Historic Environment Division

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HISTORIC ENVIRONMENT FUND

CITB CONSTRUCTION INDUSTRY TRAINING BOARD NI

Skills in the Heritage Sector in Northern Ireland

Report for the Department of Communities Historic Environment Division by CITB NI, June 2018

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Executive Summary

1. Introduction

1.1. This piece of research was carried out in February / April 2018 and the report drawn up in May / June 2018 by CITB NI. The project was funded by the Department for Communities Historic Environment Division, with a contribution in kind from CITB NI.

1.2. In 2009, the National Heritage Training Group in partnership with CITB GB and CITB NI, published a report outlining the state of demand, supply and training provision within the built heritage sector across the whole of Ireland[1]. This 2018 report aims to refresh the 2009 work, for Northern Ireland only.

1.3. A number of successful interventions were led by the heritage sector as a result of the 2009 research and its Skills Action Plan, and these are summarised within this 2018 report.

1.4. The 2018 report aims to provide an overview of the current situation in the heritage sector in Northern Ireland in terms of demand for and supply of skills and training provision and to provide a number of recommendations to assist the sector to develop its training capacity going forward.

2. Findings and Conclusions

2.1. Currently the heritage sector in Northern Ireland has an increasing number of pre-1919 buildings requiring restoration, conservation, repair or maintenance and there is a lack of funding to carry out this work.

2.2. This lack of funding means that less work is being carried out in the heritage sector, which in turn means that there is less demand for skilled workers and consequently there is no demand for training for either existing skilled workers or for new entrants.

2.3. Skills gaps and training requirements have been identified for clients (stockholders) and their tradespeople, building contractors and their staff, and building professionals. Formal accredited training is considered important by some stakeholders whereas others prefer on-the-job experience and training. Very little training is available in Northern Ireland for those working in or entering the heritage sector.

2.4. Demand for traditional building materials is increasing however there is a lack of knowledge of how these should be used and a shortage of the skills to use them.

3. Main Recommendation

3.1. Training within the heritage market could be indirectly stimulated by increasing the grant support available for repair and maintenance and introducing award criteria which includes the use of accredited skilled craftspeople with a requirement for a heritage endorsement on skills cards or formal qualifications. This would increase the demand for accredited skills and consequently the demand for and availability of training. Skills training could be directly stimulated by allocating some of the maintenance and repair grant support to provide training.

[1] Traditional Building Craft Skills, Assessing the Need, Meeting the Challenge, Skills Needs Assessment of the Built Heritage Sector, Ireland, National Heritage Training Group, 2009 https://bit.ly/2sHoraF

Introduction

1. This piece of research was carried out in February to April 2018 and the report drawn up in May / June 2018 by CITB NI. The project was funded by the Department for Communities Historic Environment Division, with a contribution in kind from CITB NI.

2. In 2009, the National Heritage Training Group in partnership with CITB NI published a report outlining the state of demand, supply and training provision within the built heritage sector across the whole of Ireland. This 2018 report aims to refresh the 2009 work, for Northern Ireland only.

3. A number of successful interventions were led by the heritage sector as a result of the 2009 research and its Skills Action Plan, and these are summarised within this 2018 report.

4. Currently the heritage sector in Northern Ireland is struggling with an increasing number of pre-1919 buildings which require restoration, conservation, repair or maintenance and a lack of funding to carry out this work.

5. However there are a number of current and future heritage projects of significance in Northern Ireland which have secured funding including:
   5.1. Enniskillen Workhouse
   5.2. Carnegie Oldpark Library
   5.3. Dunlewy Addiction Centre
   5.4. Hillsborough Visitor Centre.

6. The 2018 report aims to provide an overview of the current situation in the heritage sector in Northern Ireland in terms of demand for and supply of skills and training provision and to provide a number of recommendations to assist the sector to develop its training capacity going forward.

Research Objectives and Methodology

Research Objectives

7. This report aims to refresh certain elements of the 2009 research. The research objectives for this piece of work (for Northern Ireland only) are:
   7.1. Analyse and quantify supply and demand in the sector and identify specific skills shortages
   7.2. Assess the material supply chain and related skill issues for manufacturers and suppliers of traditional building materials
   7.3. Assess current training provision
   7.4. Inform the Skills Action Plan.

8. As well as identifying the current training needs, the research will assess what has been achieved via the 2009 Skills Action Plan for Northern Ireland.

Research Methodology

9. The research was carried out in two phases, beginning with a series of 17 in-depth qualitative interviews, followed by a quantitative online survey with 55 respondents.

10. A list of 293 potential research participants was compiled using existing mailing lists and the CITB NI registered employers database, with additional participants being identified through internet searches. All potential participants were written to and asked to advise if they did not wish to participate in the research. A minority did not want to participate and they were removed from the database (eight were not interested). In addition, the survey was advertised on the CITB NI website and through CITB NI's social media channels (Facebook, Twitter, and LinkedIn) which resulted in a number of individuals / companies offering to participate.

Qualitative Research

11. A selection of stockholders, stakeholder organisations, building contractors, manufacturers / suppliers of traditional building materials, training providers and building professionals were interviewed. Each interview lasted approximately one hour and was based on a structured topic guide covering areas such as demand, skills, recruitment, traditional building materials, provision of training, and anticipated changes in the future. An attempt was made to reflect the sample breakdown of the 2009 survey but this depended largely on the willingness of organisations / individuals to participate. Conservation officers and grants bodies are included under the category 'stockholders / stakeholder organisations' in the 2018 research.

Table 1: Interviews 2009 vs. 2018

Interviews 2009 vs. 2018	**2009**		**2018**	
	Number	**Percentage (%)**	**Number**	**Percentage (%)**
Stockholders / stakeholder organisations	8	26	6	35
Contractors	7	23	5	29
Manufacturers / suppliers	6	19	2	12
Training providers	2	6	2	12
Building professionals	3	10	2	12
Conservation officers	1	3	0	0
Grant bodies	4	13	0	0
Total	**31**	**100**	**17**	**100**

Quantitative Research

12. Six separate questionnaires were developed for six categories of potential respondent (Stockholders, Contractors, Professionals, Training Providers, Manufacturers / suppliers and Stakeholders) – slightly different to the format used in the previous research. The surveys covered areas such as stock levels, demand, grants and funding, skills, recruitment, provision of training, qualifications and accreditations. The number of potential respondents, actual respondents and the response rate is outlined in the table below.

Table 2: Online Surveys – Response Rate

Online Surveys – Response Rate	Number Who Were Sent Survey	Responses Received	Response Rate
Building professionals	42	10	24%
Building contractors	119[2]	24	20%
Stockholders	26	10	38%
Stakeholders	7	3	43%
Manufacturers / suppliers	6	1	17%
Education and training providers	73	7	10%
Total	**247**	**55**	**22%**

13. The six tailored online questionnaires were issued to the appropriate group of potential participants i.e. to those on the database who had not been interviewed. In addition, a number of surveys (25) were sent by post to those with no e-mail address and the survey was also promoted via CITB NI's website, social media channels and through the Traditional Skills Working Group members. This may have generated additional responses to the surveys but as not all who completed the survey added their contact details, this cannot be verified.

14. Again the figures broadly reflect the 2009 sample breakdown with the exception of manufacturers / suppliers who did not respond to the survey in the numbers desired. Again, conservation officers and grants bodies are included under the category 'stockholders / stakeholder organisations' in the 2018 research.

Table 3: Online Surveys 2009 vs. 2018

Online Surveys 2009 vs. 2018	2009		2018	
	Number	**Percentage (%)**	**Number**	**Percentage (%)**
Stockholders / stakeholder organisations	45	17	13	24
Contractors	129	49	24	44
Manufacturers / suppliers	28	11	1	2
Training providers	32	12	7	13
Building professionals	27	10	10	18
Conservation officers	1	0	0	0
Grant bodies	0	0	0	0
Total	**262**	**100**	**55**	**100**

15. Please note that throughout the report, charts only contain data from the online survey and not from the interviews.

Stockholders and Other Stakeholder Organisations

Survey Sample Overview

16. A total of 31 stockholders (owners of pre-1919 buildings) and eight stakeholders (other organisations involved in the built heritage whether directly or indirectly) were identified. The list of stockholders contacted to take part in the survey included public sector

[2] Includes 25 postal surveys (see paragraph 13)

organisations, charitable organisations and trusts. Stakeholders who were invited to participate included organisations responsible for the promotion of the built heritage and for planning, funding bodies and employer / professional bodies. Five stockholders and one stakeholder were interviewed and ten stockholders and three stakeholders responded to the online survey.

Demand

17. The organisations interviewed had mixed views on demand but the general consensus seems to be that demand for conservation, restoration, repair and maintenance is increasing. Whether or not that demand is being met is another question. Some organisations are not really experiencing an increase in demand as their level of stock remains steady. Two organisations (charities) indicated that they had increased budgets for maintaining their portfolios whilst the two public sector organisations have little or no budget for managing their internal works (although one is responsible for a budget / grant for works on properties that they do not own). According to one organisation interviewed the Buildings at Risk Register is continuing to grow - in 2014 it had 480 buildings on it, and it now has around 532 with more waiting to go on it. This is the highest it has been in around 10 years. The increase is due to a reduction in funding available for this type of work. Seventy three percent of listed buildings need work and 25% are in poor condition. In the past, 15 buildings were removed from the at risk list every year, now it is only eight, a 46% reduction. One stockholder interviewed expects to see a rise in demand for restoration due to the acquisition of further properties but repair and maintenance should be steady.

18. The results of the online survey concurred with the view of increasing demand, with two thirds of respondents agreeing that demand was increasing versus one third who felt it was decreasing. The main reasons cited for increasing demand were that builders are more aware of the importance of built heritage and a decline in structures due to lack of investment. The main reason given for demand decreasing was the decrease in funding / grants for traditional building work.

Ownership and Type of Stock

19. The chart below shows the breakdown of property owned by those stockholders who responded to the online survey. Sixty percent own more than 20 properties, with the remaining 40% owning 10 or less. In addition to this, those interviewed owned between four and 5,000 properties, ranging from prehistoric earthworks, through to castles, churches, listed buildings and housing stock.

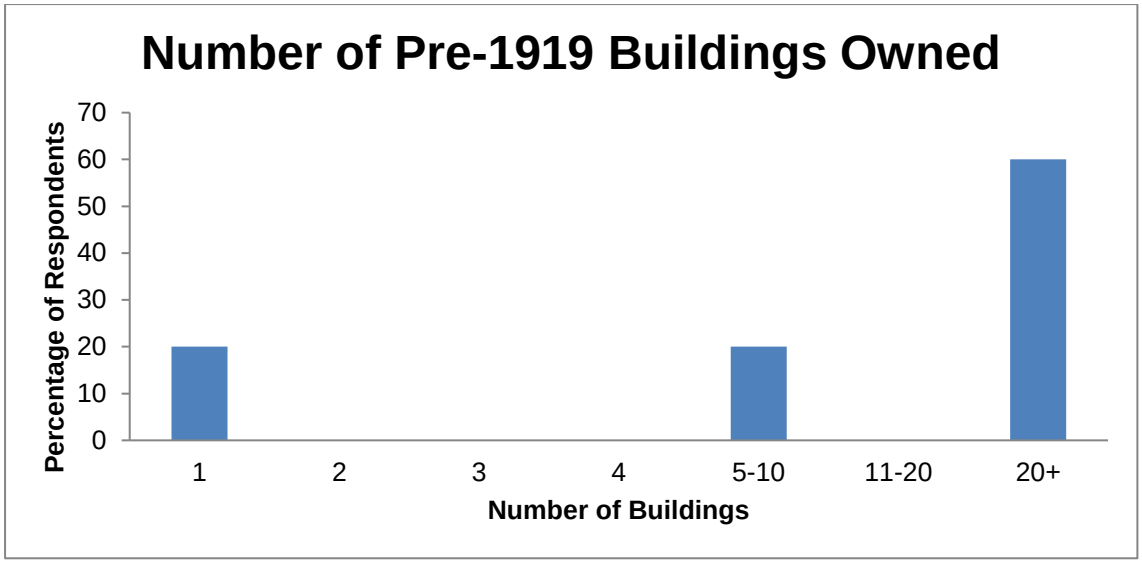

Figure 1: Number of Pre-1919 Buildings Owned

20. Ninety percent of the buildings owned by survey respondents were listed.

Expenditure

21. Seventy-five percent of stockholders have spent up to £250,000 on upkeep over the last 12 months. The remainder have spent between £500,000 and £1 million.

22. Similarly more stockholders are planning to spend under £250,000 on upkeep over the next 12 months (63%), with the remaining stakeholders planning to spend between £250,000 and £1 million. These figures show a 16% decrease in expenditure annually if we assume every stockholder spends a maximum of £250,000.

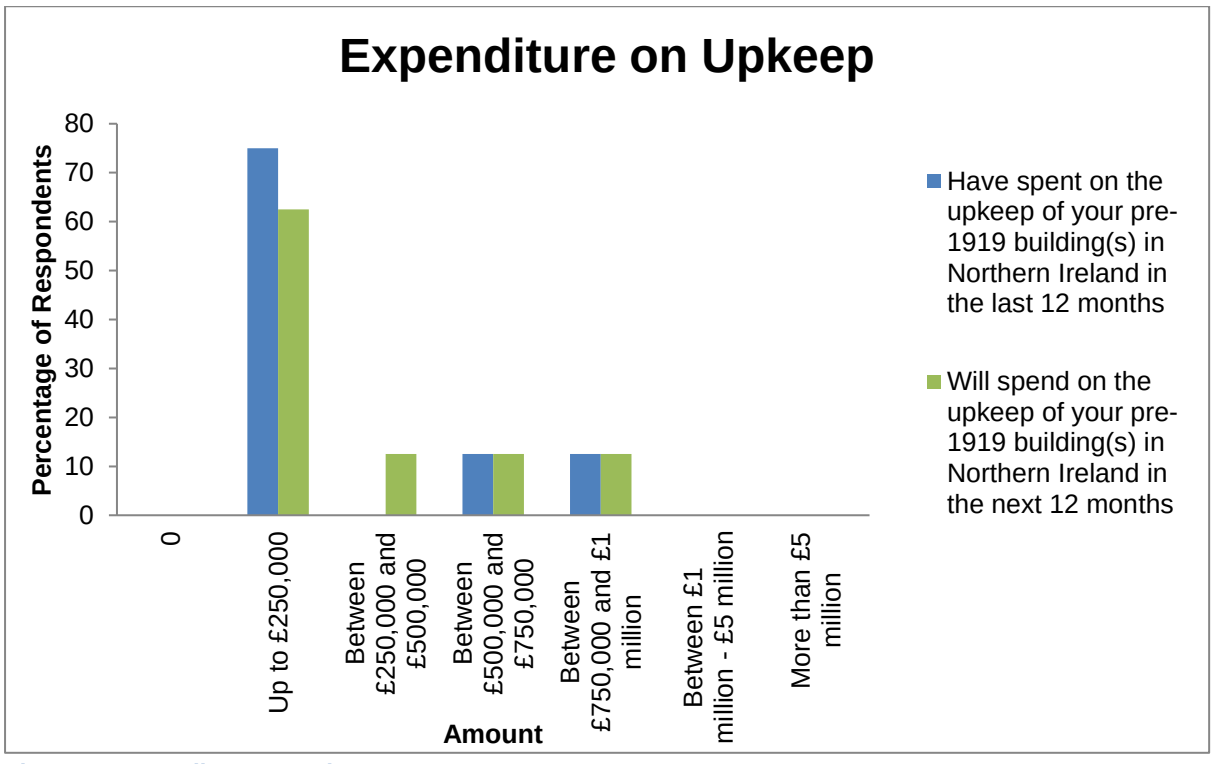

Figure 2: Expenditure on Upkeep

23. The online survey respondents provided information on how their expenditure is broken down in terms of repair and maintenance versus conservation and restoration[3]. Thirty eight percent of respondents split their expenditure on a 50/50 basis however the majority spend significantly more on repair and maintenance than on conservation and restoration, including one respondent who spends 100% of their budget on R&M. One of the stockholders interviewed expects to see a rise in the amount of expenditure per building to take account of energy efficiency requirements.

24. All of the stockholders who took part in the qualitative interviews are engaged in restoration / conservation projects, as well as routine and reactive repair and maintenance, to varying extents.

Funding

25. A number of sources of funding were identified during the research project, including:
    - 25.1. Historic Environment Division (HED)
    - 25.2. Heritage Lottery Fund (HLF)
    - 25.3. Garfield Weston
    - 25.4. Ulster Garden Villages
    - 25.5. Visitors
    - 25.6. Donations.

26. The HED grant, which has been the main source of funding in NI, has reduced from £4.8 million to £300,000 and as a result is focused on a limited number of priorities including buildings at risk, thatching, and buildings where the owner is on income support. According to one interviewee, the majority of public funding goes to community / charity organisations (subject to their ability to apply for it) and so there is no funding for private owners who are reported to make up 60% of owners.

27. Of the stockholders who responded to the survey, 75% had not received a grant for work on pre-1919 buildings in the last 12 months. The grant which was received was from the Department for Communities (likely to be the Historic Environment Division although this is an assumption).

28. Two of the stakeholders that responded to the survey had claimed grants which came from Heritage Lottery Fund / Lottery Grants and from a Local Authority / Council. The fact that these organisations had obtained grants (both for work on a building), suggests that they are in fact stockholders and therefore should have completed the stockholder survey[4].

Craftspeople – Demand and Skills Issues

29. When asked how often stockholders use only suitably qualified or experienced craftspeople with heritage skills to work on the conservation, restoration, maintenance or repair of pre-1919 building(s), 38% said usually, however a surprisingly high percentage (25%) said never. Whether this is because they choose not to, or is a result of a lack of

[3] Repair: work to remedy damage without alteration/restoration
Maintenance: routine work to keep a building in good order
Conservation: actions to preserve the authenticity of a building as it exists without alteration
Restoration: reinstating details to return a building to a previous known state.

[4] Whilst those on the database were directed to the correct survey, any respondent who responded via the CITB NI website (e.g. having heard about the survey through social media) was required to choose the survey most applicable to them, which may have resulted in these organisations completing a survey which was not the most applicable.

appropriately qualified or experienced craftspeople is unclear. Only 13% said they always use qualified or experienced workers.

30. Stockholders were asked which trades they had used in the last 12 months and which they were likely to use in the next 12 months to identify the most commonly used trades and where future demand might lie. The chart below summarises the findings. In addition to the occupations asked during the online survey, those interviewed also indicated the following: asphalt roofers, metalworkers, stained glass painters and stucco plasterwork restorers.

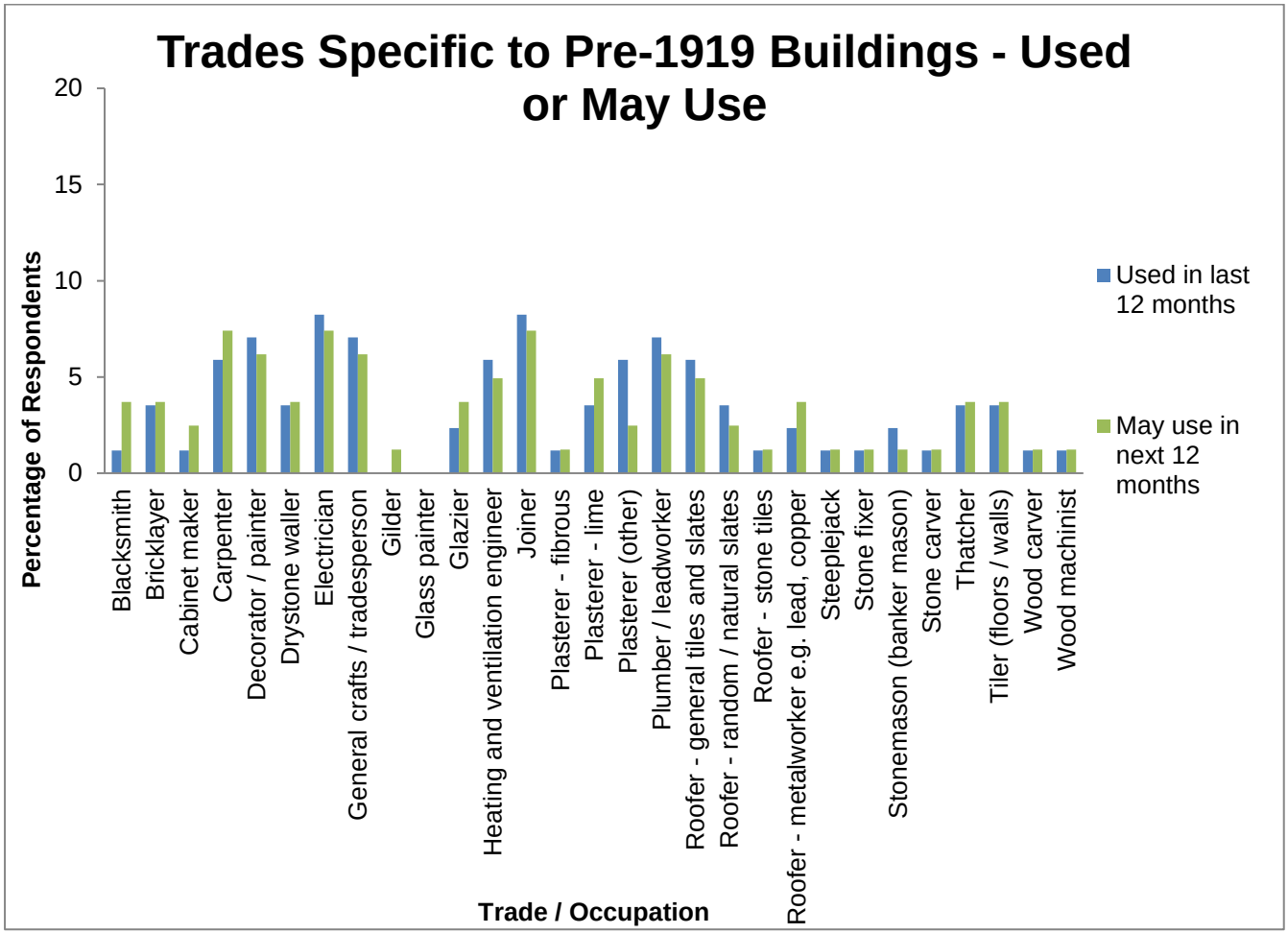

Figure 3: Trades Specific to Pre-1919 Buildings – Used or May Use

31. As can be seen from the chart, electricians, joiners, painters, general craftspeople and plumbers / lead workers were in most demand in the last 12 months. Going forward the same occupations are in most demand, although in slightly different proportions.

32. Caution must be exercised when reviewing these figures as the base sizes are very low, however, based on the chart, it would appear that the demand for blacksmiths, cabinet makers, glaziers and roofing metal workers will increase. Demand for plasterers (other), roofers (natural slates) and stonemasons will decrease.

33. Stockholders were asked which trades were most in demand for work on pre-1919 buildings and which trades were in short supply. The chart below shows the findings for both questions for comparison purposes. Trades in highest demand include glazier, plasterer (lime) and thatcher. Those trades thought to be in short supply include

blacksmith, carpenter, plasterer (lime), roofer (metalwork), and thatcher. Again base sizes are low so these results come with a caveat and should be treated with caution.

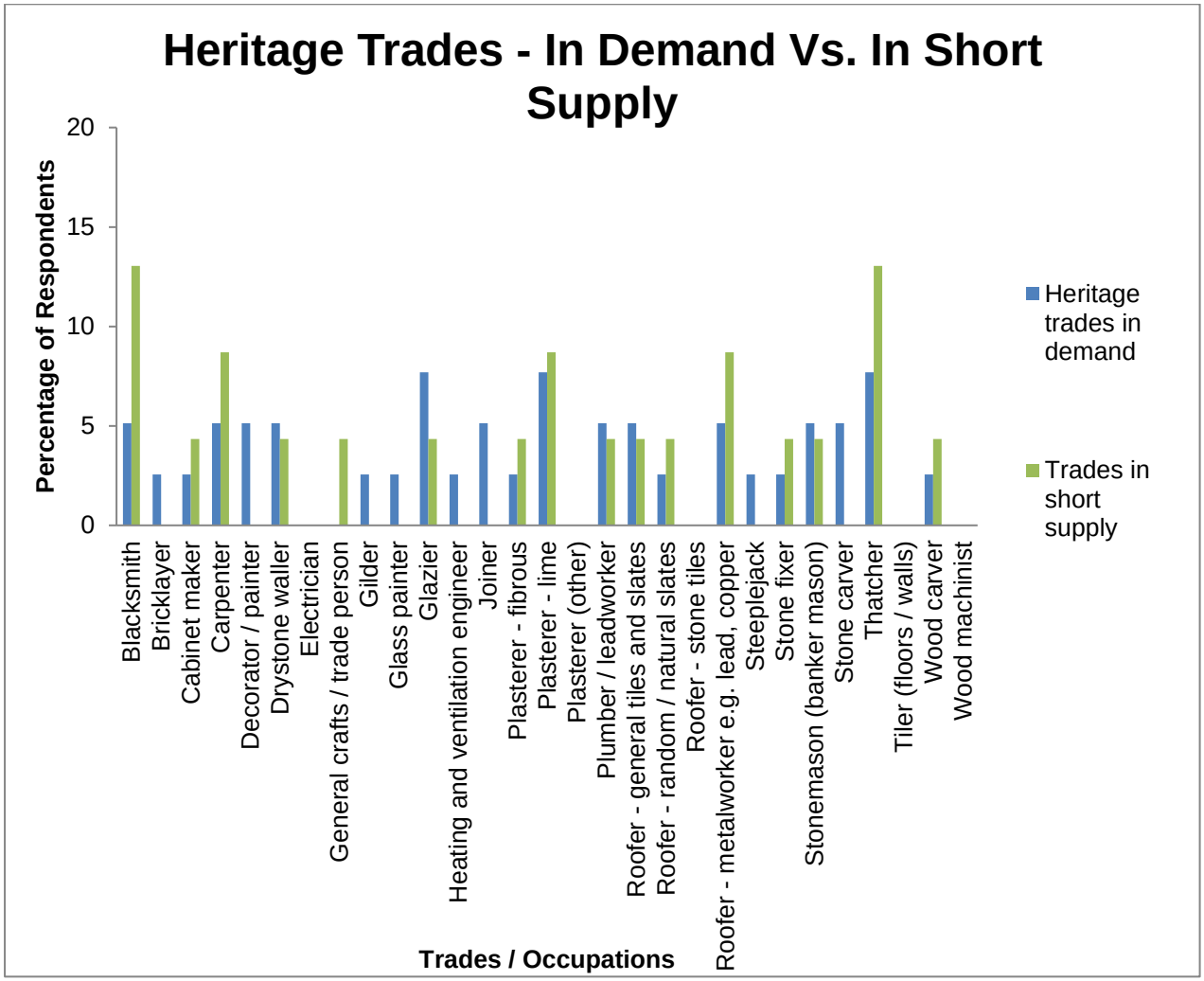

Figure 4: Heritage Trades – In Demand vs. In Short Supply

34. Stockholders were then asked about recruiting subcontractors to carry out work on pre-1919 buildings. Cost clearly plays a huge role with all stockholders rating it a four or five on a scale of one to five for importance and none of the respondents rating it as unimportant. Experience of working on old buildings and skill levels also score highly in terms of importance. Skills cards score relatively poorly in terms of importance as does the contractors location / proximity to the work.

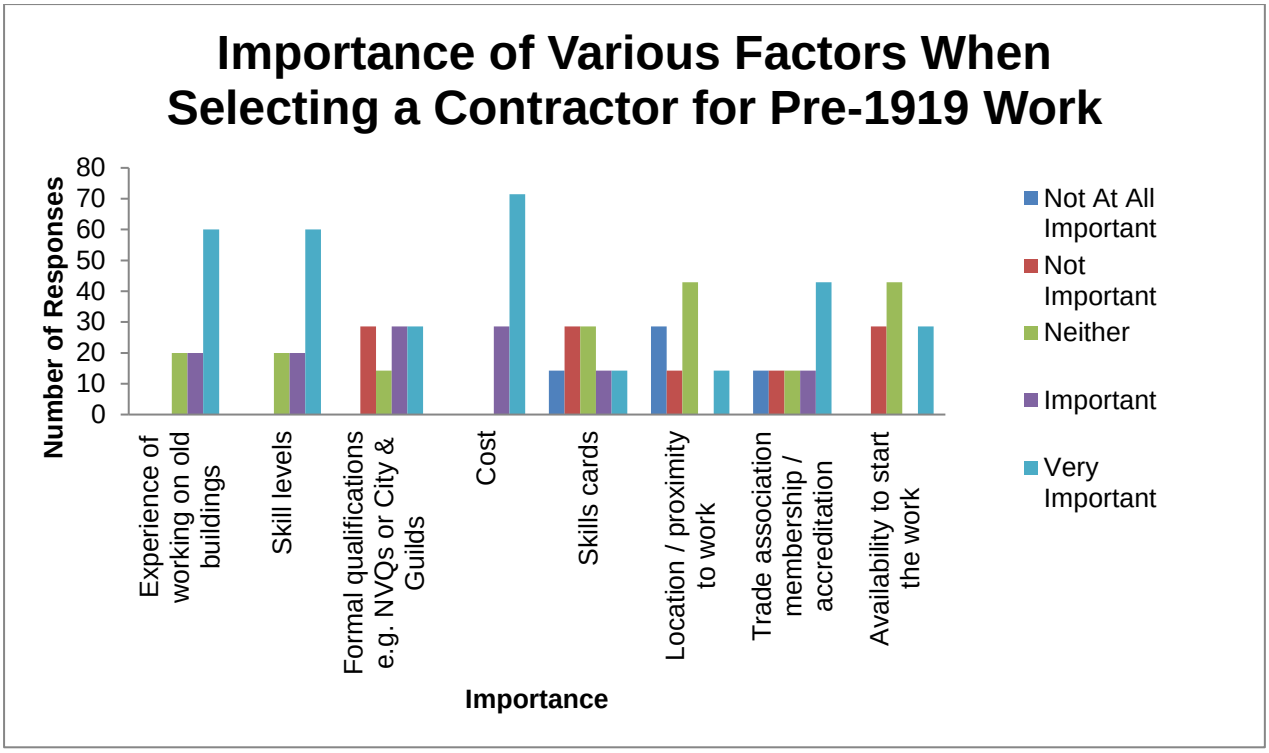

Figure 5: Importance of Various Factors When Selecting a Contractor for Pre-1919 Work

35. Fifty seven percent of stockholders rated their satisfaction with the quality of contractors' work on pre-1919 buildings as poor or fairly poor with only 28% rating the quality of work as fairly good or good. This may be a result of the low percentages of stockholders who use appropriately qualified or experienced craftspeople (see paragraph 29). Sixty percent of stockholders rated their satisfaction with the time taken to start and complete the work as average, rating each factor a three out of five. The remainder of the stockholders rated these factors as four or five (good or very good).

36. Eighty six percent of stockholders rated contractors' knowledge of working with traditional building materials as either very poor or average. The remaining 14% rated it as good. Twenty nine percent of stockholders rated their ability to work with traditional materials as good, 57% rated it as average and 14% rated it as very poor. Again this may be due to using unqualified or unexperienced tradespeople (paragraph 29).

37. At least two organisations who participated in Phase One of the research (i.e. interviews) commented that there are more contractors in GB and therefore more choice. They also have specialist conservation contractors. A third indicated that these contractors are being brought over to NI to the detriment of local skills as local skills are more expensive and are generally perceived to be of a higher quality. Two of the organisations have their own workforce but all the stockholders bring in subcontractors as and when required.

Craft Skills Employed Internally

38. Whilst 63% of stockholders used contractors to undertake work in the last 12 months, the remainder used both their own workforce and contractors. Twenty percent of respondents said they employed their own workforce with traditional building skills, with between one and ten employees each. These employees are a mixture of specialists and general craftspeople with heritage skills.

39. Two of the organisations interviewed in Phase One of the research have their own workforce but all the stockholders bring in subcontractors as and when required. They rely on networks and contacts they have built up over the years, an assessment of / evidence of skills and experience, Ulster Architectural Heritage (UAH) and Irish Georgian Society (IGS) registers, or, in the case of public sector organisations, the Central Procurement Directorate (CPD), to identify contractors and subcontractors.

40. The stockholders with employees were asked to rate the skills levels of their own staff and as can be seen from the chart below, the majority rated these skills between one and three on the scale (shown in dark blue, red and green), where one means not at all skilled and five means highly skilled. This indicates a training need for staff employed by stockholders in Northern Ireland.

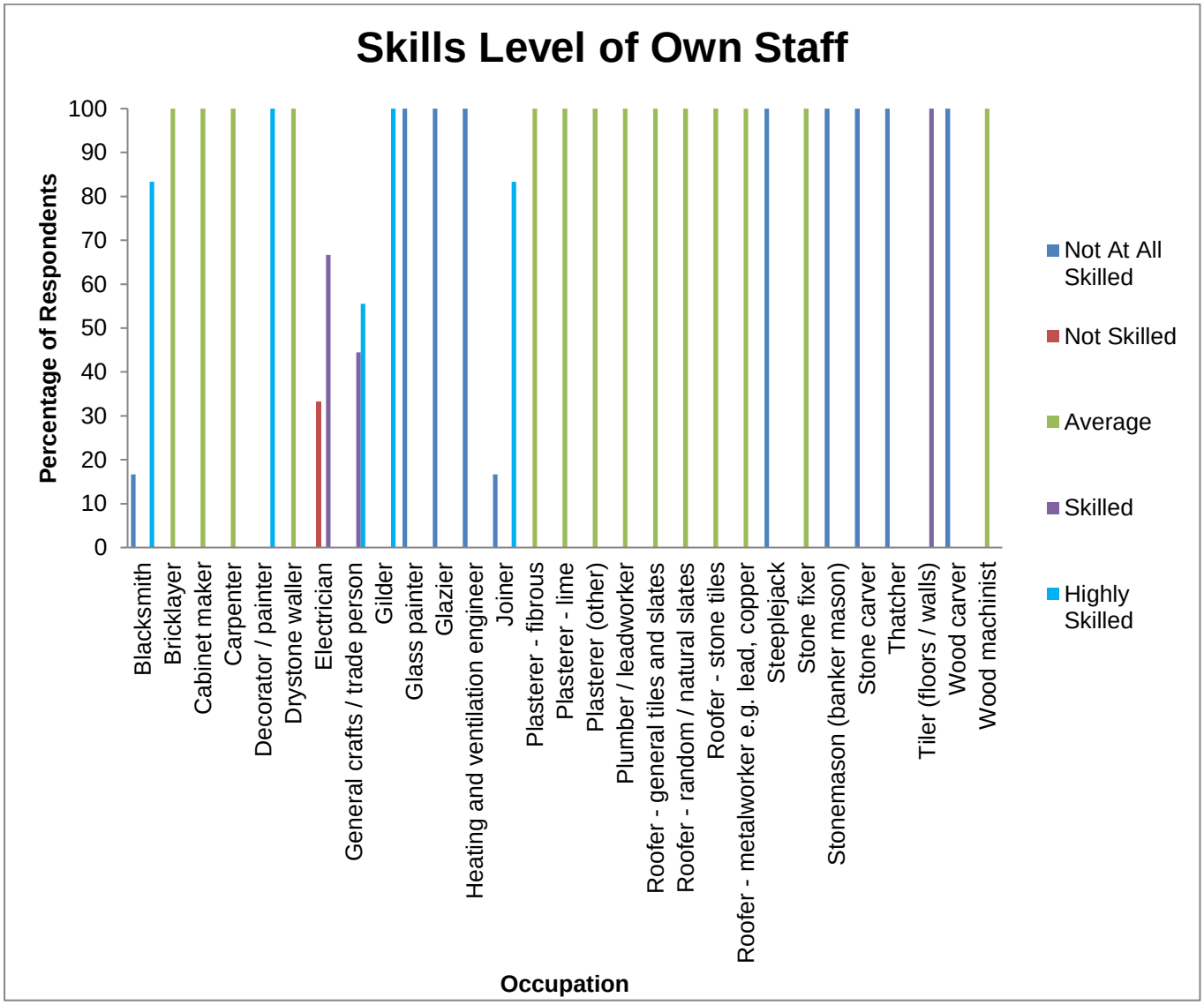

Figure 6: Skills Level of Own Staff

41. When rating employees' knowledge and ability in the use of traditional building materials, all the stockholders who responded rated their employees at four, again on a scale of one to five, where one means poor and four means good.

42. Very little recruitment has been undertaken amongst the stockholders with only one experienced craftsperson and one apprentice / trainee having been recruited in the last

12 months. One stockholder indicated that this is as a result of funding difficulties. Generally, stockholders prefer to recruit people with the relevant skills and experience but in need of some training, which perhaps explains the results of the skills ratings of their employees.

43. When asked how easy or difficult it is to recruit tradespeople, only two stockholders replied, one stating that it was difficult and one stating that it was fairly easy (ratings of one and four out of five respectively). When discussing ease or difficulty of recruitment, stockholders are not just considering how difficult it is to recruit in terms of finding people but also the constraints they face internally e.g. difficulties in funding new recruits (this interpretation is based on answers given to other questions). None of the stockholders have outstanding vacancies over three months but this may be more to do with the fact that they are not recruiting rather than difficulties finding people.

