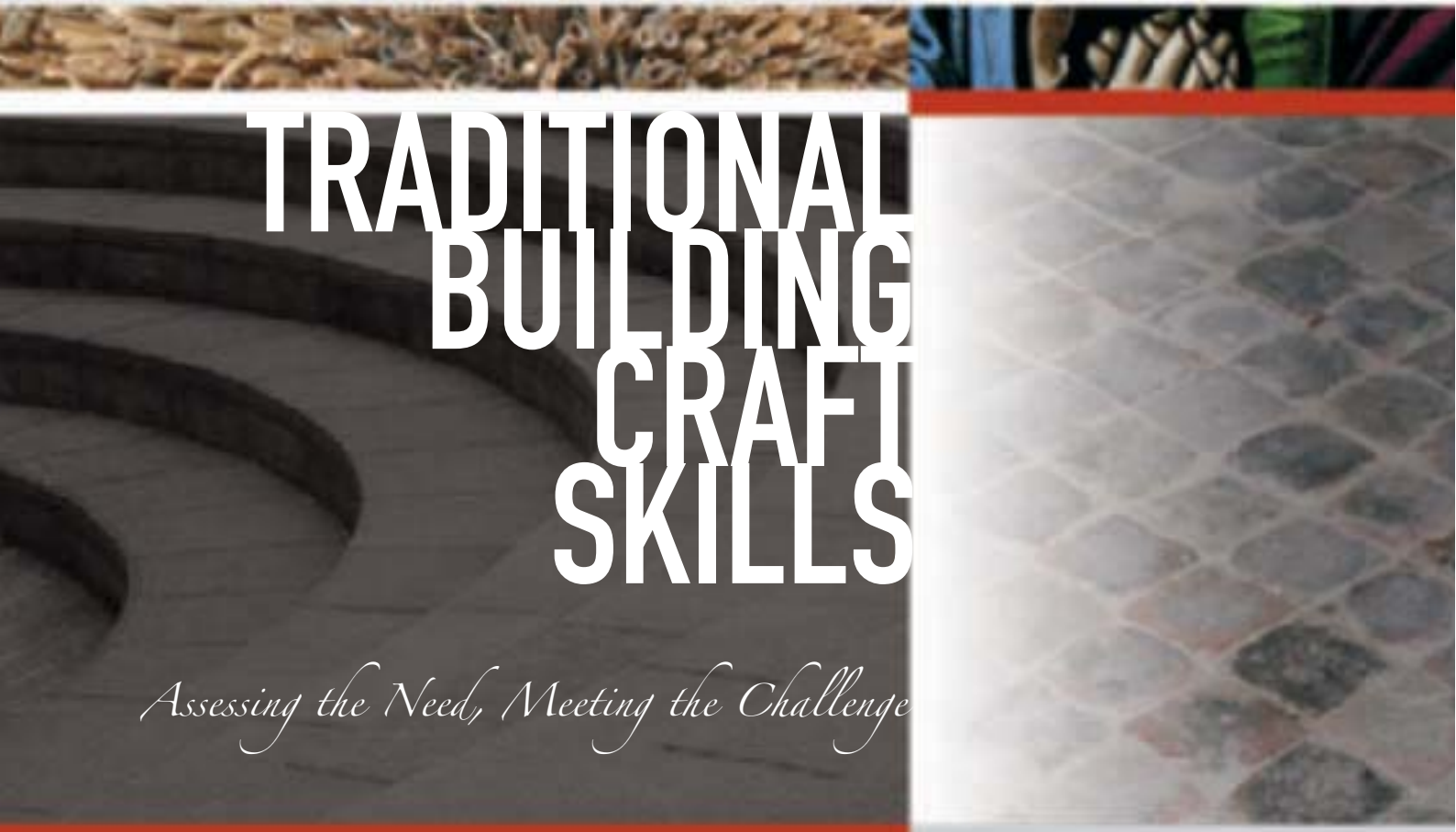

TRADITIONAL BUILDING CRAFT SKILLS

Assessing the Need, Meeting the Challenge

SKILLS NEEDS ANALYSIS OF THE BUILT HERITAGE SECTOR IN ENGLAND 2005

foreword

England's historic environment forms an important part of our lives and provides a tangible and physical link to the past. It contributes to our sense of belonging and quality of life and acts as a connection to the future, especially as new buildings are being listed and new forms of built heritage are being recognised all the time. The rich and diverse architectural lineage that exists within England allows us to appreciate and interpret the imagination, design flair and practical skills of our predecessors. Historic buildings also contribute directly to our social, educational and environmental prosperity and to the economy through tourism and regeneration, which helps sustain our existing assets.

Our built heritage is however, a resource under threat and great skill and knowledge from many different disciplines is needed to maintain and conserve this, so that it may be passed on to future generations. The most important skills are arguably those employed by our craftspeople; bricklayers, carpenters, flint-knappers, lime-plasterers, pargeters, stonemasons, etc. Without these, we would be unable to repair and care for our historic buildings, but the amount of craft skills available varies according to training, economic conditions and awareness of their need. In this respect, traditional building crafts skills, which in the past have been handed down from generation to generation are one of our most prized, but now threatened assets and in need of saving themselves.

A shortage of skilled craftspeople has highlighted the need for strong action to prevent further erosion of our skills base. Our response – the formation of the National Heritage Training Group (NHTG) in 2002 – was a pivotal point in shaping and co-ordinating our thinking and planning. One of the most important actions by this group was to commission this research in the nine English regions, which fills existing information gaps on the scope, depth and breadth of labour and skills within this sector. These are crucial to future planning.

This research report arms us with the first ever detailed analysis of this sector of the construction industry. As there is no previous comparable data, we cannot highlight trends or make accurate forecasts. We are however providing a benchmark against which we can refine our statistics by revisiting this research at a future date. It also allows us to properly measure and quantify our progress.

In presenting the research findings, solutions and skills action plan in one document we have assessed the need and suggested the way forward, but we now need concerted action by government departments, funding bodies, contractors, public and private training providers and careers services to address this vital issue. We need to ensure that the decline in craft skills is reversed and this renaissance will re-instate craftspeople and craft skills as the back-bone of our efforts to preserve our historic built environment.

It is now time to meet the challenge.

Simon Thurley
Chief Executive
English Heritage

David Linford
Chairman
National Heritage
Training Group

Peter Lobban
Chief Executive
CITB-ConstructionSkills

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acknowledgements

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We would like to acknowledge the cooperation and willingness of all the stockholders, contractors, sole traders, architects, conservation officers and training providers (whose identities must remain anonymous) for giving so freely of their time to this research. Their views have been fundamental to this project and without them there would be no research report.

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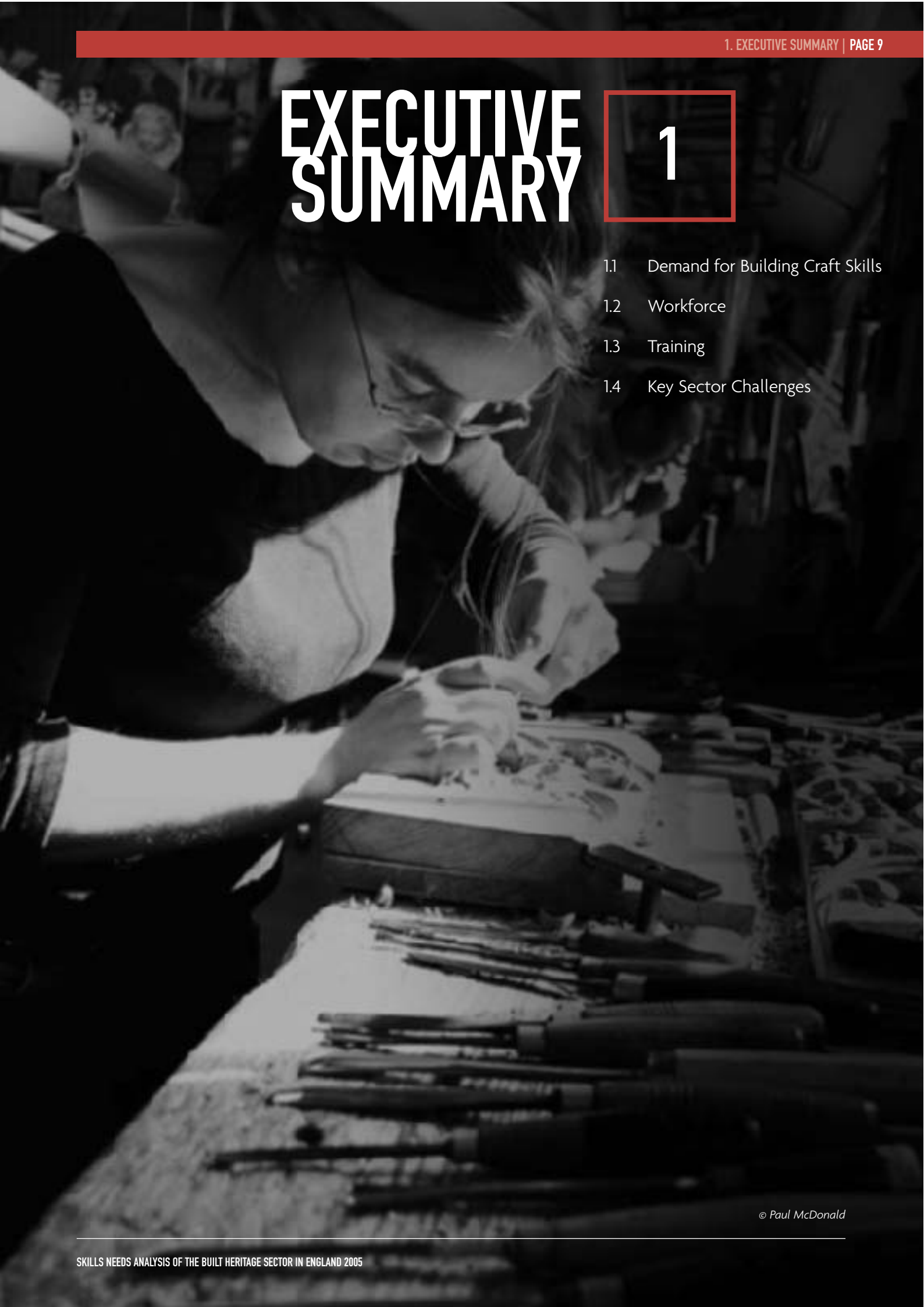
EXECUTIVE SUMMARY 1



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executive summary

The purpose of this first ever labour and skills needs analysis was to:

- Analyse and quantify the size of the built heritage sector in England
- Define existing traditional building craft skills levels and needs
- Identify any shortages and gaps within the workforce
- Evaluate training provision within the learning and qualifications frameworks
- Make recommendations to address any problems and devise a skills action plan

The main aim of the research relates to the second objective of the NHTG Business Plan *Building on the Past: Training for the Future*[1]. That is, to fill the current information gaps so that the sector's skills and training issues can be taken forward through a coherent training plan. This detailed research of the nine English regions helps fulfil these objectives for England. Similar research is planned in Scotland, Wales and Northern Ireland in 2005 to provide a UK-wide database on the sector's labour market.

The survey combined desk research of existing information on the sector with qualitative analysis of 100 face-to-face interviews (Table 1) and quantitative analysis obtained from telephone interviews with 1,567 stakeholders (Table 2). The views obtained from the range of stakeholders in this survey and participants in a Skills Summit in January 2005 have been taken into account in devising the short, medium and long term objectives within the Skills Action Plan (see Section 9).

1.1 Demand for Building Craft Skills

In August 2004 there was a total of 371,971 listed building entries[2] for England which at 1.3 buildings per entry means there are approximately 484,641 listed buildings in England. However, not all buildings are listed and using the definition of a historic building as being one that dates from before 1919[3], this research has calculated that there are approximately 4.41 million historic dwellings and 550,000 historic commercial buildings, including listed buildings in England.

In the UK as a whole the construction industry generates £149 billion of turnover (at basic prices),[4] and with an output of over £77 billion (at 2000 prices)[5] represents about 8% of the national economy in terms of gross domestic product (GDP). Repair, maintenance and improvement is by far the single largest type of work undertaken, contributing 49% of total sector output. Analysis undertaken as part of this research suggests that approximately £3.5 billion is spent on conservation and restoration of historic buildings (Table 11) and £1.7 billion of this is on listed buildings.

Whilst two thirds of public and commercial stockholders and private home dwellers expressed a high level of satisfaction with completed work, over half were unhappy with the completion times and the main reason cited for this was a lack of labour or skills.

1.2 Workforce

In the UK as a whole, the construction industry employs over 2.1 million people. Excluding electrical wiring and fitting (SIC 45.31) and plumbing (SIC 45.33) just over 1.8 million people work in the construction contracting sector (SIC 45). A further 225,000 are employed in professional consultancies (SIC 74.2)[6].

The built heritage sector is a sub-set of the main construction industry and this research has determined that the estimated workforce in the last 12 months was 86,430. However, in order to satisfy estimated demand, it is forecast that this must rise by 3,420 over the next 12 months to 89,850. In addition nearly a quarter of contractors claim to have outstanding vacancies, that is, positions which remain unfilled after three months. This equates to 3,170 long-term vacancies. If the long-term vacancies are combined with the estimated 3,420 required in the next 12 months to satisfy the rise in demand, an estimated inflow of 6,590 would be required in the next 12 months. This suggests a skills shortage.

Some skills, such as bricklaying, carpentry, lead-working and stonemasonry require an inflow in the region of 500 in this period (see Tables 22 and 23) whilst others require far less. These differences will be reflected in the nature and location of any training provision e.g. local, regional, or national, designed to counteract the shortages.

The heritage sector shares the same sub-contracting culture as is commonplace in the mainstream industry; skills are bought in as and when needed in the short term. Of the main contractors interviewed, three quarters identified shortages of skilled sub-contractors as a main cause of delayed project work.

A study of the sector workforce age profile demonstrates a distinct lack of workers and trainers in the 30-45 age group and whilst the effects of this are being cushioned by the presence of older and more experienced workers there is a potential retirement time-bomb which, if not addressed, may lead to far greater skills shortages than already exist.

Many contractors feel that the construction industry in its wider context has for some time been a dumping ground for less able youngsters, and that more academically able youngsters are encouraged to stay in full-time education. Almost half of the contractors interviewed prefer to take on apprentices aged 16. Therefore the government initiative to channel more youngsters into full-time further education, rather than those who display practical skills going into vocational education works against a successful apprentice culture.

1.3 Training

Just over half of the contractors interviewed employed an average of three apprentices under the age of 25. And while some sole traders had also taken apprentices, nearly three quarters had not done so over the five years covered by the survey.

Whilst a quarter of contractors reported that their apprentices stayed with them for over ten years, the survey revealed a drop out rate of 25% across the nine English regions and this rate jumped to 41% for sole traders. This represents a substantial loss of resource and is shown to be a sector, rather than a specific craft issue.

Three quarters of contractors agreed that apprenticeships should include both practical and college based training, but that the FE college course content needed to be reviewed and amended to


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better reflect sector needs, requiring closer liaison between contractors, colleges and the sector Skills council.

Although apprenticeships are immensely important, as they continue to provide the foundation for training for the youngest recruits, the bulk of those working in the sector have entered via mainstream trades or career changing. Within this group, for all but the most specialised trades, learning the skills on the job is the norm and few aspire to qualification through apprenticeships or NVQ conservation units.

The wider construction industry has an ambition for a fully qualified workforce by 2010. This entails qualification of the workforce to at least NVQ Level 2[7]. For the built heritage sector, a mix of NVQ Level 2 and NVQ Level 3 is needed and the NVQ Level 3 conservation units are desirable. However, less than half the employers were aware of the existence of the conservation units as were only slightly above half of the trainers interviewed. Raising awareness of these units is essential to encourage trainee up-take, as is training the college trainers.

Over three-quarters of the survey said they would like to see a clear progression ladder for craftspeople. Qualifications do not necessarily imply skills, whereas experience and good practice are seen as yielding skills. If qualifications are to be valued, changing the NVQ system is needed to meet employer expectations.

There has never been a golden age in training and the diversification of craft occupations has increased the problems. Also, self-employment continues to rise, competition is tougher, contract times are shorter, profit margins are smaller and fragmentation and specialisation increases. The large paternalistic companies of the past have given way to more flexible organisations driven by profit. In such circumstances, long-term investment in training, except in the use of products, is considered uneconomical. This may be a major obstacle to improving skills.

1.4 Key Sector Challenges

The following key challenges need to be addressed:

- **Strategic thinking:** The various partners within the built heritage sector must work through the Sector Skills Council (SSC) to learn from and be part of the wider strategic plans. This includes the Rethinking Construction Agenda, the Strategic Forum for Construction's Accelerating Change Action Plan, the industry's Qualifying the Workforce initiative and using the SSCs Sector Skills Agreement between the industry and its training and skills partners to target skills outcomes and funding allocations.

- **Sustainability:** Maintaining our existing building stock, including historic buildings through conservation and repair makes an enormous saving on the use of our finite natural material resources for new building purposes, avoids unnecessary waste through demolition and contributes directly to the Government's Sustainability policy drive. As Sustainable Development is enforced by legislation, lobbying to raise the central role conservation and the need for traditional building craft skills play

in the sustainability agenda is an important priority.

■ Demand: This is outstripping supply and increased recruitment strategies are required to attract the estimated 6,590 craftspeople needed to solve the current skills shortage to maintain the required labour levels of a skilled and fit for purpose workforce to meet demand in the next 12 months. As almost half of the expenditure in this sector is upon listed buildings, a considerable proportion of the nation's best buildings have to wait to be repaired or maintained. Some, especially those at risk through decay and dereliction, are likely to be even more vulnerable to loss or subjected to increased costs due to a lack of skilled craftspeople.

■ Skills gaps: Coordinated effort is required to improve knowledge of conservation and repair and the use of traditional building materials and techniques. Missing knowledge and competence of existing staff will lead to reduced performance and the low skills equilibrium normally affects quality output, health and safety and profitability.

■ Effect of sub-contracting: The high percentage of short-term, labour only sub-contractors (LOSCs) working within the built heritage sector may be a barrier to training and skills development. Self-employed craftspeople are less likely to engage in training and employers are less likely to take on apprentices or up-skill their own workforce if they can buy in skills as and when required. This short term thinking will hinder up-skilling and result in greater skills shortages and skills gaps.

■ Training: Developing flexible training provision is required to address the skills needs of employers and the sector and to fill current skills gaps. Centres of Vocational Excellence and the proposed Skills Academies (due in 2010) will be at the pinnacle of this. However, other training providers must be included to develop an integrated system of college-based training, On-Site Assessment and Training (OSAT) and short, taster, or up-skilling courses to meet regional demand. This should include development of a specific NVQ Level 3 in Built Heritage Craft Skills.

■ **Awareness:** Increased public awareness of the built heritage sector and work opportunities that exist within it is badly needed. This will help to attract school leavers, the 25+ age group and career changers and strive for greater diversity within the workforce to provide a sustainable supply of traditional building craft skills. The workforce is currently dominated by white males and in this respect is no different to the main construction industry demographic. Increased marketing is required to redress the current imbalance and this will need to be targeted at specific groups to help attract a more diverse workforce.

■ **Learning:** Improving links between schools, colleges, contactors and working in partnership with the Department for Education and Skills (DfES), the SSC and the Learning and Skills Councils is required to integrate aspects of the built heritage into the historic environment resource currently used to teach parts of the National Curriculum in England. This could fit within delivery of core subjects or be included as part of the many field trips undertaken annually by schools or as part of the CITB-ConstructionSkills Construction Ambassadors scheme.

■ **Career progression:** The NHTG mapping of career pathways with its mentoring scheme and master crafts status and CITB-ConstructionSkills Level 4 Master Crafts National Occupational Standard must be accelerated. This is needed to demonstrate tangible progression routes and financial reward for those wishing to continue using their practical skills, rather than transferring to management or supervisory roles or leaving the sector and industry.

For full details of proposed action: Conclusions and Recommendations (Section 8) and Skills Action Plan (Section 9)

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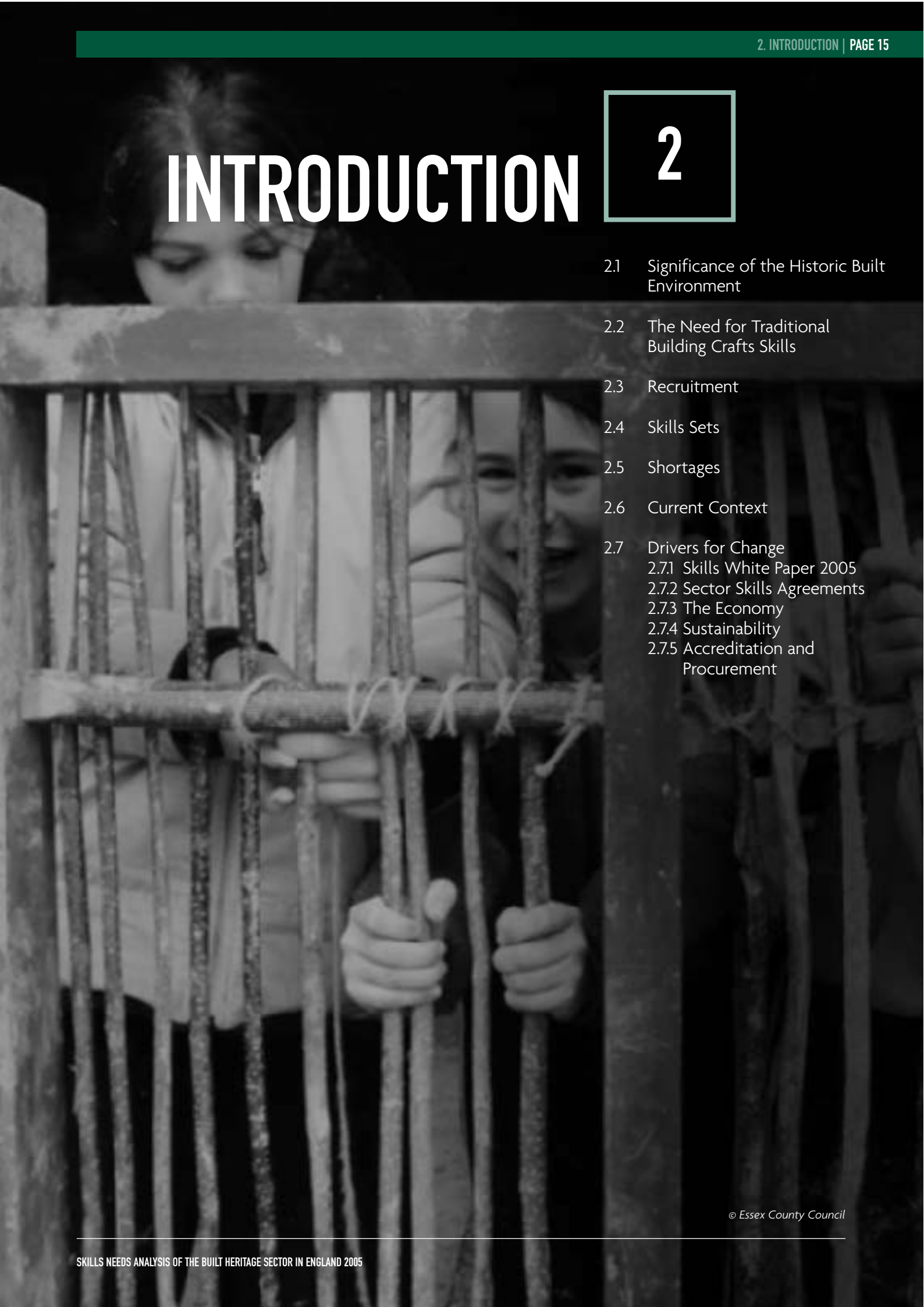
INTRODUCTION 2



introduction

2.1 Significance of the Historic Built Environment

We often take for granted our historic environment, both in terms of what that means to our national identity and the sheer diversity and quality of what has survived. Our built heritage is all around us and represents either a place we work and live in, or visit and enjoy, but we get on with our daily lives without continually admiring our surroundings. However, many people visit historic properties, join heritage organisations and see the historic environment as a vital educational asset for understanding our history, origins and identity. This is demonstrated by the continuing large numbers of visitors to heritage sites and historic buildings; the success of the annual Heritage Open Days scheme; the myriad of local historical societies and groups receiving funding for research into or preservation of historical assets from the Heritage Lottery Fund (HLF); and the popularity of television programmes on archaeology, history and the restoration of buildings[8]. Our historic environment also contributes greatly to tourism and thus directly to the economy.

Scheduling of ancient monuments and archaeological sites and listing of historic buildings exists to protect the historic environment. However, much town and rural planning and development during the twentieth century often ignored its significance with a consequent loss of individual buildings, areas and historic context. Legislation and control are still necessary to ensure that the development of new buildings and infrastructure minimises damage to our historic environment. Well-designed new buildings can sit happily with and enhance our historic towns and cities and we need to embrace change with respect and sensitivity to our past. Similarly,

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decayed or dilapidated buildings do nothing to enhance or preserve our historic built environment and neglect is often followed by demolition, therefore, careful adaptation, renewal, re-use or regeneration may be their only means of survival.

Maintaining our historic buildings and their context is vital and it is especially important to preserve the distinctive regional styles and variations that so enrich England's land and townscapes. Flint-knapping found in the south-east of England; timber-framed buildings in the Midlands and north-west; cob; different colours, types and makes of brick; cream, yellow, grey and brown stone types, thatching, dry stone walling, all provide clues to historical periods and a strong regional vernacular style and identity and use of locally sourced traditional building materials. Equally important is the use of local craftsman and we are indebted to their skills and knowledge. Not only for their part in constructing and embellishing buildings, but also for passing down from generation to generation the approaches, techniques and attitudes necessary for high-quality craftsmanship in the repair and conservation of these buildings.

2.2 The Need for Traditional Building Craft Skills

Three things have been crucial in shaping the man-made environment – *natural resources, people and skills*.

Abundant natural materials, such as clay, iron ore, stone (aggregates and hewn blocks), thatching reed and timber, are the raw materials needed for construction. However,

it is their imaginative use, the availability of labour and, most importantly, the skills of successive generations to fashion these materials into structures that has shaped our settlements, towns and cities, our way of life and in the process produced a vibrant historic built environment. Over time, knowledge changes, processes change and our skills levels also change: we consider each successive generation to be an improvement on the previous one, but in respect of traditional building craft skills we have reached a crucial point.

A decline in the numbers entering and being retained within the built heritage sector seriously threatens this skills base. Shortages are usually influenced by prevailing social and economic factors and the competition for available labour and skills is inextricably linked to salary and status. As a society we do not value highly enough the role and need for practical skills. Despite major changes in production and assembly methods for buildings there is still a demand for highly developed craft skills and knowledge of traditional methods and materials.

The Heritage Forum meeting in April 2004 identified 'Collecting Evidence of Need and Benefit' as one of the five key strategic

'England has one of the richest cultural landscapes in the world.'

Sir Neil Cossons


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priorities facing the historic environment sector[9]. Similarly, the Heritage Lottery Fund, with English Heritage, is currently engaged in much work in this area, as part of the preparations for its new strategic plan. The HLF are looking beyond financial need, to address needs relating to skills, capacity, research, etc and their Sustaining Our Living Heritage report in 2000 was instrumental in raising awareness of craft skills shortages. It helped pave the way for English Heritage and CITB-ConstructionSkills to join forces to form the National Heritage Training Group (NHTG) to specifically address traditional building craft skills issues (see Section 2.6).

The HLF is setting up a UK-wide bursary scheme worth £4 million over 4 years starting in January 2006, but expects the successful submissions to find matching funding to ensure sustainability beyond their initial four year period of investment. English Heritage and The National Trust in partnership with CADW, CITB-ConstructionSkills and the NHTG, with funding from the HLF, are currently developing a submission to the HLF for a traditional buildings craft skills bursary scheme for England and Wales. If successful, the scheme will provide bursary holders with the opportunity to gain valuable work-based training and practical skills development through variable length work-placements with a range of placement providers within the built heritage sector. This is aimed at those qualified to NVQ Level 3 or equivalent and above to further develop traditional building craft skills, but this will not provide or replace training, which can be gained at a college. It will cater for a full range of practitioners seeking guided additional practical work-experience or continuing development. It will also assist craftspeople with related transferable skills and knowledge already working in the main construction industry who are seeking to obtain particular traditional craft skills or experience. This will also help bursary-holders to undertake conservation and repair work on specific heritage sites.

The need for such a bursary scheme has arisen from continued HLF involvement in skills issues and recognising that action is necessary to prevent further erosion of current traditional building craft skills shortages. Organisations, such as the HLF and English Heritage amongst others feel that this will not be resolved without public sector intervention. Over the past 10 years, the HLF has provided about £1 billion towards conserving and enhancing historic buildings and monuments. This money has assisted regeneration of buildings at risk, brought new life to places of worship and has in the process delivered wider public benefits through greater access to and understanding of heritage[10]. Such public investment for conservation needs a properly trained workforce to carry out this type of work to the required high standards.

The fragility of our cultural heritage is generally only highlighted when natural or man-made disasters strike or after irreplaceable historic assets are severely damaged or destroyed. The success of the two series of BBC's *Restoration* programmes shows the type of public interest in saving old buildings at risk through decay and neglect. Without practical building craft skills we would be unable to respond to this direct threat to our heritage and undertake careful repair and maintenance of our ancient monuments and best historic buildings. We would be unable to save buildings in disrepair or help remove some of the 1,338 threatened buildings from the English Heritage Register of Buildings at Risk[11] and the knock-on effect is that care and conservation of listed and unlisted historic buildings will be hampered.

2.3 Recruitment

In an effort to attract and retain young people, more women, under represented groups and adult career changers the construction industry has been working hard to change public perceptions and stereotypical thinking. The built heritage sector has been included in this process through CITB-ConstructionSkills' pro-active Building Conservation and Restoration careers brochure, poster campaign and electronic media. These show the range of work involved and skill and satisfaction achieved by contributing to preservation of our historic buildings. The National Heritage Training Group (NHTG) publicity material, travelling exhibitions and website (www.nhtg.org.uk) are also good examples of establishing centralised resources to raise public awareness of this sector. The NHTG also plays an important role in providing advice on training courses, job opportunities, career pathways and links to other heritage organisations, trade federations and employers groups.

2.4 Skill Sets

What separates the traditional building sector from the main construction industry is that it generally requires more refined practical skills and judgements than those used in much of the new-build sector. Mainstream construction does carry out high-quality craftsmanship on important projects and uses traditional and modern materials to achieve this. However, working on historic buildings requires great care and understanding of the original materials of construction and the need to retain as much as possible of the original fabric. If replacement is necessary, then this is undertaken in a sensitive manner to preserve and respect the delicate historic balance. This reduces the speed at which this work can be undertaken and the approach to historic buildings requires a different mental attitude.

Nevertheless, productivity and profitability still apply to the built heritage sector, and historic buildings contractors estimate and cost their projects every bit as keenly as the new-build sector.

"Most of the roof structures (for new buildings today) are made of factory-produced truss rafter frames which are assembled like kits. As a result, the people who call themselves joiners and carpenters can efficiently put these roofs up, but they can't do the purlin and rafter construction that used to be the method."

Trade Federation

© Tony Bartholomew

While the built heritage sector has been subjected to quality price tendering, normal competitive tendering criteria usually applies. It is therefore important to maintain the balance between employing a workforce skilled in the conservation of historic buildings and the economic basis to sustain a business.

A handful of firms specialising in historic buildings were established in the late nineteenth and early twentieth centuries and are still in existence in one form or another. However, only 30 to 40 years ago much of the repair of historic buildings was undertaken by the main construction industry, rather than specialists from the built heritage sector. This change reflects not only the need for specialisation, but also how far the skills sets have altered.

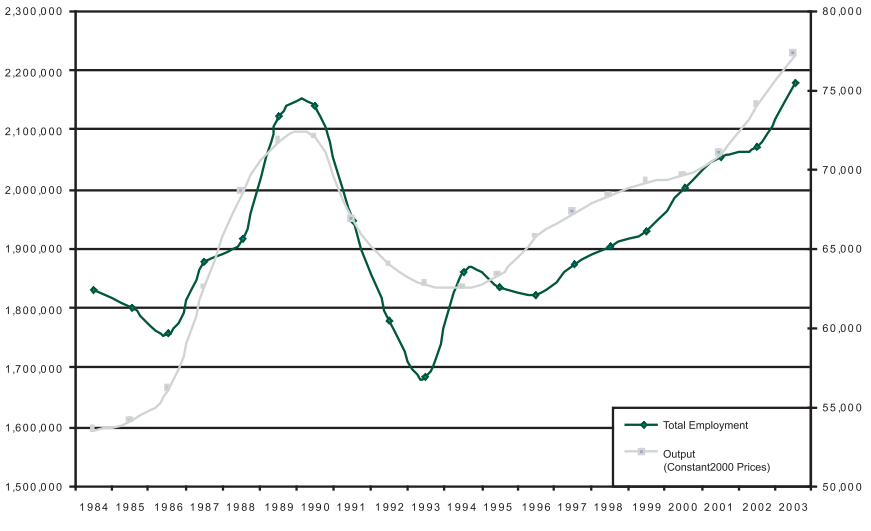
The new-build sector has concentrated upon more rapid means of construction (on- and off-site), greater use of technology and less reliance upon traditional methods and materials. On the other hand, traditional methods and materials are central to historic building repair. This loss of knowledge and practical experience of traditional building techniques within the general construction workforce has reduced the availability of skilled people to work on historic buildings. Retaining suitably qualified and experienced craftspeople is necessary to pass on these skills within the workplace, in colleges, through one-day or short course training or contributing to On-Site Assessment and Training (OSAT)[12].

2.5 Shortages

Based upon documentary sources, labour and skills shortages are not a new problem and existed as early as the 17th century[13]. The construction industry has also always suffered from cyclic periods of growth and recession following the economic patterns of the day, resulting in peaks and troughs for numbers employed within the industry. The most notable troughs occurred during the late 1840s, mid-1860s, mid 1870s, early 1900s, late 1930s, 1970 and late 1980s, but the variation seems to have diminished over time[14].

The industry has experienced sustained growth over the last 10 years – both output and total employment have increased by 30%. Initially the industry had considerable excess capacity, with over 50% of companies reporting that lack of demand was restricting output in the mid 90s, but lack of demand has halved to around 20% and is now almost balanced by those citing labour shortages as restricting output[15].

Construction Output and Employment, UK: 1984-2003



Source: Office for National Statistics; Department of Trade and Industry

Even today, with a tight labour market, skill shortage vacancies as a proportion of employment range from only 1% in England[16], Northern Ireland[17] and Scotland[18] to 3% in Wales[19]. Informal entry routes have tended to rely on learning on the job and have neither required nor generated formal qualifications. As a result the industry has a low proportion of its workforce qualified.

The construction process is a complex one starting with design and planning through production to on-going maintenance and refurbishment. Construction work is almost entirely done on a project-by-project basis, whereby contractors will draw together teams of people who often work for quite a short period of time and then move on to another location or disperse. Much of the work is managed by a main contractor who deals with the client but who sub-contracts part of it to smaller firms who specialise in a particular aspect of the process.

The level of fragmentation in the construction sector can be seen as both a strength and a weakness: on the positive side, it is likely that it has the flexibility to deal with the highly variable workloads linked to changes in economic cycles; on the negative side the extensive use of sub-contracting has brought contractual relationships to the fore and hindered team-working, supply chain integration and strategic management.

As the built heritage sector is an integral part of the construction industry and this work was traditionally undertaken by general builders, carpenters, joiners, bricklayers, stonemasons, other craftspeople have been similarly affected by labour and skills shortages.

