



HOUSES OF PARLIAMENT
R&R DELIVERY AUTHORITY

Skills Assessment Research Digest

**P2. Skills for conservation and
conservators**

November 2021

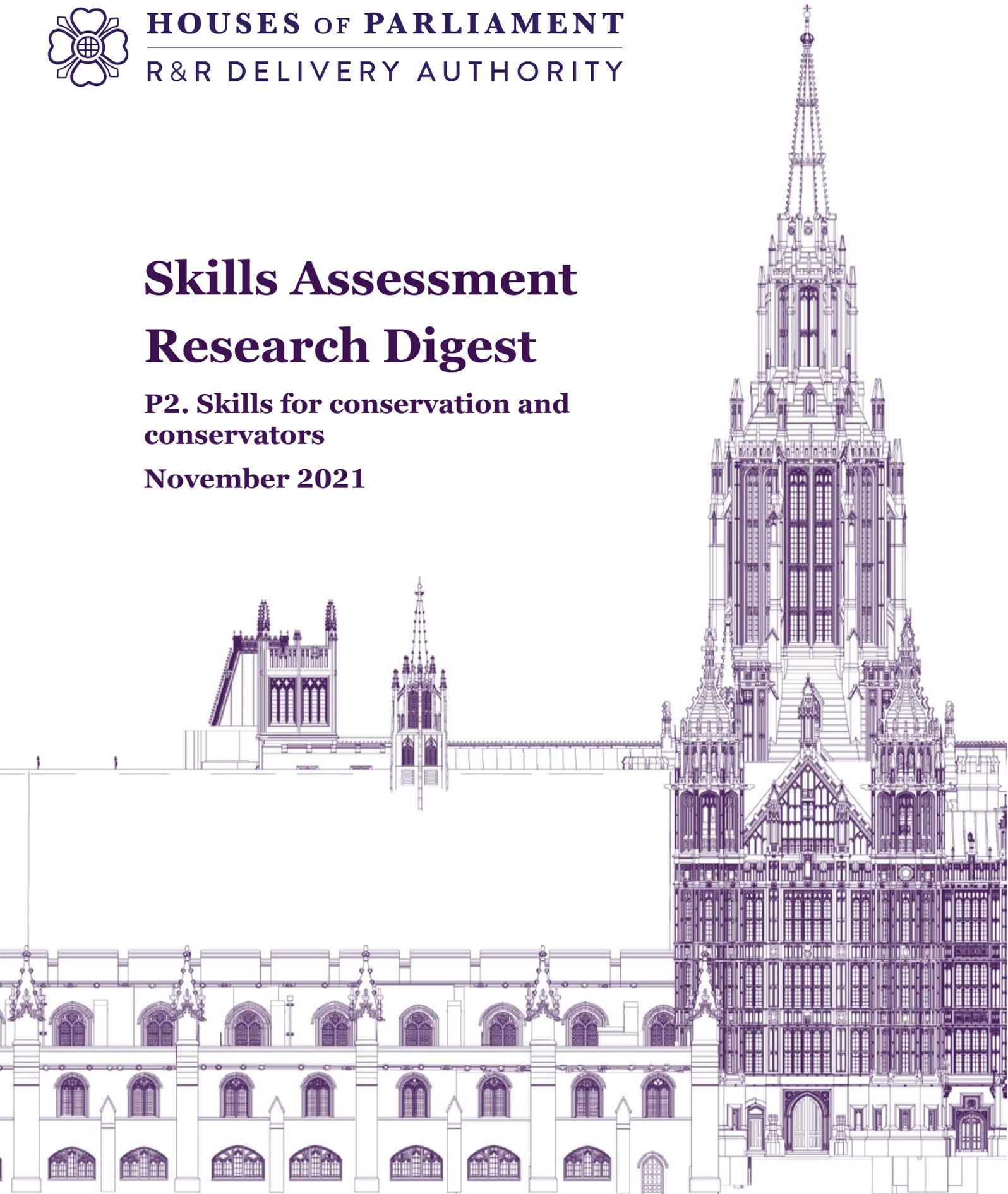




Table of Contents

1	About the research digests.....	4
2	Introduction to this digest	5
2.1	What is conservation?	5
2.2	Conservation Principles	6
2.3	The value of conserving heritage sites	8
2.3.1	Economic.....	11
2.3.2	Social.....	11
2.3.3	Environmental.....	11
3	Conservation policies.....	13
3.1	Protecting our historic environment: making the system work better	13
3.2	Conservation of historic buildings and monuments.....	13
3.3	Collections conservation.....	14
3.4	Scottish policies	14
3.5	Welsh policies	15
3.6	R&R's approach to conservation	16
4	Skills Assessment findings.....	17
4.1	Demographics of conservation sector	17
4.1.1	Volume of conservation companies	17
4.1.2	Company size	18
4.1.3	Turnover.....	18
4.1.4	Age of the workforce	19
4.1.5	Employment models	19
4.2	Skills in conservation.....	20
4.2.1	Skills overview.....	20
4.2.2	Hard-to-fill roles and skills shortages	21
4.2.3	Placements and apprenticeships.....	22
4.3	R&R Programme and conservation	24
4.3.1	What are the requirements?	24
4.3.2	What is needed to get involved?.....	25
4.3.3	Barriers and challenges.....	25
5	Overarching thoughts	27



Figures

Figure 1 Heritage sites in England (Historic England 2019)	8
Figure 2 At risk heritage sites in England (Historic England 2019)	9
Figure 3 Size of company for (left) conservation contractors and (right) all contractors	18
Figure 4 Turnover of conservation firms	18
Figure 5 Proportion of all (left) and conservation (right) contractors employing staff in each age band	19
Figure 6 Proportion of FTE (full time equivalent) contractor employees	20
Figure 7 Main barriers to taking on an apprentice	24

Tables

Table 1 List of the research digests forming part of this series. The current digest is highlighted in bold.....	5
Table 2 Surveyed conservation firms and estimated UK business population	17
Table 3 Conservation roles hard-to-fill.	21



1 About the research digests

The House of Parliament Restoration and Renewal Programme's Skills Assessment Research has been published as a series of Research Digests. These cover a number of distinct areas of the assessment as follow:

- P1: Skills for the heritage construction sector; and
- P2: Skills for conservation and conservators**
- P3: Training and provision in construction and heritage

The purpose in doing so is to add to the overall volume of knowledge and information available to organisations working in the wider heritage sector to support the approach to addressing the skills challenges ongoing within the sector.

In this or any other of the series of Skills Assessment Research Digests, where reference is made to outcomes from research findings, unless otherwise stated, these will have arisen as a result of the primary research conducted specifically for the 2020/21 Skills Assessment. The primary research comprised a survey of over 6,000 UK-based heritage and construction contractors, supplemented with 40 contractor depth interviews, and a separate survey of over 500 training providers also across the UK. This primary research followed on from early research in the Skills Assessment involving stakeholder interviews conducted in Summer 2020.



2 Introduction to this digest

2.1 What is conservation?

According to Historic England (an executive non-departmental public body of the UK government tasked with protecting the historic English environment), conservation is the process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance, while recognising opportunities to reveal or reinforce heritage values for present and future generations.¹ Meanwhile, the Institute of Conservation (ICON) outlines how conservation might be defined as physically preserving cultural heritage, allowing for items to be displayed, researched and used.

English Heritage is specifically responsible for the preservation of historic buildings, while Historic England are responsible for the listing of heritage buildings. Equivalent organisations exist around the UK to promote the protection and conservation of heritage within their own regions, and include Historic Environment Scotland, which is similarly an executive non-departmental public body responsible for care and protection of Scotland's historic environment, and Cadw, which is the historic environment service of the Welsh government that protects historic buildings and structures, and the landscapes and heritage sites of Wales. There exist other national bodies such as the Society for the Protection of Ancient Buildings and the Churches Conservation Trust which are also closely involved in the preservation of buildings.

