

OUR PAST, OUR FUTURE: A PRESERVATION SURVEY REPORT FOR SCOTLAND

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Foreword

Having quite recently taken up the post of Keeper of the Records of Scotland, I am aware that not only do I have much to learn about the archive sector but I also have the opportunity to provide a new perspective on the responsibilities inherent in the post. A critical underpinning to the discharge of my responsibilities is solid evidence. Opinions and viewpoints can be helpful, but reliable factual evidence is what provides the solid foundation for careful analysis that is necessary for decision-taking.

The report is important, therefore, because:

Firstly, it provides the archives sector in Scotland with certainty about where it is in terms of the preservation of the holdings in its care. Secondly, it is the product of close co-operation between the National Records of Scotland, the Scottish Council on Archives and the (now closed) British Library's Preservation Advisory Centre, thereby showing the added value brought to the task by pooling of resources and co-operation. Thirdly, it has brought home to me (as I hope it will to others who read it) how invaluable is the expertise and experience – 'hands on' and theoretical – of the conservators at the National Records of Scotland.

The survey is ground-breaking in that it has involved the painstaking collection and analysis of data on the preservation practices and physical condition of archives across the length and breadth of Scotland. Careful to be representative not only geographically but also in terms of the range of different kinds of archives – national institutions, local archives, university archives, health archives and specialist archives – the resulting picture gives an important snapshot of the condition of vital resources.

Those resources are vital because they are the documented national memory. Our responsibility is to preserve, in all its colour, vividness and variety, the vellum, the manuscripts, the paper, the photographs and all the other media which together make up Scotland's archival tapestry. And that task is no small one, especially at a time when resources are under substantial pressure across the public sector.

With the growth in the popularity of archives among family historians, academics, and school pupils alike, comes the desire to enjoy the hands-on experience of seeing and holding (and often marvelling at) unique items which, by their very nature, are vulnerable to physical damage. The option of producing digital images of original documents in order to prevent further wear and tear is being successfully pursued, but it can be a practical solution for only a small (though very important) proportion of the millions of individual archival items in Scotland. If the range of opportunities and challenges for archives are to be met, then decision-making quite simply has to be informed and supported by reliable data.

As I have already indicated, this Report is the result of co-operation between the Scottish Council on Archives and the National Records of Scotland: the former provided financial support and not a little in the way of encouragement, and the latter provided invaluable and often hands-on conservation expertise. I must also commend each and every archive that stepped forward when asked to participate in the survey – without them, we would not have such representative information. Of course, none of this would have been possible without the British Library Preservation Advisory Centre, which developed the Preservation Assessment Survey methodology, facilitated its application and analysed the results presented in this Report.

The survey conveys a powerful message in the manner in which it was tackled. It has shown that, by pooling their resources, archives in Scotland – at all levels and across the nation – can together achieve far more than they could hope to do individually.

Such co-operation strengthens the ability of archives services to deliver and to do in a much broader context. Archives feed into the national picture through the Scottish Government National Outcomes, which are immediately relevant to the many publicly-funded archives services. Supported by preservation, archives can contribute to at least four of the National Outcomes:

We take pride in a strong, fair and inclusive national identity

We value and enjoy our built and natural environment and protect it and enhance it for future generations

We are better educated, more skilled and more successful, renowned for our research and innovation

Our young people are successful learners, confident individuals, effective contributors and responsible citizens

Archives are the documented national memory and provide evidence of, and insights into, the political, social and economic events and trends that have moulded present-day Scotland. The core purpose of preservation is to extend the life of, and therefore access to, that documented memory.

Strongly rooted in sense of place, archives document every aspect of the built and natural heritage over the centuries, and they open it to present and future generations.

An increasingly important factor is the contribution – actual and potential – of archives to international perceptions of Scotland (not least by supporting it as a tourism destination) enrichment of education and learning at every level, and cultural and creative opportunities, including events. Already 11 outstanding Scottish archives have been awarded UK UNESCO Memory of the World Register status, and doubtless more will follow in future years.

The myriad of subjects covered by archives together with the different finding aids that facilitate access offer users unrivalled opportunities to extend knowledge and enhance personal skills, including drawing together dispersed pieces of information to support a conclusion or insight. This has already been shown through the roll out of the National Plan for Learning, which will continue to focus on showing its relevance to the needs of teachers and students and to the Curriculum for Excellence.

The archives sector seeks to ensure that its own skills base is fit for purpose. It will be immensely helped by the HLF-funded Skills for the Future initiative 'Opening Up Scotland's Archives'. The sector's ability to deliver services is further strengthened by mutually beneficial co-operation with experts in other sectors.

There are certainly challenges facing preservation. However, the robust statistical evidence of the physical condition of archives in Scotland as presented in this Report offers a unique opportunity to map the way forward. Those challenges can be met in the confident knowledge that archives and their continued availability contribute significantly to appreciation of the unique heritage of the Scottish nation.

Tim Ellis

Keeper of the Records of Scotland

Preface

I am delighted that the ambitious initiative to produce a health check on how Scotland's archives are cared for has produced results (literally). Here we have robust statistical data for the whole archives sector that should lead to evidence-based decision-making and priorities. Here we have data that will help us all to address the core issue of how we physically protect and thus continue to make available documents vital to the history of the nation, of communities, of families and of individuals.

Geographical spread and variety together make this survey truly national in scope. The geographical sweep is from the Hebrides and from Shetland, through the Highlands to Perth and Kinross, Aberdeen, Dundee, the Central Belt, to the Borders. It is impressive for the variety of archives included. Thirteen local archives participated as well as two National Health Service archives, four university archives and two national institutions – the National Records of Scotland and the National Library of Scotland – and the specialist archives included the Royal College of Surgeons for Edinburgh and for Glasgow as well as the Scottish Poetry Library.

Securing representative participants was just the first step. Commitment of resources, an ability to deal with statistics and great attention to detail were required. As specified by the Preservation Assessment Survey methodology, each participant had to provide a random sample of some 400 items, a modest figure nonetheless difficult to secure because of the work in ensuring 'randomness'.

Without the support and guidance of the then British Library's Preservation Advisory Centre this survey would have been impossible. Not least the Centre ensured that the survey results provide robust and reliable data. In addition, it provided to participating archives individual reports on the condition of their holdings.

The data have provided a picture of the way in which archives are cared for by the three types of participating archives, namely local authority, higher education and special archives (incorporating health archives). The total sampling represents not only a shade under three million items in the participating bodies – impressive in itself - but also provides something even more valuable, a picture of the state of preservation of archive holdings in Scotland.

The gathering of statistics might be no more than interesting if the evidence is not used as a springboard for mapping the way ahead. The sector requires nothing less than a clear and sharp focus on the practicalities of preservation.

What are the actions – many of them small but cumulative in effect – that, in say 10 years' time, can be looked upon as having made a real difference in preservation terms? What can be done to improve storage? Are we satisfied with the way in which

unique material is handled and, if not, what is to be done? There are questions, lots of questions, which need to be answered.

Tackling those questions feeds into two important initiatives within the archives and records management sector. The first - the Archives and Records Management Services (ARMS) Quality Improvement Framework [website address here] - adapts the European Foundation for Quality Management (EFQM) model to meet the different needs of Scottish archives. At the core of ARMS sit the concepts of self-evaluation and self-improvement, both of which are integral to preservation.

The second initiative is the UK-wide Archive Service Accreditation [website address here] developed in partnership with the archives sector and its stakeholders. It defines good practice and agreed standards, and encourages and supports them. These are factors integral to preservation.

The Report has set the scene for action. With that very much in mind, the Scottish Council on Archives has set up a Preservation Committee. Made up of professional experts and of users, the committee will focus on the practicalities of the way forward. It will seek to address how the sector can best improve its stewardship of archives in the hugely important area of preservation and conservation. That is no small challenge, but it is one vital to securing the long-term well-being of Scotland's documented national memory.

Irene O'Brien
Chair, Scottish Council on Archives

Executive Summary

An Archival Account of Scotland (2000) pointed to the need for greater knowledge of the state of archive preservation and conservation. Use of the British Library Preservation Advisory Centre's statistically robust Preservation Assessment Survey methodology made collecting and analysing such evidence a practical possibility. The Scottish Council on Archives, National Records of Scotland (NRS) and the Preservation Advisory Centre (PAC) worked together to deliver 11 preservation assessment surveys between 2009 and 2012.

Data from the 11 Council-funded surveys carried out between 2009 and 2012 were combined with existing survey data from 17 Scottish archives. The combined total collection size represented by these 28 surveys was in the region of 2.75 million items. Findings from this combined dataset feature in this report. Context is given to the figures through comparison with data collected from across the UK (from the 2006 report, *Knowing the Need*).

The three-year project provide statistical evidence of the state of archives preservation and conservation in Scotland. Guidelines can now be formulated to focus action on aspects of preservation where need is greatest and where investment of effort can produce the maximum effect. The core purpose is to ensure continued user access to Scotland's diverse and extensive archive collections.

Key findings

Access

63% of surveyed items are catalogued, although only 26% of catalogue records are accessible remotely. In the digital age, improving access to Scotland's invaluable archives means reduced cataloguing backlogs and more records online.

Use

15% of collections surveyed are in heavy use, 25% in medium use and 60% in low use. In comparison, the figures for use of library and archive materials across the UK are 10% (heavy), 22% (medium) and 68% (low). Level of use can be used to prioritise preservation initiatives, e.g., to focus digitisation on high use items.

Handling

An exceptionally high proportion - 93% - of archives in Scotland demonstrated good handling practices. Damage during handling frequently emerges in the top three risks identified in risk assessments. Scottish archives have good policies and procedures in place to ensure use can increase with minimum impact on the collections.

Surrogacy

The creation of a surrogate - a copy that can be used in place of the original - is a valuable preservation strategy. It can improve access to items in physically vulnerable condition with the additional benefit of enabling remote access where the surrogate is in digital form.

6% of items surveyed have a surrogate copy for public use. Information collected on long-term retention plans indicate that ideally 22% of items would be retained in original form, with a surrogate available. The required additional focus on digitisation could be addressed collaboratively.

Accommodation

There is a need to improve how archives are stored. Some improvements can be achieved by making procedural changes, e.g., greater use of risk assessments and setting up cleaning programmes. Other improvements will involve small-scale investment in equipment or skills, e.g., more environmental monitoring and better understanding and application of environmental data.

Emergency planning was inadequate for 42% of surveyed collections. Skills sharing and collaborative training could reap significant benefits.

Widespread boxing or upgrading of protective enclosures would be beneficial to 52% of surveyed collections. Protective enclosures bring numerous preservation benefits, and offer a pragmatic solution if collections are stored in less-than-ideal buildings.

