Preservation Advisory Centre

Knowing the Need
Optimising preservation for library and archive collections

Caroline Peach and Julia Foster
February 2013
The library and archive collections of the UK and Republic of Ireland are resources which inspire creativity and innovation. They are used in a multitude of guises to generate new knowledge: to drive business and for personal research into family history, to document society and to support thousands of students and academics in their studies. Increasingly they are available in digital as well as physical form. Independent of format, the challenge for organisations responsible for these resources is to ensure their availability over time whilst encouraging continuous use.

This report provides evidence of the way in which physical library and archive collections in the UK and Republic of Ireland are currently cared for. The amalgamation of 86 collection assessments, encompassing the richness of university, publicly funded, and special library and archive organisations, provides an opportunity to step back from the daily pressures of managing these collections individually and take a strategic view of preservation. It is a chance to appreciate what is done well but it also provides a catalyst for thinking about new ways to manage the long-term use of collections. It is particularly important to understand how the use of collections is changing. The increased demand, and indeed expectation, that collections be available to use digitally have profound implications for the way collections are preserved.

This report encourages a review of individual preservation strategies and their application in the light of knowledge about the use and significance of collections. It argues that in times of austerity we must be ever-more sophisticated in our application of techniques and should seek to use our knowledge of ‘the need’ to optimise preservation for the benefit of current and future users of the tremendous assets in our care.

Deborah Novotny
Head of Collection Care
The British Library
February, 2013
Knowing the Need is a report on the state of preservation management of physical library and archive collections in the UK and Republic of Ireland. It draws together the results of 86 Preservation Assessment Surveys (30 on library collections and 56 on archive collections) carried out between 2006 and 2011. The survey collects information on cataloguing status, demand levels, condition and usability, the value and importance of the collections, and existing damage. It assesses the preservation strategies in use to ensure the long-term availability of the collections, including the provision of good storage, environmental management, handling practices, emergency planning, security and preservation surrogacy. Collectively the results from these surveys provide a strong body of evidence from which to appraise practice and make recommendations for the changes that are necessary to improve standards of care.

In the period 2006 – 2011 the landscape in which libraries and archives operate changed profoundly. There were changes in strategic leadership, financial operating context, attitudes towards energy consumption (and costs thereof), the use of collections, the expectations of how collections are made available, and the nature of the collections themselves. This combination of events, together with the certain knowledge that the rate of change will not slow, makes a reappraisal of current preservation strategies, and the way in which they are applied, critical.

In 2006 the first Knowing the Need report drew together statistical evidence on preservation needs for the first time. A further five years of data, collected using the same assessment methodology, puts us in an enviable position. We have the opportunity to reflect on progress since 2006, to analyse how preservation needs have changed, to re-evaluate priorities and to introduce improvements which will optimise the application of long-term preservation strategies.

This report can be used to:
- provide statistical evidence of strengths and weaknesses in preservation practice based on the findings from 86 collections;
- benchmark the activities of individual organisations against the report findings;
- identify areas of practice in which organisations can work together;
- provide context for funding organisations seeking an overview of the challenges in caring for library and archive collections;
- raise the profile of preservation in the UK and Republic of Ireland.

The British Library Preservation Advisory Centre is using the findings in this report to target its own resources to improve preservation practice in the areas of identified need. The Centre’s guidance information, preservation management services and training programme are all being reviewed to better support organisations to make informed decisions about the long-term care of collections.

Many of the next steps identified in this report depend on organisations working together. A conference is being held on 1 March 2013 at the British Library to highlight the report findings and place them within the context of complementary projects and research. Organisations with the responsibility for collections, as well as those that represent, fund, guide, work alongside and lead collecting organisations are encouraged to join the debate and contribute to a programme of activity to improve the application of preservation strategy for the benefit of current and future users.

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1. The Preservation Assessment Survey is a sample survey methodology for assessing access & use, significance, usability, preservation practice and damage of collection items.
3. Information on the conference is available at: www.bl.uk/blpac/ktnconference.html
The collective survey results provide an overview of how the collections are used and valued, enable the identification of common strengths and weaknesses in preservation management, and give an indication of the extent and type of damage that exists. The statistics show that there is much good practice in place, but also allow us to readily identify the areas in which improved practice is needed to ensure the long-term usability of collections.

