



ENGLISH HERITAGE

## Skills Research in the Historic Environment Sector

### *Output 1: Literature Review*

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## Contents

1. Introduction .....	3
1.1 Background and Context .....	3
1.2 Aims and Objectives .....	3
1.3 Methodology for the Literature Review .....	4
2. Literature Review .....	6
2.1 Index of literature .....	6
2.2 Summary of literature .....	10

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## 1. Introduction

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### 1.1 Background and Context

Heritage Counts is an annual survey of the state of England's historic environment and is produced by English Heritage on behalf of the Historic Environment Forum (HEF).

Each year Heritage Counts explores the social and economic role of the historic environment and focuses on a different theme; the theme of Heritage Counts 2013 is heritage and skills.

A number of organisations have conducted research into skills in the historic environment, however, the existing research is somewhat piecemeal and needs to be brought together into a coherent narrative. To inform Heritage Counts 2013, English Heritage together with the Heritage Lottery Fund (HLF) require the existing body of recent literature on this topic to be drawn together, including a narrative outlining current skills needs and gaps facing the sector, the implications for the historic environment, as well as an understanding of actions currently underway in support of the skills agenda.

**In agreement with English Heritage, the scope of this project research has been limited to the built heritage sector.**

The results of this project will be summarised in the Heritage Counts 2013 report, with the full reports available on the Heritage Counts' website.

### 1.2 Aims and Objectives

The key overall aims of this project are to provide a concise and coherent:

- a) overview of research into skills issues in the built heritage sector conducted over the last five years; and
- b) analysis of the implications of this research for the sector.

The specific objectives of the research are to provide two key outputs:

- **OUTPUT 1 - Literature Review:** A summary of all relevant research reports, outlining research methods used, key findings, recommendations and outcomes;
- **OUTPUT 2 - Narrative Report:** A coherent overview and critical synthesis of the literature that identifies: the key skills issues for the built heritage sector; how these issues have evolved over the past five years; the effectiveness of attempted interventions; and the formulation of recommendations for addressing these issues in the future.

**This document constitutes OUTPUT 1 – Literature Review.**

### 1.3 Methodology for the Literature Review

The first task was to develop a full list of potential sources for the literature review, drawing on the following sources:

- Heritage Lottery Fund (HLF) report ‘Further information on the heritage workforce’ (dated November 2012) containing a list of recent literature;
- English Heritage’s list of Historic Environment Sector Labour Market Intelligence and Skills Gap Studies;
- Searches using keyword “heritage” and “heritage AND skills” using the Culture and Sport Evidence Programme (CASE) database;
- Searches through bibliographies of existing reports.

An initial high-level review of all sources was performed in order to exclude those not relevant to historic environment skills in England.

The remaining shortlisted sources were then interrogated and assigned scores based on the following assessment framework:

Assessment criteria	Score	Scoring Criteria
<b>Relevance</b>	1-2	Direct but marginal concern with historic environment sector
	3-4	Directly concerned with historic environment sector, but as only one of a number of sectors/themes
	5-6	Historic environment sector skills are major but not unique concern
	7-8	Directly and comprehensively concerned with historic environment sector and/or its constituent professions
<b>Robustness</b>	1-2	Uninformed polemic/personal opinion not based in experience or research
	3-4	Informed personal or institutional opinion, based on anecdote and/or relevant personal experience or derivative from current research, or research based on small samples; or accurate but derivative
	5-6	Robust but limited secondary research/ methodologically limited primary research based on moderate samples
	7-8	Methodical and widely informed critical synthesis and/or rigorous, large-scale primary research with substantial samples and/or extensive in-depth qualitative research
<b>Comprehensiveness</b>	1-2	Superficial/summary account and/or limited focus
	3-4	Moderately detailed account and/or moderately broad focus
	5-6	Substantially detailed account, covering a wide range of relevant issues
	7-8	Comprehensive, thorough exploration of the relevant issues

<b>Influence</b>	1-2	Little evidence of impact
	3-4	Some evidence of impact within expert circles or the wider public
	5-6	Considerable impact
	7-8	Major impact on policy and strategy/high public profile

The scores for each report were calculated based on the following formula:

- $Relevance * 1.5 + (Robustness + Comprehensiveness + Influence)$

Reports with a cumulative score of 25 and above were classified as HIGH priority and reports with a cumulative score below 25 were classified as MODERATE priority. Of these:

- Reports classified as **HIGH** priority have been included within this literature review and are presented in section 2;
- Reports classified as **MODERATE** priority have been taken forward to inform the context for the subsequent narrative report.

## 2. Literature Review

### 2.1 Index of literature

This section presents an index of **HIGH** priority reports (26 in total) – clustered by theme and in date order (with the most recent presented first).

Theme	Sponsoring Institution/Organisation	Author & Date	Title	Page number for summary
Construction/ built heritage	Construction Industry Training Board (CITB) in association with English Heritage and Historic Scotland	Pye Tait Consulting (2013)	<i>Skills Needs Analysis of the Repair, Maintenance and Retrofit of Traditional (pre-1919) Buildings in England and Scotland (Draft)</i>	10
Construction/ built heritage	Heritage Lottery Fund (HLF)	HLF Bursary Management Board (2012)	<i>Traditional Building Skills Bursary Scheme for England and Wales. Evaluation Report March 2012.</i>	13
Construction/ built heritage	English Heritage	English Heritage (2012)	<i>National Heritage Protection Plan 2011-15. Progress Report April-September 2012</i>	15
Construction/ built heritage	Heritage Lottery Fund (HLF); English Heritage	Ecorys (2012)	<i>The Economic Impact of Maintaining and Repairing Historic Buildings in England</i>	17
Construction/ built heritage	CITB	CITB (2010)	<i>Sector skills assessment for the construction sector. Construction Skills UK Report. Construction Skills UK report</i>	19
Construction/ built heritage	National Heritage Training Group (NHTG)	NHTG/Pye Tait Consulting (2008)	<i>Built Heritage Sector Professionals. Current Skills, Future Training. Analysis of the UK built heritage sector 2008.</i>	21

Sector	Sponsoring Institution/Organisation	Author & Date	Title	Page number for summary
Construction/ built heritage	National Heritage Training Group (NHTG)	NHTG/Pye Tait Consulting (2008)	<i>Traditional Building Craft Skills: Reassessing the Need, Addressing the Issue - Skills Needs Analysis of the Built Heritage Sector England Review</i>	24
Construction/ built heritage	National Heritage Training Group (NHTG)	NHTG/Pye Tait Consulting (2008)	<i>A Survey of Building Contractors' Views on Traditional Building Craft Skills and Training Needs in the West Midlands</i>	27
Construction/ built heritage	English Heritage	Atkins (2008)	<i>Identifying Activity and Skills Needs in Buildings History - Final Report London: for English Heritage</i>	30
Archaeology	Institute For Archaeologists (IfA)	Aitchison, K (2012)	<i>State of the Archaeological Market IFA/FAME 2012</i>	33
Archaeology	Landward Research	Aitchison, K (2012)	<i>Breaking New Ground. How Professional Archaeology Works - Landward Research Ltd / Environmental &amp; Human Resources Consultancy</i>	35
Archaeology	Higher Education Academy (HEA); English Heritage	Aitchison, K/Landward Research Ltd (2011)	<i>Landward 2011 Survey of Archaeological Specialists 2011 Sheffield 2011</i>	38
Archaeology	Council for British Archaeology (CBA)	Doeser et al (2011)	<i>Diversifying Participation in the Historic Environment Workforce. A report commissioned by the Council for British Archaeology Diversifying Participation Working Group. London: UCL Centre for Applied Archaeology</i>	41
Archaeology	Higher Education Academy (HEA)	Jackson & Sinclair (2009)	<i>Archaeology Graduates of the Millennium - A Survey of the Career Histories of Graduates</i>	44

Sector	Sponsoring Institution/Organisation	Author & Date	Title	Page number for summary
Archaeology	Institute For Archaeologists (IFA)	Aitchison, K and Edwards R (2008)	<i>Archaeology Labour Market Intelligence: Profiling the Profession 2007-8 Reading: Institute of Field Archaeologists</i>	46
Archaeology	Nautical Archaeology Society	Nautical Archaeology Society (2008)	<i>Benchmarking Competence Requirements and Training Opportunities related to Maritime Archaeology. Portsmouth: Nautical Archaeology Society</i>	49
Archaeology	English Heritage	Cossons N (2008)	<i>Sustaining England's Industrial Heritage. A Future for Preserved Industrial Sites in England. English Heritage Sustaining England's Industrial Heritage   English Heritage</i>	51
Creative industries/ crafts/ conservation	Creative & Cultural Skills	TBR/Creative and Cultural Skills (2012)	<i>Mapping Heritage Craft: The Economic Contribution of the Heritage Craft Sector in England</i>	53
Creative industries/ crafts/ conservation	Creative & Cultural Skills	Creative & Cultural Skills (2012)	<i>The Creative and Cultural Industries: Cultural Heritage 2012-13. A workbook</i>	55
Creative industries/ crafts/ conservation	Creative & Cultural Skills	Creative & Cultural Skills (2011)	<i>Sector skills assessment for the Creative Industries. Creative &amp; Cultural Skills and Skillset. Sector Skills Assessment for the Creative Industries of the UK</i>	57



Sector	Sponsoring Institution/Organisation	Author & Date	Title	Page number for summary
Creative industries/ crafts/ conservation	Heritage Lottery Fund (HLF)	Billbrough Associates (2009)	<i>Training Bursaries Programme Evaluation Report. London: HLF Training Bursaries Evaluation Report</i>	59
Creative industries/ crafts/ conservation	ICON	Kenneth Aitchison (2013)	<i>Conservation Labour Market Intelligence 2012-13</i>	61
Creative industries/ crafts/ conservation	Demos	Jones & Holden (2008)	<i>It's a material world. Caring for the public realm</i>	63
Cultural heritage	University of Bath; UKOLN	Davis & Kelly (2009)	<i>The Social Web: Opportunities, Barriers and Solutions for Cultural Heritage Institutions</i>	65
Local auth. planning	English Heritage; Association of Local Government Archaeological Officers (ALGAO); Institute of Historic Building Conservation (IHBC)	English Heritage; Association of Local Government Archaeological Officers (ALGAO); Institute of Historic Building Conservation (IHBC) (2012)	<i>A fourth report on Local Authority Staff Resources. A report on Local Authority Staff Resources</i>	67
Local auth. planning	English Heritage; Association of Local Government Archaeological Officers (ALGAO); Institute of Historic Building Conservation (IHBC)	English Heritage; Association of Local Government Archaeological Officers (ALGAO); Institute of Historic Building Conservation (IHBC) (2011)	<i>A third report on Local Authority Staff Resources. A report on Local Authority Staff Resources</i>	69
Green spaces	English Heritage	LANTRA/English Heritage (2012)	<i>Cultivating skills in historic and botanic gardens: Careers, occupations and skills required for the management and maintenance of historic and botanic gardens Cultivating Skills</i>	71

## 2.2 Summary of literature

This section presents a summary of each **HIGH** priority report and follows the same order as the index in section 2.1.