Usability

83% of collections were assessed as 'stable' (in good or fair condition), with 17% 'unstable' (in poor condition or unusable). This equates to an estimated 467,500 items in need of conservation action to ensure continuing usability. The skills, existing capacity and training needs of a Scottish conservation workforce must be understood if conservation backlogs are to be addressed efficiently over time.

Condition

Physical damage (such as tears) is the most commonly recorded form of damage. This is not surprising in collections spanning pre-1700 to the present day. It is reassuring that procedures to mitigate the effects of handling are extensively in place across Scottish archives.

Significance

77% of collections are unique or likely to be the only copy in the UK and Ireland. 85% are considered part of the national documentary heritage and 81% are of special value or importance to the holding body. The significance of these collections provides a mandate, if one is needed, for continued investment that ensures their long-term accessibility to users.

Date profile

Archive collections in Scotland range from pre-1700 to the present day. Some 55% of those surveyed fall between 1901 and 2000, a period that may raise particular preservation issues in the future, e.g., poor quality paper, unstable inks and dyes and modern materials and processes. Managing large quantities of such 20th century materials requires strategic consideration if much of it is not to be rendered unusable in the future.

The challenge is especially pressing in relation to electronic records, which, central to the operations of government and society, are created in almost unimaginable quantities. The danger of a massive information black hole is real.

Artefact type

Manuscripts are the largest single category of artefact, at 50% of collection items. The collections are diverse though, e.g., they include video and audio tapes, digital media, photographic and cartographic material, paintings and drawings and physical objects. Such rich diversity is an asset but it expands the range of skills essential for collections' future care. There is a need to investigate how long-term preservation of digital media and audio-visual material can best be addressed.

Taking action

It is important that this report should lead to action. The report includes a 'What if ...' section that points to improvements that might be achieved at very modest cost.

The Scottish Council on Archives has set up a preservation committee - comprising archivists, conservators and users - to develop an action plan based on the evidence in the report. The plan will take full account of the resource challenges facing archives and focus on practical ways of effecting change. It will build on the collaborative working of the original research project, and the Council and NRS's demonstrable success in bringing together archives in Scotland to address issues of common interest.

1 Introduction

As part of its survey on the state of Scottish archives provision, the 2000 publication *An Archival Account of Scotland* highlighted the need for greater knowledge about the state of preservation and conservation of archival material in Scotland, recognising that collections must be in good condition to support increased use.

In April 2009, the Scottish Council on Archives responded to this call for better information by funding 11 Preservation Assessment Surveys for use by archives in Scotland during 2009-2012. This financial support was significantly enhanced by the National Records of Scotland (NRS) which contributed the skills and knowledge of its trained conservation staff to work alongside local archive staff to complete the surveys. The third contributor to the collaborative project was the (now closed) British Library Preservation Advisory Centre (PAC), which provided training and support in the use of the survey, supplied bespoke reports to the organisations carrying out surveys, and collated the statistical data to provide the overview of the state of preservation of archives in Scotland.

The aim of the project was to provide robust statistical evidence of the preservation and conservation needs of archives in Scotland so that an action plan to address those needs could be formulated. The scope of the work included archives in local authority control, higher education, learned societies and health boards; it did not extend to archives in private ownership though it is hoped that the actions taken as a result of the evidence presented in this report will also help private owners to address preservation needs.

2 Methodology

2.1 Survey

The Preservation Assessment Survey is an established methodology for assessing the state of preservation of library and archive collections¹. The survey involves the collection of data from a sample of approximately four hundred items selected at random from a library or archive, or one or more of its collections. The results, on this basis, are statistically valid to plus or minus 5%, with 95% confidence, as a representation of the whole collection.

Once the sample has been selected a short questionnaire is completed for each item in the sample. Part one – the Collection Assessment Section - consists of 15 'tick box' questions on key areas of preservation, namely:

- Access
- Use
- Accommodation
- Usability
- Significance

Part two - the Condition Assessment Section - consists of an assessment of the physical damage shown by each item surveyed.

The survey answers are entered into an MS Access database and the results are sent to the Preservation Advisory Centre for analysis and the production of the report.

2.2 Collation of data

The data from the 11 SCA-funded surveys completed by July 2012 were combined with data from archives which had independently undertaken Preservation Assessment Surveys. This produced a dataset from 28 archives in Scotland, representing an estimated total collection size of 2.75 million items².

The results from each archive were weighted to ensure that each set of data contributes to the overall profile in proportion to the size of the collection surveyed. The results were then stratified to produce subsets for different categories of archive: local authority archives, higher education archives, and specialist archives.

The stratified dataset of UK local authority archives from the 2006 report 'Knowing the Need'³ has been used alongside the figures from archives in Scotland for purposes of comparison. These comparison figures are referred to throughout the report as 'UK stratified (LA archives)'.

¹ Eden, P. et al., (1998) A model for assessing preservation needs in libraries. BLRIC Report 125.

² The total collection size was estimated by adding together the sizes of the individual collections that were surveyed. For institutions for which no collection size figure was available, an average collection size was calculated and used.

³ Walker, A. and Foster, J. (2006) Knowing the Need: a report on the emerging picture of preservation need in libraries and archives in the UK. National Preservation Office.

3 Results

The results from the 28 surveys have been combined to produce a dataset representing an estimated 2.75 million collection items. This is a small proportion of the total archival holdings in Scotland, nevertheless, the scale of the survey is sufficient to provide a basis for future collective action.

3.1 Collection Assessment

The 'collection assessment' collects data on key elements of preservation practice, in the areas of access, use, accommodation, condition and usability, and significance.

3.1.1 Access

The survey asks two questions about cataloguing which are designed to show how easy it is for users to discover the existence and location of material. The first relates to whether the item surveyed is catalogued, and the second to whether the catalogue entry is accessible remotely (e.g. online).

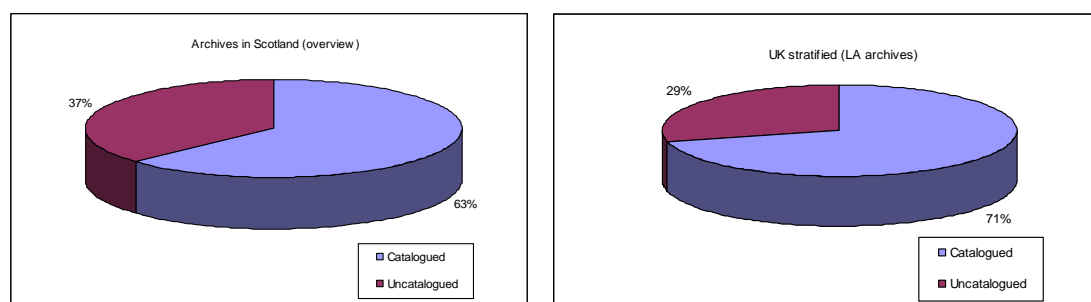


Figure 1. Levels of cataloguing

The results show that 63% of items surveyed are catalogued (compared to 71% for UK local authority archives). However, 26% of catalogue records in archives in Scotland are accessible remotely (compared to 27% for UK local authority archives).

If archives in Scotland are to be successful at sharing the full breadth of the collections they hold, there will need to be investment in cataloguing, and in making catalogues available online where it is appropriate to do so.

3.1.2 Use

Demand

The survey asks for a judgment on the level of demand for each item. Demand is categorised as 'Low', 'Medium', or 'High'. It is evaluated in the archive's own terms although parameters are provided in the survey guidance notes to help individual institutions set their own definitions.

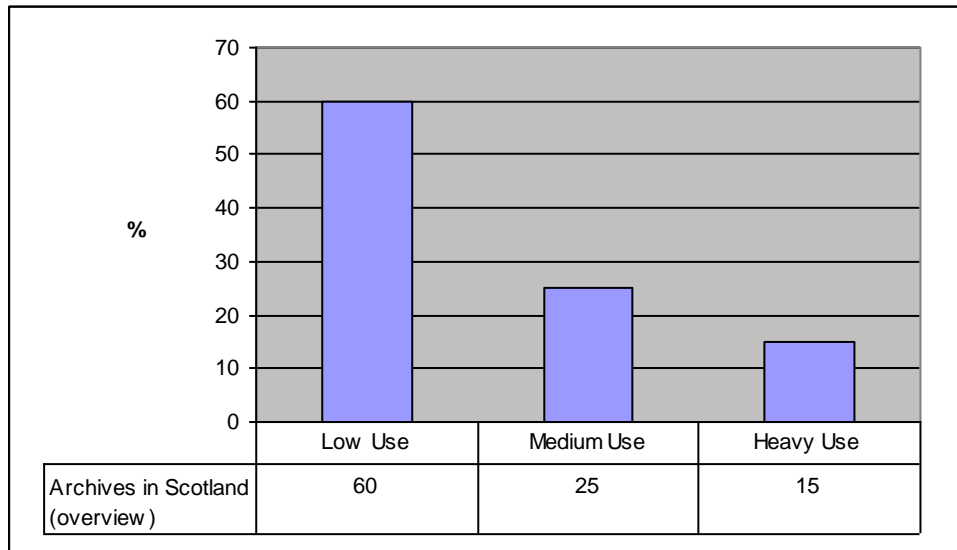


Figure 2. Levels of use

Figure 2 shows that the majority of collections in archives in Scotland are subject to relatively low demand (60%), with 25% falling into the 'medium use' category and 15% in heavy demand. It is reasonable to suggest that levels of demand are related to the proportion of material catalogued, because items will not often be requested by users if they are unaware of their existence in catalogue records. If the level of cataloguing was to increase then demand for original materials would also be likely to increase. Levels of demand should be monitored so that special measures can be put in place to ensure the sustainable use of items in heavy demand (for example, supervised handling, protective enclosures, or inclusion in a surrogacy programme).

Of course, low use is not a reason for neglect. Archives in Scotland should continue to strive for best practice in preservation management to ensure that these records, which have been selected for permanent preservation, remain available in the best possible condition for use by future generations.

Handling

The goal of preservation is to ensure the sustainable use of collection items. Good handling practices can do a great deal to minimise the risks associated with use. As we all seek to encourage the use of Scotland's fine archive collections, the availability of good handling guidelines, training and aids (such as book supports, weights etc.) will help staff, volunteers and users to minimise damage to original material.

