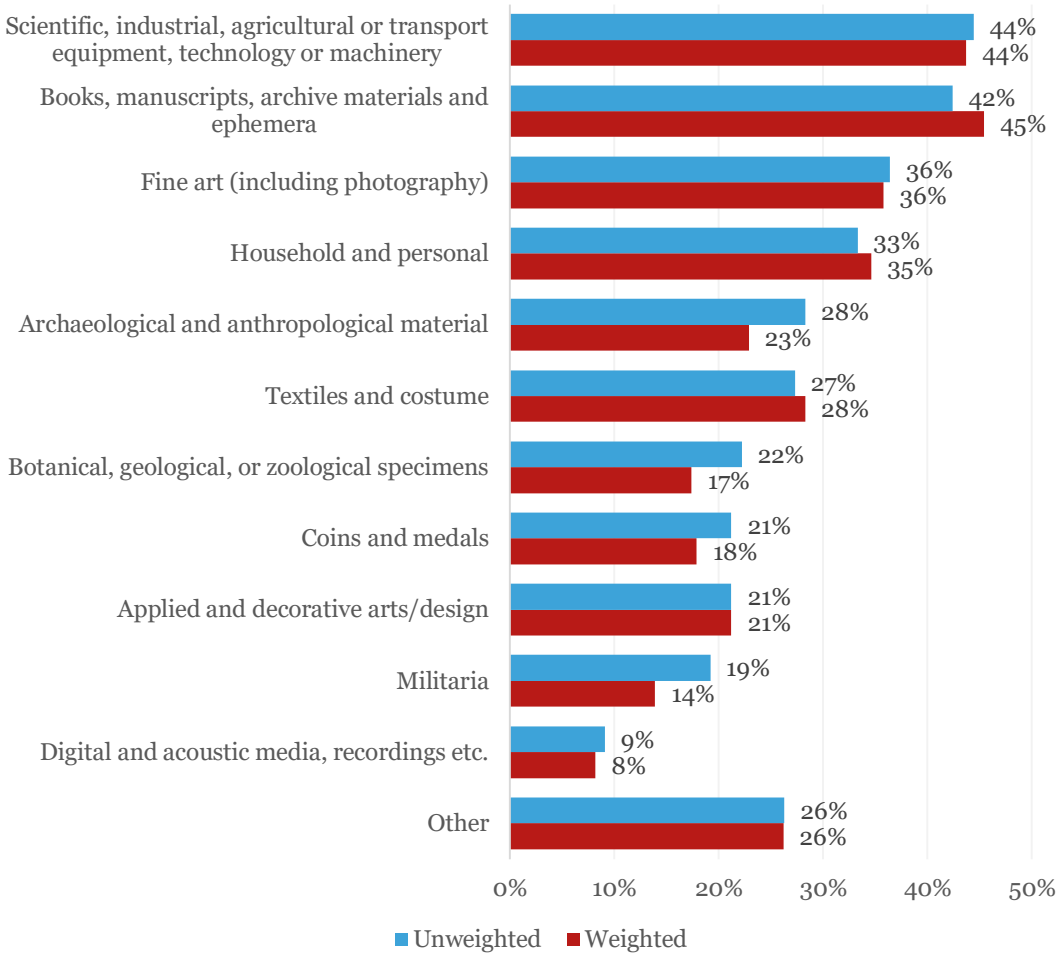


Figure 40: Whether the museum charges admission fees