



HOUSES OF PARLIAMENT
R&R DELIVERY AUTHORITY

Skills Assessment Research Digest

**P3. Training and provision in
construction and heritage**

November 2021

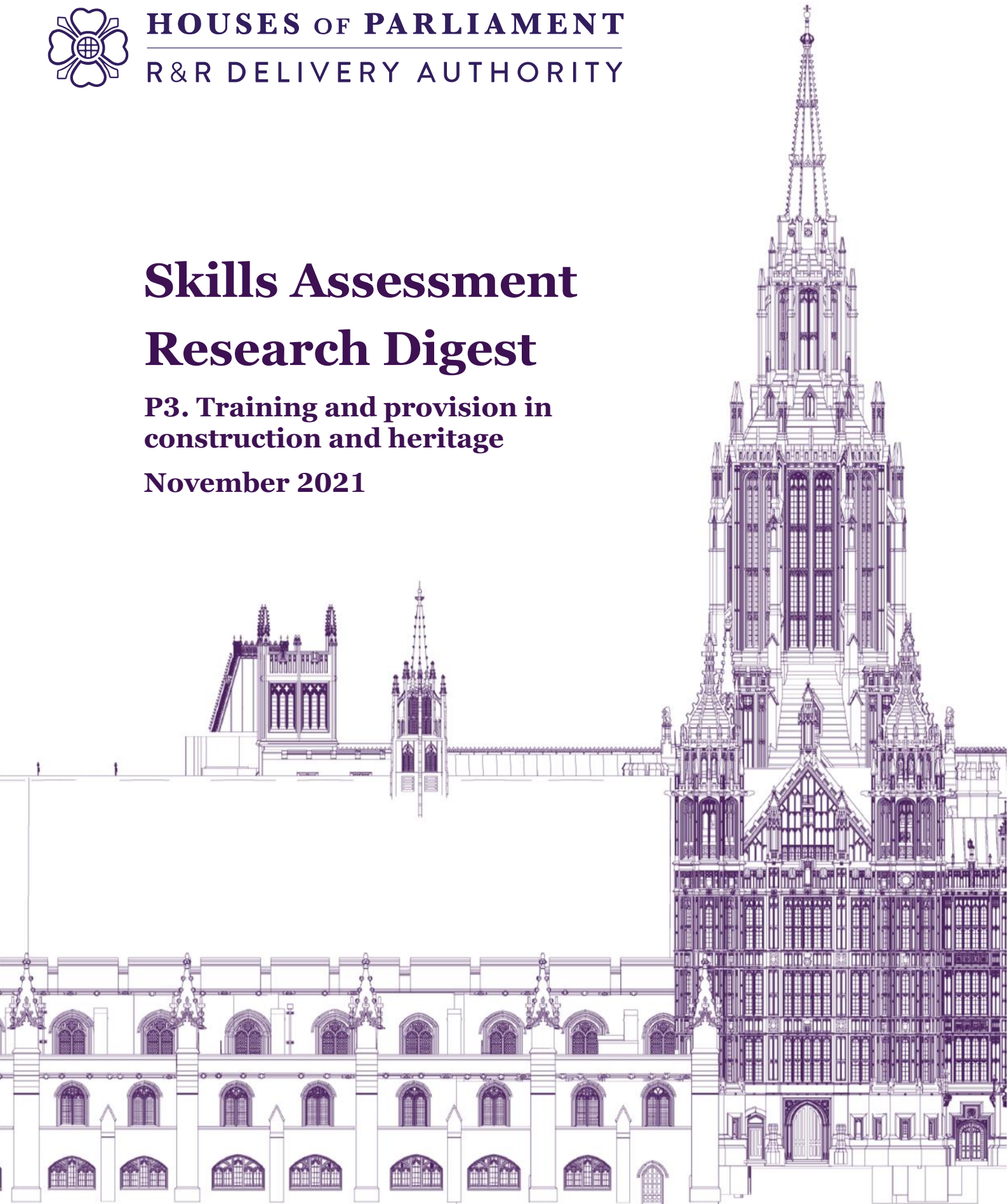




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1 About the research digests

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

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

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

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



2 Introduction

The UK education and training system is at most levels comprehensive and well-matched to employer and individual needs. However, as society and technology progress – at an ever-increasing pace – the education system is being forced to adapt at rates and depths not hitherto common.

Much of this change relates to digital. The revolution which began with room-sized computers and whirling tape reels in the 1960s led to today's palm sized computers that we call "cell-phones", but the truly radical digital change has occurred since the advent, in the 1990s, of the Internet. This, together with Wi-Fi technology, has connected most of the world and facilitated a revolution in the way companies and individuals work.

From the point of view of the Restoration and Renewal (R&R) Programme, digital change has impacted – and will continue to impact – on every aspect from the highest level of digital twinning of macro-elements to the potential need for VR/AR awareness and competence at the level of the individual worker.

The discussion which follows on the provision and take up of education and training relevant to the R&R Programme must, therefore, be considered primarily from a digital perspective.

This Digest discusses current training provision and availability relevant to the Programme. It will broadly cover training in the mainstream construction industry, and then focus on the heritage training offering specifically.



3 Training provision: mainstream construction

3.1 Overview

A huge array of training is available across different qualification levels (Appendix 1 provides a picture of these levels for the UK) for new entrants into the construction industry, and the existing workforce. Some 280 colleges and 130 universities across the UK offer a plethora of courses, ranging from short courses to formal qualifications from level 1 to level 8. This is supplemented by training available from hundreds of private providers, as well as “in-house” training offered by employers themselves. For new entrants, a key route into the industry is via apprenticeships. Beyond this, T Levels – introduced in September 2020 – offer an additional entry pathway in specific vocational routes such as design, surveying and planning for construction, building services engineering for construction, and onsite construction. They are billed by the government as ‘an alternative to A levels, apprenticeships and other 16 to 19 courses. Equivalent to 3 A levels, a T Level focuses on vocational skills and can help students into skilled employment, higher study or apprenticeships’. Due to their very recent introduction, there are – as yet – no available data regarding learner numbers.

A future pipeline of talent is a particularly pressing requirement at the level of younger entrants.

“Conversion” rates between education and employment are not high for the construction sector. Research conducted for CITB in 2017² found that of approximately 104,000 learners on construction courses, just 29,150 (28%) joined the construction workforce six months later.

The R&R Programme will require much of its work to be focused on specialist skills and competences.

The **Construction Skills Certification Scheme (CSCS)** is the leading competence card scheme in the construction sector.

- The scheme covers most occupations in the industry.
- The cards act as proof that the holder possesses the required skills and competences for a given job-role.
- These cards also regulate skills in the heritage construction sector.
- Heritage Skills CSCS cards are available for twenty different construction trades, ranging from highly specialist trades such as heritage lead and glazing workers through to more conventional trades which focus on heritage skills such as painters and decorators, tilers, and bricklayers.
- The cards demonstrate that holders possess appropriate skills and competence to work on traditional and historic buildings.

Recent research specifically for the R&R Programme shows that only 10% of the workforce working on traditional buildings hold the specific skills needed for heritage sites and only a quarter of contractors have taken part in specific training. The research revealed some concern among heritage construction employers as to the suitability of heritage training courses.



A Strategic Skills Partnership Agreement plan was set up in 2017 by Cadw, Historic England, Historic Environment Scotland, and CITB to address the perceived lack of skill needed to work on pre-1919 buildings within the industry¹. Its purpose and aim were to integrate specific skills into mainstream training making them more accessible and to broaden skills within the industry. Three routes for training were developed:

1. the Specialist Applied Skill Programme (developed through partnerships with associations and employers). There are – valid until March 2021 – a number of programmes available in areas which include a small number for heritage roofing, plastering and stone masonry,
2. short courses, which might be a short 2-day course leading to a qualification, and
3. funding allocated for special purposes which involves a 4-year training programme delivered by the Welsh Traditional Building Forum.

Qualification levels

- For occupations involved in design and construction management roles, 61% of the workforce are qualified at level 4 or higher (commonly with a SVQ/NVQ²).
- For the construction operative occupations there are far smaller percentages of the workforce qualified at level 4 and above, with most being qualified at level 2 and level 3. However, around 38% of the construction operative workforce does not have a qualification at level 2 or higher³ (see Figure 1).

Proportion of construction workforce with any qualification

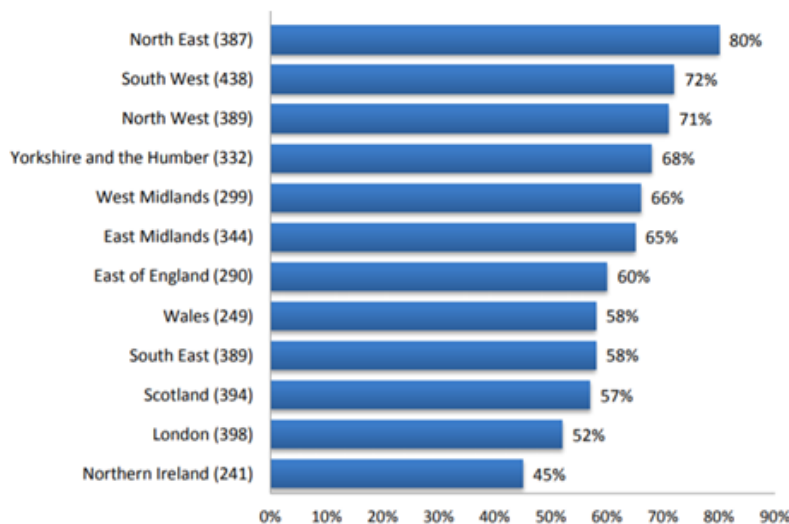


Figure 1 Proportion of workers in the construction sector that hold any construction qualification, by region/nation⁴

¹ <https://historicengland.org.uk/content/docs/education/cadw-hes-he-citb-strategic-skills-partnership-agreementpdf/>

² National/Scottish Vocational Qualifications

³ ONS Labour Force Survey Summer 2018 - Spring 2019

⁴ CITB, Workforce Mobility and Skills in the UK Construction Sector, 2015.



Distribution of qualifications and levels of achievement vary depending upon where the worker is based, as shown in the accompanying chart.

3.2 Further Education

Construction operative training is focused predominantly on qualifications at level 2 and level 3. These qualifications are delivered by a range of organisations such as further education (FE) colleges, private training providers, employers, training groups or training bodies. Data are available and reported for England, Scotland, Wales and Northern Ireland.

According to CITB's Trainee Numbers Survey of 2016/17, which collected data from construction training providers on the number of first-year construction and built environment trainees in the UK, the number of construction trainees nationally is on the rise.

England

Training activity – new learners

- Concentrated at lower qualification levels. In 2016/17, level 2 qualifications were the most popular.
- In that year, the largest proportion of first-year trainees (43%) were undertaking level 2 qualifications, while 34% were taking a level 1 qualification.
- Only 2% of trainees were undertaking a level 4+ qualification.