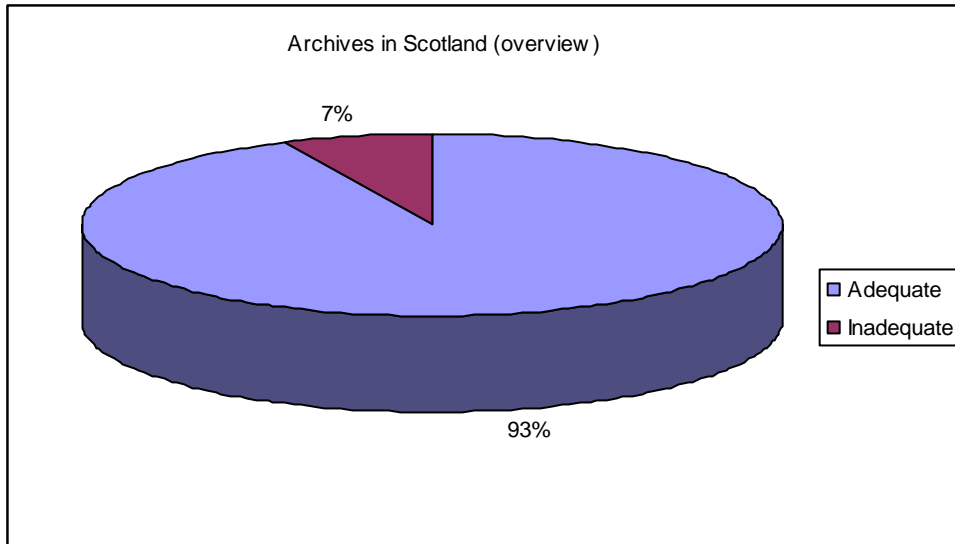


Figure 3. Handling practice

Figure 3 shows that an exceptionally high proportion of archives in Scotland demonstrate good handling practices. To demonstrate good practice, the archive must have both of the measures below in place.

- Staff and users are routinely given guidance and information about the safe handling of materials.
- Aids such as book supports, map weights, etc. are available and used where appropriate.

This is good news because handling/use commonly scores as the greatest potential threat to archive collections during risk assessments.

Surrogacy

The creation of a surrogate, (a copy which can be used instead of the original) is a useful preservation strategy, particularly in the digital age when digital copies can also contribute to widening access to collections. At the time of survey, 6% of items had a surrogate copy available for public use. This compares to an aspiration (see section 3.3) of 22% of items being retained in original form with a surrogate available. If copying is to be carried out purely for preservation purposes, the figures suggest that in the region of 440,000 items need surrogates created.

3.1.3 Accommodation

This section includes data on the preservation measures in place for the area in which the items surveyed are normally kept (for example, a stack, strong room, reading room or outstore). It includes the results on storage conditions, physical protection, environmental monitoring and control, security, fire suppression, and emergency control planning. The results are shown in Figure 4 together with a description of the standard to which the collections were assessed.

Storage

Preventive measures are taken to protect the item from hazards.	Adequate	9%
Good housekeeping procedures, such as vacuuming and shelf-cleaning, are routinely carried out.	Inadequate	91%
The item is stored at least 150mm off the floor.		
Primary protection is suitable for the item.		
Oversize material is on suitable shelving.		

Environment

Relative humidity and temperature are routinely monitored in the area in which the item is normally kept.	Adequate	18%
Visible and ultra-violet light is controlled in the area in which the item is normally kept.	Inadequate	82%
Temperature and relative humidity levels in the area in which the item is normally kept usually falls within the ranges recommended in BS 5454:2000.		

Security

An assessment of security risks to the collection of which the item is a part has been made and steps have been taken to redress any inadequacies.	Adequate	76%
	Inadequate	24%

Fire

The item is protected by an automatic fire detection system.	Adequate	69%
Fire extinguishers of the appropriate type, or sprinklers or gaseous suppressants are supplied and regularly tested.	Inadequate	31%

Emergency control plan

The item is covered by an up-to-date, written disaster control plan, and staff are trained in its implementation.	Adequate	56%
	Inadequate	42%

Figure 4. Summary of preservation measures

The same information is illustrated graphically in Figure 5, below.

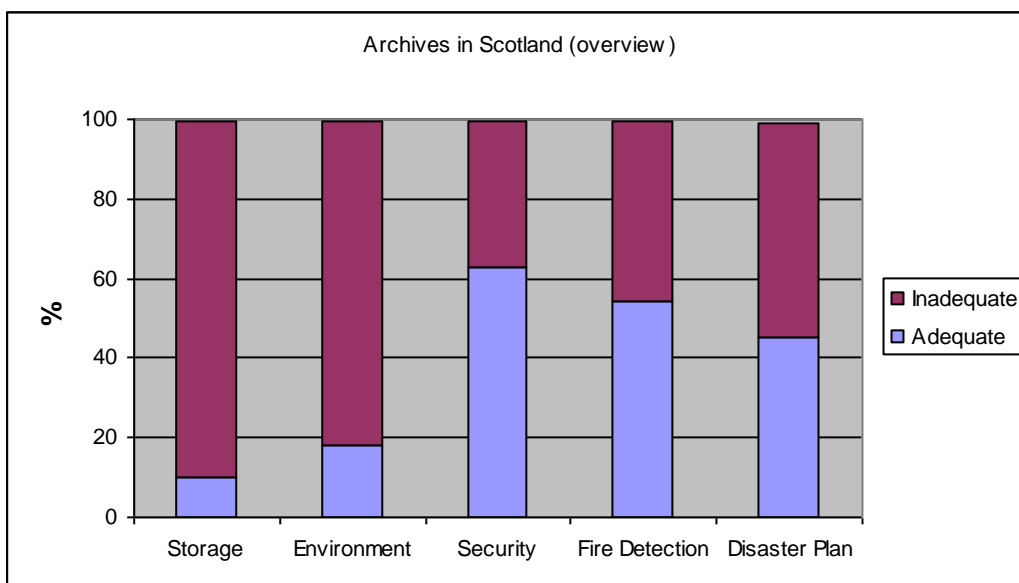


Figure 5. Graph showing preservation measures in archives in Scotland

Basic preservation measures, such as those described in figure 4 can slow down the rate at which archival materials deteriorate and reduce risks associated with their accommodation. The collective picture for archives in Scotland is that considerable improvements can be made in almost all areas of preservation practice. Some of these improvements can be readily achieved, others will require greater investment be it in time or money. The individual reports of the 28 institutions whose data contributes to these findings have been reviewed to identify common areas of strength and weakness.

Storage

- There are common weaknesses in the ability to provide appropriate storage for large format items.
- There is a notable absence of the assessments of risks presented by pipework in storage areas.
- There is widespread need for routine housekeeping and cleaning programmes.

Environment

- Where environmental monitoring is not in place, this should be a priority.
- Where environmental data is collected, this should be reviewed and action should be taken on the basis of the findings (for example, moving vulnerable material out of areas with an unsuitable or fluctuating environment.)

Disaster plan

The presence of a disaster (or emergency) plan is an important preventative measure. The surveys included in this report cover a ten year period, and whilst many organisations did not have a disaster plan in place at the time they were surveyed it is likely that they have since taken action to prepare one. It is notable that disaster plans tend to be in place at the organisations surveyed more recently, however it is very common for organisations not to have staff that are trained in the plan's use.

Security and fire detection

Measures needed to improve security and fire detection tend to be specific to the individual organisation surveyed. Recommendations will have been made in the individual reports to those organisations which need to improve practice in these areas.

Boxing and protection

Related to accommodation is the physical protection afforded to items. Providing good quality archival enclosures such as folders or boxes can bring many benefits. It can:

- protect vulnerable items and minimise further damage where it exists already
- mitigate against the effects of environmental fluctuations
- protect against dust and dirt
- protect against physical damage from handling and transport
- protect against incidents of water damage

Not all items will require boxing, though archival material does tend to have a greater need than library material because of the formats it encompasses.

Proportion of items in a box or other secondary protection	54%
Proportion of existing secondary protection that is inadequate	60% (32% of the whole collection)
Proportion requiring protection for the first time	20%

These results suggest that 52% of archive holdings would benefit from replacement secondary protection or from being protected for the first time ⁴.

3.1.4 Condition and Usability

The survey assesses items according to their usability by readers. Items are classified as **Good**, **Fair**, **Poor** or **Unusable** following the descriptions in figure 6.

⁴ It is common for archival material to have more than one form of secondary protection. For example, documents may be placed within a folder and that folder may then be placed within a box. It is also common to see a relatively high proportion of archival material requiring new/replacement secondary protection. One of the reasons for this is that items may be housed within a good quality archival box, but the folders that directly contain the documents are not of archival quality and therefore need replacing.

Condition and usability rating	Good	Fair	Poor	Unusable
	Item is in good condition, robust and stable. Usable for any purpose. It may have very slight visible damage which does not impede its use in any way. The damage will not increase with normal use.	Item is in fair condition, disfigured or damaged, but stable. It can still be used with extra care and attention.	Item is in poor condition, with signs of deterioration. Use will cause further damage. It should be in a restricted use category or used under close supervision.	Item is completely unsuitable for production to users. It is so fragile and damaged that it is certain to suffer further damage if handled, or it has mould or pest infestation.

Figure 6. Condition and usability categories

The condition and usability results for archives in Scotland are presented graphically below, with the UK stratified (LA archives) figures included for comparison.

Items in the 'Poor' and 'Unusable' categories can be grouped together as 'Unstable', i.e. they cannot be used without further damage occurring. There is a greater proportion of unstable material in archives in Scotland than is the case for the comparator figure of UK local authority archives (17% compared to 11%).

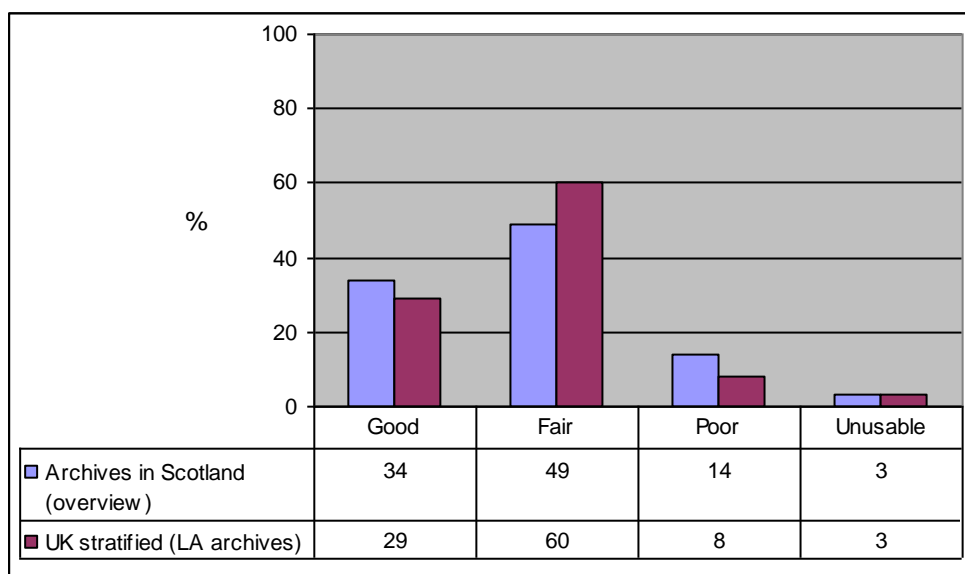


Figure 7. Condition and usability, Scottish Archives and UK archive stratified

Stratified results for the condition and usability assessment are also available, subsets have been created for local authority archives, higher education archives and specialist archives in Scotland. Here the direct comparison between unstable material for the stratified subsets of local authority archives can be made for Scotland and the UK as a whole (14% unstable in Scotland; 11% unstable for the whole of the UK).