In the late 20th and early 21st centuries, there have been major technological changes in production and assembly methods for buildings and a long-established reduction in numbers entering training within the main construction industry and the built heritage sector. However, there is still a demand for highly developed craft skills and knowledge of traditional methods and materials within an increasing market. The survival of such

"Skills shortages are one of the most common gripes from our members"

Trade Federation

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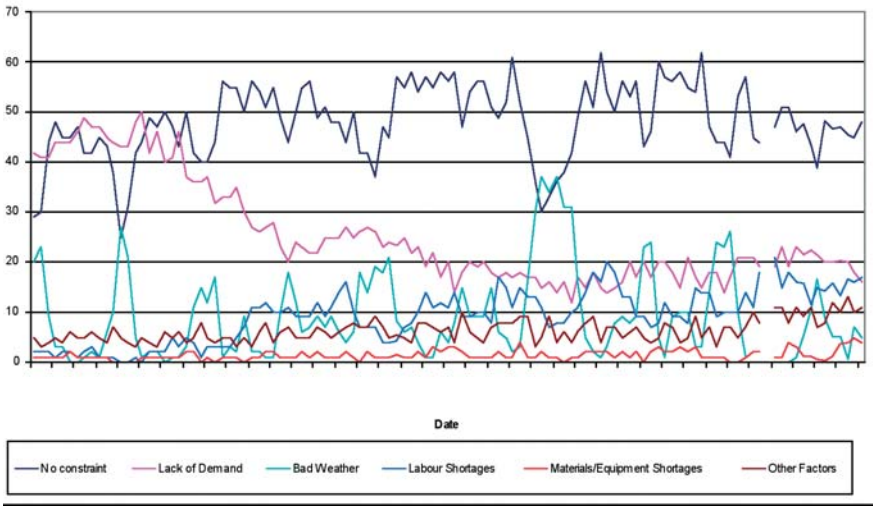
expertise and skills is imperative, as is the transfer of knowledge between traditional buildings craftspeople and trades within the new-build sector.

Although there is no suggestion that craft trades will disappear entirely in the near future, we need to ensure that this will not be the case in, say, 15 to 20 years time for small, vulnerable craft skills, such as dry stone walling, thatching, millwrighting, cob and adobe walling, or flint-knapping. In England, there are currently under 300 professional members of the Dry Stone Walling Association[20]. There are also other practising wallers who are not members of the association, so no exact numbers are available. There are 900 to 1,000 thatchers[21] and about 50 firms who work on cob and earth buildings[22]. While the demand for dry stone walling, thatching, cob and earth buildings will determine the numbers of craftspeople required, if these small numbers are reduced even further, a shortage would cause a crisis. This will lead to increased costs for projects or work not being carried out, and seriously impair the ability to train and develop craft skills for future generations. Experienced craftspeople are needed now to pass on their skills and knowledge to trainees or less experienced workers to ensure that these skills survive for the future.

Skills shortages are only one of a number of constraints faced by employers and the construction industry experience is also relevant to the built heritage sector. Experian Business Strategies publishes a monthly survey of contractors' workloads entitled Construction Industry Focus[23], which is sponsored by the European Commission as a unit in their Business Surveys series. As part of the survey, each month firms across the UK are asked to specify which of a number of factors has been a constraint on activity. The chart to the left shows this information over a nine-year period (1995–2004).

Constraints on Activity Reported by Firms, UK: 1995–2004



Source: Experian Business Strategies: Construction Industry Focus

In July 2004, the proportion of firms reporting constraints on activity marginally fell from 55% to 52%. Whilst the problem of insufficient demand had eased to 16% of firms, the problem of labour shortages rose slightly to 17% of firms reporting it as a constraint on activity. As would be expected during the summer, bad weather had less effect on activity than during the winter months, 5% in July 2004 compared to 17% during January 2004.

2.6 Current Context

The report *Sustaining Our Living Heritage* (Heritage Lottery Fund, 2000) which was based on wide-ranging research undertaken between 1996 and 1999, highlighted sector skill shortages, skills gaps and problems in training provision across the whole heritage sector,not just building crafts. This indicated that serious shortages were not yet apparent in many of the heritage areas. However, in some, especially built heritage crafts such as thatching, bricklaying, flint-knapping and stone slating, skills shortages were widespread.

Traditional building craft skills shortages were also highlighted in the following reports:

- *Power of Place* (English Heritage, 2000)
- *The Historic Environment: A Force For Our Future* (Department for Culture, Media and Sport [DCMS] and Department for Transport, Local Government and the Regions [DLTR], 2000),
- CITB-Construction Skills *Foresight Report* (2002)
- *State of the Historic Environment* (English Heritage 2002)

As a direct result of this, the National Heritage Training Group (NHTG), a specialist sector skills development group was formally established in October 2002 through a memorandum of agreement between ConstructionSkills (Sector Skills Council) and English Heritage. The NHTG is a specialist sector skills development group consisting of contractors, trade federations, trade unions, heritage bodies and training providers, with a UK-wide remit to develop and implement a cohesive strategy for training and skills provision to meet the demands of the built heritage sector. This group is a formal part of ConstructionSkills protocol to engineer craft skills to a Department for Education and Skills (DfES) model, with ownership and engagement by employers' groups (levy paying members of the construction industry). It has been

fundamental in establishing and developing links with heritage bodies, Government departments and training and conservation institutions.

The NHTG *Heritage Building Skills Report* (2003) provided an overview of the existing traditional building craft skills market and the findings of recent training and skills information surveys around the UK. It established that, while published data existed on the structure, labour markets and training provision within the construction industry, very little data existed relating directly to the built heritage sector and its then existing skills levels.

Following this, the NHTG Business Plan, *Building on the Past: Training for the Future* was launched on 29 October 2003 at the Building Crafts College, Stratford, London, by Lord McIntosh, Minister for the Arts. This identified three essential areas requiring immediate action:

- To develop and implement a formal structure to ensure a financially viable support mechanism to integrate the work of the NHTG with contractors, training providers and funders, the main sector clients and other key stakeholders

- To fill the current gaps in information necessary to develop a traditional building craft skills training plan by carrying out a detailed UK-wide survey to establish the regional and country variations in skill shortages and training provision

- To develop and implement a traditional building craft skills training plan

The third of the Business Plan objectives could only be fulfilled by the detailed skills mapping research suggested in the second objective. Consequently, the independent research contained in this report is an important milestone in addressing skill shortages and planning for the future.

2.7 Drivers for Change

The drivers for change outlined below set the context for the skills mapping research and the Recommendations (Section 8) and Skills Action Plan (Section 9).

2.7.1 Skills White Paper 2005

The need to improve skills training and provision within the built heritage sector fits within the objectives of the recently published Government White Paper Skills: *Getting on in Business, Getting On At Work*[24], especially the key elements defined in Chapter 1, Part 2 (page 3):

- A commitment to deliver publicly-funded skills training in a way that is directly led by the needs of employers, as our contribution to a national partnership which promotes higher levels of investment and commitment in training by employers.

- More people with the right skills and qualifications to be effective and productive at work, through the reform of education and training for both young people and adults. That will cover skills at every level from functional literacy, language and numeracy to technician, advanced craft, skilled trade and associate professional skills at Level 3, and through to higher education.

- Training designed and delivered in a way that best meets employers' needs, through the implementation of the National Employer Training Programme.

The NHTG is an employer-led specialist sector skills development group and much has been done by the NHTG, ConstructionSkills and English Heritage to address many of the issues contained within the Government's Skills White Paper. ConstructionSkills has identified national sectoral skills priorities required by employers, which includes the built heritage sector. Employers have a role to play to identify and influence regional skills priorities and contribute to strategic planning for national and sectoral skills development. This will ensure a relevant supply of training and sufficient points of delivery to meet the sector's needs.

2.7.2 Sector Skills Agreements

This labour and skills mapping research was planned on a regional basis to provide data that can be used and integrated with regional decision-making. Alignment with Government policy and the key role of the Sector Skills Council (SSC) for construction is also reflected in the Sector Skills Agreement (SSA) between ConstructionSkills and English Heritage signed in November 2004 (see www.nhtg.org.uk or ww.english-heritage.org.uk for details). More SSAs will be signed between employers, groups and the SSC and this collaborative process is the best means of delivering the sector needs on a sustainable basis.

2.7.3 The Economy

Economic prosperity and investment in construction has a knock-on effect on the conservation, repair, maintenance and improvement sector and therefore the built heritage sector. In the past, the 'boom and bust' nature of the

economy had drastic consequence on the construction industry, with peaks and troughs in employment and its consequent lack of investment closely following the economic cycle. It is forecast that in the next ten years, the industry in common with the economy as a whole is likely to experience less volatility than in previous decades[25]. This has the benefit of companies being able to better plan recruitment and skills development.

2.7.4 Sustainability

Sustainability is a major part of current Government policy as reflected by the UK Sustainability Development Strategy, the Sustainable Communities Plan, Egan Report on Sustainable Communities, Sustainable Building Code and the Secure and Sustainable Buildings Bill[26]. Sustainability is particularly relevant to construction activity, as it is needed to maintain and improve the infrastructure and increase building to accommodate demand for housing.

In this context, the CRMI sector of the construction industry has a major role to play. By extending the life-span of older commercial properties and dwellings through repair and maintenance it helps to reduce the number of required new buildings. The CRMI activity helps to offset depreciation of the building stock and adds value. Maintaining an existing building is better economically and ecologically than its demolition and construction of a replacement building.

While de-construction to salvage materials from an old building is more likely than demolition, the concept of embodied energy has a bearing on maintaining older buildings. The time and cost involved in obtaining primary materials, cost of manufacture of building products and the actual construction of a building is wasted if the building is neglected and ultimately demolished. Also, further costs in obtaining primary materials for the new construction must be added to the lost cost of the existing building. This results in a double cost and environmental impact on finite building resources; consequently, conservation and repair of the historic built environment contributes directly to sustainability.

2.7.5 Accreditation and Procurement

Construction Skills Certification Scheme

The Construction Skills Certification Scheme (CSCS) is an industry-led initiative driven by the Major Contractors Group

(MCG), the National Contractors Federation (NCF) and a wide range of private construction clients. CSCS aims to:

- Keep a register of competent craftspeople, construction operatives, supervisors, managers and professionals within the UK who have achieved a recognised level of competence, skill and qualification;
- Provide a standard means of identification of construction workers;
- Raise standards of health and safety to reduce risks and accidents throughout the industry;
- Encourage construction employers to use skilled workers.

Applicants normally need to have achieved an NVQ or SVQ as well as demonstrated health and safety awareness either through a NVQ or SVQ or a CSCS-approved health and safety test to be eligible for a CSCS card. The Construction Clients' Group (CCG) now advises its members to introduce contract clauses demanding CSCS accreditation. The CCG represents 41 of the 50 major public and private construction clients in the UK.

During 2005, the Scheme will aim to galvanise the support of all medium sized government offices that procure construction and has prioritised the need to meet with councils and housing associations to encourage them to promote CSCS among their contractors. CSCS continues to develop in other ways as well with an initiative to bring foreign nationals, working in the UK, into the scheme. This includes bench marking overseas qualifications against NVQ or SVQs. The industry aims to achieve a fully-qualified workforce by 2010 and CSCS provides a clear method of realising this, helping to improve customer satisfaction and the industry's image.

Quality Scheme

The Government has been working with the construction industry and consumer bodies to develop a new approach, entitled the Building Trades Quality Scheme (QS) to tackle the issue of poor competences and/or trading practices from a significant number of building firms and the consumer's inability to distinguish these from reputable contractors or sole traders. The forerunner to this (Quality Mark Scheme) was closed in 2004 due to little up-take from the trades. However, there is now considerable support from a number of the trade federations to adopt this type of scheme. Discussions with the NHTG suggest that this could be an important mechanism for establishing and linking an approved national list of contractors and sole traders for work on historic buildings.

This Quality Scheme recognises the high standards already represented by many trade bodies, but provides a framework for common industry standard, sets core approval criteria, a member's code of practice and assessment and monitoring process and a marketing and communications strategy to reach the consumer. The Charted Institute of Building (CIOB) has been appointed as Secretariat to the QS Board.

As a large proportion of listed and historic buildings are dwellings, this scheme would be beneficial to contractors and sole traders. It could have an enormous impact in raising confidence and awareness in private homeowners regarding appropriate repair methods. An accredited list has the dual purpose of providing the consumer protection from poor work by unqualified people and accredited members would follow best practice in the approach to and execution of their work.

Accredited Conservation Contractors

English Heritage is investigating options to adopt an accreditation system for contractors specialising in building conservation and repair. This type of system operates for the state heritage services in Italy and France and the Irish Government has recently adopted a peer – reviewed self-policed scheme that appears to operate with some success. These could be investigated as models for a similar scheme with conservation contractors in England.

Quality Price Tendering

Competitive tendering is the normal practice for most work in the built heritage sector. However quality price tendering, whereby the quality of the work is evaluated along with the price in a two envelope tendering system usually in a 80:20 ratio of quality versus price is also a well-established practice. This obviously takes into account the high level of skill required for the particular work and the abilities of the contractor or craftsperson to undertake this to the expected standard. The onus in such a process is upon the contractor or craftsperson to demonstrate through continued good work practice, their investment in training and skills development of their workforce or themselves.

RESEARCH OBJECTIVES & METHODOLOGY

3

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research objectives & methodology

This section of the report describes the approach and methods adopted by the researchers to determine:

- The current and future demand for traditional building craft skills;
- Existing levels of skills and any gaps established through interviews with a range of stakeholders;
- The existing and required numbers of craftspeople to meet the demand;
- Existing training provision and the needs of the sector;
- Current problems regarding skills provision and training and obstacles to change again obtained from qualitative interviews with those working in the sector.

3.1 Research Objectives

Heritage Building Skills were defined in the *Heritage Building Skills Report* (2003) as *'specialist building skills using traditional materials and techniques required to conserve, preserve and restore the nation's old and historic buildings and structures'* and the same definition was used for this research.

The benchmarking report *Heritage Building Skills Report* (HBSR) concluded that information gaps in this specialist sub-sector of the construction industry were so substantial that comprehensive skills mapping research was required, rather than a small-scale study. Because much of the UK's historic buildings were constructed using locally available materials which vary from region to region, then so too would the training and skills need and the HBSR report therefore recommended that research should determine regional as well as national training and skills provision.

In October 2003, the NHTG's three-year Business Plan, *Building on the Past: Training for the Future*, was published and includes three strategic objectives:

1. Integrating relevant stakeholders with the NHTG
2. Filling the information gaps to take the sector's skills and training issues forward
3. Developing a five-year training plan for England, Northern Ireland, Scotland and Wales.

The detailed research of the nine English regions contained in this report helps fulfil these objectives for England. Similar research is planned in Scotland, Wales and Northern Ireland to provide a UK-wide database on the sector's labour market.

The main aim of this research project relates to the second objective of the NHTG Business Plan and supports it by filling the information gaps on demand, skills and training. Devising a coherent training and skills strategy is achieved by evaluating and interpreting the work and views of key national and regional stakeholders.

The objectives of this research were therefore:

1. To analyse the building conservation and restoration market, in particular to identify and quantify demand by English region
2. To identify, quantify and analyse the traditional building crafts labour market by occupation for each English region
3. To review the knowledge and understanding of the production and manufacturing processes of traditional building materials by English region
4. To audit traditional building crafts skills training provision by occupation for each English region

... and as a result of this research ...

5. To make recommendations for the improved delivery of training

provision and sustaining a skilled building conservation workforce, to meet the demands of the sector.

For the purposes of this research, an historic building is defined as being built before 1919 or earlier[27] and/or is a listed building.

3.2 Research Methodology

This skills mapping survey was commissioned by the NHTG in February 2004 to cover the nine English regions: South West, South East, London, East of England, East Midlands, West Midlands, Yorkshire & Humberside, North West and North East and involved primary (qualitative and quantitative) and secondary (desk) research.

Research looking at skills in the main construction industry is well established[28]. As this is the first detailed analysis of this sub-sector of the construction industry and as little information previously existed, the baseline data and models produced from this research will need to be repeated to provide reliable trend forecasts. In fact, some aspects of this research were developed by necessity during the course of the project. For instance, the original specification did not include collecting data from stockholders of privately owned dwellings, but once an understanding of the historic building stock had been gained, the need for this dataset became apparent.

Throughout this report, reference is made to 'contractors' and 'sole traders'. For the purposes of this report 'contractors' are defined as those companies which have three or more employees excluding sub-contractors, whilst 'sole traders' are either an individual craftsperson, or a craftsperson with one other employee. The term 'employee' does not differentiate between 'qualified' employees or 'apprentices/trainees'.

3.3 Secondary: Desk Research

Desk research was carried out to set the context of this report, to provide an understanding of the historic building stock within England, the wider agendas for learning and skills and the

Table 1 Distribution of Qualitative Interviews

Stakeholder	Number of interviews	Region	Number of interviews
Stockholders	12	South West	10
Grant-Aiding Bodies	5	South East	21
Conservation Officers	3	London	25
Learning & Skills Councils	4	East of England	10
Architects	5	East Midlands	7
Contractors	27	West Midlands	10
Sole Traders	8	Yorkshire/Humber	6
Professional Bodies/			
Trade Federations	12	North West	5
Training Providers	15	North East	6
Students	7		
Manufacturers	2		
Total	**100**	**Total**	**100**

construction industry and to map the generic craft trades and training establishments. This included sourcing datasets and national statistics for employment, and the quantity and age of the building stock. The review also included recent reports such as the *Heritage Building Skills Report* and *Sustaining Our Living Heritage* to understand existing information on the sector and to ensure that this research provided additional, new information. The NHTG steering committee provided information to direct the research and contacts within the sector. The Internet also provided additional sources of information for many areas, topics and issues and yielded some relevant contractors, sole traders and training providers for interviews.

Desk research could not however meet all the objectives, and primary research was necessary to fill the information gaps with statistical evidence (quantitative research) and understanding the views and opinions of those within the sector (qualitative research).


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3.4 Primary: Qualitative Research

The aim of the qualitative research was to identify the key areas of interest so these could be incorporated into the quantitative study and provide a greater depth of understanding of the thinking and attitudes of the respondents. Understanding the views of all the stakeholders and identifying commonalities and differences, motivations and obstacles would help produce a coherent, acceptable and inclusive action plan for future skills needs and training provision.

The qualitative research was conducted between 1 July and 1 October 2004, and 1,439 letters of introduction from the NHTG were sent to potential respondents, to set the context and encourage participation in this project. From this, 100 interviews were undertaken, with 12 interviews

conducted over the telephone and 88 interviews conducted face-to-face at the person's home or place of work, with a range and regional distribution of respondents (Table 1). The views of respondents were analysed by the researchers and a selection of these are inserted as quotations throughout the main findings of the report to highlight specific issues and to reflect their views on current successes or shortcomings and possible courses of action.

The manufacturers' sample was based on a database of 21 companies representing five industries: brick, clay roofing, copper, glass and sand-cast sheet lead. However, recruiting interviewees proved extremely difficult due to the respondents either working on-site or within the factory and unable to come to the telephone. Interviews were also cancelled at the last minute or interviewees were not available at the pre-arranged time. Over a period of three weeks each manufacturer was contacted at least three times per week and twelve refused outright to be interviewed. The two interviews secured with manufacturers involved two or three phone calls. The first was with the marketing department, who were able to answer questions regarding the company structure, marketing, customers, etc. Information regarding staff training, number of apprentices, working conditions, etc was obtained from second and third phone interviews with the factory manager.

The response to this important part of the initial research brief was exceptionally disappointing and despite the researchers' best efforts, the number of interviews could not be increased. Having only two manufacturers is not a representative sample size and the acquired information is not sufficient to form a worthwhile and informative sub-section of this research. It has therefore been eliminated from the report and as discussed in the Executive Summary, the NHTG will review the need to carry out separate research with manufacturers. Any future research would require face to face interviewing.

3.5 Primary: Quantitative Research

Quantitative research was carried out to collect previously unavailable data on the built heritage sector and to establish the level of robustness of the qualitative findings. The objective was to include data on the amount spent on conservation, repair and restoration of historic buildings, the number of craftspeople involved and skills needed, the amount of current training within this sector and the success of that training.

A database was created from a combination of sources; general and specialist data suppliers, contact information from the NHTG Steering Group and searching the Internet, to capture all those contractors and sole traders advertising as working in one of the generic trade crafts. The NHTG research steering group determined that the threshold for eligibility for contractors and sole traders in this survey should be that 10% or more of their work was heritage-based, rather than being involved in general construction.

This arbitrary threshold of 10% was important to prevent wastage of valuable interviews with firms involved in almost no heritage work. However, it does mean that the study cannot be used to extrapolate the extent to which unfulfilled demand is, or could be, met by such firms. While the influence of these firms should not be ignored, it is hypothesised that their contribution to the heritage sector is low, but future research should be used to test this hypothesis.

An associated point relates to the increasing shift towards multi-skilling across the wider industry. Whereas once all but general builders focused upon one or two core trades, it is now not unusual for individuals to claim competence in up to a dozen specialisms. There are two implications of this, firstly, the extent to which 'non-heritage' firms are periodically picking up these specialist projects. Secondly, it should be recognised that multi-skilling is probably on the increase amongst crafts-people. Future tracking of this study will need to incorporate an assessment of multi-skilling.

Telephone interviewing was selected as the best means of collecting the data that is, from the correct person holding the information required for the research and 1,567 telephone interviews (Table 2) were completed using five separate questionnaires.

All stockholders (homeowners and public and commercial stockholders) who were contacted were asked what amount they had spent on conservation, repair and restoration of their building(s) in the last 12 months and what they

intended spending in the next 12 months, and in the following two years. Public and commercial stockholders were also asked which trades and skills they had used in the past 12 months and which they intended to use in the following 12 months. Contractors and sole traders were asked a series of questions on apprenticeships and all three groups were asked about recruitment, training and learning. Training providers supplied details on course capacity, up-take, drop-out and success rates.

Table 2 Quantitative Interviews by Region

	Total	South West	South East	London	East	East Midlands	West Midlands	Yorkshire/ Humber	North West	North East
Total	**1567**	**244**	**237**	**145**	**210**	**169**	**144**	**158**	**188**	**72**
Commercial Stockholders	94	15	15	6	15	8	15	7	10	3
Private stockholders	62	5	6	6	5	7	6	6	11	10
Contractors	629	98	108	47	96	73	57	61	69	20
Sole Traders	476	75	63	29	62	51	43	64	64	25
Training Providers	88	13	13	3	9	13	9	7	15	6
Architects	152	25	19	44	17	10	10	8	13	6
Surveyors	33	8	8	4	4	1	3	3	2	0
Conservation Officers	33	5	5	6	2	6	1	2	4	2

Note: The sample sizes per region vary according to data available for that region in terms of workforce and stock, and the availability of relevant respondents during the period of data collection. The low numbers interviewed in the North East reflect limited availability of data for that region (only 5% of the total project data) and this is influenced by the low number of historic buildings in that region. This requires a reduced workforce on those buildings and is reflected in Sections 4. Demand and 5. Supply

DEMAND 4

demand

This section of the report concentrates upon establishing the actual demand for traditional building craft skills. Firstly, existing data-sets were used from a number of sources to quantify the number of historic buildings (defined as being built before 1919) in England. Secondly, stockholders of historic buildings, that is, public and commercial owners and private dwelling owners were interviewed to establish the amount of money spent in the past 12 months and predicted spend in the next 12 months on conservation, repair or restoration. They were also asked which craft skills or trades they had most used in the past 12 months and were most likely to use in the next 12 months and satisfaction on the quality of work undertaken. This combined spend profile and specific skills used has been the basis for determining current and future requirements for traditional building skills on a regional basis.

4.1 Introduction

English Heritage's *State of the Historic Environment Report* (2002) established two main drivers for preserving the nation's historic environment. Firstly, people care and value the historic environment, and secondly, it has real economic value. Although the built heritage sector may be a very small part of the overall construction industry, it is nevertheless, very important. It is therefore necessary to understand the extent of the historic building stock, and this research set out to quantify this in each English region.

Historic buildings include those used by local authorities and central government, for example, as libraries and public buildings, headquarters for large corporations and other commercial uses (banks, hotels, etc); Government historic estates; properties in the care of heritage bodies; private dwellings. Their age and methods and materials used in their construction make them historic and therefore of economic and cultural value whether or not they have been listed.


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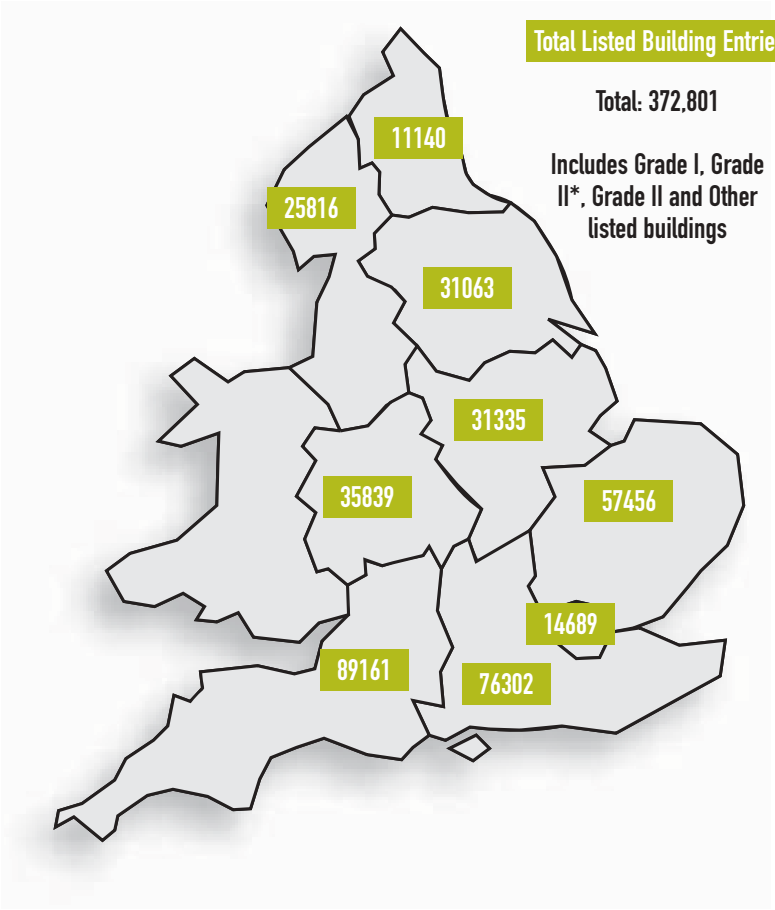
4.2 Number of Listed Buildings

Listed buildings are defined as being of 'special architectural or historic interest'[29]. The main criteria include: architectural and/or historic interest, close historical association with nationally important buildings or events and group value such as squares, terraces and model villages. Three designations exist for listed buildings:

Grade I – buildings of exceptional interest
Grade II* – buildings of particular importance and of more than special interest
Grade II – special interest and warranting preservation

The age of a building does influence the likelihood that it will be listed. All buildings before 1700 that still resemble their original

Figure 1 Number of Listed Building Entries by Region



"The difficulty is getting people to tender. Contact four or five contractors and tell them what the job is and at the moment the regions are finding they're lucky to get two tenders back. The industry is so busy at the moment."

Stockholder

condition are listed. All buildings constructed between 1700 and 1840 are also highly likely to be listed. After 1840 criteria for listing is more selective and those constructed post-1945 have to be exceptionally important to become listed[30].

In September 2004 there were 372,801 listed building entries in England on the Heritage Counts on-line database. The South West has the largest number of listed building entries, equating to 24% of the English total, and the North East the lowest number, representing only 3% of the total. The fact that the North East has a smaller number of listed building entries than other regions has important consequences for craftspeople, who may have to travel further afield for employment

In terms of property owners, the Church of England has the largest number of listed buildings: with some 12,000 of its 16,000 buildings and structures listed[31]. Central Government manages over 1,000 listed or scheduled buildings, and more than half of these are managed by the Ministry of Defence, with 12% being managed by HM Prison Service[32]. Local authorities as a whole are also significant listed building owners, with Bath and Norwich being the largest stockholders of this type. British Waterways own more

than 2,800 listed structures (a large number of these being bridges); The National Trust owns 2,341 listed buildings[33] and English Heritage cares for over 400 historic buildings on behalf of the nation. The Historic Houses Association (HHA) represents the interests of Britain's historic houses, castles and gardens that remain in private ownership with over 1,500 such properties, the majority of which are open to the public in some form.

4.3 Number of Historic Buildings

Listed buildings form only part of the historic building stock and there are many more pre-1919 buildings which remain unlisted. However, even non-listed buildings require the specialist knowledge and skills afforded to their listed counterparts.

Figures are available from 2001 on the total number of dwellings[34] and, from 2000, on the commercial and industrial buildings[35] in England. The Valuation Office has ceased publishing the age of commercial buildings. In their datasets of October 2000 commercial buildings were defined as hereditaments***. It is therefore difficult to accurately quantify commercial historic buildings. Nevertheless an accurate estimate of the number of unlisted dwellings and commercial buildings was established (Table 3). London and the North West have the largest proportions (18% and 17% respectively) and the North East again has the smallest proportion, at only 4%. Dwellings account for 89% of the total English historic building stock, and this ratio is similar for all regions.

Table 3 Number of pre-1919 Historic Buildings

Region	*No of Dwellings	** No of hereditaments	Total
South West	476,000	59,000	535,000
South East	612,000	64,000	676,000
London	787,000	104,000	891,000
East	343,000	37,000	380,000
East Midlands	352,000	45,000	397,000
West Midlands	385,000	48,000	433,000
Yorkshire/Humber	527,000	74,000	601,000
North West	752,000	96,000	848,000
North East	171,000	25,000	196,000
England	**4,405,000**	**552,000**	**4,957,000**

*Source: * English House Condition Survey 2001 ** Valuation Office (October 2000 datasets)*

****Definition of hereditament: Individually rated properties are known as hereditaments and these form the basic unit of data. Generally, an hereditament corresponds to an extent of contiguous or adjacent space appropriate for a single occupant. Most are either an individual building, group of buildings or parts of buildings. However some are just land (for example open-air car parks, storage land and various kinds of sports grounds) and some are neither buildings nor land at all (for example advertising rights). A large office or mixed-use commercial building will, if shared between several tenants or owners, consist of several hereditaments. These may occupy some floors, part of a floor or space in, adjacent to, or associated with the building. For example a flower stall or newspaper kiosk in an office building can constitute a separate hereditament. Conversely, a single large hereditament may consist of many distinct buildings, for example a large factory complex on a single site.*

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4.4 Stockholders' Survey Sample

The survey sample included 94 stockholders with commercial buildings and 62 stockholders with private dwellings. The majority of commercial stockholders (60%) were responsible for between one and five buildings (out of a total of 3,572 and an average of 40 buildings each) but 12% were responsible for over 100 buildings. Private dwelling stockholders were mainly responsible for single properties.

4.5 Spend by Stockholders: Public and Commercial Buildings

This research set out to establish the amount spent on historic buildings in the past year and intended spending in the next five years. However, when interviewing the stockholders it became apparent that while they could generally say what they had spent in the last 12 months they found it difficult to forecast what they would spend in the next 12 months and impossible to predict what they would spend in the future beyond that.

There is immense variation by region in the amount spent on conservation, repair, maintenance and restoration in the last 12 months and the required budget spend for the next 12 months both in terms of spend per commercial stockholder and spend per building (Table 4).

London shows the highest average spend per building, while the East Midlands has the lowest average at just £726. Most regions show an average spend per building of less than £8,000. The average spend displayed in London is extraordinary where one stockholder spent £2.5m last year and plans to spend £4.5m this coming year.

Over the next 12 months, public and commercial stockholders are planning to spend even more than they did last year. The average spend per building is set to rise 2% from £4,978 to £5,089, but this figure conceals large regional variations. Three regions, the South West, East Midlands and the North East, are planning to increase their average spend by around a quarter, whilst Yorkshire & Humberside are forecasting a decrease in their average spend by one third. In all but one of the regions (the East) the average amount per stockholder required to cover work identified as urgent in the QI is far in excess of that actually budgeted for the next 12 months.

These forecasts will not however, cover all work identified in Quinquennial Inspections (QIs). Within the South West, East, East Midlands and North East these forecasts cover all work

"Public buildings have a budget; I don't have a budget – individuals can't afford budgets unless they're very well-off. I just do it when it's necessary, but I do try and keep on top of it. People will only give you grants if the building is either Grade 1 or Grade 2; this is Grade 2 – it attracts no support of any kind."*

Stockholder

Table 4 Average spend per Public and Commercial Building & Required and Budgeted Spending for the next 12 Months (Average per Stockholder)

Region	Average spend per Building last 12 months	Average budgeted spend per building for next 12 months	Beyond budget-spend for next 12 months on urgent work identified by QI
South West	£2,613	£3,285	£194,000
South East	£1,632	£1,387	£139,340
London	£267,882	£359,000	£3,125,000
East	£2,838	£2,803	£16,170
East Midlands	£726	£888	£400,000
West Midlands	£3,521	£3,320	£981,075
Yorks & Humber	£12,860	£8,450	£5,252,500
North West	£7,300	£6,270	£1,750,000
North East	£6,207	£7,670	£2,500,000
England	**£4,978**	**£5,089**	**£14,295,085**

Note: All averages are separately calculated from either regional or country base data.

identified in the QI in at least 60% of cases. For the South East, London, West Midlands, Yorkshire & Humberside and the North West the situation is less optimistic, as the budgets will cover all work identified in the QI in 50% or less of cases.

Stockholders found it difficult, if not impossible to say what they intended to spend for two reasons; firstly some of the work is repair driven and secondly, availability of funding was often unknown. Hence forward projections on spend will always be subject to some uncertainty and are likely to remain highly variable.

4.6 Spend by Stockholders: Dwellings

Domestic dwellings represent 38% of listed building entries[36] and account for 89% of all historic buildings. Individual owners therefore represent a significant proportion of those with listed and historic buildings. The 62 private dwelling owners interviewed displayed a variable spend profile on their properties (Table 5).

Table 5 Average Regional Spend per Building (private stockholders)

Region	Average spend in past 12 months
South West	£5,390
South East	£7,083
London	£5,171
East	£1,790
East Midlands	£15,514
West Midlands	£1,283
Yorkshire/Humber	£2,603
North West	£18,347
North East	£4,690
England	**£8,487**

Note: All averages are separately calculated from either regional or country base data.

There is far less variability with private stockholders than commercial stockholders, but 32% spent nothing on their private dwelling in the last 12 months. The smallest recorded amount spent in the last 12 months during the interviews was £100 and the largest £240,000. Two thirds of the private stockholders found it impossible to forecast what they were likely to spend in the coming year, and this is a reflection of their attitude to spending on repair, rather than maintenance.

4.7 Spend on Places of Worship

Places of worship are a particularly important category of historic building. The church is usually the oldest and most important building in a settlement as well as a focus for community memory and social activity. For the purpose of this research, places of worship were inclusive of all faiths with the aim of collecting spend data on cathedrals, churches chapels, mosques, temples and synagogues.

Since 1969, only 22% of redundant churches have been demolished, 57% now have an alternative use and 21% are preserved as monuments, mainly by the Churches Preservation Trust[37]. In 1991, English Heritage commissioned a full survey of the condition of cathedrals at the commencement of the *Cathedral Repair Grant Scheme* and identified £164.6 million of 'urgent and necessary' repair work. In 2001, the *Cathedral Fabric Needs Survey*, which repeated the research carried out in 1991, showed that 85% of the identified work had been completed and the cost of work identified in the 2001 survey (excluding maintenance and development projects) and necessary by 2006 was £57.1 million[38].

In common with many of the major stockholders, the authorities responsible for maintaining and repairing places of worship do not hold data on spending in a format, which allows this to be identified by region. Data is only kept at an amalgamated UK level with separate spending for the regions and different places of worship of across England not available.

4.8 Spend Estimates Based Upon this Research

The data collected during this research enables a projection of spending to be calculated. However, as this is the first research to look at spend information of this sort and at this level, there is little historic data from which forward projections can be accurately predicted. These estimates are therefore built using just two years of data – the past 12 months and the forthcoming 12 months. This exercise will need to be repeated to provide a more accurate prediction model.

Estimates for Listed Buildings

In September 2004, there were 372,801 entries for listed buildings in England, but one entry is not necessarily one building and it is estimated in the *State of the Historic Environment Report 2002* (Page 20) that there are on average 1.3 buildings per entry. Hence the number of listed buildings in England is calculated to be approximately 484,641 and the regional distribution is shown in Table 6.

Table 6 Regional distribution of listed buildings

Region	Listed Building Entries	Listed Buildings
South West	89,161	115,909
South East	76,302	99,193
London	14,689*	19,096**
East	57,456	74,693
East Midlands	31,335	40,736
West Midlands	35,839	46,591
Yorkshire & Humberside	31,063	40,382
North West	25,816	33,561
North East	11,140	14,482
England	**372,801**	**484,641*** **

** Figure taken from Heritage Counts on-line database in September 2004. **This figure is calculated using the average of 1.3 buildings per entry ***The overall England figure includes rounding*

"There's massive skills shortages out there, undoubtedly, and it's something here we're trying to address by playing our part in providing some training to contractors as well as our in-house staff."