Meanwhile, ICON – a charitable and professional body – represents and supports the practice and profession of conservation. The International Council on Monuments and Sites (ICOMOS) works globally for the conservation and protection of cultural heritage places, by promoting the application of theory, methodology and scientific techniques to the conservation of architectural and archaeological heritage.

This Digest focuses specifically on collections conservation, while heritage construction is the focus of Research Digest P1.²

Conservation practise requires consideration of a series of guiding principles:

- judge how its heritage values are vulnerable to change,
- take the actions and impose the constraints necessary to sustain, reveal and reinforce those values,
- mediate between conservation options, if action to sustain one heritage value could conflict with action to sustain another, and
- ensure that the place retains its authenticity – i.e. the attributes and elements which most truthfully reflect and embody the heritage values attached to it.³

It is the government's primary aim that the historic environment and its heritage assets should use these methods and be conserved for the quality of life they bring to this and future generations. The Restoration & Renewal (R&R) Programme shares this aim. One of the goals of R&R is to protect,

¹ Ministry of Housing, Communities & Local Government, *Annex 2: Glossary, National Planning Policy Framework*, June 2019, Accessed 24/05/2021

² Research Digest P1. – Skills for the heritage construction sector

³ Historic England, *Conservation Principles, Policies and Guidance*, updated 2017



renew and restore the Palace of Westminster, for present and future generations delivering environmental, social and economic benefits across the UK. The plan will involve incorporating cutting-edge research to allow for, and identify, opportunities for enhancements of the building (for example research into the historical heating and ventilation systems) in order to increase the building's accessibility, sustainability, and overarching aesthetic to celebrate the Palace's rich heritage. Furthermore, the collections of the historic decorative building fabric contribute significantly towards the Palace of Westminster's World Heritage listing status.

Accessioned heritage items, i.e. excluding non-accessions items such as timber, panelling, and stonework that is part of the building fabric, include:⁴

- works of art collection
 - 425 easel paintings,
 - 117 wall paintings,
 - 2,130 works of art on paper,
 - 8 textiles,
 - 459 sculptures (including metal, stone, glass, wood and plaster), and
 - 486 metals;
- historic furniture and decorative arts collection
 - 6,078 items of furniture (chairs constitute more than 1,000 items within this),
 - 1,247 silver objects, and
 - 216 clocks; and
- architectural fabric collection
 - Approximately 4,500 items (with over 1,000 of these being made up of encaustic tiles), and this collection is anticipated to expand significantly during the lifetime of the R&R Programme.

It should be noted that these numbers also include some loaned items, which will potentially be returned prior to the restoration process, and that these collections are working collections.

2.2 Conservation Principles

In 2008, Historic England published the report *Conservation Principles, Policies and Guidance*⁵ to support the quality of decision-making, and help create a management regime for all aspects of the historic environment that is clear and transparent in its purpose and sustainable in its application.

The report (revised following consultation in 2017) outlined the importance of certain aspects of conservation and the principles that guide Historic England when offering advice or making changes that affect the heritage values of places, or when addressing the conflict between sustaining heritage values of a place and altering them to achieve another important public objective. Such principles include (but are not limited to) the fact that the historic environment is a shared resource

⁴ Pye Tait Consulting and Whole Life Consultants, *Skills Assessment Phase 2 Stage 1 Report Draft B*, Section 3.2.3, 29 September 2020

⁵ Historic England, *Conservation Principles, Policies and Guidance*, updated 2017



therefore advice and assistance should be available from public sources, the notion that everyone should be able to participate in sustaining the historic environment, and significant places should be managed to sustain their values.

Outlined in the report are the types of work that an historic asset will potentially undergo when changes occur. This may involve one, or more likely a combination of the following principle methods:

- routine management and maintenance,
- periodic renewal,
- repair,
- intervention to increase knowledge of the past,
- restoration,
- new work and alteration,
- integrating conservation with other public interests, and
- enabling development.

The methods listed above are standardised to ensure consistency across professional conservation advice and enable the public and other conservation sectors to see the basis on which important heritage judgements are made, and the R&R Programme will likely involve all of the methods listed above.

Conservation of the most sensitive and important buildings, sites, and collections may come close to absolute physical preservation, but those instances will be very rare. The vast majority of heritage assets are capable of being adapted to some extent without a loss of their significance, but this should always be done with the utmost respect for the structure, building fabric, and collections in order to preserve their value.



2.3 The value of conserving heritage sites

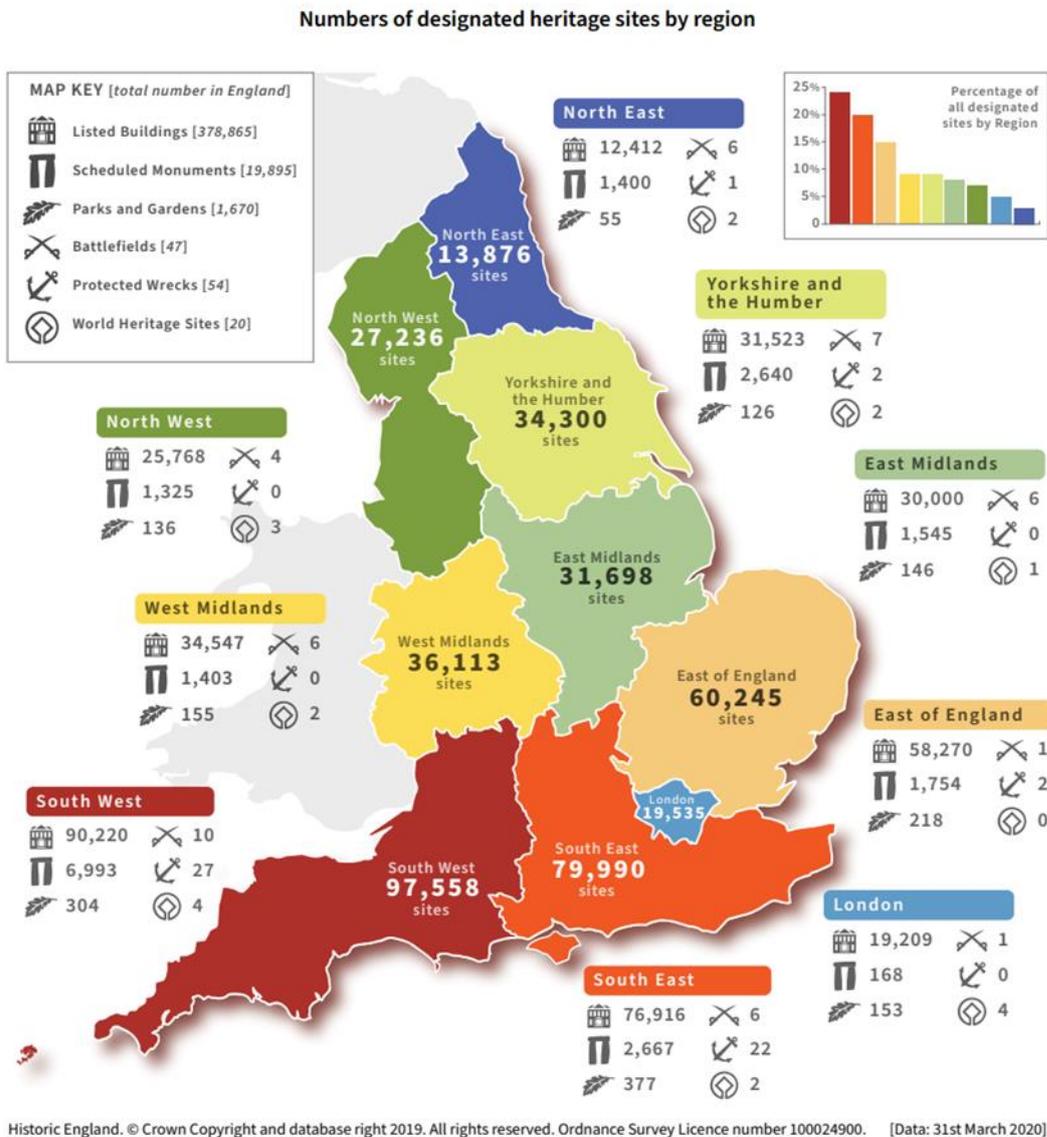


Figure 1 Heritage sites in England ⁶ (Historic England 2019)