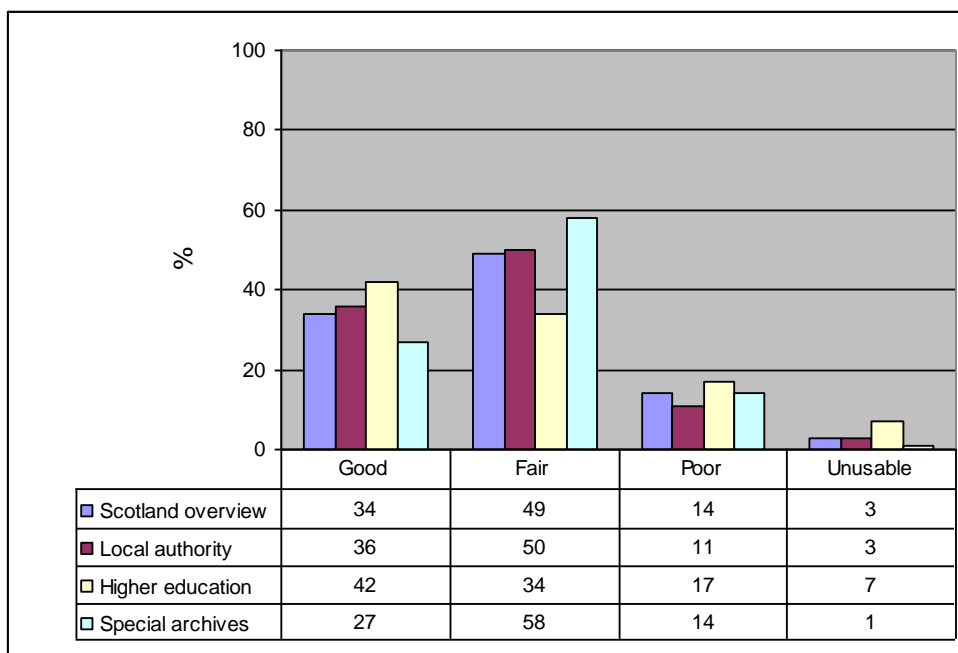


Figure 8. Condition and usability, Scotland overview and stratified subsets

Figure 8 shows that the variation in the distribution of items across the four condition and usability categories. The breakdown into the fundamental distinction of ‘stable’ and ‘unstable’ is reasonably consistent for local authority archives and special archives, with higher education archives showing a larger proportion of unstable material (see Fig. 9). Unstable material is that for which action needs to be taken – preventative or interventive – to ensure continued availability to users. It should be the alarm bell that summons everyone to action.

	Stable (%)	Unstable (%)
Scotland Overview	83	17
Local Authority	86	14
Higher Education	76	24
Special Archives	85	15

Figure 9. Proportions of stable and unstable material for stratified results

Options to protect unstable material whilst in use include:

- using under appropriate supervision
- packaging and labelling items to ensure appropriate handling
- providing additional training for staff and users on any special measures necessary
- including the items in a surrogacy programme, e.g., the creation of a digital image to be used in place of the original
- interventive conservation, either in the form of stabilisation or full treatment

These options have resource implications that require careful consideration in terms of the sector as a whole in Scotland and also within each institution (circumstances

can vary significantly). If the results are extrapolated to the total collection size that is represented by the 28 surveys, an estimated 467,500 items need some form of action to ensure their continued usability.

3.2 Condition Assessment

The second part of the survey records the type of artefact being assessed and involves a more detailed assessment of condition in terms of the nature and extent of any damage.

At the simplest level, the results show that 79% of items surveyed show some form of damage. This compares to 72% for the UK stratified (LA archive) figure.

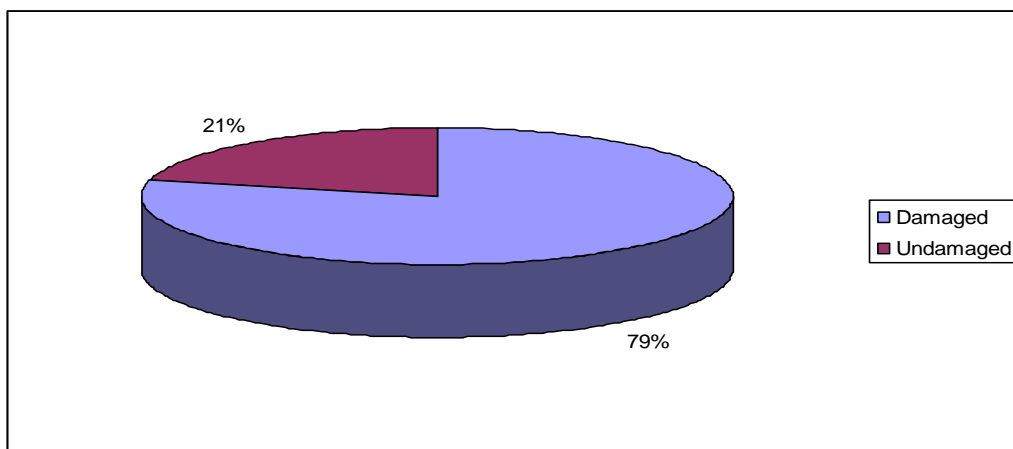


Figure 10. Proportion of damaged and undamaged items in archives in Scotland

Whilst this may sound an alarmingly high proportion, it is not surprising given that the figure includes all instances of damage, and all types of material from all ages. When broken down into the stratified subgroups, it can be seen that there is relatively little variation in the figure for the different types of archive (Fig. 11).

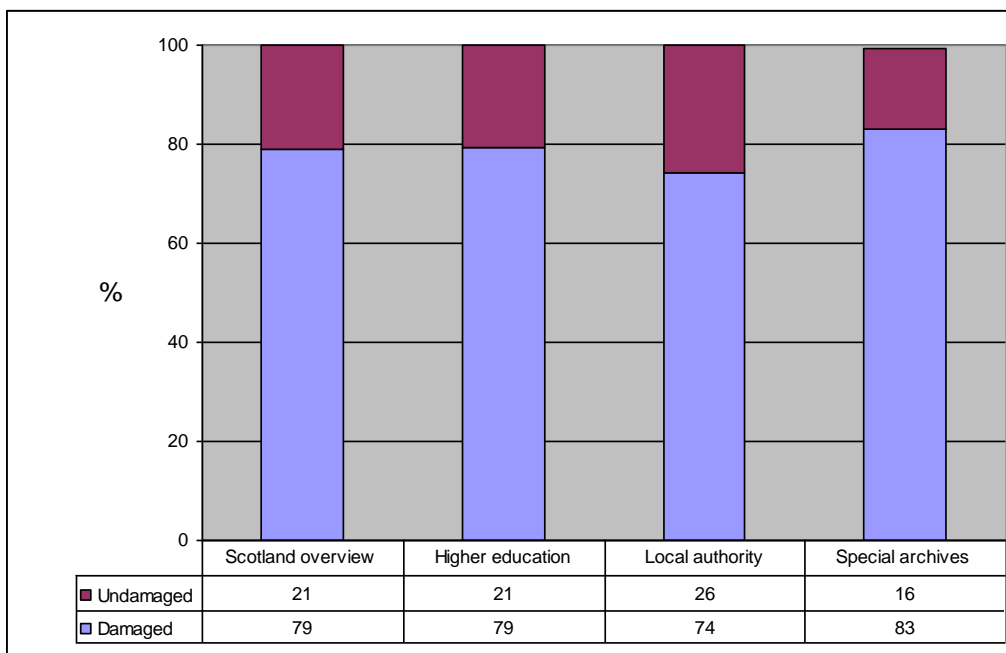


Figure 11. Stratified damaged / undamaged

Condition is assessed both in terms of the type of damage and its severity. Severity of damage is divided into:

- Slight - where evidence of damage is apparent but does not impede use of the item
- Significant - compromises the functionality of the item, which in effect means that even normal use will cause further damage to the item.

It is important to take on board a simple but uncomfortable fact: slight damage will only remain slight if material is subject to good handling and storage. In short, there is an on-going duty of care and vigilance for items falling into this category.

3.2.1 Type of damage

Bindings

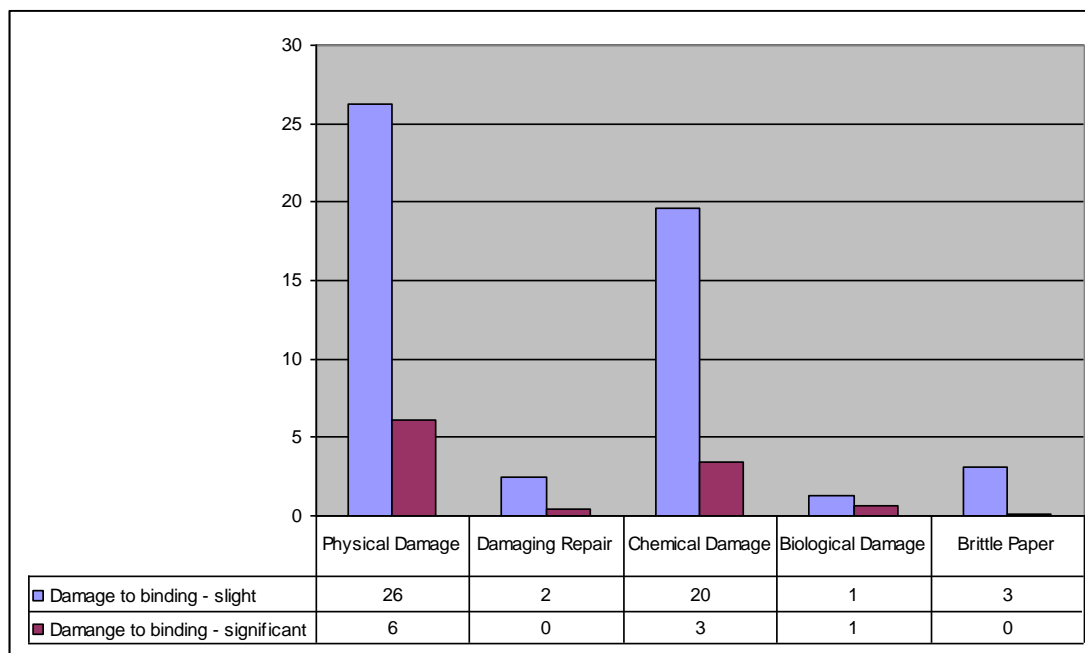


Figure 12. Damage to bindings

Approximately 50% of the items surveyed were described as 'bound'. The percentages in Figure 12 relate only to the bound items. For the purpose of the Preservation Assessment Survey, material is considered bound if it is intended to be held in a fixed order. Therefore an item held together by staples or in a ring binder would be considered bound.