44. Stockholders were asked what action they are taking to address the lack of skills and knowledge amongst their own workforces. The following actions were taken: tradespeople learn on the job, used a subcontractor with the specialist skills required, researched on the internet / publications, asked other tradespeople for advice, sourced training for the specialist skills and went on training ourselves. It is interesting that one of the most popular methods taken to address a lack of skills internally is on-the-job training, especially considering that most stockholders have indicated that the skills of their workforce are average or below average.

45. When asked which of the following methods stockholders use to provide formal and informal training in traditional building craft skills, the results were as follows:

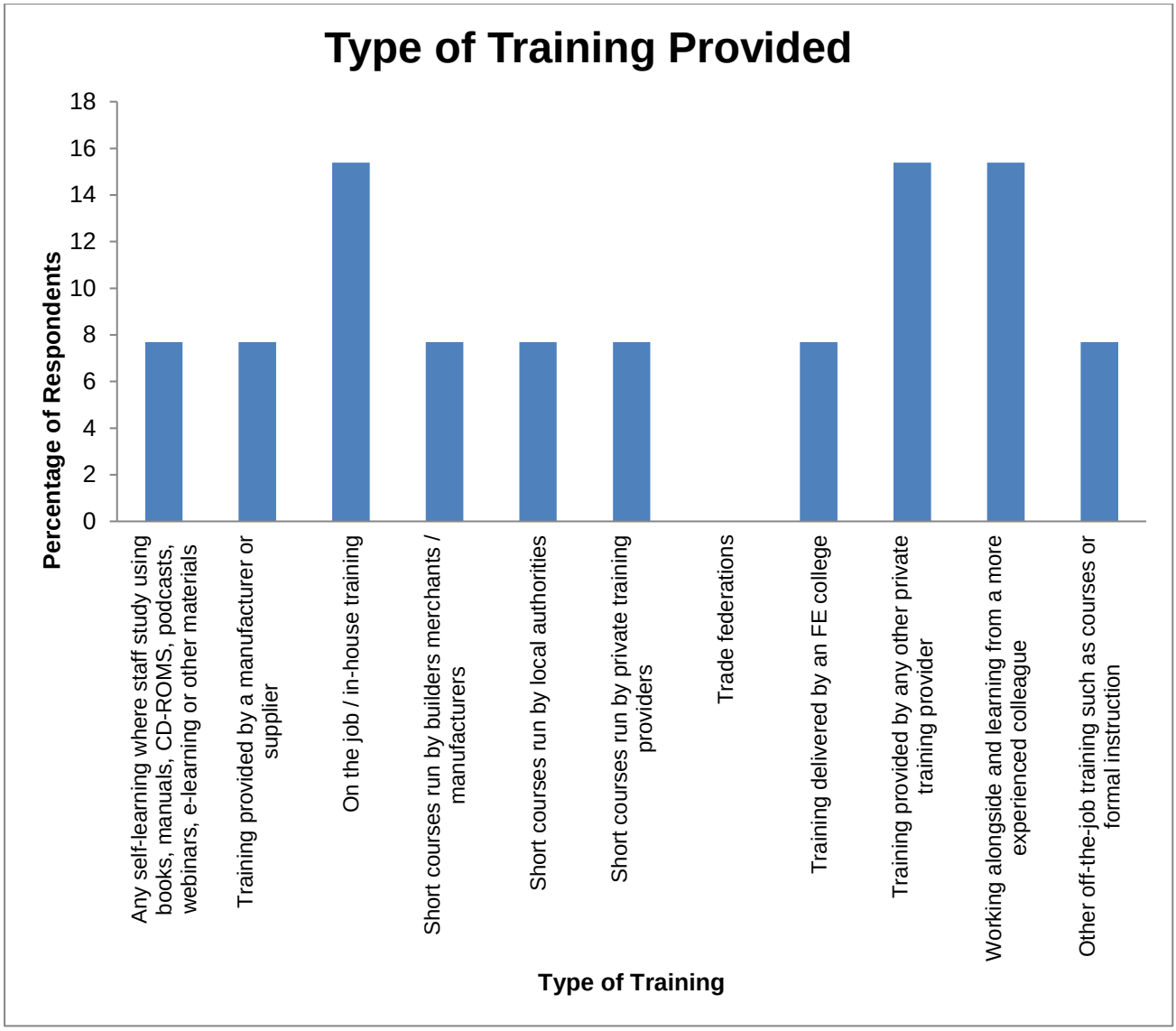

Figure 7: Type of Training Provided

46. On-the-job training, training delivered by private training providers, and working alongside / learning from a more experienced colleague are the most utilised methods for providing training. Stockholders were asked if they would like to provide more training for staff and were asked the reasons why they could not do so which are shown in the chart below. The fact that 'no courses available on the subject / area required' was the main response may explain the reliance on on-the-job training or training delivered by an experienced colleague.

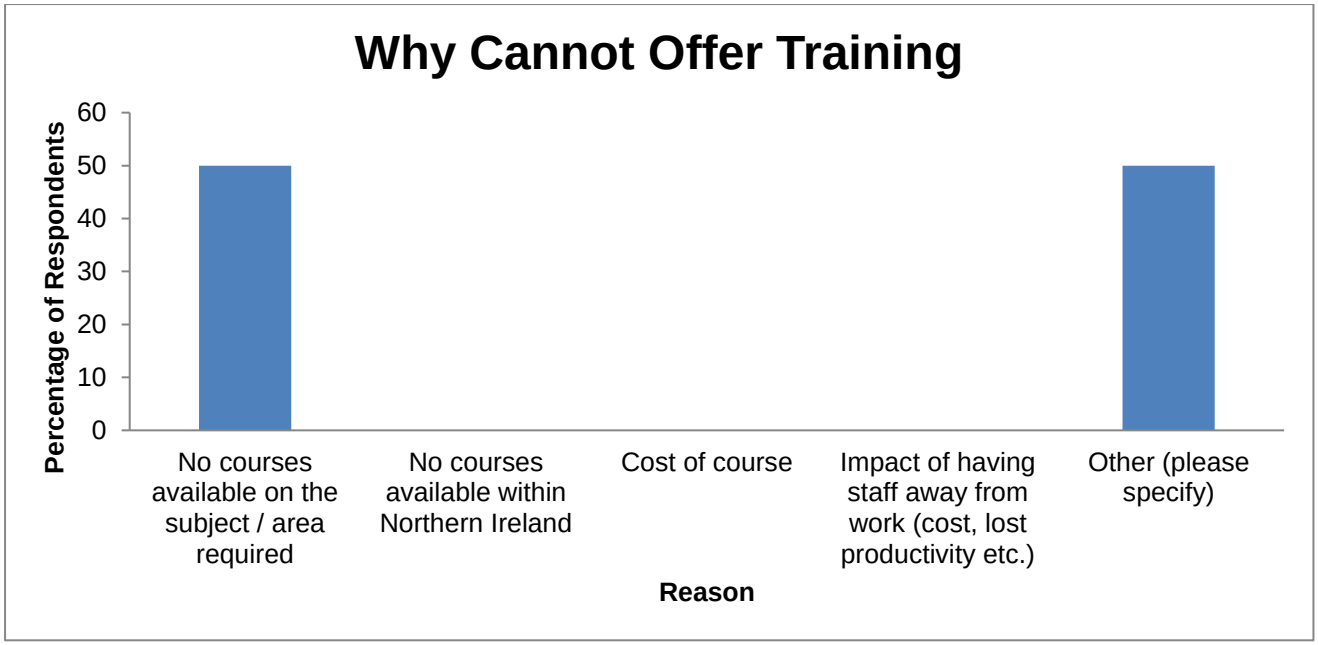

Figure 8: Why Cannot Offer Training

47. When asked what trades were difficult to recruit, thatchers came out as the most difficult, followed by plumbers / lead workers and cabinet makers.

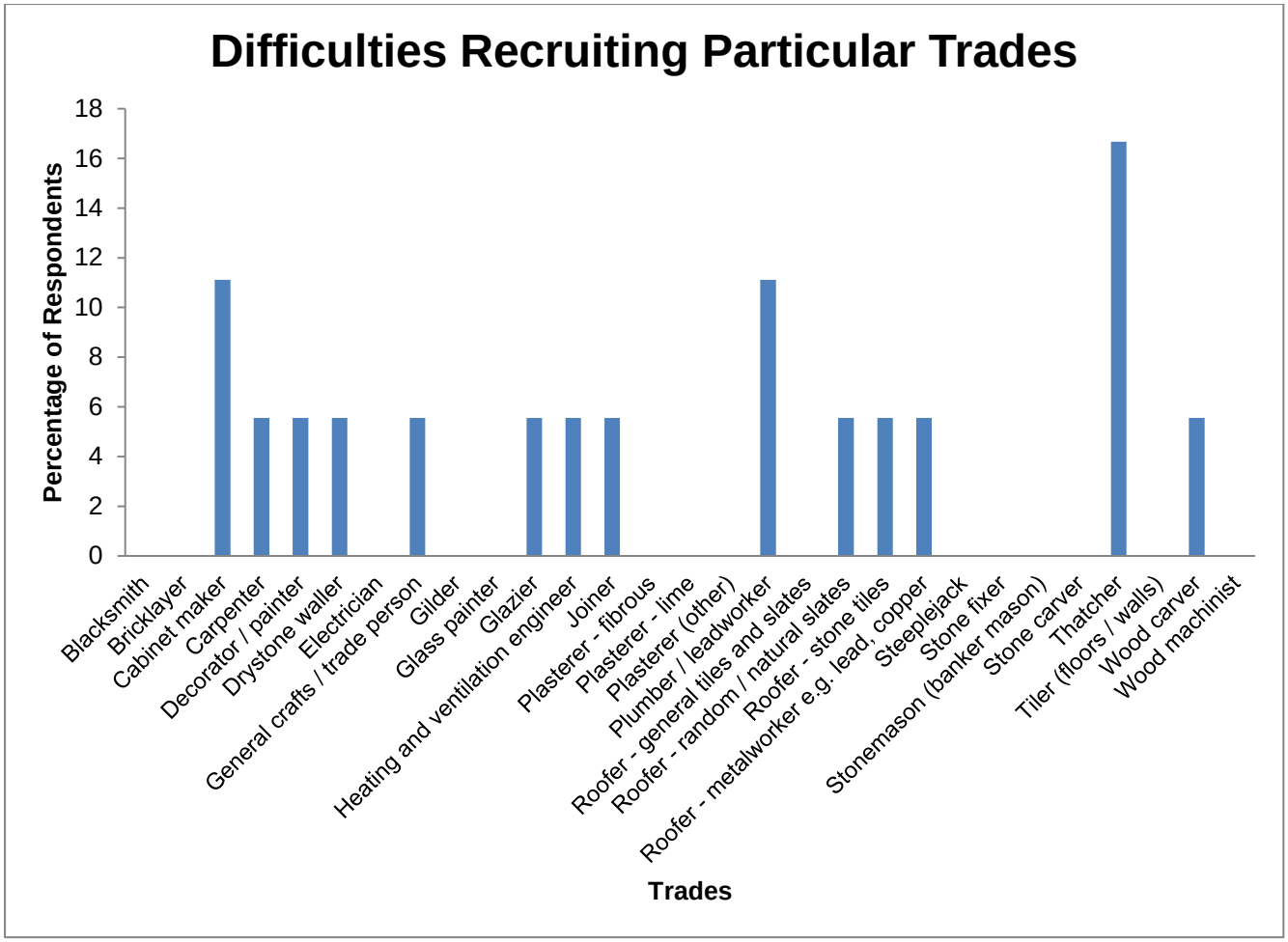

Figure 9: Difficulties Recruiting Particular Trades

48. Amongst those interviewed, thatchers and metalworkers can be difficult to recruit but there is a reasonable supply of stonemasons (with the exception of carvers), painters and plasterers. Thatching is considered a dying skill and as there are so few thatchers, clients have to wait a long time to get them. A further problem is that the thatchers may have trained outside Northern Ireland and so are not using the skills and materials synonymous with NI. Joiners may lack the skills for splicing and repair of sash windows. Lime plasterers are subcontracted in via main contractors in a number of cases rather than being directly employed. One organisation mentioned that lime demonstrators are in short supply. Irrespective of the skills required, at least two organisations indicated that an understanding of historic buildings, knowing the correct approach to use and how to apply it, are more important than the skills i.e. it is important to have a conservation philosophy.

49. The impact of any skills shortages will mean poor workmanship and higher costs due to having to complete rework as well as delays to jobs if only a few contractors are available to do the work. There is a fear that skills will be lost completely – two of the organisations interviewed reported an ageing workforce (whether their own or subcontractors) and a lack of training for those coming through.

Traditional Building Materials

50. According to those interviewed during Phase One of the research, demand for materials is expected to remain steady or increase slightly. Only one organisation has less

demand for materials but this is due to a reduced workforce to do the work, rather than a reduced demand for the work to be done.

51. Traditional materials are usually specified over modern materials by those interviewed, whether that be driven by legislation, grant / funding requirements, or just their own understanding of the buildings and materials used. Occasionally compromises have to be made. Materials can equate to between 25% and 40% of a project's costs. There are some issues with supply.

52. The main materials / traditional building products required by those interviewed are:
    - 52.1. clay
    - 52.2. crown glass
    - 52.3. hazel
    - 52.4. lime
    - 52.5. metal
    - 52.6. rye and flax
    - 52.7. sash windows
    - 52.8. stone
    - 52.9. thatch slate
    - 52.10. timber
    - 52.11. wattle and dub
    - 52.12. willow.

53. Stockholders were asked what percentage of their expenditure is on traditional building materials. The results are very mixed with some spending very little on traditional materials and others spending a high proportion of their budget on them. Consequently, the amount of expenditure on modern materials is also quite high for a number of stockholders, with 60% spending more than 76% of their budget on modern materials.

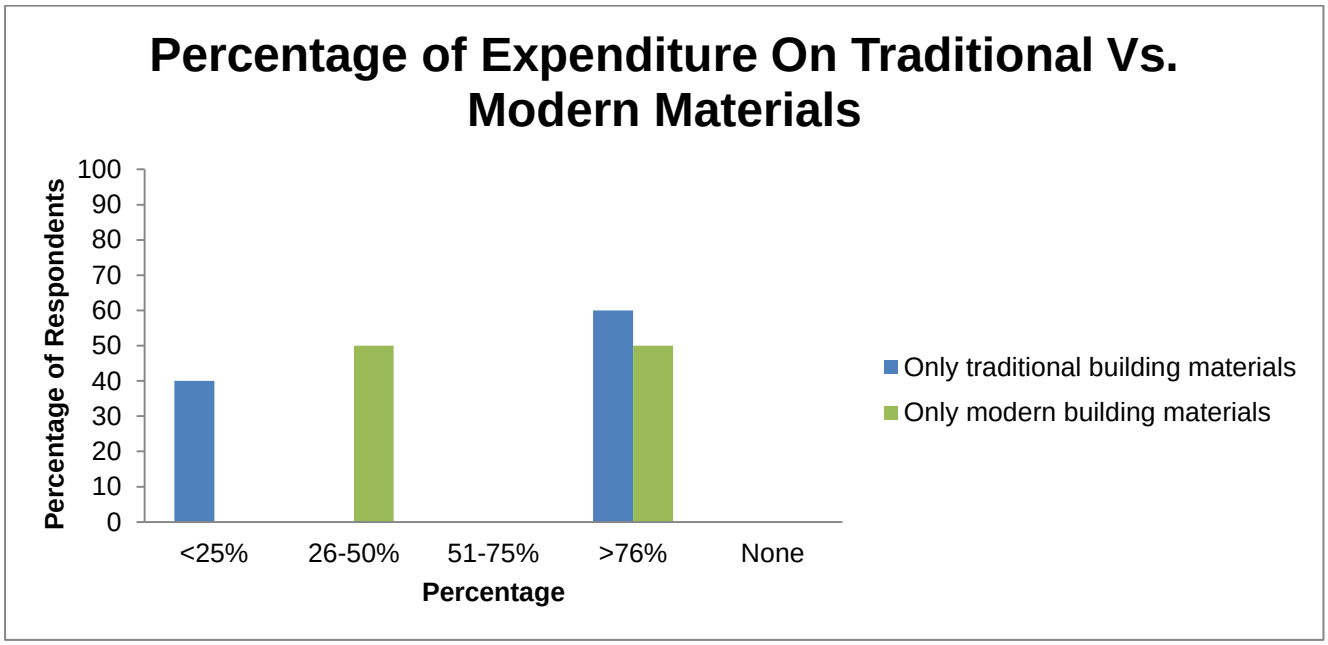

Figure 10: Expenditure on Traditional vs. Modern Materials

54. As a follow-up, stockholders who used very little traditional materials were asked what would make them use more and the responses are provided on the chart below with a wide variety of reasons being cited. Builders lacking the skills to use traditional materials was one of the highest scoring reasons which suggests a training need for contractors.

This links back to the findings highlighted in paragraph 36 where 57% of stockholders rated building contractors' ability to work with traditional materials as average and a further 14% rated it as poor.

55. In terms of 'other' responses to explain the use of modern materials, the responses included: a lot of my work is refurb painting, tiling, window repairs, etc. so modern paints, timber etc. are used; and building control / planners do not understand old buildings or how to accept that not all repairs have to perform to modern standards.

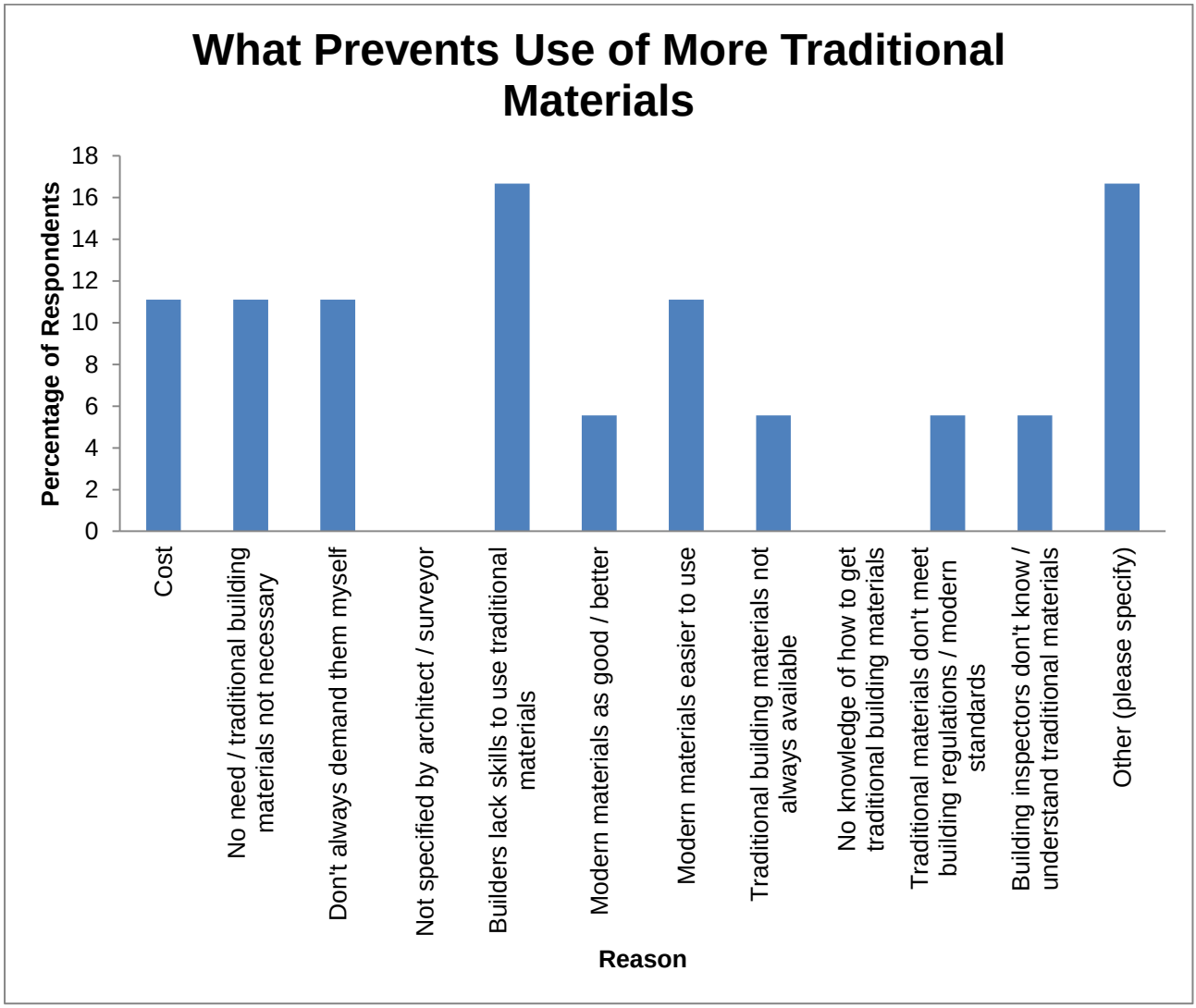

Figure 11: What Prevents Use of More Traditional Materials

56. A number of those interviewed provided some insight into the ease or difficulty of obtaining traditional building materials. Stone is difficult to obtain as many local quarries have closed so rather than replacing like with like, the nearest alternative must be identified. Slate is usually Welsh or imported from further afield. Lime is available both locally and also imported. Reclaimed timber can be found but hardwood is difficult to obtain. Thatch is imported as local materials do not last as long, even though the imported material is not traditional. The supply of metal is adequate except in the case of cast iron windows. Sash windows are easily available. There is little or no supply of crown glass.

Provision of Training

57. The majority of those interviewed during Phase One of the research indicated that there was little or no training provision for heritage craft skills in Northern Ireland. Overall training provision for mainstream trades is adequate. There is adequate provision of heritage skills / knowledge for professionals e.g. Royal Society of Ulster Architects (RSUA) Conservation Course / RSUA Certificate in Architectural Conservation. The Society for the Protection of Ancient Buildings (SPAB) and the Building Limes Forum provide some taster courses (SPAB in NI, BLF in Ireland) but these are not adequate in terms of providing training in the skills required. CIOB are looking at the delivery of some programmes in NI which have been successfully piloted in GB. Most people travel to GB for further training.

58. Twenty nine percent of stockholders who responded to the online survey provide training in traditional building skills or materials. These courses include lime plastering, conservation repairs, or less formally providing an opportunity to work on old buildings using traditional materials. The formal courses mentioned take one day and can accommodate 10-15 people. These courses are attended by builders / tradespeople and building professionals and include a mix of theory and practice. Two of the organisations interviewed provide their own in-house training as well.

59. Stockholders were asked if they felt that formal qualifications or accreditation were important for people working in the heritage sector and the majority of respondents (86%) felt that they were. Reasons why included showing professionalism; giving clients a degree of certainty about the contractor they are using, and ensuring that contractors can provide evidence of their skills levels. Formal qualifications / accreditation are thought to be important by three of the organisations interviewed during Phase One of the research, however some caveated this by saying that they are not necessarily more important than experience and having the actual skills. Often holding a qualification or accreditation is just a useful mechanism for awarding work or giving the end client peace of mind.

60. When asked to what extent do you agree or disagree with the statement that 'mainstream construction courses provide students with the appropriate skills to work on pre-1919 buildings' respondents to the online survey answered on a scale of one to five, with one being disagree strongly and five being agree strongly. Overall 86% of respondents disagreed (14%) or strongly disagreed (71%) that mainstream courses provided students with appropriate skills to work on pre-1919 buildings.

61. The chart below shows whether online survey respondents felt that additional optional or compulsory modules should be introduced to mainstream education provision to increase students' knowledge of heritage skills and materials. Not surprisingly, given the responses to the previous question, 100% of respondents agreed or strongly agreed that there was a need for additional compulsory or optional modules within mainstream training provision. Preferences leaned more towards optional modules than compulsory ones.

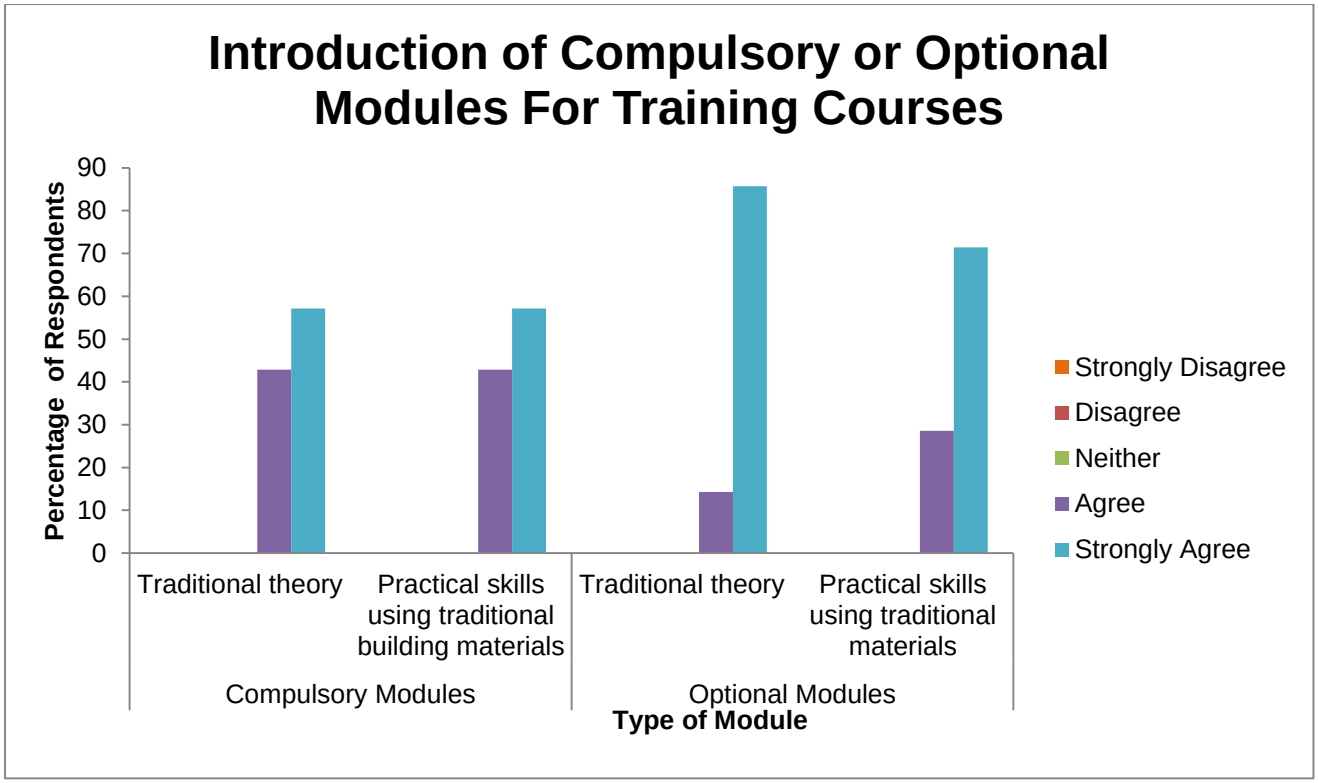

Figure 12: Introduction of Compulsory or Optional Modules for Training Courses

62. Most of those interviewed felt that it would not be difficult to upskill people with a mainstream trade to give them the skills needed for heritage work. Alternatively a bit more focus on heritage building skills within mainstream training would help. Again, an understanding of how pre-1919 buildings work and the correct approach is said to be more important than having the actual skills according to some interviewees.

63. Other comments made by these organisations were that there is a need for people to get into schools, colleges and universities to promote the heritage sector and provide inspiration.

Building Contractors

Survey Sample Overview

64. A total of 119 building contractors were identified. Five contractors were interviewed and 24 responded to the online survey or via a postal survey.

Demand

65. Of the five contractors interviewed, four agreed that there is demand for or an increase in heritage work. This is seen in different sectors e.g. historic buildings, churches, and for the conversion of stone houses / barns. There is also demand for conversion of old buildings into modern facilities with retention of the exterior facade only. Restoration is driven more so by the public sector and charities than by the private sector. Only one contractor felt that there was a downturn in demand due to a lack of money.

Funding

66. Those interviewed during Phase One of the research were asked about funding. One contractor felt there had been an increase in funding, two disagreed and two had no opinion. Sources of funding include Listed Places of Worship and HLF. Grants are available for training from the Institute of Conservator–Restorers in Ireland (ICRI) – used by one of the contractors. The industry is aware of the reduction in HED grants and the impact this has on clients.

Building Contractors Working on Pre-1919 Buildings

67. Eighty-three percent of those who responded to the online survey had between one and five employees, four percent had between six and ten employees and only 13% had more than 50 employees. This is a fairly representative sample of the overall makeup of the industry in Northern Ireland. Of the contractors interviewed, three employed less than 15, and the other two employed over 50 people.

68. Fifty four percent of respondents to the online survey classified themselves as conservation / heritage specialists, with the remaining 46% classifying themselves as a general building / craft firm which works on some old buildings. Of those interviewed, three would be classified as specialists, the others as general building firms.

69. The contractors who responded to the online survey are not commonly listed on heritage registers, although those that are, are registered either on the Ulster Architectural Heritage's (UAH) Directory of Traditional Building Skills or on the Irish Georgian Society (IGS) Building Skills Register as shown in the table below:

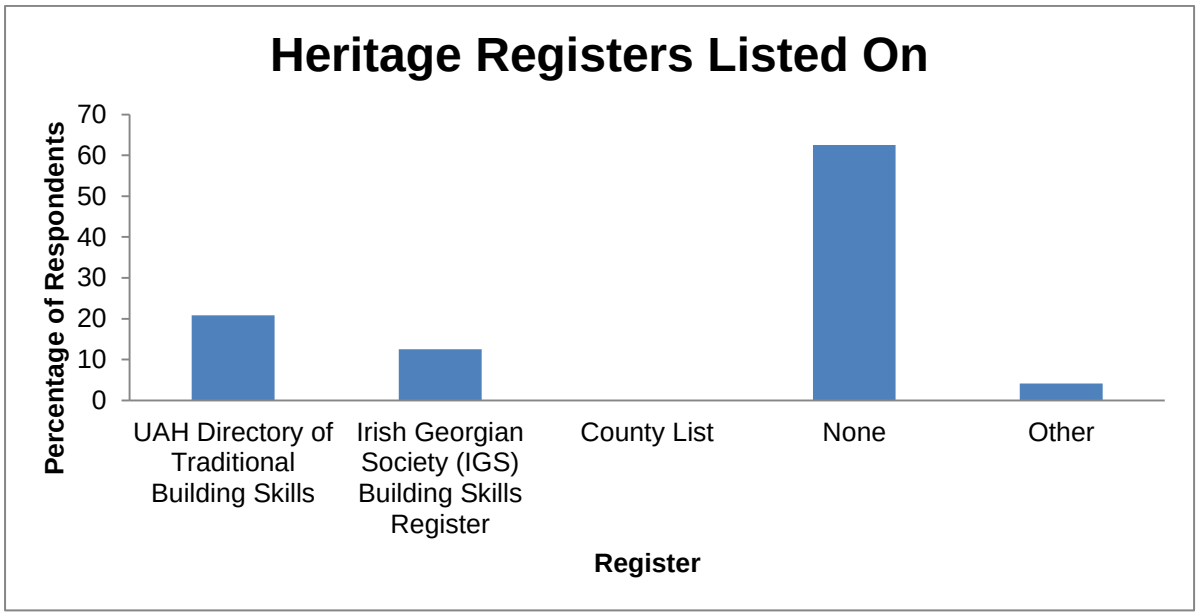

Figure 13: Heritage Registers Listed On

70. In addition to building registers, one contractor is listed on the Institute of Conservation (ICON) (accreditation for conservators) register.

71. The main activities of the contractors who responded to the online survey are shown in the chart below. A high percentage of respondents are involved in thatching in relation to other types of activity and many of these respondents replied via the postal method

which may have resulted in this higher than expected proportion. It should be noted that some of the thatchers are based in the Republic of Ireland but work in Northern Ireland whereas the majority of other contractors surveyed were based in NI.

72. Twenty five percent of respondents' main activity is thatching, 20% are involved in general building work, 15% in joinery and carpentry, 15% in lead / metalwork and 10% in stonemasonry. Many employers are involved in a range of additional activities (not shown) in addition to their main activity.

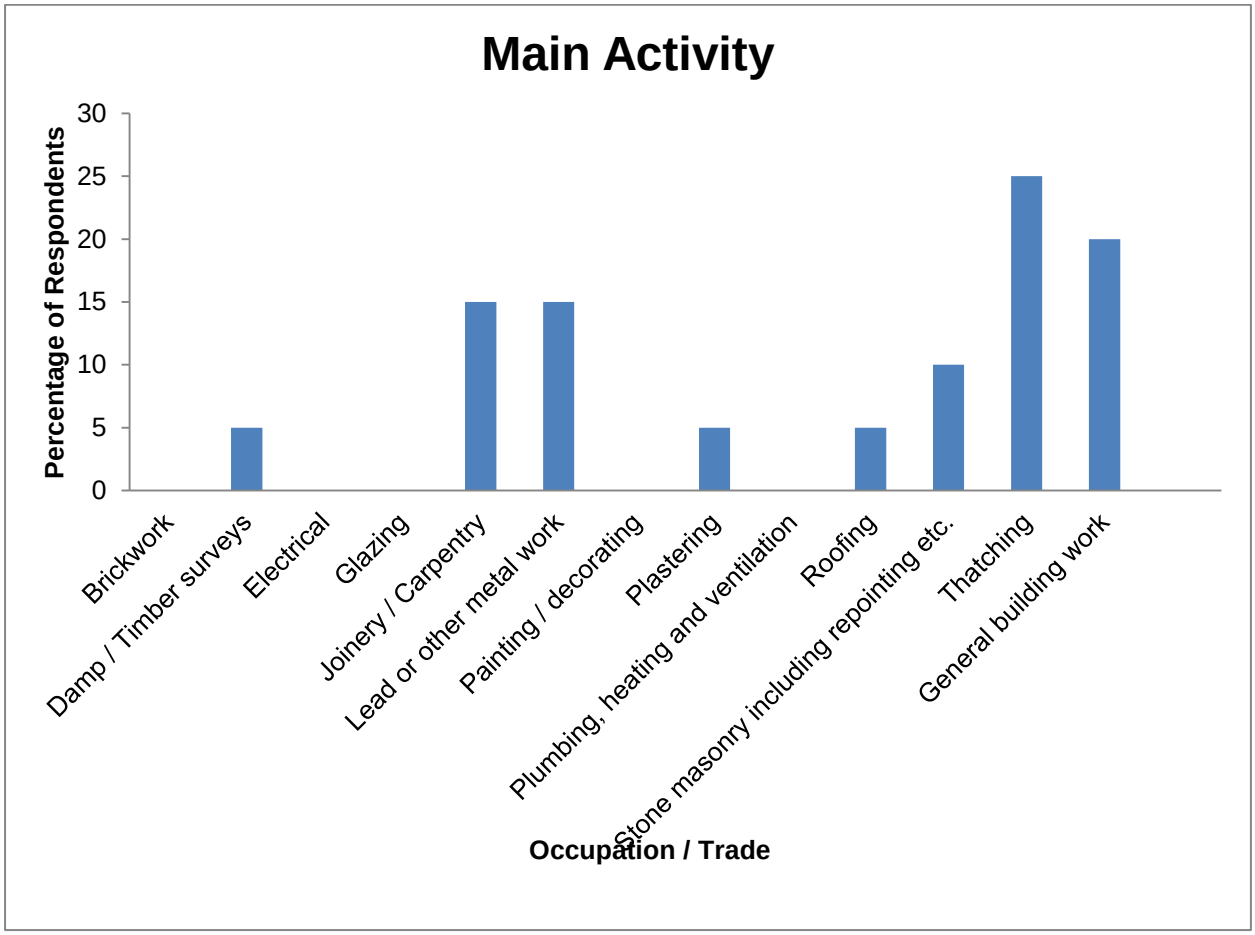

Figure 14: Main Activity

73. The age profile of the respondent's workforce is shown below. Twenty five percent of the workforce is over 55, 56% are between 30 and 55 and 19% are under 30.