The data set for these results includes 35,216 records from 86 surveys from 74 organisations. These surveys alone are thought to represent collections totalling more than 50 million items.

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### Use

- 8% of items surveyed are in high demand
- 25% of items surveyed are in medium demand
- 67% of items surveyed are in low demand

### Significance

- 66% are unique or likely to be the only copy in the UK and Republic of Ireland
- 72% are part of the national documentary heritage
- 82% are of special value and importance to the organisation

### Retention plans

- 15% will be retained indefinitely in original format and a surrogate will has been created
- 82% will be retained indefinitely in original format only
- 1% will be retained indefinitely in surrogate format only
- 2% will not be retained beyond immediate usefulness

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4 See Appendix for methodology.
The statements below relating to aspects of preservation management (handling, storage, environmental management, security, fire and emergency control) are taken from the Preservation Assessment Survey guidelines. They describe ‘adequate’ practice and are designed to indicate a common level of acceptable care for library and archive collections.

Cataloguing
- 71% of the items surveyed are catalogued or listed
- 36% of the items surveyed have a catalogue record that can be accessed online

![Figure 4. Remote access to catalogue](image)

Handling
- 83% of items surveyed are protected by safe handling procedures and reading room aids (such as book supports)

![Figure 5. Handling practice](image)

Storage
- 59% of items surveyed have adequate storage practices in place

Preventive measures are taken to protect items from hazards; good housekeeping is routinely carried out; items are stored at least 150mm off the floor; shelves and other storage units are suitable for the item

![Figure 6. Storage](image)

Environmental management
- 38% of items surveyed have adequate environmental management practices in place

Relative humidity and temperature are routinely monitored and usually fall within the levels recommended in BS5454; visible and ultraviolet light are controlled.

![Figure 7. Environmental management](image)

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6 BS5454: 2000 was replaced in April 2012 by the guidance PD5454: 2012.
Security

• 83% of items surveyed have adequate security practices in place

An assessment of security risks has been undertaken and steps have been taken to redress any inadequacies.

Fire detection and suppression

• 87% of items surveyed are protected by automatic fire detection systems and appropriate, well maintained suppression systems

Emergency control

• 62% of items surveyed are covered by an up-to-date written emergency control plan with staff trained in its implementation

Condition and usability

• 89% of items surveyed are stable
• 11% of items surveyed are unstable

Stable collections are those which can continue to be used without sustaining further damage (good condition and fair condition).

Unstable items need immediate action to enable continued use without further damage (poor condition and unusable condition).

Damage

• 63% of items surveyed show some form of damage

Physical damage is the most widespread form of damage. It affects 47% of bindings (of which 10% is significant damage) and 53% of the body of items (of which 7% is significant damage).

Other prominent damage categories are chemical damage, affecting 42% of the body of items and brittle paper, affecting 31% of the body of items.

For a description of damage categories and the guidelines given for their assessment, see the Preservation Assessment Survey for Libraries and Archives: User’s guide, 2013. www.bl.uk/blpac/paslib.html
Summary of needs

The statistics show that the majority of library and archive collections are well cared for and in a stable condition. There is widespread good practice in handling, security and fire protection. However, cataloguing levels need to be improved, realistic decisions about the proportion of catalogue records that can be made available online need to be made, and preservation practice in the areas of storage, environmental management and emergency control planning needs improving.

The sheer scale of library and archive collections in the UK and Republic of Ireland is so great that, where there are weaknesses, the needs are significant. The 86 surveys contributing to this report are alone estimated to represent over 50 million items. So when considering that 29% of collections do not have a catalogue record/listing, this approximates to 14.5 million items. Similarly 41% of items without adequate storage becomes an alarming estimate of 20.5 million items.

There are cataloguing backlogs to be addressed and there is a need for greater online access to catalogues.

A catalogue record or listing is an essential pre-requisite for use. Increasingly, users regard items as invisible if the catalogue record is not available online\(^8\). Online catalogues (particularly union catalogues) can be used to inform retention decisions\(^9\) or digitisation strategies.

- Improvements in collection storage are required.
- Improvements in environmental management are required.
- Improvements in emergency control planning are required.

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\(^8\) Uncovering Hidden Resources: progress in extending the coverage of online catalogues. Research Information Network, 2007.