<b>Year of publication:</b>	2013  <i>Confidential/not yet published - summary included with permission from CITB</i>
<b>Sponsoring Organisation:</b>	Construction Industry Training Board (CITB)
<b>Author(s):</b>	Pye Tait Consulting
<b>Title:</b>	Skills Needs Analysis of the Repair, Maintenance and Retrofit of Traditional (pre-1919) Buildings in England and Scotland (Draft)
<b>Number of pages (including covers):</b>	116
<b>Brief overview of report:</b>	<p>An update to the 2008 NHTG-commissioned Skills Needs Analysis of the Built Heritage Sector (England Review). The report encompasses England and Scotland (with nation-specific coverage) and takes into account both traditional craft and professional skills needs</p> <p>The report provides a comprehensive perspective of supply and demand of traditional buildings skills, materials and training provision, comparing where relevant with data gathered in previous reports. Skills and knowledge gaps are identified along with areas of recruitment difficulty. Recommendations for modelling Labour Market Information and recommended actions required to address industry needs are also included.</p> <p>The report provides an evidence base to inform future policy planning and development, notably of Sector Skills Agreements between CITB-ConstructionSkills and English Heritage/Historic Scotland and as a basis for influencing government policy, funding bodies, sector partners and key stakeholders.</p>
<b>Summary of research methods used:</b>	<p>A mixed methodology was deployed, combining a detailed literature review, in-depth telephone interviews, a major telephone-based survey and a focus group event.</p> <p>135 in-depth telephone interviews were completed (95 in England and 40 in Scotland) spanning five main 'groups' of stakeholder organisations:</p> <ul style="list-style-type: none"> <li>• Stockholders (landowners in the public and private sector);</li> <li>• Professional bodies, Trade Federations and Associations;</li> <li>• Training providers (covering Further Education and Higher Education);</li> </ul>

	<ul style="list-style-type: none"> <li>• Manufacturers and suppliers (of traditional building materials);</li> <li>• Major employers (contractors and sub-contractors).</li> </ul> <p>The survey of employers targeted 1,100 organisation-level responses and achieved a total of 1,161 responses through a telephone and supported on-line methodology.</p>
<p><b>Limitations of research methods:</b></p>	<p>The survey target was agreed on the basis it would provide a satisfactory level of statistical reliability (<math>\pm 3\%</math> margin of error at the 95% confidence level) although, as stated in the report, this should be treated with a degree of caution given the base number of respondents varies for each individual survey question.</p>
<p><b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• There are concerns about certain occupations that are difficult to recruit, for example blacksmiths and thatchers;</li> <li>• Without intervention, it is likely that further gaps and shortages will continue to emerge as the existing workforce contracts due to retirement and business closures;</li> <li>• Skills and knowledge gaps particularly affect retrofit activities and the installation of energy efficiency measures, where incorrect or inappropriate specifications can potentially damage and lead to more rapid decay of buildings;</li> <li>• In addition, skills and knowledge gaps can mean that the wrong types of traditional building materials are used, which again can undermine both the performance and appearance of older structures</li> <li>• The industry generally considers itself highly skilled across all specialisms, yet these claims are somewhat contradicted by qualitative feedback gathered from a range of stockholders and industry stakeholders, including professional bodies and trade associations, which suggests that there are mismatches among contractors between the skills and knowledge <i>actually</i> needed and the skills and knowledge they possess.</li> <li>• The majority of contractors surveyed for this research attach much higher value to experience and learning ‘on the job’, than to formal training and qualifications;</li> <li>• Approximately three-quarters of contractors surveyed have not undertaken any training in relation to traditional buildings in the past five years, and only around 10% of them hold relevant formal qualifications.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>One of the most critical findings of this research is that the planning landscape has increasingly placed responsibilities for the care and protection of traditional buildings under the control of local representatives at a time when acute financial pressures have contributed to redundancies and budget</p>

	<p>cuts at local levels.</p> <p>The vital roles performed by Conservation Officers have been compromised due to redundancies, and there may be a risk of further reductions. This diminishing pool of expertise is therefore affecting stockholders seeking crucial advice on repair, maintenance and restoration work on traditional buildings.</p> <p>For stockholders, the amount of money available for work on traditional buildings is typically lower because of economic constraints, and therefore much non-essential work has been postponed.</p> <p>There appears to be a lack of training provision specifically focused on retrofitting of pre-1919 buildings. This is a major gap, given the importance of understanding key aspects such as moisture movement and air flow in order to install not only the right types of energy efficiency measures but also to ensure they do not have a negative impact on the building fabric</p> <p>Limited interest in training among contractors may be partly attributed to concerns about insufficient coverage of existing traditional buildings within many construction qualifications.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>At the time of writing, recommendations arising from the research are being developed.</p>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	Heritage Lottery Fund
<b>Author(s):</b>	English Heritage, The National Trust, CADW, ConstructionSkills, National Heritage Training Group, Welsh Assembly Government
<b>Title:</b>	<i>Traditional Building Skills Bursary Scheme for England and Wales. Evaluation Report March 2012</i>
<b>Number of pages (including covers):</b>	pp. 51
<b>Brief overview of report:</b>	Provides an overview of the achievements of the major HLF-funded initiative to increase the supply of traditional building skills, the Traditional Building Skills Bursary Programme. This funds the cost of a placement with an established practitioner/company in the traditional building craft sector;
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Descriptive quantitative analysis to profile participants and project outcomes</li> <li>• Qualitative estimates – by the partner organisations – of the impact of the initiative on participants and the wider sector.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Quantitative data should be absolutely reliable;</li> <li>• The qualitative estimates are liable to be more subjective.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• Attempts to secure approximately representative proportions of female and ethnic minority trainees proved impossible to achieve (for female trainees, 15% was achieved versus a 40% target; for ethnic minorities, 0.6% versus 6.9%)</li> <li>• It proved difficult to secure a good geographical spread of trainees across the regions in England and Wales</li> <li>• It was difficult to secure placements in some building crafts (stone and clay-tiled roofing, leadwork and fibrous plaster) due to lack of employer engagement and interest from potential trainees</li> <li>• Very high levels of retention for the placement programme (94%), with 78% of trainees continuing to work in the sector, and 44% gaining an NVQ;</li> <li>• The scheme created an extensive network of placement providers who shared their skills and experience for free;</li> <li>• A single manager with part-time administrative support was not</li> </ul>

	<p>sufficient to maintain a scheme across England and Wales;</p> <ul style="list-style-type: none"> <li>• Publicity materials needed to be distributed earlier and in a more focused way.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The very considerable success of the programme implies that there is likely to be considerable unmet demand for careers in the sector, and that price/accessibility issues are inhibiting the supply of potential skilled employees.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<ul style="list-style-type: none"> <li>• Improved and earlier publicity to generate initial interest and awareness with dedicated regional and specific building-skills-focussed PR to maintain publicity for the scheme and better use of social media e.g. Twitter and YouTube;</li> <li>• Continue to explore opportunities and better ways of improving diversity and equal opportunities within this sector, including on-going focused awareness-raising of the sector, to attract more females and ethnic minorities and under-represented groups;</li> <li>• Delivering a national scheme requires a network of regionally based individuals, rather than one overall manager, which provides a better service to trainees and placement providers.</li> </ul>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	English Heritage
<b>Author(s):</b>	English Heritage
<b>Title:</b>	<i>National Heritage Protection Plan 2011-15. Overview Report April-September 2012</i>
<b>Number of pages (including covers):</b>	24pp.
<b>Brief overview of report:</b>	The report provides an update on the recent development and progress in implementing the National Heritage Protection Plan, which was introduced in 2011 to provide a structured framework for improving the management of England's historic environment. This includes a programme of action for 'capacity building' that is specifically concerned with assuring the supply of skills needed for effective management of the historic environment.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Short summary of progress on initiatives being taken by English Heritage and partner organisations to promote skills in the sector.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• As an overview, detailed contextual information is not included and the report does not explore wider impacts of the initiatives.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• English Heritage, in collaboration with other sector organisations, supports the production of labour market intelligence on skills supply in the sector;</li> <li>• 30 more trainees will be supported through the Heritage and Botanic Garden Bursary Scheme in up to 20 host gardens over the next two years;</li> <li>• The HLF funded National Heritage Training Group Skills for the Future project will be supporting 60 Buildings Traditional Skills Bursary placements from January 2012 to gain placements and take NVQs; and the National Trust Traditional Building Skills Bursary Scheme would offer 45 placements to displaced apprentices from September 2012<sup>11</sup>;</li> <li>• English Heritage would be supporting and Institute for Archaeology would be managing three six-month placements in buildings history and an eighteen-month placement in the photography of historic buildings and sites;</li> </ul>

<sup>11</sup> English Heritage has a role on the Project Management Boards for these projects.

	<ul style="list-style-type: none"> <li>• The Council for British Archaeology offers year-long workplace placements for potential community archaeologists to acquire the skills needed to work with voluntary groups and communities;</li> <li>• The archaeology training forum launched an online resource centre with information on training and career development;</li> <li>• English Heritage continues to deliver training to local authorities through its HELM programme, with 11 events for more than 835 people over the previous year;</li> <li>• Short courses for those working in the historic environment sector are delivered at West Dean College; Oxford University Department of Continuing Education; and SPAB.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>N/A</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>N/A</p>



<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	Heritage Lottery Fund
<b>Author(s):</b>	Ecorys
<b>Title:</b>	<i>The Economic Impact of Maintaining and Repairing Historic Buildings in England</i>
<b>Number of pages (including covers):</b>	pp. 20
<b>Brief overview of report:</b>	This report presents the findings of research undertaken by Ecorys on behalf of the Heritage Lottery Fund (HLF) and English Heritage (EH) to develop estimates of the economic impacts of maintaining and repairing historic buildings in England.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Desk based review of data, documentary sources and commissioned research;</li> <li>• Econometric analysis of the expenditure directed towards repair and maintenance of the pre -1919 building stock, based on applying an appropriate multiplier to the proportion of total construction industry turnover generated by repair and maintenance work.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• The multiplier is essentially a 'guesstimate' based on inference from the likely proportion of building stock dating from before 1919 and the likely relative cost of maintaining older buildings.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• Asserts, on the assumption that pre-1919 domestic buildings represent 22% of the housing and are approximately 1.5 times more expensive to maintain than their modern equivalents, expenditure on pre-1919 housing stock is likely to amount to some £6.3bn;</li> <li>• Estimates, 'as a reasonably working assumption', that approximately 38% of total expenditure on commercial repair and maintenance related to pre-1919 commercial buildings, yielding a total of approximately £4.3bn of expenditure;</li> <li>• Estimates that the built heritage construction sector directly accounts for a total of £10.6bn of construction output, £4.1bn of GDP and 181,146 FTE jobs and further £14bn of indirect economic output and 311,611 FTE jobs, leading to a total contribution of £10bn of GDP.</li> </ul>
<b>Summary of evidence relating to market failure:</b>	Does not explicitly consider issues of market failure, but it is important to note the relatively high estimates of employment, output and GDP derived in this research. The report also notes that:

	<p>‘The built heritage construction sector accounts for a major share of the total economic impact associated with heritage buildings and structures, with expenditure directed at the repair and maintenance of this fabric in turn making a very significant contribution to sustaining major elements of England’s construction sector – a wider industry which continues to face notably challenging conditions. Moreover, and as the National Heritage Training Group and others have persuasively argued, if this investment were to decrease, then there is a real possibility that a share of these higher value-added construction jobs, and associated traditional building craft skills, could be at risk.’</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>N/A</p>

<b>Year of publication:</b>	2010
<b>Sponsoring Organisation:</b>	CITB-ConstructionSkills
<b>Author(s):</b>	ConstructionSkills Research
<b>Title:</b>	<i>Sector Skills Assessment for the Construction Sector 2010 ConstructionSkills England Report</i>
<b>Number of pages (including covers):</b>	77pp.
<b>Brief overview of report:</b>	This report 'describes the current and future skills priorities for the construction sector in England, demonstrating the contribution that construction makes to the national and regional economies and highlighting priorities and potential barriers to growth'.
<b>Summary of research methods used:</b>	The report draws 'on research and analysis undertaken by ConstructionSkills since 2005 and a range of secondary sources, with particular emphasis on research and forecasting conducted over the past 12 months.'
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Lack of clarity over how some statistics are derived;</li> <li>• Is concerned only peripherally with the historic environment sector.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• At the time of writing, the industry was in a phase of sharp contraction;</li> <li>• The contraction appears to be reducing trainee numbers in the construction craft occupations;</li> <li>• The pressure for improved technology and new ways of working is driving demand for a more multi-skilled workforce;</li> <li>• This requires modifications to education and training;</li> <li>• There will be particular demands for improved entrepreneurship and leadership among SMEs to enable them to deal with the demands of the green agenda;</li> <li>• The sector as a whole has problems with education and training because of the project-based nature of work and the resulting extensive use of self-employed and labour-only subcontracting.</li> </ul>
<b>Summary of evidence relating to market failure:</b>	Given the dependence of the historic built environment on adequate supplies of skilled construction labour, the implication that training opportunities and losses from the industry as existing workers seek alternative employment may cause future skills shortages and gaps must be noted. In addition, the implicit requirement that workers should become

	more multi-skilled and able to work with new technologies may conflict with the need for 'deep and narrow' skills to maintain and repair traditional buildings.
<b>Summary of recommendations/ outcomes:</b>	n/a

<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	National Heritage Training Group (NHTG)
<b>Author(s):</b>	NHTG/Pye Tait Consulting
<b>Title:</b>	<i>Built Heritage Sector Professionals: Current Skill, Future Training. Skills Needs Analysis of the UK Built Heritage Sector 2008</i>
<b>Number of pages (including covers):</b>	pp. 108
<b>Brief overview of report:</b>	The report provides the first comprehensive overview of the skills and training needs of building professionals working in the built heritage sector and traditional buildings, and makes recommendations on how they can be addressed.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Multi-method approach, combining initial desk review of relevant literature (approximately 40 unique sources cited), large-sample quantitative survey, interview-based qualitative research , and focus groups;</li> <li>• The quantitative survey was conducted through telephone interviews: 398 respondents to the quantitative interviews; 102 qualitative interviews with building professionals/professional bodies, education and training providers, and owners/managers of historic properties; and 2 focus groups.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• No explicit discussion of the representativeness of the sample;</li> <li>• The report implies that challenges with engaging sole traders and SMEs may mean these groups are under-represented.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>Analysis and findings presented in terms of 'supply' and 'demand' for skills, 'traditional building materials' and 'training provision':</p> <ul style="list-style-type: none"> <li>• <b>Demand:</b> An average of 35% of the workload of the surveyed professionals related to pre-1919 buildings, and 76% of those who were heritage or conservation specialists; clients regard experience as more important than specialist accreditation when choosing professionals to work on traditional buildings; professionals frequently specify that appropriately experienced contractors should undertake work on pre-1919 buildings, but have difficulty finding them, and tend not to use qualifications as a criteria for choosing them.</li> <li>• <b>Supply:</b> The report draws on the ONS Labour Force Survey to estimate the total size of the construction professional workforce at 542,000; 36% had carried out work on pre-1919 buildings in the previous 12 months;</li> </ul>

