

# Review of architects' competence research project

## Architect review survey findings

This paper summarises the key findings from a survey of all ARB register members, undertaken to inform the review of architects' competence.

The purpose of the survey was to examine the views of architects on the key skills and responsibilities relevant to their jobs, their existing competence against each and expectations of change in the future. Results from this survey will be used to inform key lines of enquiry in this research project's employer survey and accompanying qualitative research with architects and other sector stakeholders (both scheduled to be undertaken in October and November 2020).

## The survey

### Purpose

The survey contained a series of questions designed to capture respondents views on:

- **Role of an architect:** The roles and responsibilities of individuals working as architects, how those have changed in recent years, and how those are expected to change in future.
- **Emerging issues:** Key issues influencing the sector that architects will need to respond to in the coming years.
- **Remaining up-to-date:** How architects currently ensure their own ongoing professional development, and the sufficiency of these approaches.
- **Existing standards:** Views on the existing standards for and routes to enter the profession.
- **Employer view:** For respondents with responsibility for hiring, management and/or training of architects within their organisations, views on the competence of their architect employees against the above issues.

A full copy of the survey is included in Annex A and the data tables are in Annex B.

### Survey dissemination

The survey was disseminated by ARB, to all 42,546 individuals listed on its register who had an email address. Dissemination was by direct email invitation and follow-up email reminders to all

register members, as well as alerts via ARB's social media channels. It was live from 27 August 2020 to 20 September 2020.

Once final responses had been cleaned<sup>1</sup> the survey had received a total of 4,405 responses, 10% of ARB register members. This level of response of fairly typical for this type of survey and the absolute number of responses is large, giving some confidence in the findings.<sup>2</sup>

## Key findings

### Respondent profile

The great majority of respondents were working as architects at the time of completing the survey (89%). Respondents worked across a broad range of different organisation types and sizes, with most (87%) working in SMEs<sup>3</sup>. This included one-quarter (26%) working as freelancers and 28% in organisations of just 2-9 employees. 13% worked in larger organisations with over 250 employees.

Respondents worked across a range of different types of project. Approximately half worked on residential and/or commercial building projects, with smaller proportions working on health and education buildings (28%) or industrial (18%) buildings.

Perhaps not surprisingly over four fifths (84%) had gained their architecture qualifications in the UK. Of the remained, most had qualified elsewhere in the EU (14% of all respondents).

### Role of an architect

The tasks that respondents most commonly undertook as part of their job were designing proposals and preparing architectural drawings (undertaken frequently by 87% and 85% of respondents respectively). When designing proposals, more architects qualified since 1991 reported doing this frequently than their colleagues who qualified earlier, 94% of architects who had qualified since 2011 reported preparing architectural drawings frequently or very frequently, whereas this task was frequently undertaken by around three quarters of respondents who had qualified between 1961 and 2000. More respondents from smaller businesses reported undertaking this task frequently (90%) compared to those from larger businesses (79%). That these tasks were more often undertaken by more newly qualified people and those working in smaller firms suggests that more experienced (senior) people in larger firms are delegating this task to more junior staff and that there is less opportunity to do this in smaller firms.

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<sup>1</sup> To remove those which did not complete sufficient questions to be usable, and a small number of duplicate submissions.

<sup>2</sup> If this were a sample survey then this response rate would equate to a 1% margin of error on all findings. Meaning that if, for example, 83% of respondents expressed a certain view, we can be 95% confident that were we to run the survey again 82-84% of respondents to the second survey would express the same view.

<sup>3</sup> Organisations with 1-249 staff.

The task that the fewest respondents undertook frequently was use of building information modelling (BIM) (33%). Two thirds of respondents from businesses with fewer than nine employees (including freelancers) report never or very infrequently using BIM, compared to 35% of businesses with over 10 employees. Half (52%) of architects qualified since 2011 reported using BIM frequently, compared to 34% of those qualified between 2001 and 2010.

Another task reported by fewer respondents was the administration of building contracts (42%). 53% of architects qualified between 1981 and 2000 reported administering building contract tasks, compared to 36% of those qualified after 2001. Again, this likely reflects seniority.

When asked about recent changes in their roles and responsibilities, the tasks that most respondents reported had become a more regular part of their job in recent years<sup>4</sup> were professional and managerial tasks such as 'client relationships and marketing' and 'business administration', rather than tasks specifically relating to the more technical architectural practice.