\(^10\) See the UK Research Reserve project. www.ukrr.ac.uk/
It is tempting to think that we have got the preservation of physical library and archive collections under control, particularly when faced with uncertainties in how to manage the preservation of digital collections. In some respects this is true. There is a good understanding of how the physical materials deteriorate and what can be done to slow deterioration down. This section analyses the data in greater detail, seeking answers to the questions:

- If the measures to slow down deterioration or damage are not in place, why are they not in place?
- How do we optimise the application of preservation strategies?

If the measures to slow down deterioration or damage are not in place, why are they not in place?

The key findings show that there are three distinct areas of preservation practice where significant improvements could be made. These areas are:

- storage
- environmental management
- emergency control planning

A comparison of the data from 2006, (the first Knowing the Need report) with that from 2012 shows that these areas were also the priority areas for improvement for the collections surveyed between 2000 and 2005 (Figure 13).

![Comparison of results from 2006 and 2012](image)

The fact that there is little variation in the results from 2006 and those from 2012 suggests widespread and long-standing difficulties in meeting ‘adequate’ practice (as described in the key findings). By reviewing the individual survey responses, it is possible to draw out common reasons for respondents failing to meet the assessment criteria.

Storage

The most common weakness is the absence of good housekeeping procedures such as vacuuming and shelf-cleaning. This is corroborated by the finding that 50% of items are recorded as ‘dirty’. Surface dirt exacerbates other problems such as mould and pests, it is bad for the health of staff and users, and it is potentially damaging to the reputation of the organisation. Targeted, planned activity is a very effective approach to maintaining good standards of cleanliness.\(^\text{11}\)

Environment

It is becoming more common for organisations to monitor the environment. However, controlling that environment to acceptable levels still proves challenging. With respect to parameters for temperature and relative humidity, the Preservation Assessment Survey criteria is that ‘levels in the area in which the item is normally kept usually fall within the ranges recommended in BS 5454:2000’\(^{12}\). The release of new guidelines for managing environmental conditions for cultural materials\(^{13}\) and for the storage and exhibition of archival materials\(^{14}\) provides the opportunity to refocus attention on environmental management in a way which is practical and achievable. These new guidance documents encourage a better understanding of the material characteristics of collections so that environmental parameters can be targeted appropriately. They also allow for seasonal fluctuations in temperature and relative humidity, and encourage an energy efficient approach to managing the environment.

Emergency control planning

For the area of emergency control planning, comparing the results from 2006 to those of 2012, (Figure 13), shows that some progress has been made (62% ‘adequate’ compared to 53% in 2006). However, 38% of the collections surveyed still do not meet the Preservation Assessment Survey criteria for emergency control planning. The reason for this is that whilst, in many cases, organisations now have a written emergency plan, very commonly they do not have staff trained in its implementation, or the plan has not been communicated throughout the organisation. A further common observation is that although many organisations now have corporate emergency plans, frequently collections do not feature in them. This is frustrating given that resource has clearly been invested in this important area of preservation management. The investment is of very limited ongoing value if staff are not confident in their ability to put the plans into practice and if approaches to emergency control planning are not holistic and well-communicated. The regular review of plans and practical sessions on their implementation are vital. Support exists in this area, from the British Library Preservation Advisory Centre and other organisations.

Different needs of libraries and archives

A sub-sample of 25 surveys was analysed to enable a broad comparison of practices in archive collections and library collections. This stratified analysis provides an indication of different priorities for the two types of collection. Storage conditions can be seen to be a greater concern for archives than libraries; whereas environmental practice is an area in which libraries perform less well than archives (Figures 14 and 15).

Storage

<table>
<thead>
<tr>
<th></th>
<th>Library</th>
<th>Archive</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>73%</td>
<td>13%</td>
</tr>
<tr>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 14. Storage conditions: comparison of archive and library collections

\(^{12}\) BS5454: 2000 Recommendations for the storage and exhibition of archival documents for many years provided a useful point of reference for environmental management alongside other aspects of preservation management. As the available standard for the period covered by these surveys, it was referenced in the PAS description of preservation measures.

\(^{13}\) PAS198: 2012 Specification for managing environmental conditions for cultural collections.