The number of heritage sites in England has increased year-on-year with the total number of listed entries growing from 400,175 in 2019, to 400,551 as of 31st March 2020, as determined by The National Heritage List for England (NHLE) which provides the official record of nationally designated heritage assets. This number indicates how strongly the UK benefits from conservation and preservation projects, and is shown by region and by heritage type Figure 1.

⁶ Historic England, 2020, *Heritage Indicator 2020 – Heritage Counts*



Data pertaining to the number of collections and artefacts in the UK are harder to pinpoint. However, in the 2,500 museums across the UK, it is thought that there are approximately 200 million objects coming under the broad banner of arts and culture.⁷

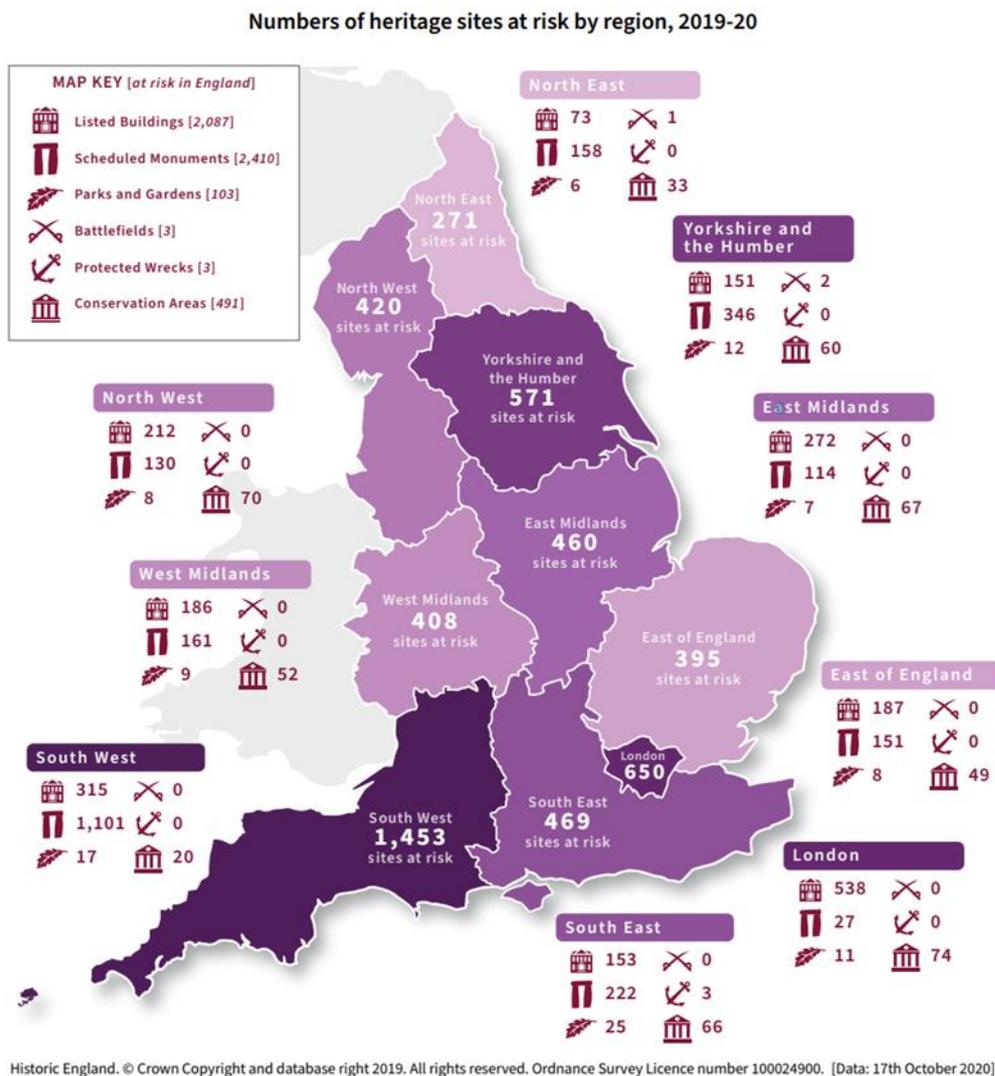


Figure 2 At risk heritage sites in England⁸ (Historic England 2019)

In 2020 it was determined by the Heritage at Risk (HAR) programme that there is a total of 5,097 “at risk” heritage sites across England; these are listed as structures most at risk of being lost as a result of neglect, decay or detrimental development. The map in Figure 2 indicates the location based on region for each type of protected heritage site; 198 out of 766 of the country’s highest graded (grade

⁷ Museums Association, Collections factsheet. Accessed August 2021. <https://www.culturehive.co.uk/wp-content/uploads/2020/10/MA-collections-love-museums-1.pdf>

⁸ Historic England, *Heritage Indicator 2020 – Heritage Counts*, “Number of heritage sites at risk by region 2019-20”, p14, December 2020



I and grad II*) are located within the Midlands, and Historic England has since allocated £1.7m to the 12 highest risk sites within this region.

In Wales, there are approximately 30,000 buildings⁹ listed as valuable, irreplaceable commodities with over 600 registered castles and ruins, but such buildings and assets can quickly become vulnerable or at risk, and according to Cadw, a total of £2.95m was allocated to capital-funded conservation and investment projects to attempt to alleviate this risk between April 2019 and March 2020.¹⁰ It is the opinion of the Welsh government that, as the historic environment is a shared resource, the fate of listed buildings should matter to all, and there should be a strong public interest in the protection of these listed buildings.

Northern Ireland follows similar ideals regarding their heritage sites by preserving and protecting historical assets and buildings. Approximately 9,000 buildings and 16,000 historic monuments are listed including prehistoric tombs, post-medieval settlements, bridges, and telephone boxes.¹¹ Of these historic monuments, 2,000 have been recognised to be of significant importance to knowledge of the region's history, with such sites reflecting all periods of human activity.¹²

Scotland, meanwhile, has declared a climate emergency and seeks to use its historic environment to inspire climate action and foster positive behavioural changes and increase resilience in communities across the country.¹³

In 2019, Historic Environment Scotland (HES) published the report "*Heritage for All*" which stated its core objective is to ensure the historic environment makes a real difference to people's lives, with a focus on public health, the economy, culture, and environment. Historic Environment Scotland directly cares for over 300 sites of national importance, and aims to:

- ensure the historic environment positively impacts the lives of the public,
- protect and manage the historic environment and guarantee that it is looked after for generations to come,
- encourage a broader contribution to the economy of Scotland and the public via historic environments,
- guarantee that the historic environment is cared for and championed by a high-performing organisation, and
- help the historic environment inspire a creative and vibrant Scotland.