Stockholder

The figures for both the private and public and commercial spending are derived from the regional averages obtained during the primary research (Table 7). This applies to those listed buildings that are not churches or not owned by major stockholders such as English Heritage or The National Trust. Although the North East region has the least number of listed buildings it did not display the smallest spend in the last 12 months, which for the private owners was the West Midlands and for commercial owners the East Midlands. The South West has the highest number of listed buildings in its region and displayed the highest spend in both the last 12 months and expected spend in the forthcoming 12 months for private and commercial owners.

Based upon a mixture of data located via secondary research and data supplied from those few major stockholders that could provide this information at national level, it is estimated that a total of £1.72 billion was spent on listed buildings in the 12 months before the survey,

Table 7 Private and Commercial Spend on Listed Buildings

Region	Private spend last 12 months (£000s)	Private spend next 12 months (£000s)	Public/commercial spend last 12 months (£000s)	Public/commercial spend next 12 months (£000s)
South West	291,592	300,340	175,487	220,649
South East	189,893	195,590	93,810	79,727
London	35,071	36,123	55,329	55,329
East	47,487	48,911	122,826	121,325
East Midlands	28,936	29,804	17,138	20,962
West Midlands	21,231	21,868	95,064	90,393
Yorkshire & Humberside	37,334	38,454	117,005	197,739
North West	23,840	24,555	141,972	121,941
North East	24,124	24,847	52,090	64,368
England*	**699,507**	**720,493**	**870,720**	**972,433**

**The overall England figure includes rounding **The figures for private and commercial spend in Table 8 are derived from the regional averages obtained during the primary research and applies to those listed buildings that are not churches or not owned by major stockholders, such as English Heritage or The National Trust.*

Table 8 Total Spend for Listed Buildings

Total Spend (£)	Last 12 months	Next 12 months	% increase
Churches	48,856,188	48,856,188	0.0
Major stockholders	101,737,651	106,359,504	4.5
Private	699,507,417	720,492,640	3.0
Commercial	870,720,478	972,432,963	11.7
Total	**1,720,821,734**	**1,848,141,295**	**7.4**

and this was estimated to rise by 7.4% to £1.85 billion in the next 12 months (Table 8). This figure has not been adjusted for inflation, as it was not possible to determine whether data given by respondents included or excluded inflation. Also as this is the first time data of this kind has been collected, it is not possible to provide a trend forecast until at least two more snapshots of data have been collected.

Estimates for Historic Buildings

Regional spending per public and commercial historic building stockholder and per listed private dwelling stockholder has been calculated (Table 9). The average spend is weighted up to the estimated built heritage stock, with the assumption that not every private historic building owner spends on their property. The stockholder sample for London was relatively small, and those stockholders that were included were part of large estates. Therefore, to include the figures for London would skew the overall figure and artificially inflate the more realistic picture. The extraordinary spend figure captured for London has therefore been adjusted with a figure based on spend throughout England excluding London.

The figures available for spend on churches from the *State of the Historic Environment* report 2002 were for a two-year spending period. This has been split 50% for the last 12 months and 50% for the next 12 months. It is therefore assumed that the spending on churches will not change and that the major stockholders own only listed buildings, hence their spending has not increased either.

The estimated spend for all historic buildings in England in the last 12 months is therefore £3.54 billion and this is estimated to rise by 4.0% to £3.68 billion in the next 12 months.

Spend relationship between the Heritage Sector and the Construction Industry

The UK construction industry as a whole generates £149billion of turnover (at basic prices). Previous secondary research in 2003 by Robert Bilborough Associates[39] suggested that the UK's built heritage sector was worth £2billion, whereas the present primary research now estimates that, for England alone, this sector accounts for approximately £3.5billion in spend. In terms of the construction industry as a whole, the South East and London are the major contributors to annual turnover, each accounting for approximately £14 million of output, while the North East region is the smallest at around £3million. Within the built heritage sector, the North West and London are the major contributors; each in excess of £0.6million spending and the East Midlands is the smallest accounting for less than £0.1million of spending.

Table 9 Regional Spend on Historic Buildings

Region	Pre-1919 Dwellings	Spend Last 12 months (£)	Spend Next 12 months (£)	Pre-1919 Hereditaments	Spend Last 12 months (£)	Spend Next 12 Months (£)
South						
West	476,000	384,846	392,543	59,184	61,850	77,767
South East	612,000	650,219	663,224	64,406	42,045	35,733
London	787,000	610,437	622,645	104,044	208,088	208,088
East	343,000	92,096	93,937	37,467	42,528	42,008
East Midlands	352,000	105,600	107,712	44,938	13,050	15,962
West Midlands	385,000	74,093	75,575	47,806	67,330	64,022
Yorks & Humber	527,000	205,767	209,882	74,187	148,374	250,753
North West	752,000	225,600	230,112	95,567	279,057	239,683
North East	171,000	120,299	122,704	24,878	61,766	76,325
England*	**4,405,000**	**2,468,956**	**2,518,335**	**552,477**	**924,087**	**1,010,340**

**The overall England figure includes rounding*

Table 10 Total Spend on Historic Buildings

Owner	Last 12 months	Next 12 months	% increase
Churches	48,856,188	48,856,188	0.0
Major stockholders	101,737,651	106,359,504	4.5
Dwellings	2,468,956,350	2,518,335,477	2.0
Commercial & Industrial	924,086,724	1,010,340,440	9.3
Total	**3,543,636,913**	**3,683,891,608**	**4.0**

**The overall figure includes rounding*

The spending figures provided in Tables 8 - 12 can also be used to estimate the size of the built heritage workforce (see Section 5.1, Supply: Workforce).

4.9 Stockholders' Demand for Building Craft Skills

Of the commercial stockholders interviewed, 32% employed a direct workforce, but these were relatively small in size, ranging from one to 32 employees (average 8 employees and 65% with less than five employees).

Over half of the stockholders preferred to recruit experienced craftspeople already with relevant skills and knowledge and who did not require any training and do not see training as their responsibility. Their primary commercial function is often unrelated to the building and therefore a directly employed workforce to maintain it is of secondary importance. The majority of the commercial stockholders prefer to buy in craft skills by engaging contractors and/or craftspeople to work on their historic buildings as and when needed. In descending order, joiners, carpenters, stonemasons, bricklayers, slate and tile roofers, decorators and general builders were the trades most used in the last 12 months and are the most likely to be used in the next 12 months (Tables 11 & 12).

"The number of men we employ really dictates the jobs we can get. I would say lack of tradesmen has caused our turnover not to increase. We could have actually doubled our turnover in the last two or three years if we'd had the men to do the jobs".

Contractor

Table 11 Trades used by Stockholders in the last 12 months

	South West	South East	London	East	East Mids	West Mids	Yorks & Hum'side	North West	North East
Blacksmith	**	**		**	**	**	**	**	
Bricklayer	***	***	***	***	**	***	***	***	**
Cabinet Maker		**		**		**	**	**	
Carpenter	***	***	***	***	**	***	***	**	***
Carver			**	**		**	**		
Clay Dabbins									
Cob Builder									
Decorator	**	***	***	***	***	***	***	**	**
Dry Stone Waller	**				**		**	**	
Fibrous Plasterer	**			**		**	**		
Flint Knapper									
†Generalist	***	**	**	**	***	**	***	***	***
Gilder (Paint)			**	**					
Gilder (Wood)			**	**		**			
Glazier	**	**	**	**	**	**	***	**	
Joiner	***	***	***	***	***	**	***	***	***
Lead Worker	**	***	**	***	***	***	***	***	**
Lime Plasterer	**	**	**	***	**	**	***	**	**
Machinist		**		**	**	**	**	**	
Marbler									
Master Glass Painters									
Millwright									
Mosaicist									
Other metal roof worker	**	**	***	**		**		**	
Pargeter									
Pavior							**		
Roofer – slate & tile	***	***	***	***	***	***	***	***	***
Stained Glass									
Steeplejack			**					**	**
Stone Fixer		**	**			**	**	**	**
Stonemason	***	**	***	**	***	***	***	**	**
Thatcher	**			**		**			
Tiler		**		**		**	**	**	
Wattle & Daub									
Wheelwright									

Key:
= less than 10% have used trade in the last 12 months
** *= 10%-29% have used trade in last 12 months*
*** *= 30%+ have used trade in the last 12 months*

†Generalist: Person who cannot be classified as carrying out one main trade, because they were involved in multi trades.

Table 12 Trades Required by Stockholders in the next 12 months

	South West	South East	London	East	East Mids	West Mids	Yorks & Hum'side	North West	North East
Blacksmith	**					**		**	
Bricklayer	**	***	**	***	**	**	**	**	**
Cabinet Maker		**				**			
Carpenter	***	***	***	***	**	***	**	**	**
Carver						**			
Clay Dabbins									
Cob Builder	**								
Decorator	**	***	***	**	**	***	***	**	
Dry Stone Waller					**		**	**	**
Fibrous Plasterer	**					**			
Flint Knapper									
†Generalist	***	**	**	**	***	**	**	***	***
Gilder (Paint)									
Gilder (Wood)						**			
Glazier	**	**				**	**	**	
Joiner	**	**	**	**	***	**	***	**	**
Lead Worker	**	**	**	**	***	**	**	**	
Lime Plasterer	**			**		**	**	**	**
Machinist						**			
Marbler									
Master Glass Painters									
Millwright									
Mosaicist									
Other metal roof worker						**		**	
Pargeter									
Pavior									
Roofer – slate & tile	***	**		***	***	***	**	***	**
Stained Glass									
Steeplejack									
Stone Fixer	**	**		**	**	**	**	**	**
Stonemason	***	***	**	**	**	***	**	**	**
Thatcher	**								
Tiler	**	**				**	**	**	
Wattle & Daub									
Wheelwright									

Key: *= less than 10% have used trade in the next 12 months*

** *= 10%-29% trade needed in the next 12 months*

*** *= 30%+ trades needed in the next 12 months*

†Generalist: Person who cannot be classified as carrying out one main trade, because they were involved in multi trades.

Note: Stockholders had buildings in a variety of regions, but when questioned they found it difficult and in some cases impossible to break down needs, costs or skills by region. Therefore, analysis has been conducted on where the stockholder resided.

Even though QIs exist to identify any required work, commercial stockholders found it difficult to predict exactly what craft skills would be needed in the coming year. This difficulty suggests a lack of planning, and is also perhaps a reflection of uncertainty regarding available funding, especially as securing funds, whether from the commercial budget or external grants, is a time-consuming and onerous process. Nevertheless, 39% of commercial stockholders received a grant for work they had carried out in the past 12 months.

The regional distribution of traditional building skills most used in the past 12 months and most needed in the next 12 months is located in Section 7: Regional Summaries.

4.10 Traditional Building Materials

When considering the current and future needs for skilled craftspeople it is necessary to take into account the predominant building materials used in England to construct the local (vernacular) and grander buildings through the centuries. These varied from region to region and the main types of walling and roofing materials of surviving historic dwellings have been mapped for England[40] and are summarised below. The regional need for brick-making and bricklaying, carpentry, dry stone walling, pargeting, stonemasonry, thatching, etc is therefore not only related to demand, but to the traditional building materials used in that area at different historical periods. These require specific knowledge and experience of the original construction and historical use of the materials and traditional skills for their repair and conservation.

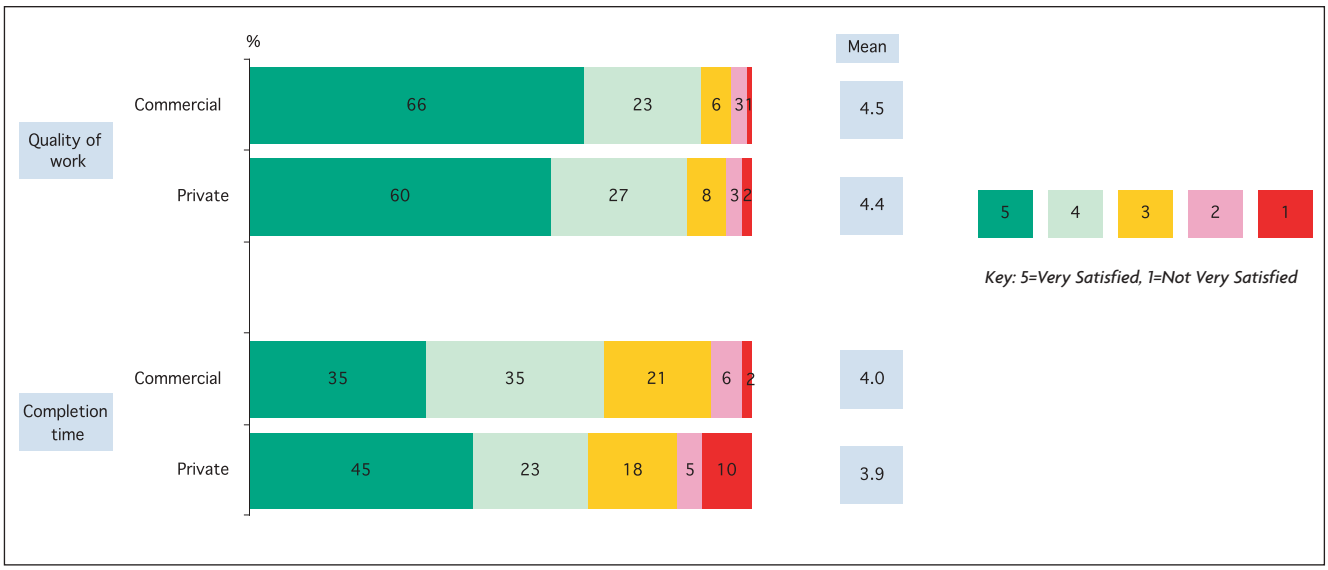
Stone

Stone within England dominates four areas: running from the Scottish border down through the Pennines; from North Yorkshire down to the Midlands and crossing into the South West; the moorlands of the South West; and a much smaller belt across the Weald in the South East. Smaller pockets of stone are found elsewhere. Dry stone walls used as field and property boundaries are traditionally found in the same areas and flint, pebble and cobble have also been used as walling materials. The main natural deposits that have had an influence on local buildings are in the Solway Plain and south west Lancashire, the East Riding of Yorkshire, and the main belt from north west Norfolk across to the Chilterns and then across the South and North Downs.

Brick

Brick walling generally complements the areas where stone has been predominantly used. Main areas of use have been the Solway Plain in the North West; a u-shaped belt running from Durham to the east side of the Pennines and into the Midlands then across to the Welsh Border counties and up to Cheshire and South Lancashire; and the final belt runs down from South Yorkshire to the East and South East of England.

Figure 2 Satisfaction with Completed Work



Base: Stockholders (94 Commercial 62 Private)

Earth

Clay, cob, turf, mud, and wychert were also used for walling and surviving earthen buildings can be found in the Solway Plain, the Midlands, East Anglia, Hampshire and the Isle of Wight, the West Country and Devon.

Timber

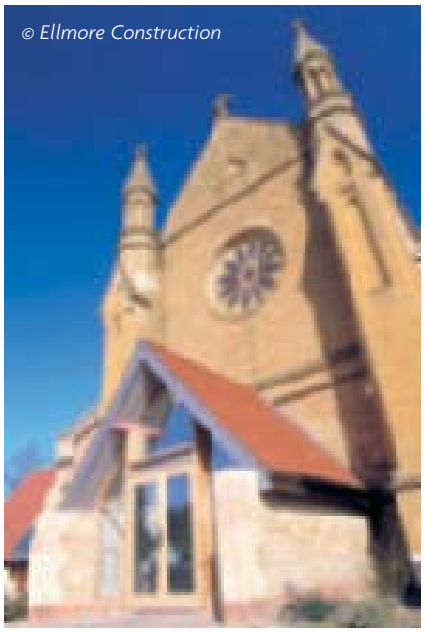
Timber buildings were constructed across most of England in the medieval and post-medieval periods using either a cruck or box-frame. The only areas that have no known or remaining buildings that used timber for the main structural walls are: Northumberland, the East Riding of Yorkshire, Lincolnshire, the East Midlands, North West Norfolk, the Norfolk and Suffolk coastal areas, north Devon and Cornwall. As the centuries progressed and technology resulted in the wider production of bricks, areas with timber frames converted to using brick as a walling material for their new buildings.

Within the timber walling areas it was common to use wattle and daub to infill the panels, but brick infill was also used. Cladding of both timber and poorer quality stone buildings was common in many places in England but dominated the buildings of Eastern England and the South East where four distinct materials were used for cladding timber-frames: plain tiles, mathematical tiles, weather boards, and wooden laths with a lime plaster finish. The latter could be plain, decorated with a pattern or a white or colour wash, or it could be moulded into relief shapes – a technique known as pargeting which was used in late 16th and 17th century buildings predominantly in East Anglia. Elsewhere, external walls were coated with limewash, ashlar or stucco.

Roofing

Roofing materials also vary across England. Common to all is the use of timber for the roof frame dictating the need for carpentry and joinery skills across the country. Existing thatched buildings can be found to varying degrees of density in parts of Cumbria, South Lancashire, down from the East Riding and across to the Midlands, East Anglia, the South East and the Isle of Wight and then across the South West as far as the northern counties of Cornwall. Stone flags can still be seen on the roofs of the historic buildings of the North West and stone tiles are found in a belt across the East-West Midlands down into the Cotswolds and the West Country and in a pocket in the Weald. Plain tiles are generally found on buildings in the Midlands, the South and South East whereas pantiles dominate buildings running down the east side of England from the North East down as far as Bedfordshire, Cambridgeshire and north Suffolk.

Over the centuries technological advances have resulted in building materials being gradually subjected to mass production and so construction styles for everyday buildings became more uniform, particularly in towns and cities. For example, the production and export of Welsh slate has seen this once vernacular material used widely across England and the development of the brick industry enabled the material to be chosen as the preferred option for workers' cottages in the new industrialised Victorian towns and cities. Gradually, this resulted in a decline in vernacular styles that relied upon locally available materials. Until the end of World War II construction techniques had changed very little from the preceding centuries.



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The wealthier population has always been able to use whatever fashionable material it wished to construct the grander and civic buildings of England. In early centuries, it was common to import materials from the continent such as Caen stone and terracotta along with foreign craftspeople who worked with the materials on a more regular basis, to join the local workforce constructing cathedrals and palaces. Most English regions have surviving examples of these buildings which followed polite or national architectural styles using materials that were not commonly available. Other materials, such as lead and wrought iron were more widely used for all types of buildings.

4.11 Stockholders' Satisfaction with Completed Work

The public and commercial and private stockholders interviewed are satisfied with the quality of work undertaken on their historic buildings but much less satisfied with the completion time (Figure

2). The evidence suggests that there is probably less tolerance for delays in the commercial sector than the private sector, but nevertheless 35% and 45% are low percentages for the top rating, which should be in excess of 50%. However, this should be set in a wider context, where many commercial firms, through greater knowledge of the construction process, have more realistic expectations of what is achievable within budgets and timescales. Stockholders must also realise that the method of procurement chosen will affect the industry's responsiveness, that is, open tendering versus long term strategic partnering arrangements.

Fifty-four percent of public and commercial stockholders and 44% of private stockholders have experienced a delay in getting building work underway. From the stockholders' point of view, this indicates a shortage of labour and/or skills within the built heritage sector. Indeed, the most frequently cited reason for delays was 'labour shortage'.

Also, 22% of those public and commercial stockholders who experienced delays mentioned financial issues, inclement weather, the tendering process and planning consent as the most frequent reasons for delays. Private stockholders were almost twice as likely to cite being let-down by contractors or craftspeople as a reason for delay as their public and commercial counterparts.

4.12 Funding

Slightly fewer than 40% of the public and commercial stockholders interviewed received grants and/or funding towards the work carried out on their historic buildings. Only 20% of private stockholders received funding, which also came out of almost five times fewer grants than the public and commercial stockholders. The two main sources of funding for the stockholders were considered to be from English Heritage and Local Authorities. While overall 24% of the public and commercial stockholders received grant aid, this varied tremendously by region, with 86% of these stockholders in Yorkshire & Humberside receiving grants and 13% in the East Midlands. The fact that Grade I or Grade II* attracted support while Grade II did not was criticised by some stockholders as was the perceived or real inequality between publicly and privately owned buildings.

4.13 Main Funding Sources

Maintaining our cultural heritage, which is a valuable asset, does need an enormous amount of money, not all of which can be provided by stockholders themselves. Nor perhaps should it as the cultural and historic environment is there for everyone to enjoy now and in the future. Similarly, the government's Sustainability Development Strategy (1999) aims to ensure a better quality of life for everyone now and for generations to come and to meet the needs of today, without compromising the ability of future generations to meet their own needs. This applies to the built heritage sector by protecting the buildings of the past for future benefit and through conservation-led regeneration. With this in mind, funding bodies provide grants or loans for conservation and repair of historic buildings and their contents. The main funding bodies referred to for this research were:

Heritage Lottery Fund

The National Lottery is currently the largest single source of funding for heritage projects, awarding approximately £300million per year through the Heritage Lottery Fund (HLF) to a wide range of heritage projects across the whole of the UK. Since 1994, England has benefited from some £1.7billion of this funding[41].

The Architectural Heritage Fund

The Architectural Heritage Fund (AHF) is a national conservation fund, established for more than 25 years, which exists to give access to local, non-profit-making building preservation trusts, to working capital at favourable rates of interest. It currently has £6.7million on loan to a wide variety of projects[42].

Building Conservation Grants

51% of local authorities responding to the Local Authority Conservation Provision (LACP) survey 2002 had historic building grant schemes of their own that were funded under Section 57 of the 1990 Act. The average grant budget was just under £20,000 with regional figures ranging from over £32,000 in the South East to £5,250 in the North East[43].

English Heritage

English Heritage administers the Heritage Economic Regeneration Scheme (HERS), which provides grants to match local authority funds for the refurbishment of buildings in areas of need. In 2002-03 this scheme provided £9.8 million to support 170 projects.

SUPPLY 5

supply

Evaluating demand is one part of the skills needs equation and this section of the report assesses the vital component of availability of skilled craftspeople to undertake conservation, repair and restoration of historic buildings. Interviews with contractors, sole traders and, to a limited extent, manufacturers provided details on the current composition of the workforce through the following inter-related aspects:

- The numbers of employed and self-employed within the built heritage sector;
- Outstanding vacancies, recruitment difficulties;
- The quality and availability of requisite skills, retention of trades/craftspeople as indicators of skills shortages or gaps;
- Inflow and outflow within the built heritage sector.

5.1 Workforce

In the UK as a whole, the construction industry employs 2.1 million people. Excluding electrical wiring and fitting (SIC 45 31) and plumbing (SIC 45.33) just over 1.8 million people work in the construction contracting sector (SIC 45). A further 225,000 are employed in professional consultancies (SIC 74.2)[44]. ConstructionSkills represents the education and training interests of the construction sector defined in terms of Standard Industrial Classification (SIC) as SIC 45 Construction, and SIC 74.2 Architectural and engineering activities and related technical consultancy. However, this definition excludes electrical wiring and fitting (SIC 45 31) and plumbing (SIC 45.33), which although forming an integral element of most construction projects are covered by SummitSkills, the SSC for mechanical and electrotechnical services.

The number of firms in England on the Department for Trade and Industry (DTI) VAT register of construction contractors in June 2004 was 148,551 and the Construction Statistics Annual 2004 shows that 42% of firms registered with the DTI in the third quarter in 2003, were sole traders. As part of the quantitative analysis for this research, it was established that 22,204 contractors or sole traders actively advertise themselves as working in the heritage sector in England. These were used as the sample base for mapping supply.

This research has established that 26% of all firms working in the wider context of the construction industry do not carry out work on historic buildings. However, for 16% of contractors who work on historic buildings this forms 60% or more of their work and for 25% of sole traders working on historic buildings this represents 60% or more of their work. Whereas previous secondary research carried out by Robert Bilbrough Associates in 2003[45] suggested the built heritage workforce to be 36,000, this research estimates that there are approximately 90,000 working predominantly in the built heritage sector (Table 13).

Craftspeople working in the built heritage sector have established networks and this, in conjunction with the short supply of labour (which means full order books), implies that craftspeople do not always need to advertise their services. Their work is gained from


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established contacts and new contacts/work comes from personal recommendation and it is perhaps worth noting that many craftpeople can rely on word of mouth networks to secure work. Many actively shun conventional advertising, as their order books are full far in advance.

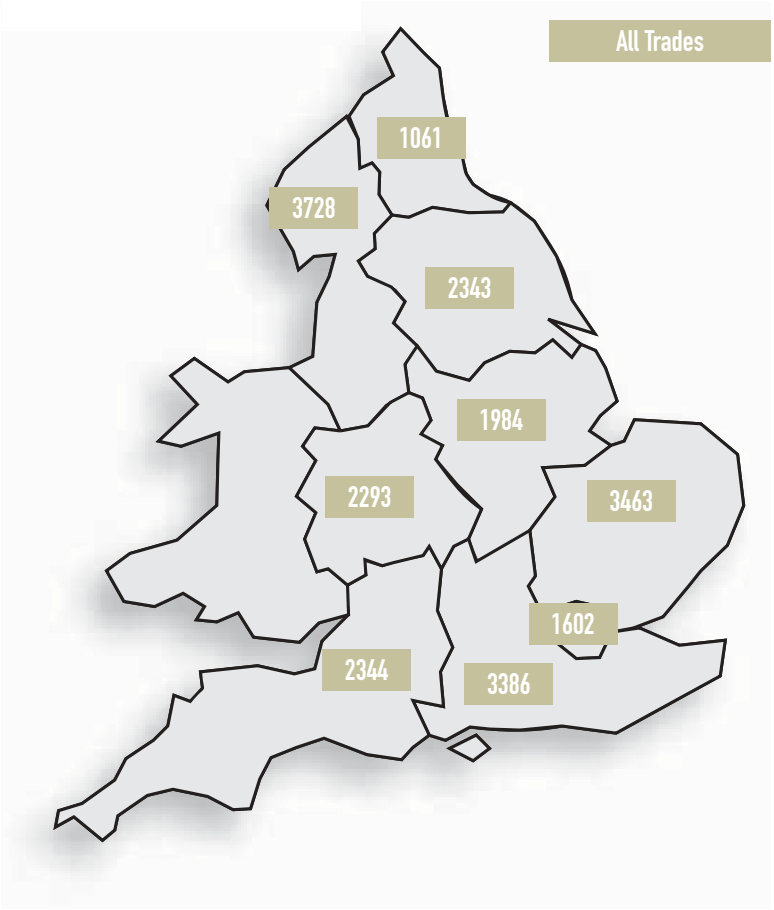
From the numbers in Figure 3, it can be seen that:

- The North East region had the fewest identified employers (whether contractors or sole traders) accounting for only 5% of the English

Table 13 Estimated Numbers Employed in the Built Heritage Sector

	Estimated workforce in the last 12 months	Estimated workforce in the next 12 months
Based upon demand model (all buildings pre 1919)	86,430	89,850

Figure 3 Distribution of Built Heritage Contractors and Sole Traders



total. This is slightly higher than the percentage of historic buildings in that region in relation to the English buildings total, which was 3%

- The North West region had the most employers, accounting for 17% of the total workforce, although in terms of buildings the North West only accounted for 7% of the total number of buildings

- The South West accounted for 24% of listed buildings, but with only 11% of employers within this region.

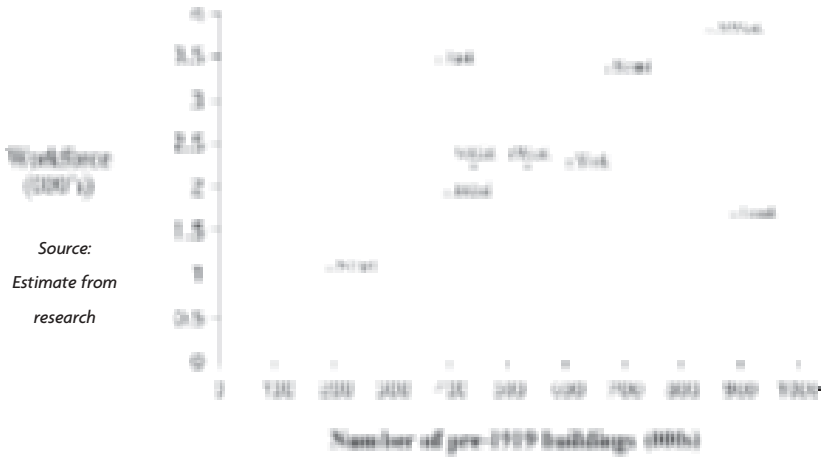
Consequently, there is no direct relationship between the number of listed buildings and the size of the current employer base in each region. However, there is a relationship between the pre-1919 building stock and the size of the employer base on a regional level, in that the larger the building stock the larger the employer base, and presumably the workforce and this is illustrated in Figure 4. However, two regions, London and East, do not conform to this rule. In London, the building stock is high but the workforce is low, because the workforce lives outside London and in the East region, the workforce is high in relation to the building stock.

5.2 Contractors' Survey Sample

Having established the size of the employer base, a representative sample of contractors was taken from this and interviewed to establish the characteristics of the workforce and skills issues affecting the sector. In total 1,105 telephone interviews were undertaken with 629 contractors and 476 sole traders, spread across the nine English regions and covering all the craft skills (See Figure 5 & Table 14 on the following page).

A considerable number of both contractors and sole traders were found to be involved with more than one trade as indicated in Table 14.

Figure 4 Location of Contractors and Sole Traders by Region Mapped against number of pre-1919 Buildings



Source: Estimate from research

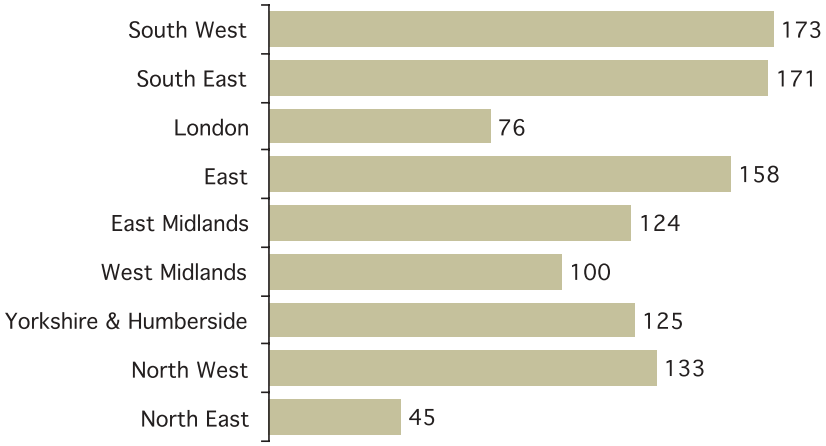
Source: English House Condition Survey 2001 Valuation Office (Oct 2000 dataset)

Table 14 Trades Undertaken by Contractors & Sole Traders Interviewed

Craft Trade	Percentage of Interviews with Contractors & Sole Traders (All craft trades)
Wood	75
Stone	56
Plaster	46
Metal	31
Paint	25
Roofer i.e. slate, tiles (not lead worker)	16
Brick	24
*Generalist	23
Glass	22
Earth	22
Thatcher	4
Steeplejack	3
Millwright	1

**Generalist: person who cannot be classified as carrying out one main trade, because they were involved in multi trades.*

Figure 5 Locations of Contractor & Sole Trader Interviews (by all occupations)



5.2.1 Employed Workforce

Taking into account the results of both the contractors' and the stockholders' surveys, the analysis shows that 36% of the contractors and stockholders with a direct labour force employed one or more carpenter. Similarly 34% employed one or more bricklayer and 32% employed one or more joiner. As in the main construction industry, carpenters and joiners and bricklayers are the most prevalent trades in the built heritage sector, followed (in descending order) by painters and decorators (21%), lime plasterers (21%) and stonemasons (20%). Generalists (those working in more than one generic trade) were also likely to be employed (30%). When considering the number of craftspeople employed in the built heritage sector, this, in common with the main construction industry, has a sub-contracting culture. This means that many skills are bought in when required, which might be from other contractors or using sole traders.

This research has established the average number of craftspeople per contractor/sole-trader for each

Table 15 Percentage of Contractors and Sole Traders in the Region with at least one Employee with a Specific Craft Skill

Craft	Percentage	Craft	Percentage
Blacksmith	9	Machinist	6
Bricklayer	22	Marbler	2
Cabinet Maker	5	Master Glass Painter	1
Carpenter	24	Mosaicist	2
Carver	4	Other metal roof worker	4
Clay Dabbins	1	Painter & Decorator	15
Cob Builder	3	Pargeter	2
Dry Stone Waller	6	Pavior	4
Fibrous Plasterer	10	Roofer Slate, Tiles	21
Flint Knapper	2	Stained Glass	4
Generalist	22	Steeplejack	2
Gilder (Paint)	2	Stone Fixer	10
Gilder (Wood)	2	Stonemason	17
Glazier	6	Thatcher	4
Joiner	22	Tiler	8
Lead Worker	9	Wattle & Daub	2
Lime Plasterer	17	Wheelwright	2

occupation (Table 15). However, it should be remembered that some contractors work in both the built heritage sector and the wider construction industry. Furthermore, this research has established that multi-skilling does occur and this means that all skills will be recorded here not just the main skills.

The vast majority of sub-contractors (71%) are sourced from within a 20-mile radius of the job. The mobility of the workforce is influenced to a degree by the relationship of stock to workforce, and naturally a distinct lack of workforce brings craftspeople in from outside of the region. Conversely, stockholders (especially domestic stockholders) are of the mind that local craftspeople have experience and knowledge of both local building materials and methods and hence prefer to engage local craftspeople, thus mitigating mobility. A factor which definitely has an influence on mobility is that of specialism, with highly specialised skills more likely to be sourced from outside of the immediate locality.

Across England as a whole more carpenters are employed than any other trade, but there are still regional variations, with more employed in the East, South East and West Midlands than in London, and the North West. A high percentage of bricklayers are employed in the East and East Midlands; joiners are prevalent in Yorkshire & Humberside and the North East and more stonemasons work in the South West and the North East.

5.2.2 Workforce Age Profile

At the beginning of this research there was a hypothesis that the built heritage sector was losing craft skills at a significant rate due to the workforce ageing and retiring. This research has shown that this is not the case. An average of 4 craftspeople left the employment of contractors or stockholders with a direct labour force within the last three years. 37% of these employers experienced ten or more employees leaving, as opposed to 10% experiencing no-one leaving. Encouragingly, on average less than one craftsperson left due to retirement, which indicates that craft skills are at present not being lost for this reason. However, the current mix of younger and older workers means that this perceived loss of skills due to retirement could happen in the future.

The age profile of the construction industry like that of many UK industries is mature and has undergone significant change over the past 10 years. For both manuals and non-manuals in the industry, the labour force statistics have shown a sharp decline in the share of the younger age groups in total employment and an analogous rise in those aged 45 years and over. The industry has an age profile that is significantly biased towards the 30-39 age bracket.

A key demographic issue is the loss of key skills due to retirement, and the addition of new skills through recruitment in the lower age groups. In the industry as a whole, 378,120 people, or 17.4% of the industry are within ten years of the statutory retirement age. This is balanced by those entering the workforce within the younger age groups. The 16-29 age groups are traditionally identified as the

"You look at the people out on-site; there are not many young people and that is the problem. Once all these people have reached retirement age, there are going to be less and less people doing the work"

Contractor

industry's optimal entry age range. In the UK, 484,620, or 22.3% of the workforce is represented by the 16-29 age groups. However, labour force statistics show a dip in numbers within the 25-29 age group. This has been attributed to a fall-off in recruitment in the early 1990s possibly due to the industry recession.

The long-term concern for the industry is to ensure there are sufficient numbers joining to replace those that are leaving. The supply of people in the 16-19 age group, traditionally the entry point into manual portions of the industry is a particular concern and a growing constraint due to the rise in uptake of post-16 education options. The size of this age group in UK manual construction occupations in 1990 was over 145,000, compared to 92,000 in 2003, a decrease of more than a third. The increase in retention of pupils in post-16 education, and similarly at degree level is reducing the recruitment pool of high quality candidates in these ages, and because individuals with academic qualifications often have other aspirations than to work in manual trades, they may be lost to the industry for good.