\(^{14}\) BS5454: 2000 was replaced in April 2012 by PD5454: 2012 Guide to the storage and exhibition of archival materials.
Environment

<table>
<thead>
<tr>
<th>Environment</th>
<th>Archive</th>
<th>Library</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>89%</td>
<td>22%</td>
</tr>
<tr>
<td>80%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40%</td>
<td></td>
<td></td>
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<tr>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Inadequate
- Adequate

Figure 15. Environmental practice: comparison of archive and library collections

It is difficult to make broad statements about the reasons for these differences but analysis of individual survey returns shows that library collections are more often held in historic buildings (or buildings which were not constructed for the purpose of providing good storage conditions for collections), while archive collections are more likely to be stored in purpose-built repositories. Using adapted buildings can present difficulties in controlling the environment. In terms of storage, the challenge of providing suitable primary protection (e.g. shelving) can be more problematic for archives than libraries as they tend to hold a more diverse range of formats and sizes.

How do we optimise the application of preservation strategies?

1. **Prioritise according to condition and usability**

The impact of poor preservation practice, such as poor storage and environmental practice is greatest on those materials that are already vulnerable. The condition and usability assessment showed that 12% of items surveyed are currently unstable (i.e. cannot be used without sustaining further damage) whilst 88% are stable. The categories for assessment are shown in Table 1.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
<th>Percentage</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Robust and stable – usable for any purpose</td>
<td>54%</td>
<td>Stable</td>
</tr>
<tr>
<td>Fair</td>
<td>Disfigured or damaged, but stable – can still be used with extra care and attention</td>
<td>34%</td>
<td></td>
</tr>
<tr>
<td>Poor</td>
<td>Shows signs of deterioration – use will cause further damage</td>
<td>9%</td>
<td>Unstable</td>
</tr>
<tr>
<td>Unusable</td>
<td>Completely unsuitable for production to users – so fragile and damaged that it is likely to suffer further if handled</td>
<td>3%</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Condition and usability categories

The vulnerability of collection items to continued use provides one method of prioritising preservation action. The results of the condition and usability assessment on the 86 collections included in this report (representing in the region of 50 million items) give an estimated figure of six million items being ‘unstable’ in these collections alone.
For this high risk group of items, preservation strategies include:

- Slowing further deterioration by implementing good storage conditions and environmental management.
- Providing suitable protective (secondary) enclosures such as boxes and folders.
- Ensuring good handling procedures are in place.
- Creating a surrogate of the vulnerable item for use instead of the original.
- Carrying out interventive conservation so that the item can be used without further damage.

We can use the data from the surveys, 2006 – 2011 to look at the correlation between the preservation strategies listed above and the condition and usability status of collection items. The graphs below (Figures 16 – 20) show how practice varies with condition.
With the exception of handling practices, Figures 16 to 20 show that there is little to no variation in the preservation measures in place when correlated against the condition/usability status of an item, i.e. we do not appear to change our approach to preservation in response to the condition and usability of items. We do not place those items that are unstable in areas where the storage or environment is better, they are not more likely to be boxed, nor are they more likely to have a surrogate for use instead of the original.

Of course, one of the main reasons for organisations commissioning a Preservation Assessment Survey is to establish priorities and to collect the evidence that informs future preservation planning. So it is perhaps harsh to focus on the lack of discrimination in the way that preservation management strategies have been applied as evident in these results. These organisations know that priorities must be established if they are to make an impact on what is currently described as ‘unstable’ material and by carrying out a Preservation Assessment Survey they are able to identify their priorities and maximise the impact of their preservation strategy. But how many other organisations take steps to tailor their strategies to the identified needs of their collections? How many organisations know the condition and usability status of their collections? These are fundamental questions. Blanket improvements are of course welcome, but in the current operating context they are unrealistic except in the most urgent of cases. Targeted improvements offer a solution. At worst they mean that swift action can be taken to address the needs of the most vulnerable items to ensure their continued usability. At best, the targeting of resources according to condition and usability allows long-term programmes to be established to gradually improve both standards of care and the physical condition of items.
2. Prioritising according to demand

To a certain extent prioritising action on the basis of condition and usability is reactive. It acknowledges existing vulnerability (often due to damage) and takes steps to prevent that damage from becoming worse. In the context of libraries and archives where the ability to use and reuse collections is critical, it makes sense to be more proactive in our application of preservation strategy. We should understand how collections are used and look to demand levels as an indicator of where to invest to prevent future damage and how to maintain the current ‘fair and good’ condition of library and archive collections. The stratified results suggest that this approach would be of particular value to archive collections as these contain a greater proportion of material in ‘fair’ condition (Figure 21), and unsurprisingly also a higher proportion of damaged material (Figure 22).