It was and remains common to want to hold items together. While bundles will often be gathered into some meaningful order and are in that sense archivally useful, the manner of doing it has often been physically deleterious to the items:

- Rubber bands, linen tape, etc., if tied too tight, will place physical stress on the paper and lead to tearing and perhaps even loss of text
- Rubber bands perish and begin to react with and eat into the paper
- Paper clips, pins and other metal fastenings tarnish and rust, especially in response to atmospheric moisture, and the chemical reaction with the paper can 'eat into' it and produce highly visible damage

It should be noted that rusting metal fastenings – especially the sharp point of pins - present Health and Safety issues as there can be injury where the user punctures the skin. Eliminating the danger is advisable.

It can be seen that physical damage is the most extensive type of damage to bindings, for both slight and significant damage.

Body

We can also illustrate the different types of damage sustained by the body of collection items.

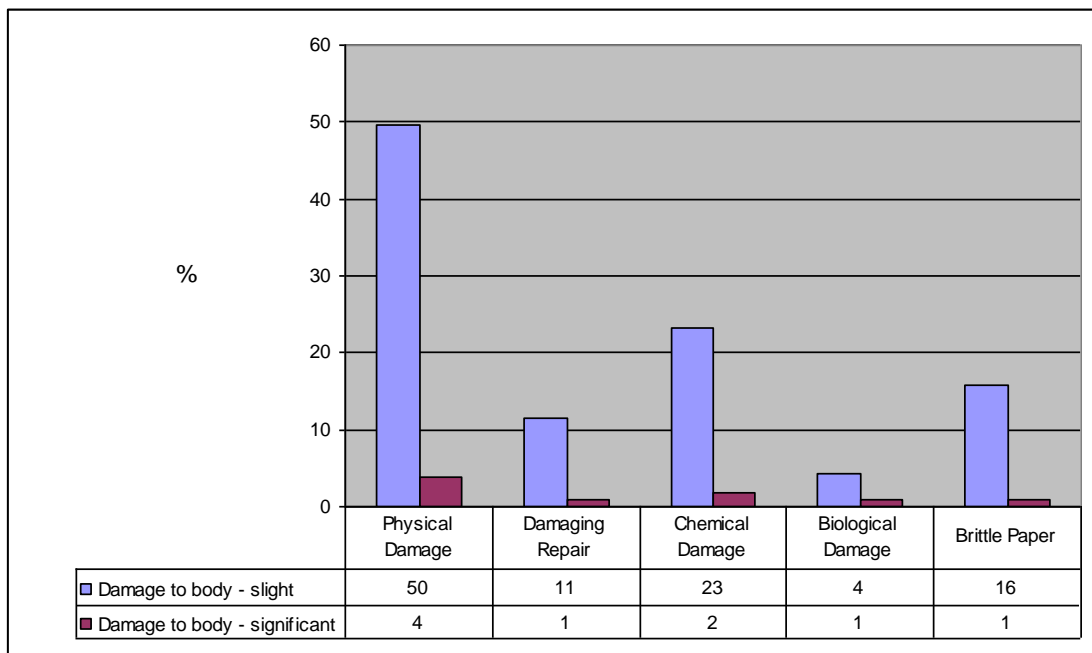


Figure 13. Damage to body

Again, it can be seen that physical damage is by far the most common form of damage sustained by the archive collections. In this graph, the figures relate to the entire collection survey (because every item has a 'body' whereas not all are bound). If the surveyed items represent an estimated total collection of 2.75 million items, somewhere in the region of 110,000 show significant physical damage (e.g. tears or losses) to the body of the item.

3.2.2 Surface dirt

Of the items surveyed, 63% had surface dirt. The term 'surface dirt' may not sound serious, but the impact of such dirt can be serious. It can harbour mould, the spores of which can spread to infect other document, which, of course, in turn can infect others. It is a negative chain that needs to be broken by interventive action, which is cleaning.

Especially where the storage environment is not controlled, surface dirt can provide a perfect environment for pests, notably insects; and food source, shelter and scene for reproduction.

Surface dirt is an unwelcome complication for archivists when they are sorting an archive. As can be understood, the users of such archives are not attracted to the handling of them where there is clear evidence of dirt.

3.3 Significance

The Preservation Assessment Survey includes an assessment of the value and/or importance of an item, both to the archive and nationally. The following guidance is given to ensure consistency in assessment.

Unique or likely to be the only copy in the UK and Ireland	The item is believed to be unique or the only known original copy in the UK and Ireland. Or it possesses unique characteristics, e.g. manuscript notes. Or (for printed items) it can be shown to be one of no more than three locatable copies in UK collections.
Considered part of the national documentary heritage	Items considered to have long-term national significance because of their information content, provenance, physical format or some other distinguishing physical or intellectual characteristics.
Of special value and/or importance to the organisation	The item may be part of a special resource in terms of subject coverage or depth, or have a special association or provenance. Local history collections and holdings of local record offices should normally all be considered of special importance because of the association with the locality where they are held, unless they are of peripheral relevance.

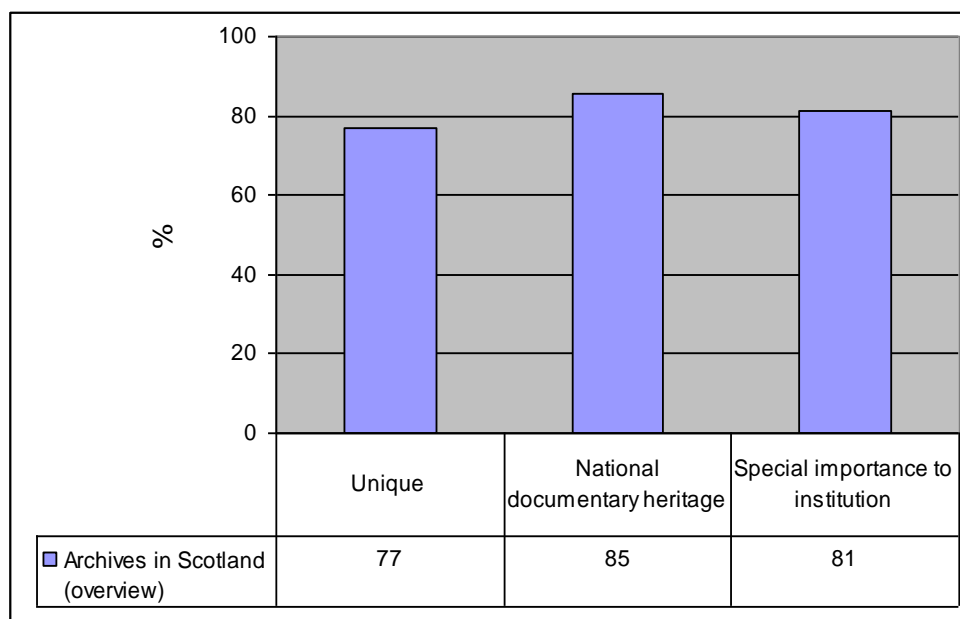


Figure 14. Assessment of significance

As is to be expected for a survey of archive collections, a high proportion of the material is classed as unique, and/or is considered to be part of the national documentary heritage, and/or is of special value to the organisation.

It is reinforced by the retention data:

- 22% will be retained in original format and a surrogate will be created because the item is of extreme value to the institution or extremely fragile or in a category for which there is an active surrogacy programme
- 76% will be retained indefinitely in its original format only
- 2% will be retained indefinitely in surrogate format only

- 2% will not be retained beyond its immediate usefulness

This gets to the heart of the challenge facing Scotland’s archives. They are responsible for unique and significant items for the long-term future.

3.4 Data Analysis

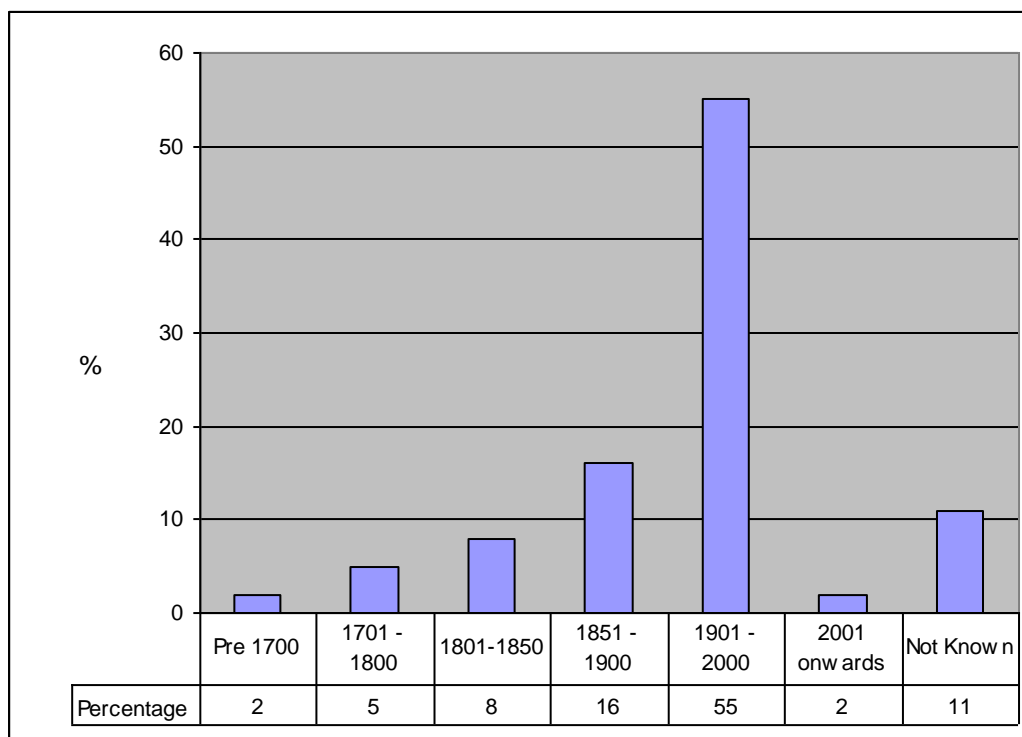


Figure 15 Date range of collection items held in Archives in Scotland

Scotland’s documented national memory is rich with iconic documents whether it is the Declaration of Arbroath or the 1707 Act of Union. They are the vital written evidence of watershed events in the nation’s history.