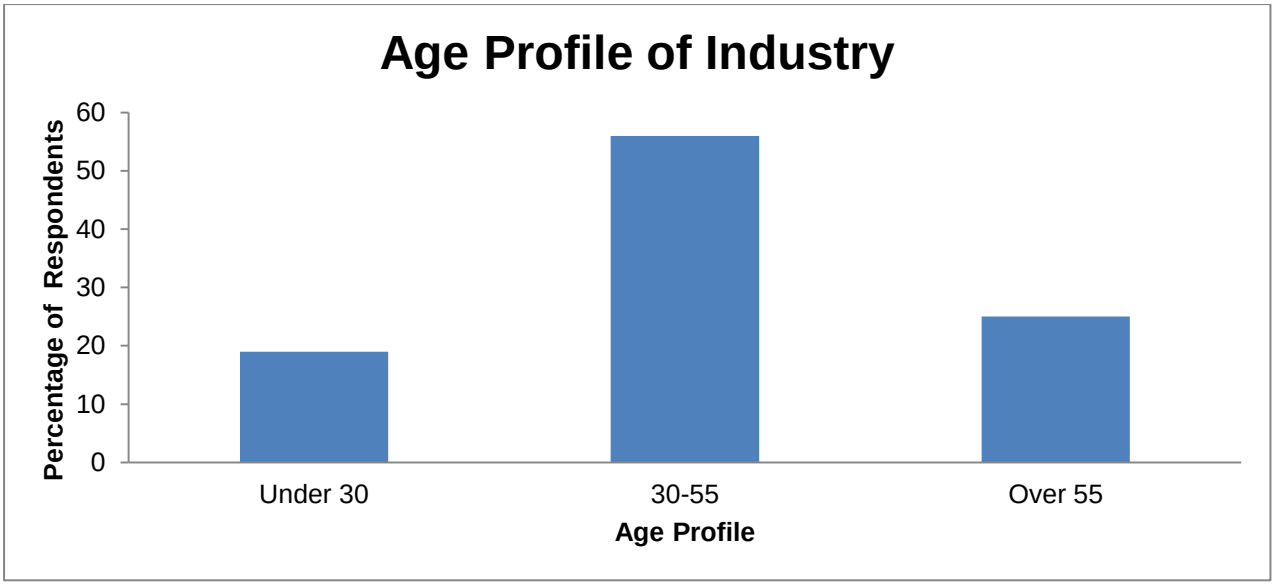

Figure 15: Age Profile of Industry

74. There was some concern among those interviewed in Phase One about an ageing workforce and lack of new entrants. Figures from the Workforce Mobility Survey (WFM) 2015[5] provide the following further breakdown of the age profile of the industry (274 interviews in NI):

Table 4: Age Profile of Industry (Workforce Mobility Survey)

Age	WFM 2015	WFM 2012
16-19	4%	4%
20-24	10%	13%
25-34	27%	33%
35-44	23%	21%
45-54	23%	18%
55-59	7%	8%
60+	4%	

75. These figures show that the number of people in the industry aged 34 and under has decreased from 50% to 41% and the number of people aged 45 and over has increased from 26% to 34%. This does seem to suggest that the number of new entrants is decreasing and the number of older workers in the industry is increasing, which supports the views of those interviewed / surveyed in this report.

Work Carried Out on Pre-1919 Buildings

76. When asked what types of buildings contractors feel comfortable working on, 100% of those who responded to this question (19 respondents) said they were comfortable working on Grade A listed buildings, whether they described themselves as conservation / heritage specialists or not.

77. Seventy percent of contractors work both in Northern Ireland and outside it. Those who describe themselves as conservation / heritage specialists are more likely to do so (82%) whereas there is a 50/50 split in general builders who work solely in NI versus both in NI

[5] Workforce Mobility and Skills in the UK Construction Sector 2015 Northern Ireland - June 2015, Study prepared by BMG Research from a commission by CITB

and outside NI. One reason for conservation / heritage specialists working outside NI may be that there is not enough work in NI. This also impacts on how easy or difficult it is for stockholders to get specialists to work on their projects.

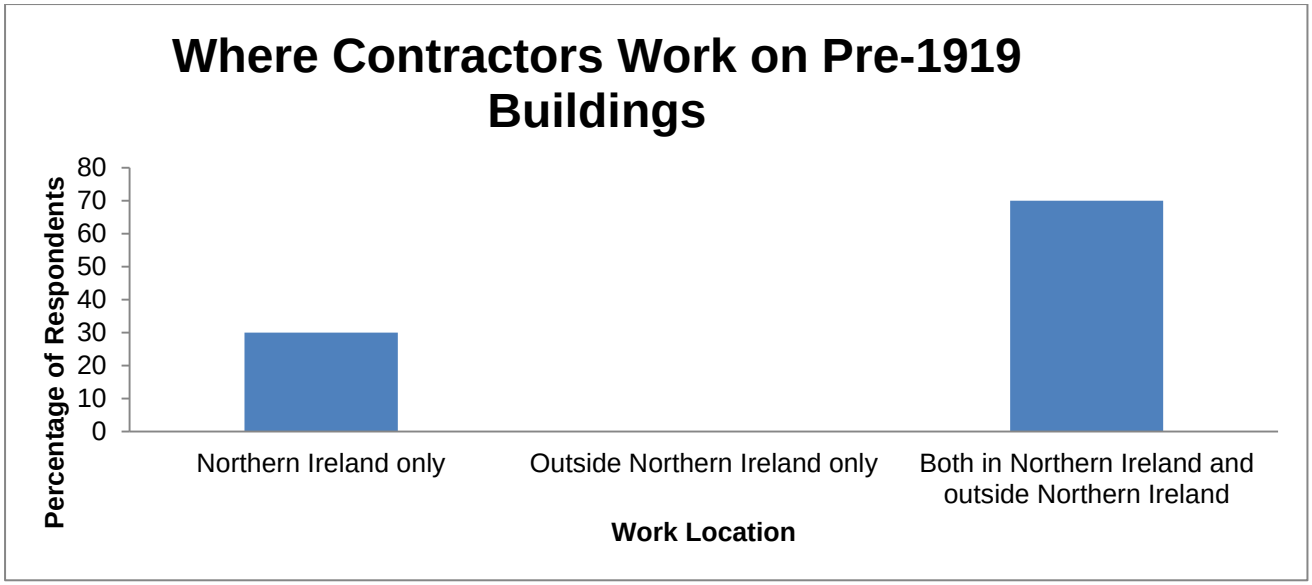

Figure 16: Where Contractors Work on Pre-1919 Buildings

78. The chart below shows how much of each contractors workload over the last 12 months has been on pre-1919 buildings. Surprisingly, of those who describe themselves as conservation / heritage specialists, 18% have had less than 25% of their workload on pre-1919 buildings although 73% have had more than 75% of their work on pre-1919 buildings. None of the general builders had more than 75% of their work on pre-1919 buildings.

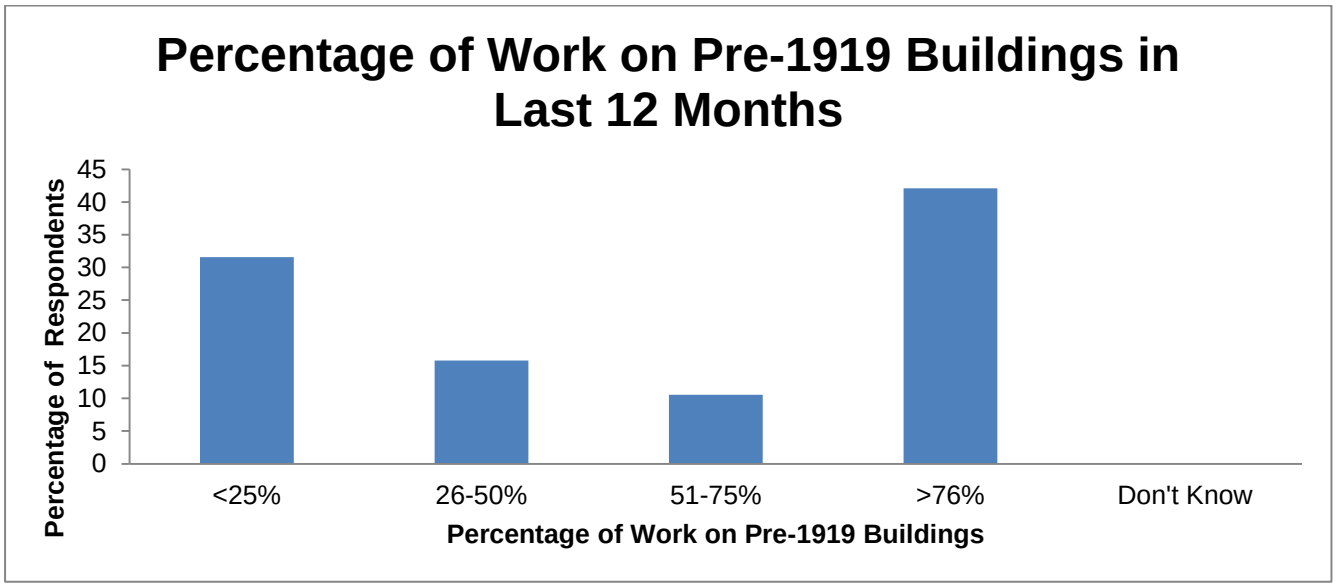

Figure 17: Percentage of Work on Pre-1919 Buildings in Last 12 Months

79. When asked what percentage of their work was on repair and maintenance versus conservation and restoration, one third of respondents had a 50/50 split of work. In contrast to the findings about expenditure by stockholders who spend more money on

R&M, the contractors who responded to the online survey are more likely to work on conservation and restoration, with 20% reporting that all their work was on C&R.

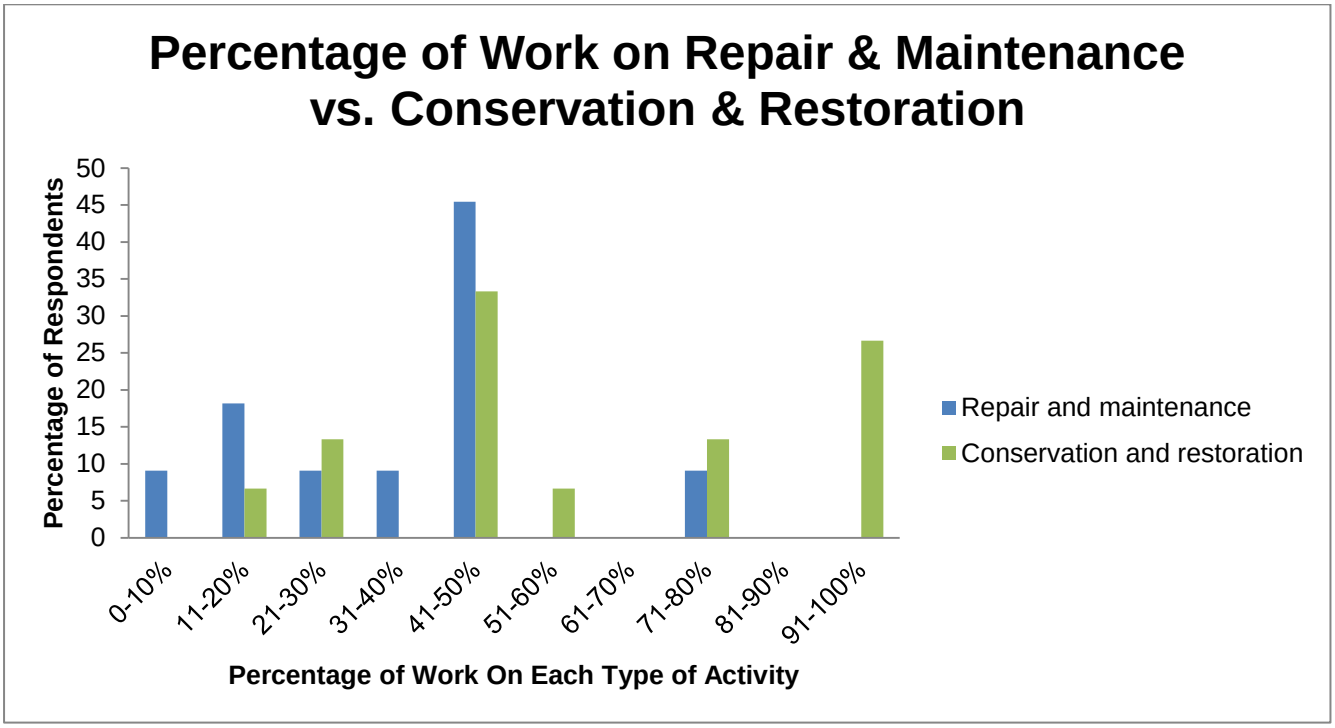

Figure 18: Percentage of Work on Repair & Maintenance vs. Conservation & Restoration

80. The building contractors who responded to the online survey provided a list of the types of work that they are involved in with regards to work on pre-1919 buildings. Stonemasonry (including repointing) and general building work were the most common (14% each), followed by joinery / carpentry (10%), brickwork (8%), and lead or other metalwork (8%). Respondents in the category of 'other' included blacksmiths and timber and damp surveyors.

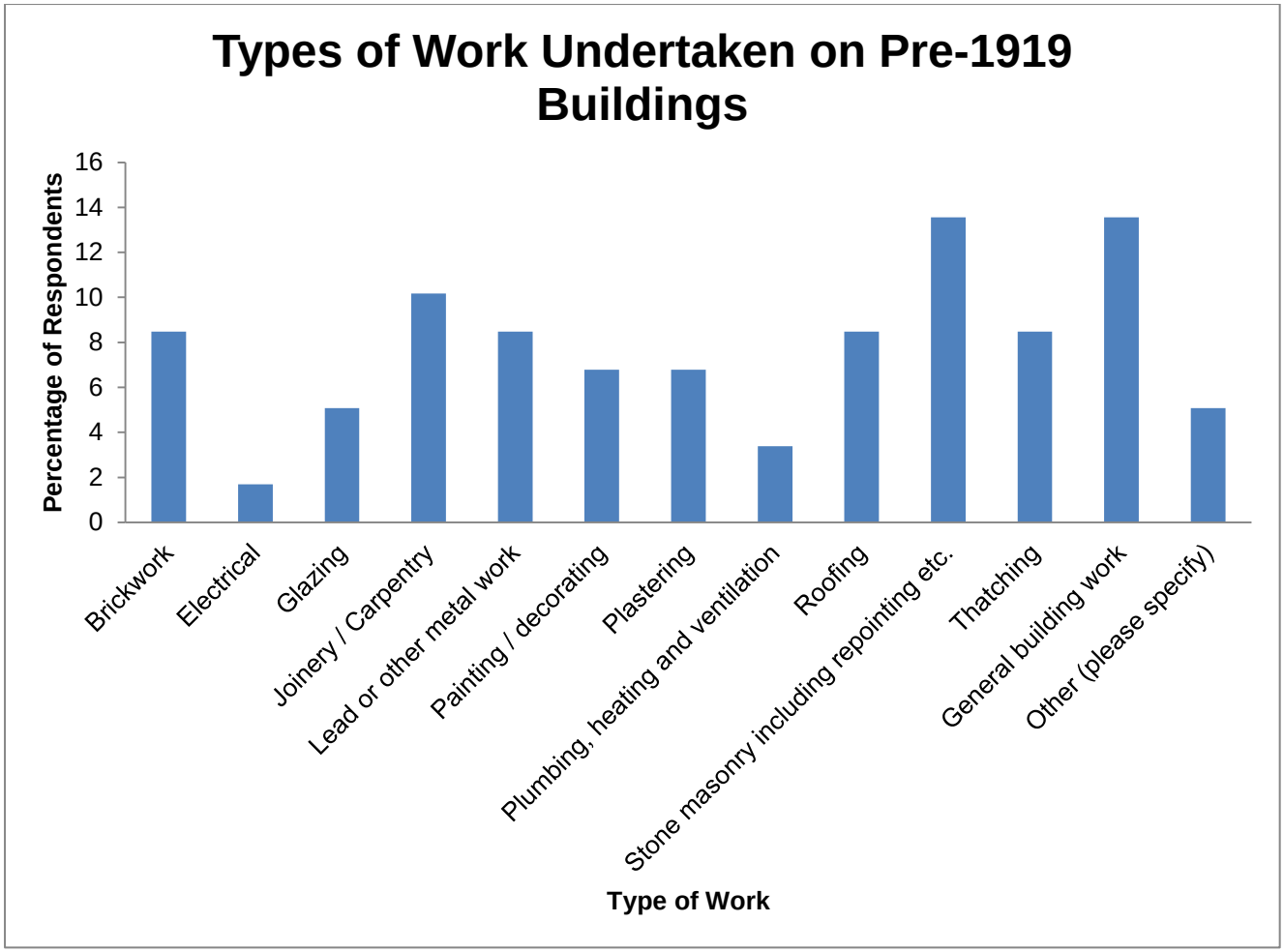

Figure 19: Types of Work Undertaken on Pre-1919 Buildings (Multiple Answers Possible)

Skills Issues

81. Building contractors were asked which trades relevant to pre-1919 buildings they employed skilled people in and which they subcontracted in. The findings are presented in the chart below. Mainstream trades such as bricklayer, carpenter, general crafts / tradesperson, and joiner are more likely to be employed in-house. More specialist trades such as gilder and glass painter are likely to be subcontracted. However these generalisations do not always hold true as more building contractors employ blacksmiths than subcontract them and more building contractors subcontract painters and decorators than employ them.

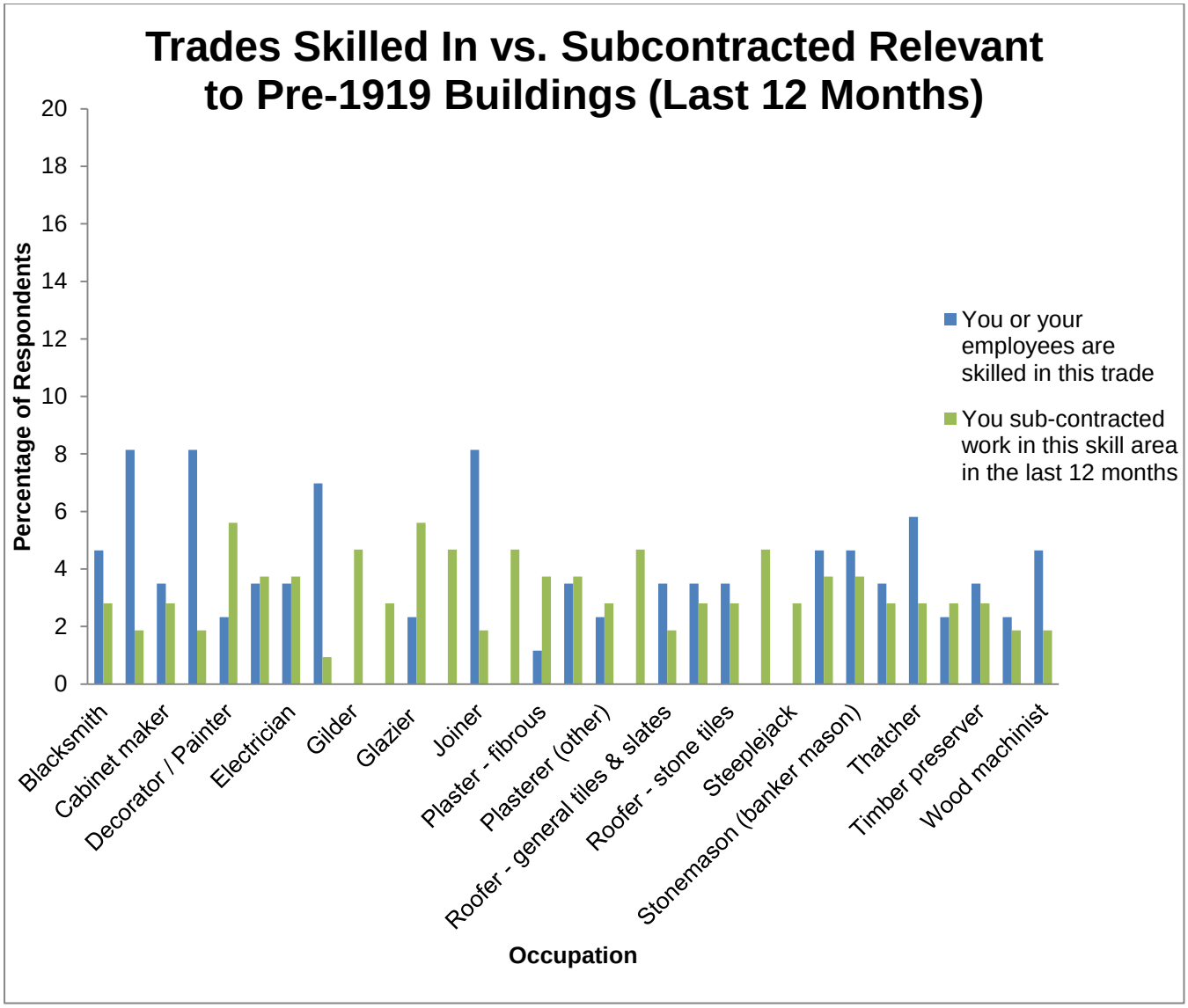

Figure 20: Trades Skilled In vs. Subcontracted Relevant to Pre-1919 Buildings (Last 12 Months)

82. Respondents were asked about difficulties in finding subcontractors and their responses are shown in the chart below. The main areas where subcontractors are hard to find are carpentry, drystone walling, stonemasonry and stone carving. In contrast to stockholders, none of the building contractors indicated that they had problems finding thatchers. However, as with all the statistics in this section, base numbers are low so caution should be exercised when using these findings.

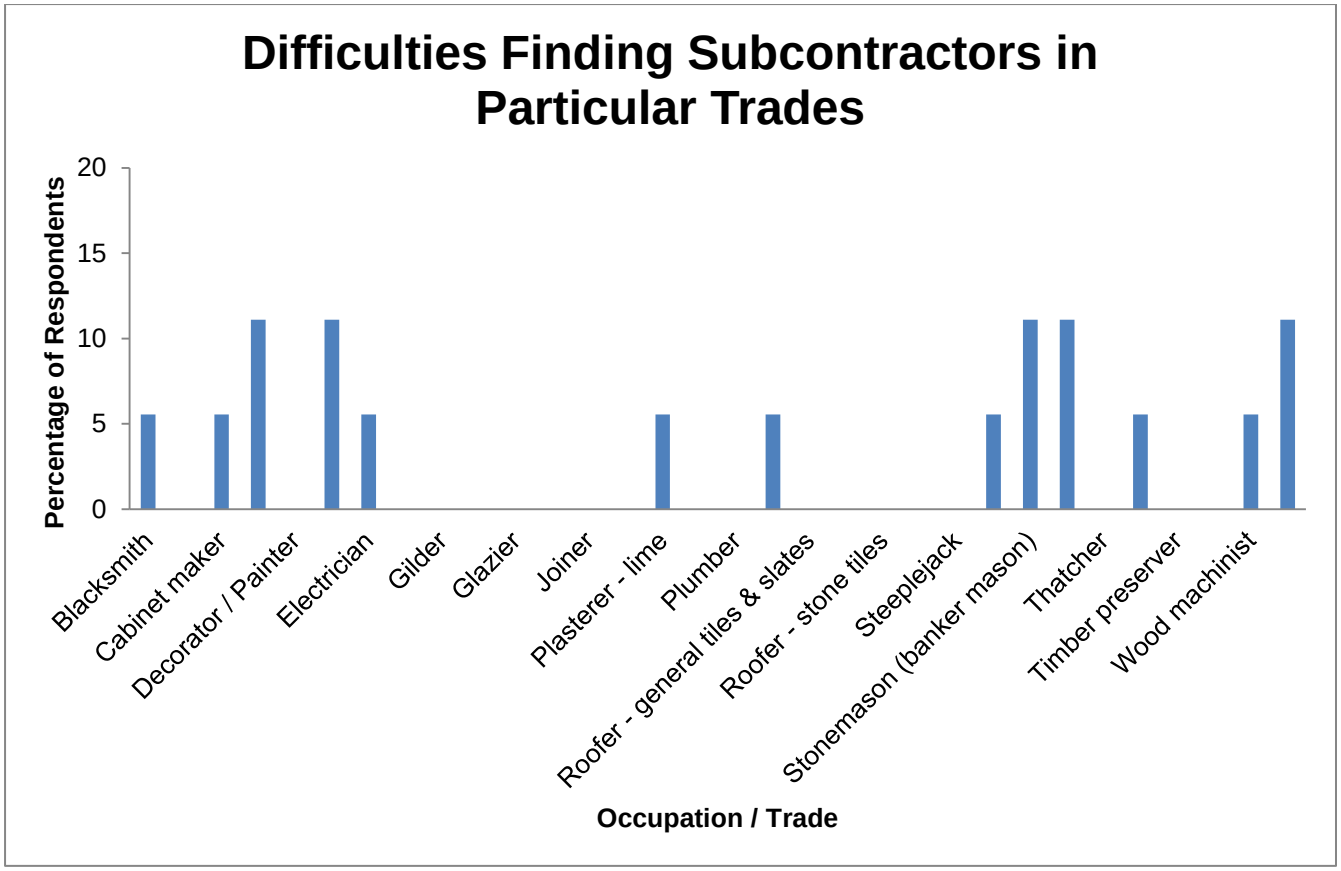

Figure 21: Difficulties Finding Subcontractors in Particular Trades

83. Evidence from those interviewed in Phase One suggests that roofing specialists are hard to get. There are also shortages of stone carvers (only four in Ireland according to one interviewee). Stonemasons are limited due to the limited work. Joiners who can install / work with sash windows and lime plasterers are hard to get. According to survey respondents there are only two thatchers based in Northern Ireland. Most skilled workers / contractors do mainly mainstream work with only a little bit of heritage – there is not enough continuity of work to concentrate purely on heritage.

84. Those interviewed indicated that this shortage of skills often results in poaching or wage inflation. Alternatively contractors wait until the skilled tradesmen are free but this has impacts on commercial projects. All of the contractors take on subcontractors to do specialist work or to supplement the skills of their existing workforce. Mainly this is because they do not have enough consistent work to employ people on a permanent basis. Subcontractors are generally well-known and their CVs, portfolios and abilities have been reviewed and tested.

85. Those surveyed using the online questionnaire were asked how long they have to wait for various trades to be available for work. A range of trades have a three month or longer waiting list, including blacksmiths, decorator / painters, glass painters, roofers (metalwork), steeplejacks, stone fixers, stonemasons, stone carvers, wood carvers and wood machinists. Stone carvers, stone masons and blacksmiths are the most frequently cited, by 21%, 14% and 14% respectively of building contractors, as having limited availability.

Figure 22: How Long Had to Wait for Trades Subcontracted for Pre-1919 Work

86. Thirty five percent of building contractors surveyed via the online questionnaire have recruited in the last 12 months (both experienced workers and apprentices / trainees). The breakdown is shown in the chart below, with a total of 56% of contractors who had recruited hiring experienced workers. Fifty percent of the companies who had hired, had hired both experienced workers and trainees or apprentices.

Figure 23: Number of Staff Recruited (Experienced vs. Trainee)

87. All except one of the interviewed contractors have some specialist skills in-house, the other contractor does not directly employ people except at supervisory / management level. One contractor indicated that it was better to directly employ people where possible because it gives them a competitive advantage as it is cheaper than subcontracting. Another contractor takes on trainees from Italy and England to help meet demand. Another has a trainee but is training that person themselves and they are not on a formal apprenticeship.

88. Building contractors were also asked what type of staff they generally preferred to recruit and surprisingly more (47%) indicated that they preferred to recruit people with no experience and in definite need of training, than people with the relevant skills and experience and not in need of training (20%). The remaining third will recruit people with skills and experience who need some training.

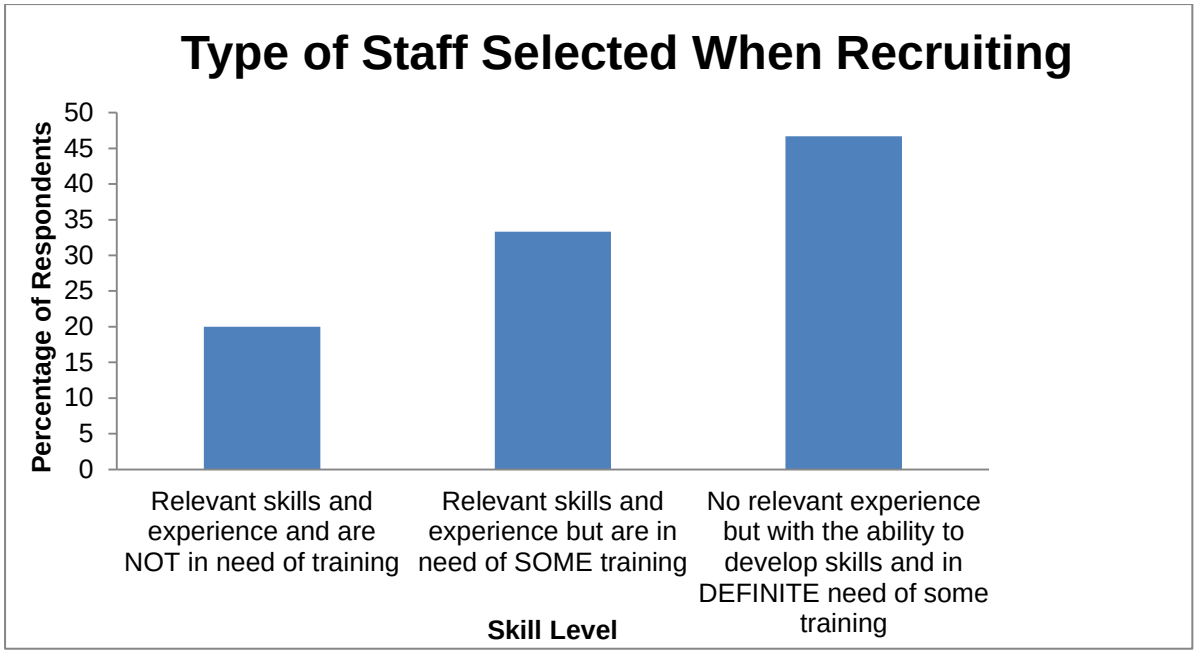

Figure 24: Type of Staff Selected When Recruiting

89. When asked about how difficult it is to recruit tradespeople (experienced) in the traditional building skills they need, the contractors surveyed online had very mixed views, however overall more found it either easy or very easy (64%) than difficult or very difficult (21%).

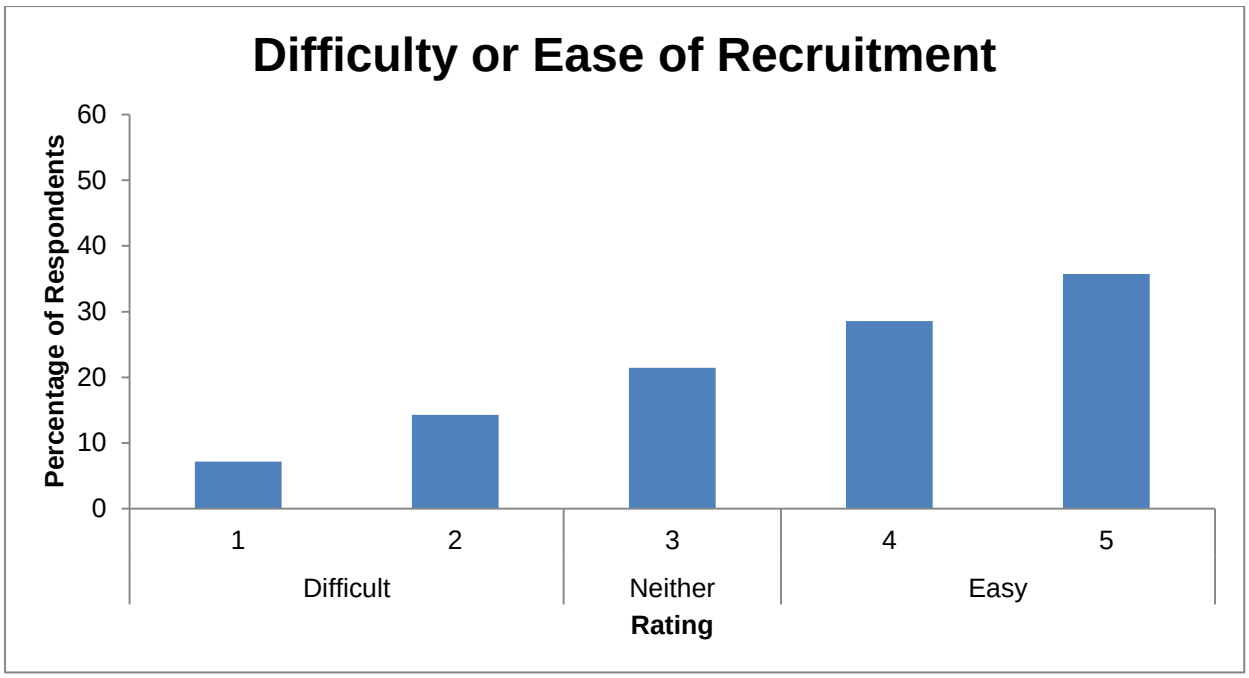

Figure 25: Difficulty or Ease of Recruitment

90. When asked which trades are difficult to recruit, stonemasons were cited most often as being hard to reach (11%), followed by bricklayers, carpenters, stone carvers, and thatchers (all cited by 8% of respondents). Note the low base sizes meaning these results should be treated with caution.

Figure 26: Difficult to Recruit Trades

91. The building contractors who responded to the online survey feel that the main reason for recruitment difficulties is a lack of skills amongst those who apply (59% of respondents) compared to a lack of applicants (18% of respondents). The remainder of employers gave a range of reasons including:
    - 91.1. No formal training / certification for thatchers
    - 91.2. Young people don't want to work
    - 91.3. General skills shortage
    - 91.4. Lack of work
    - 91.5. General lack of available applicants due to not enough young people choosing building trades as a career.

92. Online survey respondents were asked if they had any outstanding vacancies which were taking more than three months to fill. Almost a third of employers (28%) indicated that they did have long-term vacancies. Blacksmithing and bricklaying were mentioned most often by 18% of employers respectively. For each of the other trades shown in the chart below, nine percent of employers mentioned each of them. In terms of 'other', foundry workers were mentioned.

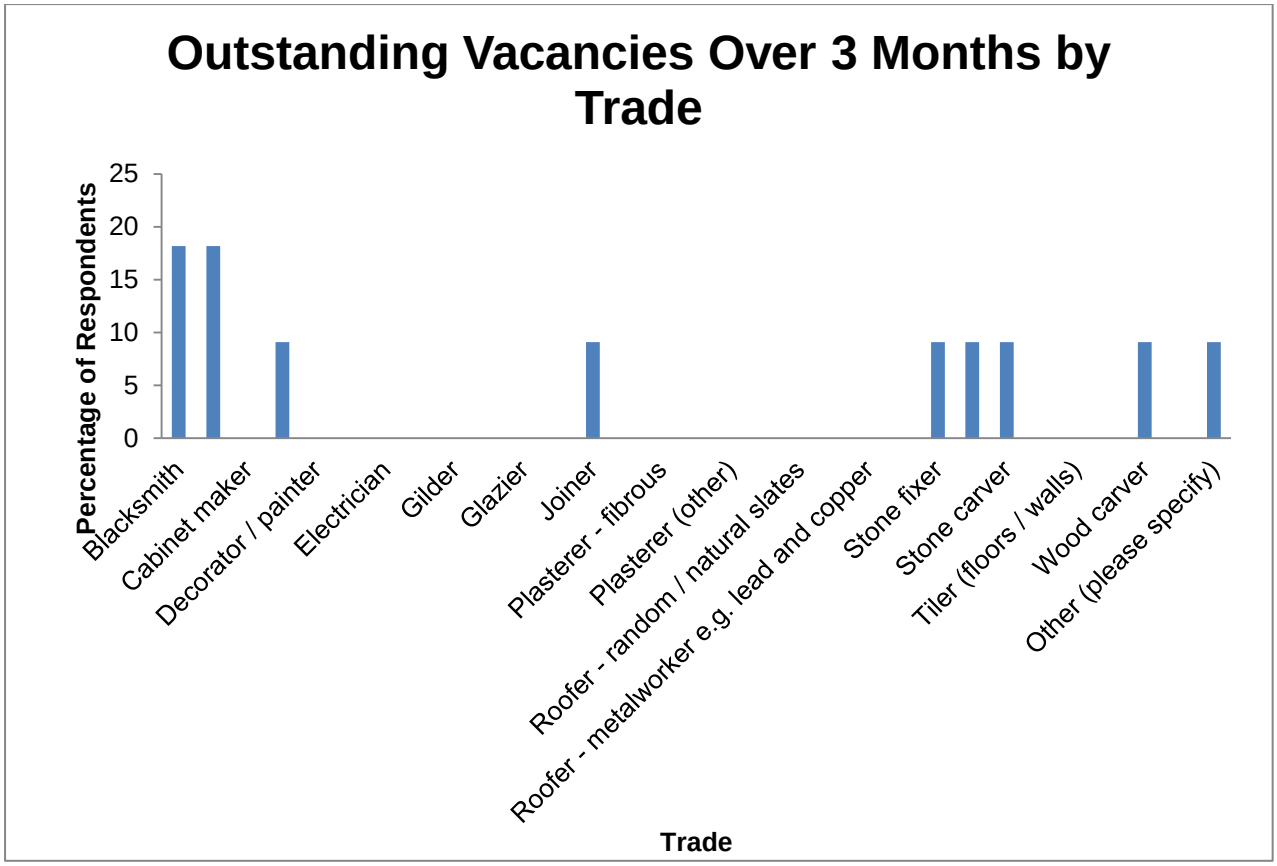

Figure 27: Outstanding Vacancies Over 3 Months by Trade

93. Respondents were asked to rate the skills levels of their own staff and the results are shown in the chart below. Please note that this chart shows the number of respondents rather than the percentage which is shown in most other charts. Joiners, followed by blacksmiths and bricklayers are considered the most highly skilled trades within the organisations of those who responded to the online survey. Almost every other trade had workers with little or no skills and this corroborates the findings that respondents tend to hire people with less skills and train them up.