These changes had generally been prompted by respondents moving from one job role to another, rather than changes to the responsibilities of a pre-existing role. For example, 63% of those now undertaking client relationships and marketing more frequently than before reported that changing roles within the previous five years was a factor in this.

Among respondents who had not changed role within the previous five years but who reported that their responsibilities had changed, 'client relationships and marketing' and 'business administration' were also the tasks that had seen the biggest increase in regularity (respectively, 30% of 35% of those whose pre-existing roles had changed). These changes do suggest a difference in work focus from direct delivery to more outward facing or business tasks, even if the respondent roles had not formally changed.

## Emerging issues

When asked about the issues that the literature review suggested had become more important to their own job in the last five years:

- Management of health and safety risks (incl. fire safety) (96% rates as more or much more important)
- Climate emergency/sustainability (88%)
- Digital developments (86%).<sup>5</sup>

There were also fairly widespread views that most of other factors tested had also become more important: demand for specialism (79%), residents and wider wellbeing (76%); acting as a project lead (principal designer, 68%); and BIM (67%).

<sup>4</sup> When respondents were presented with a list of tasks and asked about any changes in the regularity with which they had undertaken them over the past five years, they responded 'regularity has increased'.

<sup>5</sup> Such as the Internet of Things, 'smart' buildings/cities and augmented/virtual reality.

A similar pattern emerged when we asked how things might change in the next 10 years. Changes were most often expected due to climate change (82%) and health and safety (72%). Over half of the respondents also anticipated changes in digital (58%) and a growing need for specialisms (53%). Regardless of business size, 90% or more respondents thought climate change would become more or much more important. Larger businesses were more likely to think digital developments would become more or much more important (82% compared to 73% of businesses with less than 10 employees), while smaller businesses were more likely to think there would be no change in this area. In addition, respondents from larger businesses were more likely to think that management of health and safety risks and demand for specialisms will become much more important (37% compared to 22% of businesses with less than 10 employees and 26% compared to 15% respectively).

Across both questions there was very little anticipation of any of the issues becoming less important. The only response where more than 10% expected a decline was in terms of future changes in building contract management (12%).

Most issues examined by the survey had shown consistent patterns across different cohorts of respondents. However, those who had relatively recently joined the ARB register<sup>6</sup> were more likely to say that BIM had become more important to their job role in recent years (64% of this group said this) than those who had been on the ARB register for longer<sup>7</sup> (46%). Respondents from larger businesses were also more likely to say BIM had become more or much more important (89% of businesses with 250+ employees, compared to 44% of businesses with less than 10 employees).

When asked whether they had the skills and knowledge to respond to emerging issues, the two issues for which respondents reported the biggest skill/knowledge deficit were use of BIM and digital developments within the profession. Interestingly, BIM was one of the less frequent tasks undertaken at present, as reported above. Of those who thought they would need these skills in future, 28% and 23% respectively said that they were 'unconfident' or 'very unconfident' that they currently possessed the necessary skills. These values were more than double those for other issues explored<sup>8</sup>.

### **Sufficiency of the existing General Criteria**

This pattern of changing needs was also reflected in the feedback on the existing General Criteria. Those most widely thought to need more emphasis were climate change and health and safety, but all options were thought under-represented by over one fifth of respondents. Respondents were much more likely to report that issues did not have sufficient emphasis than that they had too much, although the number of respondents reporting that the current criteria had the right amount of emphasis almost always outweighed those thinking that there should be a change.

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<sup>6</sup> Registering from 2011 onwards.

<sup>7</sup> Registering in 2010 or earlier.

<sup>8</sup> 12% felt they lacked the necessary skills to undertake building contract management, while unconfident/very unconfident responses for all other issues were below 10%.

**Table 1: How sufficiently do you think the General Criteria reflect each of the following issues? (% respondents)**

	Not enough emphasis	Right amount of emphasis	Too much emphasis
Climate emergency/sustainability	44	32	3
Management of health and safety risks (incl. fire safety)	38	38	3
Acting as project lead (incl. acting as Principal Designer)	34	42	2
Building contract management	30	45	4
Demand for specialisms	28	36	3
Individual residents' and wider social wellbeing (including equality and diversity issues)	28	42	4
Building Information Modelling (BIM)	27	34	9
Digital developments within the profession	22	38	8

*Note: don't know responses excluded  
Source: SQW*

The general pattern of responses was fairly similar across people working in different sizes of firm. It was always the case that the self employed / freelancers were least likely to report an issue as not having had enough emphasis, and the second most likely group were those employed in small firms (2-9 employees). We return to this issue when we discuss CPD levels below. Interestingly those in firms with 10-99 or 100 – 249 were then often more likely to report an issue as needing more attention than those in the largest firms.