Training activity – type of course

- The majority of construction learners are studying Diplomas rather than being assessed for NVQs/SVQs.
- In 2016-17, 68% of first-year learners were enrolled on Diploma courses, compared to 32% on S/NVQ's.
- In the 13 years prior to 2016/17, the percentage of the students enrolled on S/NVQ has fallen from 70% in 2003/2004 to 32% in 2016/2017.
- While S/NVQs require onsite experience and assessment, Diplomas are largely classroom-based craft courses which do not require proof of onsite work experience. Because Diploma courses do not necessarily cover onsite work skills, there might be a risk that onsite skills are lost prompting a need for such training within further professional development.

Scotland

- In 2019-20, one fifth (20.9%) of 18–19-year-olds in the Scottish population attended college full-time.⁵
- Further education full time equivalents (FTEs) peaked in 2016/17 when just over 57,000 students were enrolled in college programmes.⁶
- Over the last ten years, number of FTEs in further education has remained relatively stable with average of 54, 592 students enrolled in college programmes.

⁵ Skills Development Scotland: <https://www.skillsdevelopmentscotland.co.uk/publications-statistics/statistics/annual-participation-measure/?page=1&statisticCategoryId=7&order=date-desc>

⁶ Scottish Funding Council: College Statistics 2019-20, 2021



Wales

- In 2019/20, level 3 qualifications had the largest number of students enrolled (89,940).⁷
- In the same year, the second most popular was level 2 with 84,545 students enrolled.
- In that year 13,500 students were enrolled in Building and Construction programmes, with most of them (4,970) studying to obtain level 2 qualifications.
- Over the period from 2012/13 to 2017/18 number of students enrolled in Building and Construction programmes gradually decreased from over 20,000 to 13,060. There was a slight increase in 2018/19 but again 2019/20 saw a slight decrease from 14,325 to 13,500.

Northern Ireland

- FE College enrolments have decreased by 14%, from 153,817 in 2015/16 to 132,354 in 2019/20.⁸
- In 2019/20 most of the students (78.9%) were studying at qualifications Level 2 and above.

3.3 Higher education

Training for design, technical and construction management occupations within the potential R&R workforce is focused on qualifications at Level 4 and above and typically takes the form of first and postgraduate degrees, i.e. higher learning.

Further education colleges are increasingly offering training at higher qualification levels, causing some crossover with higher education providers, but first degree and postgraduate qualifications delivered either by or in partnership with a university, remain the main source of training at this level.

In considering higher education achievements the research has focused on an overview of the UK as a whole, considering only UK domiciled students (i.e. those who have their permanent home in the UK) since international students will often return home upon completion of their studies.

Volumes of first degree, postgraduate degree, and other undergraduate achievements

- Numbers are relatively constant from 2010/11 to 2019/20 (Figure 2).⁹
- Slight decrease in the number of qualifications obtained in all levels for 2019/20, despite growth in the overall number of first year students in preceding years.
- Evidence suggests some of this decrease is explained by significant numbers of qualifications awarded this year not being reported, likely linked to the impact on examinations and awards resulting from the Covid-19 pandemic.

⁷ Stats Wales: <https://statswales.gov.wales/Catalogue/Education-and-Skills/Post-16-Education-and-Training/Further-Education-and-Work-Based-Learning/Learners/Further-Education/learningactivitiesfurthereducationinstitutions-by-subject-creditlevel>

⁸ NISRA: Further Education Sector Activity in Northern Ireland: 2015/16 to 2019/20, 2021

⁹ HESA: Higher Education Student Statistics: UK, 2019/20



Volume of UK degree achievements

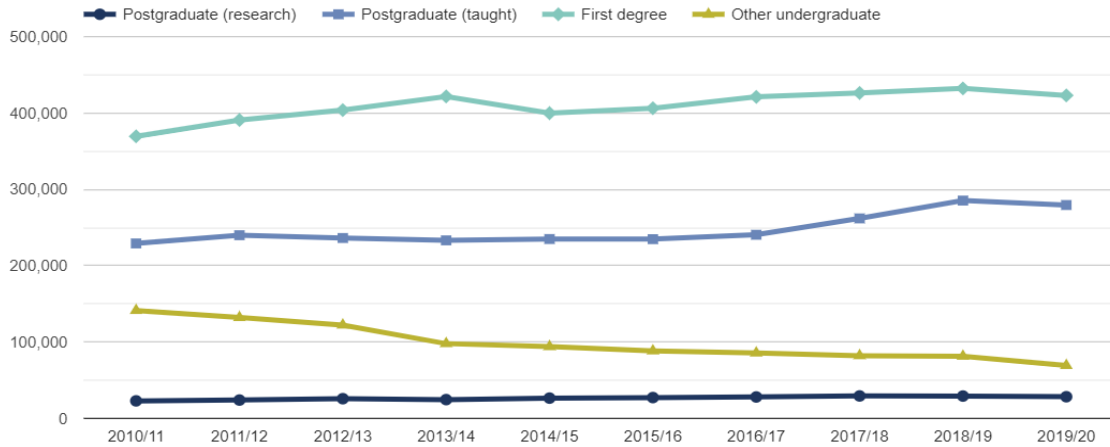


Figure 2 Total volumes of UK domiciled first degree, postgraduate degree and other undergraduate achievements

Volume of UK degree achievements, by subject area

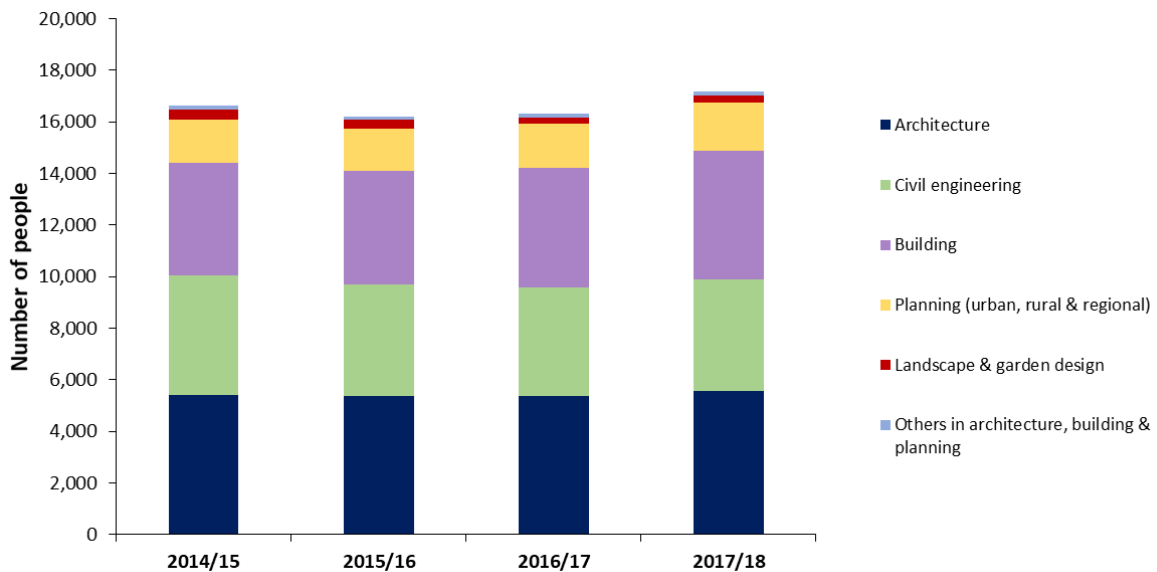


Figure 3 UK domiciled first degree, postgraduate degree and other undergraduate achievements by subject area. Source: HESA 2019.

Achievements by subject area

- ‘Building’ subject area covers a range of qualifications such as construction management and building surveying (Figure 3).
- Architecture, civil engineering, and planning are more focused in their scope.



- Reduction in number of qualifications at higher education level.
- A small, growing, number of higher-level higher education achievements at Level 4+.
- Numbers of student achievements decreased in 2019/20 in architecture and building.
- In previous academic year, there were only 13,420 graduates in those fields.

3.4 In-service training

The construction industry has a relatively low rate of formal in-service training. According to the most recent Employer Skills Survey from 2019:

- 48% of construction staff in the UK received training in that year,
- this was comparable to manufacturing (48%), primary sector and utilities (50%), and compares with an overall national average of 59%,
- these proportions have not shifted significantly in the past 13 years,¹⁰
- since construction is largely an industry of small companies (71% of the industry consists of small establishments with five or fewer employees), its size structure may well have an important impact on training, and
- these statistics do not take into account informal mentoring.

There are signs that employers in construction are beginning to increase the amount of training they offer to their staff. According to CITB's most recent Skills and Training Survey (2018):

- two thirds of employers in construction (67%) had funded or arranged training – either on or off-the-job, informal or formal – for their staff in the preceding 12 months, and
- this represents an increase on the proportion reported in the 2016 Skills and Training Survey (64%) and among construction businesses covered by the UK-wide 2017 Employer Skills Survey.

Employers continue to favour private training providers, or in-house training solutions, to cater to the training needs of staff. The same CITB Skills and Training Survey revealed that:

- 70% of employers that had trained their staff used private training providers,
- a similar proportion (69%) delivered training which involved a more experienced worker passing on skills to less experienced staff,
- only 19% of employers who trained their staff use training delivered by FE colleges,¹¹ and
- this finding corroborated that in CITB's research into post age 16 routes into construction, which found that a quarter (26%) of employers engage with FE colleges to support the training needs of their staff.¹²

Smaller firms are less likely to offer college courses to their employees. CITB's report into post-16 routes into construction revealed that some 62% of respondents with 50+ employees had offered FE

¹⁰ IFF Research (2018), *Employer skills survey 2017 Research report* (DfE).

¹¹ BMG Research (2018), *Skills and Training in the Construction Industry 2018* (CITB)

¹² CITB (2018), *Pathways into Construction*



or college courses within the last three years – compared to 17% of employers with fewer than 10 employees.¹³

3.5 Apprenticeships

For construction operatives, apprenticeships are one of the main routes into the industry, especially learners between 16 and 24 years of age who seek to enter from school or further education. Construction apprenticeships are well established and require a learner working towards completion of a framework, or programme of learning, which typically takes around two years for a level 2 with a further year if progressing to level 3. Throughout this time the apprentice would be employed.

Apprenticeship starts

- Across England there were 18,300 starts in 2014/15¹⁴.
- This has risen by nearly 23% to 22,500 by 2018/19, and in 2019/20¹⁵ there were 21,920.
- The slight decrease in 2019/20 is not surprising considering the Covid-19 pandemic.

The figure below presents the number of apprenticeship starts by trade.

Wood trades and interior fit-out (20.7%), plumbing and heating, ventilation, and air conditioning trades (19.0%), electrical trades and installation (13.4%) and bricklayers (10.9%) dominate.