There is a danger that proper attention given to the iconic documents of the past will obscure or distract from the need to identify and take care of important items that before long may be candidates for iconic status in the national story.

Of course, documentation for Scotland’s history must extend beyond the iconic and embrace the full range of material that enriches that history. As the perspective of time changes the understanding of events, much that seems to us routine will provide unique evidence of the development of a self-confident nation. The office documents of today will be the ‘stuff’ of history tomorrow.

Unfortunately, that raises the spectre of how best to deal with often low quality modern papers that react with remarkable rapidity to light or to physical contact with metal, rubber and other substances. Prevention is always much cheaper than having to resort at a later stage to conservation, hence the attention that should be afforded to improvements in preservation practices.

3.5 Artefact Analysis

It can also be useful to look at the different artefact categories into which the surveyed items fall.

Artefact Type	% of material surveyed
Audio tape	0.13
Bundle	0.89
Cartographic	7.31
Electronic data object	0.06
File	2.01
Manuscript	49.91
Microform	0.05
Newsprint	0.06
Other	6.94
Painting/Drawing	2.99
Parchment/vellum	0.45
Photographic material	3.77
Photomechanical	2.72
Print	1.06
Printed monograph	17.58
Serial	3.00
Typescript with Manuscript	0.94
Video Tape	0.09

Figure 16. Proportion of surveyed material by artefact category

As would be expected for archival materials, the largest categories are 'Manuscript' and 'Printed monograph'. However, figure 16 illustrates that there is a wide range of material formats held in archives. This has consequences for the skills required for their preservation. At the moment the bulk of the collections can be cared for by collection care professionals and archivists with traditional skills, but as categories such as audio tapes, electronic files and video tapes grow, so there will be a need to draw on new skills. Furthermore, the risks associated with these 'new' formats can be greater because of the shorter timescale over which significant material degradation or technological obsolescence can occur.

3.6 Preservation Priority Bands (PPBs)

The answers to the questions on access, use, preservation practice, item condition and significance are scored according to impact. For example, an item subject to high demand will score more highly than one in low use because it is exposed to greater risk. Similarly an item in a poor environment will score more highly than one in a monitored and controlled environment, again because it is at higher risk. The total scores are calculated for each item and these totals are banded into five preservation priority bands.

- PPB1 - very low priority
- PPB2 - low priority
- PPB3 - medium priority
- PPB4 - high priority
- PPB5 - very high priority

For the purposes of this combined report, the Preservation Priority Band distribution is calculated from aggregated data which has not been weighted according to collection size. Whilst this carries the slight risk that the findings from small institutions will influence the overall picture more strongly than they should, it does mean that the profile can be used as a baseline from which to model potential improvements resulting from changes in practice.

The distribution of the collection over the five preservation priority bands gives an indication of the overall preservation needs and priorities.

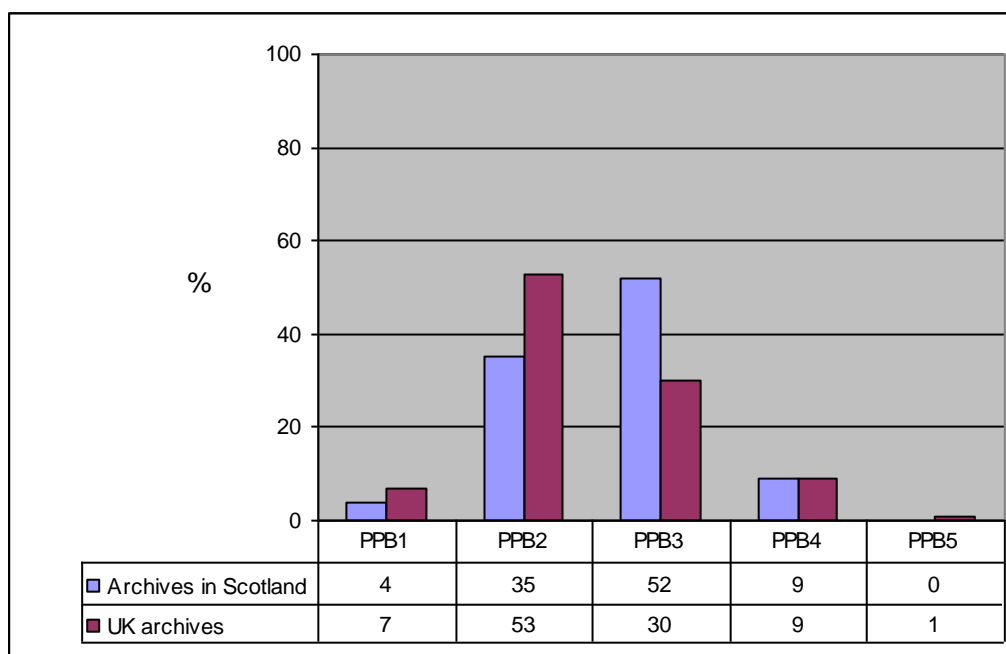


Figure 17. Preservation Priority Bands for Archives in Scotland, and Archives in the UK

Previous surveys in the UK and Republic of Ireland have shown that it is normal for the majority of items to fall into PPB2 and PPB3 (low priority and medium priority). This is also the case for items surveyed from archives in Scotland. 91% of the items surveyed fall into the low and medium priority bands.

Within this, the material in bands 1 and 2 is in good condition and already has good preservation measures in place. 39% of the collections fall into these bands and can be considered a low priority.

The material in bands 3 to 5 demonstrates the extent to which preservation is of medium to very high priority – it applies to 61% of material surveyed, with 9% of material falling into the high and very high priority bands.

This too is where the results diverge from the picture for UK archives as a whole. A greater proportion of items in archives in Scotland are in the medium to very high priority bands, 61%, than compared to UK archives as a whole, 40%.

Using the estimated total collection size of 2.75 million items, and a figure of 9% of items falling into the high and very high preservation priority bands, it can be calculated that 247,500 items from the 28 collections surveyed are at high risk.

Preservation Priority Band stratified by subgroup

Looking at the subgroups for which stratified results are available, it can be seen that, in general terms, Higher Education archives have the best preservation profile. 54% of these collections can be considered a low priority for preservation improvements and only 6% need urgent action. For local authority archives, the results are more evenly spread. A healthy 44% are of low priority, but 45% should be considered a medium priority, and 11% a high priority. Of the three types of archives for which we have been able to compile ‘sector specific’ results, special archives are in greatest need of support. A relatively low 12% of material can be considered a low priority, with 68% a medium priority and 20% a high priority.

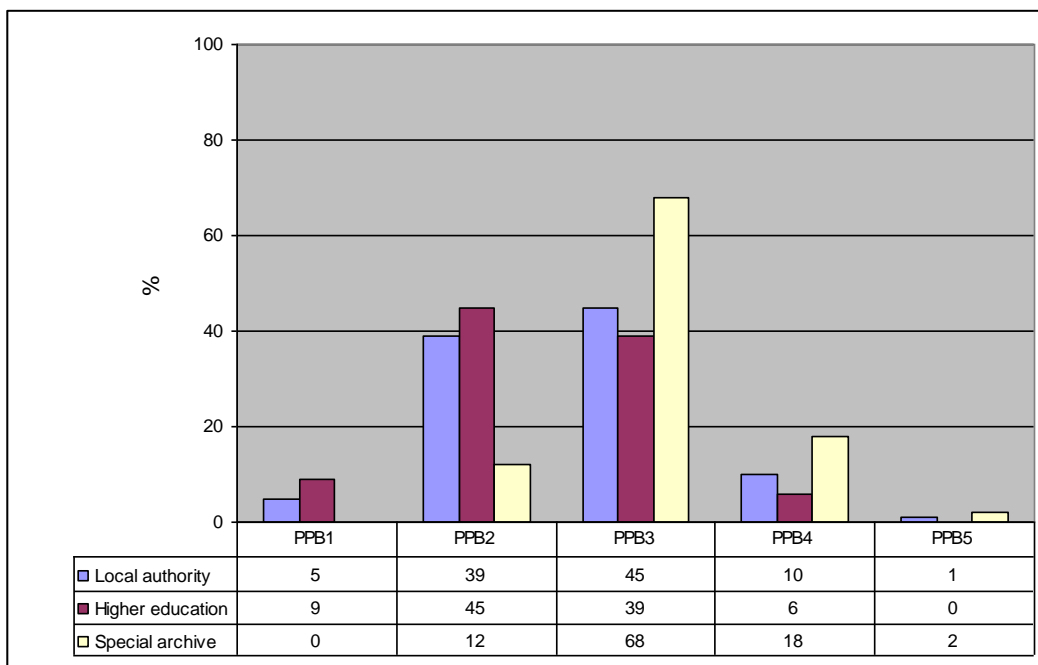


Figure 18. Preservation Priority Bands - stratified results

4 What if...Modelling improvements

What if... modelling can be carried out to show the impact of selected changes in preservation practice or use of collections on the preservation priority band profile. The impact of different activities can be compared, as can the effect of their combination. Where different levels of staffing or capital resource is required, the modelling can support the prioritisation of activities.

Modelling has been carried out for a series of improvements in preservation practice: storage, environment, boxing and disaster planning. A 'best case' scenario has been created based on all possible improvements in preservation practice. The modelling has also been used to demonstrate the impact of changes in the patterns of use.