	<p>507 conservation accredited professional were identified on relevant registers, whereas there are an estimated 0.5m listed building and 6m traditional buildings in the UK.</p> <ul style="list-style-type: none"> <li>• <b>Materials:</b> 55% of the work undertaken by surveyed professionals on pre-1919 buildings made use of traditional materials; the most important disincentives to using traditional materials are cost and lack of demand from clients; 59% found it easy or fairly easy to source performance data on traditional materials; 25% of professionals had difficult specifying traditional materials due to a lack of knowledge.</li> <li>• <b>Training:</b> A clear majority (65%) of surveyed professionals felt that their formal education had not prepared them adequately to work on traditional buildings, and a slightly larger proportion reported that their skills for heritage work had been self-taught; there is relatively low demand for specialist formal education in the sector; few firms had a formal training and development strategy and on average each staff member undertook 1.7 days of training for work on pre-1919 buildings in the last year; the majority of professionals surveyed did not find it easy to access specialist training providers.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The evidence clearly suggested extensive market failure in both the demand for, and supply of, appropriate professional skills for working on the built heritage. A relatively low proportion of respondents to the survey felt that their formal education had provided them with adequate preparation for working on built heritage is an especially notable finding, as is the exceptionally small number of conservation accredited professionals relative to the large number of pre-1919 buildings in the current building stock. The implication would appear to be that the necessary skills are developed on an <i>ad hoc</i>, individual basis, rather than in a systematic way.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>The report presented a series of 15 key recommendations:</p> <ol style="list-style-type: none"> <li>1. Client demand: Increase awareness among pre-1919 property owners and managers of the importance of routine maintenance, use of appropriate materials and techniques, and appointment of professionals with appropriate knowledge;</li> <li>2. Building standards: Improve the relevance of national building standards relating to the conservation, repair, maintenance and improvement of the historic built environment;</li> <li>3. Latent demand: Identify how policy and practice could impact on demand, especially in relation to the sustainability agenda;</li> <li>4. Sector support: Secure sector recognition of skills shortages and gaps in the professions and work to address them;</li> <li>5. Resources: Improve access to authoritative advice and guidance relating</li> </ol>

	<p>to traditional building skills and materials;</p> <p>6. Quality assurance: Establish and propagate standards of best practice for professionals working in the built heritage sector;</p> <p>7. Positive image: Improve the image of the built heritage sector among potential new recruits;</p> <p>8. New entrants. Maximise the student intake for existing higher education courses, and support the development of new providers where appropriate;</p> <p>9. Employment opportunities: Strengthen the sector by ensuring that the best potential new entrants have ready access to information on current vacancies;</p> <p>10. Traditional materials demand: Increase awareness of the need to specify traditional materials on pre-1919 buildings;</p> <p>11. Traditional materials supply: Increase supply by enabling greater cross-fertilisation of ideas and practices among traditional building and material manufacturing companies;</p> <p>12. Higher education: Strengthen the traditional building and conservation components of professional courses and higher education study curricula;</p> <p>13. Understanding building craft skills: Strengthen understanding among the professions of traditional building craft skills and their application on site;</p> <p>14. Lifelong learning and CPD: Improve the knowledge base of professionals already working in the sector;</p> <p>15. Trend monitoring: Monitor improvements within the sector.</p>
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<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	National Heritage Training Group (NHTG)
<b>Author(s):</b>	NHTG/Pye Tait Consulting
<b>Title:</b>	<i>Traditional Building Craft Skills: Reassessing the Need, Addressing the Issues - Skills needs analysis of the built heritage sector. England 2008 Review</i>
<b>Number of pages (including covers):</b>	156 pp – plus an 8-page summary
<b>Brief overview of report:</b>	<p>Purpose: To update a previous (2005) NHTG report into skills shortages and gaps in traditional building craft skills, and assess the extent to which NHTG's work has contributed to addressing the issues identified in that report. To do this, the report provides an overview of skills shortages and gaps in the traditional building sector, as of late 2007. It also considers the range and adequacy of training provision relevant to the sector, and the supply and demand for traditional materials.</p>
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Multi-method approach, combining initial desk review of relevant literature (approximately 40 unique sources cited);</li> <li>• Large-sample quantitative telephone survey that obtained 646 responses, of which 533 were from building contractors;</li> <li>• Qualitative interviews, with 68 respondents, focused on groups not well-represented in the quantitative research, principally trade associations, stockholders and training providers;</li> <li>• Econometric methods were used to estimate overall economic value of sector and to estimate number of workers engaged in work on pre-1919 buildings, using a combination of official statistics, industry-level data from third party researchers, and findings from the survey.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• No explicit discussion of the representativeness of the sample;</li> <li>• Training provider research small scale (30 interviews);</li> <li>• Discussion of impacts of NHTG initiatives does not seek to quantify relative importance;</li> <li>• Econometric analysis does not seek to identify variations in turnover between new build and repair and maintenance work for pre-1919 buildings;</li> <li>• Regional data is based on small samples.</li> </ul>



<p><b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<p>Analysis and findings presented in terms of 'supply' and 'demand' for skills, 'manufacturers' and 'training provision'.</p> <ul style="list-style-type: none"> <li>• <b>Demand for traditional building skills:</b> Approximately 5 million listed buildings generates an estimated total market of £4.7bn for 2006 (considerably larger than the £3.54bn estimate for 2004) of which £1.4bn is demand specifically for traditional building skills; stockholders reported they preferred to use experience and recommendations rather than formal training and qualifications to identify suitable contractors to work on pre-1919 buildings. However, this 'active demand' fell far short of the 'latent demand' of work needed to be done on pre-1919 buildings to ensure an appropriate state of repair and maintenance.</li> <li>• <b>Skills supply:</b> 109,000 people employed on pre-1919 buildings, but only 33,000 with appropriate skills; 16,000 of the traditional building workforce require some form of traditional building skills training, with around 2,000 needing training in the use of traditional materials (figures which were expected to rise). Most work on traditional buildings is undertaken by general builders. Building contractors expressed high levels of confidence in their ability to do work and reported few skills shortages or gaps (and few 'hard to recruit' occupations); but there was evidence from the qualitative research that these claims were sometimes unjustified. The most important skills gaps identified by contractors were in thatching, stone carving, stone fixing, and stonemasonry, and identified skills shortages were in carpentry, joinery and stonemasonry. The vast majority of contractors dealt with skills shortages and gaps by 'learning on the job' or using subcontractors. Only 8% sourced specialist training.</li> <li>• <b>Training provision:</b> Only seven FE colleges provided craft training with a specific conservation/heritage orientation; for contractors, FE colleges were the most likely source of skills training; 72% of surveyed manufacturers and suppliers of traditional building materials also offered skills training. Lack of availability of appropriate courses was the most frequently cited reason for not seeking additional training. The 30 colleges surveyed reported that 35% of their teaching staff had the skills and knowledge to work with pre-1919 buildings. Enrolments at Level 3 – regarded as the minimum skill level for traditional buildings – were much lower than Level 2. More than half of training providers strongly disagreed that current mainstream building qualifications provided students with the skills needed to work on pre-1919 buildings, largely because of their strong focus on the needs of new-builds rather than repair and maintenance. 1/3 of contractors expressed interest in the NVQ in Heritage Skills.</li> <li>• <b>Manufacturers and suppliers:</b> Manufacturers and suppliers of traditional building materials tend to be highly specialised; tend to undertake both production and supply; and in most cases use only traditional methods of manufacture. They reported no particular skills shortages or gaps among their employees, and most develop staff through formal training or on-</li> </ul>
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	<p>the-job learning. Manufacturers and suppliers rated contractors' skills and knowledge in the use of traditional material much lower than contractors themselves.</p> <p>The overall finding was an improvement in the skills profile of the workforce, since the last report in 2005, attributed to better recruitment practices; more effective careers and qualifications marketing; fairly good staff retention levels; and increased immigration of skilled labour from other EU nations.</p>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The principal problem in traditional building skills, based on contractor research, was identified as being <i>skills gaps</i> rather than <i>skills shortages</i>. That is to say, there was sufficient supply of workers with appropriate general skills, but that employees had specific problem areas in their skills and knowledge for working on pre-1919 buildings. In addition, it was found that high levels of contractor confidence in their skills and knowledge were not regarded as justified by other groups. This could be related to the focus on new-build and modern methods in mainstream construction qualifications. The report also identified the development of a divergence between the total market demand for work on pre-1919 buildings, and the estimated active market for work done with traditional techniques and materials (£4.7bn vs. £1.4bn).</p> <p>The report concluded the active market demand is lagging behind the latent demand, a finding attributed to a lack of awareness among stockholders of the need to use traditional building materials and techniques on their pre-1919 buildings.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>Eight recommendations were presented in the report , followed up by a themed Skills Action Plan:</p> <ul style="list-style-type: none"> <li>• Develop improved information, advice and guidance for stockholders (including a 'one-stop shop' source of information and a register of accredited and qualified contractors) to help transform the large potential demand for traditional building craft skills and materials into actual active demand;</li> <li>• Work for improvements in mainstream training provision so that it includes consideration of repair and maintenance and the specific needs of traditional buildings; promote the Heritage Skills Level 3 NVQ to providers, contractors and recruits, and ensure that an appropriate Advanced Construction Award is available;</li> <li>• NHTG to continue and further develop partnership working with other stakeholders – including English Heritage, CITB-ConstructionSkills, Trade Federations, and training providers – to promote these aims.</li> </ul>

<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	NHTG, Learning and Skills Council West Midlands
<b>Author(s):</b>	Pye Tait Limited
<b>Title:</b>	A Survey of Building Contractors' Views on Traditional Building Craft Skills and Training Needs in the West Midlands
<b>Number of pages (including covers):</b>	65 pp.
<b>Brief overview of report:</b>	The purpose of this research was to assess the demand for training and issues surrounding skills requirements from a contractor's perspective in relation to working on the built heritage stock in the specific geographic region of the West Midlands.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• 100 in-depth quantitative interviews with representative sample of building contractors</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• No explicit discussion of the representativeness of the sample;</li> <li>• Small sample limits extent to which findings can be extrapolated.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• 100 employers were surveyed with a range of 1-120 employees (10 on average);</li> <li>• On average, four employees left each employer over the past three years, either to retire or to move to another firm;</li> <li>• The overwhelming majority of firms (92%) are general builders rather than heritage specialists;</li> <li>• Contractors main activities tended to be brickwork or carpentry, but most firms tended to be multi-skilled; most likely to subcontract plastering, electrical work, lead work;</li> <li>• Only 15% of West Midlands contractors reported it was 'difficult' to recruit skills tradespeople;</li> <li>• Only 5% of contractors reported long-term vacancies; where they did occur, this was due to lack of skills;</li> <li>• Specialist/less common trades were given lower skills ratings than others; among mainstream trades, these included painters and decorators, plasterers, glaziers and stone tile roofers;</li> </ul>

	<ul style="list-style-type: none"> <li>• Contractors tended to rely on on-the-job learning to deal with skills gaps and also preferred informal work-shadowing/mentoring approach to learning , although 80% did use FE colleges for training purposes;</li> <li>• On balance, contractors were more likely (26% vs. 11%) to rate college training as poor rather than excellent;</li> <li>• Only 7% of contractors would like to have offered traditional building skills training but could not; where this was the case, it tended to be because of lack of availability of courses;</li> <li>• More than half were interested in developing their building craft skills further;</li> <li>• A fifth of contractors had heard of the Heritage Skills NVQ;</li> <li>• Only 17% had heard of the Heritage Lottery Fund Traditional Building Skills Bursary Scheme, but 36% were interested in applying and 34% would accommodate a bursary holder;</li> <li>• Traditional building craft skills provision was mapped, and shown to be sparse in the West Midlands.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The report gives a generally positive picture of skills supply, but suggests that it is difficult to access appropriate training opportunities for traditional building craft skills. There was evidence of a poor match between training provision and actual workplace requirements.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>The report recommendations integrated with a Skills Action Plan; however, the key issue identified was the need to develop a coordinated approach to skills development across the region through the Regional Heritage Skills Action Group set by NHTG.</p> <ul style="list-style-type: none"> <li>• <b>Raise awareness</b> of the Regional Action Group; the need for traditional building craft skills; and career opportunities in the sector;</li> <li>• For <b>Contractors and Tradespeople</b> develop a register of accredited contractors; provide information on courses and training; map skills levels within the sector; and track the progress of new trainees;</li> <li>• <b>Training provision</b> should be improved, perhaps through establishing a National Heritage Training Academy (West Midlands); ensure that appropriate, flexible training is available, including for the Heritage Skills NVQ; promote funding opportunities; investigate the possibility of ‘training the trainers’ to improve FE lecturers traditional building knowledge and skills;</li> <li>• <b>Develop skills</b> by developing a mentoring network and CPD courses for</li> </ul>