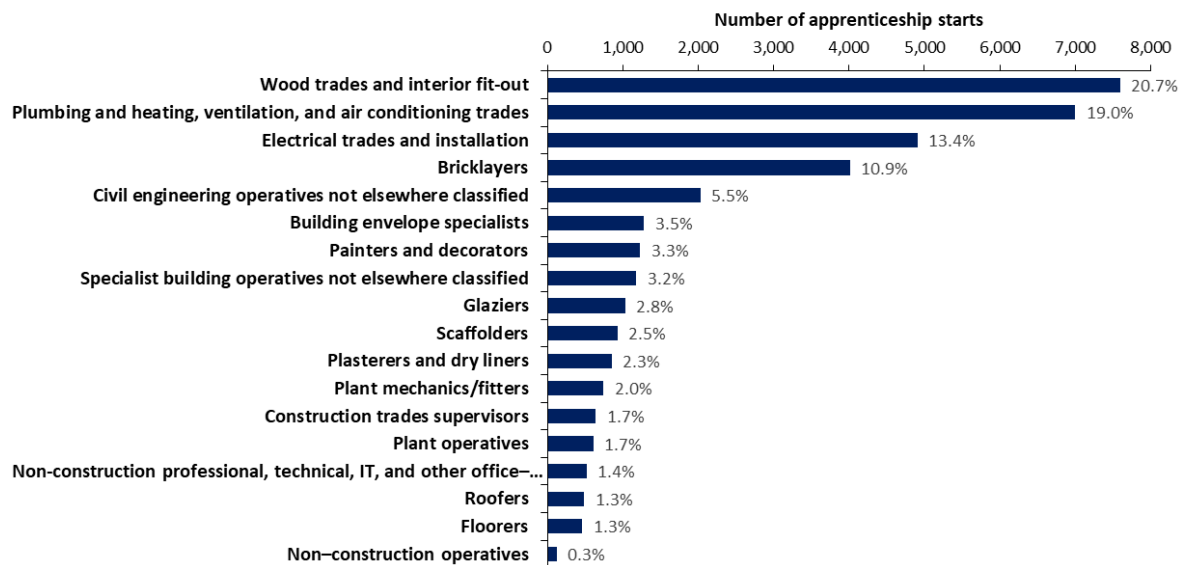


Figure 4 Construction apprenticeship starts by occupation, all levels 2016/17. Source: DfE.

The chart above, however, only demonstrates the most popular courses in the sense that the top four are those for which courses exist and are most often chosen as trades to learn. They are also ‘starts’ and the more critical metric is that of completions or those that ultimately go into the

¹³ Ibid.

¹⁴ Electrical and plumbing apprenticeships are excluded.

¹⁵ DfE: <https://explore-education-statistics.service.gov.uk/find-statistics/apprenticeships-and-traineeships/2019-20#dataDownloads-1>



industry. It is also hard to get national data on Apprenticeships for anything specialised such as covering for example heritage glazing or stonemasonry as the numbers are so small.

Interviewed contractors for the research spoke about skills gaps in the sector and the following are what they say are now needed:

- heritage glasswork,
- lime plastering/work,
- wood carving and carpentry,
- stone masonry and general repair,
- French polishing,
- Gilders,
- traditional blacksmithing,
- heritage upholstery,
- basic traditional skills, and
- conservation skills.

Marrying Apprenticeship national data with numbers required on the Programme in specific areas is challenging but simply put although contractors are planning to employ apprentices in heritage trades (see section 5.3), there are limited Apprenticeships on offer.

Apprenticeship training in heritage is undergoing a period of change with the introduction of Trailblazer Apprenticeships. In stone masonry, for example, the *English Stone Masonry Apprenticeship* framework was withdrawn at the end of June 2020, therefore, technically no colleges offer the government levy supported apprenticeships for new starts until the new Trailblazer *Stonemasonry Apprenticeship* is signed off by the Department for Education.

The Historic Environment Trailblazer has developed six apprenticeship standards in three areas and at different levels: Archaeology, Conservation and Historic Environment Advice. Of these the latter two are the major interests for the R&R Programme. Four apprenticeships have been developed for these two areas of interest.

Mainstream Construction Apprenticeship starts by region

Tables 1 and 2 show construction apprenticeship starts as a percentage of the numbers employed in each construction occupation across each region.¹⁶

¹⁶ Different data are available between trade occupations and professional occupations. The latter has more up to date data, to 2019/20 but is not broken down by region. Presenting the figures in this way helps to identify occupational trends in apprenticeship starts across the regions.



	Trade occupations													
	London	South East	London & the South East	East of England	South West	East Midlands	West Midlands	Yorkshire & The Humber	North East	North West	England average	Northern Ireland*	Scotland ⁺	Wales ⁺⁺
Construction trades supervisors	0.9%	0.7%	0.8%	0.7%	3.0%	0.6%	2.4%	0.5%	3.8%	2.7%	1.6%	3.8%	22.3%	N/A
Wood trades and interior fit-out	0.9%	3.2%	2.1%	3.1%	4.0%	3.5%	3.4%	5.2%	6.8%	4.9%	3.5%	2.8%	4.2%	N/A
Bricklayers	1.3%	5.8%	3.7%	3.2%	9.5%	12.8%	8.5%	9.2%	16.0%	6.9%	7.2%	1.3%	3.6%	N/A
Building envelope specialists	2.3%	0.3%	1.4%	0.9%	1.8%	0.3%	0.5%	1.2%	3.6%	1.4%	1.3%	0.6%	0.2%	N/A
Painters and decorators	0.3%	0.9%	0.6%	0.9%	1.3%	2.1%	1.9%	3.0%	4.4%	2.2%	1.4%	0.2%	2.8%	N/A
Plasterers and dry liners	1.2%	0.9%	1.0%	0.7%	2.9%	1.4%	2.7%	2.5%	2.9%	4.1%	2.1%	0.4%	2.2%	N/A
Roofers	1.5%	0.4%	0.7%	0.9%	0.4%	1.6%	2.2%	1.5%	4.5%	1.0%	1.3%	0.0%	2.1%	N/A
Floorers	2.2%	0.8%	1.4%	0.5%	4.9%	3.3%	1.9%	3.5%	1.4%	2.0%	2.0%	1.0%	1.7%	N/A
Glaziers	1.1%	3.0%	2.1%	5.8%	5.1%	1.1%	5.4%	2.5%	3.0%	9.3%	3.9%	0.1%	0.0%	N/A
Specialist building operatives	0.9%	2.3%	1.5%	3.6%	3.4%	2.4%	3.3%	2.5%	2.2%	2.2%	2.3%	1.2%	0.9%	N/A
Scaffolders	8.6%	4.2%	5.9%	8.0%	1.1%	14.5%	3.0%	2.2%	8.5%	6.5%	5.0%	0.0%	4.6%	N/A
Plant operatives	0.4%	2.0%	1.3%	3.5%	4.3%	0.0%	0.9%	0.6%	5.1%	1.7%	2.0%	0.0%	7.6%	N/A
Plant mechanics/fitters	1.0%	1.0%	1.0%	4.9%	1.2%	1.5%	1.3%	2.7%	0.7%	4.5%	2.1%	0.0%	1.0%	N/A
Steel erectors/structural fabrication	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18.5%	0.4%	N/A
Electrical trades and installation	1.9%	2.6%	2.3%	4.3%	4.1%	3.3%	2.8%	2.1%	2.8%	3.3%	3.0%	9.6%	0.0%	N/A
Plumbing and heating, ventilation, and air conditioning trades	2.6%	4.4%	3.6%	5.6%	4.8%	6.4%	4.3%	5.8%	5.6%	6.5%	5.0%	6.3%	0.0%	N/A
Civil engineering operatives	6.9%	13.8%	10.2%	14.6%	14.3%	4.1%	10.8%	5.5%	35.3%	20.9%	12.1%	0.0%	30.2%	N/A
Non-construction operatives	0.0%	0.8%	0.2%	0.0%	0.0%	0.7%	2.3%	0.2%	0.0%	0.0%	0.4%	0.0%	1.2%	N/A
All occupations listed above**	1.6%	2.6%	2.1%	3.2%	3.8%	3.6%	3.3%	3.6%	5.6%	4.2%	2.4%	4.2%	4.3%	3.9%

Table 1 Construction apprenticeship starts as a % of 2016 regional workforce in the selected occupation, broken down by trade occupations, regions, all levels 2016/17

* 2019/2020 apprenticeship starts as a percentage of 2019 workforce – in that occupation – in Northern Ireland as per 2019 CSN values

** As a percentage of the regional workforce in the listed occupations.

⁺ 2019/2020 apprenticeship starts as a percentage of 2019 workforce – in that occupation – in Scotland as per 2019 CSN values

⁺⁺ Data for Wales are currently not available at occupational group level; existing data do not allow for a perfect cross map. 2018/2019 apprenticeship starts as a percentage of 2018 workforce in Wales as per



Professional occupations				
	England (2018/19)	Northern Ireland (2019/20)*	Scotland (2019/20) ⁺	Wales ⁺⁺
Construction project managers	2.42%	0.0%	30.0%	N/A
Other construction process managers	0.00%			
Non-construction professional, technical, IT, and other office-based staff (excl. managers)	0.00%	0.0%	0.1%	N/A
Civil engineers	1.40%	0.4%	0.0%	N/A
Other construction professionals and technical staff	1.12%	0.9%	0.9%	N/A
Architects	0.17%	N/A	N/A	N/A
Surveyors	1.99%	N/A	N/A	N/A

Table 2: Construction apprenticeship starts as a % of 2018 regional workforce in the selected occupation, broken down by professional occupation, nations, all levels 2018/19

* 2019/2020 apprenticeship starts as a percentage of 2019 workforce – in that occupation – in Northern Ireland as per 2019 CSN values

⁺ 2019/2020 apprenticeship starts as a percentage of 2019 workforce – in that occupation – in Scotland as per 2019 CSN values

⁺⁺ Data for Wales are currently not available at occupational group level

Source: DfE/ESFA (2016/17), CITB, CITB NI

- London, for example, whilst producing low volumes of apprenticeship starts relative to workforce size overall, does perform particularly well in scaffolding apprenticeships at 8.6%. It is also in contrast to London’s low figure for further education training achievement volumes in this occupational area (i.e. 0.0% vs 0.7% for England) suggesting a preference for the apprenticeship route to training people for scaffolding in the capital.
- The South West, on the other hand, has a low volume of scaffolding apprentices which, at just 1.1%, is below that which might be expected for a region producing high numbers of apprentice starts overall relative to workforce size.

There may also be a skewing effect by regional specialist training centres. For example, scaffolders travel to the National Construction College East (Norfolk) from wider areas for training, hence slightly higher percentage in East of England.



3.6 Diversity

Recent research outlines that the UK construction workforce comprises 14% female and 5% ethnic minority.¹⁷ These groups therefore are under-represented in the population of first-year construction learners and the 2016/17 Trainee Numbers Survey revealed a rise in the number of both female and learners from ethnic minorities background.