Clearly there is still much to do to encourage more young people to join the industry, although this should be complemented by initiatives to top-up the existing workforce with older and more experienced individuals from other sectors and the economically inactive. It is also anticipated that advances in innovation and technology will to some degree off-set the decline in the numbers of individuals joining the construction industry by enabling a greater output from lower inputs.

A model of the effect of the workforce age profile (Table 16) based upon the hypothesis gained from the qualitative research shows that the built heritage sector is currently composed of a mixture of younger and older workers, with a gap in the middle. It also predicts what will happen over the coming years, as these workers get older,

Table 16 Current and Future Age of Workforce

	Age 16 – 25	Age 26 – 35	Age 36 – 45	Age 46 – 55	Age 56 – 65
Now	✓	✗	✗	✓	✓
In 10 years' time	✓	✓	✗	✗	✓
In 20 years' time	✓	✓	✓	✗	✗

assuming that the younger age group will remain in the sector and the older group will retire.

This model presents four main issues:

- On the positive side, there is evidence of young people joining the workforce.
- On the negative side, today's trainers (college and work-based) are of the older generation with few mid-generation trainers.
- Older workers will retire or leave the sector in due course and it may be 10 years before significant losses due to retirement are seen in the workforce profile, but this may be sooner, if precipitated by any significant migration to other industries.
- The older generation of craftspeople may find it harder to communicate with younger people, as they have little in common.

The number of people entering the construction industry and therefore the built heritage sector from training currently falls short of the forecast requirement.

CITB-ConstructionSkills previously calculated employment turnover on the basis that those in the craft occupations spent on average 20 years in the industry before leaving, usually moving into another industry or retiring. This relatively low average for time spent in the industry being attributed to churn in the workforce related to economic cycles, often referred to as 'boom and bust'. *(The construction industry has always been particularly sensitive to changes in the economy, and in this respect has been a good indicator of the 'health' of the nation. Construction is generally the first industry to feel the effects of a recession as investment in fixed capital (i.e. the built environment) is reigned-in, but by the same token construction generally leads out of recession as investment increases. This movement is also reflected in the labour market; growing in periods of prosperity and waning in periods of decline.)*

Statistics from the Labour Force Survey[46] show that approximately 1% of the wider construction industry workforce leave through retirement. As the total employment turnover within construction is 10%, this is a small percentage leaving the industry through retirement and supports the long-standing view that construction workers retire after entering other industries.

The construction industry overall is enjoying and will continue to enjoy over the next five years a period of strong demand. This offers an opportunity (and need) to invest in the workforce required to create a future where the service, productivity and predictability of the industry can approach that achieved by other sectors. Evidence suggests that traditional models of employer engagement (based on long-term relationships) reach about 25% of the construction industry workforce. Engaging with the other 75% (who tend to work on short-term contracts, and often on a self-employed basis) will require new methods of funding and provision that are more in tune with an industry that is increasingly project-based and supply chain driven. Realising this opportunity will ensure that the industry workforce is sufficient in size and able to meet the expectations of shareholders and clients, which in many cases it currently is not.

The economy is the greatest single factor impacting the future size of the construction sector. The level of activity in the economy drives the numbers of people employed in the construction workforce, and with the economy showing sustained growth there is an increasing demand for additional people. Demand for trained construction workers will increase further beyond the capacity of the current supply, and even if that supply is increased, challenges remain in attracting the right calibre of people. Without action, employers may respond by hiring unsuitably skilled labour, which will reduce the quality of outputs, impede productivity gains and reduce the value received by clients (of which Government is the largest).

Working on statistics alone it is clear that there is still much to do to encourage more young people to join the industry, consequently the recruitment of young people should be complemented by initiatives to top-up the existing workforce with

older and more experienced individuals from other sectors and the economically inactive.

It is anticipated that advances in innovation and technology will to some degree off-set the decline in the numbers of individuals joining the construction industry; by enabling greater outputs from lower inputs. However, the built heritage sector is limited by what can be achieved through such processes. The methods and materials that might be used in mainstream construction to improve productivity may not be applicable or suitable for the built heritage sector, if they compromise the integrity and/or social and historical value of the building.

5.2.3 Skills Shortages

Skills shortages are the inability to recruit people with the appropriate skills at an appropriate wage. The symptoms of skills shortage include long-term unfilled vacancies and understaffing. The knock-on effects of this can include long working-days and working-weeks and high overtime rates. Companies' performance can also be affected, including their capacity to bid for and fulfil new work. Shortages in craftspeople particularly affect short-term and project-based recruitment. Shortages can be highly acute but usually short-term, although they can affect the performance of the company on specific projects particularly those requiring specialist skills.

Construction work is almost entirely done on a project-by-project basis, whereby contractors will draw together teams of people who often work for quite a short period of time and then move on to another location or disperse. Much of the work is managed by a main contractor who deals with the client, but who subcontracts part of it to smaller firms who specialise in a particular aspect of the process.

The level of fragmentation in the construction sector can be seen as both a strength and a weakness: on the positive side, it is likely that it has the flexibility to deal with the highly variable workloads linked to changes in economic cycles; on the negative side the extensive use of sub-contracting has brought contractual relationships to the fore and hindered team-working, supply chain integration and investment in training. With this fragmented and short-term, project-based structure, the majority of site workers have entered the industry through informal routes and temporary work opportunities.

During this research, contractors and sole traders were asked a number of questions regarding their outstanding vacancies and difficulties experienced in recruitment, with the latter gauged on a sliding scale from 'easy' to 'extremely difficult'. These two aspects are used as an indicator to establish shortages and the effect this might have on labour supply and cost-related aspects, such as charging an increased premium to undertake specialist work or operating costs being driven up by wage inflation. This in turn can have a consequential effect on spending within the sector, with less work being completed due to higher costs or labour and skills shortages resulting in delays to projects. It might also have a knock-on effect, whereby more prestigious or lengthy projects at the higher end of the sector are undertaken, while smaller or less grand projects may struggle to be completed.

5.2.4 Outstanding Vacancies

The National Employer Skills Survey (NESS) 2003[47] estimated that 14% of all main construction businesses covered by ConstructionSkills had vacancies equating to 53,028 jobs. Eight percent of businesses also reported hard-to-fill vacancies (29,743 vacancies), and 6% of

employers were facing a skill shortage vacancy (19,646 vacancies). Table 17 shows that the percentage of establishments with any vacancies is lower for the construction industry (14%) than for English businesses as a whole (17%), while the percentage of hard-to-fill vacancies is the same (8%). When looking at skills shortage vacancies, this is 4% over all industries in England, but increases to 6% for the construction industry. The NESS report was based on 72,100 survey responses overall, including 9,469 in the construction industry. These were weighted up to represent all the industries in England (1,915,053) and those in the construction sector (247,189).

CITB-ConstructionSkills' Employers' Skills Need Survey[48] questioned approximately 500 construction companies across Great Britain regarding workload and recruitment difficulties in October 2003. Almost 70% of respondents reported recruitment difficulties (down from 80% on the previous year), with craft trades and managers presenting the most problems and approximately 21% of companies reported having at least one unfilled vacancy over the previous three months.

A recent study by CITB-ConstructionSkills[49] established that finding suitably skilled staff is still cited as the most common key business challenge reported by employers. Indeed one in four of those employing staff (and 15% of the self-employed) spontaneously cited this is one of their key business challenges. However, it is also more of an issue for large rather than small firms – a third of those with 100 plus staff across the UK say finding suitable staff is a key business challenge compared with a quarter among those employing between 2-24 staff.

This current traditional buildings skills research has established that:

- Almost a quarter of the contractors interviewed have outstanding vacancies, that is, positions that remain unfilled after three months.
- Nearly one in two of the contractors interviewed had difficulty in recruiting craftspeople.
- A further one in five found recruitment 'quite difficult.'

The percentage of contractors interviewed in this survey with outstanding vacancies is only slightly higher than the total Great Britain figure (21%) for the main construction industry and although

"There is a skills shortage, which is why a) I can't find enough people and b) I have to pay them well over the odds to stay."

Contractor

Table 17 Vacancies: Current, Hard-to-fill and Skill Shortage

	ENGLAND		CONSTRUCTIONSKILLS	
	% of establishments reporting	Number of vacancies (n)	% of establishments reporting	Number of vacancies (n)
All vacancies	17	679,072	14	53,028
Hard-to-fill vacancies	8	271,413	8	29,743
Skill shortage vacancies	4	135,295	6	19,646
Weighted base	1,915,053	1,915,053	247,189	247,189
Unweighted base	72,100	72,100	9,469	9,469

Source: National Employer Skills Survey, 2003. Base all establishments

not directly comparable, this shows a degree of consistency. However, the combination of those with outstanding vacancies and the percentages experiencing difficulties with recruitment still indicates a skills shortage in the built heritage sector. The percentage of contractors with outstanding vacancies and number of those vacancies varies considerably by region (Figures 6 & 7). This equates to 3,170 long-term vacancies.

The North East region has the lowest number of long-term vacancies and although it also has the highest percentage of contractors with a long-term vacancy the number of contractors in that region is low resulting in less impact on the sector across England as a whole. Though, regionally this has a high impact for the North East. By contrast, the South East has a low percentage of contractors with long-term vacancies, but the fact that there are a high number of contractors in that region results in a high number of long-term vacancies.

5.2.5 Recruitment

Renewing and sustaining the workforce numbers of any industry involves the use of different recruitment strategies. Modern Apprenticeships enable young people to seek out and gain employment within their chosen industry while actively training. Both the employee and employer receive support for the on-the-job and college-based training elements and an individual can then qualify up to NVQ Level 3. Employers may also use their contacts with local schools and FE Colleges to find young recruits or employ those who have completed a full-time construction course. However, whilst apprenticeships are immensely important and provide the foundation for training for the youngest recruits, the majority of those working in the built heritage sector have entered via mainstream trades or career changing. For all but the most specialised trades, learning the skills on the job is the norm and few aspire to qualification through apprenticeships or NVQ conservation units.

Qualified craftspeople also change employer and employers use local, regional and national advertising and trade journals to attract a skilled craftsperson or one who has temporarily left the industry. Advertising can also attract adults that may need further up-skilling who demonstrate the commitment and potential to develop and benefit the company. For those without qualifications On-Site Assessment and Training (OSAT) provide an important opportunity. The built heritage sector uses the same strategies as the rest of the construction industry and CITB-registered employers benefit from their support. This includes recruiting and training apprentices at the local level.

An average of 51% of the contractors in this survey reported having real difficulties in recruiting and those contractors who have no difficulty in recruiting (up to 13%) either advertise locally or find craftspeople by informal recommendation. The number of contractors recruiting through local colleges is also low

Figure 6 Percentage of Contractors with Outstanding Vacancies

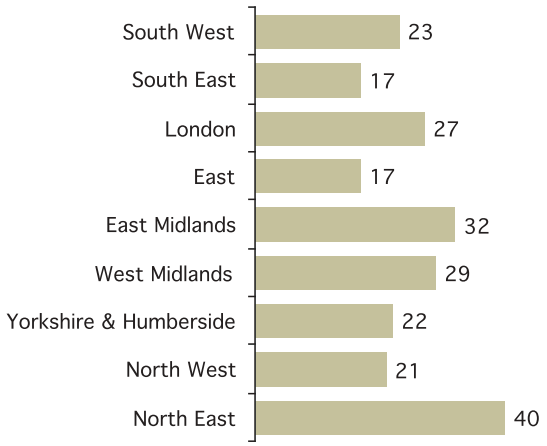


Figure 7 Number of Long-term Vacancies by Region

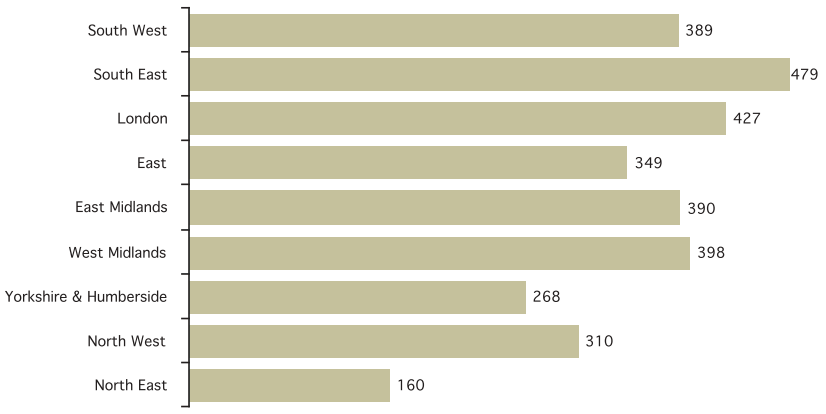
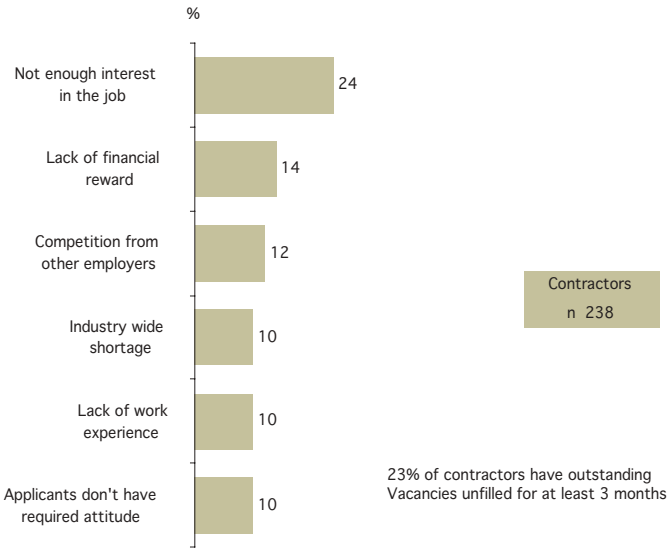


Figure 8 Reasons for Lack of Applicants



Base:Those that find it relatively difficult to recruit tradesmen due to lack of applicants

(13%) and developing links between these two parts of the sector and the role of placement officers within colleges is necessary. On a regional basis, 60% of contractors in the West Midlands and the North East find it very difficult to recruit, while London has the least difficulty at 32%. The South East (17%) and East (17%) have the lowest percentage of outstanding vacancies, but these regions still report recruitment difficulties.

Across the regions, those contractors experiencing greatest difficulties in recruitment cited lack of skills (71%) as the reason for this rather than lack of craftspeople (56%). But both percentages are worryingly high and the two reasons are inextricably linked. This research suggests there is a lack of applicants and those that are applying are short of the necessary skills (See Figure 8). However, the view that a lack of skills exists is clearly subjective and as this research established that respondents equate skills with experience; a reasonable level of care must be taken in interpreting this result. A lack of applicants was the reason for recruitment difficulty most cited by the contractors from Yorkshire and Humberside (69%) and the South West (65%), while this was the least likely reason in the South East (45%). The lack of applicants shows more regional variation than 'lack of skills', which was highest in the North East (79%) and lowest in the South East (64%).

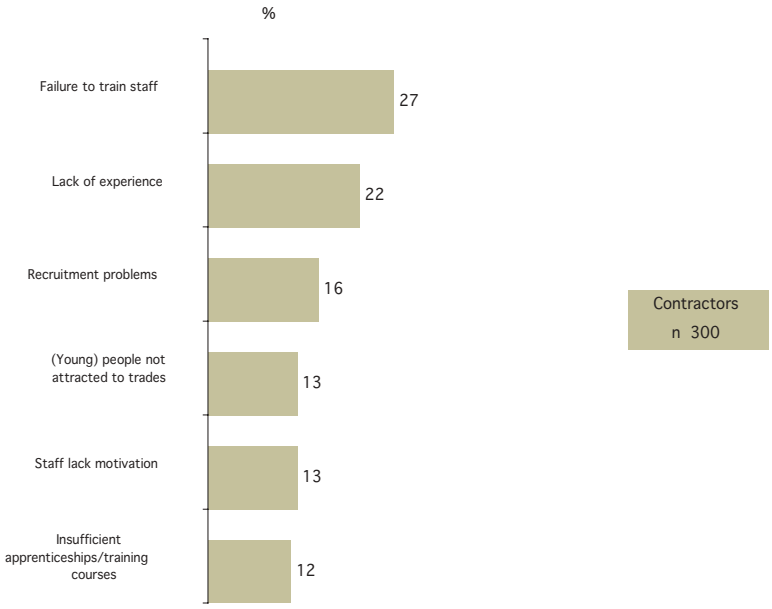
5.2.6 Lack of Skills

Lack of applicants was cited by 56% of the contractors interviewed who had difficulty recruiting as a reason for shortages in the sector, but the more frequently stated reason was a lack of skills (71%). This is a fundamental stumbling block for the built heritage sector, which needs a combination of knowledge and practical skills. When questioned into the causes of skills gaps, 27% of contractors said that the sector fails to train employees and 12% said that there were insufficient apprenticeships/ training courses (See Figure 9 on following page).

The 22% of contractors who cited a lack of skills as a reason for shortages also thought lack of experience was a mitigating factor. Experience is gained over time and by working on a range of projects. The built heritage sector is fragmented, so contractors do not encounter as wide a variety of projects as experienced by previous generations. These days exposure to a wider range of work is only achieved by the individual moving around to different projects or working for larger contractors who offer greater breadth of work experience.

Contractors who find it difficult to recruit due to a lack of skills are increasing their training programme (25%) and/or providing further training (32%). Regionally, London and the East Midlands are likely to provide only further training, whereas the other regions will provide further training and increase their training programmes. Yorkshire and Humber is performing even less well than London and the East Midlands, in terms of increasing training programmes. Some contractors have become resigned to the situation, with 15% taking no action. Of contractors interviewed 25% who find it difficult to recruit due to lack of applicants are also increasing their in-house training programmes and 20% are providing further training for their workforce. The key difference for this group is that 15% are spending more on advertising and 13% are taking no action.

Figure 9 Reasons for Lack of Skills



Base:Those that find it relatively difficult to recruit tradesmen due to lack of skills

As the built heritage sector comprises small-to-medium enterprises, sole traders or self-employed practitioners, a large percentage of Labour-only-Sub-Contractors (LOSCs) exists (Figure 10). Employers have no responsibility or financial imperative to train LOSCs as they are engaged on a short-term or project by project basis. This has a serious impact on up-skilling. Also, if craftspeople from the construction industry are enticed to work in the built heritage sector, greater initial conservation related training will be needed and this requires funding.

Earlier research commissioned by CITB-ConstructionSkills and the Department for Education and Skills (DfES)[50] indicated that whilst almost three in four (73%) employers had used Labour-only Sub-contractors (LOSCs) over the preceding 12 months, there was strong evidence that training was less likely to be provided to LOSCs. Whilst 37% of firms who employ manual staff directly provided any off-the-job training to some of their manual staff over the last 12 months, only 20% of those using LOSCs had provided any off-the-job training to LOSCs.

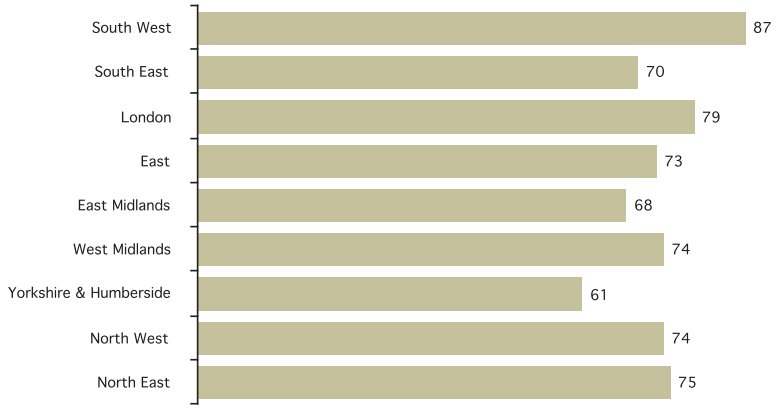
More telling, is that overall a much higher proportion of directly employed staff received any off-the-job training. For example, 17% of those employing manual staff directly indicated that all their directly employed manual staff had received training over the previous 12 months compared with 8% who employed LOSCs saying they had provided off-the-job training to all their LOSCs. A greater proportion of directly employed staff receive on-the-job training compared to that for LOSCs. For example, 17% of those with directly employed staff said all or nearly all these workers were given on-the-job training. This is twice the level found among employers with LOSCs in terms of the proportion of this type of staff given on-the-job training (9%).

The picture of those working towards any qualifications confirmed this. Overall 17% of workers indicated they were working towards a formal qualification, which is much higher among those directly employed (22%) than those in self-employment (10%). There is strong evidence from both employers and construction workers that less is invested in the training of staff who are employed on an LOSC basis. It is also the case that LOSC workers tend to receive their training and qualifications while being directly employed.

5.2.7 Retention of Skilled Craftspeople

While recruitment is a problem, once contractors have recruited

Figure 10 Percentage of Contractors that Sub-contract



staff they feel that they do not have any particular difficulty in retaining their workforce, with approximately one third of those interviewed finding it 'easy' to retain staff and a further third find it 'quite easy'. However, employing a workforce is only one aspect of the built heritage sector employment structure and much of today's work, in common with the main construction industry, is sub-contracted.

The main construction industry has progressively changed over the last thirty years from contractors directly employing specialists to being dominated now by specialist trades engaged on projects as sub-contractors. This is illustrated by the Labour Force Survey 2004 statistics, that of 2,081,000 people employed in the industry, 771,000 are self-employed. At 37% this figure represents a drop from 40% in 1997, but is still one of the highest in Europe. The flexibility of such a large pool of self-employed labour and the avoidance of employers' National Insurance contributions are significant financial advantages to main contractors. The disadvantage however, is the lack of investment in skills and qualifications and those who are self-employed migrate from job to job with little security of income and few of the advantages of direct employment.

Contractors in the built heritage sector contractors directly employ only staff with main trade skills, and on average 74% of those surveyed sub-contract to supplement gaps and engage specialist craft trades when required .

None of the contractors in the survey said that sub-contractors were hard to find or reported difficulty in finding a wide range of sub-contracted trades. The following were suggested as being relatively easy to find: blacksmiths; bricklayers; carpenters, joiners and machinists; cob builders; floor and wall tillers; glaziers, glass painters and stained glass workers; gilders; lead workers; lime plasterers; machinists; marblers; metal roof mosacists; painters and decorators; paviors; stone masons and stone fixers; slate and tile roofers, steeplejacks.

Two factors must be considered when interpreting this finding. Firstly, contractors working consistently within the built heritage sector have an established network of contacts, knowing 'who does what' and 'who to go to for which skills'. Once networks are established they continue to use these sub-contractors as long as the work they complete is of a sufficient standard. This network of sub-contractors is further extended by new connections often made by personal recommendation, thus the need to advertise their services is reduced. Secondly, the seeming overall lack of difficultly in finding sub-contractors conceals a different regional picture (Table 18). Analysis of this data shows that the North West and the South West have difficulties in finding a wide variety of skills, whereas Yorkshire & Humberside have least difficulty. At regional level the picture supports the hypothesis that there is a skills shortage within the built heritage sector and those most widely lacking are carpenters, cabinet-makers, wheelwrights, fibrous plasterers, bricklayers and thatchers.


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Table 18 Contractors Responses to Lack of Skills

Region	Provide further training %	Increase training programmes %	Increase recruitment %
South West	33	33	18
South East	29	24	8
London	27	13	20
East	37	27	4
East Midlands	41	19	8
West Midlands	28	25	13
Yorkshire & Humberside	34	10	14
North West	27	33	12
North East	27	27	36
England	**32**	**25**	**12**

Table19 Contractors Degree of Difficulty in Locating Trades by Region

	South West	South East	London	East	East Mids	West Mids	Yorks & Hum'side	North West	North East
Blacksmith							*		*
Bricklayer			*	*	*			*	*
Cabinet Maker	*		*	*	*	*		*	*
Carpenter	*		*	*	*		*		
Carver	*								
Clay Dabbins	*	*				*			
Cob Builder		*							
Decorator									
Dry Stone Waller	*		*						
Fibrous Plasterer	*		*	*	*		*	*	*
Flint Knapper	*	*				*			
Gilder (Paint)				*	*		*	*	
Gilder (Wood)	*			*	*			*	
Glazier								*	*
Joiner									
Lead Worker	*		*					*	*
Lime Plasterer			*				*		*
Machinist				*	*			*	
Marbler			*					*	
Master Glass Painters								*	
Millwright	*	*	*	*					
Mosaicist	*					*		*	*
Other metal roof worker				*	*			*	*
Pargeter	*	*						*	*
Pavior		*							
Roofer ~ slate & tile			*						
Stained Glass								*	
Steeplejack		*							
Stone Fixer	*					*		*	
Stonemason	*					*	*	*	
Thatcher	*			*	*	*	*	*	*
Tiler									*
Wattle & Daub	*	*				*		*	
Wheelwright	*	*		*	*	*		*	*

Key: * *= difficult to find*

= not difficult to find

****Whilst at first sight there may appear to be anomalies between the vernacular architecture of the regions with the trades that contractors and sole traders have difficulty finding and have to wait to access, it should be remembered that this information does not relate solely to the vernacular architecture. Even though a region may not be known for a certain type of architecture there is likely to be examples of non-vernacular architecture in existence. This statement is also relevant to Table 19.*

5.2.8 Waiting Time for Craftspeople

The time a contractor has to wait to undertake work is another indicator of skills shortages. In the nine English regions and across all craft trades the average waiting time for skills is less than two months (Table 19), but again this conceals a different picture at regional level where the waiting time may be up to six months (Table 20). In the South East and Yorkshire and Humberside, skills are said by contractors to be readily available if you know where to look. Whereas even if you know where skills are in the West Midlands or the North West you will still have to wait for these. Among those skills with the

Table 20 Contractors Waiting Time for Trades by Region

	South West	South East	London	East	East Mids	West Mids	Yorks & Hum'side	North West	North East
Blacksmith						**		**	**
Bricklayer									
Cabinet Maker			***	***	**	**		***	
Carpenter			**		***				
Carver		**	***	***		***		***	
Clay Dabbins	**				**	**			
Cob Builder					**	***			
Decorator									
Dry Stone Waller					**	**		**	
Fibrous Plasterer									
Flint Knapper						***		**	
Gilder (Paint)			***		***	**			
Gilder (Wood)			**		**	**		***	***
Glazier								**	**
Joiner			***	***				**	
Lead Worker									
Lime Plasterer						**			
Machinist								**	**
Marbler					**	**		***	**
Master Glass Painters						**		**	
Millwright									
Mosaicist						***		***	***
Other metal roof worker						**			
Pargeter	**				**	***		**	***
Pavior			**		**	**			
Roofer - slate & tile									
Stained Glass				**				**	**
Steeplejack			**			**			**
Stone Fixer			**		**			**	**
Stonemason	**		**					***	
Thatcher	***	**		***	**	**		***	***
Tiler					**	**			
Wattle & Daub					**	***			
Wheelwright	**				**	***		***	***

Key: ** *Average wait time of between 2-3 months*

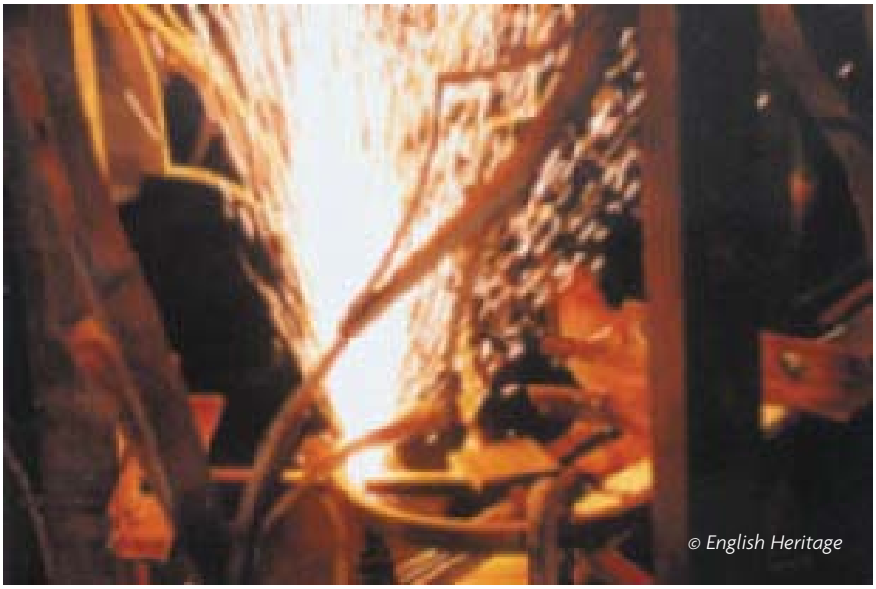
*** *Average wait time of over 3 months*

Void *Average wait time of less than 2 months*

greatest waiting time are carvers, cabinet makers, gilders, pargeters, and thatchers.

5.2.9 Skills Shortages as a Catalyst for Mobility and Migration

Recent research[51] supports the widely held assumption that the construction workforce is very mobile and to that end flexible. This mobility is obviously influenced by the relationship of workload to workforce, and naturally a distinct lack of workforce brings people in from outside of the region, and country. In terms of occupational structure, manual workers dominate and they are likely to earn more than manual workers in other sectors – a condition that has applied since 1995 and could



indicate that skills shortages are leading to wage inflation. Manual wages in construction are currently running at more than 12% over national norms[52].

Given the current rate of growth in UK construction output with a demand scenario of around 3% growth rate, this implies either a massive step-change is achieved in labour productivity by greater and more efficient investment in human capital, or it implies labour force growth of around 3% pa. It seems unlikely, even with substantial increases in relative construction wages, that the industry can solely rely on 'domestic' sources of labour, although the link between salaries, conditions and recruitment needs to be explored[53].

The alternative is to 'import' labour on a large scale. Aside from political sensitivities to charges of 'swamping', this raises difficult questions about the impact on investment in human capital, skill levels, wages & salaries and labour productivity. The danger is that the short-term solution that government and firms will adopt will be to imitate what has happened in the USA in the 1960s and 1970s – that is, replace increasingly scarce, productive but high-paid labour by abundant, less skilled and less productive but much lower paid migrant labour. In the US, this was the start of a subsequent long 'vicious circle' in which construction industry labour productivity and relative wage rates have chased one another downwards – with lower wages reducing incentive to invest in either fixed or human capital[54].

The ConstructionSkills study[55], 'Employer Attitudes and Motivations to Learning and Training' indicated that currently only 4% of employers (excluding the self-employed) said they had employed any non-UK citizen in the last 12 months. Predictably, size of company is a key determinant, with larger firms much more likely to have recruited such staff. Perhaps more surprisingly, this was more likely with Professional service firms than Construction firms.

Overall, non-UK citizens account for 2% of the total current workforce (6% among the largest firms employing 250 or more across the UK). Very few firms indicate that they are or have recently employed non-UK staff because they are more skilled than those applying from the UK (12%), though many recognise that non-UK staff are generally more motivated (54%). Most of those using non-UK appear to do so out of preference rather than necessity (only a third say they employ non-UK staff because they are having difficulty finding the workers from the UK that they need).

One issue that may need further investigation is the issue of comparative pay rates between UK and non-UK staff. Findings here suggest that in most cases employers using non-UK workers are not getting the non-UK labour at cheaper rates (only 24% said using non-UK workers meant they got good workers at competitive rates).

In summary, the evidence is that there is no case for believing that there is going to be a radical switch in either the size or skill mix of the workforce in the short-term, but that work does need to be done to ensure that labour availability and the skills mix is sufficient to exploit the opportunities as they become available.

5.3 Sector Inflow and Outflow

Table 13 demonstrated that during the past 12 months employment within the built heritage sector was composed of 86,430 people and this needs to increase to 89,850 over the next 12 months in order to satisfy the estimated demand. This results in a required intake of 3,420, but this increases to 6,590 when adding in the current 3,170 long-term vacancies. It should be noted

that these estimates do not take into account improvements in productivity or increased workforce mobility including skilled migrant workers.

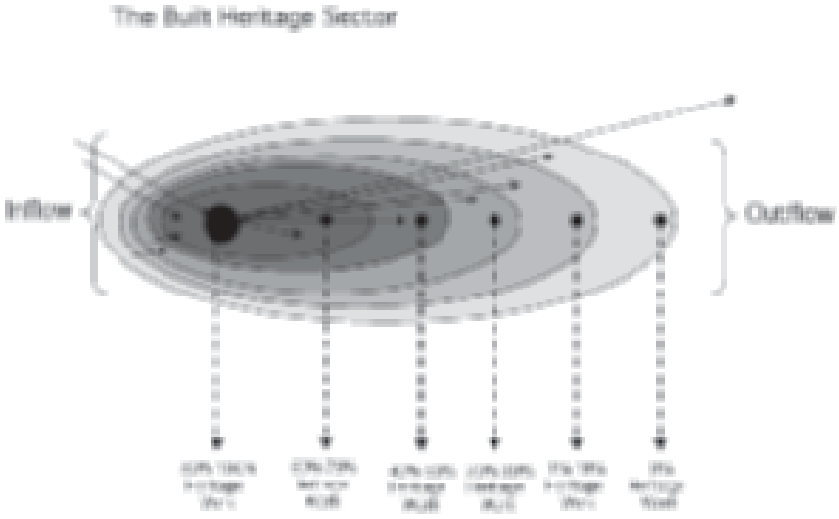
In arriving at these estimates, it is not known what proportion of this inflow figure would also work in the wider construction industry as well as the built heritage sector. The British Household Panel Survey[56] indicates that approximately 37% of those coming into construction previously worked in the construction industry and obviously re-enter with some relevant skills. Therefore, in this respect, estimating the labour requirement is not the same as predicting the training needs.

Evaluating workforce churn, that is, the inflow and outflow of workers, within the main construction industry is an established practice[57]. However, the present skills mapping survey has not directly researched workforce churn or the levels of productivity, within the built heritage sector. This is the first time that data of this type for this specific sector have been collected and analysed, and it is unknown whether this level of inflow will be sustained over the medium to long-term future. If the estimated level of demand is the result of a backlog of outstanding work, then as that work is completed, demand will decrease as will the required inflow.

Nevertheless, the datasets obtained from the research provide the basis for a tentative churn model to be developed, but it should be stressed that this has not been quantified for this sector. The accumulated research shows that those working within the built heritage sector do

Figure 11 Inflow and Outflow from the Main Construction Industry

Figure 12 Inflow and Outflow Within the Built Heritage Sector



so at different degrees; some contractors and sole traders undertake little or no work in this sector, whereas for others this forms the majority of their work. It can therefore be postulated that inflow (Figure 11) to this sector comes from:

- Outside the construction industry
- Within construction, but outside the built heritage sector
- Within the periphery of the built heritage sector

Conversely, outflow can be the reverse, that is, from the built heritage sector to any of the above and also those leaving due to long-term sickness, incapacity or retirement (Figure 12).

Three aspects of craft skills within the built heritage sector, skills most frequently used in the past 12 months, those that are difficult to find and those with an average waiting time of over three months (See Table 21 on following page) have been used to construct a model that weights the crafts relative to one another in terms of shortage and importance. The weightings have been applied to the required inflow to provide estimated craft-specific future required inflows (Table 22). It should be noted that the future craft trade requirements are not absolute, as workload planning and productivity affect these figures, probably resulting in a reduction in the numbers required.

Table 21 Summary – Trades used, difficult to find and waiting times

	South West		South East		London		East		East Mids		West Mids		Yorks & Hum'side		North West		North East	
Blacksmith													*				*	
Bricklayer					*		*		*						*		*	
Cabinet Maker	*				*	***	*	***	*		*				*	***	*	
Carpenter	*				*		*		*	***			*					
Carver	*					***		***				***				***		
Clay Dabbins	*		*								*							
Cob Builder			*									***						
Decorator																		
Dry Stone Waller	*				*													
Fibrous Plasterer	*				*		*		*				*		*		*	
Flint Knapper	*		*								*	***						
Gilder (Paint)						***	*		*	***			*		*			
Gilder (Wood)	*						*		*						*	***		
Glazier															*		*	
Joiner						***		***										
Lead Worker	*				*										*		*	
Lime Plasterer					*								*				*	
Machinist							*		*						*			
Marbler					*										*	***		
Master Glass Painters															*			
Millwright	*		*		*		*											
Mosaicist	*										*	***			*	***	*	***
Other metal roofworker							*		*						*		*	
Pargeter	*		*									***			*		*	***
Pavior			*															
Roofer – slate & tile					*													
Stained Glass															*			
Steeplejack			*															
Stone Fixer	*										*				*			
Stonemason	*										*		*		*	***		
Thatcher	*	***					*	***	*		*		*		*	***	*	***
Tiler																	*	
Wattle & Daub	*		*								*	***			*			
Wheelwright	*		*				*		*		*	***			*	***	*	***

trade frequently used in last 12 months * trade difficult to find *** average wait of over 3 months for trade

The above number of craftspeople will be required to satisfy the needs of the heritage building industry within the next 12-24 months. However, there is a question over whether or not there will be sufficient work to sustain these skills in the long term.