	<p>professionals;</p> <ul style="list-style-type: none"><li>• <b>Qualify the built heritage sector workforce</b> and meet targets for the number of Heritage Skills NVQ Level 3 achievements and use the CSCS heritage skills card to drive attainment and demonstration of heritage skills;</li><li>• Increase <b>client demand</b> for a skilled workforce through improved procurement processes; promoting the importance of traditional building skills; and promoting the CSCS heritage skills card as evidence of appropriate skills levels for working on traditional buildings.</li></ul>
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<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	English Heritage (with funding support from Historic Scotland and the Northern Ireland Environment Agency)
<b>Author(s):</b>	Atkins, with the Conservation Studio
<b>Title:</b>	Identifying activity and skills needs in buildings history – final report
<b>Number of pages (including covers):</b>	122 pp.
<b>Brief overview of report:</b>	<p>Reports on research that sought, ‘for the first time in the UK’, to assess the market size, level of activity and state of training of the buildings history subsector, and its potential future growth a result of proposed reforms to heritage protection. It then sought to review and make recommendations on training provision for the subsector.</p> <p>For the purposes of the report, buildings history includes the disciplines of architectural history, buildings history and buildings archaeology.</p>
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Multi-method approach combining initial desk-based review with in-depth interviews with key stakeholders, a survey of professionals working within buildings history;</li> <li>• Analysis of secondary data and informed estimates based on the expertise of the steering group, to derive the probable number of a) working buildings historians and b) their clients.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Small scale survey sample of 49 responses;</li> <li>• Sample biased towards larger commercial organisations. The authors note that <i>“The findings of this report should therefore be regarded as tentative conclusions requiring amplification through further in-depth research in a number of specialist areas.”</i></li> </ul>
<b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>The report analysis states that there is:</p> <ul style="list-style-type: none"> <li>• Estimated sector turnover of between £37 and £51m per year;</li> <li>• An expectation that demand for buildings history services would increase by 40% ‘over the coming years’ as a result of Heritage Protection Reform, but this figure – equating to approximately £17m of increased turnover – is stated to be tentative;</li> <li>• An ageing workforce, with many of the most highly regarded practitioners aged 50+;</li> </ul>

	<ul style="list-style-type: none"> <li>• A prevalence of sole traders and very small organisations within the sector;</li> <li>• A lack of appropriate formal training, especially at university level, with training currently coming from a wide range of sources and disciplines and much of the existing workforce having gained their knowledge and skills through experience and informal mentoring;</li> <li>• A need to overcome barriers between the various disciplines that contribute to buildings history, which are currently strongly distinct from each other;</li> <li>• This is especially the case as Heritage Protection Reform envisaged a broader, more integrated approach to managing the historic environment.</li> </ul> <p>On the basis of these findings, the report concluded that:</p> <ul style="list-style-type: none"> <li>• There is a need for more graduate and postgraduate-level courses in buildings history, to be accompanied by learning in the workplace;</li> <li>• Flexible training for existing practitioners, including graduate- and post-graduate level courses and appropriate CPD, with some appropriate financial support to recognise the potentially unrealistic cost implications for the many sole traders and small enterprises in the sector.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The limitations on the data and the tentative nature of the research conclusions make it difficult to draw out robust findings on the presence and nature of any market failure in the supply of buildings history skills. However, the overall impression is of an extremely small subsector that is currently the domain of self-taught enthusiasts. In addition, the overwhelmingly informal training routes followed by the workforce may mean that the sector is characterised by inconsistent and subjective standards of practice.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>The report made the following recommendations:</p> <ul style="list-style-type: none"> <li>• Develop a small number of key universities as centres of excellence in buildings history, offering degree courses to provide an academic grounding, together with practical skills, whilst promoting cross-disciplinary approaches where applicable;</li> <li>• Develop the competencies defined in this study into a set of National Occupational Standard, with a cross-disciplinary emphasis. These could be delivered through the establishment of a buildings history Training Forum (mirroring the Archaeology Training Forum);</li> <li>• Develop level 4 and 5 NVQs for buildings history;</li> </ul>

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	<ul style="list-style-type: none"><li>• Work with Creative and Cultural Skills and others to investigate the potential for integrating a creative apprenticeship system with existing work-based knowledge transfer and training schemes for the sub-sector;</li><li>• Develop existing schemes and provision towards a formal system for Continuing Professional Development to provide career-long training.</li></ul>
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<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	Institute for Archaeologists, Federation of Archaeological Managers and Employers
<b>Author(s):</b>	Kenneth Aitchison, Landward Research
<b>Title:</b>	<i>State of the Archaeological Market April 2012</i>
<b>Number of pages (including covers):</b>	pp. 29.
<b>Brief overview of report:</b>	The latest iteration of a regular survey-based overview of the current state of the market for commercial archaeological services, which has been conducted on quarterly basis since October 2008 to April 2011, and on a six-monthly basis since then.
<b>Summary of research methods used:</b>	Small scale online survey research, targeting 84 members of the sponsoring organisations, with reissues of the survey to encourage participation.
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Small sample – 43 responses;</li> <li>• Caveat in report that this is the <i>“best possible given the resources available”</i>.</li> </ul>
<b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>The research found evidence of:</p> <ul style="list-style-type: none"> <li>• Modest growth in employment levels in commercial archaeology in the six months to April 2012, continuing a trend established in the previous survey;</li> <li>• Improving business confidence, although from a low level which remains, overall, negative, but more businesses expect to increase rather than decrease staff levels;</li> <li>• Low and decreasing levels of staff turnover;</li> <li>• Stable or very slightly increasing salaries (in real terms);</li> <li>• Low profitability and declining turnover when compared to 2010-11;</li> <li>• Skills losses among surveyed firms were principally in fieldwork; firms were most likely to report having to buy-in skills in the areas of fieldwork, artefact or ecofact conservation or post-fieldwork analysis;</li> <li>• Training for staff was most likely to be provided in the areas of fieldwork, post-fieldwork analysis and desk-based or environmental assessment,</li> </ul>

	<p>along with data management and providing advice to clients;</p> <ul style="list-style-type: none"> <li>• Skills shortages were most frequently reported in post-fieldwork analysis and desk-based or environmental assessment, artefact or ecofact conservation, providing advice to clients and also (and very much increased levels since the previous iteration of the survey) fieldwork;</li> <li>• A minority of respondents had supported an employee to secure an NVQ, but a majority would consider doing so in the future.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The overall picture presented by the research is that the demand for archaeological services is increasing, albeit at a modest rate, with expectations of increased staffing levels and evidence of investment in training. There is some evidence of skills gaps and shortages, with the most common response to such issues being internal training; the exception is artefact and ecofact conservation, where skills tend to be bought in. This, combined with the frequency it is reported as a skills shortage area and the relative infrequency that training is provided to staff, suggests that developing skills in this area presents particularly difficulty.</p> <p>The overall picture – when quantitative findings are combined with literal comments – suggests that the greatest difficulty is securing ‘graduate level’ skills in data analysis, report-writing and client advice and communications (See limitations of research methods above).</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>N/A</p>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	[Published by Landward Research]
<b>Author(s):</b>	Kenneth Aitchison
<b>Title:</b>	Breaking New Ground: How Professional Archaeology Works
<b>Number of pages (including covers):</b>	Not paginated (Kindle e-book)
<b>Brief overview of report:</b>	Presents an overview of the archaeological market, looking at 'who employs archaeologists, who these employers work for (their clients) and why those clients want archaeological work done. It examines why there has been a demand for archaeological work in the United Kingdom over the 20 years from 1990-2010 and how this demand was met.'
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Synthesis of findings from Aitchison's own previous reports on archaeological employment, which were based on substantial quantitative surveys;</li> <li>• Case studies of individual organisations;</li> <li>• Other secondary literature on the archaeological market and its development from the 19<sup>th</sup> century onwards, and especially since the 1970s.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Those elements of the report that derive directly from other reports are subject to any methodological limitations of the original source;</li> <li>• Although published in 2012, the time of writing was late 2010.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• There has been a sustained increase in archaeological spending in England since the introduction of PPG 16 – the document that made archaeology a 'material consideration in the planning process - in the financial year 1990/91 through until the impact of the credit crunch in 2007;</li> <li>• The sustained economic contraction which followed the credit crunch led to a downturn in archaeological practice and subsequent job losses, with employment levels stabilising briefly in mid-2009 and then falling again subsequently;</li> <li>• Reductions in employment in private sectors organisations have been paralleled in reductions in local authority services;</li> <li>• Applications and acceptances to archaeology courses increased in 2009-10 and 2010-11; however, student funding has been significantly</li> </ul>

	<p>reduced; two universities closed their in-house commercial field units in 2009, with potential knock-on effects in academic archaeology and the teaching of future undergraduates;</p> <ul style="list-style-type: none"> <li>• The main heritage bodies – English Heritage and the Heritage Lottery Fund – are also being threatened with funding cuts and potential reorganisations that may impact on staffing levels;</li> <li>• There is evidence of divergence between practices in commercial archaeology and the standards increasingly advocated within university archaeology departments.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<ul style="list-style-type: none"> <li>• Explicitly discusses market failure in terms of environmental economics, which claims that the markets may not take account of environmental impacts due to information asymmetries and/or lack of compulsion to take them into account;</li> <li>• Competition in the archaeological market is driven by price rather than quality, driving down margins and leading to poor or restricted profitability – with large providers achieving profit margins of less than 5% even before the economic crisis – and reduced wages;</li> <li>• Wages remain stubbornly low for a graduate subject, with archaeology coming last in the HESA list of salary levels six months after graduation, although measures taken by professional associations within archaeology have led to wage increases in recent decades;</li> <li>• Nevertheless, the combination of regulatory requirement for archaeological investigation before development, with private enterprises competing to provide those services, does provide a ‘market solution to an environmental issue’;</li> <li>• The potential issue for the future, however, is that the market depends heavily on the local authority-based curatorial system (i.e. local advisors), which is under severe stress.</li> </ul> <p>Elsewhere the report also notes that:</p> <ul style="list-style-type: none"> <li>• The market for archaeological services is flawed because some employers have institutional advantages that protect them from the full rigours of competition, although this is becoming less widespread since the 2008 economic crisis;</li> <li>• The system is not effective at delivering training for existing workers;</li> <li>• There is considerable oversupply of potential archaeologists from the education system, with students being ‘in general under-informed as to the level of competition they will face for employment within the sector’.</li> </ul>

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<b>Summary of recommendations/ outcomes:</b>	N/A

<b>Year of publication:</b>	2011
<b>Sponsoring Organisation:</b>	The Higher Education Academy Subject Centre for History, Classics and Archaeology, English Heritage
<b>Author(s):</b>	Kenneth Aitchison, Landward Research Ltd.
<b>Title:</b>	<i>Survey of Archaeological Specialists 2010-11</i>
<b>Number of pages (including covers):</b>	369 pp.
<b>Brief overview of report:</b>	Attempts to provide the first detailed overview of the provision of specialist archaeological services (such as photography, measured survey, illustration and archiving), providing data on the subsector as a whole and enabling comparisons between individual specialisms.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Use of desk research and a previously developed database to identify archaeological specialist services (11 broad categories and 86 specific specialisms)</li> <li>• Structured electronic questionnaire aimed at archaeological specialists, to gather information on education, charging rates, competition, training &amp; CPD, whether they wish to pass on skills, impacts of post-2008 economic situation</li> <li>• 388 respondents and 235 completed, useable responses</li> <li>• Respondents gave information about more than one specialism, meaning that 1087 sets of different data were received</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• ‘Convenience’ sampling of archaeological specialists contacted via specialist associations <i>‘does not allow for extrapolation of the results, as it is unknown what percentage of the entire population of archaeological specialists completed returns’</i></li> <li>• No specific controls apparent concerning who could answer the questionnaire</li> <li>• The subsamples on individual specialisms were in almost all cases very small, usually less than 20 responses, potentially limiting their statistical robustness.</li> </ul>
<b>Summary of the report’s findings relating to the historic</b>	<ul style="list-style-type: none"> <li>• Day rates charged varied from £25 to £1500; average £220.93, and standard deviation was £147.80</li> </ul>