With these goals in mind, in 2019/20 a total of £37.3m was invested in conservation, maintenance and management of Properties in Care, and over £14.5m was invested through HES grants to restore built heritage and improve understanding of the past, specifically contributing to the overall economic and social value of these heritage sites.¹⁴

⁹ Welsh government, *Managing Listed Buildings at Risk in Wales*, May 2017

¹⁰ Cadw, 2021, *Cadw Annual Report April 2019 to March 2020*

¹¹ ni direct, *Historic buildings and monuments*, Accessed June 2021 <https://www.nidirect.gov.uk/articles/historic-buildings-and-monuments>

¹² Department for Communities, *Scheduled Historic Monuments*, Accessed June 2021 <https://www.communities-ni.gov.uk/articles/scheduled-historic-monuments>

¹³ Historic Environment Scotland, 2020, *Climate Action Plan 2020-25*

¹⁴ Historic Environment Scotland, *Annual Report and Financial Statements 2019-2020*, 15 October 2020



The DCMS' Heritage Statement of 2017¹⁵ stressed that the direct conservation, preservation, and protection of heritage sites has significant economic, social and environmental value.

2.3.1 Economic

- The heritage sector (see reference for definition) total GVA £36.6bn and 563,509 jobs in 2019 (pre COVID-19).¹⁶
- The average heritage worker produces £71,000 of Gross Value Added (GVA) per year.¹⁷
- Previous research commissioned by English Heritage in 2010 found that £1 of public sector investment in heritage-led regeneration generates £1.60 in additional economic activity over a 10-year period – a 60% return on investment.¹⁸
- Around half of all holiday visits to the UK include a visit to a castle or a historic house.
- Over 1.26m visitors were recorded to have visited Cadw's staffed heritage sites, accounting for a revenue of £4.7m.¹⁹
- Over 5.2m visitors travelled to Historic Environment Scotland sites in the 2019/2020 financial year, leading to a rise of over £64.7m in commercial income.²⁰
- Over 100,000 construction workers involved in heritage-related activities were noted to be in employment in 2020 by Historic England's "*Heritage and the Economy 2020*".²¹

2.3.2 Social

- Increased social cohesion and a greater sense of identity to improved wellbeing and better learning and skills outcomes.
- Research published by the Heritage Lottery Fund found heritage volunteers have levels of mental health and wellbeing far higher than for the general population.²²
- Over 90% of volunteers benefitted from socialising on heritage projects and 72% significantly increased their contact with older adults, leading to increased understanding of people aged over 65.
- 87% of adults agree that 'finding new uses for historic buildings rather than demolishing them' is important. A national survey in 2018 of 1,731 adults in England on behalf of Historic England shows that the conservation of heritage assets is important to the majority of the public.²³

2.3.3 Environmental

- Trees and other plants, rivers and lakes, and geology and soils that are managed on heritage sites all contribute to our economy, wildlife diversity, geodiversity and our quality of life.

¹⁵ DCMS, 2017, *Heritage Statement 2017*

¹⁶ Historic England, *Heritage Indicator 2020 – Heritage Counts*, "Number of heritage sites at risk by region 2019-20", December 2020

¹⁷ Ibid

¹⁸ English Heritage, 2010, *Impact of Historic Environment Regeneration*

¹⁹ Cadw, 2021, *Cadw Annual Report April 2019 to March 2020*

²⁰ Historic Environment Scotland website, accessed August 2021

²¹ Historic England, 2020, *Heritage and the Economy 2020 – Heritage Counts*

²² Historic England, 2014, *Heritage Counts*

²³ YouGov on behalf of Historic England, *Quality of Places*, p14, 04 June 2018



- Research carried out by Historic England has demonstrated that sympathetic energy efficiency improvements to traditionally built homes can result in reductions of up to 40% in operational greenhouse gas emissions.²⁴
- The changing climate and fluctuating temperature extremes also threaten delicate and fragile artefacts within collections, as well as likely encouraging fungal and plant growth, and insect infestation, among heritage assets.

²⁴ Historic England, *Heritage and the Environment 2020 – Heritage Counts, 2020*



3 Conservation policies

Parliament has recognised the need to protect heritage monuments and buildings for well over a century. The first legislation on the preservation of archaeological and historic sites in Britain was the Ancient Monuments Protection Act of 1882. It made arrangements for the 'guardianship' of some 50 prehistoric sites and appointed a single inspector of ancient monuments.²⁵

In this section, some key examples of the UK's progression in the conservation sector from the last 20 years are explored in order to understand the implications and approaches that the Palace of Westminster R&R Programme may need to consider.

3.1 Protecting our historic environment: making the system work better

The *Protecting our historic environment: Making the system work better* consultation document was a response of the Institute of Historic Building Conservation, published by the DCMS in 2003, and followed *The Historic Environment: A Force for our Future* (2001), which was a commitment to review the way we protect our historic environment. These papers set out the government's proposals for improving the system with objectives to deliver:²⁶

- a positive approach to managing the historic environment, which would be transparent, inclusive, effective and sustainable and central to social, economic agendas at a local and community as well as national level, and
- a historic environment legislative framework that provided for the management and enabling of change rather than its prevention.

The resulting report, *Review of Heritage Protection: The Way Forward* (2004),²⁷ included a series of short- and long-term measures. The first of the short-term objectives was implemented in April 2005, with the handing-over of responsibility for processing listing applications to English Heritage (Historic England). This means Historic England can nominate historic buildings to be reviewed, which allows for more applications from privately owned buildings and homes to be considered with a developed grading system based on overall interest (Grade I buildings are of exceptional interest; Grade II* buildings are particularly important buildings of more than special interest and Grade II buildings are of special interest; 91.7% of all listed buildings are in this class and it is the most likely grade of listing for a homeowner).

3.2 Conservation of historic buildings and monuments

The policy that ran from 2010-2015 (*Conservation of historic buildings and monuments*) outlines the importance of having measures in place to protect and conserve the historic environment, because

²⁵ <https://www.parliament.uk/about/living-heritage/transformingsociety/towncountry/landscape/overview/historicsites/> *Preserving historic sites and buildings*, UK parliament, Accessed 24/05/2021

²⁶ English Heritage (Historic England), 2006, *Heritage Protection Review - Transforming Heritage Protection English Heritage and the Heritage White Paper*

²⁷ DCMS, 2004, *Review of Heritage Protection: The Way Forward*



of the fear that heritage sites risk being changed and losing what makes them special, or being destroyed and lost forever. Such a policy claimed the government protected historic environments by:²⁸

- promoting the understanding, valuing, caring and enjoyment of the historic environment through funding English Heritage (Historic England),
- nominating places in the UK for World Heritage Site status,
- protecting buildings of special architectural or historic interest by giving them listed status, which prevents them being demolished, extended or altered without permission,
- protecting nationally important sites and monuments of archaeological or historic interest from being changed without permission by giving them scheduled status,
- protecting shipwreck sites of archaeological, historical or artistic importance by giving them protected wreck site status, and
- co-sponsoring the Churches Conservation Trust with the Church of England, which maintains over 340 churches of architectural, historical or archaeological importance.

3.3 Collections conservation

The Institute of Conservation (ICON) seeks to bring together all conservators and external professional such as curators, archivists and architects to outline and share best practice with respect to collections conservation. It acts as a central resource to provide links and networks for professionals to access information and resources around care and best practise, for instance, joining up with bodies such as the Collections Trust, the National Trust, the British Library, and the Museum of London. A series of resources are also provided that outline best practice regarding care and conservation of books, carpets, clocks, furniture, and many other artefacts.