- In 2016/2017 the proportion of female trainees stood at 7%, the highest level recorded by the survey (with an average of 4% in the period from 2012/13 to 2015/16).
- In the same year, the number of trainees that came from ethnic minorities background was 1,046, which equated to 7% of all trainees (the highest percentage of ethnic minorities trainees the survey has recorded since 2007/08).
- There are, however, significant regional variations in the proportion of ethnic minorities learners, ranging from nearly a third (31%) in London to just 1% in Scotland.
- These findings follow a similar pattern to regional ethnic minorities employment, with London having the highest share of ethnic minorities workers (19%) and Scotland the least (1%).¹⁸

Data from 2018/19 suggest that the proportion of apprenticeship starts in the Building and Construction sector, while slowly increasing year-on-year, remains disproportionately low for under-represented groups:

- 5.9% of starts were female apprentices, and
- 4.9% of starts were apprentices from ethnic minorities background (compared to 11.8% across all sectors).¹⁹

Broadly, across all sectors, the proportion of individuals from ethnic minorities backgrounds in FE has increased marginally over the past decade. A similar trend is seen for higher education learners, for example, a quarter (25%) of undergraduate learners in 2019 were from ethnic minorities backgrounds, up from 17% in 2007.²⁰

In order to help improving diversity in the construction sector, the R&R Programme may wish to consider developing a programme that promotes the construction, heritage, conservation, and digital skills sectors with Equality, Diversity and Inclusion as a key thread, and committing to a level of apprentices and diversity among these initiatives.

¹⁷ CIOB, 2020, *What construction can do to drive diversity in the sector*

¹⁸ CITB (2017), *Training and the Built Environment 2017*

¹⁹ Department for Education, Apprenticeships and Traineeships data. Accessed June 2021.

²⁰ Gov.uk ethnicity facts and figures. Accessed June 2021: <https://www.ethnicity-facts-figures.service.gov.uk/education-skills-and-training/higher-education/first-year-entrants-onto-postgraduate-degrees/latest#first-year-entrants-onto-postgraduate-degrees-by-ethnicity>



Undergraduate entrants by ethnicity

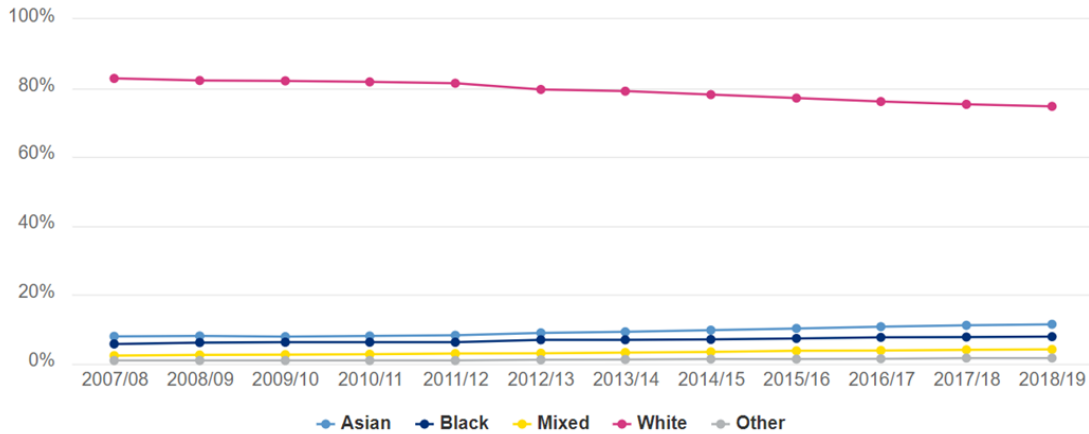


Figure 5 Percentage of first year entrants onto undergraduate degrees by ethnicity

Recent research for CITB explored employment pathways into the construction industry for under-represented groups, including:²¹

- young people not in education, training or work,
- long-term unemployed people (for longer than 12 months),
- women wishing to join construction, and
- full-time learners (particularly those studying for construction and built environment diplomas).

In response to challenges such as skills shortages, the fragmented structure of the construction sector does not necessarily facilitate effective communication between employers, educators and training providers, and perceptions of the construction sector (e.g. short-term contracts, unsafe jobs, and unsociable working hours), the research outlined best practice to include:

- strong relationships between employers, training providers, recruiters and educators,
- balance between technical skills and formal industry qualifications, and
- C=consistent emphasis on positive job outcomes.

The research also identified the following to support under-represented groups:

- providers encourage employers to participate in training delivery - this demonstrates to learners that their skills are valued and that their chances of employment have improved as a result of the training programme,
- training providers and employers engage with recruiters to increase the visibility of female-specific training and employment opportunities, and
- training providers and employers ensure that adverts targeting ethnic minorities jobseekers use inclusive languages and imagery and using a blind recruitment process to ensure that minority candidates are not unfairly disadvantaged.

²¹ CITB, 2020, *Best practice review: employment pathways into the construction industry for under-represented groups*



4 Training provision: heritage construction

Heritage construction represents a distinct and important sub-sector of the construction industry. Broadly defined, heritage construction involves the repair, maintenance and retrofit of traditional (pre-1919) buildings but also the sensitive repair, restoration and renewal of more modern listed buildings. It, therefore, requires a wide range of competences comprising knowledge and skills related to the precise nature of the work at hand, including offsite construction, digital skills, and understanding on low carbon processes, logistics and health and safety measures.

Research Digest P1 contains a more detailed overview of the heritage construction sector firmographics and skills issues, while this Digest explores the existing heritage training provision.²²

4.1 Current heritage training provision

As part of the Skills Assessment, an extensive survey was undertaken with over 500 training providers across the UK, to understand specifically the training offer available for working in the heritage sector.

Courses on offer

- Providers participating in this research list 547 heritage-specific courses they offer across the UK in the following regional split:

Region	% of heritage courses
South West	22%
South East	16%
London	13%
North West	12%
Yorkshire and Humber	8%
East Midlands	6%
West Midlands	6%
North East	6%
East of England	4%
Wales	3%
Scotland	3%
Northern Ireland	1%

Table 2 Breakdown of heritage courses of surveyed providers by region. Base 547 courses

- These cross different levels, spanning from short courses to level 1-8 courses.

²² Research Digest – P1. Skills for the heritage construction sector



Level	% of heritage courses
Level 1	25%
Level 2	28%
Level 3	17%
Level 4	2%
Level 5	2%
Level 6	2%
Level 7	1%
Level 8	1%
Short course	22%

Table 3 Breakdown of heritage courses of surveyed providers by level. Base 547 courses

- These cover 34 heritage and conservation specialisms including conservation/conservators, specialist heritage construction, heritage decorating/painting, heritage joinery, heritage brickwork, heritage carpentry, heritage plastering (other), scaffolding for heritage buildings, stained glass conservation, and digital skills connected with heritage/conservation.

Current learner volumes

- Current capacity across these 547 courses is stated as 6,359 students.
- This compares to the “usual” intake of students, i.e. pre Covid-19, of 10,112 students.
- The ongoing pandemic has impacted training and providers’ capacity for students undertaking these various heritage-related courses has decreased by around 35 to 40% in 2020.

Potential learner volumes

- Providers say they could increase capacity by 10% on average with no additional resource.
- However, with more resource, providers believe they have the potential to increase in capacity by just under 20% on average.
- These additional resources include help with recruitment, training or salaries that would enable them, in some cases, to almost double the number of students on some courses.

Specialisms with the total normal (pre-Covid) intake are:

- heritage carpentry courses with c. 1,830 students,
- heritage joinery courses with 1,500 students,
- blacksmith courses for c. 870 students,
- heritage brickwork with 802 students,
- heritage decorating/painting with 758 students, and
- blacksmithing is the specialism where capacity has been most affected, with student intake capacity decreasing over 90% in the last year (largely due to the closure of centres).

Mainstream courses with the total current capacity (i.e. Covid-impacted) and which contain some degree of heritage specialism are:

- carpentry/joinery (level 1) -150 students (usually 140),
- architectural joinery (level 1) - 100 students (usually 85),
- carpentry/joinery apprenticeships (level 1) - 75 students (usually 75 per Levels 1 and 2), and
- painting and decorating apprenticeships (level 1 and 2) - 75 students each level.



Specialisms with the smallest (current) capacity across all levels combined are:

- French polisher with two students,
- roofing-copper, aluminium, zinc with six students,
- paintings (easel) restoration with six students,
- stained glass conservation with seven students,
- stone carver with ten students,
- gilding with 15 students, and
- roofing-stone/slate/tiles with 18 students.

There are 250 courses with no current capacity, with their normal intake being up to 73 students. This means that just over 4 in 10 courses that training providers offer have been impacted by the Covid-19 pandemic and have been forced to close temporarily or permanently. These affected courses vary in their levels and specialisms, involving almost all of those mentioned above.

Courses by level

- In terms of differences between normal intake and current capacity, level 6 and short courses are the most affected with capacity being decreased by 88% and 86%, respectively, in the last year.
- The least affected courses are those at level 7 and level 1 with their capacities decreased by 1% and 12%, respectively, in 2020.

4.2 Reasons for (not) offering heritage training

When 167 providers offering no heritage-related training were asked whether they have offered, or have considered offering, any heritage or conservation training in the past, most say they have done so (89%).

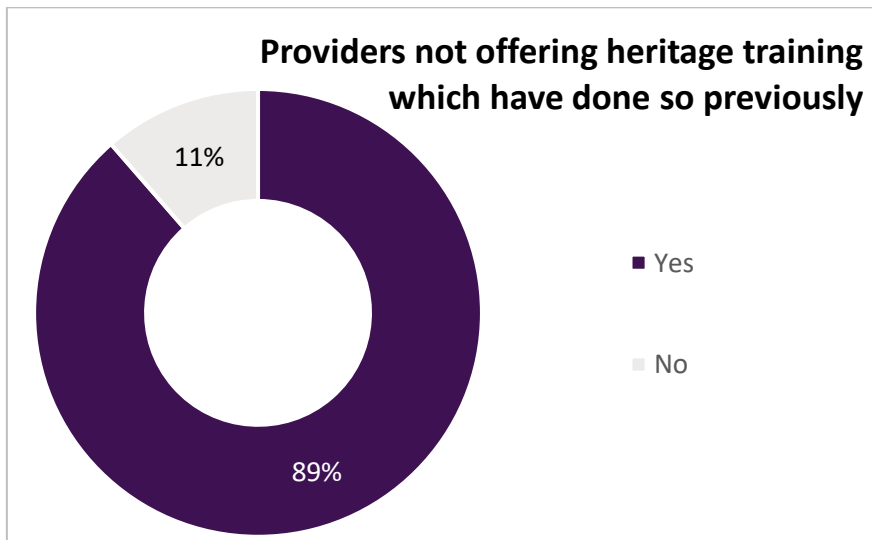


Figure 6 Training providers not currently offering heritage or conservation training, which have done so in the past. Base: 167 respondents.



Training providers which did offer heritage or conservation training in past (but no longer do so) say they did so because they might have received funding or grant to run training (40%), there was a demand from elsewhere (35%), there was demand from employers locally, or they had tutors available with that specialism (both 27%).