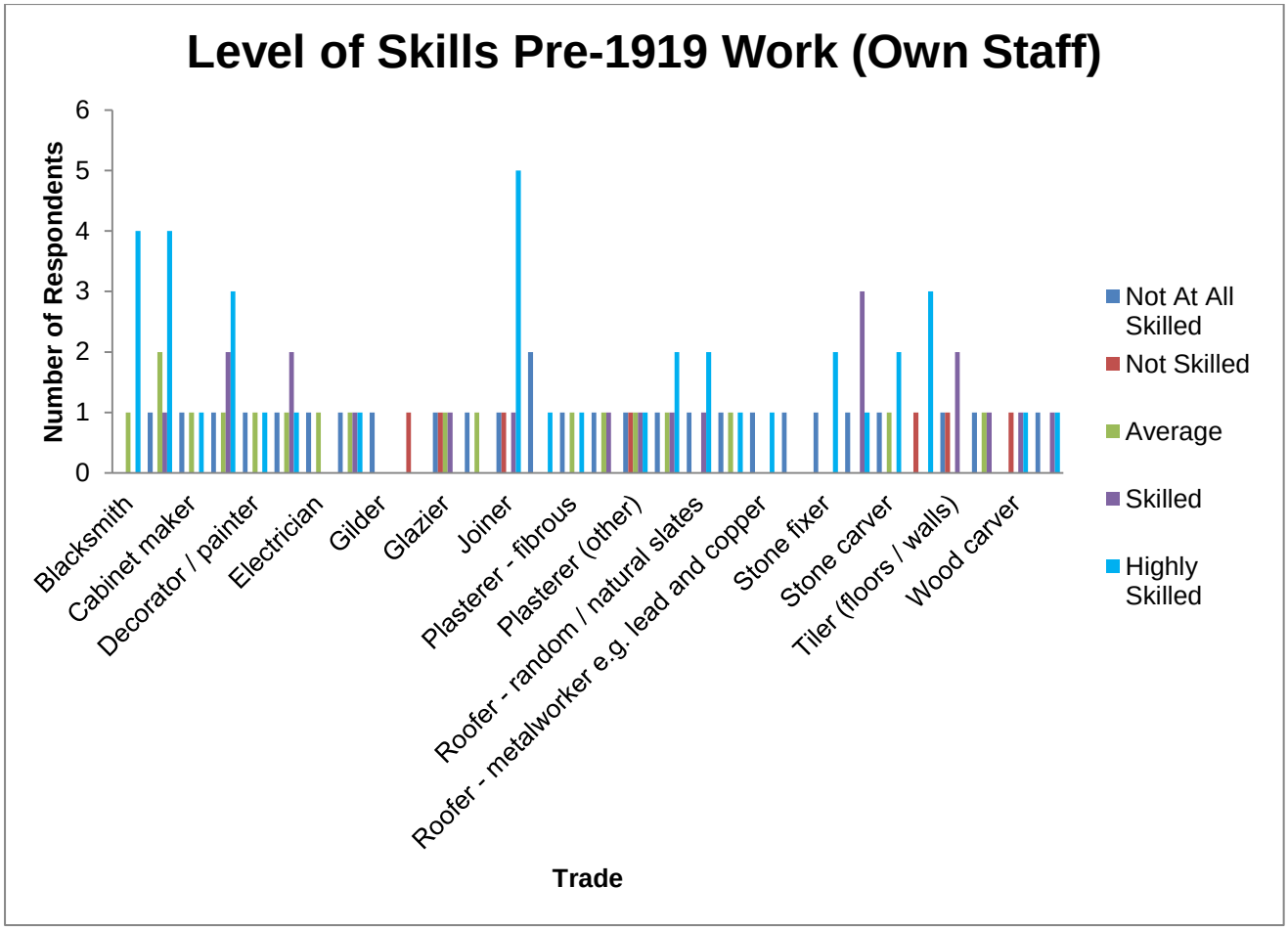

Figure 28: Level of Skills Pre-1919 Work (Own Staff)

94. Following on from the previous question, building contractors were asked what action they had taken to address any lack of skills identified in their workforce. The majority of survey respondents (30%) have trained their tradespeople on the job, and 17% indicated that they had asked other tradespeople for advice. A number of people selected 'other' but did not give specific reasons for the most part.

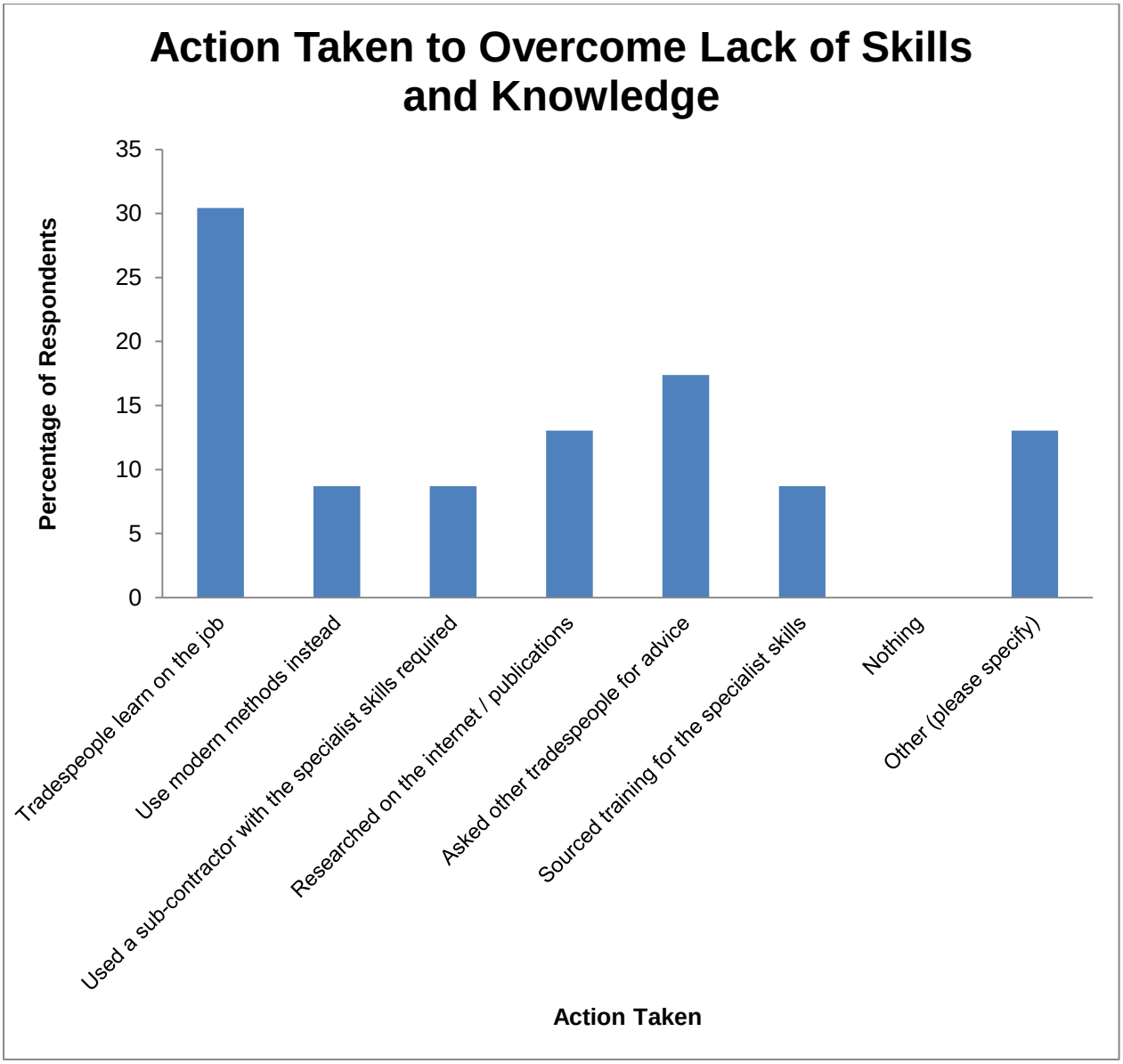

Figure 29: Action Taken to Overcome Lack of Skills and Knowledge

95. Only 17% of the building contractors who responded online have been forced to turn down work on pre-1919 buildings due to a lack of skills and knowledge amongst their workforce, meaning that 83% have not had this issue. Given the numbers saying that their workforce is poorly skilled, this suggests that instead of turning down work, they either do it using a poorly skilled workforce, resulting in poor quality work, or they subcontract the skills they need in.

Training

96. The majority of respondents (94%) do not have any employees involved in formal training with only 6% indicating that they do (in this instance, in joinery and bricklaying). One online survey respondent commented: '*NVQ or City and Guilds does not mean a person can do the work. The best way to learn is hands on'*.

97. When asked about various methods for formal training which might be used by respondents, only two building contractors responded, each mentioned one of the

following: training delivered by an FE college, and training delivered by any other private training provider.

98. The building contractors surveyed through the online questionnaire were asked to rate how important a number of different factors were in terms of importance. On-the-job / in-house training was rated most important, with 76% of respondents rating it either important or very important, compared to 65% saying work experience on old buildings and only 20% saying formal college training. A large number of respondents (40%) were indifferent about formal college training and a further 40% rated it as not at all or not important. The high number indicating that on-the-job / in-house training is important is surprising given the poor skills levels of the workforce – unless they have at least one adequately skilled employee it could prove difficult to train those with fewer skills.

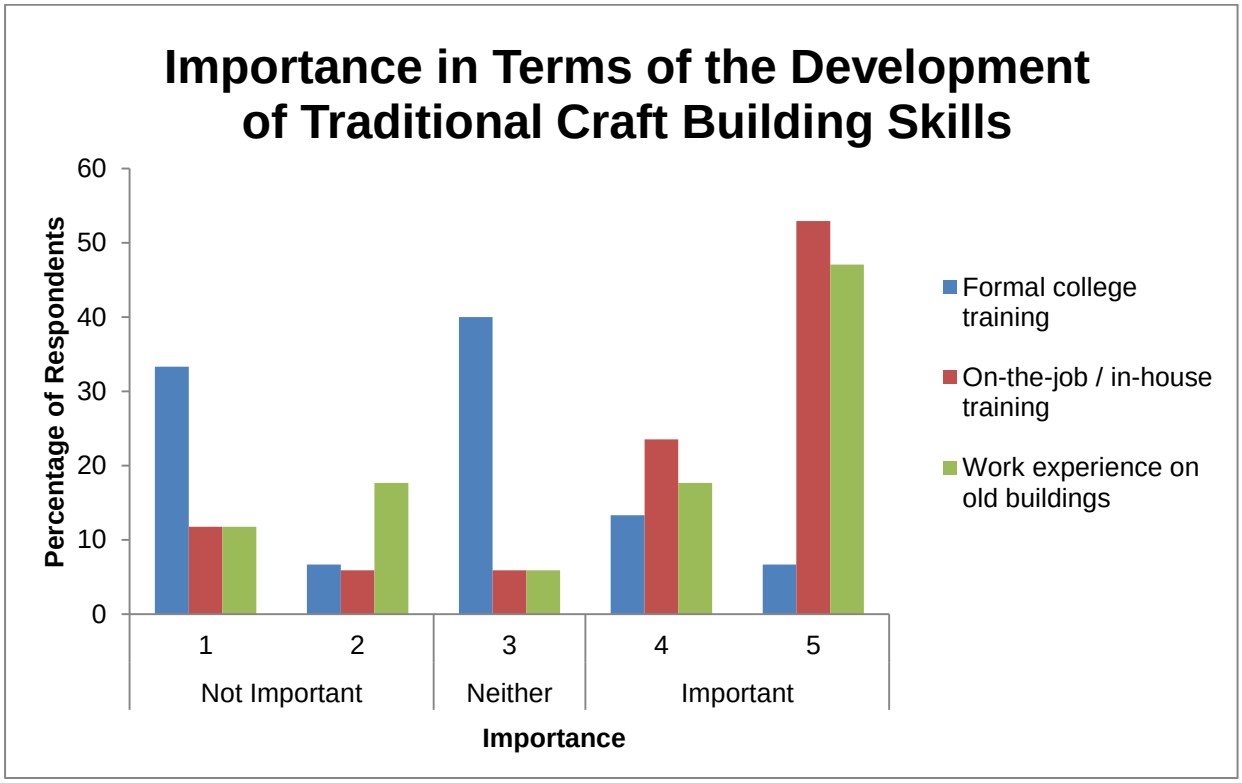

Figure 30: Importance in Terms of the Development of Traditional Craft Building Skills

99. Two of the contractors interviewed during Phase One of the research stated that generic skills are well taught in the apprenticeship schemes. But heritage skills are not provided, probably because the apprenticeships are designed to meet the needs of the majority of the industry and heritage does not account for a large proportion of this. Heritage skills are more often than not handed down generation to generation or in some cases through in-house training or working with specialists, rather than through formal apprenticeships or internships.

100. Respondents to the online survey were asked how college based training could be improved and there were a number of different responses. Twenty three percent of respondents said balance practical with theoretical elements and a further 23% said include optional or compulsory heritage training model in mainstream courses. Twelve percent said no improvements were necessary. Some respondents made additional comments including: '*The only way you learn is hands on. All roofs in thatching are*

different. No two are the same' and '*I think we need the old apprenticeship system back in conjunction with day release to a college*'.

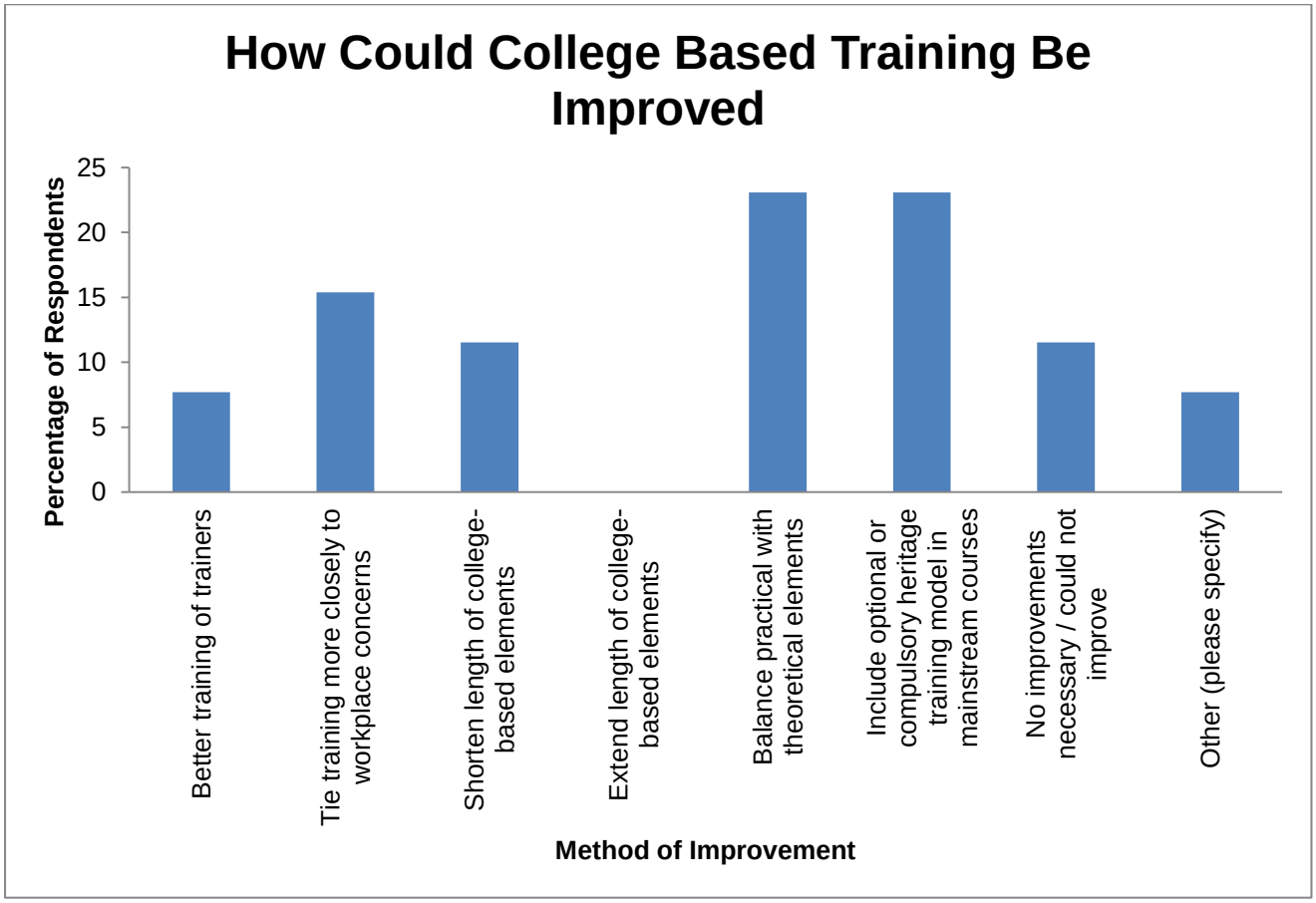

Figure 31: How Could College Based Training Be Improved

101. According to those interviewed, training provision in NI is not particularly good. Lecturers have been out of the industry for too long and many don't have the heritage skills to start with. If they do, they are out-of-date[6]. One contractor tried to train some lecturers but the short window for training was not sufficient to share the skills / train them to an appropriate level. Lecturers could be sent on work placements to help with this.

102. One interviewee thought the NVQ Level 3 needs to be more practical and most contractors thought that whilst formal qualifications are important, actually having the appropriate practical skills and experience is much more valuable. Card schemes were mentioned as important as well. Most contractors did not know if there were specific heritage qualifications and most were not aware of the Construction Skills Register (CSR) card heritage endorsement available in NI.

103. Only one of the interviewed contractors (though more of a conservator) thought that training from scratch rather than converting someone with mainstream trade skills was better, whilst the majority of contractors felt that converting skilled or semi-skilled tradespeople / apprentices into specialists was a more appropriate route. Some contractors indicated that for certain trades the skills were not much different and it might only be a knowledge of how traditional materials worked and where they should be used

[6] Rather than meaning skills are out-of-date, they may mean that lecturers have been out of the industry too long so skills have been forgotten.

that is needed. Contractors were generally in agreement that main trades education should include a heritage element, whether optional or compulsory.

104. One theme coming through the interviews was that careers advice is badly needed in all sectors to generate interest although the increase in media and promotion of the heritage sector is helping. Contractors need to have a presence in schools or on apprenticeship programmes to encourage and inspire young people.

105. The majority of contractors interviewed stated that young people were not coming into the industry and also indicated that their employees and subcontractors with heritage skills were nearing retirement age, again conflicting with the information gleaned from those contractors who completed the survey and provided a breakdown of age across the industry. This lack of interest from young people results in skills shortages which ultimately drives up prices. According to those interviewed there are no training courses in stonemasonry and there are only limited options for training in lime. Courses in stonemasonry are available in at least one NI FE college, so this shows a lack of awareness amongst building contractors of what is actually available to them.

106. Nineteen percent of respondents to the online survey would like to provide their staff with further training in skills to work on pre-1919 buildings, but feel they cannot. Training required includes thatching and surveying of pre-1919 buildings (one respondent each). Reasons given for not being able to offer the training are outlined in the chart below. The main reasons are courses not being available in either the subject area or within Northern Ireland. In terms of 'other' this related to a lack of work. Note that the base sizes for this question are very low, therefore results may be unreliable.

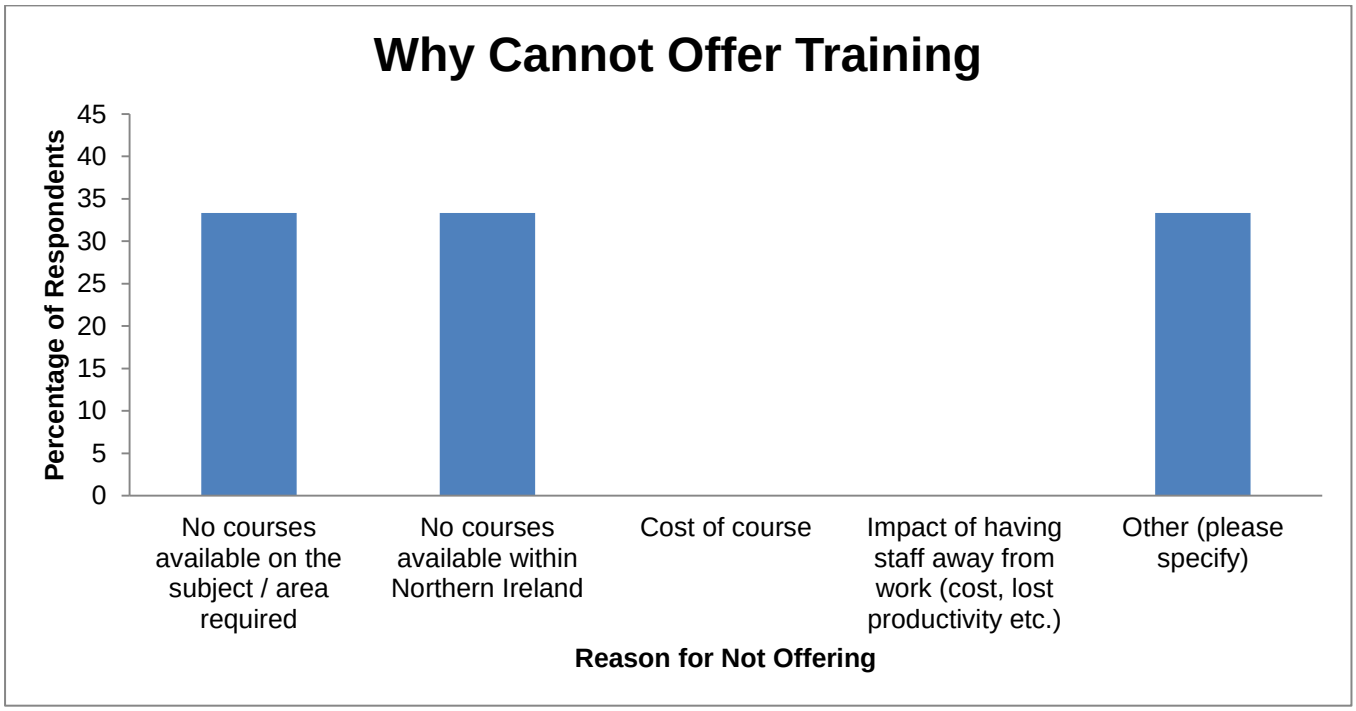

Figure 32: Why Cannot Offer Training

107. Those interviewed also indicated that there is no Continuing Professional Development in NI, contractors go to GB or ROI to improve their skills. According to interviewees, there are no training courses in stonemasonry and there are only limited options for training in lime. Training in lime plastering and similar is available in Scotland and Ireland. Occasionally a manufacturer will supply training as well. One contractor (conservator) indicated that there are better courses in GB e.g. conservation degrees and conversion courses. Most training, if undertaken at all, is either in-house (from existing staff), or else skills are picked up by working with specialist subcontractors. Occasionally an architect or building surveyor will provide a talk but this is usually project specific.

108. Online survey respondents were also asked what informal methods of training they use for their employees and the responses are shown on the chart below. Working alongside and learning from a more experienced colleague (job-shadowing or mentoring) was the most popular choice, cited by 22% of respondents. Again, given that many building contractors indicated a low level of skills in their workforce this seems surprising. This was followed by any self-learning where staff study using books, manuals, CD-ROMs, podcasts, webinars, e-learning or other materials (16%), and short courses run by private training providers (13%). FE colleges and manufacturers / suppliers were the least popular options (3% each).

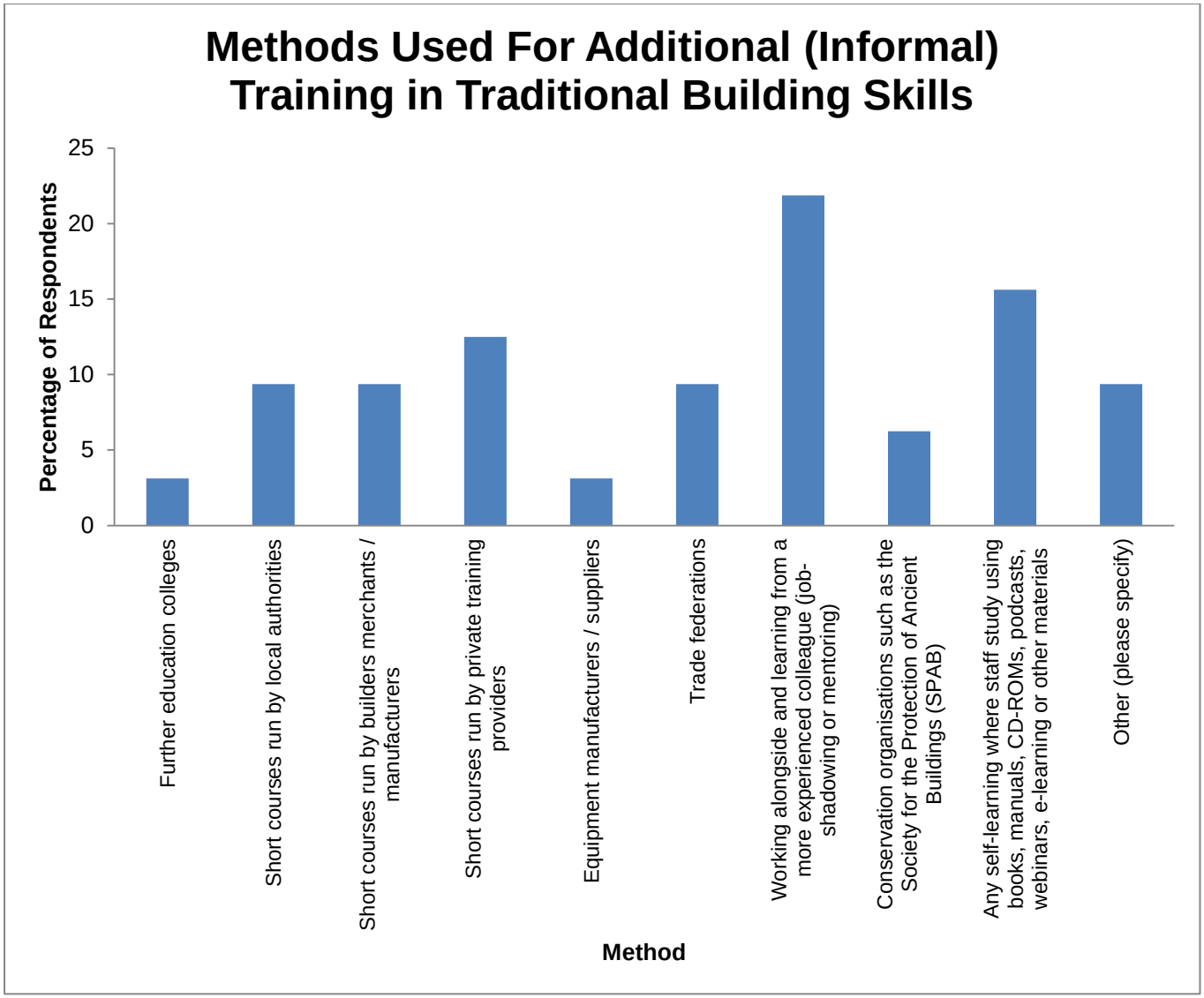

Figure 33: Methods Used for Additional (Informal) Training in Traditional Building Skills

109. Only 33% of respondents to the online survey can get all the courses they need in Northern Ireland, 50% have to go elsewhere for some courses and 17% have to go elsewhere for all courses. This may indicate a lack of demand in Northern Ireland which would be supported by the low number of respondents indicating that they require training in a particular area (paragraph 106).

110. However, only 50% of these respondents indicated that they or their employees were interested or very interested in developing their craft skills further, 21% were indifferent and 29% were not at all interested.

Traditional Building Materials

111. When asked about skills specific to traditional building materials, the building contractors who responded to the online survey rated their employees knowledge of, and ability to use traditional building materials as shown in the chart below. The majority of contractors feel that their employees have good or very good knowledge of (64%), and ability to (73%), use traditional building materials. Only 9% of respondents rated their employees as having poor skills in terms of their knowledge of traditional building

materials, with just under a third thinking their employees had an average knowledge of and ability to use these materials.

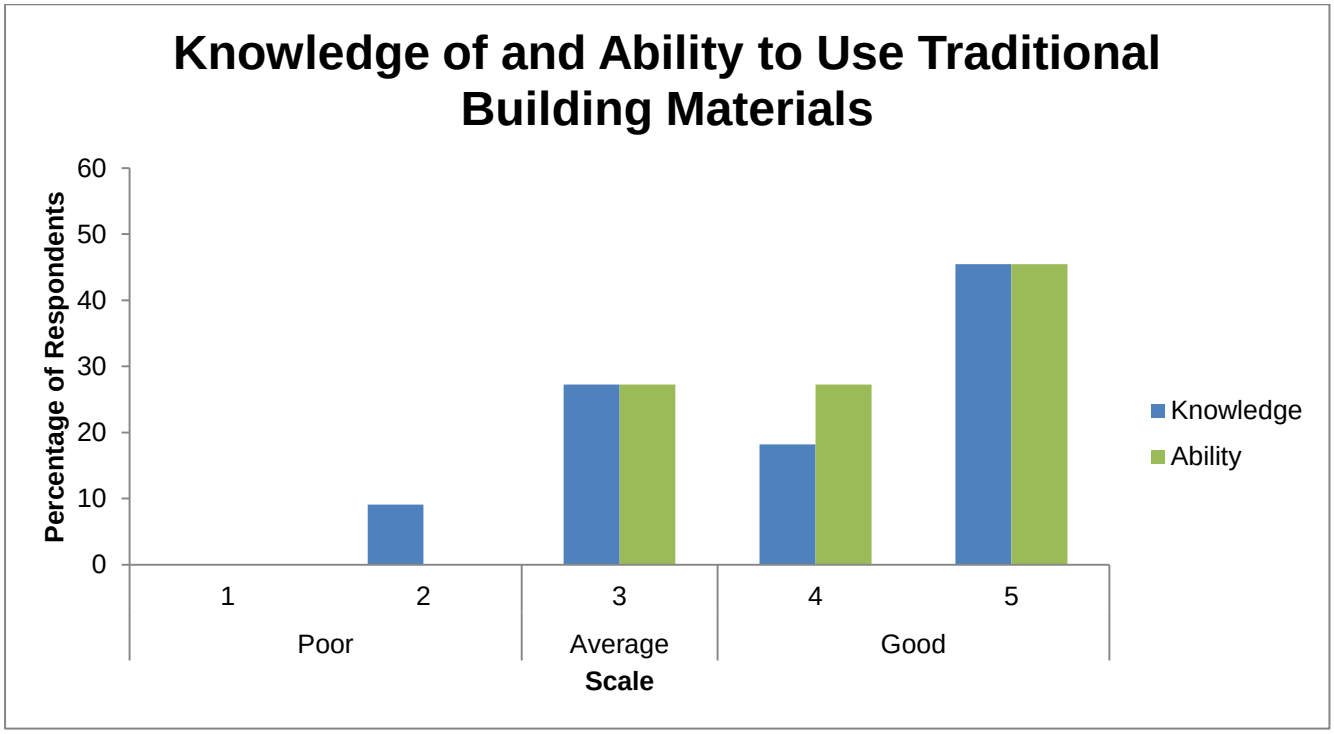

Figure 34: Knowledge of and Ability to Use Traditional Building Materials

112. Building contractors were asked about their usage of traditional building materials through the online survey. The results are very mixed but usage of modern materials only (43% of respondents) is restricted to a lower percentage of work overall. Building contractors are more likely overall to use only traditional materials (25% of respondents) or a mixture of both (36%) on the majority of their work.

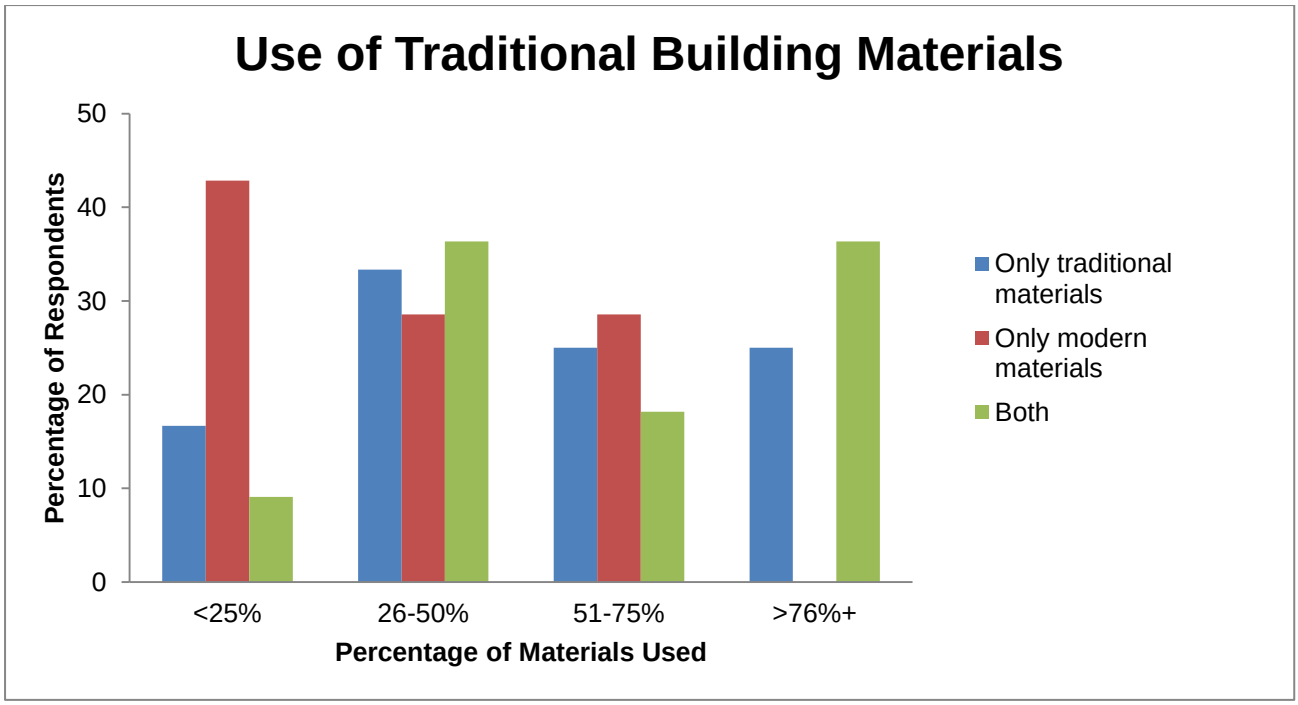

Figure 35: Use of Traditional Building Materials

113. Traditional materials are used where possible amongst the majority of the building contractors interviewed during Phase One of the research, however two of the five contractors use modern materials as well or almost exclusively e.g. modern insulation, consolidants for paints etc. These materials have been tried and tested and provide a better solution than their traditional counterparts. Like for like materials are used where they are available e.g. brick, windows, and ironwork is easy to source.

114. The main reason online survey respondents do not use more traditional building materials on pre-1919 buildings is no demand from clients (21% of respondents). Those interviewed also had some comments to make about clients who they say need educated in what materials are best. However client budgets often dictate that the most appropriate material is not used. Clients may also use unskilled or unaccredited contractors. They need to be educated since the quality of existing buildings is being diluted and ultimately repair costs will continue to rise as poor workmanship has to be rectified at a later date. Clients also do not understand that to achieve certifications like BREEAM is very difficult in old buildings using traditional materials.

115. Thirteen percent of respondents to the survey mentioned each of the following reasons: cost (as did one interviewee – stating that traditional materials can be between two and ten times more expensive than modern or imported equivalents); modern materials are as good / better; and building inspectors don't know / understand traditional materials. According to those interviewed, building control and conservation officers will often insist on traditional materials being used which puts financial pressure on clients. Planners can also have input e.g. retain exterior and retrofit rather than demolish and rebuild something that looks similar but is essentially modern. The chart below provides the full range of responses.

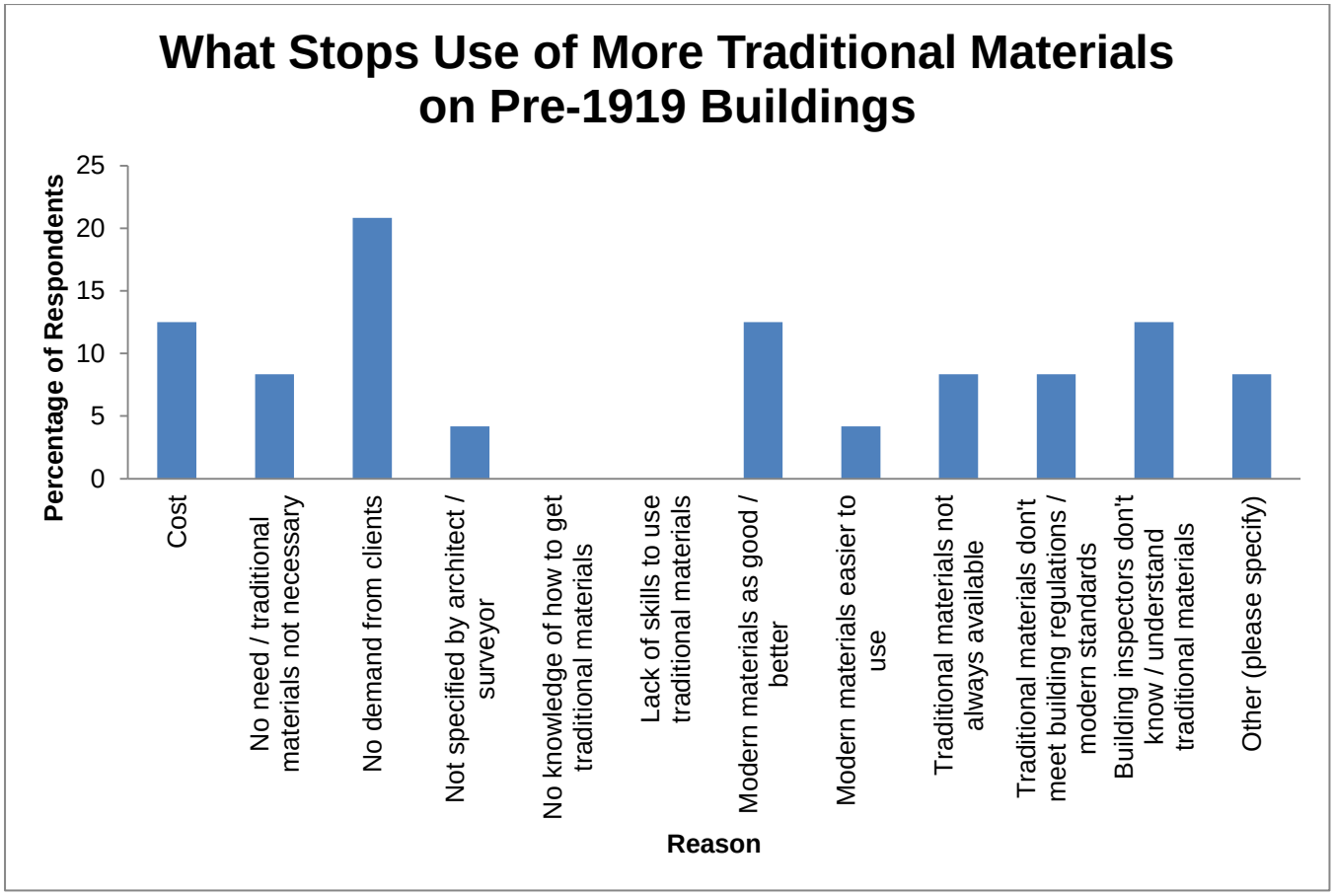

Figure 36: What Stops Use of More Traditional Materials on Pre-1919 Buildings

116. Building contractors were asked who specifies the use of traditional building materials. The majority of respondents to the online survey indicated that it is the architect (27%), with themselves and clients coming in at 20% of respondents each. In terms of 'other', this was mainly a combination of two or more of the possible responses, or in one case the Historic Environment Division was mentioned.