This research has established the percentage of contractors and sole traders that have apprentices and the average number of apprentices employed by those contractors. It has also established that contractors and sole traders are very different in their uptake of apprentices and their approach to training. Whilst it has been possible to identify the total number of contractors and sole traders and employees, this research has not established the ratio between contractors and sole-traders hence these figures cannot be grossed up to give a total number of apprentices employed in the heritage building sector. Furthermore, it should be

Table 22 Future Required Inflows

Craft Skill	Weighting	Required Inflow	Craft Skill	Weighting	Required Inflow
Blacksmith	1	56	Machinist	1	83
Bricklayer	8	528	Marbler	1	83
Cabinet Maker	4	278	Master Glass Painters	0	28
Carpenter	8	556	Millwright	2	111
Carver	2	139	Mosaicist	3	195
Clay Dabbins	1	83	Other metal roof worker	3	167
Cob Builder	1	56	Pargeter	3	167
Decorator	5	334	Pavior	0	28
Dry Stone Waller	1	56	Roofer – slate & tile	8	528
Fibrous Plasterer	3	195	Stained Glass	0	28
Flint Knapper	2	111	Steeplejack	1	83
Gilder (Paint)	3	167	Stone Fixer	1	83
Gilder (Wood)	2	139	Stonemason	6	417
Glazier	2	111	Thatcher	5	306
Joiner	6	389	Tiler	0	28
Lead Worker	7	445	Wattle & Daub	2	139
Lime Plasterer	3	195	Wheelwright	4	278
			Total	**100***	**6590**

**The figures include rounding*

Table 23 Estimated Regional Inflow by Craft Trade

	South West	South East	London	East	East Mids	West Mids	Yorks & Hum'side	North West	North East	Total
Carpenter	68	83	74	61	68	69	48	54	29	556
Bricklayer	65	79	71	58	65	66	45	52	28	528
Slate & tile roofer	65	79	71	58	65	66	45	52	28	528
Lead Worker	54	67	60	49	55	56	38	44	23	445
Stonemason	51	62	56	46	51	52	36	41	22	417
Joiner	48	58	52	43	48	49	34	38	21	389
Decorator	41	50	45	37	41	42	29	33	18	334
Thatcher	46	57	–	42	46	47	32	37	–	306

**The figures include rounding*

remembered that the heritage building sector is not separate to the wider construction industry and that some contractors work in both market sectors, hence it can not be assumed that these apprentices work exclusively and totally within the heritage building sector. Should this research be repeated in the future the information collected here could be developed further to identify the ratio and hence the total number of apprentices.

Table 23 shows the regional distribution of craft trades based upon the breakdown of inflow due to increased demand and the regional long-term vacancy pattern.

5.4 Innovation within the Construction Industry

Within the wider construction industry clients are demanding better value, more predictable costs, reliable quality, and fixed completion times, and this, coupled with a skills shortage, has initiated change within the industry. In this post-Egan era, single supply chains have been established and large companies have responded by being more innovative and by working with designers and manufacturers of materials and components to improve products and processes for ease of installation and improved performance and cost. Such companies have taken their suppliers and others with them and

sections of the industry have sought to change the whole construction process, using technology and innovation. While the rate of change has been gradual, both over time and in scope, there is little doubt that it will, in due course, have significant implications for the composition and occupational mix of the wider construction industry.

Off-site manufacturing is an area of technological change and innovation that in particular has the potential to impact across many supply sources and occupations within the industry. The aim of off-site manufacturing has been to take out many of the uncertainties of construction and prepare as much as possible within factories or workshops in a controlled environment, to allow greater control of quality and cost, and to mitigate some of the problems of skill shortages and labour supply. Any shift towards off-site manufacturing is likely to mean that on-site construction increasingly becomes more of an assembly process, suggesting that the industry will see a move from fabrication to fitting. Prefabricated components and assemblies will enable greater output from a smaller workforce essentially leading to fewer trades-people working on site and within construction[58]. It will also mean that the skills of those on site will change in line with what is required.

Whilst the traditional built heritage sector does not utilise machinery and other labour and time saving devices to the same extent as the main construction industry, their wider and increasing use presents a significant albeit indirect risk to traditional building skills. Much of the building activity undertaken within the construction industry still involves traditional methods and materials that have remained fundamentally unchanged for well over 100 years or more, however this is steadily changing as new materials and methods of construction are introduced. A concern is that the increased use of technology and innovation within the main construction industry, and the associated change to the skills set of the workforce, will result in fewer operatives of a high enough level being available to progress through to the specialist occupations. This will also have implications for the training and qualification framework, as the system will increasingly need to serve both the generalist needs of the wider industry as well as the quite specific needs of the specialist occupations within niche markets such as those that exist within the built heritage sector.

TRAINING 6

training

The late 20th Century drive to qualify the construction industry's workforce is a direct result of the charted decline in training and skills levels. The low priority afforded to qualifications and training, particularly during the economic downturns in the industry left it with a culture of non-qualification and even though training had continued via mentoring on-site, this was not recognised as a necessary part of wider training.

The Major Contractors Group (MGC) has led the renewed campaign to qualify both the existing and new workforce. This has linked to the long established government support to training via the Learning and Skills Council which supports Modern Apprenticeship frameworks, and which allows young people to gain employment and training at the same time. The construction industry has developed mechanisms for recognising the existing workforce's skills and mapping this against the NVQ framework. Individuals and companies can then identify gaps in training and skills and employees can train and achieve a full NVQ. On Site Assessment and Training (OSAT)[59] is a CITB-ConstructionSkills initiative to enable the process of training and assessing the existing workforce, which has been supported financially via CITB-ConstructionSkills and the Learning and Skills Council.

Apprentices are not the only route into the industry and the bulk of those working in the built heritage sector enter via mainstream site-based trades (carpenters, bricklayers, etc). They learn on the job and very few take up existing conservation options as part of the NVQ qualifications or apprenticeship training. Only very specialist trades, for example, stonemasons, thatchers, stained glass, seek formal qualifications on entry into the conservation sector. Also, most craftspeople enter the heritage sector at an older age, having qualified initially as apprentices, or through an NVQ programme based on mainstream site trades, or having changed career usually from a background of creative crafts and through an empathy with historic buildings and hand craft skills. Although there has been a significant increase in apprenticeships within the construction sector over the last few years, apprenticeships still account for less than a third (27%) of all new entrants (excluding sub-level 2 courses)[60,61].

6.1 Training Routes

On completing statutory education at age 16, academically minded young people usually choose to study for A Levels and progress to Higher Education and employment afterwards. The more practically orientated either study S/NVQs and technical certificates for full-time craft students at college (many colleges offer a full-time training route into construction crafts) or they enter employment as an apprentice. As an apprentice their training is within the work-place and supported by day or block release at college. Contractors who are registered members of CITB-ConstructionSkills receive grant-aid for apprenticeship training to a maximum of £6,772 (CITB Grants Scheme 2004/05). They may also gain some financial support if they provide work experience to a young person who is training on a full time basis at a local Further Education college.

Whilst a few apprentices might on completing their qualification choose to go on to Higher Education, the majority enter the labour market as craftspeople. Over time, with relevant work experience and acquiring further knowledge, they should progress to become a skilled or highly skilled craftsperson. The level at which an individual remains or develops varies and some widen their skills base and progress to a supervisory or site management role and/or estimator or contracts manager. Some will become self-employed or establish their own business.

The main route into the built heritage sector is often through people changing from another career, from a related or unrelated discipline. Formal training and attaining a qualification might be achieved by attending a college course, either full time or as part of their paid employment. This might include attending night classes to learn new craft skills or to refresh/improve existing skills or increasingly for older entrants by On-Site Assessment and Training (OSAT). Grants for this are available to in-scope companies from CITB-ConstructionSkills to up-skill their workforce and the introduction of Adult Apprenticeships by the government should assist employers in considering these additional options available to them.

Colleges are the mainstay of craft training, but these provide for the new-build sector and very few have expertise in the built heritage sector.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Specialist training centres are more likely to provide the type of skills necessary for conservation, repair and restoration of historic buildings. Producers and manufacturers of materials, products and equipment are also a source of training, and short courses such as those run by West Dean College, Weald and Downland Open-Air Museum, the Society for the Protection of Buildings (SPAB) and others provide important aspects of built heritage training.

6.2 Contractors Views of Training

6.2.1 Apprentices

As mentioned in Section 5.2.3 (Skills Shortages) some contractors recognise the need for training, but the extent of this behaviour needs to be analysed. This survey has shown that 60% of the 629 contractors interviewed have apprentices under the age of 25 at an average of 3 apprentices (Table 24). Across all contractors, the average was 2 apprentices per firm,

"One of the problems with the industry generally, given the shortage of skills, is that quite often, once students have even got half a career qualification, once they've started to be useful, then the firm will snap them up. It's very difficult to persuade the firms to send the student back to get Level 3 after they've reached Level 2, there's no incentive for the firm to send them back"

Trainer

Table 24 Contractors with Apprentices

Region	Number of contractors with apprentices	Average number of apprentices
South West	58%	3
South East	59%	3
London	45%	4
East	58%	3
East Midlands	67%	3
West Midlands	67%	3
Yorkshire/Humber	64%	3
North West	65%	3
North East	55%	5
England	**60%**	**3**

with an additional average of 1 trainee over 25 years of age.

Sole traders were much less likely to train. In the last five years the 476 sole traders in the survey sample had employed an average of 1 apprentice aged under 25 and 1 trainee aged over 25. However, 72% of sole traders had not employed a single apprentice in that five-year period. Amongst those who actually had taken on apprentices and trainees, there was little difference between contractors and sole traders. Contractors did not differ in the average number of trainees that they have employed in each age category – 3 under 25s and 3 over 25s, while sole traders employed 3 apprentices under the age of 25 and 3 trainees aged 25 and over.

The relative data for sole traders show the West Midlands highest with 35% taking apprentices, and Yorkshire/Humberside the lowest, with just 20%. In terms of average numbers of apprentices with sole traders, the South East fares best with an average of 3.

Of those contractors directly involved with employing new staff, 22% say they actively seek employees "in no need of training", leaving 78% who are happy to provide training, but this percentage could still be improved. Two reasons have emerged why training is not forthcoming from other contractors, 28% cited a lack of available courses and 23% the finances (see Section 7 Regional Summaries).

The normal length of apprenticeship is three years and 78% of contractors include both practical and college-based training. This endorses the current approach under the NVQ system and re-


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confirms that there is a continued role for both workplace training and college courses. However, the format of the college role is where behaviour differs, with 48% of contractors using day release, 25% using block release and 27% a combination of both.

6.2.2 Perceptions of College Course Content

While contractors are in favour of training, there are concerns regarding the content of available courses and although overall there is a positive reaction towards the college courses, this is not a strong positive reaction. A high level of satisfaction with courses is not demonstrated, with only one in nine contractors 'very satisfied' and around a third said they were 'dissatisfied' to some degree. In fact, 64% of contractors in touch with colleges would like to see course content reviewed and/or amended. Only 21% of sole traders were 'very satisfied' with courses where they knew of them and 21% were generally dissatisfied. The 67% of sole traders who were aware of courses also displayed an equally similar opinion in terms of wanting the content reviewed or amended. The one key difference is the mention of training needing to be 'more specific to our skills needs' –

Table 25 Percentages Completing Apprenticeships (by region)

Region	Contractors %	Sole Traders %
South West	72	64
South East	77	69
London	65	64
East	74	52
East Midlands	76	70
West Midlands	73	59
Yorkshire/ Humberside	81	49
North West	74	52
North East	77	53

Table 26 Percentages Completing Apprenticeships (by craft)

Material/Activity	Contractors %	Sole Traders %
Stone	73	54
Brick	74	49
Earth	75	50
Wood	76	57
Glass	73	58
Metal	70	55
Plaster	78	59
Paint	75	42

15% for sole traders, where just 5% of contractors cited this.

6.2.3 Completion and drop-out rates

The average drop-out rate of apprentices employed by the 629 contractors in this survey is 25%, whereas 41% of apprentices employed by the 476 sole traders drop-out. By comparison, the CITB ConstructionSkills' Managing Agency figures show that, of starters on a Modern Apprenticeship in England, about 35% will drop-out[62]. This suggests that there is less regional variability between apprenticeships with contractors than with sole traders in this survey (Table 25) and the completion and drop-out rates for each craft are similar (Table 26). This reflects a sector, rather than individual craft problem.

The contractors and sole traders in this survey both cited a 'lack of interest' as the primary reason why apprentices drop out. This is echoed by the 88 training providers interviewed, who also cite that apprentices change jobs, although it is unclear whether this is within the construction industry or built heritage sector or neither. Training providers also feel that their courses are too demanding for some apprentices, and that this is a reason why some drop-out. The four main reasons cited by contractors and sole traders in this survey for drop-out rates are:

- A lack of interest in the job (40% contractors: 48% sole traders)
- A lack of financial reward (32% contractors: 24% sole traders)
- Trainees do not have the right attitude for the work (27% contractors: 42% sole traders)
- Trainees do not like manual/hard/dirty work (12% contractors: 17% sole traders).

6.2.4 Retention Post-Apprenticeship

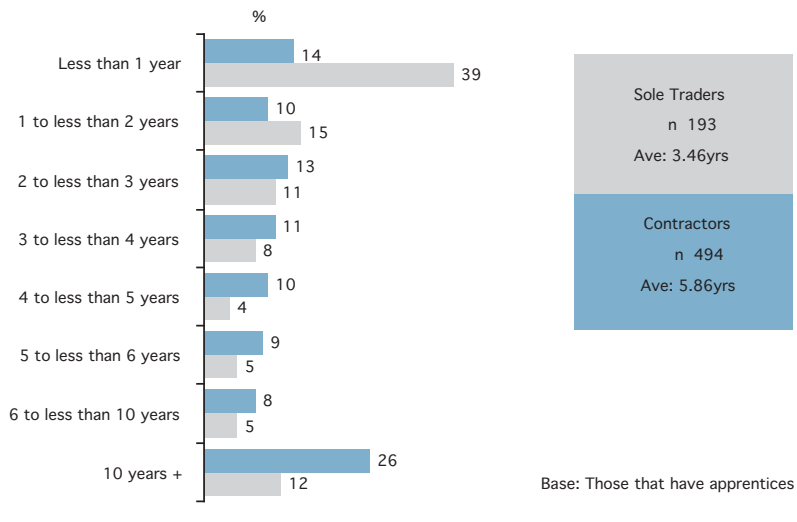
The average time an apprentice stays with a contractor post-qualifying is almost six years, whereas the average for sole traders is three and a half years (Figure 13). The latter is one of the reasons cited by sole traders for not employing apprentices, as once qualified they often leave to work elsewhere or quite quickly set up as a sole trader themselves.

Significantly, 26% of the contractors in this survey report that on completing their training, apprentices stay with them for over 10 years and just 14% leave within their first year. Conversely, 39% of the sole traders in the survey report apprentices leaving within a year of qualifying, and just 12% stay for ten years or more. The two most frequent reasons cited by the sole traders for this were not enough work to sustain another fully qualified craftsperson and insufficient financial reward. But it has not been established in this study whether apprentices stay in the construction industry/heritage sector or leave all together.

6.2.5 Perceived Training Requirements

Amongst those contractors and sole traders who would like to offer their employees training, there is a perception of a lack of skills training available for their workforce. Metal work (20%) was

Figure 13 Length of Time Apprentices stay with Firms after Qualifying



**The figures include rounding*

Table 27 Main Skills Lacking by Material in the 9 English Regions

	South West	South East	London*	East	East Mids	West Mids	Yorks & Hum'side	North West	North East*
Stone	✓				✓		✓	✓	
Brick						✓			
Wood	✓	✓		✓	✓	✓		✓	
Metal	✓	✓		✓	✓	✓		✓	
Plaster				✓				✓	
Paint						✓			
Roofing					✓				
Conservation	✓								

Note: ✓ = shortage

** For London the sample size was too small as contractors and sole traders who work there do not always reside in London*

the most frequently cited by contractors and sole traders as a skill they would like to have available to their workforce but felt unable to offer, followed closely by wood-related skills (19%), stone (12%) and plaster (11%). While these four are the most dominant, earth building, mosaics and/or tiling, glass, paint, roofing and thatching were also cited. This indicates a widespread need for these skills, rather than a shortage in one or two skill areas and the regional picture also differs (Table 27).

This perceived lack of training arises for a variety of reasons, and is not only due to availability which reflects supply and demand in each sector. For the contractors in this survey the two major reasons why they feel they cannot provide training are a lack of available courses (28%) and the cost/lack of funding (20%). Other reasons cited include: lack of time (17%); not having anyone in-house who can train (9%); and lack of available training in the locality (8%).

For sole traders in this survey the two major reasons for not being able to provide the training they would like are: cost/lack of funding (30%); lack of time (30%); not having anyone in-house who can train (10%); and insufficient work to train apprentices properly on (9%). In some cases this means a lack of variety in the work and in other cases that their work is not always on historic buildings or even in construction at all.

Given their perception that college courses do not have the correct content currently and that training is not perceived to be widely and locally available, 66% of contractors and 72% of sole traders in the built heritage sector would like to see grant schemes expanded to cover a wider range of training and/or assessment. However, it should be mentioned that CITB-ConstructionSkills' Training Plans do provide more flexible grant support to companies. Also, most construction colleges train for new

build skills and materials, some of which are directly transferable to built heritage work and contractors could access this as a starting point to further develop their employee's skills or in-house training.

6.2.6 Qualifications

There are currently NVQ Level 3 conservation units available, but only 43% of the sole traders, and 47% of the contractors interviewed were aware of their existence (Figure 14). This only increased to 56% for the 218 professionals (architects, surveyors and conservation officers) interviewed. Awareness for the 88 trainers interviewed was surprisingly low at 52% and this would be expected to be in the region of 80%.

6.3 Colleges Survey Sample

Following discussion with the NHTG Research Steering Group it was decided not to cover all NVQ Level 2 construction courses, but rather to concentrate upon those that delivered NVQ Level 3. The latter is considered to be the desired level for working on

"Our company has always had apprentices going through, but often we find they'll leave us and go and work for somebody else. You can't stop that problem. We retain about half, whereas others might decide they're going into house-building, where the money is"

Contractor

Figure 14 Awareness of NVQ Level 3 Conservation Units amongst Contractors and Sole Traders(%)[3]

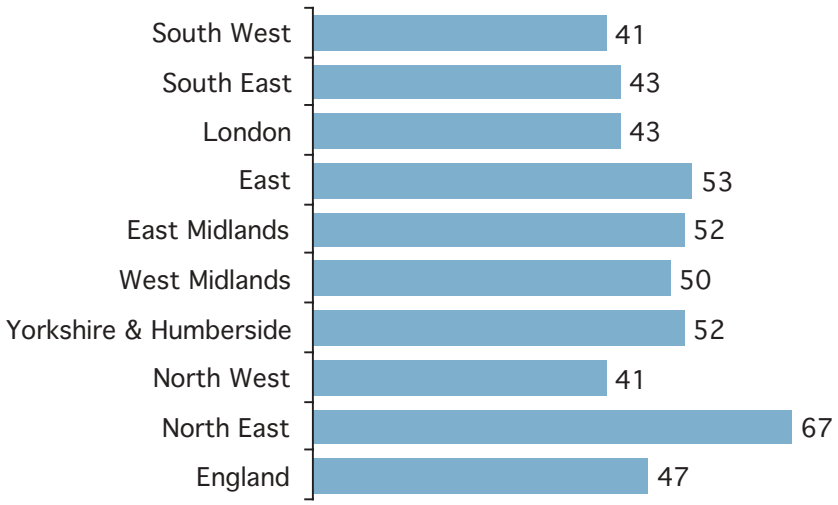


Table 28 Construction Course Statistics by Region

Region	Average course capacity (students)	Average number of applicants	% Completing courses	% Completing courses who Passed
South West	37	47	89	92
South East	35	23	94	91
London	20	19	84	90
East	55	43	98	91
East Midlands	43	47	87	96
West Midlands	37	74	96	93
Yorkshire/ Humberside	21	24	96	97
North West	28	44	89	92
North East	19	18	81	96
England	**35**	**42**	**91**	**93**

**All averages are separately calculated from either regional or country base data.*

historic buildings and especially the Conservation Units available at that level. Therefore, more would be gained from limiting the research to this training level and would provide a better picture of the current provision and any obstacles to delivery. The survey interviewed staff from 88 colleges within construction courses to obtain quantitative and qualitative information on the delivery of a combined total of 307 courses, of which 166 were NVQ Level 3 courses.

6.3.1 Course Statistics

The data in Tables 28 and 29 relates to NVQ Level 3 courses offered across England and it should be noted that these vary in terms of the type and length of the course. During this stage of the research, it emerged that the term 'capacity' has different meanings to different people and this has meant it has not been possible to provide firm data on individual courses. In both tables, the statistics reflect the capacity for the full range of courses offered annually for each region and for each specific craft and do not reflect whether students were taught simultaneously or sequentially.

One emerging issue from the training providers is of courses being over-subscribed. One college had only six places left when enrolment had finished, despite offering around 1,300 places across a range of different construction-related courses at various levels. This appears to be the case across more than half of the country and for the majority of trades, but is a reflection of the current buoyant construction industry, rather than anything to do with the built heritage sector.

There is considerable variation across the regions in terms of course capacity, with the North East showing low capacity at an average of 19 students per course and the East showing an average capacity of 55 students per course (Table 28). Six out of the nine regions appear to have had more applicants than spaces and thus are likely to have turned students away. On a positive note, the percentage completing courses is high at 91% across England as a whole, and of those completing courses the pass rate is also high (93%).

Table 29 Construction Course Statistics by Craft Type

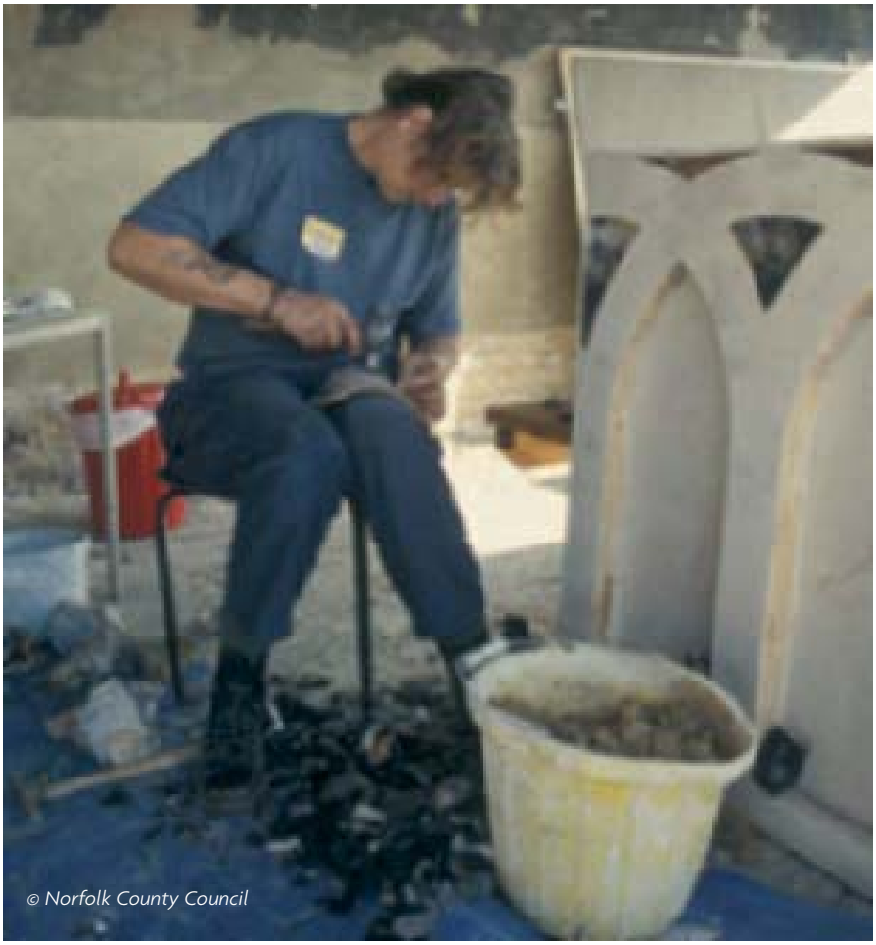
Material/Activity	Average course capacity (students)	Average number of applicants	% Completing courses	% Passed courses
Stone	16	28	92	94
Brick	32	44	91	92
Earth	15	27	93	95
Wood	36	40	90	92
Glass	63	65	96	100
Metal	52	128	95	94
Plaster	59	72	98	97
Paint	30	17	91	90

When looking at these course statistics by craft type (Table 29), there is great variety by material with very limited capacity in stone related training. All materials, except paint, appear to be over subscribed, with metal showing the greatest demand. This supports the finding in Section 6.2.5 Perceived Training Requirements that the contractors in this survey would like to offer training in metal related disciplines, but are unable to.

6.3.2 Trainers

An issue which arose from discussions with training providers was the difficulty in recruiting staff, especially those already qualified and they suggested that one reason was that craftspeople earn higher earnings and colleges cannot compete for their services. Apart from the issue of recruiting trainers, there is some concern that in the construction sector (as is the case in many other industries), large numbers of good trainers are leaving their profession.

Table 30 on the following page details the 'average number of trainers' per college, broken down in terms of their employment status. The course data reflects those colleges providing NVQ Level 3 courses with some element of heritage/traditional building craft skills. Due to the variety of courses and course length - ranging from 3 months to 3 years - it has not been possible as part of this research to relate these averages to the length of the



© Norfolk County Council

"We have recently taken up a partnership with a training college, here in the back yard, which is aimed at recruiting a lot more directly-employed apprentices and having local colleges to train them. At the moment our stonemasonry apprentices go a hundred miles in any direction, to get to a college that can teach them: York, Bath, Weymouth and Lambeth, which is crazy"

Contractor

Table 30 Trainers by Region

Region	Average Number of Full-time Trainers	Average Number of Part-time Trainers	Number of Courses per full-time trainer	Number of Courses per part-time trainer
South West	11.2	2.3	4.2	20.4
South East	12.3	4.1	2.7	8.0
London*	3.3	0.0	1.2	0
East	10.4	5.2	2.4	4.8
East Midlands	7.8	4.4	6.2	10.9
West Midlands	13.0	3.6	1.6	5.8
Yorks/Humber	17.0	3.0	1.8	10.0
North West	11.7	4.8	5.7	14.0
North East*	8.5	2.2	1.6	6.4

** (Number of colleges/courses covered is too low to provide reliable data)*

courses. There are more full-time than part-time trainers and looking to employ more trainers on a part-time basis may be one way in which the shortage of trainers can be addressed.

For those who wish to teach NVQ Level 3 conservation units, specialist material is readily available from English Heritage, SPAB and the Trade Federations. However, the construction college staff interviewed in this survey, suggest that there is sometimes a shortfall in terms of the requisite knowledge of some college trainers. On a number of occasions, training providers commented on the lack of support and knowledge to run the heritage-based elements of NVQ courses.

Some of the trainers interviewed feel that the NVQ qualification framework itself is not an adequate means of achieving the required competencies for the built heritage sector. The construction industry and many other industries and sectors wish to ensure that all workers are qualified to Level 2. However, this is still a basic level of skill and a key issue that emerged in this survey is that in order to progress to Level 3 staff must prove competency in certain management or supervisory tasks. This is off-putting to many employers, who don't want the average 18 year-old apprentice going down that route. It can also be frustrating to the employee, who simply wants to improve their craft skills, something which is particularly important in the heritage sector.

From 1st September 2004 a new National Qualifications Framework was established[63]. Under this, individuals are awarded credits for completion of units. Qualifications are built up by combining units and accumulating credits towards the required targets set by the Qualification and Curriculum Authority. In terms of construction-related NVQs, the new framework will continue to identify qualifications that are designed to recognise occupational competence in the sector and they will be clearly linked to national occupational standards, with a brand identity within the framework.

6.4 Learning

During the qualitative interviews many of the stakeholders expressed views on the need to develop links with schools, to influence the National Curriculum to raise awareness of the built heritage and promote work possibilities within this sector. An understanding of the built heritage can start with an appreciation of traditional building methods and materials at an early age in primary school.

Contractors and sole traders would like to see 'craftspeople demonstrate crafts to children', as well as ensuring that 'children understand how materials are used'. They would slightly prefer 'children to make something with relevant materials' but failing that would like 'children to handle the materials'. While recognising that there are fixed drivers on curriculum development set by the Department for Education and Skills (DfES), this could be delivered by holding an event for children in the first and/or second year of secondary school, years 7 or 8 (age 11 to 13).

This concept is in existence, but not widespread and some of the conservation officers had already embarked on this type of activity and much of their efforts are directed at primary school level rather than teenagers. One respondent had a positive suggestion, whereby local

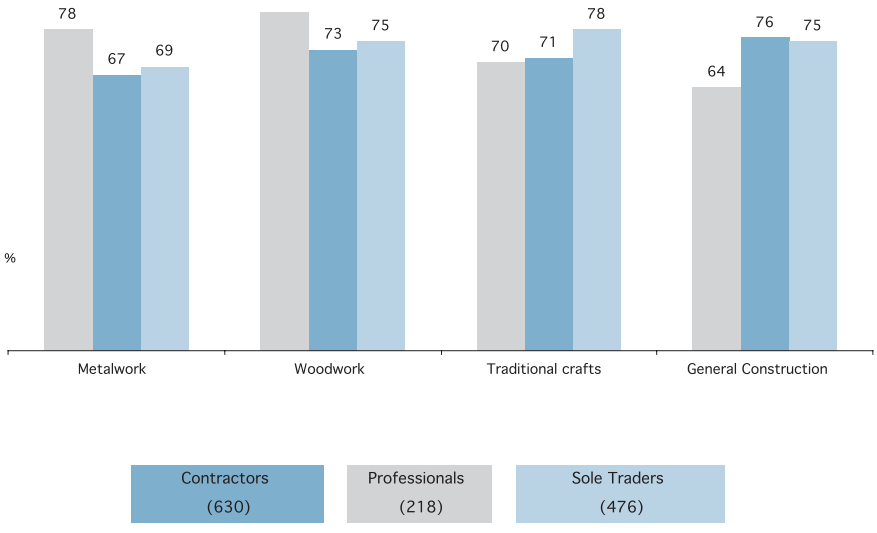
'We're working on the 14 to 19 agenda as well, with the schools: we've got the now more vocational-oriented GCSEs; we're working with the careers service to deliver more appropriate guidance.'

Local LSC

© English Heritage

companies could supply materials for schools to use, as a way of supporting craft training for youngsters. This type of initiative has been established by the Building Crafts College, Stratford, East London, which is supplying materials and working in association with local secondary schools to demonstrate craft skills to youngsters. Again this echoes an earlier theme in this research; that of companies and education providers, forming mutually beneficial links.

Figure 15 Views on Desired Subjects Taught in Schools



6.4.1 Secondary Schools

There are approximately 3,500 secondary schools in England with around 3.2 million enrolled children. The cohort of 16–year-old school leavers each year thus amounts to a substantial target group for the construction industry as a whole. ConstructionSkills, English Heritage and The National Trust deliver support and educational programmes for schools and teachers. This offers a range of resources and help to use construction and the historic environment as a context for learning within the framework of the National Curriculum.

Changes to the secondary school curriculum were favoured by 91% of

contractors and 90% of sole traders in this survey. Together with the professionals in this survey, they favoured a more practical and/or technically orientated curriculum, suggesting four subjects could be taught (Figure 15).

6.4.2 Careers Advice

General Information, Advice and Guidance (IAG) on careers for young people are currently delivered by the Connexions Partnerships across the English Regions. The construction industry also provides careers information and literature to secondary schools through the Trade Federations, Trade Unions and ConstructionSkills. Every secondary school in England receives up-dated careers literature from CITB-ConstructionSkills' Education Teams. Regular schools programmes and careers events are run locally, regionally and nationally by the Construction Industry, CITB-ConstructionSkills, the National Trust and English Heritage. This research has established that those contractors working in the built heritage sector would like to see improvements to the existing IAG provision. But, it should be noted that many of those may not be aware of the extensive current work in this area.

Contractors and sole traders expressed an interest in attending career events if asked to. However, careers evenings are now only one part of the careers process and a combination of careers guidance, web-based information and personal investigation are routes used by young people and their parents to make an informed career choice. Contractors criticised the lack of adequate information, advice and guidance (IAG) from careers staff, expressing the view that either students who were not academically bright were the ones to whom a career in construction is suggested or young people were actively discouraged from considering this career path.

Apart from schools, careers advice is also provided by the Connexions service. Launched in 2001 with an annual £450m budget it was

'Seven, eight, nine years old – that's when you start getting images that you will carry with you forever.'

Trade Federation

© Essex County Council

intended to combine a universal careers service – education, training and employment advice to all teenagers – with a range of targeted help for those needing specialist support. However, the perception is that advice on careers and employment prospects has suffered. Of concern is that many youngsters, who are prime candidates for a good career in construction, are those least likely to seek advice at Connexions on the work and career possibilities within the industry.

6.4.3 Career Progression

Of the total 1,567 stakeholders in the survey sample, 81% would like to see a clear progression ladder for craftspeople, but what this should be linked to differs by stakeholder:


© SPAB

- Stockholders and sole traders favour experience (85%: 83%) and skills (91%: 74%)
- Contractors favour experience (83%)
- Trainers favour qualifications (89%) and experience (78%).

Experience is undoubtedly the common factor, with skills playing a more important role than qualifications. Skills and qualifications are not seen as one and the same; just because a craftsperson has qualifications does not mean that they have skills, so this perception needs changing if qualifications are to be merited. Presently skills are more likely to be linked to experience. If the NVQ system can be amended to cover skills which employers consider relevant, then this would be a good first step in achieving the link between qualifications and experience. The vehicle for this is the Trade Federations and the Occupational Working Groups for standards and qualifications, which are supported by ConstructionSkills, the Sector Skills Council for construction.

REGIONAL SUMMARIES 7

South West

South East

London

East Of England

East Midlands

West Midlands

Yorkshire & Humberside

North West

North East

south west

Gloucestershire, Avon, Wiltshire, Dorset, Somerset, Devon, Cornwall, Isles of Scilly

The South West is the largest of the nine English regions and although it has undergone the biggest population growth of all the regions (12.5% in 20 years), it is also the least densely populated. Bristol (500,000 population) is the largest city and Plymouth (approximately 200,000) the next largest. The region is therefore, largely rural in character, with agriculture accounting for 80% of land use and an estimated £69.2 billion gross domestic product (GDP). The human settlements are mainly hamlets, villages and small market towns.

The historic nature of the settlements is reflected in the region having almost a quarter of the English total of listed building entries, it also has 21.8% of the national total of Grade I and 24.2% of Grade II* buildings, but 170 of these two categories of listed buildings are at risk, representing a conservation deficit of over £40 million. This, and the increasing demand for good quality affordable housing, puts continued pressure from development on the region's listed buildings. The South West has three world heritage sites; Stonehenge, Avebury and associated sites; the City of Bath and the Dorset and east Devon Coast. It also has 6,944 scheduled monuments (32% of England's total), 1,513 conservation areas (15.5% of the national total) and 18% of the country's registered designed landscapes[64].

Traditional building materials found in this region range from limestone, granite, slate, earth, timber, thatch, stone tiles, with lime wash applied as internal and external decoration[65].

Summary of Regional Statistics

Regional Employment:	2,395,704
Construction Employment:	179,630 (7.5% of employed)
Self-employed within construction:	79,524 (44%)
Private Construction Contractors:	18,397 (10.8% of GB)
Construction Output:	£7,548m (8.4% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

244 quantitative and 10 qualitative interviews were undertaken with stakeholders in this region; 173 of which were with contractors and sole traders. From this, it is estimated that the region has 2,344 traditional building craftspeople (3.7% of the national total).