ICOMOS outlines its Principles for the analysis, conservation and structural restoration of architectural heritage, which are viewed as best practice for the sector. These guidelines broadly state that a multi-disciplinary approach is required, and that the value and authenticity of heritage cannot be based on fixed criteria.²⁹

3.4 Scottish policies

The Historic Environment Policy for Scotland (HEPS) is a document outlining policies for how the Scottish government should undertake the duty of care and conservation of important heritage sites. Six policies define the management of historical assets and the historic environment.

- Decisions affecting any part of the historic environment should be informed by an inclusive understanding of its breadth and cultural significance.
- Decisions affecting the historic environment should ensure that its understanding and enjoyment, as well as its benefits, are secured for present and future generations.
- Plans, programmes, policies and strategies, and the allocation of resources, should be approached in a way that protects and promotes the historic environment. If detrimental impact on the historic environment is unavoidable, it should be minimised.

²⁸ DCMS, 2015, *2010 to 2015 government policy: conservation of historic buildings and monuments*

²⁹ ICOMOS, 2003, *Principles for the analysis, conservation and structural restoration of architectural heritage*



- Changes to specific assets and their context should be managed in a way that protects the historic environment. Opportunities for enhancement should be identified where appropriate.
- Decisions affecting the historic environment should contribute to the sustainable development of communities and places.
- Decisions affecting the historic environment should be informed by an inclusive understanding of the potential consequences for people and communities. Decision-making processes should be collaborative, open, transparent, and easy to understand.

In 2019, the Scotland declared a Climate Emergency. Historic Environment Scotland (HES) is seeking to utilise this an opportunity to inspire climate action. In its Climate Action Plan 2020-25, HES outlines a plan to transform the way it operates in response to the climate emergency, to help tackle the causes of the crisis, to change they way it protects and operates some of the assets it manages, and to share knowledge and invest in sustainability to support other to do likewise.

3.5 Welsh policies

The Welsh government’s Technical Advice Notes help inform planning policies and advice. Note 24: The Historic Environment³⁰ specifically provides guidance on how the historic environment is considered when developing planning preparation and listed building consent applications, with direct mention of different historical assets to consider such as:

- scheduled monuments,
- archaeological remains,
- listed buildings,
- conservation areas,
- historic landscapes, and
- historic assets of special local interest.

Beyond this, Planning Policy Wales³¹ specifically sets out the Welsh government’s approach to planning to ensure the system directly contributes to the well-being of Wales. This policy outlines how the Welsh government is obligated to conserve the historic environment for the benefit of current and future generations, and to sustainably manage historic assets.

Currently, Cadw is in the process of creating new guidance to complement the pre-existing legislative framework that will support the sustainable management of the Welsh historic environment. Several papers have been released to-date, and each focus on the all-encompassing need to enhance, protect, and preserve sites of importance.³²

³⁰ Welsh Government, 2017, *Technical advice note (TAN) 24: the historic environment*

³¹ Welsh Government, 2021, *Planning Policy Wales edition 11*

³² Cadw, Policy, advice and guidance. Accessed June 2021: <https://cadw.gov.wales/advice-support/placemaking/legislation-and-guidance/policy-advice-and-guidance>



3.6 R&R's approach to conservation

One strand of the R&R Programme's Vision and Strategic Theme is "Sense of History: conserve and enhance the fabric of the Houses of Parliament and build appreciation of its rich history".³³ This theme comprises several sub-themes.

- **Accretions:** Remove unsightly accretions to the Palace, providing alternative facilities elsewhere as needed.
- **Heritage:** Acknowledge the significance of Parliament's heritage, while embracing the opportunity for change and flexibility.
- **Icon:** Maintain the status of the Palace of Westminster as one of the world's iconic buildings and its role as the universally recognised home of the UK's Parliament.
- **Value:** Recognise the value of the building and conserve and enhance it.
- **Conserve:** Conserve and safeguard heritage collections, taking into account the needs and requirements of both Houses.
- **People:** Help Parliament to connect people with the past, present and future of parliamentary democracy through engagement with its rich heritage.

³³R&R Programme, *Palace of Westminster Restoration and Renewal Programme Vision and Strategic Themes*



4 Skills Assessment findings

The Skills Assessment has included detailed desk research, interviews with a range of stakeholders, a survey of over 6,000 heritage and construction contractors, 40 depth interviews with contractors, and a survey of more than 500 training providers, across the UK.

Contractors were provided with a list of primary activities and asked to self-define the area in which they worked. For the purposes of this research, contractors defined as working in “conservation” include firms whose primary business was one of the following.

- Conservation/Conservators
- Clockmaking (horology)
- Furniture restorer
- Paintings (easel) restoration
- Paintings (wall) restoration
- Stained glass conservation
- Textile conservation

4.1 Demographics of conservation sector

4.1.1 Volume of conservation companies

In the Skills Assessment survey, 338 contractors said that they primarily work in a conservation-related activity (about 5% of the total sample of 6,000 contractors). Table 2 outlines the number of businesses surveyed, and the estimated UK business population determined from a large national database of employers. Surveyed firms are spread UK-wide.

Primary activity	No. firms surveyed	Estimated UK total	Estimated % surveyed
Conservation	97	153	63
Paintings (wall and easel) restoration	139	70	199 ³⁴
Stained glass conservation	54	53	102 ³⁴
Furniture restoration	18	22	78
Clockmaking (horology)	22	44	50
Textile conservation	8	16	50

Table 1 Surveyed conservation firms and estimated UK business population

³⁴ Figures over 100% may arise for several reasons. The most likely is that respondents may have “self-defined” their primary activity erroneously. For example, a respondent might define wall painting restoration very widely to mean any restoration of a painted wall and another might categorise any small repair of a piece of Edwardian stained glass as “stained glass conservation”. It is also possible that definitional issues in national databases might lead to an underestimate of the total number of businesses in a specific trade or skill.



4.1.2 Company size

Those companies self-defining as having a primary activity in conservation – hereafter referred to as “conservation companies” – tend to be small. Almost three in four conservation companies are micro in size.

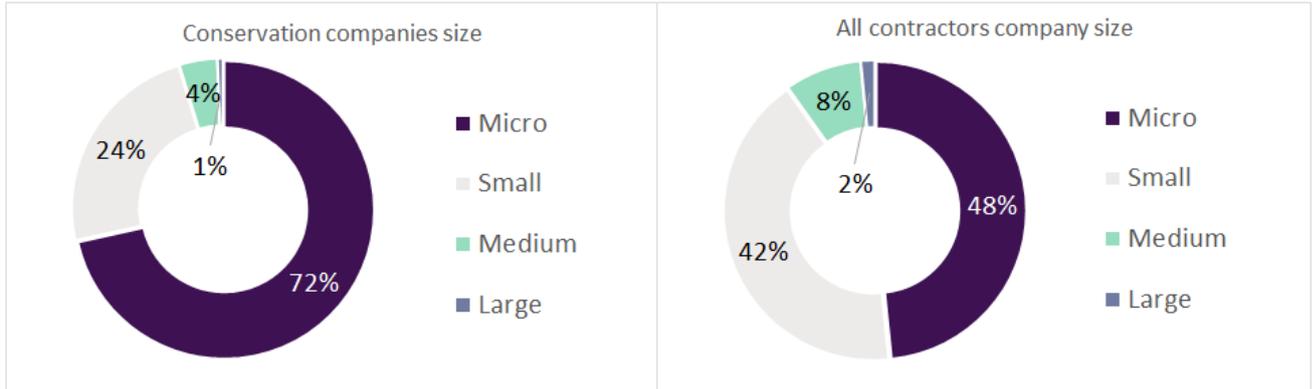


Figure 3 Size of company for (left) conservation contractors (base 320) and (right) all contractors (base 5,849)

4.1.3 Turnover

The size of a company will inevitably have an overall effect on average turnover. Surveyed conservation contractors were asked to provide an estimate of their average turnover band for a year of trade pre-Covid. Around half have a turnover of under £0.25m per annum.