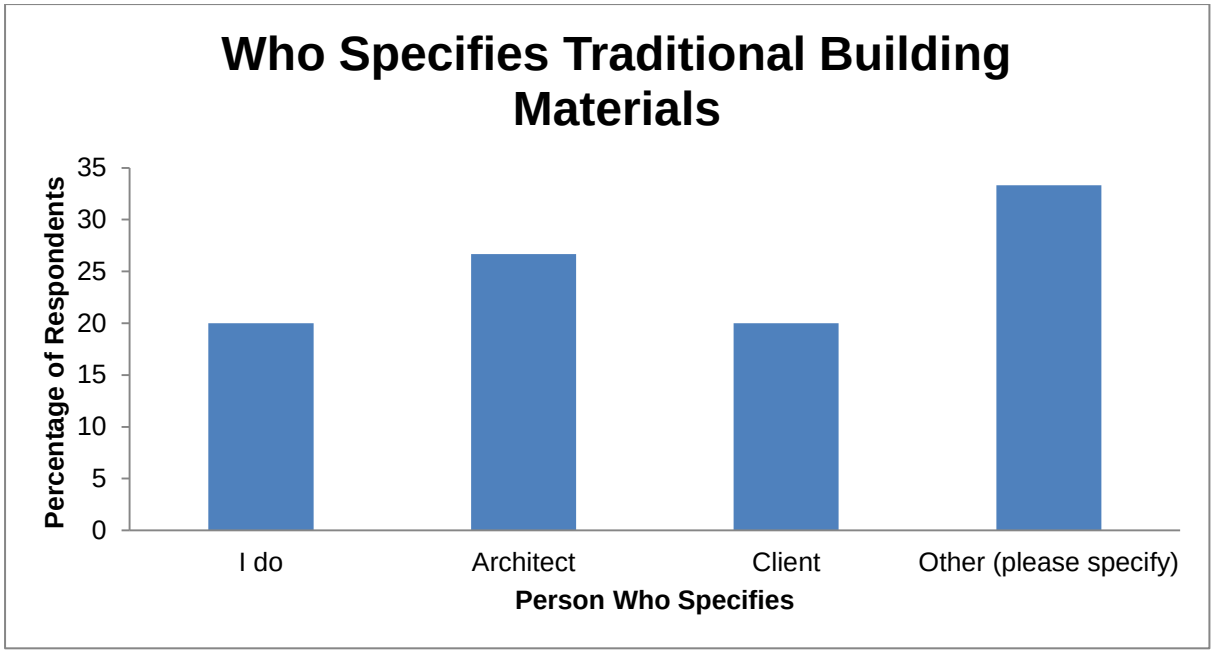

Figure 37: Who Specifies Traditional Building Materials

117. Building contractors were asked how much of the traditional building materials they use is purchased in Northern Ireland. Thirty three percent of those who responded to the online survey indicated that hardly any comes from NI, in contrast to the 25% who indicated that most does. Seventeen percent indicated that none of the material they use comes from NI.

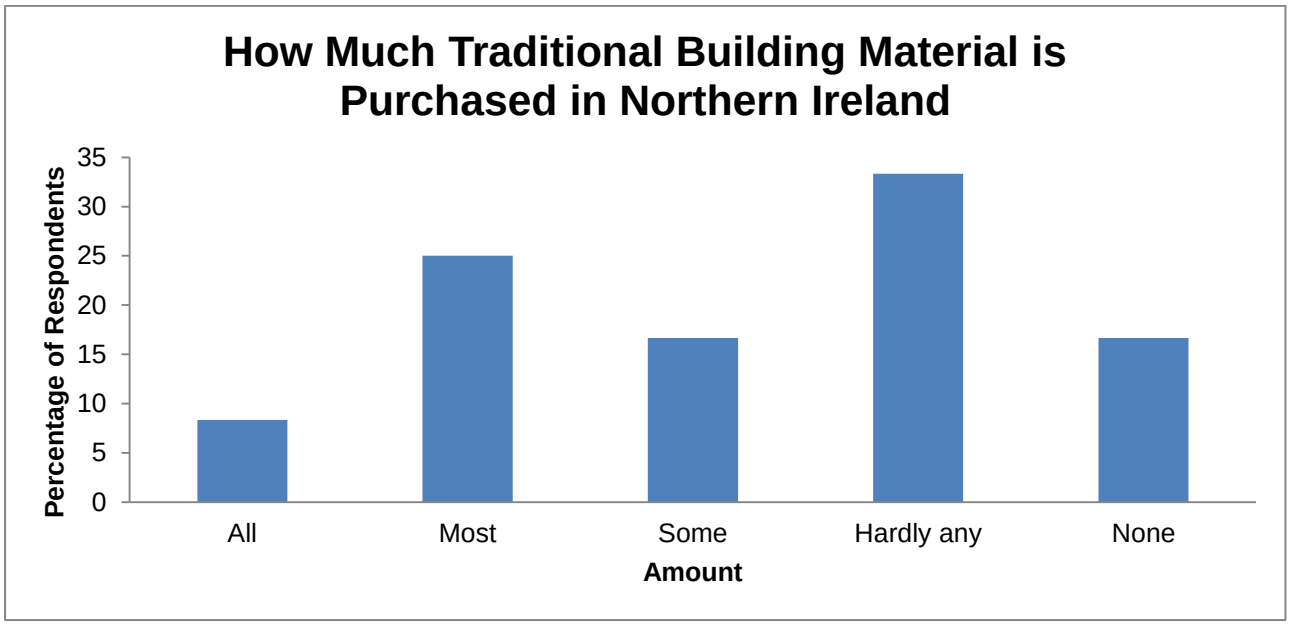

Figure 38: How Much Traditional Building Material is Purchased in Northern Ireland

117.1. In terms of where traditional building materials actually come from, the majority of online survey respondents (42%) think that less than 20% originates from NI, which is fairly close to the figure cited by manufacturers / suppliers of less than 25%. Thirty three percent of respondents think that between 21% and 75% of materials originate in NI, and only 8% think that over 75% of material comes from NI.

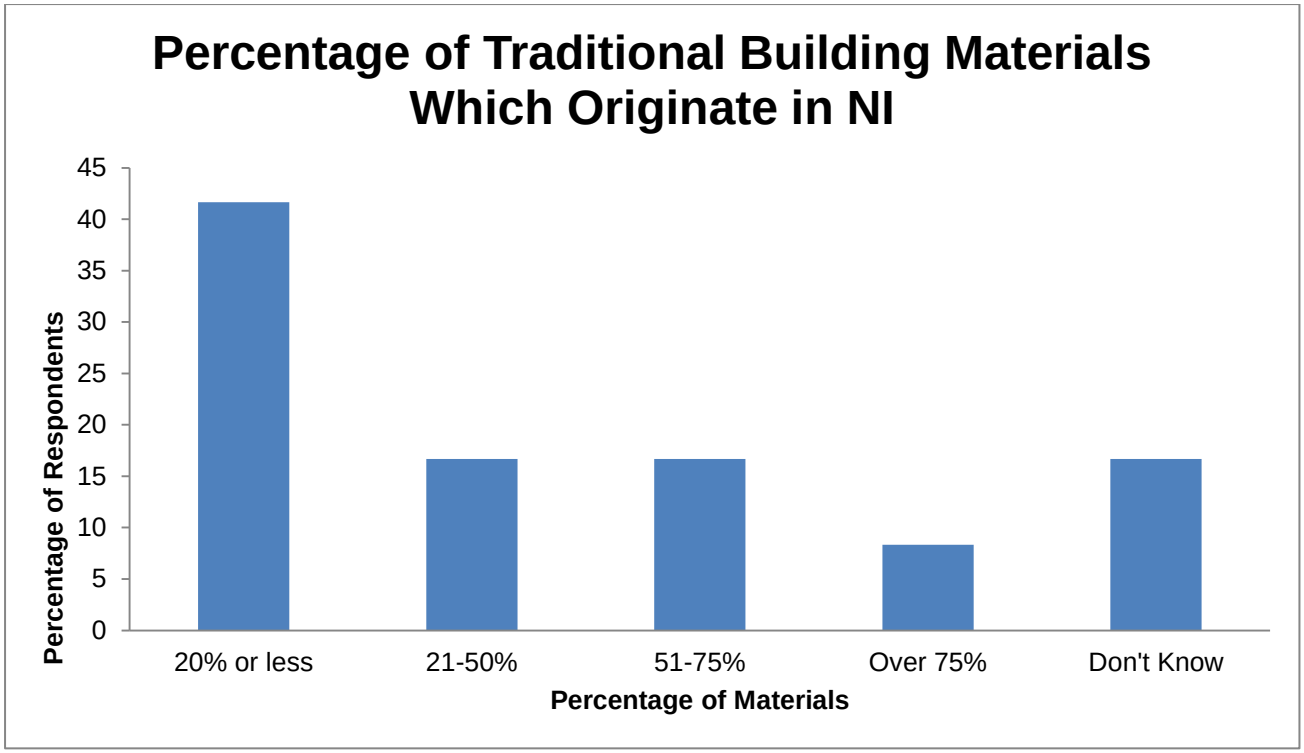

Figure 39: Percentage of Traditional Building Materials Which Originate in NI

118. In terms of the origin of materials which come from outside NI, building contractors surveyed in the online questionnaire source their materials predominantly from Great Britain and Ireland. All products can be sourced in Great Britain. Glass and lead are the only products which those building contractors who responded do not source in Ireland. A few items are sourced mainly in the EU such as glass, sawn timber and thatch.

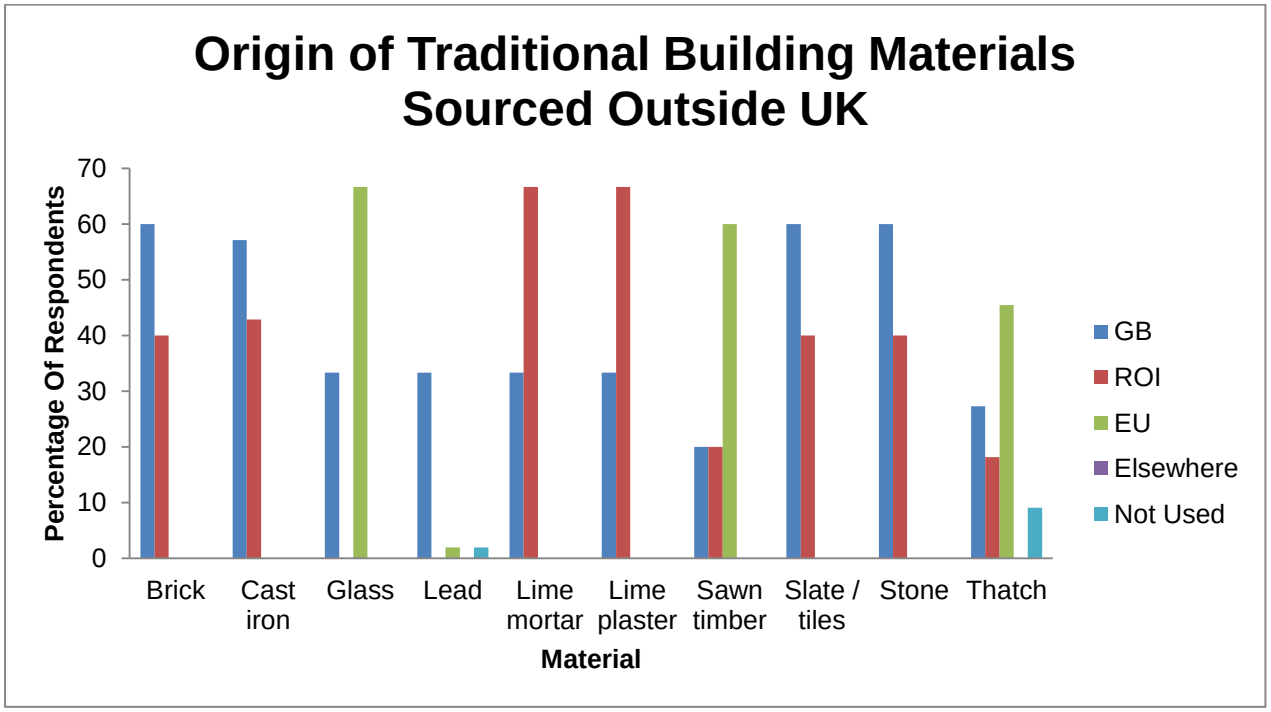

Figure 40: Origin of Traditional Building Materials Sourced Outside UK

119. Those interviewed during Phase One of the research also provided some information on their ability to source traditional building materials. One contractor has issues with the supply of stone due to local quarries having been closed so does his own research to determine the closest match from other parts of the UK. Another contractor indicated that they always import stone as local stone is not good quality. Lime seems to be readily available now whereas in previous years this was not the case so there is a lot of work to do to replace cement products which were used on historic buildings in the 60s, 70s, and 80s. Thatch is sourced from Turkey as it is thought that the local reed is not durable enough. Timber and nails can be sourced from architectural salvage yards unless it is very unusual like teak. Lead paint was specified for one contract and was difficult to obtain due to health and safety considerations.

Manufacturers and Suppliers

Survey Sample Overview

120. A total of eight manufacturers / suppliers who supply traditional building materials to those working in the heritage sector were identified. Two were interviewed but unfortunately only one responded to the online survey.

Demand

121. Those suppliers who were interviewed during Phase One of the research have seen demand increasing over the last 18 months / few years. For one, sales have increased fivefold and for the other, lead times have increased to 6-8 weeks (they manufacture as well as supply) and they are running at capacity. They anticipate this continuing for the next 12 months. Demand has also increased for imported materials and the ratio of imports to UK materials is 3:1 on a volume basis.

122. Most materials are specified by conservation architects, and occasionally by the client – both companies interviewed provide advice and guidance on the appropriate materials for different jobs. Cost is sometimes an issue and occasionally compromises have to be made.

123. The online survey respondent indicated that demand for traditional building materials has remained constant over the last 5 years.

124. When asked to rate the extent to which the respondent believes the following restrict the use of traditional building materials, on a scale from 1 meaning not at all to 5 meaning to a great extent, the results were as follows:

Table 5: What Restricts Use of Traditional Building Materials

	Rating				
Factor	**1**	**2**	**3**	**4**	**5**
Lack of knowledge of traditional materials among architects and surveyors				x	
Lack of knowledge among property owners				x	
Lack of knowledge among builders					x
Lack of traditional skills among builders					x
Local authority building control officers				x	
Building regulations		x			

125. As can be seen from the table above, a lack of knowledge and traditional skills amongst builders are believed to be the biggest barriers to the use of traditional building materials, followed by a lack of knowledge amongst professionals, property owners and building control officers. However as with all findings in this section, these are the thoughts of one online respondent and two interviewees so may not be reflective of the sector as a whole.

Supply of Traditional Building Materials

126. Two companies were interviewed during the qualitative research, both produce and sell their own materials and one also imports materials from all over the world.

127. The sole respondent to the online survey describe themselves as a company selling / providing specialist conservation / heritage products, meaning they are not involved in the extraction or production of traditional materials. They are also involved in consultation and contracting in relation to traditional buildings. The company supply a range of products as listed below, however their main or most important product is lime:

127.1. Interior decorative fittings e.g. textiles, wallpaper, plasterwork
127.2. Lime
127.3. Mortars
127.4. Plaster
127.5. Roofing slates / tiles
127.6. Quarried rubble stone
127.7. Sawn timber
127.8. General building materials
127.9. Other (riven timber, internal and external decorative finishes, insulations).

128. According to the online survey respondent, less than 25% of the materials they supply come from Northern Ireland (similar to the 20% cited by building contractors). Reasons given for not supplying more materials from Northern Ireland include: none available and too expensive. Materials which do not originate in Northern Ireland are sourced from various locations as indicated in the table below:

Table 6: Source of Traditional Building Materials Not Originating in NI

Material	Great Britain	Ireland	Europe	Elsewhere	Not Used
Brick				x	
Cast iron	x				
Glass					x
Lead					x
Lime mortar			x		
Lime plaster	x	x	x		
Sawn timber	x				
Slate / tiles	x				
Stone					x
Thatch	x				

129. As can be seen from the table, these materials are sourced in different locations to those mentioned by building contractors e.g. brick is sourced from outside the EU according to manufacturers / suppliers but from GB and ROI according to building contractors. Similarly, this manufacturer / supplier sources lime mortar and plaster from outside the EU whilst it is sourced by building contractors in GB and ROI.

130. The online survey asked respondents to comment on the methods used to process raw materials, and the respondent indicated that they use a combination of modern and traditional techniques (traditional techniques meaning 'methods largely unchanged from techniques used before 1919, although using modern machinery as appropriate').

131. Between 51% and 75% of the materials supplied by the respondent are traditional materials (i.e. substantially the same as those that would have been widely used before 1919).

132. Reasons given for not supplying more traditional building materials are:
- 132.1.1. No demand from clients
- 132.1.2. Builders lack skills to use traditional materials
- 132.1.3. Modern materials easier to use
- 132.1.4. Building inspectors don't know / understand traditional materials
- 132.1.5. Other (lack of skilled craftsmen who know how to use correctly).

133. These reasons reflect the reasons given by stockholders and building contractors for not using more materials although both of these groups also mentioned cost.

Workforce Skills and Recruitment

134. The online survey respondent rated the knowledge of traditional materials and the ability to manufacture or process traditional materials of their own staff as very good. The company employs between one and five people, all of whom have traditional craft building or manufacturing skills.

135. In terms of recruitment for their own business, the online survey respondent rated it as very difficult to recruit the tradespeople required with the appropriate traditional building craft skills for pre-1919 work. Trades which are particularly difficult to recruit are painter / decorator and lime plasterer. These recruitment difficulties relate to a lack of skills amongst those who apply. When recruiting people, the main factor is identifying

people with a passion for traditional buildings and competence to undertake relevant training.

136. Amongst those interviewed, one company has no issues recruiting staff for their own business, the other indicated that good people are hard to find. In terms of skills, there are fewer skilled plasterers, and migrants are also less skilled. There is a lack of skills in mainstream trades and in heritage generally. Slating is also a skilled trade and it is harder to recruit people into the industry. Slating in natural products requires a higher skill level.

Training in Traditional Building Materials

137. Both companies interviewed provide training or CPD for the industry. One provides a number of training courses, but none in heritage-related skills at present although they are developing a lime-based CPD training programme with accreditation. They have five people working on a full-time basis to provide training. The training is accredited by RIBA's training arm NBS.

138. The other provides short CPD training for architects, accredited by RIBA and delivered to between 70 and 100 people annually, as well as unaccredited training to builders merchants and seminars to roofing contractors. They believe that education helps to drive demand for their product.

139. Training is also provided by the respondent to the online survey to people outside their own company including builders / tradespeople, architects / surveyors, homeowners / DIY enthusiasts. In the main, this training is undertaken by building professionals. The training provided is a mix of short courses and longer courses leading to qualifications and is delivered either at the company premises or on site. Training is provided by their own staff and can be tailored as required.

140. One of the suppliers who was interviewed during Phase One of the research indicated that they are not sure if there is training provision for heritage skills in Northern Ireland however they did comment that the practical element of mainstream courses was too short. The other interviewee indicated that basic training is done to the best level possible however heritage skills are a step above, and again they were unsure if there was provision in NI. The online respondent's own staff have undertaken formal training courses leading to qualifications - two plasterers achieved their Heritage NVQs in conjunction with the CITB NI HLF funded project in 2012/13.

141. If people were trained in the correct methods and materials it would significantly reduce the amount of maintenance required. A suggestion by one of the interviewees was that architects should have more training in the identification and properties of natural products at university.

142. As most work on listed buildings is controlled and monitored the correct materials are generally used. However different individuals being responsible in different regions means that there are different rules / policies in different areas and no joined up planning or best practice. According to one interviewee, HED now seem to act only in an advisory capacity and mainstream Government funding has all but disappeared for listed building repair.

143. One organisation interviewed indicated that there is an immense lack of interest and respect for our built heritage in NI. It is not valued in the way that it is in the South of Ireland as part of our culture. As a result of this lack of education we risk losing our buildings, our traditional skills and our identity. Our towns and cities are being developed

in the wrong way with unsustainable spaces just for the sake of turning a quick buck and with no regard for sustainability.

Building Professionals

Survey Sample Overview

144. A total of 44 architects and surveyors who work in the heritage sector were identified. Two architects were interviewed and 10 building professionals responded to the online survey.

145. Sixty percent of the online respondents had between one and five employees and only two percent had more than fifty employees. Sixty percent of those who responded online described themselves as conservation / heritage specialists, with the remaining 40% describing themselves as a general practice whose work involves old buildings.

Work on Pre-1919 Buildings

146. The two building professionals interviewed reported that demand for the repair, maintenance, restoration and conservation of pre-1919 buildings is increasing following a slowdown during the recession. One barrier to more work being done on pre-1919 buildings is VAT which is charged on refurbishment and not on new build. This may be impacted by Brexit as VAT rules could change. The amount of work available would increase if the number and value of grants was increased.

147. There was a fairly even spread amongst the online respondents with regards to the percentage of their firm's work which is on pre-1919 buildings, with 30% each having either less than 25% or more than 76% of work in this area. A further 30% had between 26% and 75% of their work on pre-1919 buildings.

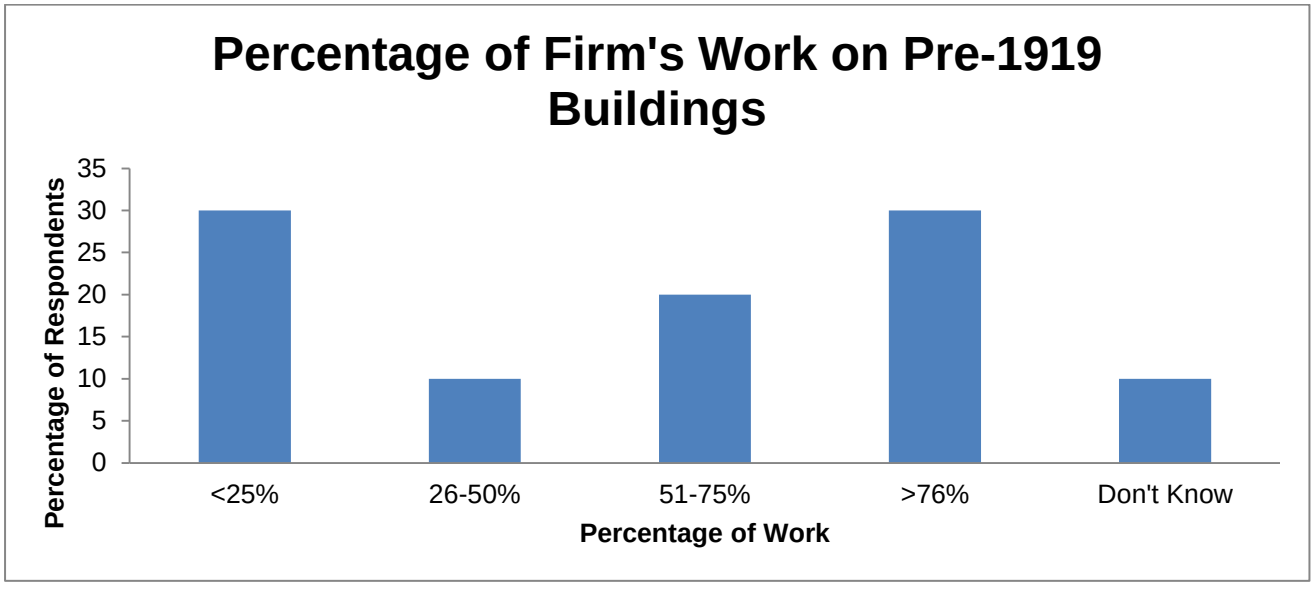

Figure 41: Percentage of Firm's Work on Pre-1919 Buildings

148. Forty percent of respondents to the online survey carry out all their pre-1919 work in Northern Ireland, with the remaining 60% carrying out work both in NI and outside NI. None of the respondents carry out all their work outside NI.

149. Professionals in Northern Ireland who responded to the online survey feel less comfortable working on Grade A listed buildings than other types of buildings, with only 29% feeling confident, compared to 35% feeling confident working on either Grade B listed buildings or non-listed buildings dating from pre-1919. This is despite 67% of companies having at least one building conservation professional / specialist in the practice. Registers mentioned include Royal Institute of British Architects (RIBA) and Royal Institute of the Architects of Ireland (RIAI). The findings from the professionals sector contrasts strongly with those of building contractors, 48% of whom are confident working on Grade A buildings.

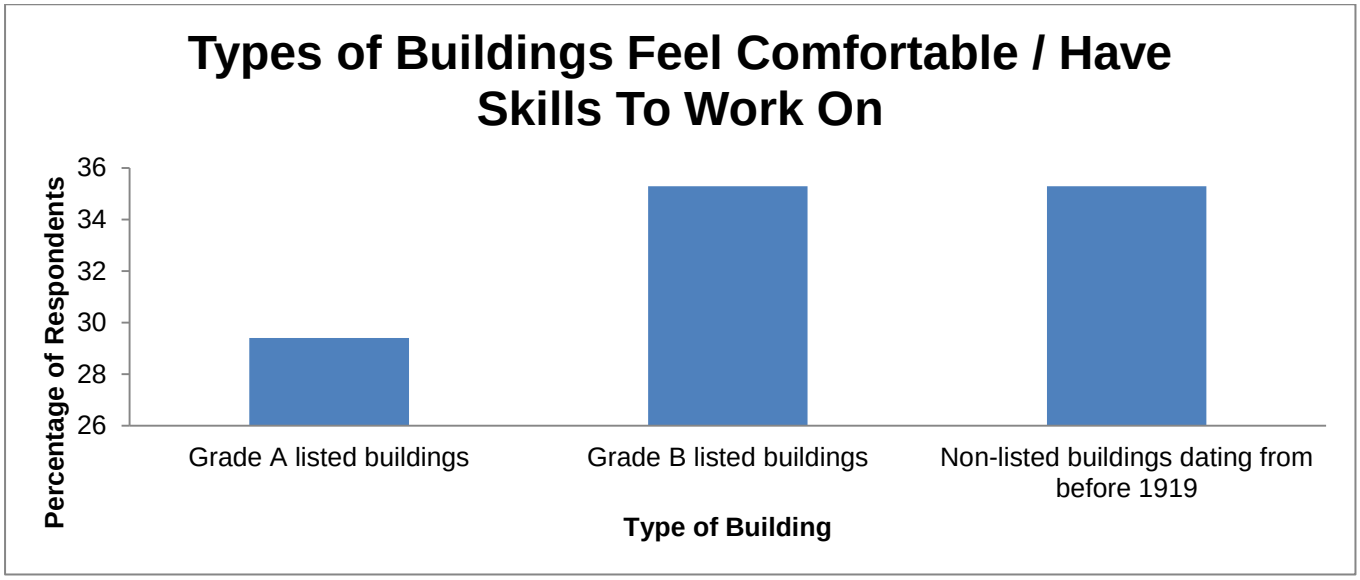

Figure 42: Types of Buildings Feel Comfortable / Have Skills to Work On (Multiple Answers Possible)

150. The companies represented by respondents to the online survey are listed on a variety of registers, however the majority (58%) are registered on the UAH Directory of Traditional Building Skills. Seventeen percent are not listed on any register, contrasted with 63% of builders who are not registered. Clearly, professionals find more benefits in being listed on registers than builders.

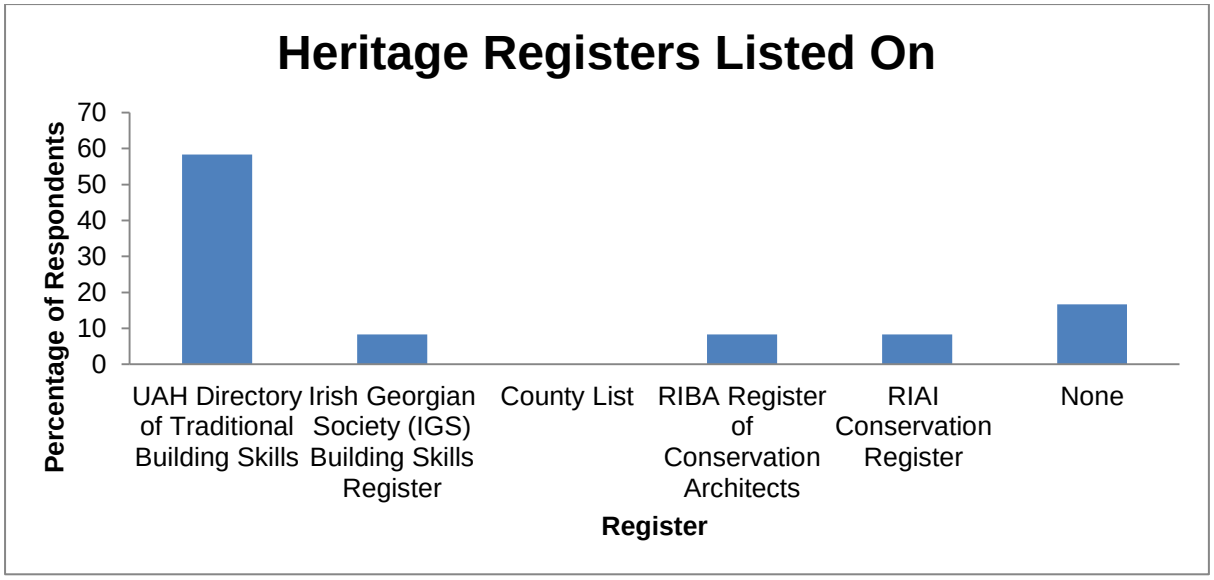

Figure 43: Heritage Registers Listed On

151. Those interviewed listed a similar range of registers and accreditation schemes:
    - 151.1. Royal Institute of British Architects (RIBA) Conservation Register
    - 151.2. Institute of Historic Building Conservation (IHBC)
    - 151.3. UAH Directory of Traditional Building Skills
    - 151.4. Irish Georgian Society (IGS) Traditional Building Conservation and Skills Register
    - 151.5. Building Conservation Directory
    - 151.6. Royal Institute of British Architects (RIBA)
    - 151.7. Architects Accredited in Building Conservation (AABC)
    - 151.8. Royal Institute of the Architects of Ireland (RIAI).

Contractors Used by Building Professionals

152. When asked to describe the importance of various factors in terms of awarding work to contractors, professionals who responded to the online survey rated experience of working on old buildings and skills levels as the two most important. Cost and membership of a trade association were also considered relatively important. They were fairly ambivalent about formal qualifications such as NVQs, about skills cards and about proximity to the work. Availability to start work was one of the least important factors.

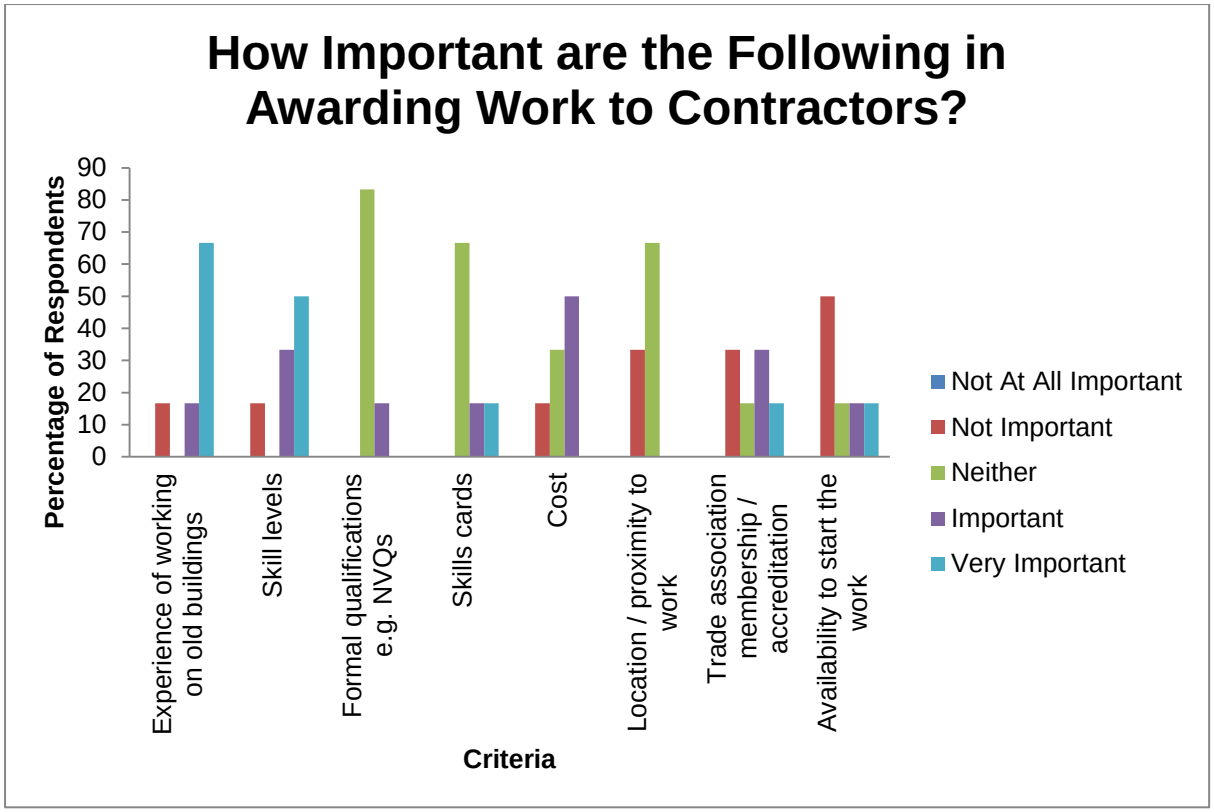

Figure 44: How Important are the Following in Awarding Work to Contractors?

153. All the professionals who responded to the survey online use contractors based in Northern Ireland only. None of the respondents use contractors from outside NI. This differs from the views of stockholders and those professionals who participated in the interviews who stated that contractors from GB are being brought over to carry out work.

154. Professionals who responded to the online questionnaire are generally satisfied with the quality of contractors in Northern Ireland with 50% stating they were satisfied and 17% stating they were very satisfied.

Figure 45: Quality of Contractors

155. Professionals are relatively happy with the time taken for contractors to start work with 67% scoring them a four out of five (satisfied) and 17% scoring a five (very satisfied). In contrast, professionals are less happy with the time taken to complete the work, with only 40% saying they were satisfied and 50% saying they were neither satisfied nor unsatisfied.