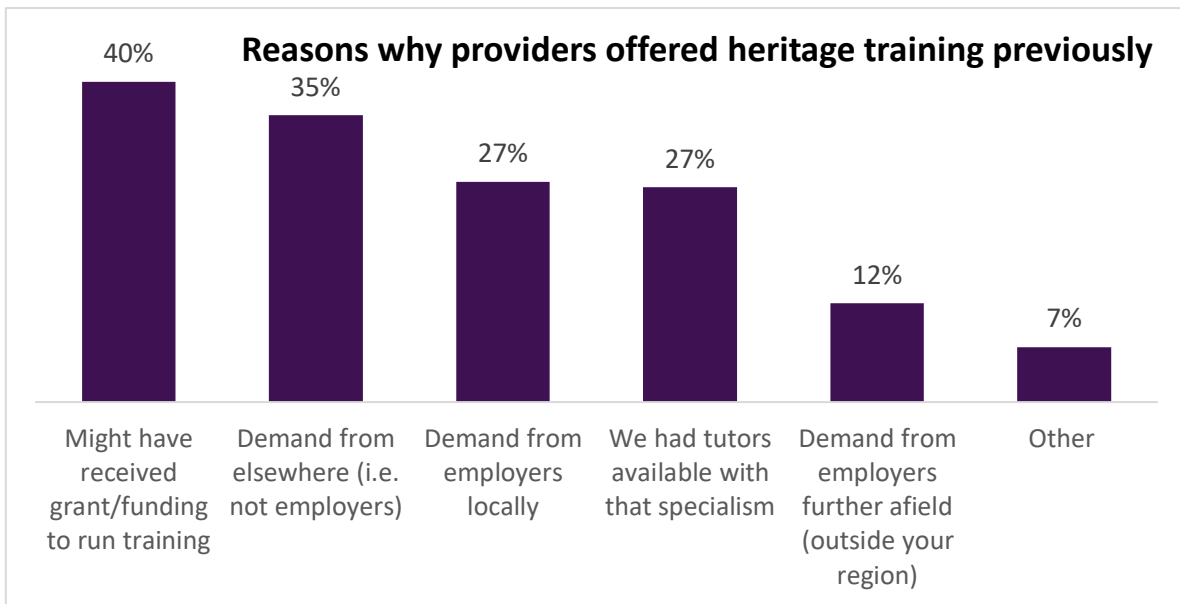
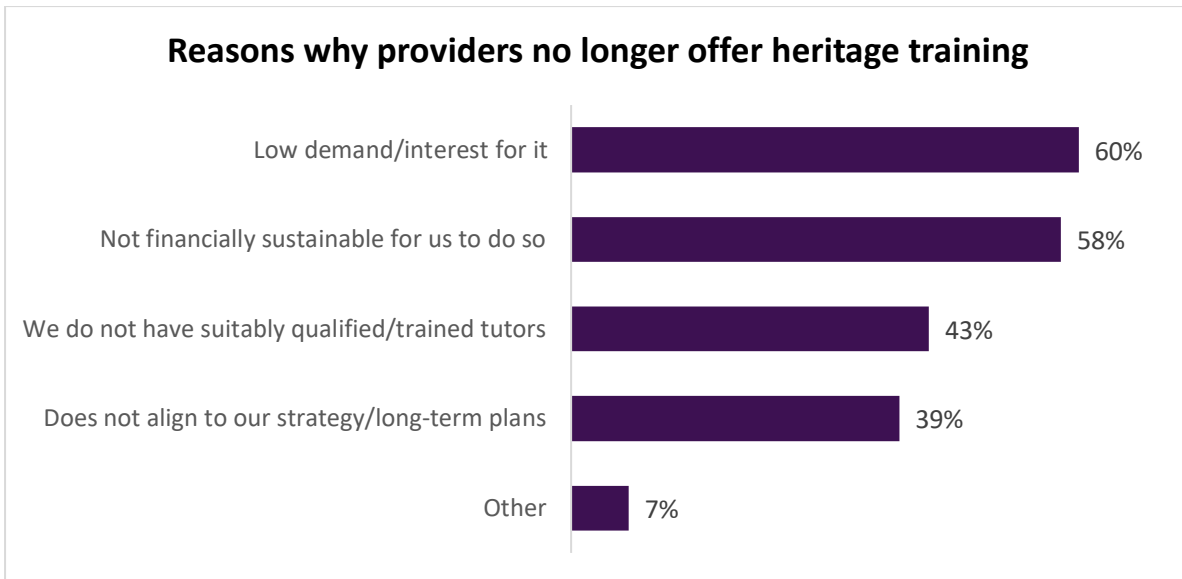


Figure 7 Reasons why training providers not currently offering heritage training did offer heritage or conservation training in the past. Base: 147 respondents, multiple responses permitted.

These training providers explain that the main reasons for not offering heritage training currently include: low demand/interest for it (60%), financial reasons (58%) meaning such training was not commercially viable, tutors' qualifications/trainings issues (43%), and misalignment with their long-term plans (39%).



*Figure 8 Reasons why training providers which offered heritage training in the past no longer offer this.
Base: 146 respondents, multiple responses permitted.*

4.3 How providers keep up to date

When asked how they keep heritage courses, knowledge, and skills up to date and comprehensive, training providers most commonly:

- review the latest research and literature (74%),
- their staff read specialist journals (71%),
- hold discussions with awarding organisations (61%), and
- review the websites of heritage bodies (59%).

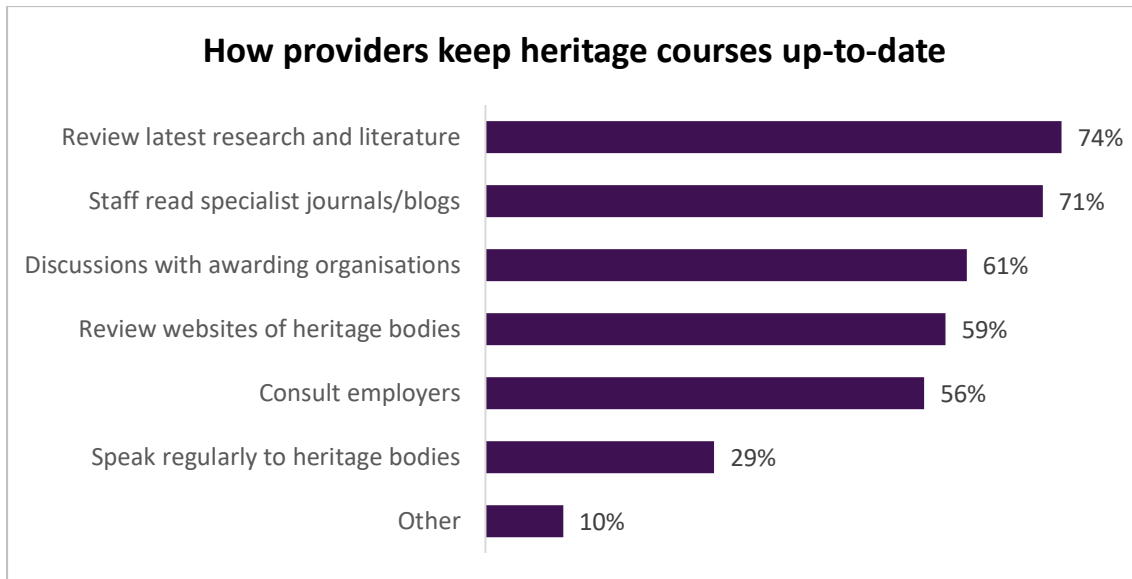


Figure 9 Methods used to keep heritage courses up to date and comprehensive in knowledge/skills terms.
Base: 332 respondents (multiple responses permitted)

An important aspect of delivering training is communication between providers and employers. Of the 279 respondents who explained how their department or organisation links with relevant employers, most responding providers (approx. 80%) mention the following methods and pathways for such links:

- work experience or work placements (mentioned by 16 FE/HE institutions),
- apprenticeships and training if general costs are reasonable,

“If funding was available, we would be very interested in taking on apprenticeships”

- the use of Careers and Business departments and/or officers (in which such departments organise open careers days/events with businesses, and provide general working advice),
- business to business events (and other such networking events),
- in general, personal internet research/networking/communication via emails online etc, and
- trade shows.

[We have links with employers] through careers advisors, by visiting employers and discussing the calibre of apprentices required, through trade shows and through guidance from the government.

FE/HE College (East Midlands)

Approximately 12% of responding providers claim that they do not have any links to relevant employers, or they struggle acquiring these. These respondents typically state that:



It's very difficult as not many employers in the area offer heritage subjects.

FE/HE College (West Midlands)

Very few employers now offer this kind of workplace for untrained tradespeople, so I do find this extremely difficult. However, if more and more apprenticeship schemes were offered in and around the construction industry then I would have more enthusiasm to speak to employers.

FE/HE College (North West)

Several methods were described by training providers as to how they might also link with relevant employer bodies. Of the 247 responding providers, the most frequently mentioned organisations and approaches include:

- **British Artist Blacksmiths Association (BABA)**; 25 respondents mentioned BABA, with 21 of these respondents being from Independent Training Providers. A total of 14 are located in the South East and South West of England,
- **Construction Industry Training Board (CITB)**; 14 respondents state they linked via the CITB, 6 being from FE/HE colleges and 6 from Independent Training Providers,
- **The British Society of Master Glass Painters (BSMGP)**; 11 respondents refer to BSMGP, which were almost exclusively independent training providers,
- **City and Guilds**; A total of 17 respondents state they have links to City & Guilds (primarily (13) FE/HE colleges),
- 17 respondents (all from FE/HE colleges and universities) mention that their primary method for linking with relevant employers involved **networking and 'word of mouth'** or via social media such as **LinkedIn**, and
- 33 respondents state they have links via their own **personal and professional relevant memberships**; all of these 33 respondents are from FE/HE colleges.

Traditionally employers and the education sector have found it challenging to keep each other abreast of developments and ensuring up-to-date skills requirements are fed into education to help upskill tutors. Much dialogue has occurred and is still happening with this particular issue and is also captured in the *Skills for Jobs* white paper.

4.4 Providers' future intentions

Considerations about additional training provision and requirements

When it comes to considering offering (more) heritage or conservation training in the future, training providers are split. A small majority (52%) say they would not consider it, while the rest (48%) say they will consider offering (more) heritage or conservation training in the future.

Of the additional heritage courses training providers might consider offering in the future, the most commonly mentioned courses focus on specialist heritage construction, heritage carpentry, heritage joinery and heritage brickwork, while steeplejack and heritage glazing are not mentioned at all.



Most common training considered		Least common training considered	
Specialist heritage construction	26.7%	Asbestos removal	0%
Heritage carpentry	15.7%	Clockmaking (horology)	0%
Heritage joinery	14.7%	Heritage glazing	0%
Heritage brickwork	12.0%	Steeplejack	0%
Cabinet maker	9.7%	Stonemasonry – banker masons	0.5%
Heritage decorating/painting	9.2%	Stonemasonry – fixer masons	0.5%
Conservation/Conservators	8.3%	Roofing other metals – copper, aluminium, zinc	0.9%
Furniture restorer	8.3%	Stained glass conservation	0.9%
Paintings (wall) restoration	6.9%	Stone carver	0.9%

Table 4 Additional courses training providers consider offering in the future Base: 222 respondents



5 Perceptions of heritage training

The Skills Assessment comprised a survey of over 6,000 contractors, 500 training providers, and follow up depth interviews with 40 contractors. This section outlines perceptions of the training available – from both provider and contractor viewpoints – in terms of both availability and quality, and concludes with an overview of what might be needed (from a training angle) to be involved in R&R.