<p><b>environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• Survey work had the highest charges and archiving work the lowest</li> <li>• More respondents reported ‘very little’ than a ‘great deal’ of competition; and ‘Overall, the levels of competition to provide archaeological services in every area are remarkably low’</li> <li>• More representative gender balance in the provision of specialist archaeological services than in archaeology as a whole but considerable variation by specialisation (surveyors and photographers more likely to be men, conservators women)</li> <li>• New entrants typically expected to be graduates</li> <li>• Respondents reported that it was difficult to access initial training across specialism, with older respondents reporting it more difficult than younger respondents, and the more highly educated easier, than the less highly educated</li> <li>• Preferred CPD consisted of reading appropriate technical publications, followed by attendance at conferences</li> <li>• More than half of those who answered were interested in becoming trainers</li> <li>• The economic situation had reduced the number of projects available and led to decreased sense of job security</li> <li>• Within specialist areas, relative to the average, surveyors had the highest charges and reported the most competition; illustrators had lower charges, tended to be older, and found CPD particularly difficult to access; while photographers had lower charges, less competition, and found it easier to access training.</li> <li>• There is a high risk of future skills shortages in all specialisms, with particular problems due to a large proportion of workers proposing to stop working in next 5 years in survey, photography, and report production; and due to reduction in volume of available work, in photography and illustration</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The ‘convenience’ based approach to sampling makes it difficult to draw robust wider conclusions, but the key issues seem to relate to maintaining future skills supply given the highly specialised nature of many of the services being provided and the apparent lack of accessible initial training and CPD opportunities.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>The report recommendations are variously aimed at individual specialists, training providers and funding bodies, and can be summarised as follows:</p>

	<ul style="list-style-type: none"> <li>• <b>Charges</b> – specialists should review their charges and include appropriate overheads, to ensure that they are sustainable and competitive;</li> <li>• <b>Entry level</b> – explore creating apprenticeships for archaeological specialists; consider developing formal network of mentors; develop e-learning packages for specialists;</li> <li>• <b>CPD</b> – carry out more research into why CPD is seen as difficult to access; establish mentor network and provide training for mentors; develop e-learning packages; help support specialist conferences to support specialist; create a culture of workplace learning so that specialists can pass on their skills; that appropriate use is made of the list of specialists who like to be involved in training;</li> <li>• <b>Other</b> – Repeat the research into archaeological specialist skills on a five year cycle.</li> </ul>
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<b>Year of publication:</b>	2012
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<b>Sponsoring Organisations:</b>	Council for British Archaeology, English Heritage
<b>Author(s):</b>	James Doerer, Sarah Dhanjal, Abigail Hinton, Dominic Perring Clive Orton (UCL Centre for Applied Archaeology)
<b>Title:</b>	<i>Diversifying participation in the historic environment workforce. A report commissioned by the Council for British Archaeology Diversifying Participation Working Group</i>
<b>Number of pages (including covers):</b>	131 pp.
<b>Brief overview of report:</b>	This project was originally designed as a scoping survey that would identify all existing data and research pertaining to ethnic diversity in the sector. This report pulls together all known analysis and available data on the subject into one holistic analysis that examines all parts of the sector (including its educational, voluntary and professional elements). The purpose is to provide data that will help the sector address its recognised lack of ethnic diversity, identifying barriers to engagement and making recommendations on how to deal with them.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• A combination of extensive review and synthesis of existing literature with primary research;</li> <li>• Short questionnaire on the ethnic profile of employees aimed at major employers, voluntary organisations and professional bodies in the sector resulting in 21 semi-structured qualitative interviews with informed respondents from major sector organisations;</li> <li>• Synthesis of data derived from other research (including Aitchison's reports for the IFA and reports by CABE on the built environment professions);</li> <li>• Secondary analysis of data supplied by HESA and UCAS on the ethnic profile of students taking qualifications relevant to the historic environment.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• The primary research is essentially a supplement to a coordinated presentation of data and findings from previous reports;</li> <li>• The use of relatively modest primary research therefore limits the extent to which the report is able to go further to address specific issues, e.g. of causation, that are not discussed in previous reports;</li> <li>• There is evidence of different levels of completeness in the data and previous reports by professional groups. In particular, archaeologists are easier to define and track through the data than other educational and</li> </ul>

	<p>professional groups, such as ‘conservation’ professionals.</p>
<p><b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• There can be very different perceptions of what constitutes ‘heritage’ in minority ethnic groups, and these often do not correspond to the ‘conventional’ heritage; in addition, certain aspects of Britain’s historic environment that may have negative associations due to their connection with empire and colonialism, especially in their more unsavoury aspects.</li> <li>• BME populations are concentrated in the major cities and especially in London, and are more likely to face significant socio-economic and educational challenges – poverty as well as barriers created by ethnicity.</li> <li>• Students from BME backgrounds, who go on to university, attend the post-1992 universities, which are often perceived to award lower quality qualifications than the older universities and which also have a lack of provision appropriate to historic environment careers; BME students often have lower attainment at degree level, except those studying at Russell group universities. The transition to HE can be difficult for some members of BME groups, especially for those from poorer backgrounds.</li> <li>• Early experiences shape later participation in the historic environment, and evidence of negative perceptions of history at primary level suggests a barrier for all children, not just those from BME backgrounds; at secondary level there is a correlation between the availability of courses related to the historic environment, and the socio-economic status of pupils. Representation of BME students in undergraduate courses varied greatly from course to course – with as many 18% in planning courses to as few as 3% in archaeology courses. Overall, BME students are more seriously under-represented in postgraduate than undergraduate courses, although this is likely to reflect social and economic factors as much as ethnicity <i>per se</i>.</li> <li>• The historic environment workforce is overwhelmingly white, in both paid and voluntary roles, with the greatest under-representation in archaeology and the most balanced representation (among major employers) in the National Trust; there is a small but persistent trend towards greater diversity; but the general lack of representation impacts on perceptions of the sector by BME groups.</li> <li>• Volunteering plays a crucial role in the historic environment sector. Lack of data collection and monitoring makes it difficult to quantify the situation of BMEs precisely, as few organisations routinely collect ethnicity data from their volunteers. In general, however, ethnic minorities tend to participate less in volunteering roles, and when they do volunteer it is more likely to support religion or local communities than a physical ‘place’, and it seems that historic environment volunteers are especially likely to be white, middle-aged and middle-class. This is particularly problematic, because in some sectors – such as museums –</li> </ul>

	<p>volunteering experience is almost a prerequisite for those seeking paid employment. In addition, there is evidence that some potential volunteers in receipt of benefits are put off by fear that volunteering would lead to loss of income.</p> <ul style="list-style-type: none"> <li>Stakeholders interviewed for the research feel that the majority view in the sector is that the kind of heritage that they are concerned with preserving is not ‘relevant’ to BME groups and that increasing diversity in the sector was a priority for organisations. Interviewees were particularly concerned at the lack of a non-graduate route into the professions and the potentially discriminatory impact of the expectation that people should have volunteered in certain kinds of role.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The key issue that seems to be at least implicit in this report is a self-sustaining cycle of a) lack of engagement in the historic environment sector by those from BME groups b) a sense within the sector that the kind of heritage that they are concerned in preserving is not ‘relevant’ to BME groups; c) lack of representation of BME groups among the sector’s workforce and volunteers.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>The report set out a wide range of recommendations, but identified five measures that could be quickly implemented:</p> <ul style="list-style-type: none"> <li>Improve data collection by routinely monitoring the ethnicity of the sector workforce and applicants;</li> <li>Improve careers advice through major sector employers and organisations collaborating to provide a regularly updated information pack to careers advisors;</li> <li>Articulate the value of volunteering in the heritage sector, and also make it clear to people in receipt of benefits where to find out how volunteering might affect their income</li> <li>Make ethnic diversity a priority, and ensure that those at the top of the sector clearly articulate its economic and social value;</li> <li>Promote a richer historical narrative that takes into account the experiences of BME groups in the past.</li> </ul>

<b>Year of publication:</b>	2009
<b>Sponsoring Organisation:</b>	Higher Education Academy Subject Centre for History, Classics and Archaeology
<b>Author(s):</b>	Victoria Jackson and Anthony Sinclair
<b>Title:</b>	<i>Archaeology Graduates of the Millennium - A Survey of the Career Histories of Graduates</i>
<b>Number of pages (including covers):</b>	46 pp.
<b>Brief overview of report:</b>	The intended outcome of the report was to provide Higher Education Institutions (HEIs) and students with key information about the employability of archaeology graduates. This information is intended to help HEIs develop current and future provision of skills training on the basis of evidence provided by recent experiences of archaeology graduates in achieving graduate level employment.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Desk review of relevant statistics, primarily data from the Higher Education Statistics Agency (HESA);</li> <li>• Nationwide survey distributed to all graduates of archaeology or archaeology related degrees since 2000, which obtained 710 survey responses;</li> <li>• Follow-up semi-structured interviews with a total of nine respondents, used to create seven case-studies.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Despite a large sample there appears to be some gender bias;</li> <li>• The gender bias is more prominent in the case studies, for which six of the seven interviewees were female.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>• 96% of the sample had obtained a 2.2 classification or higher;</li> <li>• Interest in the subject and desire to become an archaeologist were the top two reasons provided for choosing to study archaeology at university;</li> <li>• With regards to fieldwork, 92.5% of the sample experienced some form of fieldwork during their degree and the majority of these reported that fieldwork was influential in their choice of career;</li> <li>• At the time of the survey, 86% of the total sample were employed (both part or full time) and 59% of those employed were in graduate level</li> </ul>

	<p>employment, that is to say employment which requires a degree;</p> <ul style="list-style-type: none"> <li>• Of the total sample, 40% were employed in the field of archaeology, and around half had been employed in professional archaeology at some point;</li> <li>• When asked if their degree could have better prepared them for the world of work, 57% of the archaeology graduates responded ‘yes’ and suggestions were made on how they could have been better prepared;</li> <li>• It was found that university tended not to prepare students with professionalism, business skills, leadership skills and management skills; the case studies also suggest that there should be more emphasis on fieldwork, preparing and delivering presentations, and teamwork in university degrees.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The key issue that emerges from the report is that university provides many of the skills needed in employment, but there may be specific weaknesses in providing sufficient fieldwork skills and specific employability skills.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<ul style="list-style-type: none"> <li>• <b>Fieldwork</b> – because of its importance to future employment in the sector, fieldwork should either be a compulsory component of archaeology courses or be made more accessible to students in other ways;</li> <li>• <b>Skills</b> – There was evidence of a need to develop better transferable skills in areas such as IT, presentations, teamwork, business skills, and foreign language learning;</li> <li>• <b>Student expectations</b> – many students reported having had unrealistically high expectations of the likelihood of employment, or of pay and conditions, in the sector;</li> <li>• <b>Stakeholder awareness</b> – the findings from the research need to be more widely distributed to relevant stakeholders to help ensure that students are better prepared for –and informed about – employment in the sector.</li> </ul>

<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	Institute of Field Archaeologists
<b>Author(s):</b>	Kenneth Aitchison & Rachel Edwards
<b>Title:</b>	<i>Archaeology Labour Market Intelligence: Profiling the Profession 2007-08</i>
<b>Number of pages (including covers):</b>	252 pp.
<b>Brief overview of report:</b>	The report discusses the findings of the Archaeology Labour Market Intelligence 2007-08 project, which aimed to improve understanding of the needs of the archaeological profession by identifying, collecting, quantifying and disseminating labour market information for the sector. It is the third of a series of quinquennial surveys of the profession.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Multi-method approach, combining an initial desk based review of relevant literature with a survey of professional archaeological organisations in the UK;</li> <li>• The survey was a paper-based self-completion postal questionnaire, with an electronic alternative, it received 466 responses, of which 242 were complete responses used for data analysis and the remainder were null or invalid returns;</li> <li>• A full description of the sample and analysis methods is given in the report and the representativeness of the sample is considered in detail;</li> <li>• The data were cleaned, weighted and expanded using other sources of information to calculate the overall size of the archaeology workforce.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• The report focuses on professional archaeological organisations only, and does not include voluntary organisations;</li> <li>• The number of responses received to the survey was somewhat low, but given the comparatively small population of professional archaeological organisations (estimated at 1353) was sufficient to generate data with a slightly greater than standard confidence interval and level;</li> <li>• While the basic methods used to clean and weight the data for calculating the workforce size are described in some detail and appear rigorous, the precise method is not detailed (although the source data have been anonymised and placed in the public domain by the researchers).</li> </ul>
<b>Summary of the report's findings:</b>	The research findings were presented in summary form under a number of headings:

<p><b>relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• Workforce size: the archaeology workforce was estimated at 6865 in 2007-08, a 20% increase on 2002-3. There were a further 866 people working as support staff in the sector;</li> <li>• Workforce profile: the workforce was found to be 41% female and 59% male; the average age of an archaeologist was 38; the workforce was not ethnically diverse, being overwhelmingly white; and there were few archaeologists reporting disabilities. There was little change since 2002-03;</li> <li>• Sector Growth: employers anticipated growth over the next five years, although the survey was completed before the impact of the 2007-08 credit squeeze became evident;</li> <li>• Developer funding: nearly half of organisations generated income at least in part from development or the planning process, which funded the equivalent of 58% of archaeological posts;</li> <li>• Estimated numbers working in each job type: 10% national government; 17% local government; 15% universities; 51% private sector. 57% of the workforce worked for organisations providing field archaeology services; 27% for organisation involved in historic environment advice; 5% for museum and visitor services; and 12%, in education or academic research services;</li> <li>• Geographical differences: the regional concentration of archaeologists largely varies in accordance with relative population numbers, but has fallen in London;</li> <li>• Range of jobs: the survey collected information on 2,733 archaeologists and support staff working in 808 jobs with 519 different post titles, equating to one post title for every 5.3 individuals;</li> <li>• Salaries: the average full-time salary was £23,310 per annum, with wages somewhat lower in the private sector – considerably lower than the UK average full-time salary;</li> <li>• Staff qualifications: 12% held a Doctorate or post-doctoral qualification, 40% held a Masters degree or higher and 90% of archaeologists held a Bachelors degree or higher;</li> <li>• Potential skills shortages and skills gaps: conducting and contributing to surveys of historic buildings, conducting and contributing to geophysical survey, desk-based research and assessment, conservation of artefacts or ecofacts, artefact research and ecofact research. Information technology and report writing were also identified as areas where there were potential non-archaeological skills issues;</li> </ul>
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	<ul style="list-style-type: none"> <li>Employers’ commitment to training and qualifications: around 75% of organisations identified the training needs of their organisation; 93% of employers identified individual training needs and provided training for paid staff. Just over half had a training plan, and just under half evaluated training impacts on individuals; a third evaluated training impacts on the organisation.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The principle concern appears to be that archaeologists are paid below the rates that would be expected given their levels of qualifications and experience. This may indicate an oversupply of qualified archaeology graduates. The narrow ethnic profile of the profession may also reflect inequities and inflexibilities in the supply of recruits to the profession. Evidence is also presented that many current archaeology degrees do not provide the requisite practical or intellectual skills and experience needed to work as a professional archaeologist.</p>
<p><b>Summary of recommendations/ Outcomes:</b></p>	<ul style="list-style-type: none"> <li>That the research should continue to be repeated at least every five years to ensure that the data continues to be up to date and relevant to the needs of employers and other stakeholders;</li> <li>Further projects which apply the National Occupational Standards in Archaeological Practice in the workplace to improve business and individual performance are recommended;</li> <li>Further research is needed to identify why there continues to be so few black or minority ethnic people working in the sector. More support is needed to help employers increase diversity in the workplace;</li> <li>The creation of a single, annually updated, directory of archaeologists and archaeological organisations would greatly assist future iterations of this project and would aid employers, individual employees and potential employees;</li> <li>Comprehensive, up-to-date information about those participating in archaeology on a voluntary basis is needed. This project looked at voluntary participants working with paid employees, but there is need for a comprehensive and comparable study of voluntary participation in archaeology in order to identify potential skills and training issues for this group of individuals.</li> </ul>



<b>Year of publication:</b>	2009
<b>Sponsoring Organisation:</b>	English Heritage
<b>Author(s):</b>	Nautical Archaeology Society
<b>Title:</b>	<i>Benchmarking Competence Requirements and Training Opportunities related to Maritime Archaeology</i>
<b>Number of pages (including covers):</b>	129 pp.
<b>Brief overview of report:</b>	Study aimed to relate maritime archaeological training to archaeological standards. The study sought to identify the range and level of skills required and to define competencies required. It looked at existing training provision and how this could be developed in accordance with the project aims of ensuring that training is fit for purpose with sufficient opportunities provided to support the acquisition and maintenance of the competencies of those participating in the sector.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Literature review focused on analysing existing legislation, standards and qualifications in maritime archaeology;</li> <li>• Targeted, non-structured, interviews with key stakeholders;</li> <li>• 2 group consultation meetings held with experts and stakeholders through NAS Training and Education Advisory Board;</li> <li>• Consultation meetings held in London, Edinburgh, Plymouth, Swansea and Sydney (Australia);</li> <li>• Downloadable public survey seeking responses to the interim report, which generated 12 responses;</li> <li>• Four practitioner case studies to explore different ways of achieving competence (initial training, mature entry, experience on-the-job).</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Primarily focused on defining standards rather than exploring skills shortages and gaps or workforce profile;</li> <li>• Distillation of expert views, no large-scale research from a representative sample;</li> <li>• Only twelve survey responses, which is far too small to give statistically significant results.</li> </ul>
<b>Summary of the report's findings relating to the</b>	<ul style="list-style-type: none"> <li>• Notes that there is a shortage of competent marine archaeologists;</li> <li>• Survey respondents indicated that there would be an increase in demand</li> </ul>

<p><b>historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<p>for marine archaeologists over the next five years;</p> <ul style="list-style-type: none"> <li>• When asked about the reliability of National Occupational Standards and NVQs as evidence of competence, respondents gave largely negative replies;</li> <li>• For most respondents, university education is the best means to acquire theoretical knowledge while on-the-job learning is the best way to acquire practical fieldwork skills;</li> <li>• Most university education for maritime archaeology is at post-graduate level, and is potentially costly. Most students do not go onto careers as maritime archaeologists; no providers interviewed defined their course content against external standards;</li> <li>• There were perceived to be specific training gaps in dealing with seaplanes/crashed aircraft, inland waterways and flooded caverns.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The key issues seem to relate to potential inadequacies in current training provision and demonstration of competence – in both practical and theoretical domains. The supply of appropriate non-academic training seems to be poor.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<ul style="list-style-type: none"> <li>• Promotion and support for UK National Occupational Standards for Archaeology;</li> <li>• Encouraging the use of the National Vocational Qualification in Archaeological Practice;</li> <li>• Creation of a competency scheme to allow verification of practitioners abilities;</li> <li>• Creation of standards for peer reviewing of archaeological work;</li> <li>• Future use of the European Qualification Framework to harmonise training standards;</li> <li>• Need to increase practitioners abilities to work on and understand submerged landscapes and industrial archaeological remains;</li> <li>• A training strategy that incorporates skills acquisition via short course attendance and increasing opportunities for experience and mentoring for practitioners through collaborative long term research driven training projects to help bridge the gap between academic education and vocational skills training.</li> </ul>

<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	English Heritage
<b>Author(s):</b>	Neil Cossons
<b>Title:</b>	Sustaining England's Industrial Heritage. A Future for Preserved Industrial Sites in England
<b>Number of pages (including covers):</b>	62pp.
<b>Brief overview of report:</b>	This study examines the current state of preserved industrial archaeological sites in England, principally of the eighteenth and nineteenth centuries and that are 'preserved and accessible to the public', and makes recommendations on how their future may be secured.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Synthesis of earlier reports on policy and practice in the fields of industrial archaeology and conservation of industrial heritage;</li> <li>• Site visits to a sample of industrial heritage sites;</li> <li>• Authorial experience and expertise.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Primarily reflects authorial opinion: 'The opinions expressed are entirely his and the recommendations reflect observations based on his experience and of sites visited, and the views of those consulted.'</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>The primary focus of the report is on broader issues affecting the conservation of industrial heritage; however, there is some consideration of skills and training in both the volunteer and professional workforces:</p> <ul style="list-style-type: none"> <li>• Many industrial preservation groups 'are outside the mainstream of wider conservation philosophy and practice ... as a result, standards of preservation and interpretation fall short – often well short - of currently accepted practice and public expectations;</li> <li>• Volunteer numbers are often short, and volunteers are often elderly; trustees and volunteers often lack leadership and experience;</li> <li>• There are also problems in local authority funded sites, where declining funding and neglect is leading to problems both of preservation and interpretation;</li> <li>• Skills and knowledge limitations appear to extend to planning processes, including those for which English Heritage is responsible;</li> <li>• Many sites involve preserved machinery, and this poses particular</li> </ul>

	<p>challenge because of the lack of clearly established conservation principles for this kind of heritage; the tendency to prioritise operation over preservation; and difficulties dealing with potential health and safety issues.</p>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>There appears to be acute failures in the skills base needed for the effective preservation and presentation of the sites. This is related to the acute shortages of funds and rooted in the preponderance of sites run by volunteer preservation groups, with relatively little involvement by statutory or national agencies</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>A number of recommendations related specifically to the supply of skills and expertise in industrial heritage:</p> <ul style="list-style-type: none"> <li>• English Heritage should reconstitute the Industrial Archaeology Panel (which advises staff) as a full Committee (Industrial Archaeology Committee (IAC)) to advise the English Heritage Advisory Committee (EHAC,) and widen its terms of reference to embrace the strategic oversight, conservation and management of preserved industrial sites.;</li> <li>• English Heritage should establish an Industrial Archaeology Unit (IAU) with resources of knowledge and management experience, and a budget, sufficient to implement a policy of securing a sustainable future for preserved industrial sites;</li> <li>• English Heritage should support provision of research and teaching in those specialist areas of preservation, conservation and management that relate to the historic industrial environment.</li> </ul>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	Department for Business, Innovation and Skills, Creative and Cultural Skills
<b>Author(s):</b>	TBR
<b>Title:</b>	<i>Mapping Heritage Craft: The economic contribution of the Heritage Craft sector in England October 2012</i>
<b>Number of pages (including covers):</b>	144
<b>Brief overview of report:</b>	Seeks to provide the first systematic overview of the size, profile, economic and education.
<b>Summary of research methods used:</b>	<p>The method used employed six main steps as follows:</p> <ul style="list-style-type: none"> <li>• Creating a master database of Heritage Craft makers, practitioners and businesses using data available from associations/guilds/ membership bodies and online directories;</li> <li>• Utilising keyword searches on a business dataset to identify Heritage Craft businesses and their economic activity;</li> <li>• Applying weights to this “known universe” of businesses and makers to scale this up to a population estimate;</li> <li>• Undertaking a survey of 762 Heritage Craft businesses in order to collect specific data on the nature of activity, business performance and needs (quota/stratified sample to ensure representativeness);</li> <li>• Modelling data from ONS data sources on GVA and workforce demographics;</li> <li>• Analysing historic trend data on employment and standard econometric forecasts of anticipated performance in order to estimate a likely future employment footprint.</li> </ul> <p>In addition to the core strand of quantitative research, the study also included:</p> <ul style="list-style-type: none"> <li>• A series of 22 in-depth interviews with Heritage Craft businesses, focusing on four craft groups: Stone, Wood &amp; Plants, Guns and Instruments;</li> <li>• Desk research to develop an understanding of the supply of training available to the sector.</li> </ul>

<p><b>Limitations of research methods:</b></p>	<ul style="list-style-type: none"> <li>• The division of the heritage craft sector into subsectors has been carried out using ‘materials’ – such as stone, paper, plaster and paint - making it difficult to disentangle craft work specifically connected with the historic environment from craft work undertaken for other markets.</li> </ul>
<p><b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• The Heritage Craft sector overall provides employment for 210,000 people and is worth £10bn in revenue and £5bn in GVA;</li> <li>• There are 2,490 heritage craft business working with stone, turning over, on average, £111,060 each in heritage work, with 79% of employees predominantly undertaking heritage work ;</li> <li>• There are 11,460 firms working with plaster, turning over, on average, £14,550 each in heritage work;</li> <li>• In the sector as a whole, the workforce is predominantly white and male, with a somewhat older age profile than average;</li> <li>• Most new business comes through word-of-mouth rather than advertising;</li> <li>• Learning is overwhelming reported as having been done through experience/on-the-job training, and employees are much more likely to report having no qualifications or ‘other’ qualifications than England’s workforce as a whole;</li> <li>• 12% of the heritage craft workforce has been working in their occupation for less than a year;</li> <li>• Most training opportunities are entry level and aimed at amateurs; more limited CPD is available in some areas.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The primary findings of the research were: the small scale of businesses, the difficulty they had accessing training, and concerns that fewer and fewer people were choosing to enter craft apprenticeships. There was also some evidence that established craftspeople – who make their livings out of their craft skills – are in some cases unwilling to train people to compete. Against this, however, there was also evidence of deep-seated concern to keep craft traditions alive.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>n/a</p>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	Creative and Cultural Skills
<b>Author(s):</b>	Creative and Cultural Skills
<b>Title:</b>	<i>The Creative and Cultural Industries: Cultural Heritage 2012-13. A workbook</i>
<b>Number of pages (including covers):</b>	11 worksheets (Excel)
<b>Brief overview of report:</b>	The aim of this workbook is to provide easily understandable information on the cultural heritage industry. It provides information on the total number of cultural heritage employees in the UK as well as businesses information and Gross Value Added.
<b>Summary of research methods used:</b>	Data obtained from the following secondary sources: <ul style="list-style-type: none"> <li>• Annual Population Survey (2010/2011);</li> <li>• Annual Business Survey (2009);</li> <li>• Interdepartmental Business Register (2009).</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Based on evidence 3-4 years old;</li> <li>• Does not provide a definition for the 'cultural heritage' sector.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>Main findings with respect to the cultural heritage workforce:</p> <ul style="list-style-type: none"> <li>• 46,620 people work in the cultural heritage sector across the UK;</li> <li>• Per hour, each person earns on average £8.27;</li> <li>• 10% of the workforce is aged under 24 and 22% is aged 55 and over;</li> <li>• 17% of the workforce is classified as disabled, compared with 15% for the UK economy as a whole;</li> <li>• 94% of the workforce is white compared to 90% for the UK economy as a whole;</li> <li>• 35% work part time compared with 27% for the UK economy as a whole;</li> <li>• 60% of the workforce is female compared with 46% for the UK economy as a whole;</li> <li>• 5% of the workforce is self-employed compared with 14% for the UK economy as a whole;</li> <li>• 73% of the workforce is qualified to level 4 and above compared with</li> </ul>

	<p>37% for the UK economy as a whole;</p> <ul style="list-style-type: none"> <li>51% of businesses employ a minimum of five staff compared with 24% for the UK economy as a whole.</li> </ul>
<b>Summary of evidence relating to market failure:</b>	None.
<b>Summary of recommendations/outcomes:</b>	None.