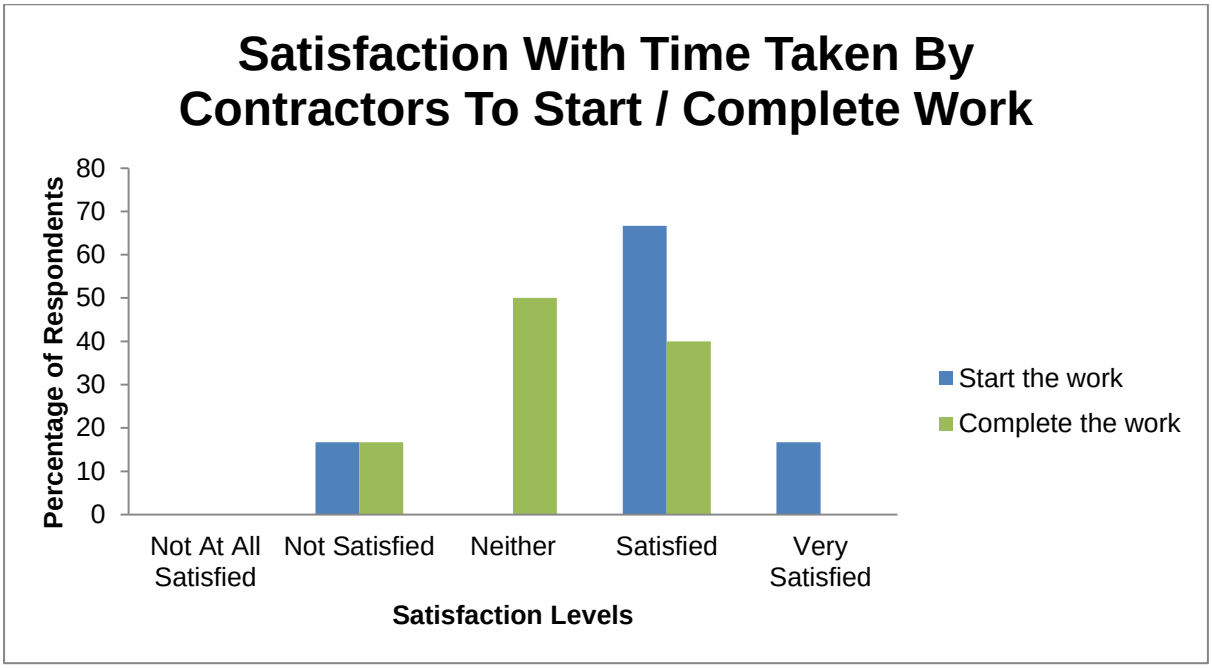

Figure 46: Satisfaction With Time Taken By Contractors To Start / Complete Work

156. In terms of satisfaction with the knowledge and ability of contractors to use traditional building materials, 83% of online respondents indicated that they were neither satisfied nor dissatisfied. This high level of ambivalence may be due to a lack of knowledge or may be due to the standard of workmanship. The remaining 17% of respondents were satisfied with building contractors' knowledge and ability to use traditional materials.

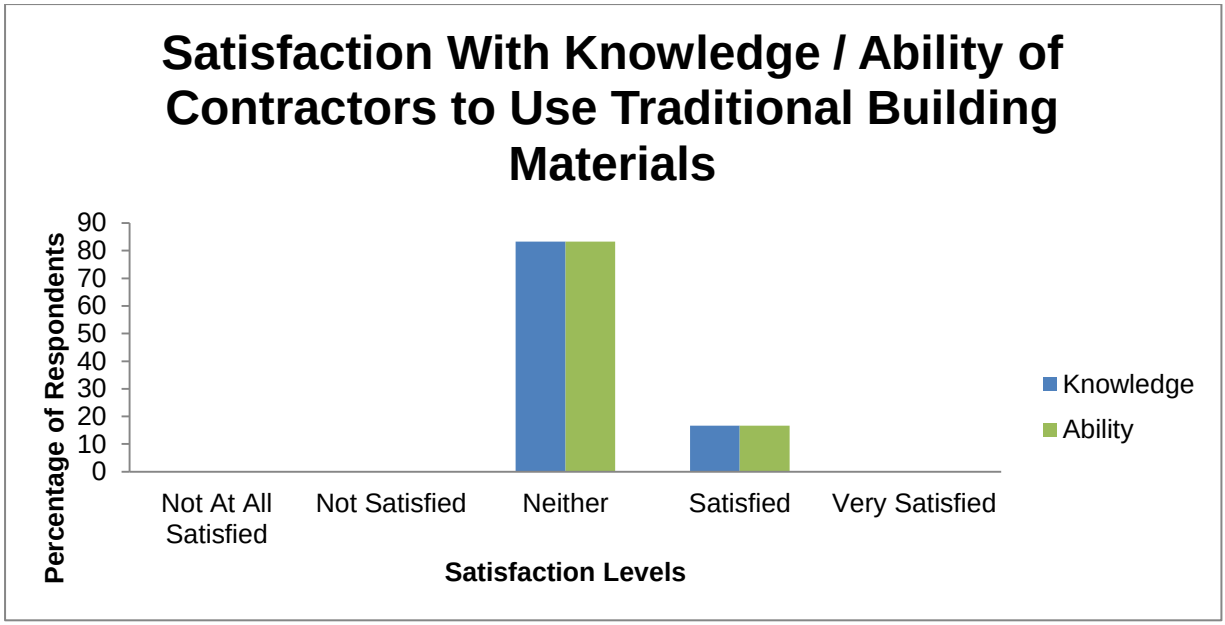

Figure 47: Satisfaction With Knowledge / Ability of Contractors to Use Traditional Building Materials

157. Eighty three percent of the professionals surveyed use both contractors who would describe themselves as 'general builders / tradespeople who can work on old buildings' and as 'conservation / heritage specialists' and 17% would only use 'conservation / heritage specialists'.

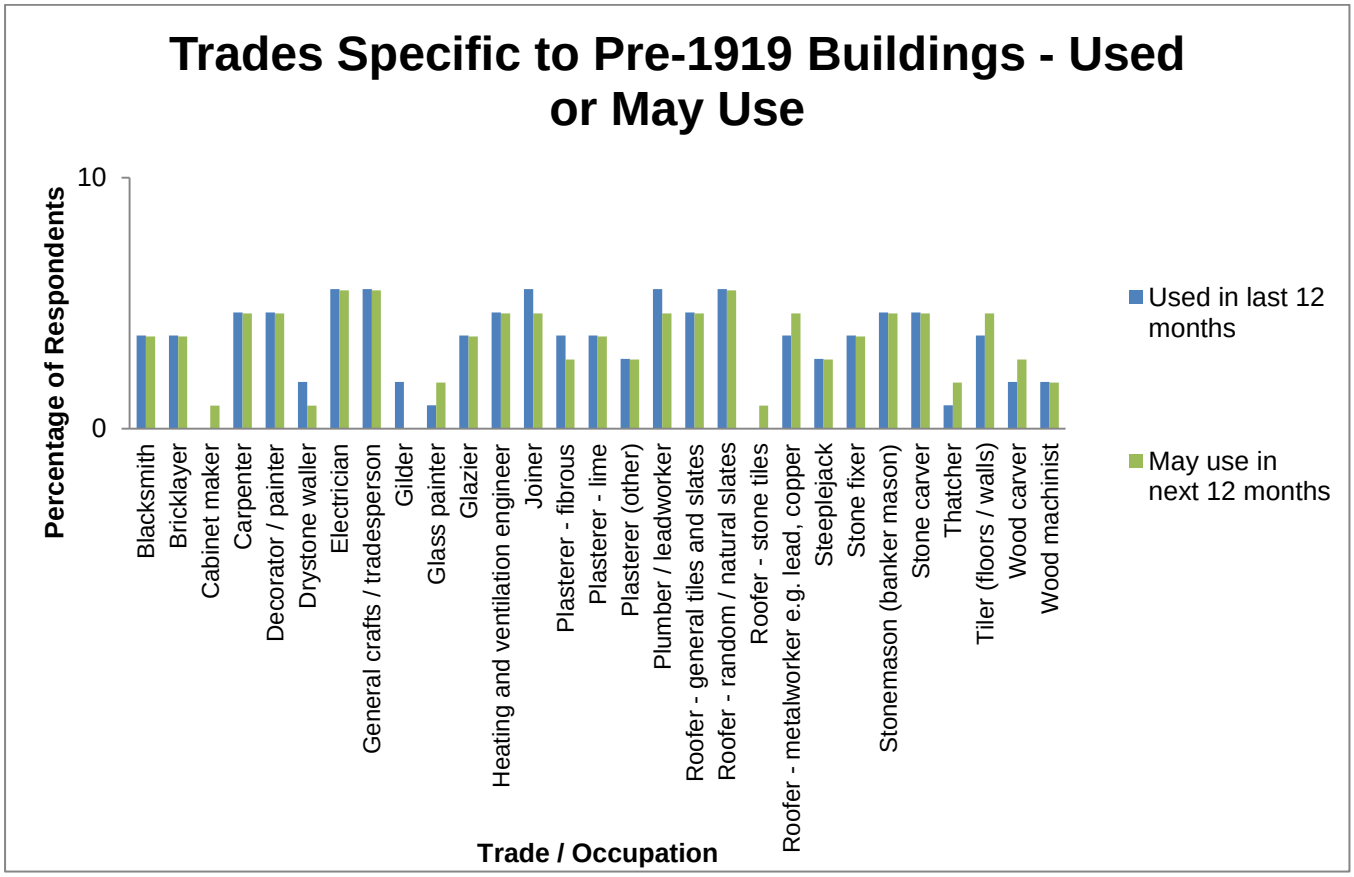

Figure 48: Trades Specific to Pre-1919 Buildings - Used or May Use

158. The online survey asked professionals which trades they had used in the last 12 months and which they might use in the next 12 months. The results are shown in the chart above. Base sizes are very low so caution should be exercised when analysing these results. It would appear from the chart that the most sought after trades / occupations are electrician, general crafts / trade person, joiner, plumber / lead worker, roofer (natural slate), stonemason, stone carver and tiler.

159. A number of trades which are difficult to find were identified by respondents to the building professionals survey with the most commonly cited occupation being thatcher (30%). Other trades include blacksmith, bricklayer, drystone waller, general craftsperson, lime plasterer, stonemason and stone carver.

160. Respondents to the online survey were asked how long they generally had to wait before they could get someone to start work on a project. Caution should be exercised due to the low base numbers, but blacksmiths, bricklayers and thatchers seemed to have the longest waiting times (over three months). Gilders, roofers (stone tiles) and stone carvers were mentioned by a number of respondents and have a waiting time of two to three months. Full details can be seen in the chart below – note that the chart shows the number of respondents rather than the percentage of respondents which most other charts in the report show.

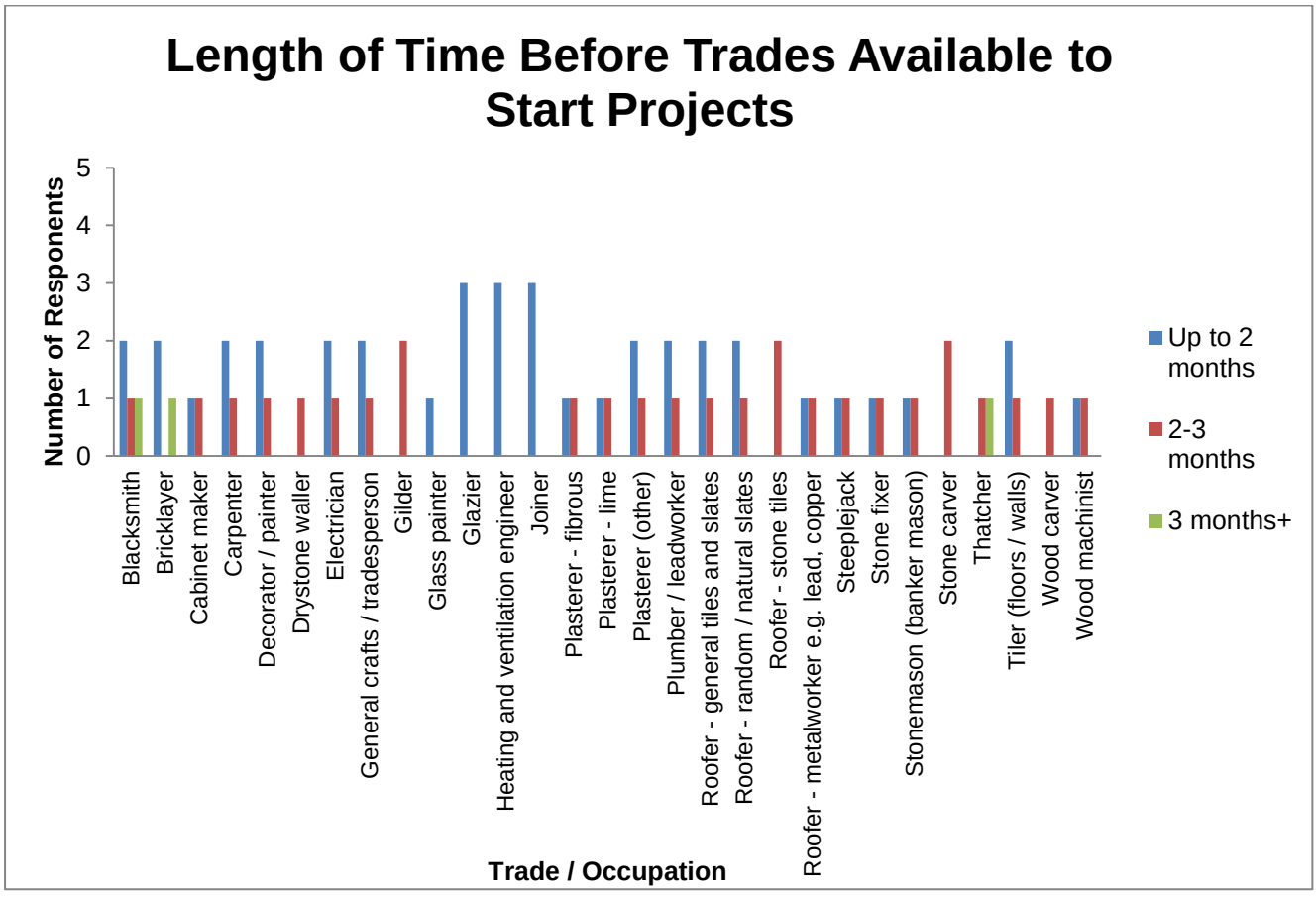

Figure 49: Length of Time Before Trades Available to Start Projects

161. The consequences of not finding people with the appropriate skills to work on pre-1919 buildings are shown in the chart below. Higher costs, using tradespeople with lower or unknown skills levels and wasting staff time are the main consequences experienced by the building professionals who responded to the online survey.

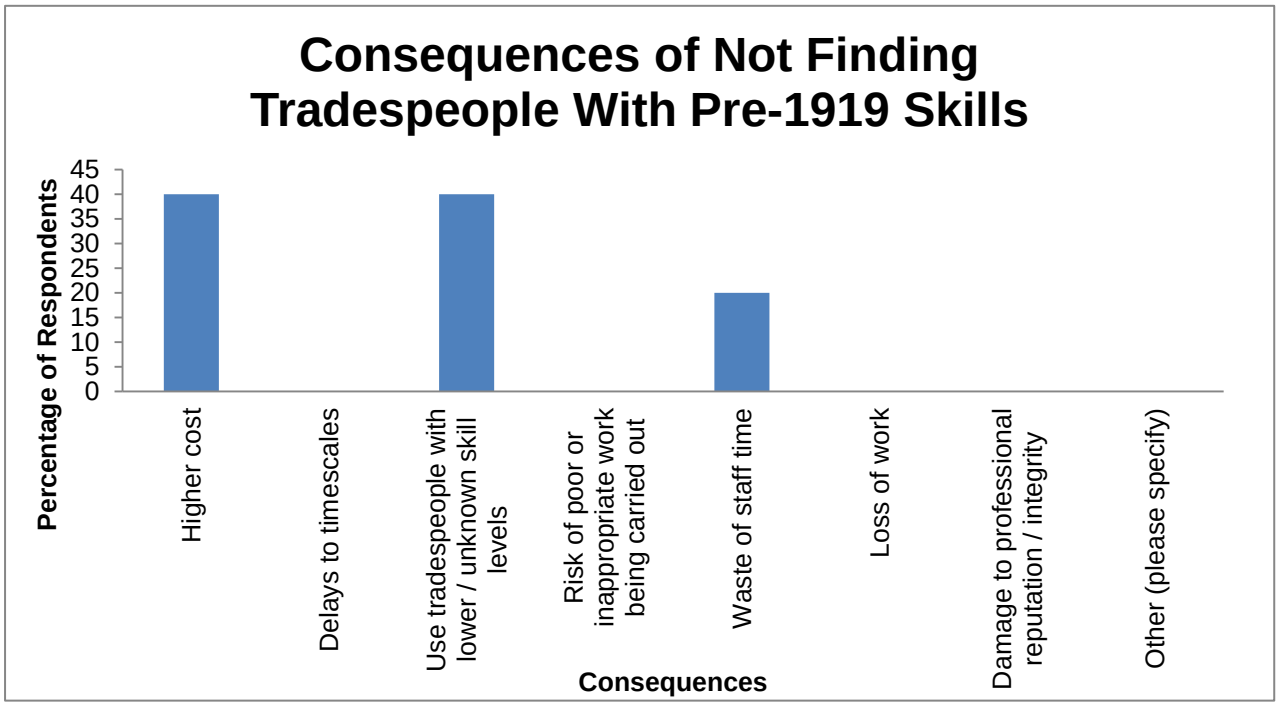

Figure 50: Consequences of Not Finding Tradespeople With Pre-1919 Skills

162. Those interviewed in Phase One of the research commented that training courses should have heritage skills incorporated into them, even up to as much as 50% of the training. In terms of apprenticeships, formal schemes are often too burdensome on small contractors so unless a form of on-the-job scheme can be developed, small specialist contractors are unlikely to take them on.

163. According to the interviewees, skills are needed in terms of materials and their properties, as well as when and how to use them. Some skills are available in NI but the majority of more specialist trades have to be brought in from GB (contradicting the findings of online survey respondents [paragraph 153]). Mainstream skills could be adapted for some specialist occupations but not for all. In addition, there is a need to train clients to have a better appreciation of the skills and materials needed. Legislation on skills cards would drive training and upskilling in the construction industry.

164. Interviewees also indicated that professionals usually have access to specialist training. Training in heritage skills is offered by a range of organisations including SPAB, the Council on Training in Architectural Conservation (COTAC) and in Scotland there is more provision at university level than in NI.

165. When asked about the importance of various factors in developing traditional craft building skills, the professionals who responded to the online survey rated work experience on old buildings most highly, with on-the-job / in-house training following closely behind. Professionals are less interested in formal college learning as a method of gaining these skills.

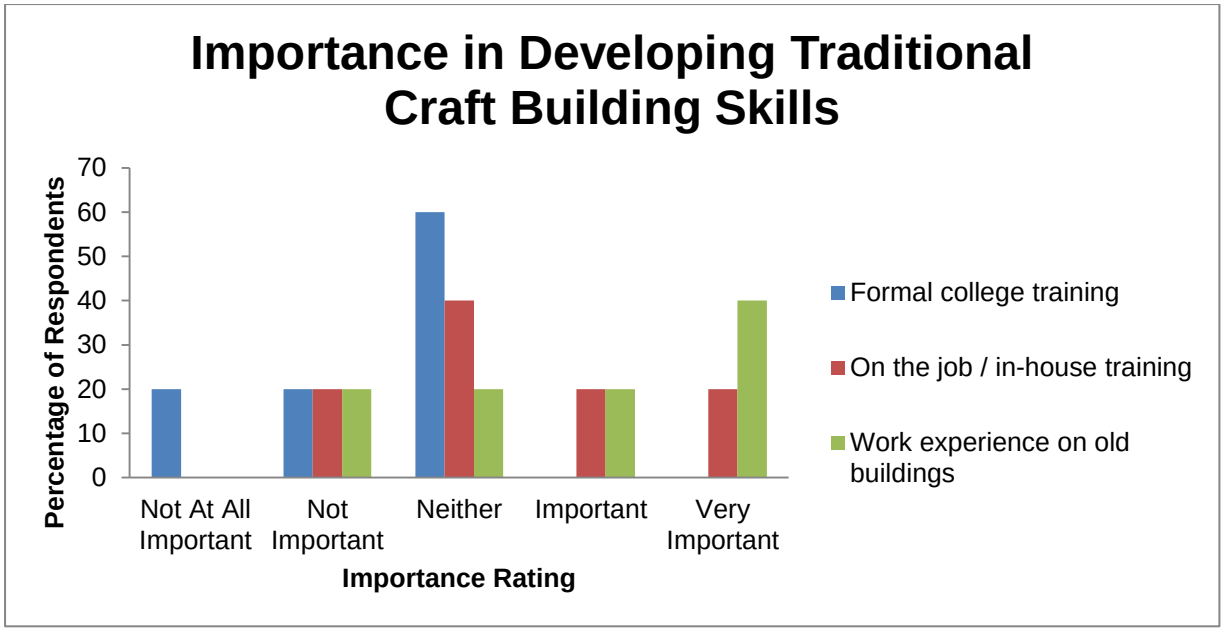

Figure 51: Importance in Developing Traditional Craft Building Skills

166. Those interviewed during the qualitative element of the research commented that there are no specialist main contractors in NI as there are in GB. All work is subcontracted to specialists. At the professional level only a few practices are specialists, others do very little work in this area and so do not have the skills.

167. Fewer professionals (10%) request formal qualifications when asking contractors to tender for work on pre-1919 buildings than other options. Sixty percent of online survey respondents ask for the contractor to undertake training during the contract or to hold a CSR card with a heritage endorsement. This suggests, in keeping with the response to the previous question, that professionals do not hold formal training / qualifications in as high a regard as other methods of upskilling.

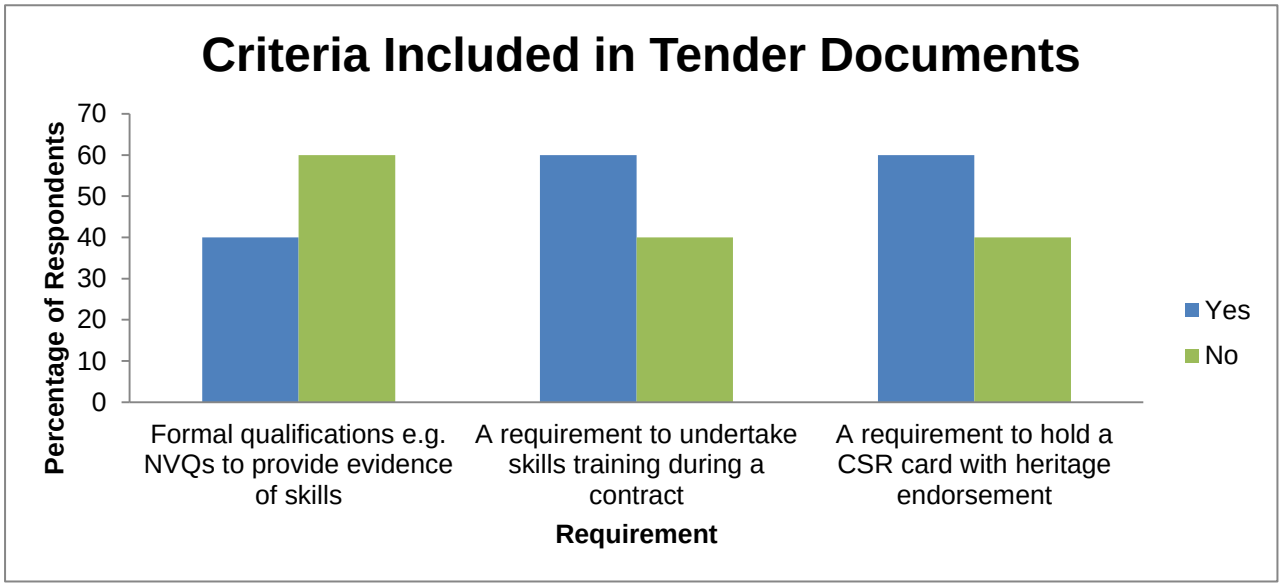

Figure 52: Criteria Included in Tender Documents

168. Traditional Building Materials

169. Those professionals interviewed as part of Phase One of the research indicated that demand for materials is increasing and there are shortages in some materials e.g. local stone and metals. Most respondents to all surveys recognise a shortage of local stone, however stockholders felt the supply of metal was adequate in contrast to these findings. There is more awareness overall of the need for traditional materials however cost is often a barrier.

170. When professionals undertaking the online survey were asked if they use predominantly traditional building materials or modern, the results were mixed. As can be seen from the chart more respondents use only traditional materials than any other type. Modern materials are also used in relatively high quantities, whilst other professionals use a combination of both types.

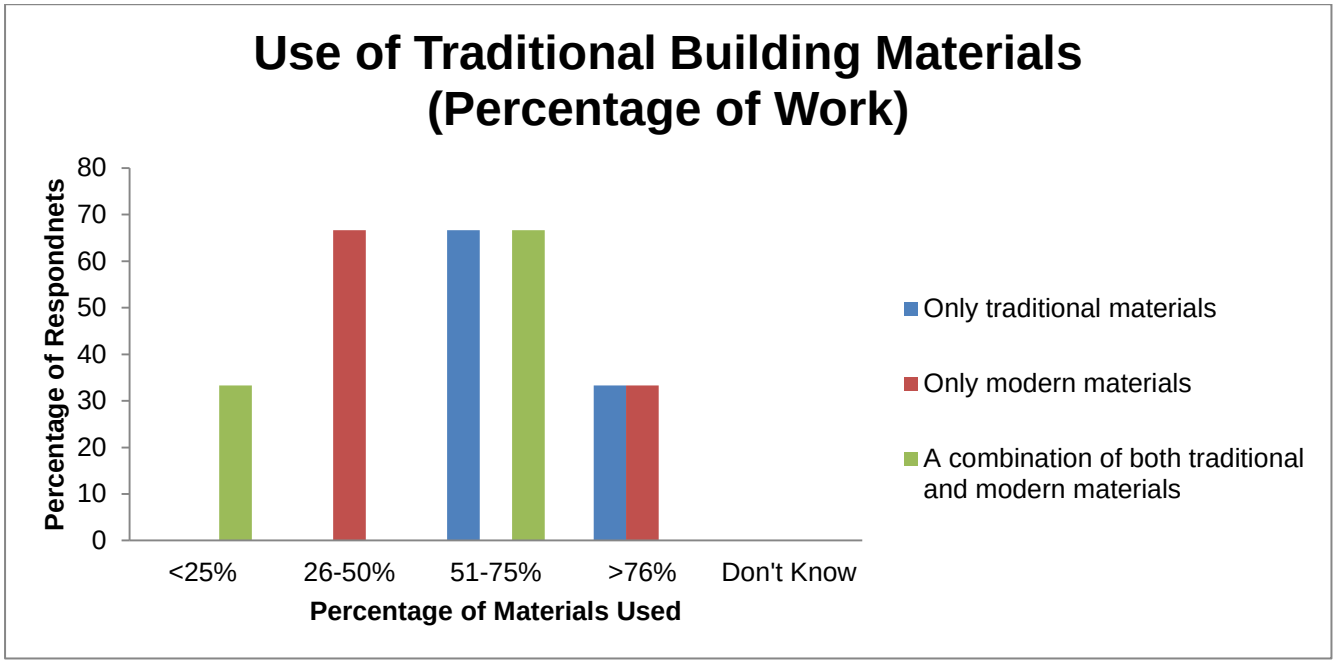

Figure 53: Use of Traditional Building Materials (Percentage of Work)

171. When asked what prevented them from using more traditional building materials, cost was the main factor, cited by 25% of respondents. Other reasons included no need, a lack of skills to do so, modern materials are as good and easier to use, and that traditional building materials do not meet modern building regulations. Availability was another aspect. This contrasts with the main reason cited by contractors that there is no demand from clients and the stockholder's main response that builders lack the required skills.

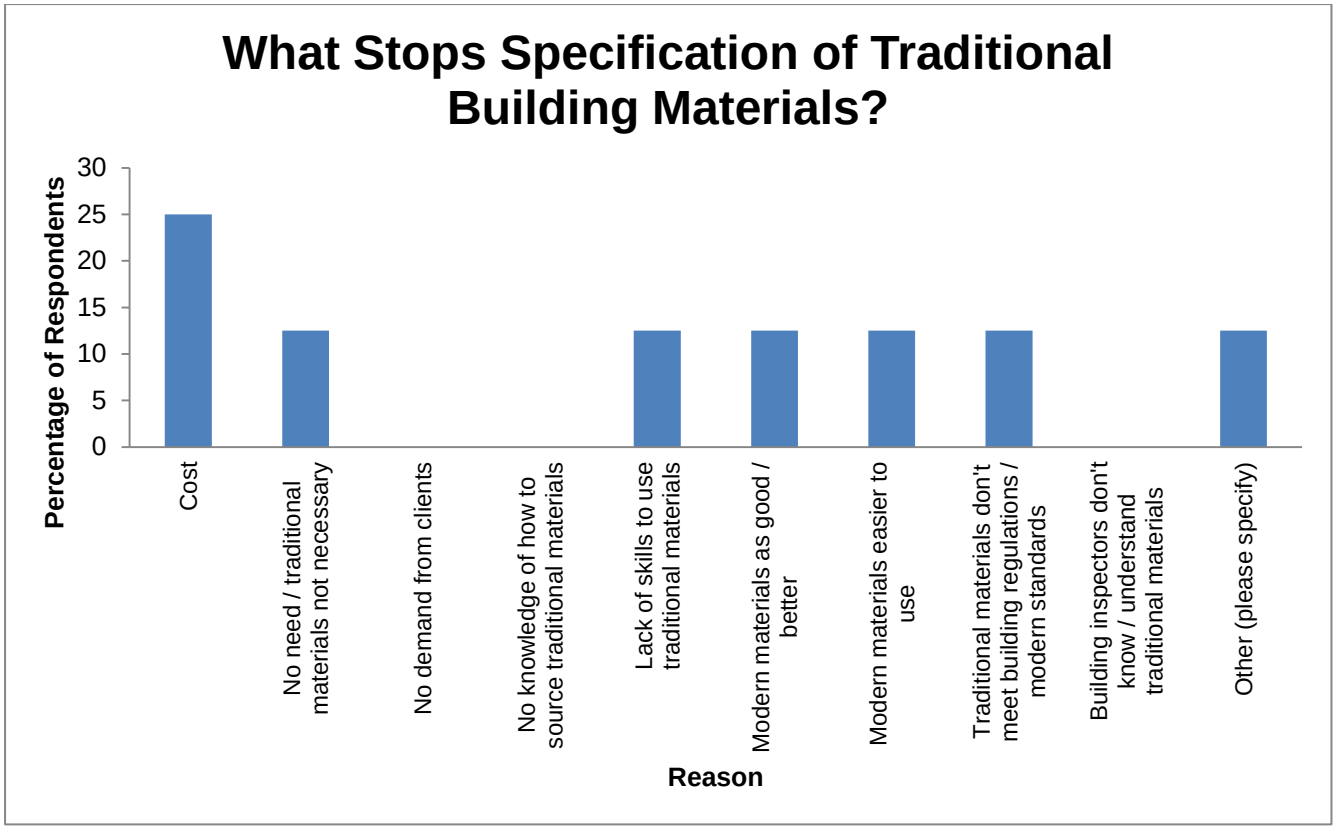

Figure 54: What Stops Specification of Traditional Building Materials?

172. According to one interviewee, increased planning rigour would drive the use of traditional building materials.

173. When asked where traditional building materials were purchased, 33% indicated that all were purchased in Northern Ireland and a further third indicated that most were. The remaining third indicated that they did not know, perhaps only specifying rather than purchasing materials. In relation to the source of traditional building materials, the responses again had a relatively high percentage of 'don't know' answers. A third of respondents indicated that more than 76% of traditional building materials originate in Northern Ireland (compared to only 8% of building contractors), however a further third thought that this number was only between 26-50%.

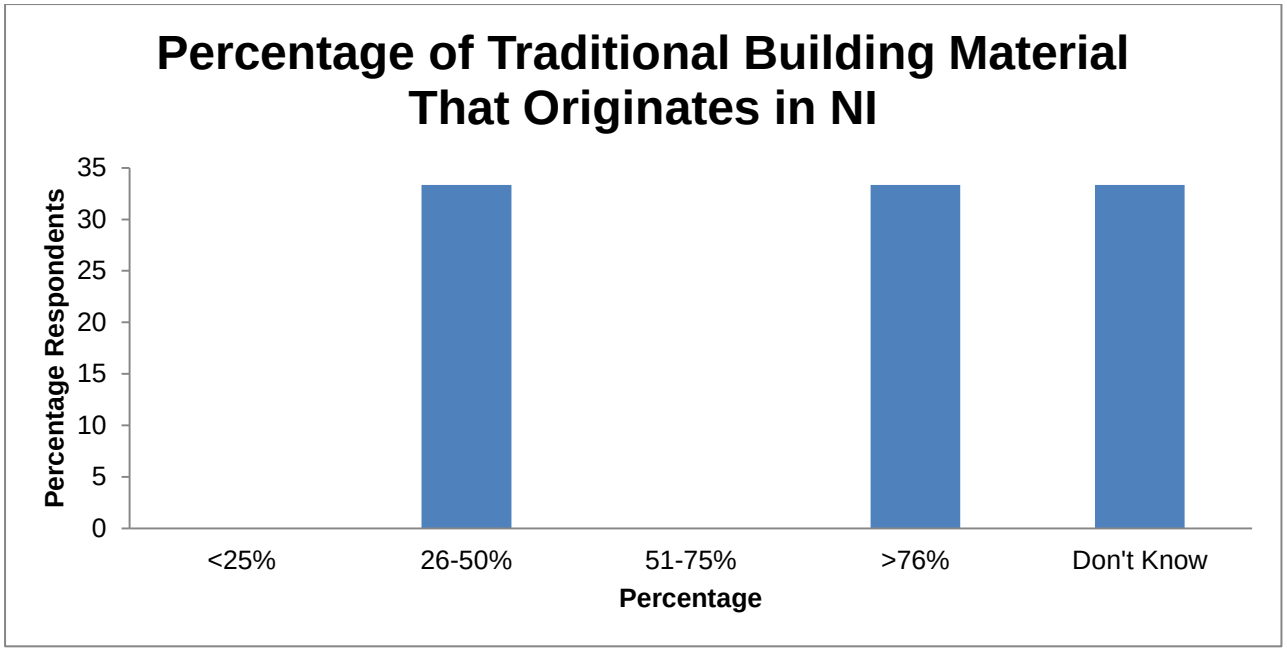

Figure 55: Percentage of Traditional Building Material That Originates in NI

174. The majority of traditional building materials not originating in Northern Ireland are sourced in Europe or Great Britain according to online survey respondents. According to these respondents, very little material comes from the Republic of Ireland except for brick and cast iron which is in contrast with what building contractors indicated, as most sourced material in either GB or Ireland.

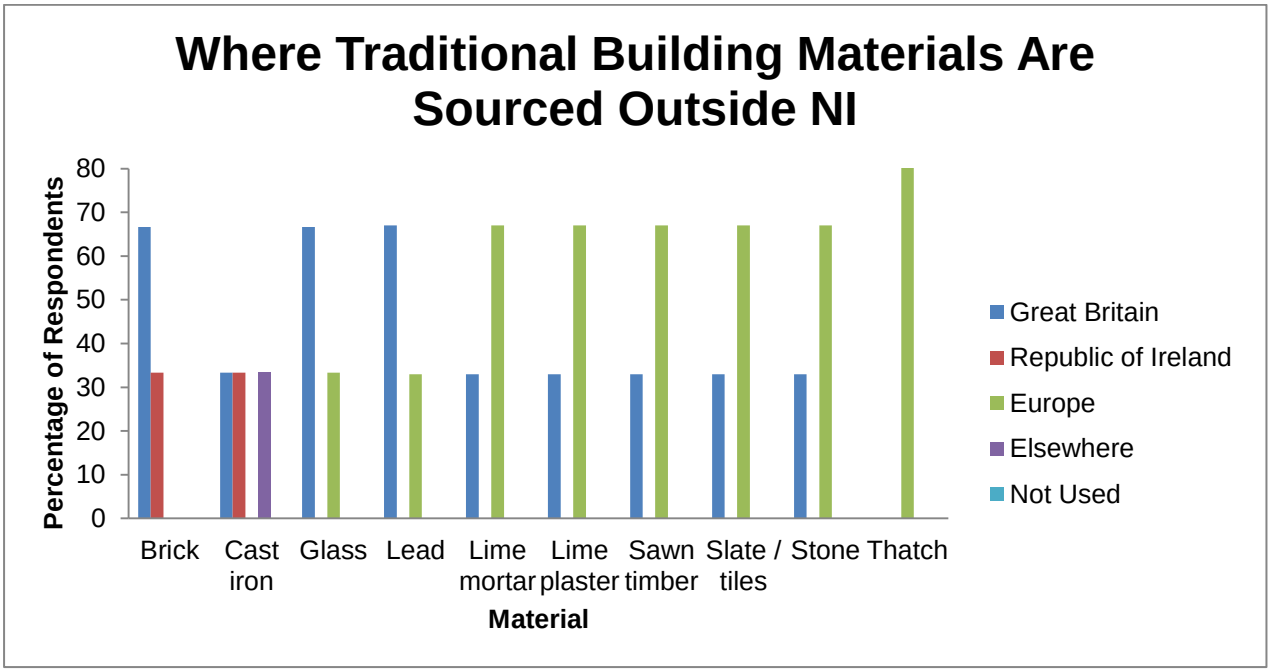

Figure 56: Where Traditional Building Materials Are Sourced Outside NI

175. Online survey participants were asked what traditional building materials they have specified in the last 12 months and just under a third each said lime products or locally quarried stone. Local slate and thatch were specified by just under 20% each.