Trades most in demand in the last 12 months and likely to be similarly needed in the next 12 months are carpenters, stonemasons, slate & tile roofers, and general builders.

Interpretation of Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified. It also provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and

sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 31-35. In Table 31 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 35).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 32, while Table 33 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped. Particular emphasis is placed upon understanding the degree of relevant training currently available and this is summarised in Table 34. In Table 35, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 31 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		89,161 (24% of England total)
No. of Listed Buildings		115,909
No. of pre-1919 dwellings		476,000
No. of pre-1919 hereditaments		59,184
Total spend on Listed Dwellings	Last 12 months:	£291,590
	Next 12 months:	£300,340
Spend on Listed commercial buildings	Last 12 months:	£175,487
	Next 12 months:	£220,649
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£384,846
	Next 12 months:	£392,543
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£61,850
	Next 12 Months:	£77,767
Total spend on all Historic Buildings	Last 12 Months:	£913,773
	Next 12 Months:	£991,299
Average Spend on Private Buildings	Last 12 months:	£5,390 (42% of the total English spend)
Average Spend on Commercial Buildings	Last 12 months:	£2,613 (20% of the total English spend)
	Next 12 months:	£3,285 (23% of the total English spend)
Required Spend for Urgent Work* (Under QI):		£194,000
Budgeted Spend for Next 12 Months:		£87,600

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 32 Percentage of Contractors and Sole Traders in the Region with at least one Employee with a Specific Craft Skill

Craft	Percentage	Craft	Percentage
Bricklayer	28	Machinist	8
Cabinet Maker	8	Marbler	3
Carpenter	35	Master Glass Painters	2
Carver	8	Mosaicist	2
Clay Dabbins	1	Other metal roof worker (eg copper, zinc, tin)	7
Cob Builder	5	Pargeter	3
Decorator	28	Pavior	2
Dry Stone Waller	13	Roofer - slate & tile	44
Fibrous Plasterer	21	Stained glass	11
Flint knapper	1	Steeplejack	4
Generalist	41	Stone Fixer	16
Gilder (Paint)	4	Stonemason	41
Gilder (Wood)	3	Thatcher	12
Glazier	8	Tiler	12
Joiner	36	Wattle & Daub	1
Lead Worker	13	Wheelwright	6
Lime Plasterer	33		

Table 33 Shortages of Craft Skills

Contactors with outstanding vacancies		23% (equal to the national average)
Number of long-term vacancies		389
Recruitment difficulties	No difficulty:	4%
	Very difficult:	51% (higher than the national average of 49%)
Reason for recruitment difficulty	Lack of applicants:	65% (higher than the national average)
	Lack of skills:	65% (lower than national average)
Contractors response to lack of applicants		
	Increase training programmes:	27% (higher than the national average)
	Increase training for workforce:	22% (higher than the national average)
	Increase recruitment advertising:	16% (lower than the national average)
	Expand recruitment channels:	4% (lower than the national average)
	No action:	1%
Contractors response to lack of skills		
	Provide further training:	33%
	Increase training programme:	33%
	Increase recruitment:	20%
Sub-contractors used by contractors		87% (Highest % of the 9 regions)

Table 34 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	58	Joint 3rd lowest number
Average number of apprentices	3.4	3rd highest average
Training not undertaken due to lack of available courses	14%	Lowest %
Training not undertaken due to financial issue	34%	Highest % (England national average of 20%)
Contractors favouring college day release	46%	5th lowest %
Contractors favouring combination of day and block release	40%	Highest %
Contractors apprentices completing course	72%	2nd lowest
Sole traders apprentices completing course	64%	Joint 3rd highest
Awareness amongst contractors of NVQ Level 3 conservation units	33%	Joint 8th
College courses average capacity	37	Joint 3rd highest
Average number of applicants	47	Joint 3rd highest
% completing courses	89%	Joint 5th
% passing courses	92%	Joint 5th
Trainers		
Average fulltime:	11.2	5th of 9 regions
Average part-time:	2.3	7th of 9 regions
Courses		
Per full-time trainers:	4.2	3rd of 9 regions
Per part-time trainers:	20.4	7th of 9 regions
% of heritage/traditional craft skills Teaching material	15%	7th lowest of 9 regions (London highest with 45%)

Table 35 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	√			65
Cabinet Maker		*		34
Carpenter	√	*		68
Carver		*		NA at regional level
Clay Dabbins		*		NA at regional level
Decorator				41
Dry-stone Waller		*		NA at regional level
Fibrous Plasterer		*		NA at regional level
Flint Knapper		*		NA at regional level
Gilder (Wood)		*		NA at regional level
Joiner				48
Lead Worker		*		54
Millwright		*		NA at regional level
Mosaicist		*		NA at regional level
Pargeter		*		NA at regional level
Roofer – slate & tile	√			65
Stone Fixer		*		NA at regional level
Stonemason	√	*		51
Thatcher		*	***	37
Wattle & Daub		*		NA at regional level
Wheelwright		*		34

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*√ trade used * trade difficult to find *** average wait of over 3 months for trade*

south east

Buckinghamshire, Oxfordshire, Berkshire, Surrey, Kent, East Sussex, West Sussex, Hampshire, Isle of Wight

The South East covers 19,069 square kilometres and is the third largest of the nine regions. It is composed of a southern and eastern coastline with ports, seaside towns and historic military defences and over such a large geographical area has a varying landscape and distinct buildings types. The later are found within a mixture of small cities, large towns, urban settlements and smaller villages and this forms a rich historic environment. Its close proximity to London means that it is the second most economically important region after London, with an estimated gross domestic product (GDP) of £140 billion per year.

It is also the most highly populated region in England, with over 8 million people and coupled with increased current and expected future population growth this places considerable demand for housing and infrastructure. Three areas within this region are at the centre of the Government's Sustainable Communities Plan to alleviate housing shortages and therefore adapting or re-using historic buildings may contribute to this and to maintaining the character and identity of the affected areas.

The region has two world heritage sites: Blenheim Palace, Oxfordshire and three ecclesiastical sites in Canterbury, the Cathedral, St Augustine's Abbey and St Martin's Church. It also has 2,610 scheduled monuments, 1,986 conservation areas, 359 registered parks and gardens (more than any other region) and the 213 entries on the English Heritage *Register of Buildings at Risk* is the highest for any region[66].

Traditional building materials found in this region range from limestone, sandstone, flint, slate, earth, timber, brick, thatch, clay tiles, oak shingles and lime wash applied as internal and external decoration[67].

Summary of Regional Statistics

Regional Employment	4,034,984
Construction Employment:	306,727 (7.6% of employed)
Self-employed within construction:	137,414 (45%)
Private Construction Contractors:	30,094 (18.1% of GB)
Construction Output:	£12,032m (14.8% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

37 quantitative and 21 qualitative interviews were undertaken with stakeholders in this region and 171 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 3,386 traditional building craftspeople (15.2% of the English total).

Carpenters, decorators, lead workers, bricklayers and slate & tile roofers were in demand in the South East region in the last 12 months and carpenters, decorators and bricklayers are the most likely trades to be required in the next 12 months.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified. It also provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 36-40. In Table 36 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 40).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 37, while Table 38 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped. Particular emphasis is placed upon understanding the degree of relevant training currently available and this is summarised in Table 39. In Table 40, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 36 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		76,302 (20% of England total)
No. of Listed Buildings		99,193
No. of pre-1919 dwellings		612,000
No. of pre-1919 hereditaments		64,406
Total spend on Listed Dwellings	Last 12 months:	£189,893
	Next 12 months:	£195,590
Spend on Listed commercial buildings	Last 12 months:	£93,810
	Next 12 months:	£79,727
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£650,219
	Next 12 months:	£663,224
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£42,045
	Next 12 Months:	£35,733
Total spend on all Historic Buildings	Last 12 Months:	£975,967
	Next 12 Months:	£974,274
Average Spend on Private Buildings	Last 12 months:	£7,083 (27% of the total English spend)
Average Spend on Commercial Buildings	Last 12 months:	£1,632 (11% of the total English spend)
	Next 12 Months:	£1,387 (8% of the total English spend)
Required Spend for Urgent Work* (Under QI):		£139,340
Budgeted Spend for Next 12 Months:		£88,200

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 37 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	6	Lime Plasterer	13
Bricklayer	26	Machinist	6
Cabinet Maker	6	Marbler	1
Carpenter	38	Master Glass Painters	3
Carver	4	Mosaicist	2
Clay Dabbins	0	Other metal roof worker (eg copper, zinc, tin)	3
Cob Builder	4	Pargeter	2
Decorator	17	Pavior	4
Dry Stone Waller	6	Roofer – slate & tile	17
Fibrous Plasterer	8	Stained glass	2
Flint knapper	3	Steeplejack	2
Generalist	18	Stone Fixer	9
Gilder (Paint)	2	Stonemason	13
Gilder (Wood)	2	Thatcher	5
Glazier	5	Tiler	9
Joiner	21	Wattle & Daub	2
Lead Worker	10	Wheelwright	2

Table 38 Shortages of Craft Skills

Contactors with outstanding vacancies		17% (lower than the national average)
Number of long-term vacancies		479
Recruitment difficulties	No difficulty:	4%
	Very difficult:	47% (lower than the national average)
Reason for recruitment difficulty	Lack of applicants:	45%
	Lack of skills:	64%
Contractors response to lack of applicants		
	Increase training programmes:	17%
	Increase training for workforce:	9%
	Increase recruitment advertising:	6%
	Expand recruitment channels:	14%
	No action:	14%
Contractors response to lack of skills		
	Provide further training:	29%
	Increase training programme:	24%
	Increase recruitment:	8%
Sub-contractors used by contractors		70% (3rd lowest % of the 9 regions)

Table 39 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	59	Fifth highest number
Average number of apprentices	3.0	3rd lowest average
Training not undertaken due to lack of available courses	24%	3rd lowest %
Training not undertaken due to financial issue	32%	2nd highest %
Contractors favouring college day release	57%	3rd highest %
Contractors favouring combination of day and block release	21%	4th lowest %
Contractors apprentices completing course	77%	Joint 2nd highest
Sole traders apprentices completing course	69%	2nd highest
Awareness amongst contractors of NVQ Level 3 conservation units	34%	3rd lowest
College courses average capacity	35	5th highest
Average number of applicants	23	3rd lowest
% completing courses	94%	4th highest
% passing courses	91%	Joint 2nd lowest
Trainers		
Average fulltime:	12.3	3rd of 9 regions
Average part-time:	4.1	4th of 9 regions
Courses		
Per full-time trainers:	2.7	5th of 9 regions
Per part-time trainers:	8.0	6th of 9 regions
% of heritage/traditional craft skills Teaching material	21%	4th highest of 9 regions (London highest with 45%)

Table 40 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	√			79
Cabinet Maker				42
Carpenter	√	*		83
Carver		*		NA at regional level
Clay Dabbins		*		NA at regional level
Decorator		*		NA at regional level
Dry-stone Waller				50
Fibrous Plasterer		*		NA at regional level
Flint Knapper				58
Gilder (Wood)	√	*		67
Joiner		*		NA at regional level
Lead Worker		*		NA at regional level
Millwright		*		NA at regional level
Mosaicist	√			79
Pargeter		*		NA at regional level
Roofer - slate & tile				62
Stone Fixer				46
Stonemason		*		NA at regional level
Thatcher		*		42
Wattle & Daub	√			79
Wheelwright				42

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*√ trade used * trade difficult to find *** average wait of over 3 months for trade*

london

Greater London is the smallest of the nine regions (1,584 square kilometres), but its resident population of approximately 7.2 million accounts for 15% of the English total and it has the ten most densely populated areas in England. Its estimated £162 billion economy accounts for 17% of the UK Gross Domestic Product (GDP). However, the extremes of wealth creation and social deprivation and exclusion sit side by side, with 25% of England's most deprived areas found in London. It has nevertheless unrivalled cultural attractions and outstanding built heritage.

As expected of a major world city, London has an outstandingly rich built heritage and contains four of England's world heritage sites: Tower of London; Palace of Westminster, Westminster Abbey and St Margaret's Church; Maritime Greenwich and Royal Botanical Gardens, Kew. It has 150 scheduled monuments, 885 conservation areas and 147 registered parks and gardens, over 600 historic squares, eight Royal Parks, 16 historic cemeteries and 644 entries on the English Heritage *Register of Buildings at Risk* with seven structural scheduled monuments also at risk[68].

Traditional building materials found in this region range from: limestone, sandstone, brick, fiance, terracotta, timber, slate and clay roof tiles[69].

Summary of Regional Statistics

Regional Employment	3,410,227
Construction Employment:	199,052 (5.8% of employed)
Self-employed within construction:	91,316 (46%)
Private Construction Contractors:	17,610 (10.6% of GB)
Construction Output:	£13,524m (16.7% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

145 quantitative and 25 qualitative interviews were undertaken with stakeholders in this region and 76 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 1,602 traditional building craftspeople (7.2% of the English total).

Joiners, carpenters, stonemasons, decorators, metalworkers other than lead workers, bricklayers, and slate & tile roofers were the most frequently used trades in London over the last 12 months. Carpenters and decorators are those trades most likely to be used over the next 12 months.

The average spend displayed by London is extraordinary and within the London stockholders there was one, which spent £2.5m last year and plans on spending £4.5m next year. Individual projects of this size have an immense impact on spend and thus on the ability to estimate forward spend accurately.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified. It also provided a

picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 41-45. In Table 41 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 45).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 42, while Table 43 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped. Particular emphasis is placed upon understanding the degree of relevant training currently available and this is summarised in Table 44.

In Table 45, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 41 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		14,689 (4% of England total)*
No. of Listed Buildings		19,096**
No. of pre-1919 dwellings		787,000
No. of pre-1919 hereditaments		104,044
Total spend on Listed Dwellings	Last 12 months:	£35,071
	Next 12 months:	£36,123
Spend on Listed commercial buildings	Last 12 months:	£55,239
	Next 12 months:	£55,239
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£610,437
	Next 12 months:	£622,645
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£208,088
	Next 12 Months:	£208,088
Total spend on all Historic Buildings	Last 12 Months:	£908,835
	Next 12 Months:	£922,095
Average Spend on Private Buildings	Last 12 months:	£5,171 (5% of the total English spend)
Average Spend on Commercial Buildings	Last 12 months:	£267,882 (6% of the total English spend)
	Next 12 Months:	£359,000 (6% of the total English spend)
Required Spend for Urgent Work*** (Under QI):		£3,125,000
Budgeted Spend for Next 12 Months:		£1,220,600

** Figure taken from Heritage Counts on-line database in September 2004. **This figure is calculated using the average of 1.3 buildings per entry. *** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 42 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Bricklayer	13	Machinist	5
Cabinet Maker	4	Marbler	5
Carpenter	15	Master Glass Painters	1
Carver	8	Mosaicist	5
Clay Dabbins	1	Other metal roof worker (eg copper, zinc, tin)	4
Cob Builder	3	Pargeter	1
Decorator	12	Pavior	3
Dry Stone Waller	3	Roofer - slate & tile	18
Fibrous Plasterer	7	Stained glass	7
Flint knapper	0	Steeplejack	0
Generalist	24	Stone Fixer	8
Gilder (Paint)	7	Stonemason	7
Gilder (Wood)	8	Thatcher	5
Glazier	4	Tiler	8
Joiner	5	Wattle & Daub	1
Lead Worker	4	Wheelwright	4
Lime Plasterer	7		

Table 43 Shortages of Craft Skills

Contactors with outstanding vacancies	27% (higher than the national average)	
Number of long-term vacancies		427
Recruitment difficulties	No difficulty:	13%
	Very difficult:	32%
Reason for recruitment difficulty	Lack of applicants:	57%
	Lack of skills:	71%
Contractors response to lack of applicants		
	Increase training programmes:	8% (lower than the national average)
	Increase training for workforce:	17% (lower than the national average)
	Increase recruitment advertising:	-
	Expand recruitment channels:	17% (lower than the national average)
	No action:	8%
Contractors response to lack of skills		
	Provide further training:	27%
	Increase training programme:	13%
	Increase recruitment:	20%
Sub-contractors used by contractors		79% (2nd highest % of the 9 regions)

Table 44 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	45	Lowest number
Average number of apprentices	3.8	2nd highest average
Training not undertaken due to lack of available courses	-	
Training not undertaken due to financial issue	17%	4th lowest %
Contractors favouring college day release	63%	2nd highest %
Contractors favouring combination of day and block release	19%	3rd lowest%
Contractors apprentices completing course	65%	Lowest
Sole traders apprentices completing course	64%	Joint 3rd highest
Awareness amongst contractors of NVQ Level 3 conservation units	32%	Lowest
College courses average capacity	20	2nd lowest
Average number of applicants	19	2nd lowest
% completing courses	84%	2nd lowest
% passing courses	90%	lowest
Trainers		
Average fulltime:	3.3	9th of 9 regions
Average part-time:	0.0	9th of 9 regions
Courses		
Per full-time trainers:	1.2	9th of 9 regions
Per part-time trainers:	0	9th of 9 regions
% of heritage/traditional craft skills Teaching material	45%	Highest (North West lowest with 8%)

Table 45 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	✓	*		71
Cabinet Maker		*	***	37
Carpenter	✓	*		74
Carver			***	NA at regional level
Decorator	✓			45
Dry-Stone Waller		*		NA at regional level
Fibrous Plasterer		*		NA at regional level
Gilder (Paint)			***	NA at regional level
Joiner	✓		***	52
Lead Worker		*		60
Lime Plasterer		*		NA at regional level
Marbler		*		NA at regional level
Millwright		*		NA at regional level
Other metal roof worker	✓			NA at regional level
Roofer – slate & tile	✓	*		71
Stonemason	✓			56
Thatcher				41
Wheelwright				37

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

east of england

Norfolk, Suffolk, Essex, Cambridgeshire, Bedfordshire, Hertfordshire

The East of England is the second largest of the nine English regions (9,120 square kilometres) and with 5.4 million people has one of the fastest growing populations of the English regions (11% in the past 20 years and second to the South West region in terms of growth). Four of the Government's Sustainable Communities Plan areas are within this region, so continued population growth, increased infrastructure and pressure on the historic environment can be expected. The economy within this region is also growing and in 2002 this generated £90 million gross domestic product (GDP)[70].

The region has coastline around its three easternmost counties (Norfolk, Suffolk and Essex), which contain a mixture of ports and small seaside towns and the landscape is characterised by the more densely populated counties of Essex, Hertfordshire and Bedfordshire, while Cambridgeshire, Suffolk and Norfolk are more agricultural and less populated. Norfolk and Cambridgeshire have three small Cathedral cities between them and the remainder of the settlements are composed of urban developments, market towns, villages and hamlets.

This region has no world heritage sites, but there are 1,700 scheduled monuments, 1,154 conservation areas (12.6% of the national total), 209 historic parks and gardens entries (13.2 % of the England total) and 124 entries on the *English Heritage Register of Buildings at Risk*[71].

Traditional building materials found in this region are: limestone, brick, flint, timber, earth, pargeting, thatch, clay tiles and oak shingles[72].

Summary of Regional Statistics

Regional Employment	2,673,127
Construction Employment:	204,322 (7.6% of employed)
Self-employed within construction:	89,845 (44%)
Private Construction Contractors:	21,790 (13.1% of GB)
Construction Output:	£8,245m (10.2% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

210 quantitative and 10 qualitative interviews were undertaken with stakeholders in this region and 158 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 3,463 traditional building craftspeople (15.6% of the English total).

Joiners and carpenters, lime plasterers, decorators, lead workers, bricklayers and slate & tile roofers were the trades most used in the last 12 months in the Eastern region, and carpenters, bricklayers and slate & tile roofers are the trades most likely to be used over the next 12 months in that region.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 46-50. In Table 46 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 50).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 47, while Table 48 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 49. In Table 50, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 46 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		57,456 (15% of England total)
No. of Listed Buildings		74,693
No. of pre-1919 dwellings		343,000
No. of pre-1919 hereditaments		37,467
Total spend on Listed Dwellings	Last 12 months:	£47,487
	Next 12 months:	£48,911
Spend on Listed commercial buildings	Last 12 months:	£122,826
	Next 12 months:	£121,325
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£92,096
	Next 12 months:	£93,937
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£42,528
	Next 12 Months:	£42,008
Total spend on all Historic Buildings	Last 12 Months:	£304,937
	Next 12 Months:	£306,181
Average Spend on Private Buildings	Last 12 months:	£1,790 (7% of the total English spend)
Average Spend on Commercial Buildings	Last 12 months:	£2,838 (14% of the total English spend)
	Next 12 Months:	£2,803 (12% of the total English spend)
Required Spend for Urgent Work * (Under QI):		£16,170
Budgeted Spend for Next 12 Months:		£143,335

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 47 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	7	Lime Plasterer	15
Bricklayer	27	Machinist	6
Cabinet Maker	6	Marbler	2
Carpenter	25	Master Glass Painters	1
Carver	3	Mosaicist	1
Clay Dabbins	3	Other metal roof worker (eg copper, zinc, tin)	4
Cob Builder	3	Pargeter	4
Decorator	15	Pavior	5
Dry Stone Waller	1	Roofer – slate & tile	17
Fibrous Plasterer	7	Stained glass	1
Flint knapper	5	Steeplejack	1
Generalist	18	Stone Fixer	8
Gilder (Paint)	1	Stonemason	11
Gilder (Wood)	0	Thatcher	1
Glazier	6	Tiler	10
Joiner	17	Wattle & Daub	4
Lead Worker	14	Wheelwright	0

Table 48 Shortages of Craft Skills

Contactors with outstanding vacancies		17%
Number of long-term vacancies		349
Recruitment difficulties	No difficulty:	10%
	Very difficult:	46%
Reason for recruitment difficulty	Lack of applicants:	54%
	Lack of skills:	75%
Contractors response to lack of applicants		
	Increase training programmes:	40%
	Increase training for workforce:	34%
	Increase recruitment advertising:	11%
	Expand recruitment channels:	9%
	No action:	20%
Contractors response to lack of skills		
	Provide further training:	37%
	Increase training programme:	27%
	Increase recruitment:	4%
Sub-contractors used by contractors		73% (4th lowest % of the 9 regions)

Table 49 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	58	Joint 3rd lowest number
Average number of apprentices	3.3	4th highest average
Training not undertaken due to lack of available courses	36%	3rd highest %
Training not undertaken due to financial issue	22%	Joint 3rd highest %
Contractors favouring college day release	43%	3rd lowest %
Contractors favouring combination of day and block release	24%	6th highest %
Contractors apprentices completing course	74%	Joint 4th lowest
Sole traders apprentices completing course	52%	Joint 2nd lowest
Awareness amongst contractors of NVQ Level 3 conservation units	41%	3rd highest
College courses average capacity	55	Highest
Average number of applicants	43	5th highest
% completing courses	98%	Highest
% passing courses	91%	Joint 2nd lowest
Trainers		
Average fulltime:	10.4	5th of 9 regions
Average part-time:	5.2	Highest of 9 regions
Courses		
Per full-time trainers:	2.4	5th of 9 regions
Per part-time trainers:	4.8	72nd lowest of 9 regions
% of heritage/traditional craft skills Teaching material	19%	5th highest of 9 regions (London highest with 45%)

Table 50 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	✓	*		58
Cabinet Maker		*	***	31
Carpenter	✓	*		61
Carver			***	NA at regional level
Decorator	✓			37
Fibrous Plasterer		*		NA at regional level
Gilder (Paint)		*		NA at regional level
Gilder (Wood)		*		NA at regional level
Joiner	✓		***	43
Lead Worker	✓			49
Lime Plasterer	✓			NA at regional level
Machinist		*		NA at regional level
Millwright		*		NA at regional level
Other metal roof worker		*		NA at regional level
Roofer -				
slate & tile	✓	*		58
Thatcher		*	***	34
Wheelwright		*		31

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

east midlands

Derbyshire, Nottinghamshire, Lincolnshire, Leicestershire, Northamptonshire

The East Midlands is a mixture of the coastline of Lincolnshire with its small seaside towns and a largely rural interior ranging from flat arable land in the east to dales in the west, rolling hills in the south and the former coal-mining and industrial belt in the north. The major urban settlements are in Derby, Nottingham and Leicester, accounting for the majority of its population of 4.175 million and the remaining settlements are largely small market towns and villages. The historic environment ranges from the ancient woodlands of Sherwood Forest and Rockingham Forest, to industrial heritage, which in 2003/04 generated 3.4 million visits to its historic attractions. Heritage Tourism is a major economic contributor to the region and historic attractions generated £10 million in 2003. Over a third of a million people in the region are members of a heritage organisation, with heritage-led membership generating over £7 million each year and over 100,000 volunteers perform approximately £3.5 million worth of work each year[73].

Outstandingly important historic buildings in the region include Lincoln Cathedral, Southwell Minster, Chatsworth Hall, Bolsover Castle, Hardwick Hall, Newstead Abbey and many more, but there is also an abundance of country houses from the smallest to the largest and a rich tapestry of fine churches.

This region has one world heritage site, covering an area 15 miles long in the lower Derwent Valley in Derbyshire, which contributes greatly to tourism, 1,510 scheduled monuments, 1,006 conservation areas, 94 historic parks and gardens and 123 entries on the *English Heritage Register of Buildings* at Risk (11.6% of the national total)[74].

Traditional building materials found in this region are: limestone, brick, earth, timber, thatch, stone tiles, and clay tiles with lime wash applied as internal and external decoration[75].

Summary of Regional Statistics

Regional Employment	2,014,096
Construction Employment:	152,978 (7.6% of employed)
Self-employed within construction:	53,207 (35%)
Private Construction Contractors:	12,245 (7.4% of GB)
Construction Output:	£5,382m (6.6% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

169 quantitative and 7 qualitative interviews were undertaken with stakeholders in this region and 123 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 1,984 traditional building craftspeople (8.9% of the English total).

Joiners, stonemasons, decorators, lead workers, slate & tile roofers and general builders were the trades most frequently used last year in the East Midlands. General builders, joiners, lead workers and

slate & tile roofers are the trades most likely to be used in the next 12 months.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 51-55. In Table 51 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 55).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 52, while Table 53 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 54. In Table 55, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 51 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		31,335 (8% of England total)
No. of Listed Buildings		40,736
No. of pre-1919 dwellings		352,000
No. of pre-1919 hereditaments		44,938
Total spend on Listed Dwellings	Last 12 months:	£28,936
	Next 12 months:	£29,804
Spend on Listed commercial buildings	Last 12 months:	£17,138
	Next 12 months:	£20,962
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£105,600
	Next 12 months:	£107,712
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£13,050
	Next 12 Months:	£15,962
Total spend on all Historic Buildings	Last 12 Months:	£164,724
	Next 12 Months:	£174,440
Average Spend on Private Buildings	Last 12 months:	£15,514 (4% of the total English spend)
Average Spend on Commercial Buildings	Last 12 months:	£726 (2% of the total English spend)
	Next 12 Months:	£ 888 (2% of the total English spend)
Required Spend for Urgent Work* (Under QI):		£400,000
Budgeted Spend for Next 12 Months:		£84,400

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 52 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	4	Lime Plasterer	16
Bricklayer	21	Machinist	4
Cabinet Maker	5	Marbler	1
Carpenter	22	Master Glass Painters	0
Carver	3	Mosaicist	1
Clay Dabbins	2	Other metal roof worker (eg copper, zinc, tin)	0
Cob Builder	3	Pargeter	0
Decorator	11	Pavior	5
Dry Stone Waller	2	Roofer – slate & tile	19
Fibrous Plasterer	7	Stained glass	4
Flint knapper	2	Steeplejack	2
Generalist	17	Stone Fixer	10
Gilder (Paint)	2	Stonemason	16
Gilder (Wood)	2	Thatcher	5
Glazier	6	Tiler	7
Joiner	18	Wattle & Daub	2
Lead Worker	7	Wheelwright	0

Table 53 Shortages of Craft Skills

Contactors with outstanding vacancies		32% (higher than the national average)
Number of long-term vacancies		390
Recruitment difficulties	No difficulty:	1%
	Very difficult:	52% (higher than the national average)
Reason for recruitment difficulty	Lack of applicants:	51%
	Lack of skills:	73% (higher than the national average)
Contractors response to lack of applicants		
	Increase training programmes:	27%
	Increase training for workforce:	27%
	Increase recruitment advertising:	12%
	Expand recruitment channels:	35%
	No action:	4%
Contractors response to lack of skills		
	Provide further training:	41%
	Increase training programme:	19%
	Increase recruitment:	8%
Sub-contractors used by contractors		68% (2nd lowest % of the 9 regions)

Table 54 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	67	Joint highest number
Average number of apprentices	2.7	Joint lowest average
Training not undertaken due to lack of available courses	28%	Joint 5th highest %
Training not undertaken due to financial issue	22%	Joint 3rd highest %
Contractors favouring college day release	68%	Highest %
Contractors favouring combination of day and block release	13%	2nd lowest %
Contractors apprentices completing course	76%	3rd highest
Sole traders apprentices completing course	70%	Highest
Awareness amongst contractors of NVQ Level 3 conservation units	40%	4th Highest
College courses average capacity	43	2nd highest
Average number of applicants	47	Joint 2nd highest
% completing courses	87%	3rd Lowest
% passing courses	96%	2nd Highest
Trainers		
Average fulltime:	7.8	8th of 9 regions
Average part-time:	4.4	3rd of 9 regions
Courses		
Per full-time trainers:	6.2	1st of 9 regions
Per part-time trainers:	10.9	3rd of 9 regions
% of heritage/traditional craft skills Teaching material	24%	3rd highest of 9 regions (London highest with 45%)

Table 55 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer		*		65
Cabinet Maker		*		34
Carpenter		*	***	68
Decorator	✓			41
Fibrous Plasterer		*		NA at regional level
Gilder (Paint)		*	***	NA at regional level
Gilder (Wood)		*		NA at regional level
Joiner	✓			48
Lead Worker	✓			55
Machinist		*		NA at regional level
Other metal roof worker		*		NA at regional level
Roofer – slate & tile	✓	*		65
Stonemason	✓			51
Thatcher		*		37
Wheelwright		*		34

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

west midlands

Staffordshire, Shropshire, Herefordshire, Worcestershire, Warwickshire, West Midlands

The West Midlands is a mixture of large urban settlements and agricultural land. The latter is a key component of the regions economy, especially in Herefordshire and Shropshire, but there has been a large change from the previous industrial and manufacturing in and around Birmingham, the Black Country and the Potteries to an economy based upon innovation, knowledge and the service industries. It generated £65 billion gross domestic product (GPD) in 2003 and has a population of 5.26 million within its 13,000 square kilometre area. The major urban settlements are in the West Midlands and the remainder of the region has a mixture of medium sized towns, smaller market towns and villages. The historic environment in this region can be seen as an evolving feature of regional life in adapting to a diverse range of pressures and plays an important part in shaping regional priorities for planning, economic growth, culture and sustainable communities.

This region has one world heritage site, the Ironbridge Gorge in Shropshire, 1,407 scheduled monuments, 737 conservation areas, 148 registered historic parks and gardens and 183 entries on the English Heritage *Register of Buildings at Risk*, at a total cost of repair or conversion to their optimum viable use of £61.8 million[76].

Traditional building materials found in this region are: limestone, brick, timber, thatch, stone tiles and clay tiles with lime wash applied as internal and external decoration[77].

Summary of Regional Statistics

Regional Employment	2,427,684
Construction Employment:	169,143 (7.0% of employed)
Self-employed within construction:	62,651 (37%)
Private Construction Contractors:	14,746 (8.9% of GB)
Construction Output:	£7,633m (9.4% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

144 quantitative and 10 qualitative interviews were undertaken with stakeholders in this region and 100 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 2,293 traditional building craftspeople (10.3% of the English total).

Carpenters, stone masons, decorators, lead workers, bricklayers and slate & tile roofers were the trades most frequently used over the last 12 months in the West Midlands, and carpenters, stonemasons, decorators and slate & tile roofers are the trades most likely to be required in the next 12 months in this region.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a

picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 56-60. In Table 56 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 60).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 57, while Table 58 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 59. In Table 60, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 56 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		35,839 (9% of England total)
No. of Listed Buildings		46,591
No. of pre-1919 dwellings		385,000
No. of pre-1919 hereditaments		47,806
Total spend on Listed Dwellings	Last 12 months:	£21,231
	Next 12 months:	£21,868
Spend on Listed commercial buildings	Last 12 months:	£95,064
	Next 12 months:	£90,393
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£74,093
	Next 12 months:	£75,575
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£67,330
	Next 12 Months:	£64,022
Total spend on all Historic Buildings	Last 12 Months:	£257,715
	Next 12 Months:	£251,858
Average Spend on Private Buildings	Last 12 months:	£1,283
Average Spend on Commercial Buildings	Last 12 months:	£3,521 (11% of the total English spend)
	Next 12 Months:	£3,320 (decrease to 9% of the total English spend)
Required Spend for Urgent Work* (Under QI):		£981,075
Budgeted Spend for Next 12 Months:		£118,420

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 57 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	10	Lime Plasterer	16
Bricklayer	22	Machinist	9
Cabinet Maker	3	Marbler	2
Carpenter	27	Master Glass Painters	2
Carver	1	Mosaicist	3
Clay Dabbins	1	Other metal roof worker (eg copper, zinc, tin)	5
Cob Builder	1	Pargeter	3
Decorator	11	Pavior	3
Dry Stone Waller	5	Roofer - slate & tile	17
Fibrous Plasterer	8	Stained glass	7
Flint knapper	1	Steeplejack	2
Generalist	24	Stone Fixer	7
Gilder (Paint)	4	Stonemason	11
Gilder (Wood)	1	Thatcher	1
Glazier	8	Tiler	9
Joiner	25	Wattle & Daub	2
Lead Worker	8	Wheelwright	2

Table 58 Shortages of Craft Skills

Contactors with outstanding vacancies		29% (higher than the national average)
Number of long-term vacancies		398
Recruitment difficulties	No difficulty:	2%
	Very difficult:	60% (higher than the national average)
Reason for recruitment difficulty	Lack of applicants:	54%
	Lack of skills:	78% (2nd highest in England)
Contractors response to lack of applicants		
	Increase training programmes:	36%
	Increase training for workforce:	32%
	Increase recruitment advertising:	14%
	Expand recruitment channels:	18%
	No action:	5%
Contractors response to lack of skills		
	Provide further training:	28%
	Increase training programme:	25%
	Increase recruitment:	13%
Sub-contractors used by contractors		74% (joint 4th highest % of the 9 regions)

Table 59 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	67	Joint highest number
Average number of apprentices	2.7	Joint lowest average
Training not undertaken due to lack of available courses	33%	4th highest %
Training not undertaken due to financial issue	13%	7th highest %
Contractors favouring college day release	52%	4th highest %
Contractors favouring combination of day and block release	34%	3rd highest %
Contractors apprentices completing course	73%	3rd lowest
Sole traders apprentices completing course	59%	5th highest
Awareness amongst contractors of NVQ Level 3 conservation units	42%	2nd highest
College courses average capacity	37	Joint 3rd highest
Average number of applicants	74	Highest
% completing courses	96%	Joint 2nd
% passing courses	93%	4th highest
Trainers		
Average fulltime:	13.0	2nd of 9 regions
Average part-time:	3.6	5th of 9 regions
Courses		
Per full-time trainers:	1.6	Joint 7th of 9 regions
Per part-time trainers:	5.8	7th of 9 regions
% of heritage/traditional craft skills Teaching material	16%	4th lowest of 9 regions (London highest with 45%)

Table 60 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	✓			66
Cabinet Maker		*		35
Carpenter	✓			69
Carver			***	NA at regional level
Clay Dabbins		*		NA at regional level
Cob Builder			***	NA at regional level
Decorator	✓			42
Flint Knapper		*	***	NA at regional level
Joiner				49
Lead Worker	✓			56
Mosaicist		*	***	NA at regional level
Other metal roof worker		*		NA at regional level
Pargeter			***	NA at regional level
Roofer – slate & tile	✓	*		66
Stone Fixer		*		NA at regional level
Stonemason	✓	*		52
Thatcher		*		38
Wattle & Daub		*	***	NA at regional level
Wheelwright		*	***	35

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

yorkshire & humberside

North Yorkshire, West Yorkshire, South Yorkshire, East Yorkshire, North and North East Lincolnshire

Yorkshire and the Humberside is the 5th largest of the nine English regions and forms almost 12% of England's total land area, with a population of 5 million and in 2003 generated an estimated £66 billion, which is growing consistently faster than the European average. The major urban settlements are in West and South Yorkshire with the economy of their cities based around their industrial past. Hull, in the east of the region, is still largely dependent upon fishing and trade and the economy of York is now highly dependent upon tourism. The region and its people have a strong sense of historic identity and the regional character has been shaped by adaptation and change to its landscape, buildings and monuments and settlements. It has a rich historic environment ranging from beautiful landscapes, major historic country houses, the remains of great medieval abbeys and castles, buildings and landscapes associated with 500 years of industrial activity, the City of York and the second largest number of listed places of worship of the nine regions[78].