4.1 What if...improved storage?

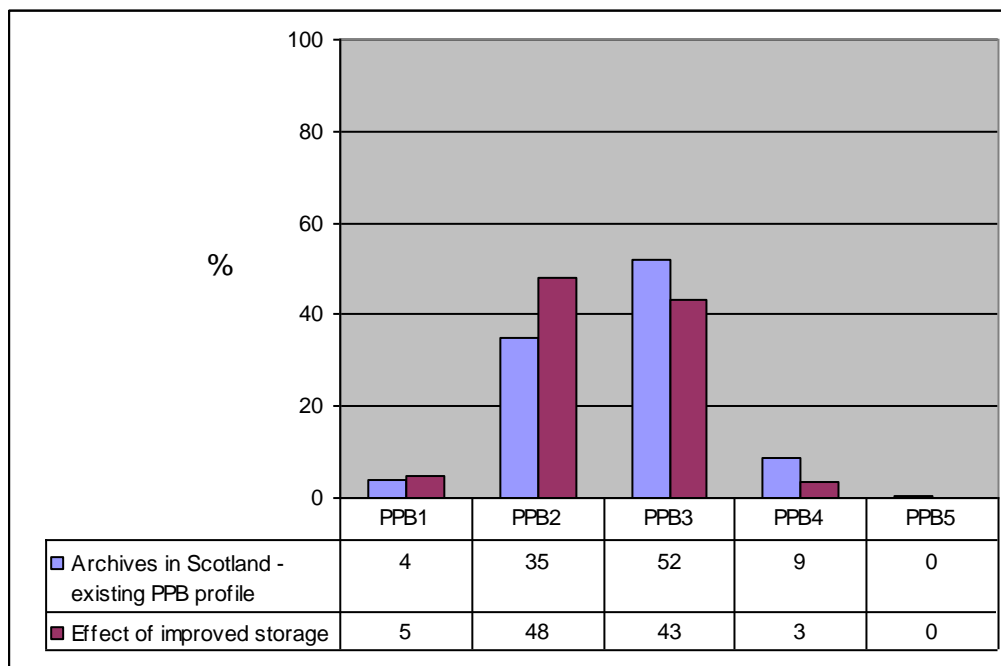


Figure 19. Effect of improvements in storage on PPB profile

Improvements in storage, such that the following conditions are met by all items would significantly improve the preservation priority band profile.

- Preventive measures are taken to protect the item from hazards.
- Good housekeeping procedures, such as vacuuming and shelf-cleaning are routinely carried out.
- The item is stored at least 150mm off the floor.
- Primary protection is suitable for the item.
- Oversize material is on suitable shelving.

The proportion of material at medium to very high risk would decrease from 61% to 46%. Within this, the proportion of material at high or very high risk would decrease

from 9% to 3%. Based on an estimated total collection size of 2,750,000 this approximates to moving 165,000 items out of the high or very high risk categories. It should be remembered that the total collection size is based on the sum of the collections that were surveyed. Some institutions only surveyed one collection from within much larger holdings and so the impact of such changes would be much greater if all collections at the 28 institutions were affected and, of course, greater still if one were to extrapolate the findings to archives across Scotland that did not form part of this assessment.

4.2 What if...improved environment?

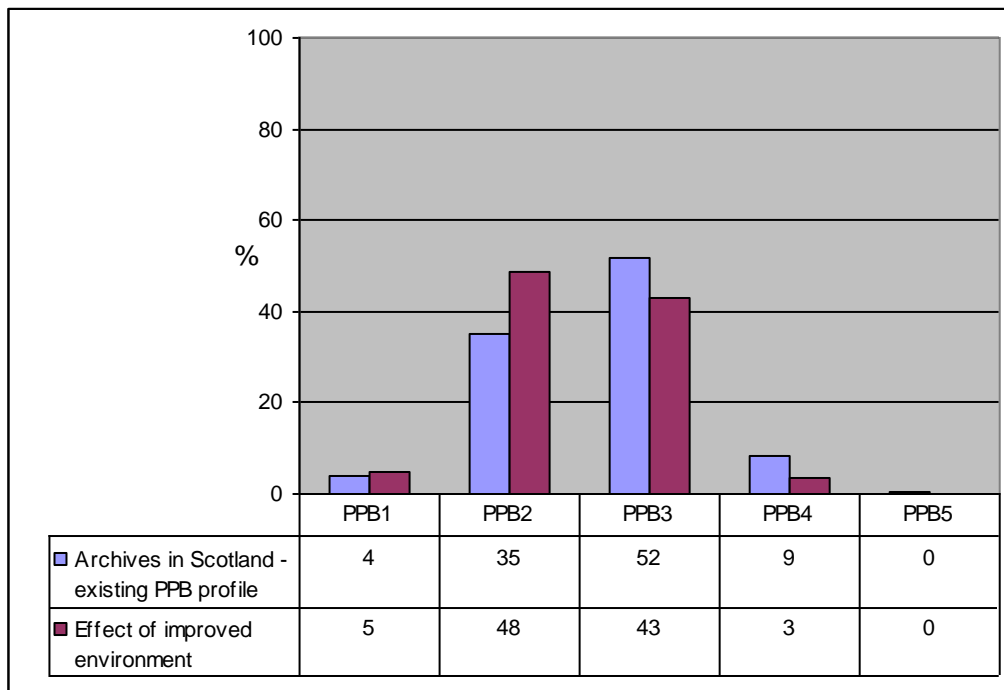


Figure 20. Effect of improved environment

Changes to the environment can also be seen to have a significant impact. Coincidentally, the impact is the same across all bands as changes to storage. Improvements modelled are to both monitoring and control of the environment, such that the following criteria are met:

- Relative humidity and temperature are routinely monitored in the area in which the item is normally kept.
- Visible and ultra-violet light is controlled in the area in which the item is normally kept.
- Temperature and relative humidity levels in the area in which the item is normally kept usually falls within the ranges recommended in BS 5454:2000⁵.

⁵ BS 5454:2000 was withdrawn by the British Standards Institute in April 2012 and has been replaced by PD 5454:2012.

4.3 What if...improved boxing?

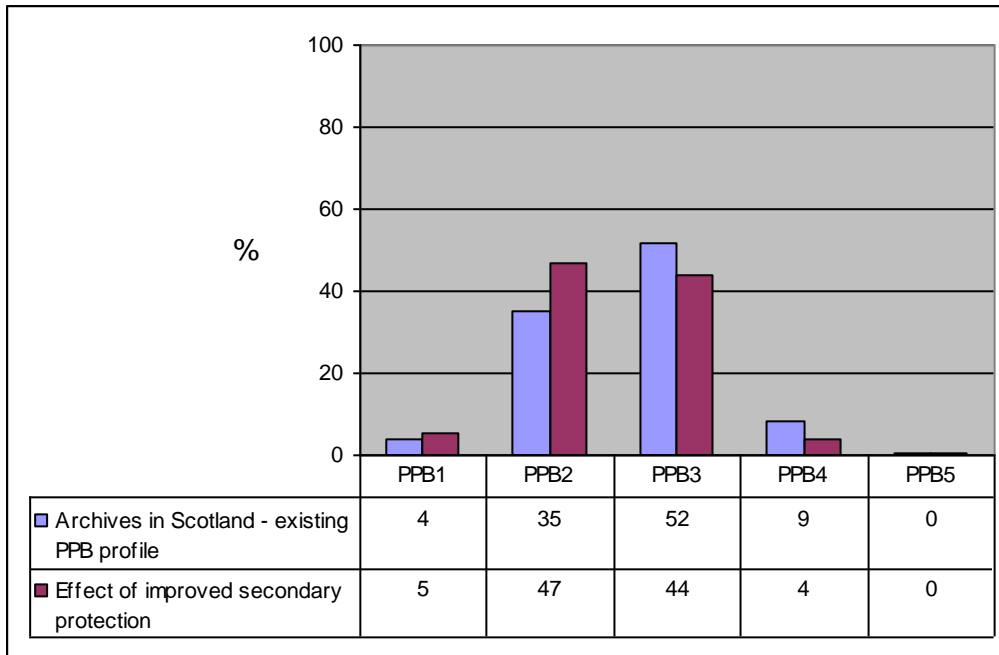


Figure 21. Effect of improved secondary protection

Improving secondary protection (by providing boxes or enclosures where they are needed for the first time, and replacing boxes or enclosures that are not up to standard) can also make a big difference. The proportion of material falling into the high and very high risk bands reduces from 9% to 4%, and there are comparable improvements across other categories of the profile.

4.4 What if...improved disaster planning?

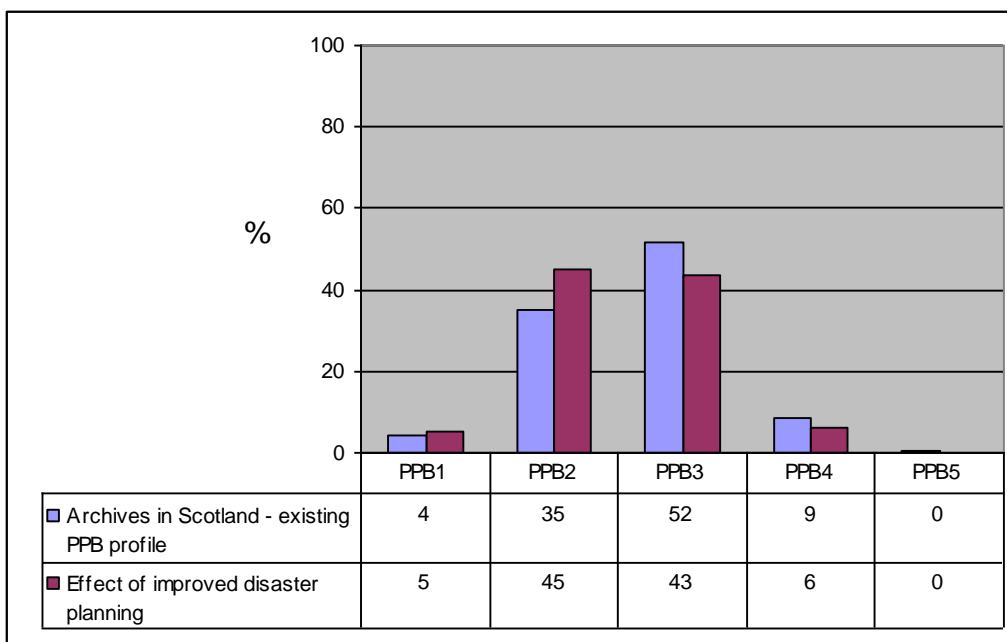


Figure 22. Effect of improved disaster planning

Although preservation practice in the area of disaster (or emergency) planning is significantly better than the other two areas for which improvements have been modelled, it has been included in the ‘what if...’ scenarios because it is relatively simple and cheap to make improvements to this area of practice. The requirements identified by the Preservation Assessment Survey are:

- The item is covered by an up-to-date, written disaster control plan
- Staff are trained in its implementation.