The level of demand has a significant impact on the ongoing usability of vulnerable items. Combining results on condition and usability with those on demand shows that little concession is made to the condition and usability of material in terms of the amount of use it receives: 35% of poor and 31% of unusable material is in medium or high use (Figure 23).
Fortunately, the number of items involved is relatively low, just 1,343 items (or 4% of the total number of items surveyed) are in poor or unusable condition and yet are in medium or high use. This is where the value of analysis of the data lies. Focusing preservation effort on items in high demand and poor condition/usability becomes achievable – the scale is such that even time-rich strategies such as interventive conservation are realistic.

The principal threats associated with high demand are wear and tear (physical damage), security and dissociation. Preservation strategies to mitigate against physical damage for items in high demand include:

- Ensuring good handling procedures are in place.
- Creating a surrogate of vulnerable items for use instead of the original.
- Conservation treatment appropriate to proposed use.

The survey results show good levels of both awareness and practice in terms of handling and security. Turning then to surrogacy as a strategy for mitigating the effects of high demand, it is interesting to note that despite wide-spread microfilming programmes in the 1980s and 1990s, only a small proportion of the surveyed items have a surrogate available for public use (Figure 24).

![Figure 24. Surrogate availability](image)

Is this an indication of the level of existence of surrogates, or a reflection of the proportion available for public use? Or does it indicate that catalogue records do not show that a surrogate exists? To a certain extent it is a moot point given that a surrogate only performs a valid preservation function if it is available for use in place of the original.

Correlating ‘condition and usability’ with the existence of a surrogate (Figure 25), and ‘demand’ with the existence of a surrogate (Figure 26) shows little variation in the availability of a surrogate as either condition and usability, or demand changes. It points to the conclusion that decisions made about creating surrogates are made independently of the condition of the original and largely independently of demand for the original.

![Figure 25. Surrogate availability compared with condition and usability](image)
What does this mean in terms of surrogacy as a preservation strategy? It indicates that surrogacy is not being used effectively to enable, or in fact increase, access to items which are physically vulnerable and in heavy demand.

Referring back to the data on retention plans (Figure 3), of the items surveyed, 15% are to be retained indefinitely with a surrogate available. If only 6% of items have a surrogate, applying basic arithmetic implies that 9% of items will therefore need to have a preservation surrogate created to meet retention plans. For the survey sample this equates to 3,169 items: extrapolated to the total collection the survey sample represents (50 million items) gives a figure of 4.5 million items to be surrogated.

The time is right to re-examine surrogacy as a preservation strategy. Organisations have moved, or are moving from using microfilm for surrogacy to digital objects. The benefits of increasing access through digitisation are clear. The benefits in terms of preservation are blurred. Certainly the presence of a digital copy can relieve demand on original objects, though there seems to be an equal weight of anecdotal evidence to suggest that digital availability can also increase demand to see an original. What do we require from a digital surrogate? Are the requirements different to the specification when digitising purely to achieve wider access? What are we prepared to commit to in terms of the longevity of the digitised object and the original object? These are all questions to be answered as part of a review of the role and form of preservation surrogacy.

3. Preservation Priority Profile

The preservation priority profile in Figure 27 gives an overview of the distribution of priorities for the 86 collections surveyed.

The preservation priority profile is created by combining data on use, accommodation, condition and significance. The factors identified in the ‘collection assessment’ part of the Preservation Assessment Survey (demand, handling, storage, protection, environment, security, fire, emergency planning, condition and usability, and significance) are weighted according to their impact on the preservation of the collection. The scores (weighting) were devised by the project board of the ‘Model for Assessing Preservation Needs in Libraries’\(^\text{15}\). Each item surveyed generates a score ranging between 1 and 100. These scores are grouped into five preservation priority bands (PPB), with band 1 representing items of very low preservation priority and band 5 items of very high preservation priority.

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For the 86 aggregated surveys, the distribution of the items over the five preservation priority bands is shown below (figure 27).

<table>
<thead>
<tr>
<th>% of Items (rounded to the nearest whole number)</th>
<th>Very low priority</th>
<th>Low priority</th>
<th>Medium priority</th>
<th>High priority</th>
<th>Very high priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>56</td>
<td>33</td>
<td>5</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Figure 27. Preservation priority profile

The overall picture shows that 63% of the library and archive collections surveyed fall into the low or very low preservation priority bands. That is to say, the way they are looked after and their existing physical condition means that they are at low risk and no significant changes in their management are needed.