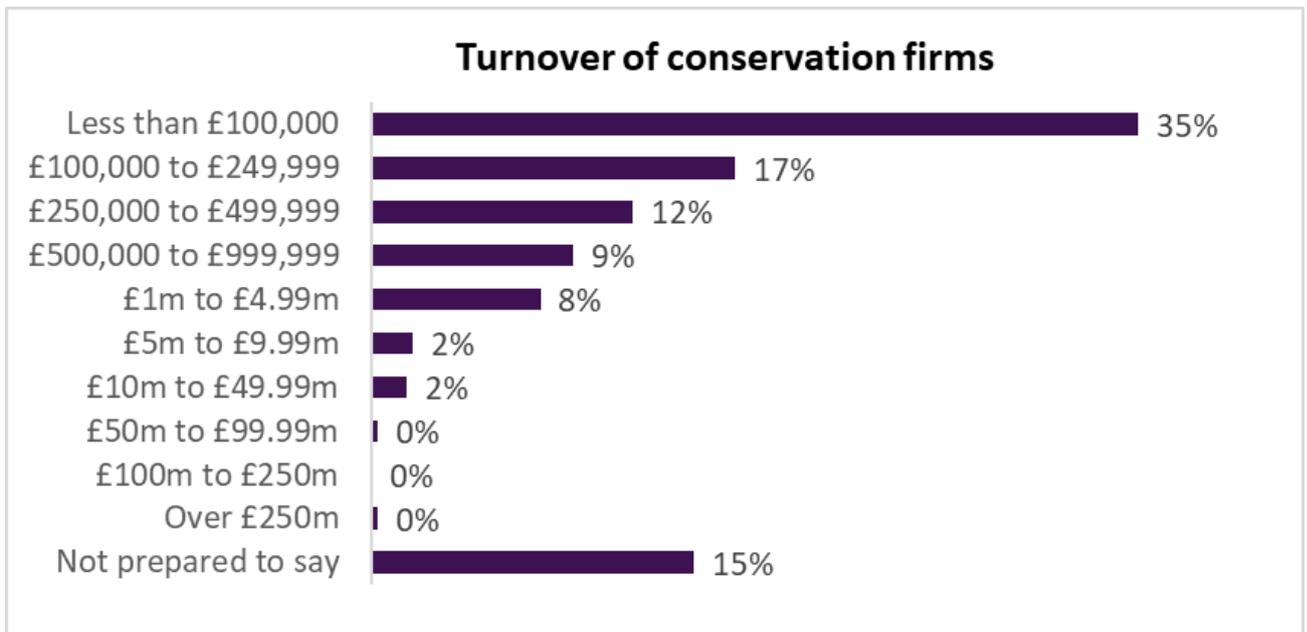


Figure 4 Turnover of conservation firms. Base: 322 respondents



4.1.4 Age of the workforce

The average age of the surveyed conservation workforce was also explored. The proportion of surveyed conservation firms employing young people aged 16 to 24 is 20%, compared to 22% across all contractors. Meanwhile, the proportion of surveyed conservation firms employing staff aged 50 and over is 43% compared to 38% across all surveyed contractors.

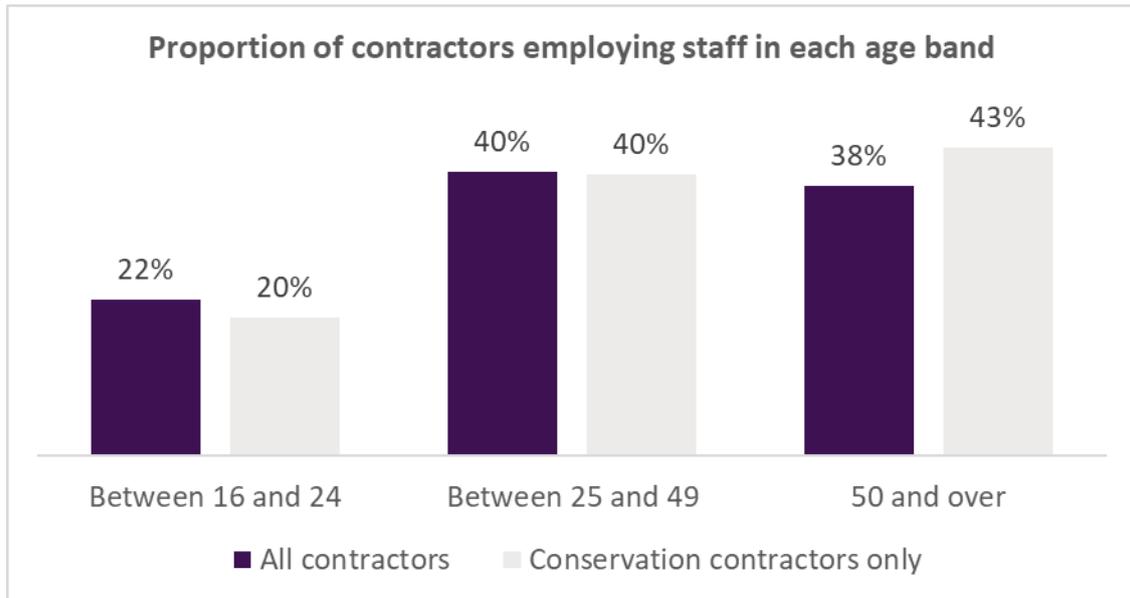


Figure 5 Proportion of all (left) and conservation (right) contractors employing staff in each age band
Bases: 2,327 and 298 respondents

Further, the mean percentage of staff aged 50 and over employed by conservation companies is 53%, while the mean percentage of staff aged 50 and over employed by all surveyed contractors is 47%. This indicates that the conservation workforce has a higher average age than other sectors, with a higher percentage of people working who are over the age of 50.

4.1.5 Employment models

In terms of the balance of FTE (full time equivalent) employees and other types (including agency and self-employed), a third of employees in the construction industry as a whole are directly employed in some way. By comparison the conservation and restoration sector directly employs just 16% of its workers.

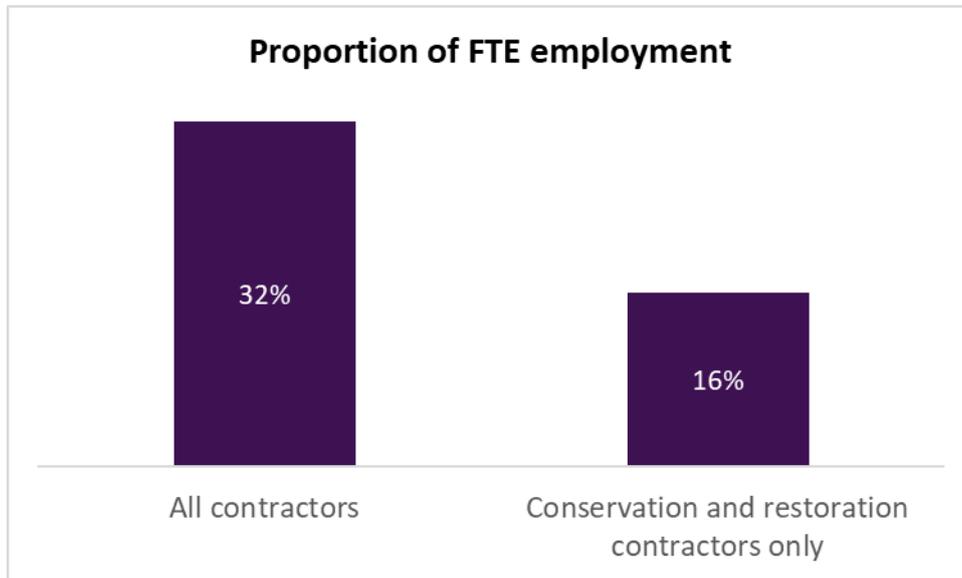


Figure 6 Proportion of FTE (full time equivalent) contractor employees
Bases: 5849 respondents (left) and 281 respondents (right)

4.2 Skills in conservation

Over 500 training providers were asked if their organisation teaches courses or parts of courses related to conservation skills, and just over 10% state that they do so, with courses ranging from furniture restoration to stained glass window restoration.