4.5 What if...best case scenario

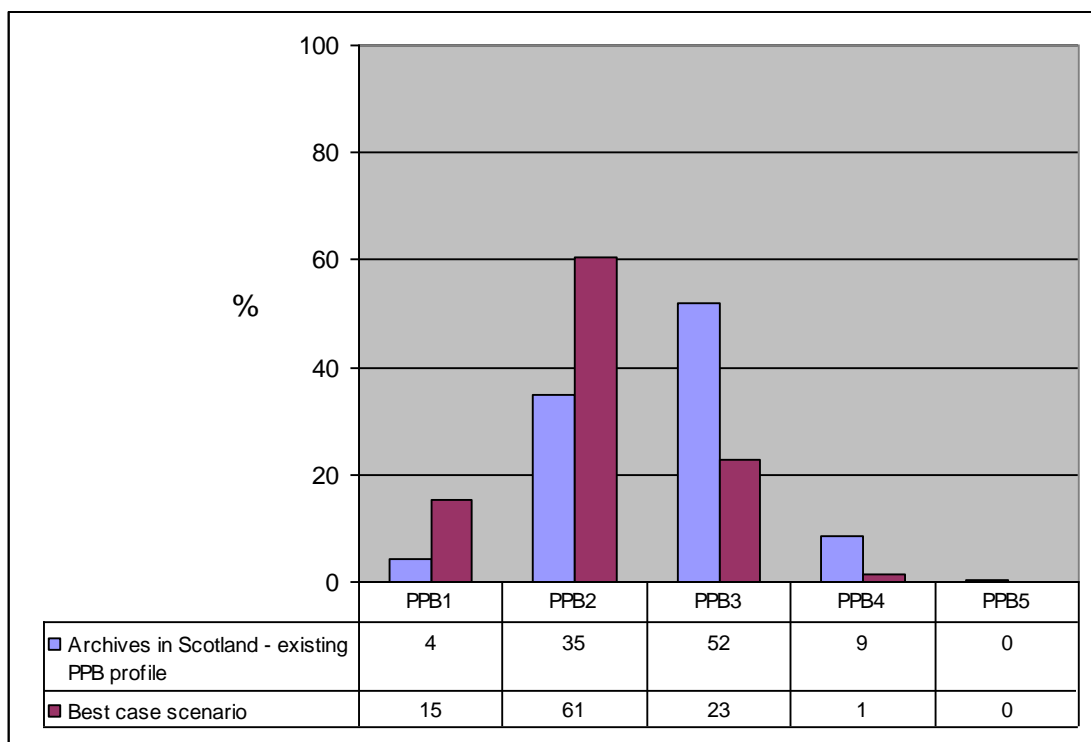


Figure 23. Preservation Priority Bands - best case scenario

Where a number of preservation factors require attention a ‘Best Case’ scenario can be produced. This demonstrates the potential improvement to the preservation priority band profile if all weaknesses in *preservation practice* are addressed.

The criteria against which the Preservation Assessment Survey assesses are designed to indicate a common level of practice below which an institution could not be said to be providing adequate or appropriate collection care. The purpose of fig. 23 is to show what is possible through incremental changes and long-term planning. It is possible, through making changes in the way that these collections are managed and stored, to produce a profile in which 99% of items fall into the very low to medium preservation priority bands.

However, it is worth clarifying that it is not possible to move all the collections to the ‘very low preservation priority’ band (PPB1) through improvements in preservation

practice alone. The maximum improvement that can potentially be achieved is offset by the value and importance of the items surveyed, and their existing condition and usability. Given the role of archives as the long-term custodians of these collections, it is unlikely that the perception of their value and importance will change dramatically over time. Similarly, improvements to the existing condition and usability of items will not change as a result of changes to preservation practice. Improvements can only be made here by interventive conservation, that is, action to stabilise or address existing damage.

4.6 What if...use increases?

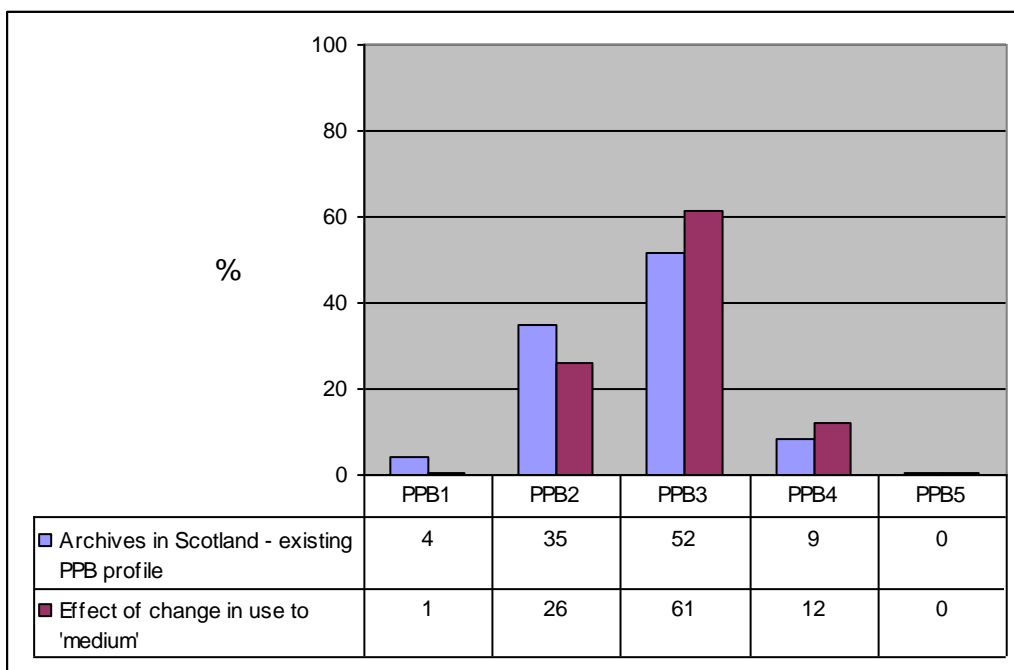


Figure 24. Use increased to 'medium'

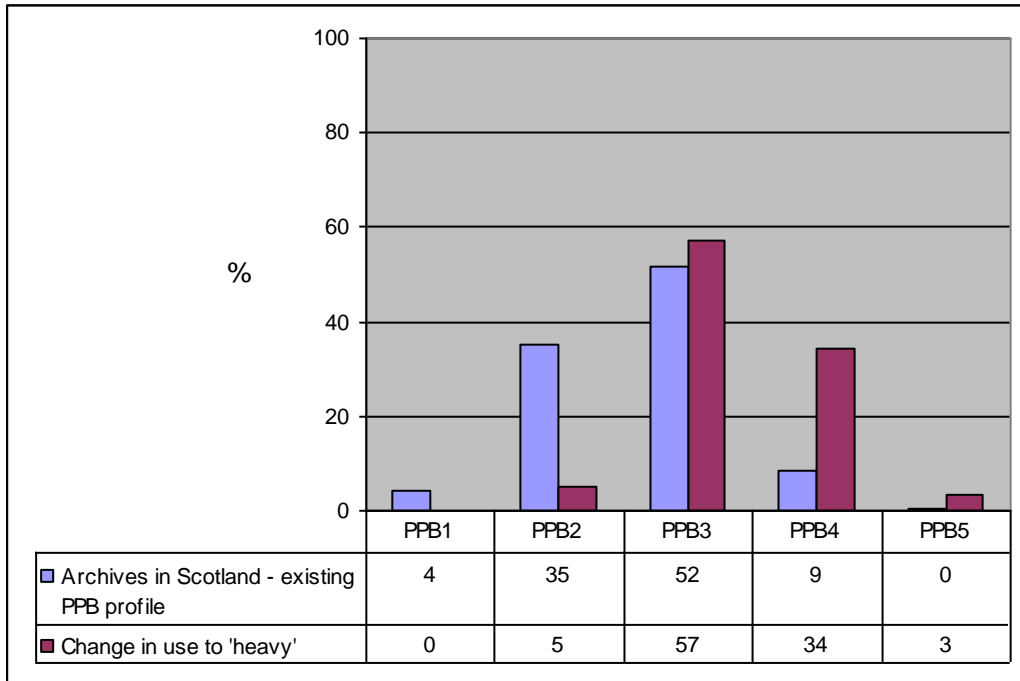


Figure 25. Use increased to 'heavy'

Figure 24 and 25 show the effect on the preservation priority bands of two levels of increased use. An increase to first medium and then heavy use makes a significant change to the preservation priority profile of the collection. This graph reflects the need to retrieve and handle the material with great care. The effect of increased use should be borne in mind if material within the collections is subject to increased use and handling for example due to changes in research activities.

If levels of cataloguing are improved, or if a greater proportion of existing catalogue records are made available online, it is likely that demand for the original items will increase. It is therefore useful to understand the effect of increased use on the preservation profile of the collection. This understanding will inform long-term preservation strategy, for example the prioritisation of collections for inclusion in surrogacy programmes.

5 The way forward

This report is intended to be the statistical and analytical foundation for the examination of 'where we go from here', i.e., how the condition of Scotland's Archives can best be maintained and, indeed, improved.

A factor that emerged clearly (and unsurprisingly) from the assessment exercise was the vital role of trained conservators. Training and years of hands-on experience has produced a small cadre of experts who can assess physical condition and do so with both confidence and speed.

The evidence presented is of diverse, well-used and significant collections with notable examples of good preservation practice in place, such as the widespread availability of good handling procedures. The report also brings to light a number of areas in which shared skills and knowledge, or collaborative approaches towards investment or purchasing may bring benefits; improving the state of preservation and increasing accessibility. These areas include:

- A reduction in cataloguing backlogs to increase discoverability of collections.
- A strategic approach to increased digitisation of high demand, physically vulnerable material.
- Improvements to storage and storage practices to increase the longevity of archival materials.
- Improvements in environmental conditions and in the skills and knowledge to monitor the environment and interpret the resulting data.
- An increased proportion of organisations with emergency plans and with staff trained in their use, and confident in their deployment.
- A proactive approach to understanding the issues associated with the long-term care of 20th century materials so that cost-effective strategies can be implemented early, to avoid costly and large-scale conservation issues in the future.

Any examination of the way forward should take account of four key factors:

1. The need to prioritise scarce and highly skilled conservation resources.
2. The need to encourage training, recruitment and retention of specialist archive professionals, from archivists, through records managers and electronic records experts, to conservators.
3. A preference for preventive rather than interventive action – prevent damage to many items and thus minimise the need for conservation treatment.
4. The Scottish Council on Archives' commitment to setting up a preservation committee to make recommendations on practical improvements.

6 Acknowledgements

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Falkirk Community Trust Archives

Glasgow City Archives

Grampian NHS Trust

Highland Council Archives

Lothian Health Services Archive

National Library of Scotland

National Records of Scotland

North Lanarkshire Council Archives

Perth and Kinross Council Archives

Preservation Advisory Centre, British Library

Royal College of Surgeons Edinburgh

Royal College of Surgeons Glasgow

Scottish Borders Council Archives (Hawick Heritage Hub)

Scottish Council on Archives

Shetland Council Archives

Stirling Council Archives

Tasglann Nan Eilean Siar (Hebridean Archives)

University of Aberdeen Special Libraries and Archives

University of Dundee Archive Services

University of Edinburgh Library Special Collections

University of Glasgow Archive Services

University of Stirling Library, Archives and Special Collections

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