<b>Year of publication:</b>	2011
<b>Sponsoring Organisation:</b>	Creative and Cultural Skills, SkillSet
<b>Author(s):</b>	Creative and Cultural Skills, Skillset
<b>Title:</b>	<i>Sector Skills Assessment for the Creative Industries of the UK, January 2011</i>
<b>Number of pages (including covers):</b>	pp. 154
<b>Brief overview of report:</b>	Attempts to profile the entire creative industries workforce on the basis of a synthesis of data from standard statistical sources. Subsectors relevant to the historic environment workforce are primarily cultural heritage and crafts.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Secondary analysis of standard datasets e.g. official statistics, LFS data;</li> <li>• Secondary analysis of custom research and commissioned by sector organisations CCSkills, SkillSet etc.</li> </ul>
<b>Limitations of research methods:</b>	High-level overview research that does not separately identify the historic environment workforce. This is true even of the most relevant subsectors, craft and cultural heritage.
<b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p><b>Craft Subsector</b></p> <ul style="list-style-type: none"> <li>• The craft subsector consists of 18,000 businesses and 75,900 individuals and of the latter 33% are self-employed;</li> <li>• Its overall contribution to the UK economy is £3.1bn per year (GVA), and 53% of the craft sector earns less than £20,000 per year;</li> <li>• 11% of employees in the craft sector are stonemasons, making it the second most common occupation in the subsector;</li> <li>• Business performance is mostly reported as static or declining;</li> <li>• Skills gaps and future skills shortages are not felt to be a particular problem by most craft employers;</li> <li>• Craft employers tend to provide low levels of training to their staff;</li> <li>• The most common types of learning are on-the-job (39%), knowledge-based sessions with an external provider (35%) and networking (25%); the least common, apprenticeships, specific union learning and structured CPD were the least common;</li> <li>• The most highly rated means of learning were S/NVQs; on-the-job learning; internal training; personal knowledge development (e.g.</li> </ul>

	<p>reading).</p> <p><b>Cultural Heritage Subsector</b></p> <ul style="list-style-type: none"> <li>• The cultural heritage subsector consists of 1000 business and 53,700 individuals and of the latter 4% are self-employed;</li> <li>• Its overall contribution to the UK economy is £5.3bn per year (GVA), and 87% of the craft sector earns less than £20,000 per year;</li> <li>• Most common occupations are visitor relations (19%), archaeologist (12%) and curator (9%);</li> <li>• Business performance is mostly reported as static or declining;</li> <li>• Cultural heritage employers tend to provide considerably higher levels of training than craft employers, and a relatively high proportion (39%) provide an entitlement to training;</li> <li>• The most common types of learning knowledge-based sessions are with an external provider (63%), networking (62%) and personal knowledge development (61%); the least common are apprenticeships and specific union learning;</li> <li>• Apprenticeships, on-the-job coaching, and knowledge-based sessions with an external provider were the most highly rated forms of learning;</li> <li>• There is some evidence that there are skills shortages of archaeologists; visitor relations positions; and technicians;</li> <li>• More than third of employers feel there are skills gaps in their workforce, but there are difficulties making the time and money available to address these;</li> <li>• Many businesses feel that they will be adversely affected by skills gaps in the future, notably in the areas of creative expertise, ICT and fund-raising.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>Although the nature of the analysis makes it difficult to draw specific conclusions about the historic environment sector, there are indications that training is often informal and low-cost. In addition, there is a perception that skills gaps and shortages represent a current and future challenge in the cultural heritage sector as a whole.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>n/a</p>

<b>Year of publication:</b>	2009
<b>Sponsoring Organisation:</b>	Heritage Lottery Fund
<b>Author(s):</b>	Robert Bilbrough Associates
<b>Title:</b>	<i>Training Bursaries Programme Evaluation Report August 2009</i>
<b>Number of pages (including covers):</b>	55pp.
<b>Brief overview of report:</b>	Evaluation of 10 Traditional Bursary Programmes (TBPs) to support training for craft and conservation skills relevant to the heritage sector
<b>Summary of research methods used:</b>	<p>No explicit description of the evaluation methodology, but the following list of evaluation actions is given in the report:</p> <ul style="list-style-type: none"> <li>• Continuing to keep contact with project managers and project administrators on project developments and to encourage the use of monitoring and evaluation instruments;</li> <li>• Planning and organising project visits;</li> <li>• Visiting training bursary holders at their placements (focusing on those with bursaries of more than two months);</li> <li>• Visiting project management teams to provide advice on training, accreditation, monitoring and evaluation issues;</li> <li>• Reviewing project teams' documentation sent for comment;</li> <li>• Attending the national meeting with HLF's Nick Randell, Dr Jo Reilly and the project managers;</li> <li>• Telephone and email contact with project managers and trainees on placements of two months or more;</li> <li>• Analysing data on Registration, Monitoring, Non-Completer, Completer questionnaires and meeting notes;</li> <li>• Providing statistical data for HLF; and</li> <li>• Writing the evaluation report.</li> </ul> <p>There is therefore an implicit combination of qualitative (visits to placement providers and trainees) and quantitative methods (using a series of separate questionnaires for different stages of, and outcomes from, the programme).</p>

<p><b>Limitations of research methods:</b></p>	<ul style="list-style-type: none"> <li>• Direct statistics on retention etc. can be assumed to be absolutely accurate (as census-type information seems to have been maintained for all participants);</li> <li>• The evidence for other types of qualitative evaluation is not always made clear.</li> </ul>
<p><b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b></p>	<ul style="list-style-type: none"> <li>• Skills gaps were more of a problem than skills shortages in the cultural heritage sector, particularly in relation to adapting to new technologies;</li> <li>• In the built heritage sector nearly all employers reported skills shortages in craft and technician roles and difficulties securing work of sufficient quality from subcontractors;</li> <li>• Certain built heritage occupations stood out as presenting difficulties: stone masonry and carving; roofing with asymmetric and traditional materials; and – though more particularly in Scotland and Northern Ireland – thatching;</li> <li>• Most of the bursary holders completed their placements;</li> <li>• All of the areas supported by the bursaries represented genuine skills shortage areas, with 89% of bursary holders continuing in employment in their chosen sector.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>Did not directly address this issue, but findings suggest that there are significant issues with skills gaps, especially in the traditional building crafts, where work is often done to inadequate quality levels.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>The report did not make explicit recommendations; however, it noted that:</p> <ul style="list-style-type: none"> <li>• Since the last project report there has been a severe downturn in the economy. This has come at a time when the TBP is entering its final stage of delivery;</li> <li>• Due to the cut-backs in both private and public sector organisations it is now more unlikely that projects will be able to continue after their contract completion. The projects will therefore wind-up and with this their knowledge and experience will disappear;</li> <li>• In addition to this the funding cut-backs are likely to cause other providers of heritage training to reduce or curtail their provision. This is likely to lead to further skill shortages and gaps in the future if training is reduced over an extended period of years;</li> <li>• There is a now an even stronger case for HLF to continue the TBP for an extended period. This will maintain the training momentum and use the knowledge and experience of the project teams.</li> </ul>

<b>Year of publication:</b>	2013
<b>Sponsoring Organisation:</b>	ICON
<b>Author(s):</b>	Kenneth Aitchison
<b>Title:</b>	Conservation Labour Market Intelligence 2012-13
<b>Number of pages (including covers):</b>	121 pp.
<b>Brief overview of report:</b>	Provides the first detailed primary research into the size and profile of the conservation workforce in more than ten years; develop accurate employment figures by speciality and job role; identify potential barriers to employment, progression and recruitment; and identify training needs, skills shortages and skills gaps.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Review of secondary literature;</li> <li>• Construction of a database of all providers of conservation services to provide a sample frame for survey of 833 organisations/individuals;</li> <li>• Online survey targeting all providers of conservation services (employers and self-employed), which received 209 useable responses;</li> <li>• Statistical analysis to estimate size and profile of sector, using extrapolation to take into account non-response.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Sample frame based on conservators listed in directories, or found using internet searches or via e-mail contacts – this may miss smaller; independent practitioners, with the potential to distort findings if there is a 'long-tail' of such conservation service providers;</li> <li>• Small subsamples of providers in individual conservation disciplines may limit the robustness of findings at this level of analysis.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>The report identified the following major findings:</p> <ul style="list-style-type: none"> <li>• It is estimated that 3,175 people worked as professional conservators in 2012-13, supported by 1,125 support staff, 700 volunteer conservators and 175 voluntary support staff, meaning that the total conservation workforce in 2012-13 was 5,125 people;</li> <li>• The workforce was not diverse; it was drawn from a relatively narrow segment of society;</li> <li>• The median salary for a professional conservator was £26,000 (50% earned more than this, 50% less). The national median for all occupations was £26,500, but the median for professional occupations nationally was £36,359;</li> <li>• Conservators were very highly qualified, with 78% being graduates;</li> <li>• Conservation workplaces were typically very small; 84% of all conservation workplaces have five or fewer conservators working in them;</li> <li>• Conservation employment was relatively evenly distributed between the public, private and civil society (charity / NGO) sectors;</li> <li>• Skills gaps and shortages were identified in many areas of specialist</li> </ul>

	<p>conservation skills, and also identified widely in areas of transferable professional skills.</p> <p>Skills issues were identified in a number of specific areas:</p> <ul style="list-style-type: none"> <li>• Skills issues emerged in many areas of conservation practice, and repeatedly in both preventative and interventive conservation of digital media and clocks, watches and scientific instruments;</li> <li>• There were difficulties with generic business and professional skills throughout the profession.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>A key issue is the relatively low salary levels reported by conservators relative to their levels of education, training and skills. The underlying reasons for this were not explored in detail, but the implicit claim is that it reflects lack of understanding of the high level of skill required. Alternative explanations – such as the highly labour intensive nature of conservation serving to ‘build-in’ low prices – do not appear to have been considered.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>The report presented recommendations under five headings:</p> <ul style="list-style-type: none"> <li>• <b>Training planning:</b> Employers of conservators should consider developing and implementing achievable, adequately funded training and plans; individual conservators should discuss CPD requirements with their employers and seek to agree training mechanism that contribute to the organisations skills development goals; and ICON should consider extending the requirement for structured CPD to all professional members and not just accredited conservator-restorers;</li> <li>• <b>Training Delivery:</b> Training providers should seek to develop provision that responds to skills gaps reported by employers, and in particular develop bespoke business skills courses for conservators; ICON should develop its training directory into an active marketplace for the delivery of skills training;</li> <li>• <b>Business development:</b> Conservators, and organisations employing conservators, should where appropriate offer subcontracted services in identified skills shortage areas; ICON should promote the professional status of its members to commissioners of conservation work;</li> <li>• <b>Professional conservation:</b> employers and training organisations should seek to diversify the workforce; ICON should promote the professional quality of work undertaken by its members in order to move their salaries upwards to the professional average;</li> <li>• <b>Strategic delivery:</b> The findings of the report should be used to inform initiatives based on the <i>National Conservation Education and Skills Strategy</i>; ICON should commission a repeat of the report in 2016 (the end of the <i>Skills Strategy</i>) to assess progress and build a time-series of datasets.</li> </ul>