4.2.1 Skills overview

As a whole, stakeholders interviewed during Phase 1 of the Skills Assessment perceived there to be very low numbers of conservators (as compared with other skills that will be required in the Programme) in specific fields. This is despite the fact that there is an apparent “oversupply” of conservators from existing higher education conservation courses, which tend to have a large proportion of fee-paying overseas students attending universities. In general the sector has a pool of conservators consisting mainly of highly specialised micro-businesses focusing on areas such as:

- books and paper restoration,
- painting restoration,
- fabrics and textiles conservation, and
- furniture restoration.

This is backed up by the fact that the vast majority of the Institute of Conservation (ICON) 2,500 members are book, paper, and object conservators. Stakeholders raised concerns that there may be shortages in areas such as furniture, wood and decorative surfaces for the R&R Programme, and the estimate for such trained conservators may be in the low hundreds.



There is this feeling that conservation training is on a knife edge in some areas, it requires institutions to want to keep it and to cross fund it with other delivery.

Specialist conservation organisation

It was also noted by stakeholders that, where building conservation (as opposed to object conservation) is concerned, there may be major skills shortages in particular for conservation site managers. These respondents also expressed concern about the depth of skill and knowledge in the available workforce.

Two stakeholders note that some painting conservators already complete work in London-based historic buildings such as Buckingham Palace and the Palace of Westminster, and believe there is an established training programme for these individuals. Further information about training programmes is available here: <https://www.icon.org.uk/training.html>

4.2.2 Hard-to-fill roles and skills shortages

Over 6,000 contractors who took part in a survey were asked to rate a selection of roles for how difficult they anticipate they will be to fill in the coming year (from 1 very easy to 10 extremely difficult):

Roles hard to fill	Average rating (mean)
Furniture restoration	4.8
Painting restoration	4.8
Stained glass conservation	4.8
Clockmaking	4.8
Textile conservation	4.6

Table 2 Conservation roles hard-to-fill. Base variable from 337 to 400 respondents

These ratings from the survey suggest a middling to average level of difficulty when attempting to fill these specialised heritage/conservation roles, a slight contrast to stakeholders' perceptions (as discussed above) that furniture restorers may be harder to find, although they do top the list in Table 3.

When asked, in the depth interviews, about the skills gaps that seem to be apparent within the conservation industry, specific niche or hard-to-fill conservation roles that contractors mention include:

- French polishing,
- gilding, and
- heritage upholstery.

When probed, these contractors believed that such skills gaps occur because fundamentally the skills required are very specialist, or are inherently disappearing, and are therefore particularly hard to fill. There was a common consensus that the inherently specialist nature of the specific field was partly the cause for the disappearance. One respondent who works in cabinet making, and on occasions requires specialists trained in ornate wood carving and upholstery, states that:



My upholsterer retired last year, and I haven't been able to find one since. They retire and they've not retained anyone...youngsters aren't interested.

Cabinet maker (North East)

Three other respondents agree with the notion that younger generations are either not interested in completing training in the specialist work, or the training itself is not of high enough standards, with each claiming:

[Specialist skills are] massively disappearing, [there is] low interest in training for the specialist carving.

Stone masons (Northern Ireland)

It goes for whole heritage sector; young people don't know much about this sector and they're not interested.

Specialist heritage construction (East Midlands)

The skills were very specific but it's also because there is a lack of students doing practical, hands on work.

Conservation company (Wales)

These contractors perceive that young students coming into the subject either lack interest, or there are not as many placements or internships available to them to spark interest in the first place (in the heritage or conservation sector).

4.2.3 Placements and apprenticeships

To assess the availability of training in terms of placements, internships, apprenticeships etc for young people, a total of 11 representatives of institutions which offer conservation training were interviewed early on during the Skills Assessment, including:

- Cardiff University
- City and Guilds of London Art School
- Durham University
- Hamilton Kerr Institute
- Northumbria University
- The Courtauld Institute of Art
- University College London
- University of Glasgow
- University of Lincoln
- University of York
- West Dean College of Arts and Conservation.

These particular institutions raised no concerns about sourcing for positions or requiring qualified staff, and generally speaking, the institutions have longstanding relationships with employers.

It was made clear that the purpose of providing such placements was to offer an experience of the working environment in relation to conservation for the students in such a way to build confidence and the ability to work autonomously. However, several institutions were concerned that the costs of living and transport can be a significant barrier for students, for placements right across the UK,



thus suggesting a level of inaccessibility for those from lower socio-economic classes, and discouraging diversity. This does not, however, deter the prospects of overseas students, and typically these students would make up 50% of the course intake, and up to 70% in some cases; this is in general welcomed as it avoids flooding the limited UK jobs market for collections conservation. Universities also welcome overseas students (with the majority from Europe and the US) as they pay higher fees which help to contribute to the large overheads required for conservation courses.

Stakeholders expressed hope of following in the footsteps of nations such as France and Germany, who have, over the last 50 years, established college and apprenticeship programmes in very specific heritage and conservation areas; these have been vital in the restoration and maintenance of their countless historical assets and buildings. Stakeholders referenced the French depth in skills such as wood carving and stone masonry and the German experience in recreating heritage buildings using modern techniques and materials.

Therefore, it was noted by several stakeholders that there is potential for the R&R Programme to become a major driver for skills in the UK by beneficially creating shared apprenticeship schemes in conjunction with several specialist conservation businesses (both building conservation and collections conservation, potentially).

This is estimated to especially benefit micro to small companies who cannot accommodate trainees and apprentices due to:

- significant lack of space,
- training resources,
- time – they tend not to have the time to spare away from profitable work, and
- suitable funds.