Only 69 of the 35,216 items assessed (0.2%) were considered to be a very high priority. However, 38% (13,137 items surveyed) are a medium or high priority. It is the items in the medium and high categories that will benefit most from the improvements in preservation practice that have been identified throughout this report and that are at greatest risk from increased use, or any deterioration in practice.

Whilst we should be proud of the fact that the majority of the collections are stable and well cared for, we must be alert to the proportion of the collections for which action must be taken to enable continued use. Preservation is an active set of processes, the goal of which is to slow deterioration and prevent damage. The processes and their application can be prioritised and individual collection managers should seek an understanding of their collection that enables them to make these judgements to best effect.
Based on the evidence presented in this report it is recommended that future action to improve the long-term usability of collections should focus on three areas.

1. Organisations must gain a greater understanding of their collections, in particular:
   - The materials, their vulnerability and tolerances.
   - Demand levels taking into account any future programmes to increase use.
   - Existing condition and usability.

   In order to optimise the application of preservation strategy those responsible for the care and management of collections must know what the collections are and how they are used. There is therefore a need for improved levels of cataloguing, clear statements about retention plans, collection mapping of materials and condition, and an understanding of demand.

2. Weaknesses in preservation practice in the areas of storage, environmental practice and emergency control planning should be addressed.
   - Routine preservation housekeeping activity, particularly cleaning of storage areas and appropriate storage furniture for diverse collection items should be in place.
   - Organisations should capitalise on the opportunity presented by the release of new guidelines to improve environmental practice, to target improvements towards items in greatest need, and to achieve greater energy efficiency.
   - Emergency control plans should be regularly reviewed and staff trained in their implementation.

3. Surrogacy should be re-examined as a preservation strategy.
   - Clarity must be achieved on the application of surrogacy as a preservation strategy (e.g. to address brittle paper problems, mass re-binding requirements) alongside other preservation strategies (e.g. mass deacidification).
   - Clarity must be achieved on the requirements for a digital object to act as a preservation surrogate.
   - Existing centralised resources listing the availability of surrogates should be investigated. Their existing use and their potential to inform surrogacy and digitisation programmes should be understood.

The British Library Preservation Advisory Centre provides the means for some of these next steps to be taken immediately. It provides free guidance information on the topics of cleaning, environment, storage furniture, and salvage to name a few. For those requiring greater levels of support, the Centre also provides workshops and training, including sessions on emergency response (www.bl.uk/blpac).

Subject to funding and a sector-wide willingness for collaborative working, the Preservation Advisory Centre could:
   - Provide guidance and training on understanding and implementing new environmental guidelines.
   - Work with groups of organisations to address local training needs or initiate regional programmes.
   - Carry out research into the cost-benefit of employing different preservation strategies.
   - Coordinate a strategic approach to the use of digital objects as preservation surrogates.

There is also a body of work to be done on sharing existing good practice, resources and examples of collaborative initiatives. The Preservation Advisory Centre is well placed to highlight this good practice and has already taken steps to meet this need through a review of its website and the changes needed to improve communication and the sharing of resources.

A conference on 1 March 2013 at the British Library provides the first opportunity to discuss these findings and assess the willingness of organisations to work together to improve the preservation practices in place to ensure the long-term use of library and archive collections.
Conclusion

The library and archive collections of the UK and Republic of Ireland are extensive. The evidence presented in this report is based on 86 surveys from 74 institutions and shows that most of the collections are stable and well cared for. The benefit of comparing data collected using a standardised methodology is that it enables the identification of common areas of weakness in practice. Analysis of the data suggests that preservation strategies are often not applied in a way that seeks to maximise their potential to mitigate the risks associated with use or existing poor condition of items.

The optimisation of preservation strategy should be our goal. At the beginning of the 21st century we know how to care for physical library and archive collections but we are not always able to put all the necessary measures in place. Sometimes this is because of financial constraints, sometimes it is because of scale, sometimes it is due to a lack of skills and knowledge. What this report advocates is that through being more selective in our improvements to preservation practice we can have a greater impact on the long-term usability of collections.