The region has two world heritage sites, Fountains Abbey and Studley Royal Park and Saltaire, 2,603 scheduled monuments (13% of the national total), 772 conservation areas, 115 registered historic parks and gardens and 133 entries on the *English Heritage Register of Buildings at Risk*, (4.9% as opposed to 3.5% nationally)[79].

Traditional building materials found in this region are: limestone, sandstone, brick, cobbles, timber, thatch and clay tiles with lime wash applied as internal and external decoration[80].

Summary of Regional Statistics

Regional Employment	2,293,780
Construction Employment:	183,213 (8.0% of employed)
Self-employed within construction:	54,953 (30%)
Private Construction Contractors:	12,476 (7.5% of GB)
Construction Output:	£6,380m (7.9% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

158 quantitative and 6 qualitative interviews were undertaken with stakeholders in this region and 125 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 2,343 traditional building craftspeople (10.6% of the English total).

A wide variety of trades have been utilised in Yorkshire over the last 12 months and the most frequently used were joiners, carpenters, stonemasons, lime plasterers, glaziers, decorators, lead workers, bricklayers, slate & tile roofers, and general builders. Joiners and decorators are the two most likely trades required in the next 12 months.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 61-65. In Table 61 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 65).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 62, while Table 63 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 64. In Table 65, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 61 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		31,063 (8% of England total)
No. of Listed Buildings		40,382
No. of pre-1919 dwellings		527,000
No. of pre-1919 hereditaments		74,187
Total spend on Listed Dwellings	Last 12 months:	£37,334
	Next 12 months:	£38,454
Spend on Listed commercial buildings	Last 12 months:	£117,005
	Next 12 months:	£197,739
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£205,767
	Next 12 months:	£209,882
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£148,374
	Next 12 Months:	£250,735
Total spend on all Historic Buildings	Last 12 Months:	£508,480
	Next 12 Months:	£696,810
Average Spend on Private Buildings	Last 12 months:	£2,603
Average Spend on Commercial Buildings	Last 12 months:	£12,860 (13% of the total English spend)
	Next 12 Months:	£8,450 (anticipated to increase to 20% of the total English spend)
Required Spend for Urgent Work* (Under QI):		£5,252,500
Budgeted Spend for Next 12 Months:		£381,670

Table 62 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	3	Lime Plasterer	10
Bricklayer	15	Machinist	6
Cabinet Maker	5	Marbler	0
Carpenter	10	Master Glass Painters	0
Carver	3	Mosaicist	0
Clay Dabbins	0	Other metal roof worker (eg copper, zinc, tin)	2
Cob Builder	2	Pargeter	2
Decorator	5	Pavior	2
Dry Stone Waller	2	Roofer - slate & tile	12
Fibrous Plasterer	8	Stained glass	1
Flint knapper	0	Steeplejack	2
Generalist	11	Stone Fixer	9
Gilder (Paint)	0	Stonemason	11
Gilder (Wood)	0	Thatcher	2
Glazier	2	Tiler	3
Joiner	18	Wattle & Daub	0
Lead Worker	5	Wheelwright	4

Table 63 Shortages of Craft Skills

Contactors with outstanding vacancies		22% (lower than the national average)
Number of long-term vacancies		268
Recruitment difficulties	No difficulty:	7%
	Very difficult:	46%
Reason for recruitment difficulty	Lack of applicants:	69%
	Lack of skills:	69%
Contractors response to lack of applicants		
	Increase training programmes:	10%
	Increase training for workforce:	14%
	Increase recruitment advertising:	24%
	Expand recruitment channels:	17%
	No action:	17%
Contractors response to lack of skills		
	Provide further training:	34%
	Increase training programme:	10%
	Increase recruitment:	14%
Sub-contractors used by contractors		61% (lowest % of the 9 regions)

Table 64 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	64	4th highest number
Average number of apprentices	3.2	3rd highest average
Training not undertaken due to lack of available courses	15%	3rd lowest %
Training not undertaken due to financial issue	15%	4th lowest %
Contractors favouring college day release	30%	2nd lowest %
Contractors favouring combination of day and block release	30%	4th highest %
Contractors apprentices completing course	81%	Highest
Sole traders apprentices completing course	49%	Lowest
Awareness amongst contractors of NVQ Level 3 conservation units	36%	5th highest
College courses average capacity	21	2nd lowest
Average number of applicants	24	3rd lowest
% completing courses	96%	Joint 2nd
% passing courses	97%	Highest
Trainers		
Average fulltime:	17.0	1st of 9 regions
Average part-time:	3.0	6th of 9 regions
Courses		
Per full-time trainers:	1.8	3rd of 9 regions
Per part-time trainers:	10.0	7th of 9 regions
% of heritage/traditional craft skills Teaching material	27%	4th lowest of 9 regions (London highest with 45%)

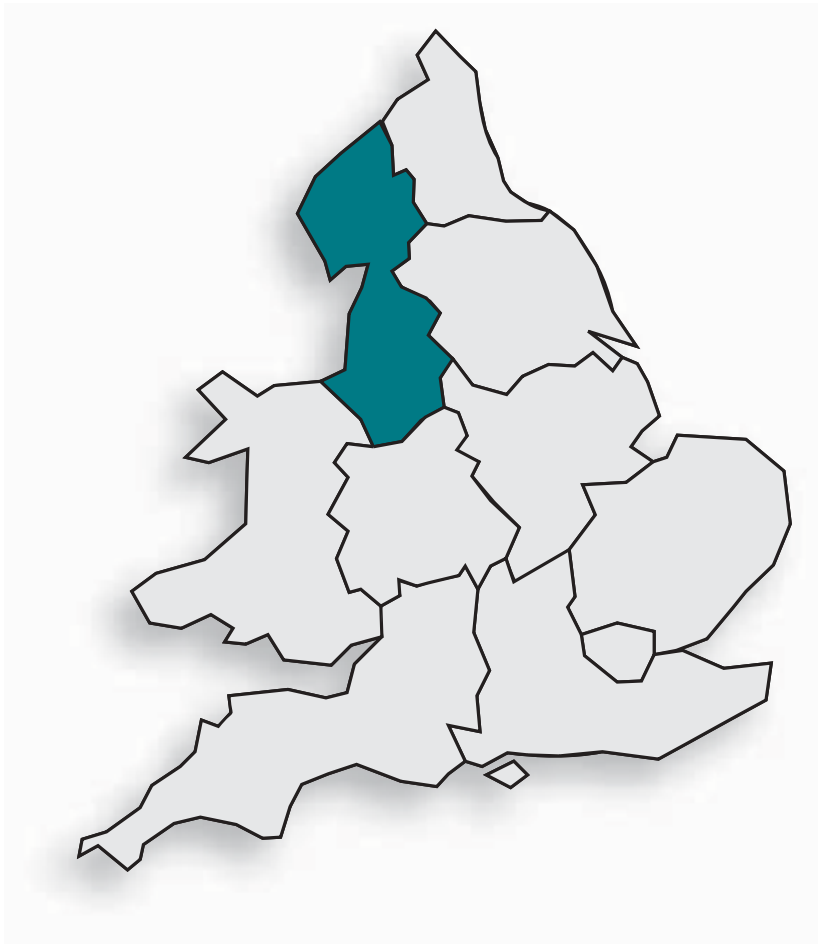
Table 65 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Blacksmith		*		NA at regional level
Bricklayer	√			45
Cabinet Maker				24
Carpenter	√	*		48
Decorator	√			29
Fibrous Plasterer		*		NA at regional level
Gilder (Paint)		*		NA at regional level
Glazier	√			NA at regional level
Joiner	√			34
Lead Worker	√			38
Lime Plasterer	√	*		NA at regional level
Other metal roof worker		*		NA at regional level
Roofer – slate & tile	√	*		45
Stonemason	√	*		36
Thatcher		*		26
Wheelwright				24

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*√ trade used * trade difficult to find *** average wait of over 3 months for trade*

north west



Cumbria, Lancashire, Cheshire, Greater Manchester, Merseyside

The North West covers 14,165 square kilometres (11% of the total area of England) and has a population of around 6.7 million. It straddles three counties that are a combination of large rural areas and small to medium sized settlements and two metropolitan counties (Greater Manchester and Merseyside) which form a densely populated urban belt on an east/west axis across the region. Apart from London and the South East, this region has the largest population (14% of the England total), but includes parts of the Peak District National Park, the Yorkshire Dales National Park and the Lake District National Park. The region has 32.8% of its 4,459 communities among the fifth most deprived in England, the greatest number for any region and the second highest behind the North East region. Knowsley, Liverpool and Manchester are the top three most disadvantaged areas nationally[81].

Summary of Regional Statistics

Regional Employment	3,078,183
Construction Employment:	232,599 (7.6% of employed)
Self-employed within construction:	83,168 (36%)
Private Construction Contractors:	15,661 (9.4% of GB)
Construction Output:	£8,189m (10.1% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

The region has a wealth of historic buildings and monuments ranging from Hadrian's Wall and vernacular buildings in Cumbria, the outstanding Victorian architecture in Manchester, to the two cathedrals and maritime and mercantile past in Liverpool, including a large area of its waterfront and commercial centre.

The North West has two world heritage sites; Hadrian's Wall and Liverpool Maritime and Mercantile City, 1,308 scheduled monuments, 808 conservation areas (8.9% of the national total), 129 registered historic parks and gardens and 157 entries on the *English Heritage Register of Buildings at Risk*[82].

Traditional building materials found in this region are: sandstone, brick, clay buildings (Solway Plain), cobbles, timber, thatch, terracotta and stone flags for roofing, with lime wash applied as internal and external decoration[83].

Regional Craft Skills Needs

188 quantitative and 5 qualitative interviews were undertaken with stakeholders in this region and 133 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 3,728 traditional building craftspeople (16.8% of the English total).

Joiners, lead workers, bricklayers, slate & tile roofers and general builders were the most frequently used trades in the North West last year. In the forthcoming year general builders and slate & tile roofers are the most likely trades to be sought.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 66-70. In Table 66 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 70).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 67, while Table 68 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 69. In Table 70, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 66 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		25,816 (7% of England total)
No. of Listed Buildings		33,561
No. of pre-1919 dwellings		752,000
No. of pre-1919 hereditaments		95,567
Total spend on Listed Dwellings	Last 12 months:	£23,840
	Next 12 months:	£24,555
Spend on Listed commercial buildings	Last 12 months:	£141,972
	Next 12 months:	£121,941
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£225,600
	Next 12 months:	£230,112
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£279,057
	Next 12 Months:	£239,683
Total spend on all Historic Buildings	Last 12 Months:	£670,469
	Next 12 Months:	£616,291
Average Spend on Private Buildings	Last 12 months:	£18,347
Average Spend on Commercial Buildings	Last 12 months:	£7,300 (16% of the total English spend)
	Next 12 Months:	£6,270 (anticipated to fall to 13% of the total English spend)
Required Spend for Urgent Work*(Under QI):		£1,750,000
Budgeted Spend for Next 12 Months:		£290,000

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 67 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	7	Lime Plasterer	17
Bricklayer	20	Machinist	5
Cabinet Maker	2	Marbler	0
Carpenter	15	Master Glass Painters	1
Carver	2	Mosaicist	2
Clay Dabbins	1	Other metal roof worker (eg copper, zinc, tin)	3
Cob Builder	3	Pargeter	1
Decorator	12	Pavior	5
Dry Stone Waller	8	Roofer – slate & tile	15
Fibrous Plasterer	9	Stained glass	2
Flint knapper	1	Steeplejack	1
Generalist	19	Stone Fixer	10
Gilder (Paint)	1	Stonemason	14
Gilder (Wood)	1	Thatcher	0
Glazier	3	Tiler	6
Joiner	24	Wattle & Daub	2
Lead Worker	5	Wheelwright	0

Table 68 Shortages of Craft Skills

Contactors with outstanding vacancies		21%
Number of long-term vacancies		310
Recruitment difficulties	No difficulty:	1%
	Very difficult:	49%
Reason for recruitment difficulty	Lack of applicants:	58%
	Lack of skills:	73%
Contractors response to lack of applicants		
	Increase training programmes:	23%
	Increase training for workforce:	34%
	Increase recruitment advertising:	23%
	Expand recruitment channels:	15%
	No action:	8%
Contractors response to lack of skills		
	Provide further training:	27%
	Increase training programme:	33%
	Increase recruitment:	12%
Sub-contractors used by contractors		74% (joint 4th highest % of the 9 regions)

Table 69 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	65	2nd lowest
Average number of apprentices	3.1	Highest
Training not undertaken due to lack of available courses	38%	2nd Highest %
Training not undertaken due to financial issue	8%	Lowest %
Contractors favouring college day release	42%	3rd Lowest %
Contractors favouring combination of day and block release	36%	2nd Highest %
Contractors apprentices completing course	74%	Joint 5th lowest
Sole traders apprentices completing course	52%	2nd lowest
Awareness amongst contractors of NVQ Level 3 conservation units	35%	3rd lowest %
College courses average capacity	28	4th lowest
Average number of applicants	44	3rd Lowest
% completing courses	89%	Joint 5th highest
% passing courses	92%	Joint 4th lowest
Trainers – Average fulltime:	11.7	4th of 9 regions
– Average part-time:	4.8	Joint 2nd of 9 regions
Courses – Per full-time trainers:	5.7	2nd of 9 regions
– Per part-time trainers:	14.0	2nd of 9 regions
% of heritage/traditional craft skills Teaching material	8%	Lowest of 9 regions (London highest with 45%)

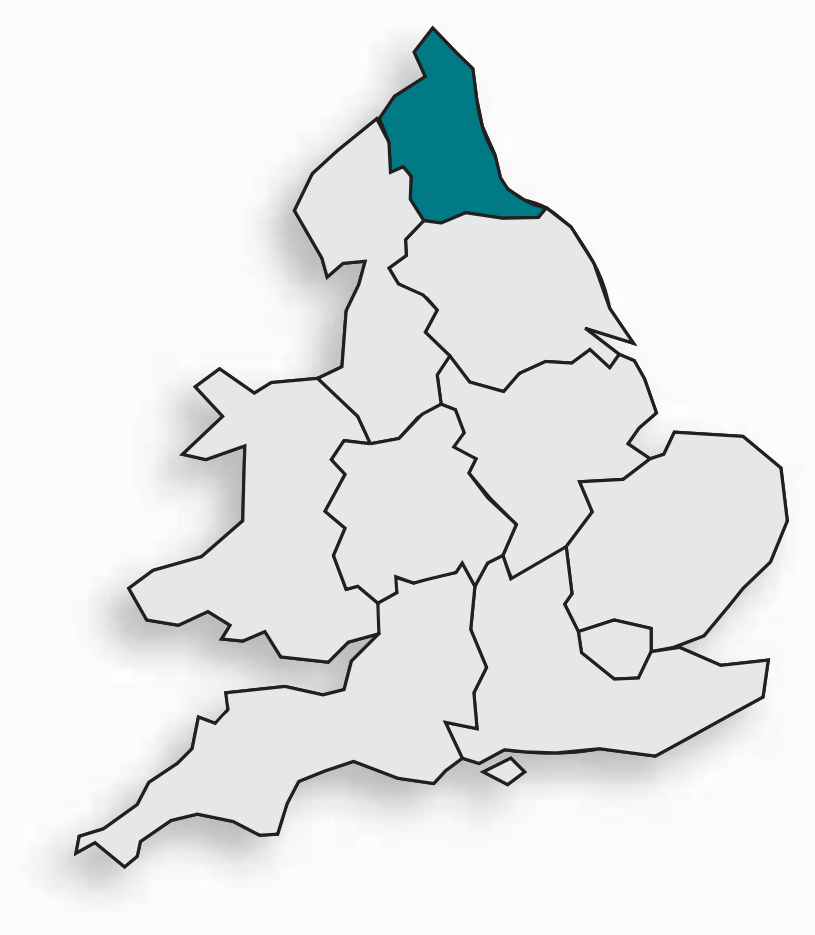
Table 70 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Bricklayer	✓	*		52
Cabinet Maker		*	***	27
Carpenter				54
Carver			***	NA at regional level
Decorator				33
Fibrous Plasterer		*		NA at regional level
Gilder (Paint)		*		NA at regional level
Gilder (Wood)		*	***	NA at regional level
Glazier		*		NA at regional level
Joiner	✓			38
Lead Worker	✓	*		44
Machinist		*		NA at regional level
Marbler		*	***	NA at regional level
Master Glass Painters		*		NA at regional level
Mosaicist		*	***	NA at regional level
Other metal roof worker		*		NA at regional level
Pargeter		*		NA at regional level
Roofer – slate & tile	✓			52
Stained Glass		*		NA at regional level
Stone Fixer		*		NA at regional level
Stonemason		*	***	41
Thatcher		*	***	30
Wattle & Daub		*		NA at regional level
Wheelwright		*	***	27

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

north east



Northumberland, Durham, Tyne and Wear and Tees Valley

The North East is the second smallest region (8,592 square kilometres) after London and forms less than 7% of the total land area of England. Over two thirds of the region is classified as rural and 13% of this is designated as National Park, with 17% of the region also designated as Areas of Outstanding Natural Beauty (AONB) and 91.5% of the coastline has Heritage Coast status. However, over half of the region's population of 1.45 million live in areas ranked as within the most deprived 20% of the country and the region has the highest rate of unemployment in England. But quality of life in the North East is relatively high and travel to work times, house prices and disposable income above the UK average. There is also a strong sense of regional identity with heritage and the built environment considered important by the residents and regional strategies are trying to incorporate regional distinctiveness. It also has the highest success rate for HLF applications for funding[84].

This region has two world heritage sites Durham Castle and Cathedral and Hadrian's Wall, 1,381 scheduled monuments, 279 conservation areas, 9 registered historic parks and gardens and 8.3% of the entries on the English heritage *Register of Buildings at Risk*. It also has the highest proportion of grade I and grade II* listed buildings at risk in England (8.25% compared to the 3.5% national average)[85].

Traditional building materials found in this region are: limestone, gritstone, sandstone, slate, brick, timber, stone flags and clay tiles[86].

Summary of Regional Statistics

Regional Employment	1,054,832
Construction Employment:	89,461 (8.5% of employed)
Self-employed within construction:	19,243 (22%)
Private Construction Contractors:	4,191 (2.5% of GB)
Construction Output:	£2,811 (3.5% of GB)

(Source: CITB-ConstructionSkills Sector Needs Analysis, 2004)

Regional Craft Skills Needs

72 quantitative and 6 qualitative interviews were undertaken with stakeholders in this region and 45 of these were with contractors and sole traders. This skills mapping research, estimates that the region has 1,061 traditional building craftspeople (4.8% of the English total).

Joiners and carpenters, slate & tile roofers and general builders were the most dominant trades last year and general builders look set to remain so next year.

Interpretation of the Tables

This consultation process allowed current shortages of traditional building craft skills in the region to be identified and provided a picture of the key traditional building craft skills needed at both national and regional level to meet the demands of the sector and sustain a viable

workforce, particularly over the next 12 months. The profile for demand, supply and training needs in the built heritage sector in this region is shown in Tables 71-75. In Table 71 the number of historic buildings is mapped against the current and future spend, to provide an estimate of the demand for skills in the future (Table 75).

The percentage of contractors and sole traders in the region who have at least one employee with a specific craft skill is shown in Table 72, while Table 73 highlights the difficulties in recruitment and solutions contractors are currently using to overcome labour and skills shortages. Existing levels of training and training provision through the regional Further Education (FE) colleges, has also been mapped, with particular emphasis placed upon understanding the degree of relevant training currently available and this is summarised in Table 74. In Table 75, those trades that have been most frequently used in the last 12 months are shown alongside those that, although used for more specialised work, are difficult to find in the region. This table also identifies those trades where there is an average waiting time of over 3 months for craftspeople. This data has been combined to weight the various crafts relative to each other in terms of shortage and importance and to estimate the additional number of craftspeople required at the regional or national level.

Table 71 Regional Demand for Traditional Building Craft Skills

Total number of historic buildings		
No. of Listed Buildings Entries		11,140 (3% of England total)
No. of Listed Buildings		14,482
No. of pre-1919 dwellings		171,000
No. of pre-1919 hereditaments		24,878
Total spend on Listed Dwellings	Last 12 months:	£24,124
	Next 12 months:	£24,847
Spend on Listed commercial buildings	Last 12 months:	£52,090
	Next 12 months:	£64,368
Spend on Historic (Pre-1919) Dwellings	Last 12 months:	£120,299
	Next 12 months:	£122,704
Spend on Historic (Pre-1919) Hereditaments	Last 12 Months:	£61,766
	Next 12 Months:	£76,325
Total spend on all Historic Buildings	Last 12 Months:	£258,279
	Next 12 Months:	£288,244
Average Spend on Private Buildings	Last 12 months:	£4,690
Average Spend on Commercial Buildings	Last 12 months:	£6,207 (6% of the total English spend)
	Next 12 Months:	£ 7,670 (anticipated to increase slightly to 7% of the total English spend)
Required Spend for Urgent Work * (Under QI):		£2,500,000
Budgeted Spend for Next 12 Months:		£667,335

** Where budget has been identified as only covering part of what is necessary, by the last QI.*

Table 72 Percentage of contractors and sole traders in the region with at least one employee with a specific craft skill

Craft	Percentage	Craft	Percentage
Blacksmith	11	Lime Plasterer	22
Bricklayer	16	Machinist	4
Cabinet Maker	2	Marbler	2
Carpenter	13	Master Glass Painters	0
Carver	2	Mosaicist	4
Clay Dabbins	0	Other metal roof worker (eg copper, zinc, tin)	13
Cob Builder	0	Pargeter	4
Decorator	16	Pavior	4
Dry Stone Waller	9	Roofer – slate & tile	22
Fibrous Plasterer	18	Stained glass	4
Flint knapper	0	Steeplejack	2
Generalist	24	Stone Fixer	11
Gilder (Paint)	0	Stonemason	29
Gilder (Wood)	2	Thatcher	4
Glazier	9	Tiler	9
Joiner	36	Wattle & Daub	0
Lead Worker	16	Wheelwright	4

Table 73 Shortages of Craft Skills

Contactors with outstanding vacancies		40% (higher than the national average of 25%)
Number of long-term vacancies		160
Recruitment difficulties	No difficulty:	10%
	Very difficult:	60% (higher than the national average)
Reason for recruitment difficulty	Lack of applicants:	57%
	Lack of skills:	79% (higher than the national average)
Contractors response to lack of applicants		
	Increase training programmes:	38%
	Increase training for workforce:	25%
	Increase recruitment advertising:	38%
	Expand recruitment channels:	-
	No action:	-
Contractors response to lack of skills		
	Provide further training:	27%
	Increase training programme:	27%
	Increase recruitment:	36%
Sub-contractors used by contractors		75% (3rd highest % of the 9 regions)

Table 74 Training

Training	Number or %	Relation to other nine regions
Contractors in survey sample with apprentices	55	2nd lowest number
Average number of apprentices	4.8	Highest average
Training not undertaken due to lack of available courses	40%	Highest %
Training not undertaken due to financial issue		
Contractors favouring college day release	11%	Lowest %
Contractors favouring combination of day and block release	11%	Lowest %
Contractors apprentices completing course	77%	Joint 2nd highest
Sole traders apprentices completing course	53%	Joint 4th lowest
Awareness amongst contractors of NVQ Level 3 conservation units	60%	Highest
College courses average capacity	19	Lowest
Average number of applicants	18	Lowest
% completing courses	81%	Lowest
% passing courses	96%	Joint 2nd highest
Trainers		
Average fulltime:	8.5	7th of 9 regions
Average part-time:	2.2	8th of 9 regions
Courses		
Per full-time trainers:	1.6	Joint 7th of 9 regions
Per part-time trainers:	6.4	6th of 9 regions
% of heritage/traditional craft skills Teaching material	12%	2nd lowest of 9 regions (London highest with 45%)

Table 75 Future supply

	Trades Used	Difficult to find	Waiting times	Regional Inflow Required
Blacksmith		*		28
Bricklayer		*		NA at regional level
Cabinet Maker		*		15
Carpenter	✓			29
Decorator				18
Fibrous Plasterer		*		NA at regional level
Glazier		*		NA at regional level
Joiner	✓			21
Lead Worker		*		23
Lime Plasterer		*		NA at regional level
Mosaicist		*	***	NA at regional level
Other metal roof worker		*		NA at regional level
Pargeter		*	***	NA at regional level
Roofer – slate & tile	✓	*		28
Stonemason				22
Thatcher		*	***	16
Tiler		*		
Wheelwright		*	***	15

NA = Not applicable because this trade is not sustainable at a regional level, for required national inflow figures for this craft trade see Section 5.3, Table 23 in the main report.

*✓ trade used * trade difficult to find *** average wait of over 3 months for trade*

CONCLUSIONS AND RECOMMENDATIONS

8

conclusions

To ensure the continued provision of relevant skills, the built heritage sector and its partners need to work collectively to reverse the current skills shortages and quantifiable gaps. As conservation and restoration is part of the repair, maintenance and improvement sector of the construction industry, the wider influences on the industry need to be taken into account when planning solutions.

The heritage sector represents a microcosm of the main construction industry. Therefore, when considering any potential solutions to the issues surrounding staff and skills shortages, the first consideration should always be whether this reflects part of the broader picture. Solutions are suggested within this context, however when considering investment in marketing activity or new training course provision, economies of scale will inevitably exist. It is also the case that the changing nature of construction will potentially create new problems for the heritage sector, and it needs to anticipate these and act in very specific and targeted ways. For instance, the introduction of new technologies and move towards off-site manufacture will result in an increasing proportion of the wider workforce becoming specialists in skills ever more distance from those required to service historic building stockholders. Beyond the practical skills, there is a shift in attitudes, potentially ever-further removed from a culture of repair and conservation.

8.1 Summary of Main Findings

	Demand	Supply	Employers	Training Providers
Facts	5million pre-1919 buildings including around 500,000 listed buildings £3.5billion spent in the last 12 months on conservation and restoration of historic buildings with half on listed buildings Average spend per building set to rise; total spend on listed buildings estimated to rise by 4%	Shortage of labour, skills and experience 6,590 new craftspeople needed in the next 12 months to meet demand Stockholders are reactive rather than planning ahead 75% of stockholders are highly satisfied with completed work, but over half are unhappy with completion times	Over half of the contractors have real difficulties recruiting 60% of contractors and 28% of sole traders employ apprentices, but suffer a 25% and 41% drop-out rate, respectively Specialised trades more likely to suffer from lack of apprentices Training provision is insufficiently focused. Mix of day and block release courses favoured	Construction courses are over-subscribed, but insufficient up-take of training in built heritage skills Too few older trainees are entering the built heritage sector Only slightly above half of the trainers were aware of NVQ Level 3 conservation units
Reasons	As bulding stock increases with age, more conservation, repair and maintenance are required Difficulties in sourcing skilled crafts people High level of sub-contracting in sector with lack of investment in training	Poor image of construction industry/built heritage sector and lack of knowledge of built heritage sector results in lack of applicants Lack of financial reward Insufficient number of craftspeople entering the sector through current training routes	Dissatisfaction with course content Apprentices do not stay with sole traders long after qualifying detracting from investing in training Low awareness of NVQ Level 3 conservation units High level of travel for some apprentices to attend courses	Difficulty in recruiting staff to provide training Loss of trainers from the industry Poor pay for college lecturers compared to working in the construction industry College trainers lack conservation knowledge
Solution	Educate domestic home owners regarding the need for sympathetic conservation and repair Increase awareness of the need for skilled craftspeople working on historc buildings Support the implementation of Quality Scheme for registered building contractors	Government needs to create parity of esteem between academic and vocational routes. Address image issues of the construction industry and built heritage sector to improve recruitment Target skills gaps at regional and national level	Educate employers on the benefits of apprenticeships and training Ensure careers and training advisers are properly briefed Employ more 25+ age group and career changers to fill current age gap	Employers and contractors need to work more closely together Ensure additional support for older entrants Make courses more accessible and flexible in-line with National Occupational Standards

8.2 New Findings

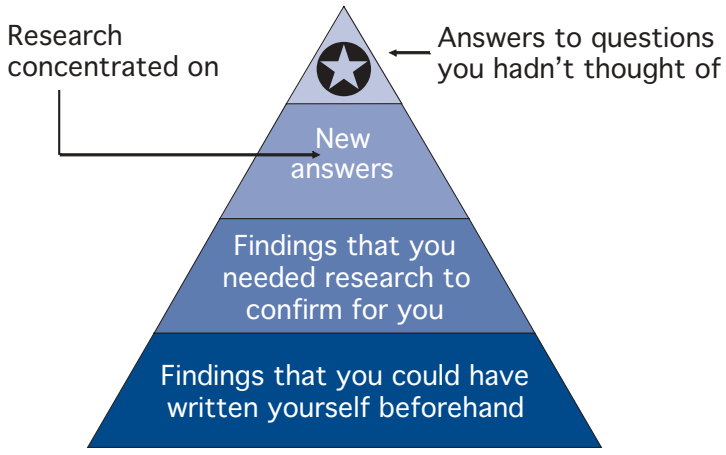
All research, no matter how large or small, will always yield information, which may confirm known facts, anecdotal evidence and unsubstantiated evidence. Research may also identify new questions to which answers are needed and sometimes these answers will be revealed within the research and sometimes not: the latter then requires further research. This research is no different to any other in these respects, as illustrated in Figure 16.

The pyramid is used as a general research tool. However areas were included in this report arising from the qualitative research that did not form part of the original research brief and therefore raised additional issues that were discussed. There were also areas that added value and depth to the findings, but did not directly contribute to the quantification of demand and supply. These areas included:

- Issues regarding travelling distance of apprentices to college to receive off-the-job training.

- Issues surrounding the lack of a perceived or recognised career ladder and in particular the lack of structure leading to 'master crafts' status;
- The link between the sector, training providers and schools;
- The perception of the role of conservation officers;
- The extent to which consultation with conservators and craftspeople occurs at specification stage;
- The extent of multi-skilling;
- The complexity of the sector, especially in terms of developing a model to understand and estimate inflow/outflow/churn;
- How the stockholders collect/report/store their financial data relating to expenditure on buildings;
- Given that Quinquennial Inspections (QI's) are in place; issues surrounding the uncertainty of the future, in terms of knowing what budget will be available and planning the work to be carried out.

Figure 16 Typical Research Findings Pyramid



8.3 Demand and Spending

The current healthy level of demand may be the result of years of under-spend and a buoyant economy, thus creating a backlog and if this backlog is reduced so to will demand, but the rate of this is unknown. A significant reduction in demand will have major implications for funding and for the workforce.

The level of demand generated by the domestic market is far larger than that generated by the public/commercial market however the domestic owner is less likely to see the need to engage heritage specialists than the public and commercial stockholders. Therefore the current demand for heritage skills is driven by the public and

commercial sector, but if the domestic market is educated as to the need for sympathetic conservation and restoration, demand for heritage skills will rise.

The spending profile shows a high degree of variability across the regions, which has implications for planning or predicting the expected or required workforce to meet spending demand. Some regions are going to need far greater numbers of craftspeople than others (Tables 22 and 23), but if the workforce is in short supply then either the workforce travels or training is required to supply the necessary

Regional Requirements for Skills

South West

Carpenters, stonemasons, slate & tile roofers and general builders are the trades most used in the South West in the last 12 months and likely to be used in the next 12 months.

South East

Carpenters, decorators, lead workers, bricklayers and slate & tile roofers were in demand in the South East region in the last 12 months. Carpenters, decorators and bricklayers are the most likely trades to be required in the next 12 months.

London

Joiners, carpenters, stonemasons, decorators, metalworkers (other than lead workers), bricklayers, and slate & tile roofers were the most frequently used trades in London over the last 12 months. Carpenters and decorators are most likely to be used over the next 12 months.

East

Joiners and carpenters, lime plasterers, decorators, lead workers, bricklayers and slate & tile roofers were the trades most used in the last 12 months in the Eastern region. Carpenters, bricklayers and slate & tile roofers are the trades most likely to be used over the next 12 months.

East Midlands

Joiners, stonemasons, decorators, lead workers, slate & tile roofers and general builders were the trades most frequently used last year in the East Midlands. General builders, joiners, lead workers and slate & tile roofers are the trades most likely to be used in the next 12 months.

West Midlands

Carpenters, stonemasons, decorators, lead workers, bricklayers and slate & tile roofers were the trades most frequently used over the last 12 months in the West Midlands. Carpenters, stonemasons, decorators and slate & tile roofers are the trades most likely to be required in the next 12 months.

Yorkshire

A wide variety of trades have been utilised in Yorkshire over the last 12 months and the most frequently used were joiners, carpenters, stonemasons, lime plasterers, glaziers, decorators, lead workers, bricklayers, slate & tile roofers, and general builders. Joiners and decorators are the two most likely trades required in the next 12 months.

North West

Joiners, lead workers, bricklayers, slate & tile roofers and general builders were the most frequently used trades in the North West last year. In the forthcoming year general builders and slate & tile roofers are the most likely trades to be sought.

North East

Carpenters, slate & tile roofers and general builders were the most dominant trades last year and general builders look set to remain so next year.

workforce, or a combination of the two occurs. This also has implications for training as some regions are likely to have far higher training needs than others.

Until trend analysis is obtained from further data sets, this could be a short-term, rather than long-term demand forecast model. If this is the case, then providing large amounts of training in specific areas may not be viable in the long-term.

The major public and commercial stockholders had difficulty identifying what they had spent and should this study be repeated, their procedures for data storage and reporting would need to be assessed and amended beforehand. In some cases this may take a year to complete. The regional spend variation on historic buildings is immense and this has implications for the regional workforces and training.

8.4 Skills Shortages and Gaps

Definition of Skills Shortage

The inability to recruit people with the appropriate skills at an appropriate wage indicated by long-term unfilled vacancies and understaffing. This can result in long working-days/working-weeks and high overtime rates, thus affecting a companies' performance, including their capacity to tender, undertake and complete new work.

Summary of Skills Shortages

6,590 craftspeople are required to meet demand in the next 12 months. This is based upon a combination of the employers' long-tern vacancies (3,170) and a further projected need of 3,420 estimated from the stockholders spending.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Difficulties in recruiting craftspeople also indicate a skills shortage. The evidence is not simply in the smaller and more vulnerable skills, such as thatching, earth buildings, flint-knapping or dry stone walling, but also the main craft trades.

Although the sector considers lack of funding to be a major constraint, the effect of increasing funding also needs to be considered. Should the current skills shortage remain unresolved, then an increase might result in a much-needed market opportunity or it could mean that a skills shortage would quickly become the major constraining factor.

Definition of Skills Gaps

Missing knowledge and competence of existing staff, with gaps leading to reduced performance, safety and quality. This may lead to lower quality output and longer snagging times, below par health and safety record and less profitability.