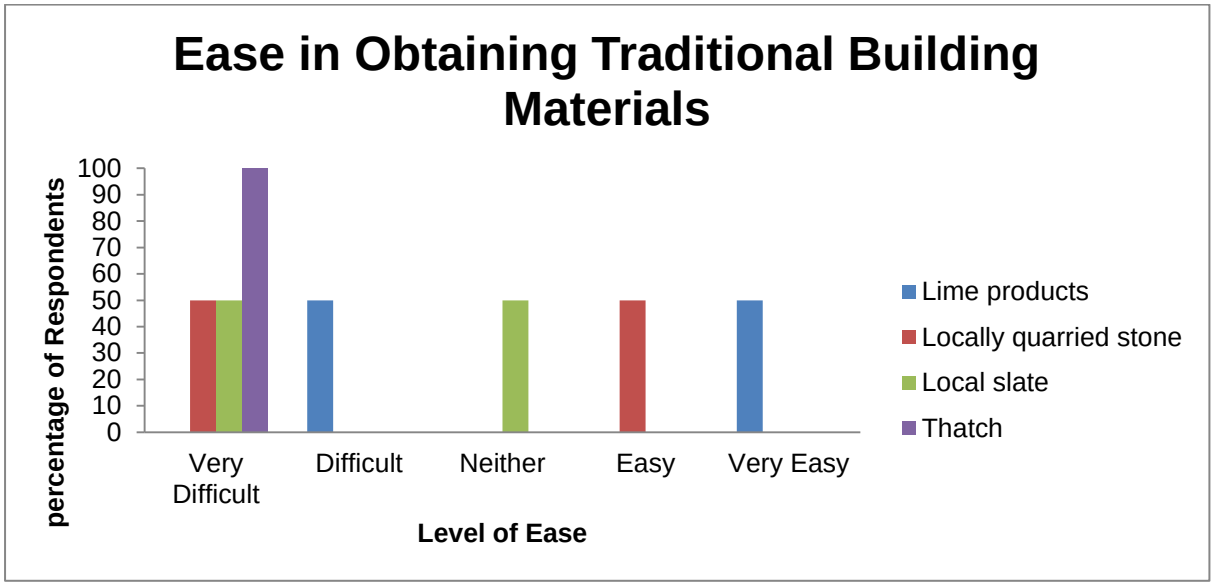

Figure 57: Ease in Obtaining Traditional Building Materials

176. Online survey respondents were asked about the ease or difficulty of obtaining traditional building materials and the results are shown in the table above. Thatch is evidently the most difficult to obtain, with 100% of respondents scoring it a one for very difficult (on a scale of one to five where one equals very difficult and five equals very easy). For other products, there is no clear answer with some people finding them difficult to source and others finding it easy.

Grants

177. Interviewees were able to list a range of potential funding sources including:

177.1. Heritage Lottery Fund
177.2. Ulster Garden Villages
177.3. Pilgrim's Trust
177.4. Roof Repair Fund
177.5. Biffa (Landfill Tax Scheme)
177.6. EU Funding.

178. However they also indicated that the majority of this funding is only accessible by the public sector or churches etc. with the exception of the HLF Enterprise Scheme which allows the private sector to obtain some funding. There is no significant funding available from the Historic Environment Division.

179. Finally respondents to the online survey were asked if any of their projects involving pre-1919 buildings received grants or funding in the last 12 months.

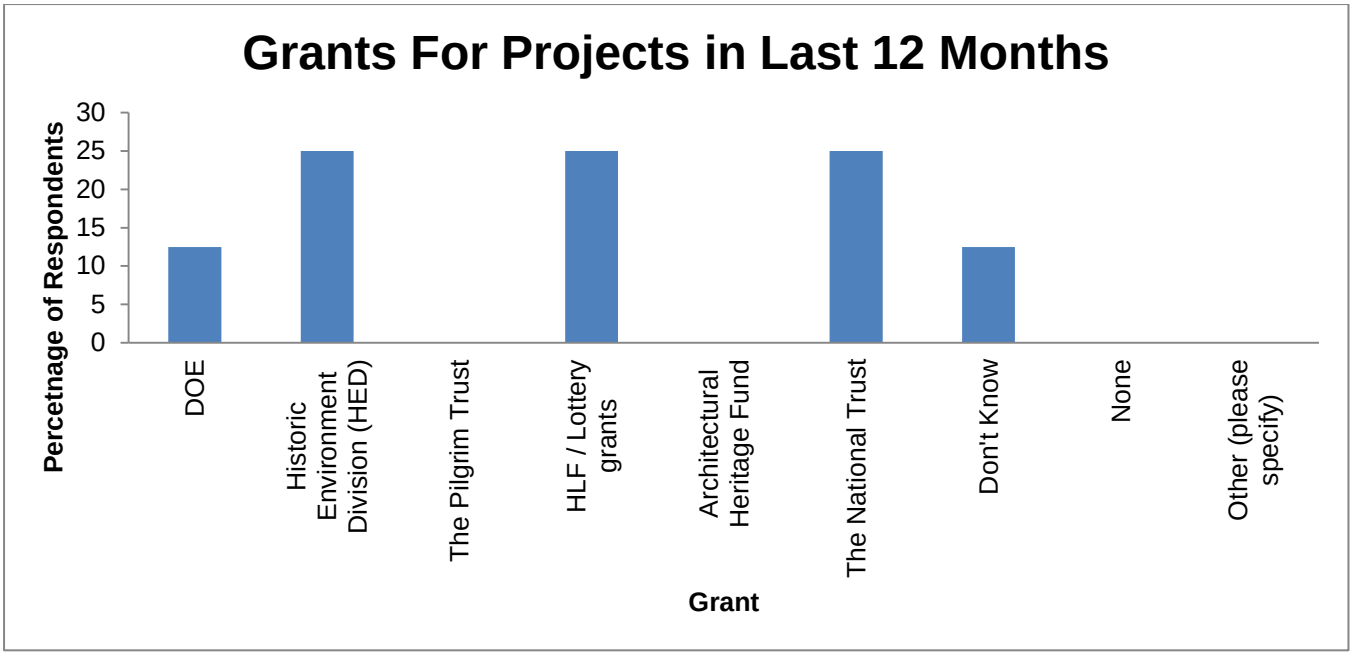

Figure 58: Grants For Projects in Last 12 Months

180. HED, HLF / Lottery grants and the National Trust were the most widely used sources of funding secured for projects respondents had worked on.

Education and Training Providers

Survey Sample of Education and Training Providers

181. A total of 78 education and training providers who may or may not deliver traditional building skills training were identified. Two providers were interviewed and seven of the remaining 76 responded to the online survey.

182. The providers interviewed included one university and one Further Education (FE) college. The respondents to the online survey described themselves mainly as private training providers, although some FE colleges also responded. The respondent who selected 'other' described themselves as a '*sole trader consultant community engagement animator, writer and educator*'.

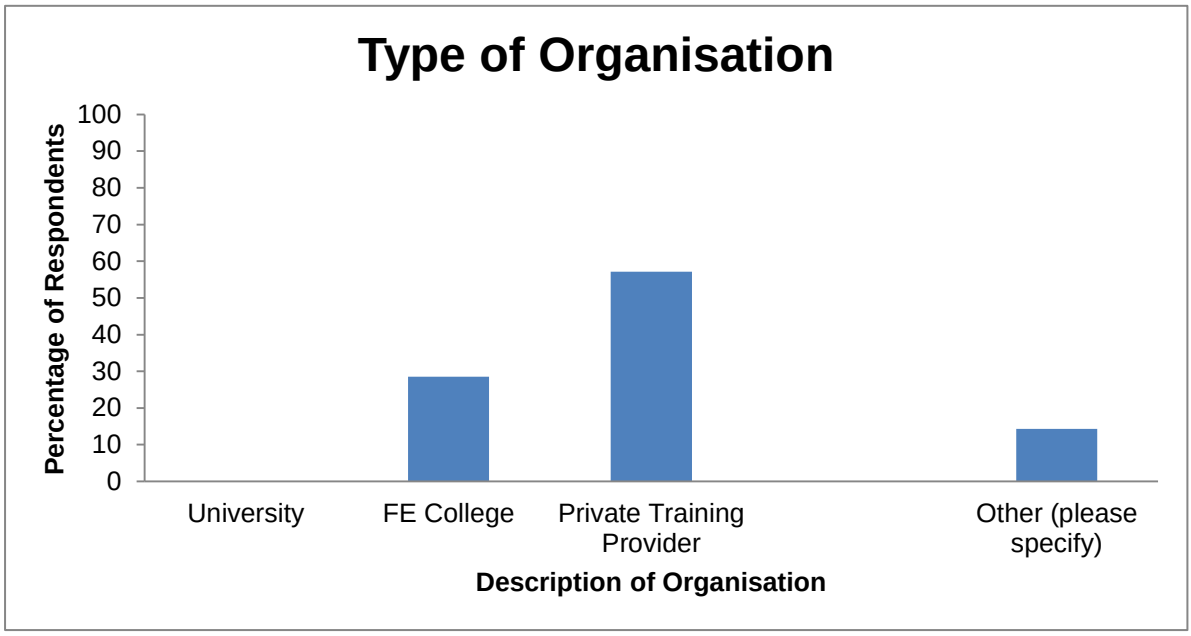

Figure 59: Type of Organisation

Construction Training Provision

183. The FE training provider interviewed during Phase One of the research advised that demand for training at FE level is non-existent, except perhaps for stonemasons. Courses in heritage are available in FE colleges but there is no uptake. However, mainstream provision could be adapted to include heritage modules.

184. Specific heritage provision at the university interviewed was available but has been withdrawn (although not due to a lack of demand). However all courses have some form of heritage / conservation within them although it is not a significant part of the curriculum. Student projects may also feature heritage buildings.

185. The training providers surveyed through the online questionnaire deliver the formal training outlined in the chart below. The main activities are wood trades, bricklaying and masonry, and plumbing. In terms of the category 'other' a wide range of courses are offered including Civil Engineering, Property Planning and Housing, Electrical Installation, Gas, and Sustainable Construction.

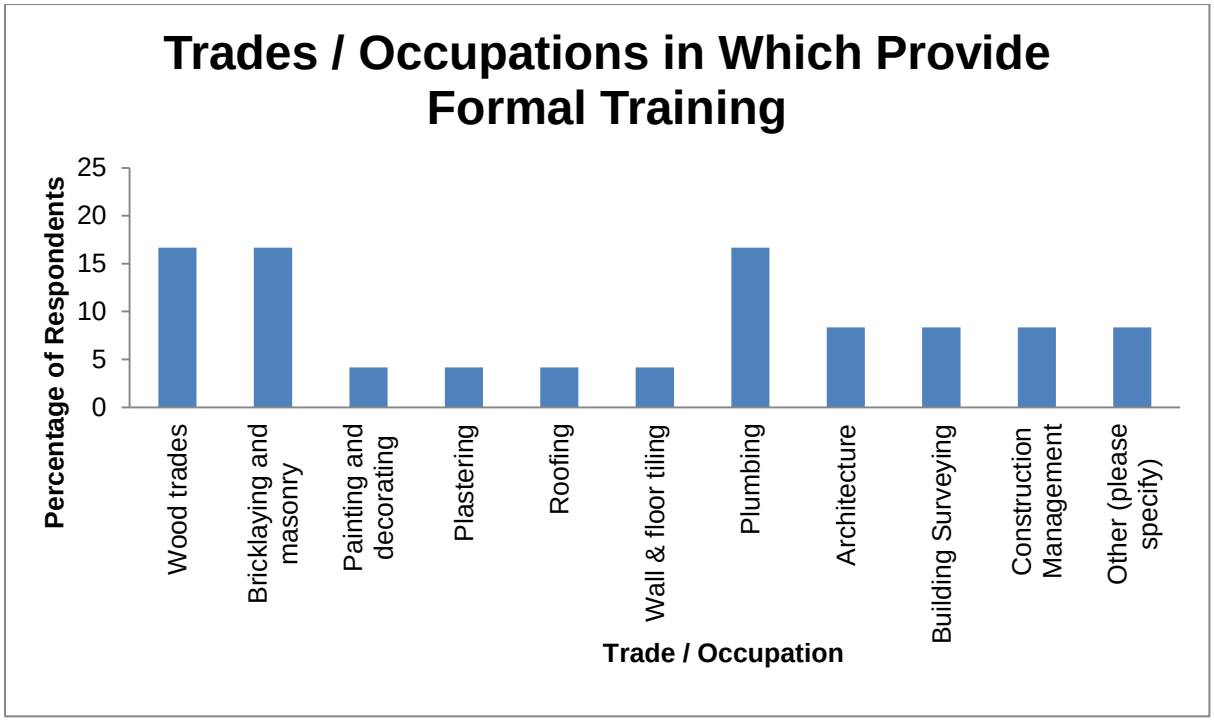

Figure 60: Trades / Occupations in Which Provide Formal Training

186. Online survey respondents were asked to clarify how many of their courses lead to formal qualifications and the results are displayed in the chart below. Again bricklaying and masonry, wood trades and plumbing come out as the leading courses.

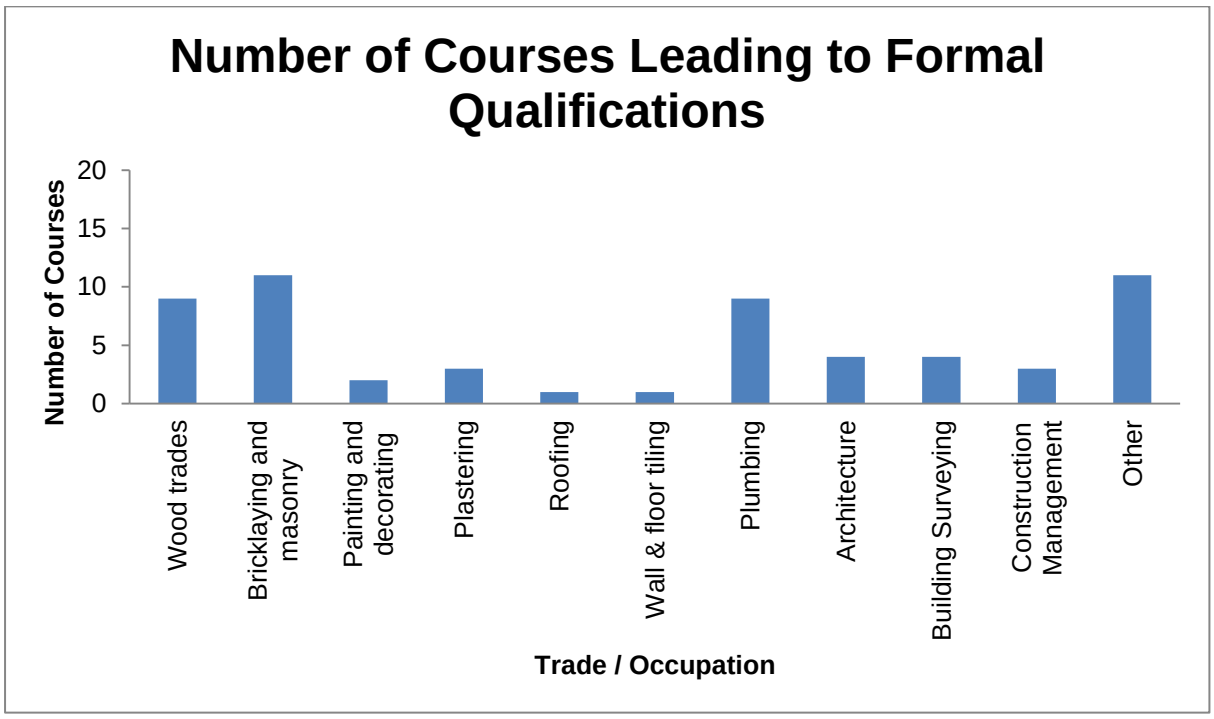

Figure 61: Number of Courses Leading to Formal Qualifications

187. Thirty three percent of courses provided by those who responded to the online survey are delivered at Level 2. A further 17% are delivered at Level 1 and another 17%

at Level 3 – the remaining are courses in the 'other' category, where respondents indicated they delivered courses between Levels 1 and 5, or non-accredited courses.

188. Of the four respondents who answered this question, a total of 144 students were enrolled in construction courses, giving an average of 36 students per organisation.

189. Amongst the six organisations who responded to this question, there were a total of 48 full-time staff and 42 part-time staff. This averages out at eight full-time staff and seven part-time staff per organisation.

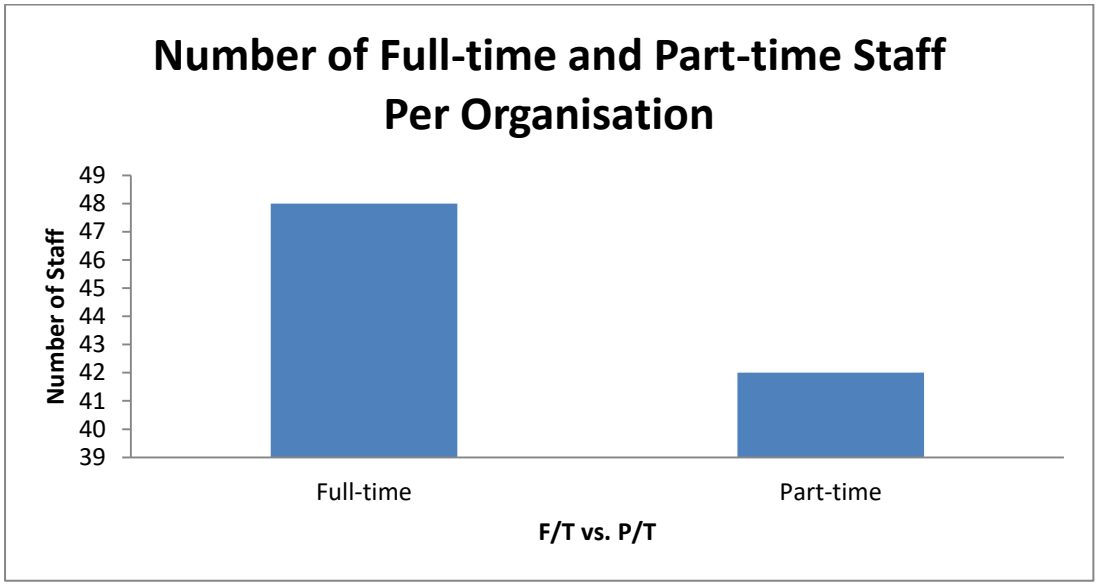

Figure 62: Number of Full-time and Part-time Staff Per Organisation

190. The FE college interviewed during Phase One of the research has 46 lecturers of which five can deliver specialist trades. They do not undertake any Continuing Professional Development (CPD). The university interviewed has 30 lecturers and CPD is up to the individual lecturer.

191. Respondents to the online survey were asked if the knowledge to work on pre-1919 buildings is included in any of the mainstream courses and the results show that this is the case in only 33% of courses. Those respondents who said it was not (67%) were asked why this knowledge is not included in mainstream courses and the findings are outlined below:

191.1. there is no requirement for this in terms of the qualification standards or funding frameworks
191.2. time limitations do not lend themselves to additional units
191.3. there is no demand from employers
191.4. staff lack the knowledge, skills and experience to teach it
191.5. universities and colleges do not see the potential job opportunities for students in this area so do not focus on it.

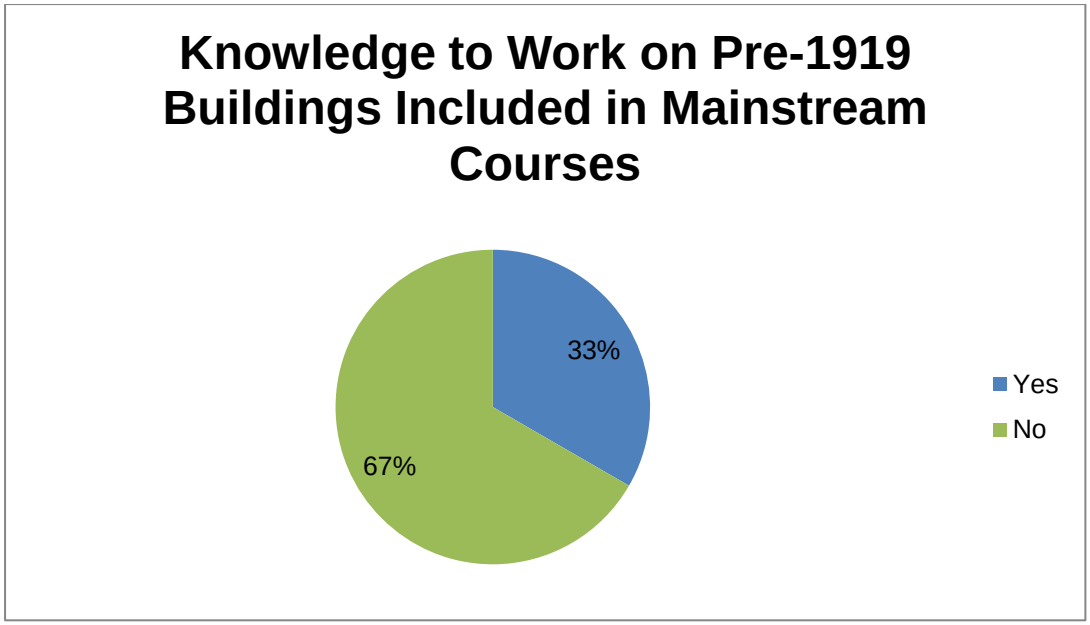

Figure 63: Knowledge to Work on Pre-1919 Buildings Included in Mainstream Courses

192. The online survey respondents whose organisations deliver training on pre-1919 buildings within mainstream courses were asked how this training was delivered. Fifty percent indicated that it was through theory only, the remaining 50% indicated that it was a mix of both theory and practical learning. Respondents were also asked if the properties and appropriate usage of traditional building materials is taught on mainstream courses. The split here was 50:50, a higher percentage than teach knowledge of how to work on pre-1919 buildings. Sixty seven percent of those who do include this element in their courses teach it using both practical and theoretical learning, with the remaining 33% teaching it as theory.

Specialist Conservation / Heritage Skills Modules and Courses

193. Only 17% of respondents to the online survey said they deliver any specialist conservation / heritage skills modules or courses which lead to a formal qualification, however, this was clarified as being an element of another qualification rather than a standalone heritage course or module. Eighty three percent do not offer any specialist conservation / heritage skills modules or courses which lead to a formal qualification.

194. In the past 50% of online survey respondents have delivered specialist conservation / heritage skills modules or courses which lead to a formal qualification. These qualifications were in woodworking, stonemasonry and a bespoke one-off course. When asked why these courses no longer run, the responses included lack of interest / demand (40%), lack of tutors with appropriate knowledge / experience (40%), and difficulties getting suitable trainers (20%). One respondent suggested the following as a means of addressing these problems: '*These are specialist areas which we believe should have hubs across the sector that should specialise in one specific area. This would allow the best trainers to be used plus sufficient numbers of students coming through to sustain provision'*.

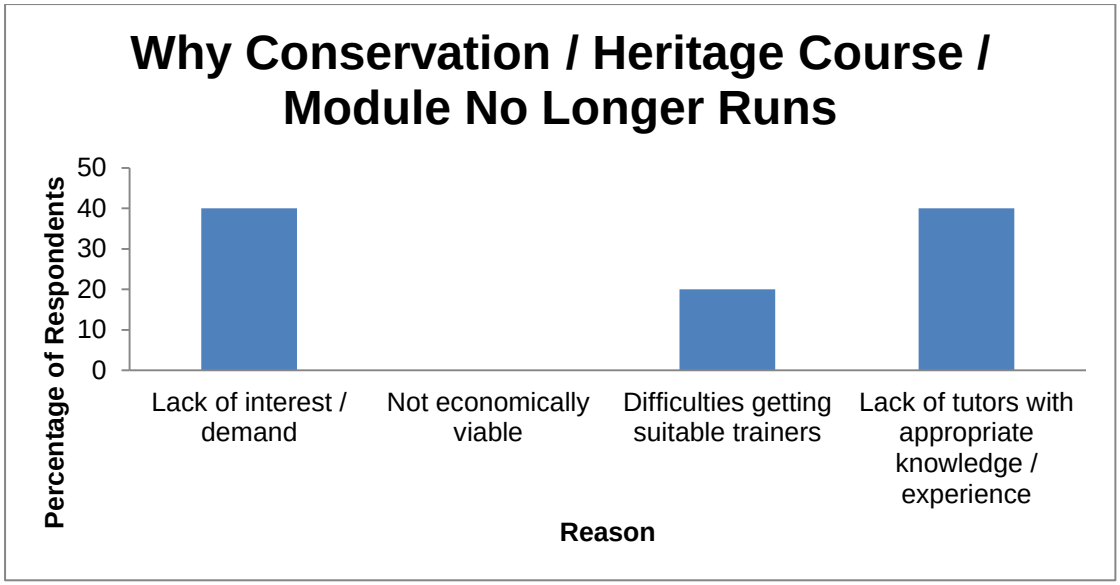

Figure 64: Why Conservation / Heritage Course / Module No Longer Runs

195. When asked what heritage skills (if any) are in demand from employers, one respondent to the online questionnaire indicated that they saw no demand, whilst in contrast another indicated that the following training was in demand: '*Lime plastering / rendering, lime pointing (stone and brick) - particularly hot-mixed lime; stone carving; conservation architecture, conservation structural engineering, conservation planning*'.

196. According to those interviewed, in terms of encouraging more training in the sector, legislation is required to act as a driver for both skills cards to encourage the industry to train and for apprentices, to ensure that apprentices are being taken on in specialist trades e.g. thatching and blacksmithing. Barriers to delivering training are cost and lack of demand for the FE college. The university interviewed felt that the number of migrant workers in NI was restricting apprenticeship training but felt that this issue might be resolved at least in part by Brexit.

197. Eighty percent of online survey respondents would be unable to deliver training in heritage skills if there was demand, mainly due to a lack of specialist staff, although a lack of facilities and access to work placements were also mentioned. The FE college interviewed during Phase One of the research cited a lack of resources should heritage training be in demand however the university interviewed felt that there was no issue with resource.

198. Sixty percent of respondents to the online survey feel that mainstream construction courses do not provide students with the appropriate skills to work on pre-1919 buildings. Twenty percent thought they did and 20% were ambivalent.

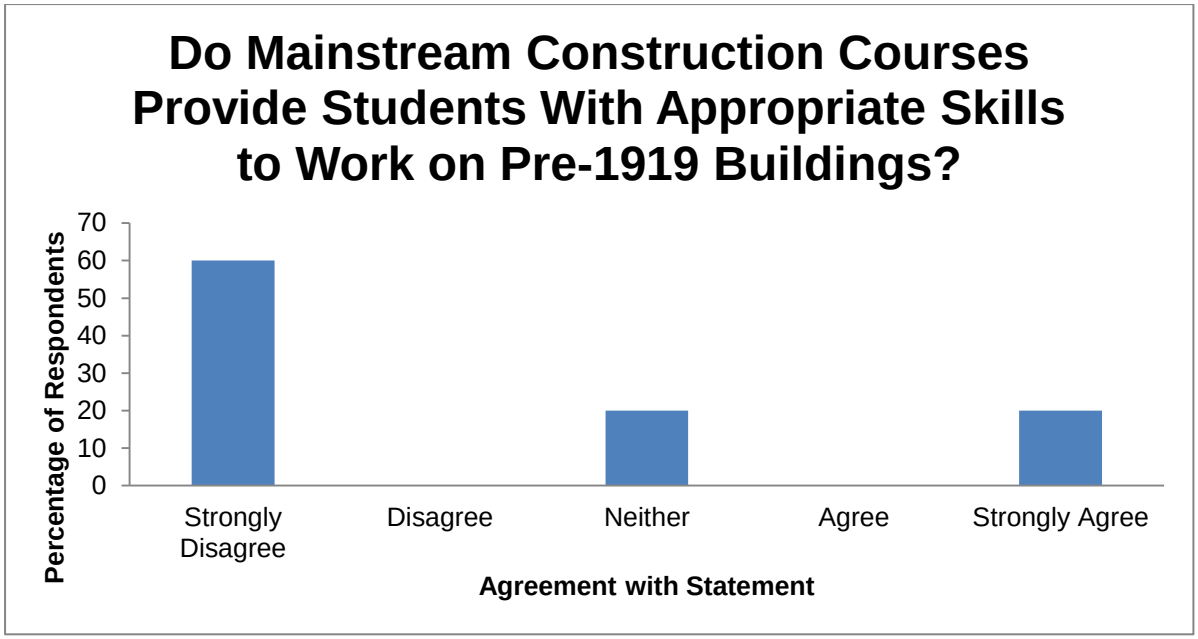

Figure 65: Do Mainstream Construction Courses Provide Students With Appropriate Skills to Work on Pre-1919 Buildings?

199. According to those interviewed in Phase One of the research, awareness of the need for traditional building materials is fairly good amongst training providers and the need to use appropriate materials is highlighted in courses.

200. Respondents were asked to rate the knowledge and ability of students in mainstream courses, to work with traditional building materials. The majority (67%) rated their knowledge and ability as very poor, with only 17% rating them as average and 17% rating them as good. These results could provide a reason for stockholders and building contractors scoring their own workforce's skills levels as fairly poor.

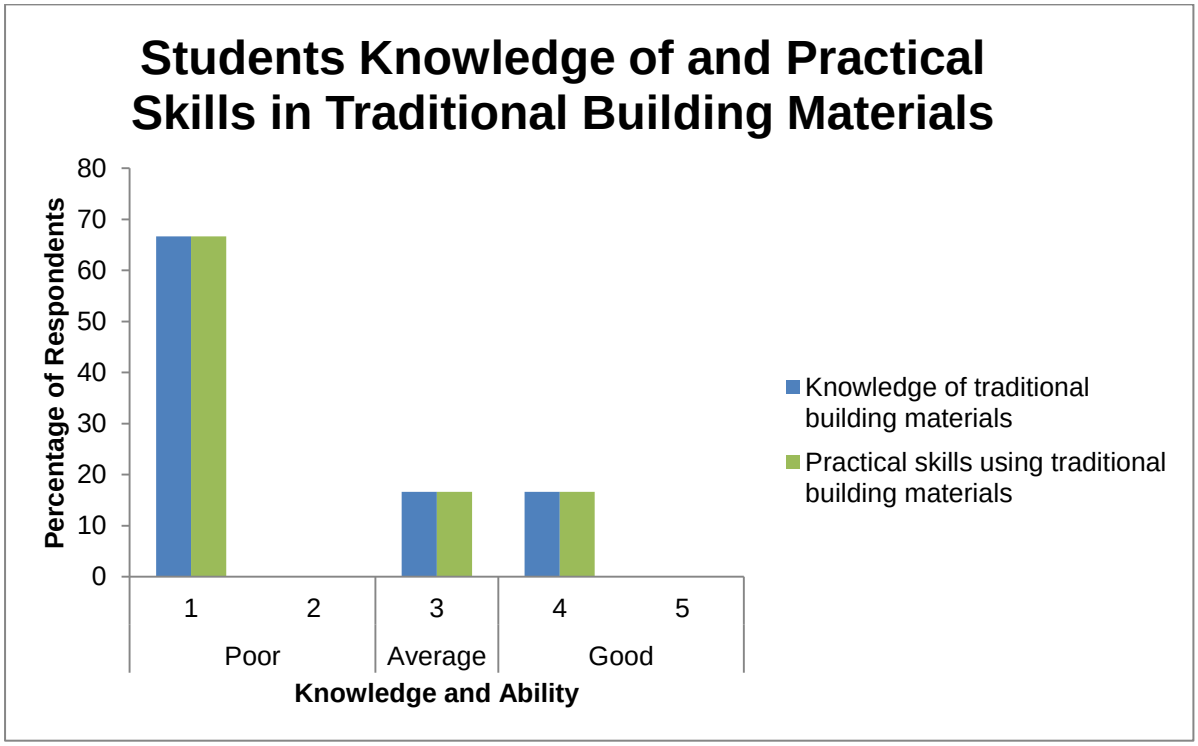

Figure 66: Students Knowledge of and Practical Skills in Traditional Building Materials

201. When asked 'to what extent do you agree that additional *compulsory* modules should be introduced on mainstream construction courses to cover traditional theory and practical skills using traditional building materials, the majority of respondents to the online survey agreed or strongly agreed, although more so for the theory element (83%) than the practical element (63%). Seventeen percent each disagreed.

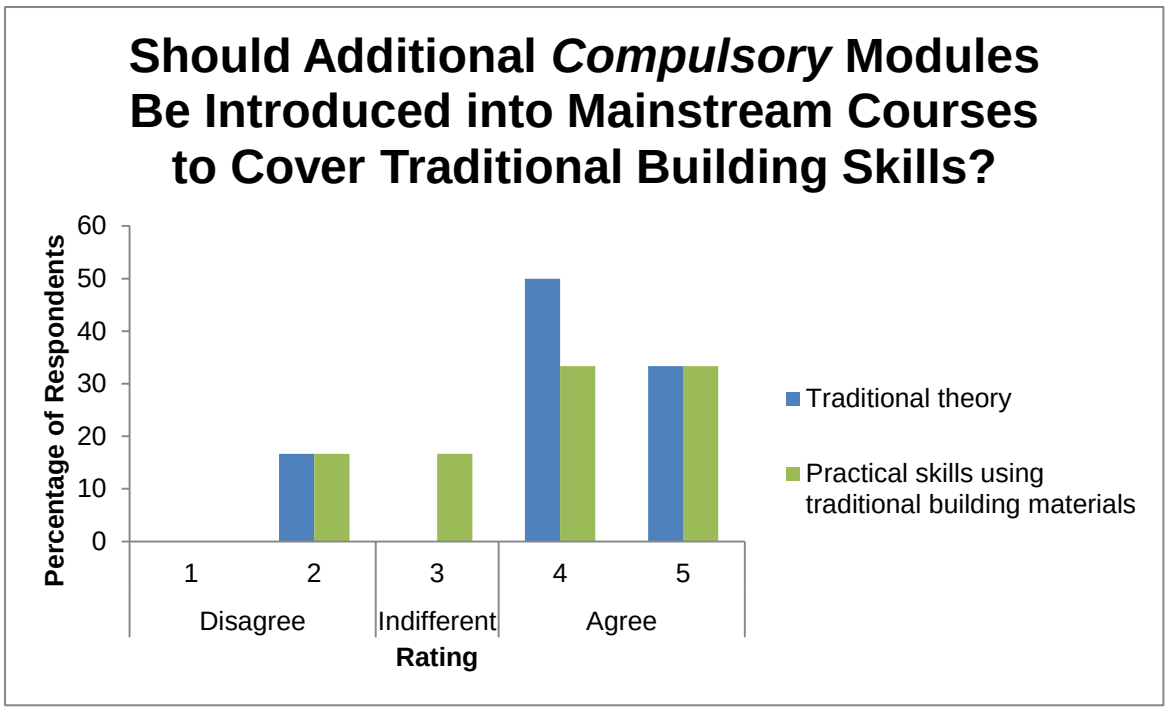

Figure 67: Should Additional *Compulsory* Modules Be Introduced into Mainstream Courses to Cover Traditional Building Skills?

202. Some additional comments on the subject were provided by survey respondents: '*Occupational Frameworks should include one mandatory traditional skills unit within. This does not have to be linked to a practical assessment however it would begin the process of introducing into mainstream curriculum. CITB NI should work in conjunction with the Department for Communities to develop a resource centre at Nutts Corner as a hub for Colleges to bring lecturers to upskill through guest experts initially and then peer learning. This can then be used as a shared resource with lecturers from all Colleges developing skills across a range of areas'*.

203. When asked the same question but for *optional* modules the results were more positive in that none of the respondents disagreed with this idea, however there was much more indifference to the idea than encountered in the previous questions (33% in each case) meaning that the number of respondents agreeing was actually slightly less than for the introduction of compulsory modules (67% each).

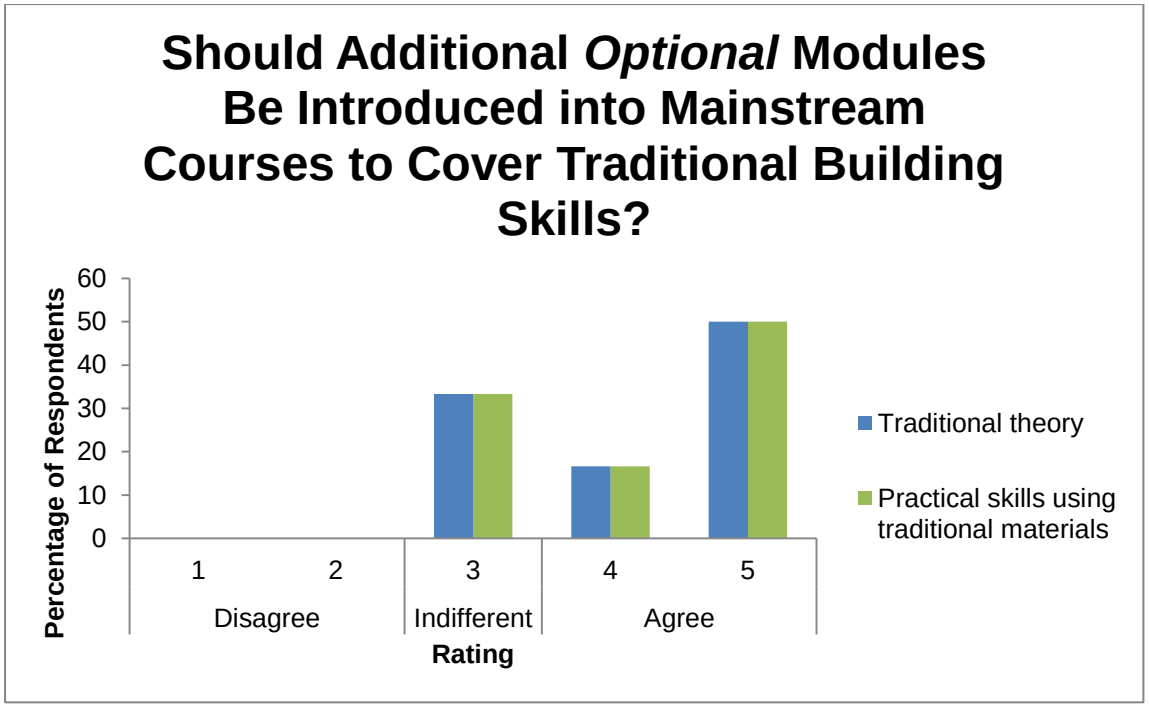

Figure 68: Should Additional *Optional* Modules Be Introduced into Mainstream Courses to Cover Traditional Building Skills?