By using the existing services of the British Library Preservation Advisory Centre and others we can take immediate action to achieve ‘quick wins’ in areas such as emergency response training. With relatively little investment we can made great strides to improving sustainable environmental management. Recently published guidance (PAS 198: 2012) proposes a tailored and energy-efficient approach to setting environmental targets. The Preservation Advisory Centre will work with other organisations to communicate the benefits of this approach and ensure access to resources and case studies which will help organisations to put the guidance into practice.

In other areas of practice, there needs to be more thought, and a willingness to work together to better understand the issues and create joint solutions. For example, digitisation offers a preservation strategy very different from the surrogacy options of the past. This needs to be investigated: are there common goals? Can connectivity provide a virtual collection of surrogates? What does this mean for individual institutional retention strategies? A significant amount of work has already been carried out in this area by individual organisations; and there is real opportunity for collaborative working to build upon this to provide a coordinated approach to the creation and maintenance of preservation surrogates.

A conference in March 2013 at the British Library provides the first opportunity to discuss these findings and assess the willingness to work together to improve the preservation practices in place to ensure the long-term use of library and archive collections.
Appendix

Methodology

Knowing the Need combines the results of 86 Preservation Assessment Surveys carried out between 2006 and 2011 from 74 organisations in the UK and the Republic of Ireland. The Preservation Assessment Survey is a method of assessing preservation needs which originated from a British Library Research and Innovation Centre research project in 1998. It was subsequently developed and managed by the National Preservation Office, now the British Library Preservation Advisory Centre. The survey takes a sample of approximately 400 items from the collection to be surveyed. The items are selected using a random or stratified sampling technique. For a collection of more than 5,000 items the sample of 400 items gives precision to ±5%, with a confidence level of 95%. For each item 15 ‘collection assessment’ questions are answered covering the key areas of access, use, accommodation, usability, and significance, followed by a ‘condition assessment’ which records information on artefact type and assesses the type and extent of damage according to pre-defined categories.

Each organisation commissioning a Preservation Assessment Survey returns a copy of its data to the Preservation Advisory Centre which carries out statistical analysis and produces an individual report highlighting strengths and weaknesses in practice, together with recommendations for improved practice. The evidence is used by individual organisations for internal preservation planning, to support funding bids and in some cases for collaborative planning. Further information on carrying out a Preservation Assessment Survey is available at www.bl.uk/blpac/paslib.html.

The data received from each organisation which has completed a survey is also incorporated into a central database by the Preservation Advisory Centre. This central database generates the aggregate figures used in the Knowing the Need reports. The aggregate data set for this report includes 35,216 records from 86 surveys from 74 organisations. These surveys alone are estimated to represent collections totalling over 50 million items. It is not possible to provide an accurate overall collection size because several organisations were not able to provide a figure for the size of the collection being surveyed.

The 2012 data set was analysed by the team at LISU which produced the statistics used in this report. The analysis was carried out using SPSS statistical software on the data collected for each individual item assessed. The analysis of the aggregate data set is not weighted according to total population size, so cannot be assumed to be representative of the whole of the UK and the Republic of Ireland.

Stratified data sets have been produced for ‘libraries’ and ‘archives’ so that variations in practice between the two domains can be identified and highlighted. The stratified data set for libraries is based on 10 library surveys. The stratified data set for archives is based on 15 archive surveys. The surveys were chosen according to their Preservation Priority Band profile as the most typical of each sub-stratum. For each analysis the relevant survey data were weighted according to the proportion of the total sample collection they comprised.

The data used in this report was collected and analysed following the same methodology as that used for Knowing the Need in 2006 which means we can look at the two sets of results side by side to reflect on similarities and differences in practice 2000 – 2005 and 2006 – 2011.

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17 It is not possible to provide an accurate overall collection size because several organisations were not able to provide a figure for the size of the collection being surveyed.
18 LISU is a research and information centre for library and information services based in the Department of Information Science at Loughborough University.
19 The total number and size of library and archive collections in the UK and Republic of Ireland is unknown.
20 The Preservation Assessment Survey methodology weights the answers to the questions on access and use, significance, condition & usability, and preservation practice according to the risk they present to the item’s long-term availability. From this an overall preservation priority ‘score’ is calculated. The scores are grouped into five preservation priority bands (PPB), with band 1 representing items of very low preservation priority and band 5 items of very high preservation priority.