Perhaps more striking was that when we compare responses by when someone qualified, those who qualified since 2010 were most likely to report that an issue required more attention across every issue tested. For example:

- On the climate emergency 42% of those qualified since 2010 said it did not have enough attention, while no more than 27% of those qualified in any other decade held this view
- On digital the corresponding figures were 23% and 12%
- And health and safety while closer still generated response from 31% and 27% respectively.

This difference may reflect changing priorities in the profession, more newly qualified people taking a longer view of their needs as they expected to be working for longer or even this group being more easily influenced by things which are topical currently and over-stating their importance. The focus groups will provide an opportunity to explore this in more detail.

## Remaining up-to-date

Almost one third (31%) of the sample reported undertaking over 35 hours of formal CPD per year, and a further 39% said they did 15-34 hours. Of those who completed over 35 hours of formal CPD per year, this did not vary a lot based on business size. Between 31-34% of respondents reported

this level of CPD within in firms with two to over 250 employees. Freelance architects were less likely to complete over 35 hours, with 26% of respondents reporting this level.

The responses were also varied fairly little between in terms of when people qualified. That said, those who qualified in the 1960s and 1970 were less likely to undertake over 16 hours of CPD compared to those who qualified since (62% v 71%). However, looking then at the people who registered since 1980, the range was 68-76%, with the lowest levels reported by those who have qualified since 2010.

The freelance / self employed group were least likely to undertake 35 hours plus of CPD, just 26% compared to in excess of 30% across other size bands. This group were also, as reported above, least likely to report a need to change the General Criteria. This could be read as them being very competent. However, it does need to be set against many of the complaints raised with ARB being about smaller firms, which may suggest that their lack of demand for change and CPD are reflective of poorer practice rather than a lack of need.

Similar numbers were reported for informal CPD, but with more people reporting doing over 35 hours (38%).

Over four fifths reported that their CPD involved: self-directed reading (90%), on the job learning (87%), and training delivered by external training provider (including professionals bodies such as RIBA, 80%).

Just under half of respondents (45%) said that they would like to do more CPD than they currently do. When asked what barriers prevented them from undertaking as much CPD as they would like, most cited a lack of time (83%). The next most common response was lack of priority (39%), which in part explains why time is such a common barrier.

Relatively few faced other barriers, such as their employer being unwilling to fund or provide training (23%) or being unaware of where they could access formal training (17%) or information for self-directed learning (16%).

Most employers said that they offered both financial support and time allocations to help employees with their training/CPD, although this was generally on an ad hoc basis rather than a routine, set offer to all employees.

## Routes to registration

Most respondents felt that they had been well prepared by the point they became a newly-qualified architect: 14% felt very well prepared and 45% that they were prepared. While a majority this does suggest some scope for improvement. Indeed, 22% said they had felt unprepared at that point, although this falls to 17% for those qualified since 2010. Of those who said they felt unprepared at

the point of entering the profession, the skills they most commonly said they needed to gain within their first two years of practice were skills relating to the construction process<sup>9</sup>.

This finding is slightly at odds with the finding above about the suitability of the general criteria, where there was more support for developments around digital, and health and safety, but might suggest this group newer qualified more likely to identify emerging issues which they think they could have been taught as they qualified. For those working for some time this option may warrant less consideration.

Most (57%) respondents felt that the amount of time it currently takes for new architects to become registered in the UK is 'about right', although almost one third (32%) thought it was too long. The concern was primarily due to the length of time that trainees spend in higher education: of those who said the current route to registration is too long, 70% said this was due to the length of time spent in higher education compared to just 18% who felt that too much time is spent in practice.

Architects who had qualified most recently were more likely to state that they thought the route to registration is too long. There is a noticeable jump for those qualifying since 2010, which may well be related to the introduction of tuition fees.

## Employer view

Just over half (51%) of survey respondents stated that they were responsible for hiring, recruitment and/or staff development of architects within their organisations. Most of these respondents worked in smaller organisations (employing fewer than 100 staff), although a small number worked in large architect studios (137) or large non-architecture organisations<sup>10</sup> (86).