5.1 Providers' views on heritage training gaps

Training providers were asked about the main gaps and weaknesses in the content of courses they are teaching.

Overall, across all heritage training offered, there is a common consensus among providers that:

- specific skills (e.g. heritage brickwork, heritage joinery, stained glass work, etc.) require too much of a practical hands on approach for training to be integrated online,
- there are few online resources available (courses, material, funding etc) to do so,
- in addition, it can be impossible to teach skills via online teaching due to the lack of online capabilities or facilities, and
- more broadly, the low uptake of students is seen as one of the weaknesses of courses offered.

There is a big shortage of young people wanting to work in heritage and conservation.

FE/HE College (London)

- Generally, providers perceive a lack of work placements/apprenticeships from employers.

When providers were asked whether there are any levels or courses that employers need, but which are perceived to be missing across the UK at present, out of the 174 respondents who answered, 44 claim that 'general heritage skills' and therefore courses are primarily missing. Specific examples are:

- stonemasonry and heritage bricklaying,
- heritage wood carving, carpentry, and restoration,
- general heritage construction and conservation,
- textiles and upholstery restoration,
- traditional blacksmithing, and
- onsite management.

One respondent also noted that more higher-level courses might be required: *"Level 4 qualifications in heritage construction are limited, most courses [only] go up to Level 3"*.

Other examples of courses that providers believe employers need but which are missing across the UK at present include:

- CAD, ICT and digital related courses that are useful to heritage ways of working
- health and safety in the workplace and construction industry courses, and



- availability for apprenticeships with contractors.

Delivering training online has become increasingly important in last year due to the Covid-19 pandemic. Providers were shown a list of specialisms and asked to self-define which areas they offered courses in. From these chosen areas, they were then asked to rate the extent to which their courses are easy to deliver online or in blended ways (on a scale from 1 (extremely difficult) to 10 (extremely easy)), providers state that:

- specialisms including steeplejacks, digital skills connected with heritage/conservation, and window workers (glaziers) are the courses that are easiest to deliver online or in blended ways, all rated at 9 out of 10, and
- lime pointing, stone carving, stonemasonry – general, wood carving, and blacksmithing were seen as most difficult to train via online methods (rated below 5 on average).

Heritage training (1 =extremely difficult to 10 = extremely easy)	Average (mean)	Mode
Steeplejack	9	9
Digital skills connected with heritage/conservation	9	9
Window workers (glaziers)	9	9
Asbestos removal	8	7
Conservation/Conservators	7	5
Textile conservation	7	9
Heritage brickwork	7	9
Architectural metal work	7	5
Heritage joinery	7	7
Heritage carpentry	7	7
Plastering (fibrous)	7	7
Paintings (wall) restoration	6	7
Cabinet maker	6	8
Heritage decorating/painting	6	6
Lime harling	6	7
Heritage plastering (other)	6	7
Plastering (lime)	6	6
Stonemasonry - banker masons	6	8
Stonemasonry - fixer masons	6	7
Clockmaking (horology)	6	9
Specialist heritage construction	5	2
Lime pointing	5	7
Stone carver	5	1
Stonemasonry - general	5	1
Wood carving	5	7
Blacksmith	5	1

*Table 5 Extent to which heritage courses are easy to deliver online or in blended ways
Base: variable from 1 to 57 respondents*



5.2 Contractors' views on barriers to training

When asked about the main barriers to getting existing staff trained and upskilled, two factors that stand out for contractors are:

- the cost of training (37%),
- inability to release people from work (25%),
- other barriers include a lack of locally available and suitable courses, people being unwilling to undertake formal training and a lack of suitable courses anywhere, and
- a lack of face-to-face training was noted to be particularly acute in Yorkshire, Scotland, and Wales, being mentioned by 24%, 24%, and 27% of those respondents, respectively.

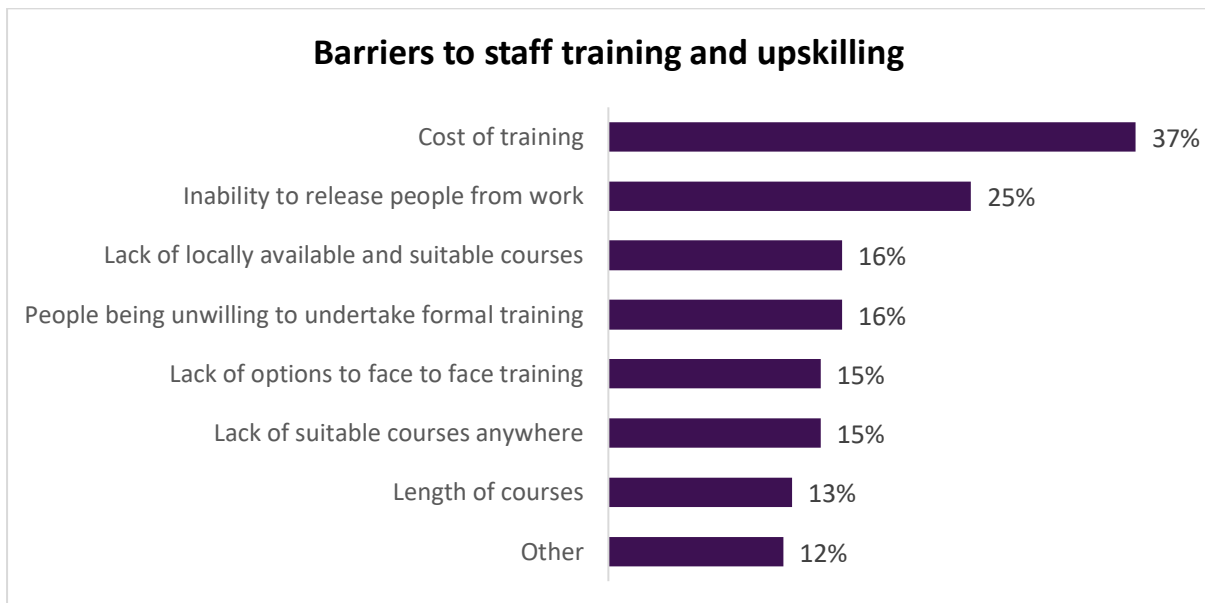


Figure 10 Main barriers to getting staff trained and up-skilled, Base: 3,991 respondents (multiple responses permitted).

“Other” concerns mentioned centre on:

- the effect of the Covid-19 pandemic,
- associated time commitments, and health and safety,
- respondents (26) question the need for additional training, claiming that learning on the job was sufficient enough and no external factors were required for the skill sets needed to be developed, especially as learning in house was easier overall, and
- a sizeable group of respondents (55) also believe that there are no barriers at all when getting staff trained, noting that training would happen if and when needed.



5.3 Contractors' views on heritage apprenticeships

Surveyed contractors were asked how many apprentices they will employ in the next 12 months. A total of just under 5,000 (mainstream construction) apprentices across surveyed businesses are anticipated to be taken on, with the most common roles being electricians, carpentry, and general construction operatives, while property maintenance and wood machine operatives are seldom mentioned.

Occupation	No. apprentices to be taken on by surveyed firms in next 12 months	Average across the total of surveyed firms (%)
Electrician	526	1.3
Joiner/Carpenter	377	0.9
General construction operative	321	1.1
Engineer	272	1.0
Construction management	246	1.1
Bricklayer	232	0.9
Civil Engineer	227	0.9
Roofer	219	0.7
Scaffolder	217	0.7
Multi trade	207	0.8
Glazier	175	0.7
Painter and decorator	174	0.6
Floorer	170	0.7
Building envelope operative	160	0.7
Plumber	152	0.5
Ground worker	136	0.6
Estimator, valuer and assessor	122	0.6
Surveyor	113	0.5
Plasterer and drylining	95	0.4
Highways Maintenance	78	0.4
Plant operative	65	0.3
Modern methods of construction factory operative	60	0.3
Plant mechanics/fitter	60	0.3
Window installer	47	0.2
Technical	36	0.2
Project Management	25	0.1
Site manager	15	0.1
Property Maintenance	9	0
Wood machine operative	6	0

*Table 6 Number of apprentices contractors will employ in next 12 months
Base: variable from 191 to 417 respondents*



Looking ahead to the 12 months thereafter, a similar trend is seen, with just over 5,000 apprentices expected to be hired, with most as electricians or joiners/carpenters.

Similarly, surveyed heritage contractors primarily working in a heritage specialism were asked how many specialist heritage apprentices they anticipate employing in the next 12 months. A total of 437 specialist heritage apprentices across surveyed heritage businesses are anticipated to be taken on, with the most common occupations being stonemasonry, joinery, and roofing. Looking ahead to the 12 months thereafter, a slight increase is anticipated for around 480 heritage apprentices with most as stonemasons or heritage joiners.

Occupation	No. heritage-related apprentices to be taken on by surveyed firms in next 12 months	Average across surveyed heritage firms
Stonemasonry	82	0.8
Joinery	39	0.4
Roofing (lead work)	31	0.4
Architectural metal work	16	0.2
Blacksmith	14	0.2
Heritage brickwork	13	0.2
Roofing (stone/slate/tiles)	12	0.2
Plastering (fibrous)	10	0.1
Plastering (other)	10	0.2
Stonemasonry - (banker masons)	10	0.1
Cabinet making (bespoke furniture making)	9	0.1
Roofing other metals - copper, aluminium, zinc	6	0.1
Cultural heritage conservation technician	5	0.1
Plastering (lime)	5	0.1
Wood carving	5	0.1
Building Conservation technician	4	0.1
Cultural heritage conservator	3	0
Façade Preservation	3	0
Heritage wall and floor tiling	3	0
Stonemasonry - (fixer masons)	3	0
Other	154	1.3

*Table 7 Number of heritage-related apprentices contractors will employ in next 12 months
Base: 61 to 119 respondents*

‘Other’ heritage apprenticeships mentioned cover activities ranging from gilding and French polishing, to heritage surveying and stained glass work.

Asked about the main barriers to taking on an apprentice, contractors commonly mention:

- non-availability of quality candidates (27%) – particularly acute in Northern Ireland (43%),



- insufficient funding support (22%), and
- concerns around apprentices dropping out and leaving (21%).