Summary of Skills Gaps

Apart from a shortage of skilled labour, there are also skills gaps,

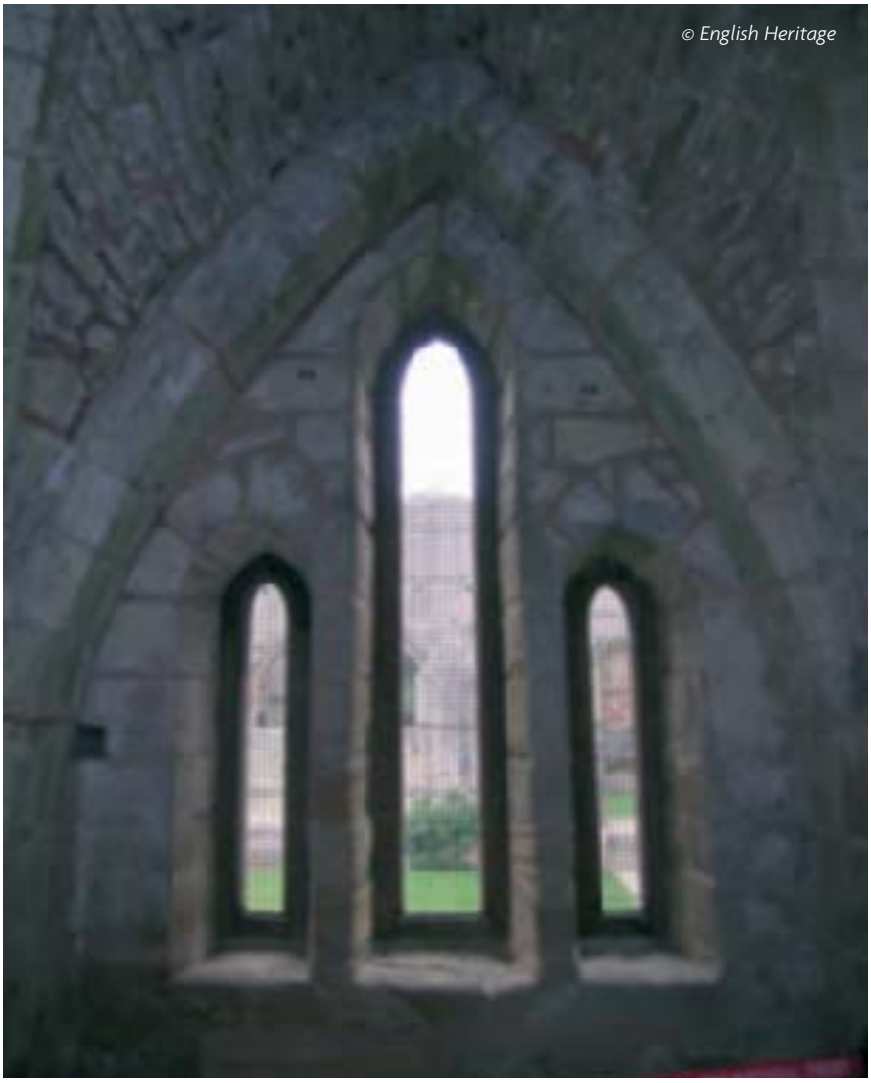
with clear evidence of a shortage of craftspeople with the knowledge and experience of traditional methods and materials and working practices. A frequently cited reason for the current labour shortage was a lack of skills and experience. The former is thought by contractors to be due to the course content and that the NVQ system is failing to deliver what is required in the built heritage sector. Similarly, there is less variety of projects that people will work on nowadays and getting a range of experience is more difficult. The danger is acceptance of a low skills base, which will further erode standards, together with the sector failing to train.

Contractors prefer to engage sub-contractors who live near where the building is being conserved and 70% of sub-contractors are sourced from within 20 miles of the project. While some specialist skills may travel further distances for work, this has implications for recruitment and training of mainstream skills, which need to be sourced and retained on a local rather than regional or national level. Conversely, specialist craftspeople, such as carvers, millwrights, mosaicists and wheelwrights may travel and work in a wider geographic area, and so their recruitment and training can be sourced at regional level or national level.

Not enough 25+ age group or career changers are employed by contractors. As there is presently a shortage of the mid-age range workers in the built heritage sector, contractors should be encouraged to employ more people within this age bracket. There is a role for ConstructionSkills to play in promoting mature apprenticeships. Similarly, there is also a great need for increased diversity in the built heritage sector.

The age profile of the wider construction industry like that of many UK industries is mature and has undergone significant change over the past 10 years. For both manuals and non-manuals in the industry, the workforce has been distinguished by a sharp decline in the share of the younger age groups in total employment and an analogous rise in those aged 45 years and over.

Whilst the construction industry will, over the next 20 years lose around 30% of its workforce it has an age profile that is significantly biased towards the 30-39 age bracket. Traditionally this group is seen to sit within the most experienced and productive section of the construction industry workforce, those aged 35-49. On a national level signs of increased participation of individuals in the 20-24 age group is tempered by the slightly lower levels coming in at 16-19, and the peak at 45-49. The long-term concern being that the 45-49 age group will be approaching retirement in 20 years, whilst those



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in the 16-19 age group would (and should) form the core of the most experienced and productive section of the construction industry workforce, traditionally those aged 35-49.

8.5 Image and Recruitment

Many of the interviewees criticised the emphasis in secondary schools on the academic route, often to the detriment of those who might be more suited to a vocational one. While many of the interviewees may not be up to date on educational developments, they feel that a major change is required in schools to achieve similar parity of esteem between the two routes. There is evidence that this is happening and the introduction of a GCSE in Construction during 2005 is a first step. The Tomlinson 14-19 Education Report[87] proposed a wide range of measures and although the suggested over-arching framework has not been adopted by the Government[88], specialised diplomas are being considered as an option for introduction by 2010. This will include construction and the built environment and will rationalise the 200 or so qualifications in construction currently available.

Both the construction industry and the built heritage sector suffer from a poor public image and perception. Increasing awareness of the built heritage and the career opportunities within it to schools, parents, careers advisors and the general public is seen as an important aspect to ensure the continued supply of future craftspeople into the sector. Integrating relevant work experience/placements into the current school system and establishing a register of contractors who could and would get involved in this should be considered. While Health and Safety is an issue, it should not be treated as an insurmountable barrier and a framework for enabling work experience within this sector should be developed in tandem with CITB-ConstructionSkills' Curriculum Centre initiatives.

Education Business Link organisations (EBLOs) exist in the nine English regions to nurture links between education and business. One example in this research was of a regional employer who had a member of staff specifically engaged to attract young people into their business from schools.

8.6 Learning

The best way of improving awareness of the historic built environment and introducing future generations to a possible career in the built heritage sector is by increased involvement at primary and secondary school education. This recent research has shown this to be an important aspiration of the sector's stakeholders. It would also build upon the excellent existing work by ConstructionSkills with schools and recruitment and its Construction Ambassadors scheme. All aiming to raise the profile of the construction sector.

The historic environment can be, and is, used as a teaching resource within the National Curriculum and a visit to a historic site is an option at the various key stages linked with subjects, such as: art and design, citizenship, design and technology, geography, history, religious education and science. Schools in England are provided with exemplar, but non-statutory schemes of work by the Qualification and Curriculum Authority (QCA) and these are sometimes followed very closely, although the National Curriculum offers a flexible guideline that teachers can interpret in a number of ways[89]. Increased interest in sustainable development by the Government and within the education authorities offers the possibility of greater emphasis upon the historic environment in the curriculum and the built environment can play a major role in this.

School trips, including field trips to historic sites and open-air museums in particular, provide an ideal opportunity for integration of an understanding of traditional building skills. At open-air museums there is an emphasis upon traditional methods, materials and techniques of building construction. Preparation and the use of traditional materials are often demonstrated and this established resource could be used by the NHTG and partners to further develop awareness of the historic built environment with children.

At secondary school level, the new GCSE in Construction, which will be piloted from September 2005, should include traditional building materials. Field trips to producers of hand-made bricks, tiles, lime mortar, timber for heavy-duty carpentry, quarrying, etc and skilled craftspeople visiting schools to talk about or demonstrate their trade skills could be central to this. ConstructionSkills and the NHTG could assist in this process by working with the employer groups and trade federations to establish an approved national and regional list of craftspeople who could undertake this role.

Similarly, the CITB-ConstructionSkills' Construction Ambassadors scheme is another vehicle for promoting work in the built heritage sector, but industry needs to provide young craftspeople to participate in the scheme.

The Joint Advisory Committee on Built Environment Education (JACBEE) developed by DCMS and DfES, is due to publish its recommendations for ways of developing learning using the built environment[90]. This research supports the need for education staff from all partner organisations to coordinate discussions in line with the JACBEE recommendations to investigate what time or space is available within the National Curriculum and how this aspect can be best achieved and how they can now build on the successful Construction Award Scheme for schoolchildren run by CITB-ConstructionSkills.

8.7 Apprenticeships, Training and Lifelong Learning

Colleges and contractors need to liaise more closely to deliver appropriate training and improve the up-take of the current NVQ Level 3 Conservation Units. On-Site Assessment and Training (OSAT) can provide another means of up-skilling for existing craftspeople working within this sector or provide missing skills to craftspeople working in the main construction industry who might convert to the built heritage sector.

College trainers need educating and training in the principles and approaches to historic building conservation and repair to deliver the Conservation Units specifically for trainees wanting to work in or specialise in the built heritage sector. The NHTG is developing a rolling modular Training the Trainers programme, funded by CITB-ConstructionSkills. The initial pilot scheme will commence in June 2005 with five trades: brickwork, carpentry, lead work, stone masonry and roofing and will up-date trainers on conservation principles and provide hands-on experience of methods and materials for their specific craft trade and mentoring.

Although the NVQ Level 3 Conservation Units are the desired skills level for this sector, it is also important to recognise that the large majority of trainees do not reach this. It is therefore, important to try to establish a compulsory element within the NVQ Levels 1&2 covering elements of the construction and repair of traditional building materials. The industry's Occupational Working Groups, with representatives from the built heritage sector, are best placed to take this aspect forward.

In addition to addressing course content and retention of apprentices, we must be mindful of the poor image that NVQs hold in the minds of many craftspeople. Recent research conducted by OPERA Building Research[91] highlights how many craftspeople, particularly older ones, hold City and Guilds in high regards, but are very dismissive of NVQs. The belief is that NVQs do not provide apprentices with the levels of training or discipline that they consider are necessary. Given that the NVQ system is unlikely to disappear in the medium term, greater collaboration with industry and training providers needs to take place to ensure that the NVQ system and consequent training programmes meet the needs of the industry operating in the built heritage sector.

A clear career progression route needs to be mapped out with qualifications linked more strongly to skills and experience, for instance, the current NHTG mentoring pilot for advanced craft skills and the CITB-ConstructionSkills development of Level 4 Master Crafts National Occupational Standards. Such career progression obviously needs to be related to pay, with increased financial re-numeration for acquiring additional qualifications and ultimately Master Crafts status. This needs the backing of employer groups and the trade unions.

Most training needs for this sector can be achieved through regional training centres and some skills involving smaller numbers are best serviced by one national centre. The established Centres of Vocational Excellence (CoVEs) should be at the heart of this training. Trainees and apprentices of sole traders in this survey on average travelled 28 miles to attend college and trainees and apprentices of contractors travelled an average of 18 miles. Therefore, travelling distance should not be an impediment for trainees and apprentices attending regional colleges, rather than local delivery of training.

The existing network of private training providers will also need to be utilised for short courses or material specific processes so that the sector can benefit from the infrastructure and expertise available.

Acquiring skills through training and qualification is the first step towards productive, decently-paid employment. But continuing development to accrue more skill and knowledge only happens over time and with experience and is

usually achieved by on-the-job training and practice. The opportunity to develop new skills or up-skilling for existing craftspeople, career changers or older workers is central to the aims for a fully qualified workforce and will help to retain people within the sector. This helps the individual to maximise their potential and work prospects and in a changing labour market it is important for employers to have people equipped with the skills to meet changing demands. Sustainable employment needs to support an individual's training needs by coordinated training and skills programmes devised by the sector for the sector.

There is much training offered by private training providers, some local authorities, material producers/suppliers and amenity societies in the form of short courses and summer schools. These can be used to fill the knowledge and skills gaps related to the use of traditional building methods and materials and can be added to the under-pinning knowledge and skills gained from the NVQ apprenticeship training system to acquire further knowledge. These courses could also attract small-scale jobbing builders working on repairs to existing buildings, particularly in more rural environments, with course delivery organised on an accessible regional level. These could be undertaken in conjunction with Local Authorities to reach local builders and an incentive for attendees would be the need to show proof of skills development to be placed on a proposed approved list of contractors and craftspeople to work on historic buildings (see Skills Action Plan). This type of course could also be run in conjunction with the IHBC, to raise awareness for conservation officers within local authorities.

The HLF is setting up a UK-wide bursary scheme worth £4 million over 4 years starting in January 2006[92]. English Heritage and The National Trust in partnership with CADW, ConstructionSkills and the NHTG, with funding from the HLF, are currently developing a submission for a traditional buildings craft skills bursary scheme for England and Wales. A similar scheme is being developed in Scotland and Northern Ireland by Historic Scotland and partners. If successful, the scheme will provide bursary holders with the opportunity to gain valuable work-based training and practical skills development through variable length work-placements with a range of placement providers within the built heritage sector.

This scheme is aimed at those qualified to NVQ Level 3 or equivalent and above to further develop traditional building craft

skills, but this will not provide or replace training, which can be gained at a college. It will cater for a full range of practitioners within the built heritage sector seeking guided additional practical work-experience or continuing development. It will also assist craftspeople with related transferable skills and knowledge already working in the main construction industry who are seeking to obtain particular traditional craft skills or experience. Bursary-holders will have the opportunity to undertake conservation and repair work on specific heritage sites.

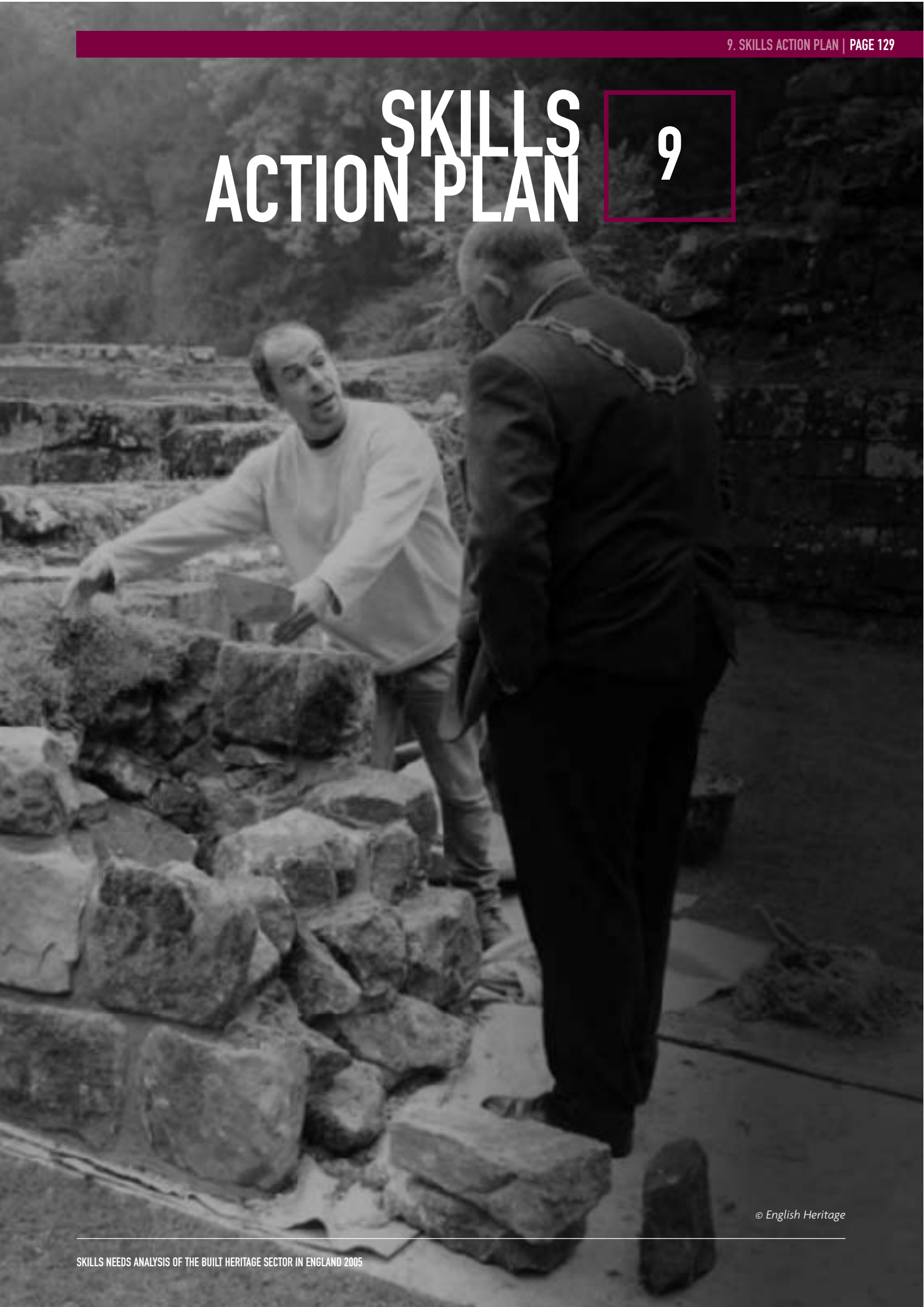
8.8 Key Recommendations

The key recommendations arising from this research and detailed further in the Skills Action Plan in Section 9 of the report are:

Recommendation	Link to Research Theme
1. The NHTG to continue its key role as the umbrella body to represent the built heritage craft skills interests, to provide a cohesive voice and tackle issues in a coherent manner	Common to all themes
2. Develop an effective sectoral communications and marketing strategy, to adapt to key trends and characteristics identified as part of this research and coordinated by the NHTG	Demand and Supply
3. Repeat the skills mapping research in 2-5 years time to determine medium and long-term demand in order to establish and analyse trend data for the sector	Common to all themes
4. Improve advice, guidance and raise awareness of clients, designers/specifiers, property owners and funding bodies regarding the use of suitably skilled and qualified craftspeople for the conservation, repair and maintenance of historic buildings.	Demand
5. Influence changes to the procurement process so that it drives forward the need for training in traditional building craft skills.	Demand
6. Secure long-term funding opportunities to ensure continuity in developing and training the built heritage workforce.	Demand
7. Improve the image of the sector and attract applicants with suitable skills and attitude across the age ranges 16+, 25+ career changers and increased diversity	Supply
8. Ensure that qualifications and training are relevant and valued within the sector and easier to access to allow a recognised career progression	Supply
9. Improve awareness of traditional building crafts skills within the National Curriculum & promote the vocational route as a career pathway	Supply
10. Encourage investment in training by contractors & promote the benefits of young and adult apprenticeships to our sector of the industry	Supply

The NHTG is now well-established and its positive and successful work in integrating the various stakeholders means that it is the most suitable organisation to undertake and continue the role of umbrella body for the sector. The NHTG is currently funded by CITB-ConstructionSkills and English Heritage and under the Sector Skills Agreement between the two organisations (see www.citb-constructionskills.co.uk and www.english-heritage.org.uk) this financial support will remain in place until November 2007. However, increased funding will be needed for the NHTG to assume a greater and more independent role to represent the interests of traditional building craft skills.

SKILLS ACTION PLAN 9



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skills action plan

The results of this research were presented to a NHTG focus group in December 2004 and January 2005, who then formulated an outline action plan. This was presented to invited delegates at a Craft Skills Summit on 24th January 2005, to discuss the main research findings and to explore sustainable solutions that could be delivered collaboratively. Representatives from various organisations were present, including contractors, trade federations, government departments, the Learning and Skills Council, heritage bodies and training providers. The summit prioritised and validated the following actions for strategic and tactical delivery across the nine English regions, highlighting the key issues needing to be addressed over short, medium and longer-term time-scales. Partners agree that the time is right for the various organisations to work together to make a real and lasting impact for the sector.

At the time of writing this report, organisations have been setting their annual budgets and unable to identify immediate funding streams that could be published. This research will help the sector to access a better share of funding for learning, skills and training. The NHTG and its partners will engage with the relevant organisations from the skills, economic development and heritage sectors to ensure sufficient funding is obtained to deliver the proposed solutions to the issues over the next 5 years. Possible sources of funding and in-kind support include Regional Development Agencies, the Learning and Skills Council, Government Departments' funding streams, Trade Federations, Local Authorities, the Professional Bodies, the Heritage Lottery Fund and other grant-giving trusts, European funding streams and any domestic equivalents post the 2006 change to the European Development and Social Fund programmes, as well as ConstructionSkills and English Heritage through their Sector Skills Agreement.

For consistency, the skills action plan follows the three research themes covering demand, supply and training and the actions are clearly linked to NHTG's, ConstructionSkills' and English Heritage's business plan priorities for skills and training. Performance targets have been set against each action point, so that progress and the success of these can be measured and evaluated.

Meeting the Challenge

The Built Heritage Sector in England Skills Action Plan 2005-2010

Research Theme: Demand for Skills

Action 1: Improving advice, guidance to, and awareness of, Clients, Designers/Specifiers and Property Owners in the use of suitably skilled and qualified craftspeople for the conservation, repair and maintenance of historic buildings

Immediate Action (2005–06)

a) Develop a unified communications and marketing strategy amongst all stakeholders involved in providing advice and guidance and awareness-raising

b) Begin a campaign of general awareness raising targeted towards all groups via estate agents, press/TV, web-based media, PR/marketing campaigns targeted at clients, property owners and professionals and the next generation

c) Examine the feasibility of devising a cohesive register of contractors, on a national/regional basis, who can demonstrate proof of experience and membership of relevant Trade Federation/Association

d) Establish a dialogue and network with local authority Chief Executives, Chief Planning Officers and Heritage Champions and the Institute for Historic Building Conservation (IHBC) to ensure consistency and good practice in advising property owners

Medium-Term Action (2005-08)

a) Develop a national and regional register of approved historic buildings contractors for use by heritage bodies, and designers and specifiers when providing advice and guidance

b) NHTG to work with professional institutions to promote good practice to include an annual event or conference

c) Support relevant training for Conservation Officers

Who is responsible for delivery?

Trade Federations, British Association of Construction Heads (BACH) and other training providers, English Heritage, National Trust, SPAB and other amenity societies with support from the NHTG. Additional external support will be needed at an early stage to deliver communications and marketing strategy to the wide target audience and make best use of existing communication systems

Performance Measures

i) All stakeholders involved in providing advice and guidance and awareness-raising agree to communications and marketing strategy and deliver to target groups started by end of 2006

ii) Media profile to promote traditional building craft skills needs to be nurtured and maintained from 2005 to 2010 with an increasing profile identified from 2005 levels

iii) A registration scheme for suitably qualified contractors is established, maintained and used by all target groups by 2008

v) A positive working relationship developed with advisers to property owners with agreement to set performance measures on the amount of decrease in improper repairs to historic buildings from 2006-10

Research Theme: Demand for Skills

Action 2: Influence changes to the procurement process so that it drives forward the need for training in traditional building craft skills

Immediate Action (2005-06)

a) Support the Trade Federations, Chartered Institute of Builders and DTI in the implementation of the Quality Scheme

b) Explore with the Office of Government Commerce (OGC) the opportunity for introducing into the public sector a unified pre-tender qualification process for contractors irrespective of size and monetary value of contract

c) Investigate the establishment of a nation-wide system linked to a register of contractors as per the electrical and gas sectors to prevent unqualified craftspeople from working on historic buildings

Medium-Term Action (2005-08)

a) Examine the possibilities with DTI, ODPM, DCMS, client groups, local authorities and funding bodies of assisting industry in implementing a nation-wide system to prevent unqualified craftspeople from working on historic buildings.

b) If feasible, devise a fully accessible registration scheme that builds on existing good practice from Trade Federations, public sector bodies and 'Construction Line' and from other countries with existing schemes.

Longer Term Action (2005-10)

a) Ensure that the registration scheme is funded and sustained beyond 2010.

Who is responsible for delivery?

English Heritage and DCMS, working with the Trade Federations to promote the need for changes to other government departments and funders. NHTG to support the coordination of agreed delivery of a regulatory system.

Performance Measures

i) Public sector is required by Government to operate a unified pre-tender qualification process by the end of 2007

ii) Endorsement is achieved from Government/ OGC to adopt the Re-thinking Construction Agenda/MGC model for procurement for SMEs in a long-term framework agreement by the end of 2007

iii) Introduction of pre-tender and grant contract conditions by key funding bodies to ensure appointment of adequately qualified designers/specifiers, craftspeople and contractors who are committed to training. This will demonstrate a direct impact and increased demand on training provision, by early 2007

iv) Other funders of grant-aided work, such as the Heritage Lottery Fund and private trusts, adopt the same pre-tender and grant conditions by the end of 2007

v) A fully-funded and administered regulatory system is introduced by the end of 2007

Research Theme: Demand for Skills

Action 3: Secure long-term funding opportunities for developing and training the workforce involved in the conservation, repair and maintenance of historic buildings

Immediate Action (2005-06)

a) Develop a road map of all current and potential sources of funding for skills development in the conservation, repair and maintenance sector

b) Enter into a dialogue with all relevant funding bodies to examine the long-term opportunities for training, so SMEs can deliver 3-5 year training programmes

c) Work with the Regional Development Agencies, Regional Cultural Foras and Historic Environment Foras to ensure the connection between sustainable development, tourism, the economy and the historic environment is understood and developed across the nine English regions

d) Explore the opportunities for current funding and new, untapped, income for skills and training development in the sector

Medium-Term Action (2005-08)

a) In conjunction with regional development partners, explore opportunities for regional and local funding dedicated to skills development for traditional building crafts

b) Deliver more in-depth research for the most threatened trades and manufacturers relevant to the sector e.g. structural carpentry, millwrighting and flint walling

Longer Term Action (2005-10)

a) Raise awareness within relevant agencies/government departments of the link between conservation, repair and maintenance and sustainable development

b) Repeat this labour and skills need analysis of the sector on a bi-annual basis to analyse trends and forecasts

Who is responsible for delivery?

NHTG to support partners with the production of a road map, funding strategy and initial discussions with funding bodies and regional agencies. Chief Executives and Senior Staff of stakeholder groups to take forward dialogue with national organisations and institutions

Performance Measures

i) Commitment from funding bodies to enter into a proactive dialogue by early 2006

ii) Positive working relationships are developed and maintained with the Regional Fora by the end of 2006

iii) The connection between conservation, repair and maintenance and sustainable development is recognised by government departments and funding organisations through their published policy and grant guidance by 2008

Research Theme: Recruitment, Supply and Advancement of Skills

Action 1: Improve the image of the sector & attract applicants with suitable skills and attitude across the age range (16+, 25+ and career changers)

Immediate Action (2005–06)

a) Develop targeted careers advice that raises the profile of the sector and vocational training to young people, parents, returners, and career changers

b) Develop a sector-wide outreach plan to compliment the communications strategy and raise the profile of working in our sector of the industry, based on an assessment of effective methods of delivery to the respective target groups

c) Identify and recruit positive role models/ambassadors/champions and case studies to assist in delivery of strategy

d) Develop and promote clear career pathways for the sector linking qualifications and experience, based on a matrix model to reflect the multiple entry points, length of time and manner in which craft skills are acquired

Medium-Term Action (2005- 08)

a) Deliver outreach programme to include taster sessions and courses for target groups

b) Establish improved recruitment and retention techniques for contractors, publish good practice models to take steps to reduce apprentice drop-out rates, and support post 25 year olds and career changers to enter the sector

c) Examine the feasibility of creating either a new central web-based resource for careers advisers or developing an existing site (such as the NHTG's)

Longer Term Action (2005- 10)

a) Deliver outreach programme to include taster sessions and courses for target groups

b) Maintain and update published models to assist contractors in recruitment and retention

Who is responsible for delivery?

Trade federations, BACH and other training providers, ConstructionSkills, English Heritage, National Trust, SPAB and other amenity societies supported by the NHTG

Performance Measures

i) NHTG to co-ordinate partners to work with CITB-ConstructionSkills' Education and Communications teams to develop up-to-date targeted careers advice (web-based, cd-rom and printed media) during 2005 and dissemination by all stakeholders from early to mid 2006

ii) NHTG to coordinate development of sector-wide outreach plan utilising existing good practice in stakeholder organisations by early 2006 to coincide with timetable for new-intake of apprentices

iii) Delivery of outreach plan to be underway with full stakeholder engagement by March 2006

iv) Trade Federations, training providers, English Heritage, National Trust, SPAB and other amenity societies to provide potential role models/ambassadors/ case studies by end of 2005

v) NHTG to complete career pathways project and promote and disseminate via its website and stakeholder organisations by December 2005

vi) Trade Federations and ConstructionSkills to determine good practice models for recruitment and development and publish annually from 2006

Research Theme: Recruitment, Supply and Advancement of Skills

Action 2: Ensure that qualifications and training are relevant and valued within the sector and easier to access to allow a recognised career progression

Immediate Action (2005-06)

a) Support ConstructionSkills in its work to ensure Government support for vocational training as well as academic post-16 education

b) Explore and pursue the possibilities for additions and changes to currently available national qualifications such as filling the current gap in NVQ level 2 for traditional building craft competencies, the development of a NVQ Master Crafts, a "Rural crafts apprenticeship", within a portfolio of elements that will attract funding and opportunities to specialise

c) Consult more widely across the industry and with training providers on any impending developments and changes to relevant qualifications

d) Ensure that any discussions on qualifications examine the grant-aided opportunities/consequences

e) Audit the current range of training provision and develop a framework with BACH and independent training providers to clearly promote available provision across the sector

f) Establish an approved register of training provision, linked to the NHTG website training database

g) Develop and maintain a rolling programme for 'Training the Trainers' to improve delivery of NVQ Level 3 conservation units or NVQ Level 3 heritage skills qualifications

h) Develop mentors for the various crafts to support career progression

i) Target investment and facilitate an increase in the number of suitably qualified assessors for NVQs

j) Ensure qualifications and training provision is marketed consistently by all stakeholders

k) Establish an Alliance of (public, private and charitable specialist) Conservation Trainers (ACT) to network and interface with FE colleges for bespoke specialist and sub-contractor training delivery for NVQs 1-3 and continuing development through mid-career training

Medium-Term Action (2005- 08)

a) Deliver tailored training provision for career changers clearly linked to national occupational standards

b) Support the development of regional training centres of excellence based upon the CoVE network and national centres where the training need is better sustained at this level

c) Encourage all training providers to deliver provision that is linked to the national occupational standards for the sector and/or a nationally recognised qualification that can be funded and contributes to the individual trainees' career progression

Longer Term Action (2005- 10)

a) Consult more widely across the construction sector and with training providers on any developments and changes to relevant qualifications

b) Ensure that discussions on qualifications examine the grant-aided opportunities and implications

c) Ensure that there are flexible and sustainable solutions to address a range of training needs across the various crafts, for instance, variations to the length of time for block release and mobile training

Who is responsible for delivery?

ConstructionSkills to continue to lead on any new qualifications development with support from the NHTG and its network. NHTG to work with Trade Federations, English Heritage, ConstructionSkills, FE and independent training providers to deliver the 'Training the Trainers' initiative, also supply and coordinate a network of suitable mentors and increase the number of qualified assessors. NHTG and stakeholders to ensure communications and marketing strategy promotes qualifications and training provision

Performance Measures

i) The sector and its training providers to respond positively to engagement in any qualifications discussions or development from ConstructionSkills and the NHTG from 2005 onwards

ii) The 'Training the Trainers' initiative being delivered in 2005 progresses into a fully-funded rolling programme of continuing development by 2007

iii) A coordinated sustainable network of suitable mentors is developed by the end of 2006

iv) A 30% increase in the number of qualified assessors by the end of 2006 and a 50% increase by 2007

v) The Communications and Marketing strategy results in a 50% increase in the number of contractors that are aware of the range of relevant qualifications, available training provision and grants by the end of 2006

Research Theme: Investment in Education and Training

Action 1: Improve awareness of traditional building crafts skills within the national curriculum & promote the vocational route as a career pathway

Immediate Action (2005–06)

a) The NHTG to continue its role as the umbrella body to represent the built heritage craft skills interests and provide a cohesive voice, tackling issues in a coherent manner

b) Develop further links and promote the NHTG website and its training database as a one-stop careers and skills information source

c) Explore the feasibility of expanding the NHTG website to include a job finder facility on a national/regional/local basis

d) Develop targeted careers advice that raises the profile of the sector and vocational training for young people, parents, returners, and career changers

e) Disseminate targeted careers advice via schools, libraries, careers centres, training centres, trade federations, contractors and heritage organisations through integration into ConstructionSkills' careers programme

f) In consultation with DfES and educationalists determine the availability of time and space in the national curriculum at primary and secondary school age to promote the built heritage sector and linked to core and foundation subjects

g) Work with ConstructionSkills to establish a pool of young people currently working in the built heritage sector to act as heritage ambassadors

h) Ensure young people, parents and teachers are sufficiently targeted by Communications, Marketing and Outreach Plans

Medium-Term Action (2005–08)

a) Co-ordinate a programme of Skills Fairs across England

b) Ensure that the new GCSE in Construction includes traditional building craft skills

c) Deliver structured taster courses for schools and for adult returners

d) Establish a network with teacher and careers officers to identify long-term heritage champions

e) Establish an approved national and regional list of craftspeople and specialist contractors who can go into schools and participate in careers and skills events delivering craft demonstrations and talks

f) Establish full engagement of the built heritage sector in offering work-placement opportunities for 14 year olds

g) Develop resource packs with information linked to amenity societies, etc to accompany school visits

h) Explore the feasibility of a funded national scheme for improving awareness and promoting traditional building craft skills using existing mechanisms such as the CITB-ConstructionSkills Construction Award Scheme for young people; developing links between CoVEs and other regional centres of excellence with primary and secondary schools; exploring the possibilities for specialist schools or academies with a heritage focused syllabus

Longer Term Action (2005–10)

a) If feasible and sustainable, develop and coordinate a funded national scheme for improving awareness and promoting traditional building craft skills

Who is responsible for delivery?

NHTG to coordinate main delivery with full engagement from Trade federations, FE and independent training providers, CITB-ConstructionSkills, English Heritage, National Trust, SPAB and other amenity societies

Performance Measures

i) A 75% increase in users accessing NHTG's website by the end of 2006

ii) NHTG to work with ConstructionSkills' Education and Communications teams to develop up-to-date targeted careers advice (web-based, cd-rom and printed media) during 2005 and dissemination by all stakeholders from early to mid 2006

iii) NHTG to coordinate development of sector-wide outreach plan utilising existing good practice in stakeholder organisations by early 2006 to coincide with timetable for new-intake of apprentices

iv) Delivery of communications and marketing strategy and outreach plan underway with full stakeholder engagement by March 2006

v) Trade federations, training providers, English Heritage, National Trust, SPAB and other amenity societies to provide potential role models/ambassadors/ case studies by end of 2005

vi) When the GCSE in Construction is fully rolled out across England in September 2006 to ensure that traditional building crafts skills and teaching materials are fully integrated

Research Theme: Investment in Education and Training

Action 2: Encourage investment in training by contractors & promote the benefits of young and adult apprenticeships to our sector of the industry

Immediate Action (2005–06)

a) Ensure that the sector-wide communications and marketing strategy and outreach plan promotes the financial and business benefits of recruiting and training apprentices to the industry, focusing on the practical aspects of training provision and including any requirements for registration with trade federations or any future nation-wide regulatory scheme

b) Promote all grants available to industry including CITB-grants for registered companies

c) Develop guidance and tools for assisting contractors as to the benefits of training employees and available qualifications for traditional building craft skills. Utilise existing models such as the CITB-ConstructionSkills interactive Training Plan and Investors in People assistance to encourage career progression to NVQ Level 3 and beyond

d) Publicise existing and any future procurement and grant-aid requirements for a qualified workforce

Medium-Term Action (2005-08)

a) Enter into a dialogue with the Learning and Skills Council and DfES to secure funding sources for NVQ Level 3 as well as adult apprenticeships

b) Discuss with trade federations how barriers can be removed to give confidence to contractors to invest in training new entrants, 25+, career changers and the existing workforce and to ensure they retain their investment in their employees

Longer Term Action (2005-10)

a) Ensure that there are flexible and sustainable solutions to address a range of training needs across the various crafts, for instance, variations to the length of time for block release and mobile training which will result in greater engagement in training and more support to trainees from employers

b) Implement actions to remove barriers and provide incentives to contractors to train

Who is responsible for delivery?

NHTG to coordinate main delivery with full engagement from Trade federations, FE and independent training providers, ConstructionSkills, English Heritage, National Trust, SPAB and other amenity societies

Performance Measures

i) Additional sources of funding are made available for qualifications at NVQ Level 3 and adult apprenticeship from 2006

ii) Policy for grant-aided schemes is changed by the end of 2006 to make longer-term funding available

iii) An increase in the availability of relevant training courses to compliment on-site training/experience is sustained by contractor take-up from 2006 to 2010

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Notes

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