Most of these respondents were asked questions about the skills and knowledge of their existing architect workforce<sup>11</sup>. Of those who said they had recruited architects within the previous year, 81% said they had found applicants lacked the skills or knowledge needed in the firm. These respondents primarily reported that applicants lacked the necessary skills relating to building contract management/ design and build, along with the skills/knowledge to manage health safety risks and procurement. In the next stages of the research it will be important to draw out if there are differences in the types of skills lacking at various career stages.

It is noticeable that the skills respondents were least likely to report as lacking among applicants were around: environmental, social or conversation factors influencing design (37%); software skills (26%); and digital developments (22%). While these are still fairly high numbers, they are

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<sup>9</sup> Including a technical understanding of the construction process itself, and of construction contract management.

<sup>10</sup> Large non-architecture organisations included local/central government, other public sector organisations, and private sector firms not specialising as architecture studios or house building.

<sup>11</sup> Those responsible for hiring, recruitment and/or staff development of architects in architect firms/studios with 100+ staff were not asked these questions, as these individuals will be included in the sample for the more in-depth employer survey.

perhaps lower than might have been expected given the findings above about issues that are becoming and expected to become more important. This could reflect limited awareness of these skill needs as they develop over time.

These findings were quite consistent across firms of different sizes, although in general smaller firms (employing 2-99 people) were most likely to identify issues.

A minority (31%) of respondents felt that at least some of their existing employees lacked the skills and knowledge they needed to be fully proficient in their roles. Responses here again focused on skills and knowledge relating to the construction process, although here a lot of respondents reporting existing skills shortages also said their employees lacked the necessary skills to use BIM (51%).

Almost all (97%) said that their architects would need to acquire new skills and knowledge over the next five years. The most common skills/knowledge gaps cited in response to this question included the same skills covered above, although the ordering was different. The most frequent responses were:

- Adapting to alternative construction materials and methods (73%)
- BIM (69%)
- Environmental, social or conversation factors influencing design (64%)
- Management of health and safety risks (incl. fire safety) (62%)
- Software skills (e.g. CAD, augmented/virtual reality) (62%).

## Implications and next steps

The results present a picture of a profession where change has been and is expected to be widespread. Moreover, this change is being seen across a range of functions, most often around: climate change; health and safety; and digital skills. At the same time there was little signal of the issues tested becoming less important, which may imply a growing workload or increased specialisation (and there are some suggestions of this in the responses).

The changing (growing?) requirements are reflected in feedback about the General Criteria. While the numbers thinking that the existing Criteria had the right amount of emphasis almost always outnumbered those thinking additional emphasis was required, there were significant numbers in the latter group. The exception was for climate change, where those thinking more emphasis was needed were the largest group.

The qualitative stages of the work present an opportunity to explore these issues further including looking at:

- Those who think the current criteria are sufficient and testing their basis for this view; and



- Those who think more should be added and drawing out the detail of what they think is not covered sufficiently at the moment.

The survey found reported level of CPD to be fairly high. Despite this those answering the employer questions still highlighted fairly common skills gaps in their existing workforce. The qualitative research will provide an opportunity to explore these gaps in more detail and test views on how far:

- These gaps reflect weaknesses in the standards
- Whether a tightening up of the re-registration criteria could or should be a way to address these gaps.

Fairly strong views were expressed about the current routes to registration, with around one third thinking it was too long, usually as a reflection of the time spent in higher education. The intended focus groups with current students may be a way to test this, in particular asking how far they are gaining additional skills in the later years of their study.

Similarly, it would be possible to convene a focus group of recently qualified survey respondents to explore this issue in more detail. This focus group could also then be used to probe about what they did not think was well covered and so provide one perspective on addressing skill gaps.

The employer group of respondents also identified skills lacking in those who were applying for jobs. These tended to be similar skills to those that were reported to be becoming more required. In the next stage of the research it will be important to understand more about how far these gaps are amongst new or experienced architects, as this would inform how any gaps might be addressed.

In summary, this suggests several broad and overlapping areas of enquiry in the next stages:

- The fit of the existing criteria to emerging, changing requirements
- The significance of the current skill gaps and whether these are reflect the natural development of the profession over time (as new issues emerge so it will take time for people to be proficient but they may well still be a trustworthy architect) or whether they are more serious and reflect a weakness in the re-registration process
- The particular skills required of new entrants which are not being covered at present.