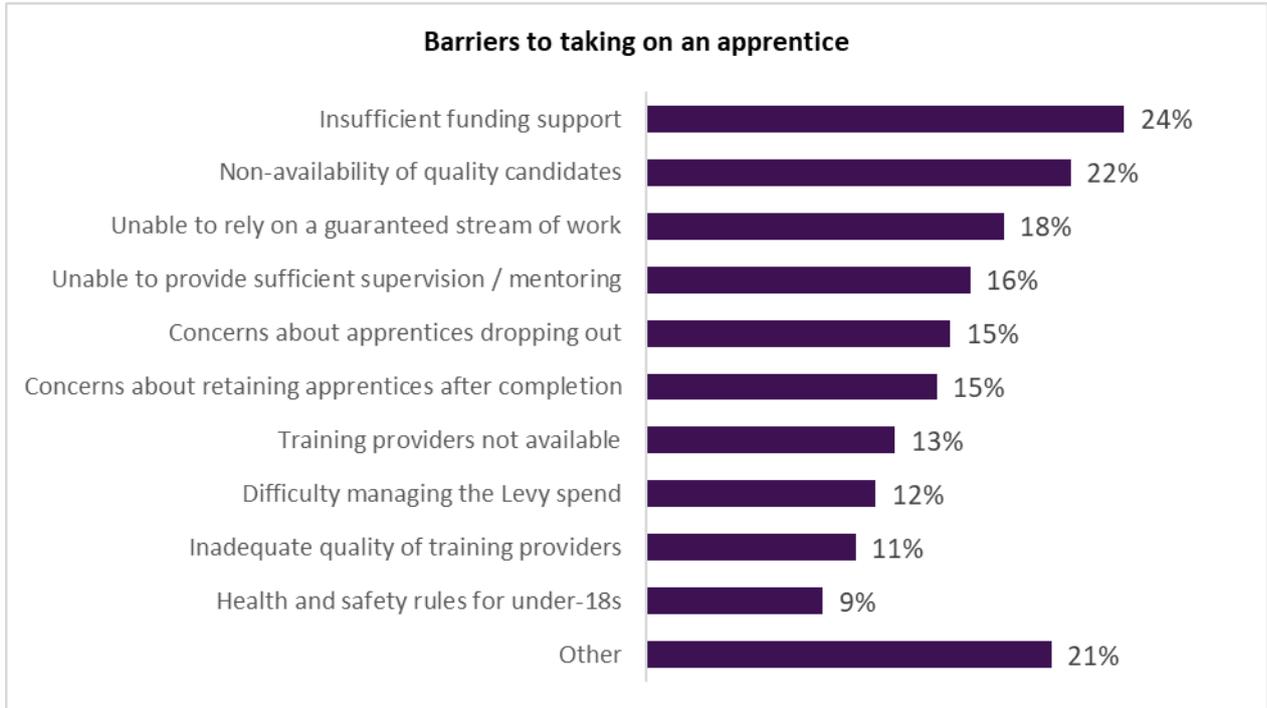


Figure 7 Main barriers to taking on an apprentice. Base: 293 conservation respondents (multiple responses permitted)

However, taking on apprentices may be harder than it seems, with contractors providing their opinion on the most pressing barriers relating to doing so. The most common concerns are around lack of funding support available (24%) and availability of quality candidates (22%). Also, in general many small and micro contractors are happy with their business and workload and do not want to expand it, or they prefer to keep the business within the family, therefore were not wanting to take on apprentices in the first place.

4.3 R&R Programme and conservation

4.3.1 What are the requirements?

Stakeholders (from professional and sector representative bodies) interviewed earlier in the Skills Assessment believe that, with the best intentions for the R&R Programme in mind, there should be a more fundamentally clear understanding of the criteria for conservation of any collections item within the project.

One conservation stakeholder pointed out the need, as they see it, for the UK to be very clear what exactly is being “restored and renewed” at the Palace of Westminster and in what way. Two respondents, alluding to the need for clarity in objectives and rationale, argued that the term conservation could only ever be applied to the aesthetic elements of the Palace as a whole – it is essential (in their view) to be precise as to which elements are being conserved in a state which is as close to their original form as possible and which elements could be aesthetically restored to their original appearance without necessarily needing to be “conserved” with respect to materials. One gave the example of a wall carving which could be aesthetically reproduced using 3D printing at a



fraction of the cost of a crafts-person. Another pointed to evidence from the USA of galleries using 3D printed copies of priceless objects to enable the public to interact with them. However, it should be clarified here that this argument is not in alignment with conservation principles of practice, not to the strategic vision and themes for the R&R Programme.

Many stakeholders also had difficulty answering questions on the demand for heritage and conservation competences on the grounds that there is still a considerable degree of uncertainty as to what, exactly, will be conserved and what replaced in a sensitive but modern manner, and several respondents mentioned the difficulty they had in estimating the issues around the R&R Programme. One said that they had heard that not only was the state of much of the furniture currently unknown but that decisions had yet to be taken as to what would require the attentions of furniture conservators and what might be replaced with modern replicas. It should be noted that accessioned items, however, cannot simply be removed from a collection in this straightforward manner.

4.3.2 What is needed to get involved?

As part of the 39 depth interviews with contractors, these firms (a mix of mainstream construction, heritage, and conservation) were asked what would encourage them to become involved with the R&R Programme. The majority mention that very little encouragement would be required for them to become involved in the Programme due to the prestigious nature of the building itself:

Anybody with any conviction or interest will want to contribute to the Palace of Westminster.

Offsite manufacturing for construction company (West Midlands)

Despite this, a minority of contractors feel that training in public sector bidding would be needed and/or desired for them to be encouraged to become involved; it would be a “*primary encouragement*”. This sentiment was shared exclusively by small and micro sized companies that had little experience in bidding for significantly large projects in the public sector.

Two contractors in particular said that the paperwork involved with bidding would need to be manageable, especially for smaller businesses;

[The] paperwork you have to deal with, it's [a] disincentive for smaller suitable companies...we want to do this work, but we don't have time to jump through all the hoops.

A further two claimed that they would not get involved until more information was readily available, as they would need to know if they are suitable for the job.

4.3.3 Barriers and challenges

The contractor depth interviews explored if firms could foresee any challenges were they to become involved in the R&R Programme. Two common themes arising including: the tendering process, and the associated problems with the London based location.



Tendering process:

Firstly, there was concern surrounding the tendering process for such a large project; it was noted by a handful of contractors that the amount of paperwork for such a large contract would be very daunting, and for the smaller companies they would simply not have the time to dedicate to the tendering process. It was felt that as larger companies can assign admin and tender writing jobs to departments within their business, that there was an unfair disadvantage for small companies with limited manpower that cannot spare the resources or time:

The larger companies have people hired to do the tenders for them, so they get the work much more easily.

Conservation company (Wales)

One contractor even mentioned that the application process may not be “friendly for small companies” with regards to the procurement portals.

A common opinion shared by a handful of contractor respondents from micro to small sized companies was that they would not feel able to compete with the larger businesses. There was doubt expressed over how winnable the tender may be:

It can be political especially in property as it's a relationship-heavy sector and sometimes if someone's released a tender then you know they will work with X company previously...you don't know how winnable it is.

Office design and build company (South East)

This was furthered by two respondents claiming that construction companies are “reluctant to work with new contractors if they've worked with the same for a long time”, thus enhancing the seed of doubt over how winnable the tender actually is.

Other contractor respondents only state that the one barrier they would be wary of is the size of the project/tender itself and that if it was a multi-million pound contract, they “wouldn't bother”; this was primarily noted by companies that are smaller.



5 Overarching thoughts

In conclusion, the general consensus expressed by training providers, contractors, and stakeholders is that conservation companies are generally very small (micro sized), have a relatively low income (compared to mainstream construction), are less likely to use a full-time employment model (i.e. are more inclined towards self-employment), and have a relatively high percentage of the workforce aged over 50.

Respondents raised concerns over what they regard as a potential (in some cases actual) lack of relevant training, and a widespread perception that younger people are unaware of, or are simply not interested in, the conservation sector.

In terms of skills, respondents think that a significant number of specialised skills are disappearing and, therefore, becoming increasingly difficult to find. A potential reason is thought to be the lack of young people actively participating in training to acquire conservation skills to fill the gaps in the workforce.

The respondents suggest that the R&R Programme may be able to help by providing apprenticeship schemes for small to micro sized businesses. However, as with other sectors, several contractors pointed to key barriers to taking on apprentices. These include a perceived lack of funding or respondents wanting fully qualified trainees.

Many respondents want more information on the R&R Programme with particular emphasis on what is actually being restored or conserved. In these instances, awareness and understanding of the specific details of the R&R Programme were too low for respondents to comment on their precise skills demands for the R&R Programme.