204. Respondents to the online survey were asked if they run any building conservation or traditional building craft skills courses which do not lead to formal qualifications such as NVQs or degrees. Eighty three percent do not. The only training provider who does deliver informal training has a mix of participants including builders / tradespeople, building professionals and home owners / DIY enthusiasts. Architects and stonemasons are the most common attendees. These courses last on average between two to four days.

205. According to the training providers who responded to the online survey, seven percent of teaching staff have the sort of traditional craft skills or professional knowledge necessary to work on pre-1919 buildings.

206. Online survey respondents were asked about the willingness of staff to develop their own traditional craft building skills / knowledge further, using a scale from one meaning not at all to five meaning to a great extent. All the responses fell in the middle of the scale indicating that lecturers are not particularly interested, although this may be a result of the lack of demand. About 50% of respondents indicated that there is no funding available for staff to upskill. Those who indicated that there was funding available cited the following sources: internal staff development budgets and the Lecturers into Industry scheme[7]. Additional comments included: '*while retraining of current staff is desirable to upskill in traditional skills we need trade experts in traditional skills at the forefront of any training being offered out to construction industry*'.

207. As with other groups, during the interviews some concerns were raised about a retirement 'time bomb' as many really specialist tradespeople are getting older and younger people are not being trained to replace them.

November 2018 Report Addendum – since completion of the report we have been advised that Southern Regional College has been providing the NVQ Level 3 Stonemasonry and the

[7] Which we believe no longer runs

NVQ Level 3 Heritage Skills Diploma (Stonemasonry) which has been running every year since 2002 and 2007 respectively. Diplomas have been awarded to over 50 students. They are also currently delivering the NVQ Level 3 Stonemasonry (Construction) for 6 students which has been set up from demand from past Heritage Skills students to learn gothic and classical detailing and carving.

Impact of the Current Political Situation and Anticipated Future Changes

Stockholders and Other Stakeholder Organisations

208. There were mixed views on the future and current political issues such as the Stormont stalemate and Brexit. Changes to Building Regulations, energy performance requirements and EU directives were all cited as potentially affecting the heritage sector in the future. The main issue with Stormont is its impact on funding and the ability to plan budgets. In terms of Brexit, labour, e.g. cross-border skills might be an issue as might the impact on materials costs which one interviewee thought might decrease.

Building Contractors

209. Interviewees were asked about how future developments in terms of politics, economics, legislation and regulation might impact the sector going forward. Two contractors indicated that in the future there is likely to be more policing and more accreditation required. Legislation (e.g. health and safety legislation) is having an impact on costs. Things like changes in British Standards, fire regulations and air tightness requirements may all have an impact

210. The situation in Stormont is having an impact in that Government work is not forthcoming, which will ultimately lead to a slowdown in the industry. In addition, it means that funding for heritage projects is not forthcoming. One contractor thought that Brexit may result in increased costs of materials from the EU, two felt it would have no impact and the others were unsure or did not comment.

Manufacturers / Suppliers

211. Those interviewed were asked about the impact of future changes in politics, economics, legislation and regulations. Comments included: '*changes in British Standards may have an impact on the roofing industry*'; '*Stormont is delaying work starting on projects and funding is being withheld. This will lead to a slowdown in the industry. Whereas before, clients could get most of their funding from HED, they now have to look at multiple sources*'; and '*Brexit has already had an impact with the devaluation of Sterling resulting in an increase in imported materials costs of 20% which ultimately has to be passed on to the customer*'.

Forecasts

212. The information in this section has been provided by CITB GB.

213. The table below provides an overview of the current and forecasted market size for construction, construction repair and maintenance, and pre-1919 conservation, repair and maintenance over the five year period from 2017 to 2021.

Table 7: Forecasted Market Size for Work on Pre-1919 Buildings

	2017	2018	2019	2020	2021
A: Total building market in Northern Ireland (£m Constant 2013 Prices)	£2,555	£2,595	£2,645	£2,605	£2,545
B: Of which Northern Ireland R&M Output (£m at Constant 2013 Prices)	£660	£655	£665	£675	£680
C: CRM theoretical total market value for building work on pre-1919 buildings (£m Constant 2013) (24%)	£160	£155	£160	£160	£165
D: CRM on pre-1919 buildings taking into account those not doing any pre-1919 work from the survey (£m Constant 2013 Prices) (26%)	£40	£40	£40	£40	£45
E: CRM on pre-1919 buildings and using traditional materials (£m Constant 2013 Prices) (44%)	£20	£20	£20	£20	£20
Rounded to nearest £5m					

214. Row A provides information on the size of the Northern Ireland construction market overall. In order to achieve a figure for the pre-1919 market, first the value of Northern Ireland R&M output was determined (Row B). Using the proportion calculated for the 2009 survey[8], the amount of R&M work undertaken by those who are involved in work on pre-1919 buildings was identified (Row C). However these figures include all R&M work meaning work on both pre-1919 buildings and on more modern buildings. The data has then been weighted to take account of the proportion of work undertaken only on pre-1919 buildings which provides the figures in Row D. Row E further breaks this down to show what proportion of the work uses traditional building materials.

215. Labour requirements and training forecasts can then be determined from the size of the sector. This has been done using a coefficient calculated for the 2009 research, which determines the number of workers required for every £1 million of forecasted demand (for Northern Ireland this equals 23 workers). Row A of the table provides figures for the number of workers likely to be involved in work on pre-1919 buildings in Northern Ireland for the period 2017 to 2021. Row I shows the labour demand for contractors using traditional building materials. Further recruitment coefficients were applied to the data to obtain the number of new entrant workers (Row B).

216. The number of new entrants does not equate to the number of people who need training as new entrants may already be fully or semi-skilled workers. Using data obtained from some of CITB GB's other research projects, the number of new entrant workers requiring no training (i.e. fully skilled) has been determined as 10 per annum (Row C) and the numbers requiring top-up training has been determined at 20 per annum (Row D). Less than 10 new workers will require full training (Row E).

[8] The 2009 figure was used as the sample size was larger, therefore those findings are less subject to error margins. Having said that, due to the small size of the sector, when breaking down figures into sub-groups, there are likely to be large error margins and as such all figures in this section should be treated as indicative only.

Table 8: Forecasted Demand and Training Needs for Workers on Pre-1919 Buildings

	2017	2018	2019	2020	2021
A: Labour Demand by Output – Workers undertaking pre-1919 building work	750	750	760	770	770
B: Entrant workers	30	30	30	30	30
C: Entrant workers requiring no training (25% - CITB Employer Panel)	10	10	10	10	10
D: Entrant workers requiring top-up (59% - CITB Employer Panel)	20	20	20	20	20
E: Entrant workers requiring full training (13% - CITB Employer Panel)	<10	<10	<10	<10	<10
F: Entrant workers requiring any training	20	20	20	20	20
G: Existing workers requiring top up training (4% - ESS 2015)	30	30	30	30	30
H: Total number requiring training	50	50	50	50	50
I: Labour demand by contractors using traditional materials	330	330	330	340	340
J: Top-up training requirement for contractors using only traditional materials	10	10	10	10	10
K: Entrant workers with traditional skills	10	10	10	10	10
Rounded to nearest 10					

Conclusions

Demand in the Heritage Sector

217. The current value of work undertaken on pre-1919 buildings equates to around £40 million maintaining a fairly steady rate up until 2021 when it increases slightly to £45 million.

218. According to the stockholders, building contractors and building professionals surveyed, demand for the restoration, conservation, repair and maintenance for pre-1919 buildings is increasing as stock deteriorates. However this demand is not being met due to a lack of funding which is limiting expenditure and in fact a decrease in expenditure amongst stockholders is forecast for the next 12 months. Another potential barrier to investment in pre-1919 buildings is the fact that VAT is charged on renovations and refurbishments (in contrast to no VAT on new builds).

219. Manufacturers and suppliers of traditional building materials are however experiencing an increase in demand for these products.

220. Despite the demand for restoration, conservation, repair and maintenance of pre-1919 buildings, without adequate finance to fund projects there is no demand for skilled labour to carry out the work. This filters down to a lack of demand for heritage training at FE level where it is said to be non-existent with the exception of stonemasonry.

221. According to forecasts, the total number of construction workers requiring training on an annual basis is 50.

222. Skills Levels, Gaps and Shortages

222.1. Most stockholders do not have their own workforce and subcontract work out – most people supplement existing staff with sub-contractors. Specialist tradesmen are often brought in from GB.

223. A quarter of stockholders never use qualified or experienced people to carry out work. Potential reasons for this include:

223.1. no one is available / they have to wait too long for a skilled contractor
223.2. the skills required are not available in the workforce
223.3. they choose not to
223.4. they have insufficient knowledge.

224. Stockholders are not particularly happy with the quality of contractors work or their knowledge of traditional materials but as many do not use qualified or experienced tradespeople this is perhaps to be expected.

225. Stockholders also rated their staff's skills levels as being relatively low yet they prefer to do their training on-the-job. Whilst each stockholder most likely has some skilled staff, this method risks passing on poor skills throughout the workforce. Strangely, given the low assessments of skills levels, stockholders did rate their staff's knowledge of materials as good.

226. When combining all the data from the different groups, carpenters and thatchers are considered the most difficult to recruit, followed by cabinet makers, drystone wallers and stonemasons (bankermasons), then plumbers / leadworkers and finally stonecarvers. Those contracting the various trades have to wait over three months for bricklayers, cabinet makers, drystone wallers, glaziers, steeplejacks, stonefixers, stonemasons (bankermasons), stonecarvers, thatchers, wall and floor tilers and wood machinists). Skills lacking in employed staff are noted in the following trades: electricians, glaziers, heating and ventilation engineers, joiners, plumbers / leadworkers, steeplejacks, stonemasons (bankermasons) and stone carvers. Those trades which are likely to be used in the next 12 months include electricians, carpenters, general crafts / tradesperson, joiners, decorator / painter, plumber / leadworkers, heating and ventilation engineers and roofers (general tiles and slates). While caution should be exercised given the small number of responses for each of these questions, it does provide a general overview of the situation, better summarised in the table below:

Table 9: Summary of Findings Re Skills Gaps and Shortages

Occupation	Skills Lacking in Employed Staff	Difficult to Recruit	Wait Over 3 Months	Likely to Use in Next 12 Months
Bricklayers			x	
Cabinet Makers		x	x	
Carpenters		x		x
Decorator / Painter				x
Drystone Wallers		x	x	
Electricians	x			x
General Crafts / Tradesperson				x
Glaziers	x		x	
Heating & Ventilation Engineers	x			x
Joiners	x			x
Plumbers / Leadworkers	x	x		x
Roofers (General Tiles and Slates)				x
Steeplejacks	x		x	
Stonecarvers	x	x	x	
Stonefixers			x	
Stonemasons (Bankermasons)	x	x	x	
Thatchers		x	x	
Wall & Floor Tilers			x	
Wood Machinists			x	

227. The table shows that of the trades most likely to be used in the next 12 months, only carpenters and plumbers / leadworkers are difficult to recruit and there are training needs for internal staff in only electricians, heating and ventilation engineers, joiners and plumbers.

228. An equal proportion of heritage specialists and general builders that do some heritage work responded to the survey and all said they have the skills and knowledge to use traditional materials and the confidence to work on Grade A listed buildings. Despite some identifying themselves as specialist, it would appear that many building contractors and tradespeople do a mix of heritage and mainstream work as there is not enough continuity in heritage work.

229. Contractors rate their skills with regards to traditional materials higher than stockholders, professionals and manufacturers / suppliers rate them. Having said this professionals are still satisfied with the quality of contractors (unlike stockholders), however they are less satisfied with their knowledge of and ability to use traditional materials which seems strange.

230. There is concern about a heritage 'retirement time bomb' due to the fact that most tradesmen who have heritage skills are likely to be leaving in the next 10 years and there is no one to replace them.

231. There are training needs for clients, building control officers and conservation officers and there needs to be more joined-up thinking between different agencies.

232. Just under three quarters of contractors work both in Northern Ireland and outside it. This could be because there is not enough work in Northern Ireland and could also mean that stockholders have to wait longer for contractors to be available for work, leading to skills shortages in NI.

Accreditation, Qualifications, Training and Skills Cards

233. Over half of building professionals are heritage specialists and appear on an accredited register. Very few contractors are listed on registers.

234. Building professionals value experience and on-the-job training over formal qualifications and skills cards when tendering for contractors. Stockholders think that accreditation and formal qualifications are important.

235. Possibly as a result of the above, contractors are not interested in formal training. On-the-job training is rated as the most important method of upskilling (though given the comments above, it may not be the most effective). They also have a low awareness of the availability of specialist heritage qualifications and skills card endorsements.

236. A fifth of stockholders provide training however it is not clear if this is internal or external.

237. Training is also supplied by manufacturers / suppliers of traditional building products particularly for professionals. Some training is available in how to use traditional materials, mainly from the manufacturers / suppliers themselves.

238. Like stockholders, contractors train their staff on-the-job, even though they say they are not skilled which again exacerbates the low skills levels in the industry. However this lack of skills does not prevent them from working on pre-1919 buildings (whether they subcontract more skilled people in or they just do the work with inappropriately skilled people anyway is unclear).

239. Provision of specialist training for professionals is adequate in terms of CPD although some training is only available in GB. Most degree courses cover heritage to some extent.

240. The availability of formal heritage based training is limited with most occupational skills being gained "on the job" alongside skilled colleagues. Mainstream courses are not thought to provide adequate heritage skills according to the majority of stockholders and three fifths of training providers think that mainstream courses do not provide students with the appropriate skills to work on pre-1919 buildings. As such there is strong support for introducing optional or compulsory modules into mainstream construction courses

(100% of stockholders and just under a quarter of contractors for example). However many of those surveyed indicated that they felt that a general awareness of heritage skills was more important than specific skills i.e. being able to recognise when heritage skills / traditional building products are required and knowing how to implement the appropriate solution.

241. Current formal training provision is limited to stonemasons. According to one training provider there is evidence of demand for heritage related training however this was not quantified and none of the others surveyed indicated that they saw any demand. Could this lack of demand be due to a lack of availability of training? Only two contractors mentioned training that was needed, one in thatching and one in surveying – these low numbers would not warrant the development or provision of a training course. In general only 50% of the contractors surveyed were even interested in training.

242. The main lack of resource facing heritage training is the lack of trainers with the appropriate knowledge and experience. Any training that is being delivered focuses mainly on the transfer of knowledge rather than the acquisition of skills. There is no training infrastructure to upskill lecturers / trainers and equally very little interest from them to upskill because of the lack of demand for heritage training. Trade specialists from the industry are required who can contribute to the training. Facilities and a lack of work placements are further barriers.

Traditional Building Materials

243. Demand for traditional building materials is increasing. The majority of materials can be sourced locally however even when available locally, cost may influence purchasers to source their material outside Northern Ireland which the majority do. Local stone is hard to procure as quarries are closed and most stone is now imported.

244. The knowledge and skills necessary to manufacture and process traditional materials are available, however the knowledge and skills to specify and use these materials are not. The different groups surveyed have different awareness levels of traditional building materials and where they can source them.

245. The majority of those interviewed always use / specify traditional building products although there were a few who use tried and tested modern materials.

Future of the Heritage Sector

246. Issues which may impact on the heritage sector in the future are changes in building regulations, airtightness and energy performance standards, fire regulations etc.

247. Stormont is affecting the flow of work and finance for work in the heritage sector and Brexit has already had a negative impact on the price of imported materials. Brexit may also have an impact on labour going forward.

Recommendations

Main Recommendation

248. HED should consider if training within the heritage market could be indirectly stimulated by increasing the grant support available for repair and maintenance and introducing award criteria which includes the use of accredited skilled craftspeople with a

requirement for a heritage endorsement on skills cards or formal qualifications. This would increase the demand for accredited skills and consequently the demand for and availability of training. Skills training could be directly stimulated by allocating some of the maintenance and repair grant support to provide training.

249. All other recommendations below would support this main recommendation.

Grants and Funding

250. Increase grant support for Heritage work.

251. Link grant support to the use of sub-contractors skilled and qualified in heritage work and the use of traditional materials.

252. Incorporate the need for improved energy efficiency in historic buildings into grant support.

Accreditation, Qualifications, Training and Skills Cards

253. Develop occupationally-based on-the-job training, mentoring and assessment programmes that can be delivered by skilled colleagues. These should include the most in-demand occupations and should cover knowledge of traditional building materials as well as skills. The training should be delivered by experienced people.

254. Partner with manufacturers and suppliers to deliver training programmes to stockholders, professionals and tradespeople in the specification and use of traditional materials.

255. Encourage the upskilling of existing workers in areas where recruitment is difficult.

256. Consider the development of a form of on-the-job apprenticeship to encourage SMEs to take on apprentices.

257. Introduce a method of subcontractor accreditation (e.g. CSR card endorsement).

258. Develop a network of Heritage Trainers and Assessors.

259. Include either an optional or compulsory module in heritage skills (both practical and theory) in all mainstream trade courses.

260. Formal training for young people should be delivered at specialist training hubs focusing on particular trades and using specialist trainers to ensure sufficient numbers and long-term sustainability of training.

261. Establish a method to upskill lecturers / trainers which might involve developing a work placement programme for lecturers to improve their heritage skills and knowledge or developing a training hub for specialist heritage trainers where skills can be shared and improved.

262. Develop training for staff employed by stockholders which might include seconding workers and sharing the pool of skilled workers between stockholders (and potentially contractors) to improve skills overall.

263. Work in partnership with / encourage Trade Associations / Federations to provide training in heritage skills.

264. Educate stockholders on the need to use appropriately skilled and qualified workers and what this actually means in practice (i.e. how to identify them and verify their skills).

265. Provide training for professionals, contractors, property owners and building control officers on what traditional training materials to use and when.

266. Provide architects and other building professionals with training in the properties of and identification of traditional building materials as part of university courses.

267. Provide training for building professionals in working on Grade A listed buildings.

Promotion of the Heritage Sector, Skills, and Careers

268. Increase demand for knowledge transfer and skills training.

269. Increase awareness of the heritage CSR skills card.

270. Increase awareness of heritage qualifications.

271. Increase awareness of the UAH Traditional Building Skills Directory and other heritage registers.

272. Develop a promotional campaign for schools to encourage more new entrants into the industry.

273. Develop a central point of contact or website which allows people to search for specialist contractors and professionals, to identify and obtain training, to register training needs, to source funding, to register as a specialist etc.

Policy

274. Work with local Councils to develop a strategy for appropriate repair, maintenance and restoration of heritage buildings and incorporate this into the planning approval process.

275. Ensure private stockholders have equal opportunities to source funding.

276. Introduce legislation / policies to increase the uptake of heritage skills cards, drive training and encourage upskilling.

Appendix One – Skills Action Plans

Progress to Date on the Built Heritage Sector in Northern Ireland Skills Action Plan 2009

1. The following section outlines the agreed recommendation and actions for the heritage sector which were identified following the 2009 report and outlines the progress to date on these actions.

2. Please note that list may not be fully comprehensive as a number of those contacted for updates on progress did not respond, despite several follow-ups.

ACTION THEME 1 - DEMAND FOR SKILLS & MATERIALS

Increase awareness of and demand for the use of traditional building craft skills and materials

Demand

1 Provide integrated information, advice and guidance on conservation, repair, maintenance, and restoration to the general public, clients and stockholders by signposting to the NHTG website and other websites, and developing easily understandable leaflets for public dissemination.

ACTIVITY	ORGANISERS/SPONSORS	CONTENT
'Right Skills for the Repair & Maintenance of Traditional Buildings' 1 day Roadshow	CITB NI in partnership with the Historic Environment Division (HED and formally Northern Ireland Environment Agency)	The event was aimed at clients, building professionals, contractors, property owners and training providers to learn more about the expertise and skills required for the Repair and Maintenance of Traditional (pre-1919) Buildings. The roadshow was delivered by leading people from the built heritage sector in September 2012. Ninety people attended the event.
'Traditional Lime Mortars & Renders Training for Contractors & Building Professionals' 1 day course	HED in partnership with the National Trust (NT) and CITB NI with the Building Limes Forum Ireland (BLFI) and in association with Historic Scotland (HS).	Onsite training was held at the Argory, Dungannon in June 2014 that was aimed at practitioners seeking to update and enhance their existing skills in understanding, using and specifying building limes. Forty people attended the course which provided 'hands on' tutorials in raking out, repointing and rendering, issues around the influx of new building limes onto the Irish market, pre-bagged 'ready mixes', the use of mechanical tools and 'hot lime' mixes using indigenous limes was all addressed.
Dry Stone Wall Booklet and Leaflet Short films produced Primary School Teaching Resource	Mourne Heritage Trust (MHT)	Films on techniques used to restore Tollymore Follies (YouTube – Mournelive) and also less technical films produced to raise

		awareness of built heritage in the Mournes, eg Mourne Water Towers, History of Tollymore Follies and Down Memory Lane in the Mournes.
Presentations and individual advice and guidance	Inner City Trust (ICT)	Advice on best practice and procedures in relation to the restoration of listed and heritage buildings.
Dedicated website Advice & Guidance	Ulster Architectural Heritage (UAH)	Dedicated Advice and Guidance section on UAH website providing answers to frequently asked questions and providing more in depth information on certain topics relating to built heritage through dedicated guidance notes.
Your Architecture, Your Heritage Initiative	UAH supported by Heritage Lottery Fund (HLF)	
'Maintain to Retain' Project 2017	UAH worked with Armagh Banbridge and Craigavon District Council, supported by DfC	Dedicated guidance and workshops on maintenance.

2 Use the emerging UK-wide NHTG Heritage Building Contractors Register to promote the selection of suitably experienced and competent contractors for pre-1919 building work and to provide consumer protection to homeowners.

The Traditional Building Skills Register, hosted by UAH and supported by DfC Built Heritage at Risk project has published the Fourth Edition of the register online. It has been live since 2014 and is currently being maintained and monitored by UAH. The directory identifies and promotes the importance of traditional building skills in the conservation of historic buildings and hosts a variety of associated conservation specialists in Northern Ireland. There are a large number of practitioners listed.

3 Work with heritage organisations and major stakeholders to develop a Works & Training Contract Framework, and use quality price tendering for pre-1919 buildings to deliver higher quality projects and develop a standard approach to stipulating the level of skills required in project specifications, to ensure current and future skills supply.

UAH continue to advocate for a better framework to guide the quality of projects and the use of adequate levels of expertise, according to specification, as necessary.

4 Ensure that clients/stockholders are aware of and insist upon evidence of competence and safety-awareness through the construction registration schemes, and investigate developing a Heritage Skills Card for built heritage sector work, to comply with the industry objective of a qualified workforce by 2010.

In December 2009 the Construction Employers Federation (CEF) approved a heritage endorsement to the Construction Skills Register (CSR). Following considerable work in developing the card routes and ensuring Council approval the advanced craft card is now available for bricklaying, carpentry and joinery, craft masonry, painting and decorating, roof slating and tiling, stonemasonry, stone carving and wall and floor tiling.

Due to the CITB NI HLF funded heritage programmes during 2010-2015, lecturers were trained from three colleges (Belfast Metropolitan, South West and South East) to be able to offer the NVQ Level 3 Diploma Heritage Skills which is a requirement to get the CSR Heritage endorsed card. The NVQ qualification was also an outcome for the CITB NI HLF funded bursaries and enabled them to acquire the card on completion of the relevant H&S training. However, only five craftspeople have achieved the card to date: three joiners and two stonemasons.

5 In partnership with the IHBC and other professional bodies, work more closely with conservation officers, planners and local authorities to encourage the use of an appropriately skilled regional workforce and traditional building materials for pre-1919 buildings, and develop improved information and guidance for their use with private stockholders.

Many of the stakeholders who responded to the request for an update on the Skills Action Plan in respect of their businesses/organisations stated that they have worked with various organisations such as Ulster Architectural Heritage (UAH), Historic Environment Division, planners and local authority when carrying out restorations projects, and seeking advice and guidance and recommendations for skilled workers.

One organisation, Inner City Trust, signed the prosperity agreement between the Department of the Environment Historic Environment Division and the Inner City Trust. The agreement is a framework for the development and implementation of “best practice for the management of historic buildings and heritage construction projects”. It encourages “excellence in heritage development and management to improve environmental performance and reduce costs” and promotes “working with key stakeholders in the Derry-Londonderry area to develop a strategic approach to the management of the historic assets within the Walled City”.

UAH, supported by HLF delivered ‘Home & Dry’ Workshops up to 2012. These events linked historic building owners to traditional building owners to traditional skills and craftspeople.

6 Promote the positive environmental and social benefits of traditional buildings, including the contribution to minimising carbon emissions (through reducing waste and using nationally sourced building materials), energy efficiency, sustainability, quality outcomes and local distinctiveness through the sensitive use and reuse of pre-1919 buildings.

ACTIVITY	ORGANISERS/SPONSORS	CONTENT
2 Day Energy Efficiency and Retrofit of Pre-1919 Traditional Buildings Course, a recognised SQA Level 3 Award	Organised by the Environment Study Centre and delivered in partnership between the NCC and Edwards Hart Consultants Ltd	Aimed at Work supervisors and site managers experienced craftspeople, contractors, architects, surveyors and housing technical officers estimators, planners and designers Conservation officers and Building control officers. The training programme provided individuals with a better knowledge and understanding surrounding energy efficiency works and the installation of energy efficiency measures to older traditional buildings and ensured that such measures do not compromise the aesthetics of such buildings, or lead to the development of unintended consequences.
'It's not just retrofit: Making Older Buildings Energy Efficient'	UAH in partnership with Institute of Historic Buildings Conservation (IHBC)	A talk and panel discussion that was aimed at everyone in the property and construction industry who needed to understand that the one size fits all approach is not the answer for millions of older buildings. Discussions included the Fundamental differences between new and older buildings, comparing and contrasting energy efficiency assessment methods, making existing fabric more energy efficient – without retrofit, why dampness is one of the most important issues to understand.
2013 NGO Challenge Funded 'Quality Streets: Retrofitting Traditional Terraces'	UAH	A short video to encourage heritage–led regeneration and the creative retrofitting of Belfast's distinctive red brick terraces –

		protecting established communities and the homes of local residents.

ACTION THEME 2 – SUPPLY OF SKILLS & MATERIALS

Work towards achieving a fully skilled and qualified built heritage sector workforce by ensuring that contractors and craftspeople invest in training and upskilling.

Supply

1 Establish suitable training providers and assessors for the Heritage Skills NVQ Level 3, Scottish National Progression Award for the Conservation of Masonry and the Senior Craftsperson NVQ Level 4 to stimulate demand for training and self-development, and review and adapt existing/future qualifications to meet employer demand.

The Training the Trainers Built Heritage Trainers Forum was formed in the initial stages of the CITB NI funded HLF programmes between the three colleges, Belfast Metropolitan, South West and South East to work together to deliver heritage skills training.

Southern Regional College has been providing the NVQ Level 3 Stonemasonry and the NVQ Level 3 Heritage Skills Diploma (Stonemasonry) which has been running every year since 2002 and 2007 respectively. Diplomas have been awarded to over 50 students. They are also currently delivering NVQ Level 3 Stonemasonry (Construction) for 6 students which has been set up from demand from past Heritage Skills students to learn gothic and classical detailing and carving.

Through the CITB NI HLF funded programmes during 2010-2015 a team of assessors were trained to be able to assess for the NVQ Level 3 Diploma in Heritage Skills (Construction) in stonemasonry, painting and joinery.

2 Focus upon upskilling practitioners working in the construction sector and career changers from other trades or professions for the built heritage sector, and promote career progression to master crafts status, to enable craftspeople to remain working on the tools.

ACTIVITY	ORGANISERS/SPONSORS	CONTENT
'Sustaining Traditional Building Skills in Northern Ireland' and 'Heritage Specialist Apprenticeship Programme - Wood Occupations'	CITB NI with funding from HLF	Bursary training placements for experienced craftspeople from construction to upskill in their occupational area into the heritage sector and achieve an NVQ Level 3 Diploma

		in Heritage Skills. One year placements were offered by a number of experienced heritage contractors and organisations in conservation joinery, conservation metalwork, stonemasonry, traditional plastering, heritage painting and blacksmithing. Twenty nine participated on the programme and 28 achieved the NVQ. Three colleges (South West, Belfast Metropolitan and South East) were able to offer the Level 3 Unit Award in Understanding Repair & Maintenance of Traditional Pre-1919 Buildings to experienced construction operatives who want to upskill into the heritage sector of the construction industry as a result of their lecturers having completed the qualification themselves.
'Get the Knowledge to Work on Traditional Painted Decoration and Wallcoverings' 2 day course at Castle Ward & Mount Stewart.	CITB NI in partnership with the NT and the Painting & Decorating Association	The course which was aimed at craftspeople who regularly work on the repair, maintenance, refurbishment and re-decoration of old buildings, who had the practical skills but lacked an understanding of the principles for the use of the correct methods and materials for this type of work. Nineteen craftspeople attended and on completion of the course were awarded the Level 3 Award in 'Understanding Repair & Maintenance of Traditional (Pre-1919) Buildings'.
'Dry Walling' and 'Introduction to Lime' Courses	MHT	
Bishops Gate Hotel Restoration Project	ICT	Four Apprentices were employed during the

		project including builders and mechanical services.
SPAB Ireland Working Party	Derry - Donegal Heritage Landscapes Alive 2017 With The Society for Protection of Ancient Buildings (SPAB)	Four day 'hands-on' traditional building skills event focusing on hot-mixed lime and the philosophy of conservative repair of a rubble stone wall which attracted c40 volunteers (architects, stone masons, structural engineers, crafts skills tutors and property owners).

3 Ensure that traditional building skills training is on the Department for Employment and Learning Northern Ireland (DELNI)'s[9] agenda and is eligible for the Department's funding streams.

No progress seems to have been made as none of the respondents provided examples of work or achievements in this section.

4 Increase the use of the HLF Bursary Scheme for Masonry Conservation and the Prince of Wales's Foundation Apprenticeship Scheme by contractors so they access work-based training and practical experience opportunities.

CITB NI worked in partnership with Historic Environment Scotland (formally Historic Scotland) to recruit and manage one year training placements who participated on their bursary programme. This was an HLF funded programme and a portion of the funding was allocated to provide placements in Northern Ireland. Six trainees participated on the programme, all placed with HED and all received the National Progression Award for the Conservation of Masonry qualification.

5 Adapt the NHTG mentoring programme for use in Northern Ireland to enable experienced craftspeople to pass on their skills and knowledge to less experienced practitioners in the workplace and develop the sector skills base.

CITB NI through funding from the Heritage Lottery Fund provided opportunities for heritage Ambassadors to act as advocates and champions to promote the built heritage sector and traditional building skills and to train as mentors to provide advice and guidance to the trainees on the CITB NI HLF funded bursary schemes which ran from 2010-2015. A total of 10 Ambassadors were recruited for the role and they participated in delivering presentations at events and delivering training, organising site visits and mentoring the bursary scheme trainees.

[9] Now incorporated into the Department for the Economy

6 Work with the Building Limes Forum in Ireland (BLFI) and other material suppliers to deliver improved product training for contractors, craftspeople and heritage training providers.

Delivery of a two day training course titled 'Traditional Lime Mortars & Renders Training for Contractors & Building Professionals' at the Argory on Wednesday 18th & Thursday 19th June 2014. Organised by CITB NI, the NT and HED with Building Limes Forum Ireland (BLFI), in association with Historic Environment Scotland. The course was aimed at practitioners seeking to update and enhance existing skills in understanding, using and specifying building limes.

7 Promote European exchange programmes for craftspeople and professional practitioners, and extend opportunities to enable travel around the UK, the Republic of Ireland and abroad, including those offered by Les Compagnons du Devoir.

No progress seems to have been made as none of the respondents provided examples of work or achievements in this section.

8 Increase practical demonstrations by contractors/craftspeople at schools, skills events and education/outreach programmes, and educate potential entrants on the career possibilities within this sector through targeted information packs and a Career in Building Conservation & Restoration brochure for Northern Ireland.

Promotion of the built heritage sector and demonstrations of traditional building skills has been ongoing since the last Skills Action Plan, albeit not on a grand scale. Many of the organisations who responded have participated in some way or another to educating potential new entrants into the sector. The following is a list of some of the activities:

- Heritage Taste & See Events and demonstrations at a number of schools and colleges and at the Skillbuild NI Competition
- Heritage Skills Case Studies produced for distribution at careers events
- CITBNI's 'Building Outside the Box' careers event for School Careers Teachers and Careers Advisors held at Mount Stewart, in partnership with the NT, included a tour of the Mount Stewart restoration project and talks by professionals on careers in built heritage and other specialist sectors
- A primary school teaching resource has been produced by MHT on built heritage in the Mournes
- A partnership between MHT and UAH delivered 24 workshops and a celebration event on their Schools Built Heritage Programme
- Various workshops, conservation skills masterclasses, conferences, guided walks and tours
- 'Taste of Traditional Building Skills Programme' to raise awareness of the wide range of traditional building, professional conservation and heritage management skills through workshops and potential career opportunities
- 'Windows on your World' suite of workshops providing a variety of fun activities suitable for children at Key Stage 1.

ACTION THEME 3 - DEMAND FOR SKILLS & MATERIALS

Deliver flexible training and skills development to meet the needs of contractors and craftspeople and the requirements of the built heritage sector.

Training Provision

1 Provide integrated information, advice and guidance on conservation, repair, maintenance, and restoration to the general public, clients and stockholders by signposting to the NHTG website and other websites, and developing easily understandable leaflets for public dissemination.

A traditional building craft skills centre has been established at HED, Moira depot. Six employees have been trained as assessors for the NVQ Level 3 Heritage Skills (Construction) for Stonemasonry (including Stone Carving), Brickwork, Blacksmithing, and Architectural Joinery. One other member of staff has been trained to be the Lead Internal Verifier.

Two day courses are currently in development covering a range of themes including stone decay that will be offered out to contractors, professionals and all other relevant parties within the built heritage sector.

2 Pilot a Heritage Apprenticeship Programme within the NIEA directly employed labour workforce by registering three or four new NIEA apprentices, develop an in-house training programme combined with the Intermediate Construction Diploma (ICD) and promote this approach to the wider sector

No progress seems to have been made as none of the respondents provided examples of work or achievements in this section.

3 Support training providers to actively publicise heritage and conservation-related construction courses to meet latent demand, and upskill existing trainers through a 'Training the Trainers' programme

CITB NI delivered a 'Training the Trainers' programme to 10 lecturers from three local colleges (Belfast Metropolitan, South East and South West) through the Heritage Lottery Funded project 'Sustaining Traditional Building Skills in Northern Ireland' during 2012. Nine of the Lecturers who completed the course progressed on to achieve the NVQ Level 3 Diploma in Heritage Skills Construction in their

occupational area. By completing this training each of the colleges were provided with the opportunity to upskill their existing lecturers to be able to offer both of the qualifications to anyone working in the heritage sector or considering upskilling into the sector.

4 **Support the provision of accredited/approved training provision to include the Heritage Skills NVQ Level 3, the Scottish National Progression Award and the Senior Craftsperson NVQ Level 4, short training courses and conservation and repair projects, such as Townscape Heritage Initiatives (THIs), as live site-based training opportunities.**

This action has also been covered via the CITB NI HLF funded project outcomes as noted above.

5 **Respond to contractors' preference for on-site, practical training and qualification through increased uptake of the HLF Bursary Scheme for Masonry Conservation; adapt the existing Great Britain ConstructionSkills On-Site Assessment and Training (OSAT) scheme to suit Northern Ireland; develop built heritage assessors within the province (linked to Action Theme 2.1 above); and use other opportunities to upskill and qualify the workforce.**

This action has been covered via the CITB NI HLF funded project outcomes as noted above.

6 **Exploit opportunities for shared training and education between building professionals, contractors and craftspeople by linking to the emerging University of Ulster postgraduate course and CPD skills events, short training courses and on-site learning, and increase opportunities for craftspeople to develop routes from further to higher education.**

From responses gathered it was noted that most of the businesses/organisations have delivered some type of CPD event aimed at building professionals, contractors and craftspeople and many of the businesses/organisations own staff attend courses to continue to develop their knowledge of heritage and best practice of historic buildings.

Other Activities

Awards

UAH leads on the administration of the newly introduced Heritage Angels Awards to Northern Ireland in partnership with HED, CITB NI, HLF, CAF and HNT. The Awards celebrate the efforts of people who go to extraordinary lengths to protect, save, record and share their local heritage and are supported by the Andrew Lloyd Webber Foundation and feature a dedicated award for traditional building skills: 'Best Craftsman or Apprentice on a Heritage Rescue or Repair Project'.

The Federation of Master Builders (FMB) has a heritage award for a project both in Northern Ireland which is then entered to the UK wide competition as part of their Bi-Annual Master Builder Awards.