<b>Year of publication:</b>	2008
<b>Sponsoring Organisation:</b>	Demos
<b>Author(s):</b>	Samuel Jones & John Holden
<b>Title:</b>	It's a material world: Caring for the public realm
<b>Number of pages (including covers):</b>	136pp.
<b>Brief overview of report:</b>	Policy report arguing that conservation in the UK is under serious threat, and making recommendations on ways of addressing those threats.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>No explicit discussion of methods; appears to be based primarily on desk research, personal experience and informal contacts with those working in the field of conservation.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>Explicitly presented as policy report, so does not present detailed empirical evidence on the state of the sector.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<ul style="list-style-type: none"> <li>Conservation is under threat from lack of public support to institutions and closure of education and training opportunities;</li> <li>Suggests that few museums now have the resources to undertake intervention-based conservation;</li> <li>Points out a lack of clarity about how the various components of the conservation sector – museums, higher education, and private practitioners – come together as the conservation sector;</li> <li>States that two leading conservation courses had recently been closed and a third was threatened with significant cuts in funding;</li> <li>States that the reasons are high levels of resource intensiveness, both in terms of facilities and teaching staff;</li> <li>At the time of writing, the Textile Conservation Centre at the University of Southampton was threatened with closure;</li> <li>Cuts to conservation education threaten the future supply of conservation skills and of the capacity to undertake certain large-scale conservation interventions that are beyond the capacity of the private sector ;</li> <li>Claims that the job of conservation is expanding beyond simple conservation of objects, and needs to take a broader educational and</li> </ul>

	public role.
<b>Summary of evidence relating to market failure:</b>	The issue of market failure is not explicitly discussed, but it is clear that the report hints at significant issues with the economic viability of conservation provision in spite of its critical role in preserving cultural heritage.
<b>Summary of recommendations/outcomes:</b>	<p>The following main recommendations are presented in this report:</p> <ul style="list-style-type: none"> <li>• conservators’ work should be recognised as integral not only to the cultural and heritage sector but also to social well-being;</li> <li>• policy makers, cultural professionals and conservators should collaborate in communicating the importance of caring for the material world and its social benefits to a wider public;</li> <li>• conservators should build on existing practice in public engagement and connect their practice to wider agenda ;</li> <li>• policy makers must support a conservation education sector that has flourished and has an international reputation that is second to none, but is currently under threat;</li> <li>• conservators should extend their existing involvement in social innovation. Alongside communicating the importance of care, they can provide a logic that reinforces a less throw-away society, and the need to look after, rather than replace, goods.</li> </ul>



<b>Year of publication:</b>	2009
<b>Sponsoring Organisation:</b>	University of Bath; UKOLN
<b>Author(s):</b>	Janet E Davis and Brian Kelly
<b>Title:</b>	<i>The Social Web: Opportunities, Barriers and Solutions for Cultural Heritage Institutions.</i>
<b>Number of pages (including covers):</b>	28pp.
<b>Brief overview of report:</b>	This report summarised the opportunities provided by the Social Web for cultural heritage organisations, describes barriers which have been encountered in exploiting this potential and describes possible approaches to addressing these barriers.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Largely desk-based research;</li> <li>• Description of barriers based on issues raised at a series of Web 2.0 workshops which were organised by UKOLN for staff working in museums, libraries and archives, two of which were personally attended by the principal author (J.E. Davis);</li> <li>• The principal author also led a session on libraries' use of the social web at the London LocalGovCamp(2010); and had discussions and interviews with people working in the heritage sector.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Views are largely based on informal research methods, giving qualitative depth but lacking statistical precisions;</li> <li>• Solutions/recommendations are given on the basis of author expertise, rather than on the basis of feedback from target groups.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>The report highlights a number of barriers to the use of social media, some of which are technological, but others of which are rooted in skills and cultures/behaviours:</p> <p><b>Skills:</b></p> <ul style="list-style-type: none"> <li>• Lack of experience in using Social Web applications;</li> <li>• Lack of knowledge of how to write or otherwise create content.</li> </ul> <p><b>Cultural:</b></p> <ul style="list-style-type: none"> <li>• Management that only allows specified staff, such as marketing officers,</li> </ul>

	<p>write or approve any ‘corporate communications;’</p> <ul style="list-style-type: none"> <li>• Management that does not permit anything to be published on the Web without vetting by senior manager or local authority councillors.</li> </ul>
<b>Summary of evidence relating to market failure:</b>	Highlights certain specific difficulties in the heritage sector with the effective use of social media and other opportunities, suggesting that there may be deficits in training provision required for new technologies.
<b>Summary of recommendations/ outcomes:</b>	<p>The following were among the suggestions made for improving the use of the social web by the heritage sector:</p> <ul style="list-style-type: none"> <li>• There is more need for strong leaders who understand both cultural heritage and the Social Web, and who can help change happen;</li> <li>• Digital cultural heritage people could help to encourage the digitally excluded people to use the Web. They could also help professionals in other services and sectors to deliver online information effectively and efficiently;</li> <li>• At an individual level, people need to build up confidence in using information technology and especially in using the cost-effective Social Web [through workshops at introductory and advanced levels];</li> <li>• A straightforward, concise best practice guide, preferably using Social Web facilities (for example, videos), would be very helpful;</li> <li>• It would also be worth considering setting up regional social media ‘surgeries’... informal, drop-in events ... to help professionals or volunteers working in cultural heritage to get online, set up Facebook pages, Twitter accounts or blogs.</li> </ul>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisations:</b>	English Heritage; Association of Local Government Archaeological Officers; Institute of Historic Building Conservation
<b>Author(s):</b>	Owain Lloyd-James
<b>Title:</b>	<i>A fourth report on Local Authority Staff Resources. Produced by English Heritage, the Association of Local Government Archaeological Officers and the Institute of Historic Building Conservation</i>
<b>Number of pages (including covers):</b>	6 pp.
<b>Brief overview of report:</b>	Provides a short overview of the staffing levels in Local Authority planning departments that are able to provide specialist expertise in the historic environment, and how these have developed since 2003.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• The report states only that ‘the data was collected by ALGOA and IHBC’;</li> <li>• The analysis consisted of developing a time-series by combining data 2012 with that collected in earlier years where comparable data was available for both archaeological and building conservation expertise (2003, 2006, 2008, 2009/10, 2011 and 2012).</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Does not explicitly describe research and analysis methods used;</li> <li>• The data appear to be almost entirely quantitative;</li> <li>• The research considers only archaeological and conservation provision.</li> </ul>
<b>Summary of the report’s findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>At the beginning of 2012 there were 909 full-time equivalent (FTE) historic environment specialists providing advice to local authorities in England. This comprises:</p> <ul style="list-style-type: none"> <li>• 568 FTEs working on building and area conservation and 342 FTEs providing archaeological advice;</li> <li>• These figures represent a continuation of a downward trend that began in 2006 which has seen numbers fall by over 25% in overall historic environment advice. This breaks down into: <ul style="list-style-type: none"> <li>- a drop of 16% in archaeological advice (including Historic Environment Records Officers); and</li> <li>- a drop of 31% in conservation advice.</li> </ul> </li> <li>• In the past 12 months: <ul style="list-style-type: none"> <li>- the number of archaeological specialists advising local authorities in England has fallen by 3%; and</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- the number of conservation specialists has fallen by 6%.</li> <li>• As the number of specialist advisers continues to decline, numbers of planning application decisions have remained relatively steady over the last two years.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>Demand for Local Authority Planning services remains high but the availability of expertise to deal with those applications has fallen significantly since a peak in 2006. The implication – although this is not explicitly addressed in the report – is that current levels of expertise are under high and increasing pressure. The causes of this are not explicitly addressed in the report, but the discussion pays particular attention to the impact of budget cuts, suggesting that these are the primary cause of the decline in numbers.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>N/A</p>

<b>Year of publication:</b>	2011
<b>Sponsoring Organisations:</b>	English Heritage, Association of Local Government Archaeological Officers, Institute of Historic Building Conservation
<b>Author(s):</b>	Dave Batchelor
<b>Title:</b>	<i>A third report on Local Authority Staff Resources. Produced by English Heritage, the Association of Local Government Officers and the Institute of Historic Building Conservation</i>
<b>Number of pages (including covers):</b>	9 pp.
<b>Brief overview of report:</b>	Provides a short overview of the staffing levels in Local Authority planning departments able to provide specialist expertise in the historic environment, and how these have developed since 2003.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>• Not specified, but notes imply that the 2003 data are based on a survey of Local Authorities, while subsequent data was 'collected by ALGAO and IHBC';</li> <li>• Planning consent data was based on official statistics published by the Department for Communities and Local Government;</li> <li>• The analysis consisted of developing a time-series by combining 2011 data with that collected in earlier years where comparable data was available for both archaeological and building conservation expertise (2003, 2006, 2008, 2009/10, and 2011).</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>• Does not explicitly describe research and analysis methods used;</li> <li>• The data appear to be almost entirely quantitative;</li> <li>• The research considers only archaeological and conservation provision.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>In early 2011 there were 957.5 full time equivalent (FTE) historic environment members of staff in local authorities in England. This comprises:</p> <ul style="list-style-type: none"> <li>• 606.5 FTEs working on building and area conservation and 351 FTEs archaeological staff;</li> <li>• These figures represent a reduction of 5.6% since comprehensive data was first collected in 2003. This breaks down into: <ul style="list-style-type: none"> <li>- a reduction of 9.2% for Conservation Officers and;</li> <li>- a slight increase of 1.4% for Archaeological Officers.</li> </ul> </li> <li>• A high point in terms of numbers of historic environment staff was</li> </ul>

	<p>reached in 2006 when 1224 FTEs were working in local authorities, since then there has been a 21.8% reduction in numbers;</p> <ul style="list-style-type: none"> <li>• In the past year there has been an overall reduction of 11.9%, with a reduction of 13.5% for conservation officers and 8.9% for archaeological officers;</li> <li>• The reduction has occurred in both archaeology and conservation, and this was the same for all areas of the country except London, which saw archaeological provision remain static;</li> <li>• Between 2003 and 2011 the number of archaeological officers had increased slightly (by 1.4%), but the number of conservation officers had decreased by 9.2%;</li> <li>• As the number of specialist advisers declined, planning application decisions have increased in the past year by 5.2%, and listed building consent decisions showed a slightly larger increase of 7.1%.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>Demand for Local Authority Planning services remains high but the availability of expertise to deal with those applications has fallen significantly since a peak in 2006. The implication – although this is not explicitly addressed in the report – is that current levels of expertise are under high and increasing pressure. The scope of the research did not enable the report to address the causes of decreases, but changes to government funding of Local Authorities were used to frame the findings, implying that these are the crucial factor in determining demand for this kind of expertise.</p>
<p><b>Summary of recommendations/outcomes:</b></p>	<p>N/A</p>

<b>Year of publication:</b>	2012
<b>Sponsoring Organisation:</b>	English Heritage
<b>Author(s):</b>	Pamela Smith, Simon Thornton Wood (Lantra)
<b>Title:</b>	<i>Cultivating Skills in Historic and Botanic Gardens: Careers, occupations and skills required for the management and maintenance of historic and botanic gardens</i>
<b>Number of pages (including covers):</b>	59 pp.
<b>Brief overview of report:</b>	This study was commissioned to provide an updated perspective on changing demands on the skills that sustain England's outstanding heritage of gardens and parks, the last having been undertaken in 2005.
<b>Summary of research methods used:</b>	<ul style="list-style-type: none"> <li>Postal survey of people working in the sector, generating a total of 232 responses, of which 134 were garden managers (16% response rate) and 98 were garden staff (33% response rate);</li> <li>Small-scale additional qualitative research.</li> </ul>
<b>Limitations of research methods:</b>	<ul style="list-style-type: none"> <li>Manager and employee response numbers are roughly equal, which may not be representative of the balance in the overall survey population</li> <li>Linked to the above – a survey sample is typically difficult to control using a postal survey.</li> </ul>
<b>Summary of the report's findings relating to the historic environment workforce (including skills shortages and gaps, their causes and their implications):</b>	<p>There is clear evidence that the challenges are evolving for gardens and parks, a foundation stone of the UK visitor economy on the one hand, and a key component of healthy urban communities on the other. Garden managers identify a clear need for the skills to meet those challenges, and express concern that the education system was not providing enough people with the skills needed to start working in the sector.</p> <p>Key themes that emerge in the study, and that characterise the challenges, are:</p> <ul style="list-style-type: none"> <li>The demand for skills to manage ever-increasing visitor numbers, and their impact upon an inherently fragile landscape. Many gardens have reported significant increases in visitor numbers in recent years, reflecting wider tourism trends (steady increases in visitor numbers to attractions averaging 3.2% each year since 2005 are reported by VisitEngland, Visitor Attraction Trends in England 2010) and the impact of economic circumstances;</li> </ul>

	<ul style="list-style-type: none"> <li>• A continuing need for investment in the maintenance and repair of infrastructure, requiring more skilled people to ensure that further degradation is minimised and to find creative ways to resolve significant problems in the face of severe financial constraints;</li> <li>• Overall, a greater breadth of knowledge and experience is demanded, though there are clear differences in emphasis between public parks, which require more generic skills to manage work programmes and to engage their communities, and gardens, which demand a greater depth of underpinning knowledge in horticulture and related subjects, as well as managing the visitor experience;</li> <li>• The sector has become very reliant upon a small number of well-established training institutions to provide skilled horticulturists; however, the impact of innovative training schemes such as the lottery-funded Historic and Botanic Gardens Bursary Scheme (HBGBS) ... demonstrates that there is an appetite to provide training across a range of gardens where the right kind of support can be applied.</li> </ul>
<p><b>Summary of evidence relating to market failure:</b></p>	<p>The issue of market failure was not directly addressed in this report, but there are implications that the breadth and variety of training currently on offer is not fully meeting the needs of the sector.</p>
<p><b>Summary of recommendations/ outcomes:</b></p>	<p>n/a</p>