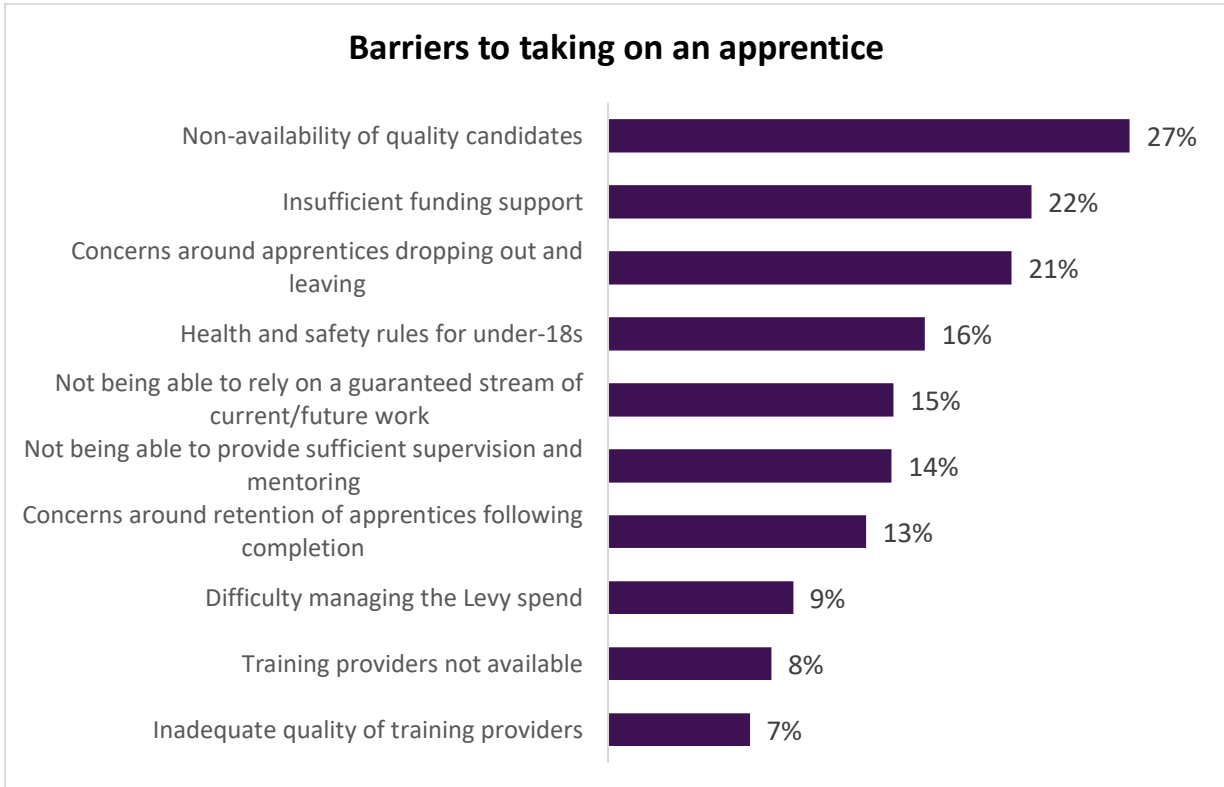


Figure 11 Barriers to taking on an apprentice
Base: 4,027 respondents, multiple responses permitted

Among “other” reasons, contractors commonly mention the following as barriers to taking on apprentices:

Availability of apprentices

Some 234 respondents mention that it is not easy to find the “right” apprentice, or an individual with the “right experience”, or that there are no apprenticeships available for their type of business. Approximately half of these respondents refer to the importance of apprentices having the right skills and attitudes when joining the business including wanting to do a physical work, working on sites and willing to be paid low wage at the start of their career.



I personally think the biggest challenge is the massive shift in people wanting to do more office-based work. There are not enough people wanting to enter the world of construction training.

The biggest difficulty is finding people who are passionate about the trade and who want to work not just sit around.

Some 25 respondents mention a change in work ethic among young people, for example, some not wanting to commit to physical work on site and not working hard enough when on the job. Respondents say that employing apprentices younger than 18, or in some cases 21, is not possible for them due to health and safety restrictions on sites or a need to drive vehicles that require minimum age of 21.

Some 49 contractors also comment that there are no apprenticeships available or local colleges do not have relevant courses. That includes heritage courses, roofing, scaffolding, stained glass, architecture and some of its specialist fields, for example ecclesiastical architecture.

Covid-19 restrictions

Nearly 200 contractors mention the Covid-19 pandemic and the impact this has had on their businesses since March 2020. Due to business slowing, and staff on furlough, businesses could not make long-term plans and priorities are business survival and taking care of existing staff.

Economic uncertainty. Already been through a difficult year with lockdowns, furlough. Want to see how things pan out before making any apprenticeship decisions

Having a small business and preference to have fully trained workforce

Some 112 respondents say that they own small or family-run businesses, and are happy with their current workload and do not wish to expand. Other contractors note that they prefer to have fully trained and qualified employees, rather than training apprentices, as they find this more effective.

Additional barriers mentioned include:

- cost – financial, time, and resource,
- apprentices are not practical for some types of business and flow of work, with some contractors stating that they need to organise their work in a quick and efficient manner to meet project timelines and clients' requirements and do not see apprenticeships fitting into their businesses, and
- associated paperwork, especially for small companies.

In the follow-up depth interviews, the issue of apprenticeships was explored further with contractors. Similar themes emerged, with drawbacks/barriers to taking on apprentices including:

- perceived health and safety issues (you cannot have under 18-year-olds on construction sites as it is an insurance risk),
- some arrive with poor attitudes, and
- there is a risk that they may not initially be the right fit for the company overall.



5.4 Contractors' views on heritage training availability

Surveyed contractors were asked whether they had concerns about the availability of training. Of the 572 responses received:

- 38% report no concerns with heritage/conservation training availability,
- 9% qualify this with positive responses about the training availability and its good quality, and
- where there are concerns, these tend to be around poor availability and location.

Around 9% report a general lack of available training or have concerns about a declining number of relevant courses available, with around one third of these being based in the South East, while around 2% report no availability at all.

A further 21% specify concerns about the availability of training for (at least one) specific heritage skill. These concerns are most prevalent in the South with over half of these comments being made by contractors based in South East, London and the South West South. The specific skills which were highlighted to be lacking availability include:

Activity	No. of mentions
Stonemasonry/ Masonry	21
Heritage skills/ management	10
Blacksmithing/ metal work	10
Conservation skills - construction	9
Plastering (Lime, fibrous, ornate etc)	9
Clock repair/making	8
Joinery	8
Roofing	7
Carpentry	6
Wood	6
Cabinet making	5
Furniture restoration	5

Table 8 Contractor views on skills where heritage training is not available

Availability due to location was a problem for around 6% of responding contractors, noting:

- courses are too far away to travel,
- cost to travel is too great,
- provision is poor in their local area,
- some report that this has stopped them from access entirely, and
- others note the loss of resources in terms of time away from the workplace. This is particularly apparent outside of London.



Centralisation of training providers is an issue. We are not based in London and can't afford to commute three days a week for a £600 course.

There is only one college in the whole of Northern Ireland which you can train in drystone masonry.

When contractors were asked in follow-up depth interviews about their perceptions of heritage training and its availability, most respondents (32 out of 39) state that they have never been in contact with training providers, and “*have no reason to use heritage training providers*” due to the feeling that:

- they are superfluous as they do their training in-house so they are already fully trained,
- they have a pre-existing heritage skills interface,
- they are unaware of available training options in their area, and
- they have been in the same work long enough to not need further training.

Any idiot could get heritage training but it's not indicative of how well they work hands on, they need at least 1 year on site first.

Stone masons (Northern Ireland)

Those companies who had been in contact had mostly negative feelings about the introduction of online training for the heritage sector (although two companies believe it could be beneficial if it “*encourages people into the industry*”). The common consensus is that hands-on skills cannot be learned from behind a computer screen:

I can't see online training as been very beneficial for heritage skills, it is vitally important to learn the practical skills on the job.

Furniture restorer (South East)

5.5 Contractors' views on heritage training quality

Surveyed contractors were also asked whether they had any concerns about the quality of heritage/conservation training.

- Most contractors are positive about this training, with 51% saying they have no concerns about quality.
- Some 10% raise concerns about the quality of particular heritage/conservation courses, mentioning courses such as stonemasonry (10), conservation (6), blacksmithing (4) and architecture (4).
- Of those that have concerns about training quality, the main focus is about the content of courses and the standard of tutors.

Respondents are particularly concerned about the practical elements of training which they perceive to be lacking.



- Around 7% feel that experience in the workplace is the best form of learning and that this should be used more frequently in all training.
- The training quality in colleges is a particular worry for around 6% of participants, primarily because of their perception of it being classroom or theory-based practice.
- It is suggested by around 5% that training is producing candidates who are not prepared for the workplace or who are not suitable for hiring, as apprentices or otherwise.

Colleges have a tick box mentality - they are businesses, so it is no surprise but having a detrimental effect on the people taking the courses - they show up at work lacking so many skills.

Some 4% put the poor standard of training down to tutors and teachers who are poor quality. These contractors believe that often tutors do not have enough experience working in the field which, in turn, is detrimental to the students who do not learn a good level of skills from them. Contractors perceive that having tutors who are qualified with a wealth of experience would lead to better quality training and therefore produce students who are knowledgeable and proficient in the craft.

People are actually being brought out of retirement to teach these skills as the college tutors haven't got the lifelong experience which is needed.

All tutors have no experience, teach the wrong things and so we have to retrain students when they come back to us.

When asked to rate the quality of training available from different providers from 1 (very poor) to 10 (excellent), contractors rate their own internal mentoring the highest (8.7 average), followed by private providers (7.5), and then by colleges' training (7.1 to 7.4).

Type of training	Average (mean)	Mode
Your own internal mentoring	8.7	10
Private providers (short courses)	7.5	7
Private providers (longer courses)	7.5	8
Colleges (longer courses - e.g. ONCs, HNCs etc.)	7.4	7
Colleges (apprenticeships)	7.3	7
Colleges (short courses)	7.1	7
Distance/on-line providers	7.1	7

Table 9 Rating of the quality of training available from different providers Base: variable from 2,450 to 4,182 respondents

Where the quality of training in colleges is perceived to be poor (rated 6 and below), contractors' concerns predominantly focus on course content, methods, and tutors, as well as the provision of courses and poor organisation from colleges.

Teaching – content, methods and tutors

Methods – Contractors raise concerns that training has too much of a classroom educational setting, with college learning being too academic or textbook based, which are perceived to be poor quality



teaching methods. Some 27% state that more practical work experience is needed to improve the quality of courses at colleges, and that this is currently lacking in college training.

It is the distinction between learning on the job and learning in the classroom - lack of transparency in the skills they take with them to the working world. The classroom and the working world do not go hand in hand and a college training programme encourages a spoon-feeding mentality where they feel they do not need to use their own initiative/common sense and ask constant questions.

Content – 22% believe that colleges are only teaching “the basics” to students, and not preparing students well enough as they often have more to learn once graduating or finishing a course. Contractors perceive content is generally too broad without enough focus on specialist subject areas to give students the skills they need for work. Most contractors feel that courses are too short to learn all the skills needed to an appropriate level.

Colleges operate in my opinion on a 'bums on seats' mentality where the more they have the more money they will receive. This, in effect, is detrimental to the young people as they only really scratch the surface as they are being rushed through to just receive a piece of paper with a qualification on.

Tutors – Poor quality is attributed to the perceived inadequate experience and qualifications of tutors, as well as a lack of sufficient tutors who are able to deliver courses. Such contractors believe that tutors need to have had more time working in the field to be sufficiently qualified to teach practical skills and truly understand the craft. In line with perceptions about the industry declining as a whole, some reflect that there are simply not enough tutors to teach these particular subjects, let alone to the standards required.

College as an organisation

Some contractors comment that there is a lack of communication, with colleges not keeping in regular contact with their business, especially regarding hiring of apprentices or student progression.

Poor communication with firms which take on apprentices. No proper supervision - in the past apprentices were continuously assessed as to their skills and that information was passed on to the firm they were working for - that doesn't happen now.

Others suggest that the coordination, organisation, or administration in colleges are or have been inadequate (4%). Examples include tutors not showing up when expected; changes in systems, curriculum or awarding bodies; or poor dissemination of information to stakeholders.

Where the quality of training from private providers is perceived to be poor (rated 6 and below), contractors' concerns predominantly focus on training content. Cost and commercialisation are also perceived to impact on quality.

Training content

- Some 16% of those raising concerns about the quality of private training note that courses are too general or only teach the very basics of what is required, rather than honing specific skills needed for the craft.



- Some 10% of responding contractors say that there is not enough practical work experience involved, so more ‘on the job’ learning is required in order to improve quality of training in private providers.
- On a similar note, the idea that courses are too short to be able to teach all the skills required is an issue for 9% when thinking about the quality of private providers.

Rushed through and again, only teach the basics which is good, but you need to be on site to really learn and get to grips with the ropes - especially as our job spectrum is huge.

We offer a service that needs very specialised skills and tend to find the training offered is too generic. We prefer to train all our people in house even if they have already had official qualifications.

Cost

Some 9% of responding contractors feel that private providers are driven by financial gains, and therefore not as focussed on building skills as they should be. It is thought the main priority for providers is getting “bums on seats” rather than prioritising the development of skills for their students, and this in turn is reason for the perception of low quality.

Driven by monetary value rather than imparting skills to a high degree to people - lack of regulation and oversight.

Some 7% perceive that private providers are not good value for money. They feel that the personal financial cost of courses is too great and that it is consequently not worth the money for the level of training provided or standard of skills gained.

5.6 What do providers and contractors need to be involved in R&R?

Providers

Training providers were asked what they might need from R&R to be involved, and to consider being involved, in the Programme and its training. Three common themes arose:

- development of specific and bespoke courses or short courses in general,
- funding assistance, and
- more information about the R&R Programme and scope.

Several providers mention the need for highly specialised bespoke training courses so that they can provide adequate qualifications and skills for the R&R Programme.

- In terms of heritage courses in general, around one in four providers believe there is a need for **short courses** that span a few days to a few weeks to ensure that the skills required for the specialist heritage areas are maximised.



[A] 10 day course provides [the] skill set and knowledge ready to start up as a sole trader in traditional furniture finishing, French polishing, contemporary paint, clear coat techniques woodcare.

- Many providers commented that more training courses and apprenticeships in bespoke areas would be highly beneficial to both the Palace of Westminster, but also to many young people and people coming into the trade. For example, one respondent stated:

[We need] more training courses available. The lack of crafts and arts training is a very big long-term issue that needs to be solved long term, [maybe with a] better apprenticeships programme. PoW is a big opportunity to help people start up with their careers.

Bespoke courses most commonly mentioned include:

- carpentry Levels 1-3 including joinery and onsite carpentry.
- City and Guilds Stonemasonry (carving) and black smithing (level 2 forgework),
- heritage painting and decorating,
- stained glass restoration,
- Level 1 foundation courses in basic conservation skills to be used as introductory courses, and
- traditional construction courses.

In terms of funding:

- some 37 respondents believe it would be highly beneficial for there to be a higher level of funding for highly specialist subjects to be taught to a higher level of quality, via more tutors, materials/resources, student accommodation and apprenticeships, and
- these providers feel that this would “generate more people to train to help with the restoration”.

Providers also comment that they would like more information about the R&R Programme available to them and their students, specifically about:

- how they can get involved,
- what work will be required,
- what skills would be useful, and
- if there are placements/apprenticeships related to the Programme that could be more heavily funded.

Two providers note that if “more information is available prior to terms starting, courses can be tailored specifically for this project”.

Contractors

Contractors themselves were asked whether there was anything related to skills and training that they would need from R&R Programme to be able to participate. Around two thirds of contractors (69%) would welcome training that would equip them for participation in the R&R Programme. The following skills and trainings were specifically identified:



- courses in specialised fields,
- heritage training,
- restoration work training,
- health and safety training,
- management training, and
- IT/digital skills

We would need training on how best to approach to certain areas of our work when dealing with historical buildings.

Site induction. We would need to know the area and limitation of work. Someone would need to put in place a site process training manual in order that all companies working on the restoration programme follow the same guidelines.

In addition, some contractors note that it would be beneficial to have more or better organised apprenticeship programmes in courses that would be required for working on R&R. Contractors note that young people could train and qualify for the relevant professions via such apprenticeship programmes and that would enable them to work on the Programme and projects of similar scale and country-wide recognition which require trained and qualified professionals. Respondents argue that having such apprenticeship programmes would be beneficial for the R&R Programme too as there will be more qualified workforce for the required work.

I feel as though it would be a future benefit to take on several apprentices for this programme. Not only would it be a great opportunity for them, but these would curb the skills gaps in the future. I feel as the people behind this restoration scheme should converse with a variety of institutes to offer this to lots of different apprentices as possible, e.g - The Institute of Carpenters.



6 Overarching thoughts

A number of issues have been revealed by the interviews and surveys conducted for this skills assessment research and many are concerns for the wider economy as well as for the R&R programme. For example, respondents are concerned at the conflict between the pressure for cost-effective training solutions – e.g. online approaches – and their need for applied, practical skills that can only be developed and honed through the physical application of a given skill. Other national issues (raised in many other sectors) are the perceived lack of relevant training courses (whether face to face or online), and concern as to the "quality" of tuition (generally meaning whether tutors are sufficiently up-to-date with the latest technology, skills, and applications).

Within the heritage sector there is also a problem regarding the relatively small number of people involved. Occupations requiring small numbers of highly skilled people have always been an issue in training but became more so when colleges were forced through funding pressures to meet demanding targets for student numbers on every course. A few decades ago colleges were given more ability to cross-subsidise courses. An extremely popular course that attracted large numbers of students could be used to help fund smaller but locally vital courses.

This inability to mount courses with small numbers of students is exacerbated by the geographical distribution of such skill needs. If all heritage gilding trainees were concentrated in the north-east for example, it would be possible for a single college to mount economically-viable courses. This is not possible when the need for the same number of trainees is distributed widely across the entire UK.

Apprenticeships is a difficult topic. On the one hand the main regulated trades like gas, electricity, and scaffolding continue to attract and employ reasonable (although not sufficient) numbers and there are increasing numbers of higher-level apprenticeships being launched. However, other trades and occupations are experiencing more difficulty in attracting young people and, as employer-respondents say, in keeping them through to the completion of their courses.

The issue is not merely a "numbers" one but that of attracting young people to applied occupations in fields such as construction and heritage. The opportunity of a shared apprenticeship scheme organised by the Programme whilst welcomed by a good third however raises worries by others who raised issues such as candidate quality, funding, candidate retention, confidentiality and a myriad of other points demonstrating their lack of confidence in and experience of training new entrants.

All of the above are what one might call national, technical issues – focused on the management, funding, and structure of training.

The Covid-19 pandemic has had – and continues to have – a major effect on the construction industry (as evidenced by current – July 2021 – shortages of vital materials and of skilled workers). This disruption and its impacts (many of which have yet to become evident) makes the task of addressing the above issues even more difficult and urgent.



Appendix 1: Qualifications by Level

Level	Qualification	Academic	Other
Entry level	Entry Level Award, Entry Level Certificate, Entry Level Diploma, Entry Level ESOL, Entry Level Essential Skills, Entry Level Functional Skills, Skills for Life	n/a	n/a
Level 1	First Certificate, GCSE grades D–G, Reformed GCSE grades 1–3, Level 1 Award, Level 1 Certificate, Level 1 Diploma, Level 1 NVQ, Level 1 ESOL, Level 1 Essential Skills, Level 1 Functional Skills, Welsh Bacc Foundation	Foundations 5 Grade, Foundation GNVQ	n/a
Level 2	GCSE grades A*–C, Reformed GCSE grades 4–9, CSE grade 1, Level 2 Award, Level 2 Certificate, Level 2 Diploma, Level 2 NVQ, Level 2 ESOL, Level 2 Essential Skills, Level 2 Functional Skills, Level 2 National Certificate, Level 2 National Diploma, Welsh Bacc National, Intermediate Apprenticeship	GCSE grades A* - C	Intermediate GNVQ, BTEC first certificate.
Level 3	A Level, Access to Higher Education Diploma, AS Level, Applied General International Baccalaureate Diploma, T Level, Level 3 Award, Level 3 Certificate, Level 3 Diploma, Level 3 NVQ, Level 3 ESOL, Level 3 National Certificate, Level 3 National Diploma, Advanced Apprenticeship, Welsh Bacc Advanced	A-Level	AVCE, BTEC National, Certificate/Diploma, Vocational A-Levels. An ONC (Ordinary National Certificate) and OND (Ordinary National Diploma) are both broadly comparable to a Level 3 qualification
Level 4	Higher National Certificate, Level 4 Award Level 4 Certificate, Level 4 Diploma, Level 4 NVQ, Level 4 Higher Apprenticeship	Undergraduate, Certificate of Higher Education, Higher National Certificate (awarded by a degree-awarding body)	Full technical certificate, BTEC HNC
Level 5	Higher National Diploma, Level 4 NVQ, Level 5 Award, Level 5 Certificate, Level 5 Diploma, Level 5 Higher Apprenticeship	Foundation degree, Diploma of Higher Education, Higher National Diploma (awarded by a degree-awarding body)	BTEC HND



Level 6	Level 6 Award, Level 6 Certificate, Level 6 Diploma, Degree Apprenticeship, Level 4 NVQ	Graduate, Bachelor's degree, Graduate Certificate, Graduate Diploma	n/a
Level 7	Level 7 Award, Level 7 Certificate, Level 7 Diploma, Level 5 NVQ	Postgraduate, Master's degree, Integrated master's degree, PGCE, PGDip, PGCert	n/a
Level 8	Level 8 Award, Level 8 Certificate, Level 8 Diploma, Level 5 NVQ	Doctoral, PhD/DPhil, Professional doctorates	n/a

Table 10 Qualifications from level 1 to level 8

*Nearest comparable level

SCQF Levels	School And College Qualifications		Qualifications of Higher Education Institutions	SVQS
12			Doctoral Degree	
11			Integrated Masters Degree /Masters Degree Post Graduate Diploma Post Graduate Certificate	SVQ5
10			Honours Degree Graduate Diploma Graduate Certificate	
9			Bachelors/Ordinary Degree Graduate Diploma Graduate Certificate	SVQ4
8		Higher National Diploma	Diploma Of Higher Education	
7	Advanced Higher Scottish Baccalaureate	Higher National Certificate	Certificate Of Higher Education	SVQ3
6	Higher			
5	Intermediate 2 Credit Standard Grade			SVQ2
4	Intermediate 1 General Standard Grade	National Certificate/ Award/Qualification	National Progression Award	SVQ1
3	Access 3 Foundation Standard Grade			
2	Access 2			
1	Access 1			

Table 11 Scottish Qualifications from level 1 to level 12

Diagram courtesy of the Scottish Qualifications Framework (West College Scotland).