

Board Paper

Open session

Subject: Competence outcomes for the initial education and training of architects

Board meeting:

6 September 2023

Agenda item:

7b

Action:

- For noting
- For discussion
- For decision

Purpose

This paper sets out for consideration and approval by the Board the proposed set of competence outcomes that individuals are required to achieve before becoming eligible to be an architect.

Recommendations

That the Board

- i) approves the competence outcomes (**Annexe A**) that an individual must meet in order to be eligible to register as an architect;
- ii) directs that from 6 September 2023 new qualifications prescribed section 4(1)(a) Architects Act 1997 must meet the competence outcomes at level 7 master's (or equivalent) or diploma (or equivalent) following a period of practical experience.

Annexes

Annexe A – Competence outcomes for the initial education and training of architects

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1. Open Session

2. Background and Key points

Background

- 2.1. The Under section 4 of the Architects Act 1997 (“the Act”), ARB has legal responsibility for determining the qualifications, experience and competence someone needs to become an architect and join the Register of Architects.
- 2.2. Those requirements are currently set out in the Criteria for prescribing (accrediting) qualifications (“the Criteria”). They are qualifications that are currently accredited at three stages of education and practical experience: undergraduate (Part 1), level 7 master’s (or equivalent) (Part 2), and post-graduate diploma after a period of practical experience (Part 3).
- 2.3. Because the Act sets a regulatory framework based on the accreditation of qualifications, it is the statutory responsibility of ARB to set out what those qualifications must achieve to be accredited. That legal responsibility cannot be shared with or transferred to another body or organisation.
- 2.4. In December 2022, following a three-year period of research and engagement, the Board decided that it would consult on its proposal to move away from the three-part based model of education and training, to an outcomes-based model which would see qualifications assessed at a master’s level 7¹ academic stage, and after a period of practical experience.
- 2.5. In addition, the long-standing Criteria would be replaced with a set of competence outcomes, setting out what a student must know and be able to do to meet the threshold for registration as an architect.
- 2.6. The proposal was to simplify what a student must be able to demonstrate at two stages of their educational journey:
 - **Academic Outcomes** – that they have acquired the core knowledge and skills during the academic stage of their education.
 - **Practice Outcomes** – that they can perform at the required levels of competence following a period of working in architectural practice.

¹ Level 11 in Scotland

The outcomes

- 2.7. The proposed outcomes were created as a result of a significant period of research and engagement with the profession and beyond. Through research commissioned in 2020, 4,500 architects responded to a survey seeking information on architectural practice in the 21st century, and we undertook comparative research on the competencies required of architects globally, and of other professionals in the UK. We used this research to set out our intended direction in a discussion paper in 2021, and sought stakeholder views through a survey that confirmed support for that direction.
- 2.8. We took into account ARB's strategic ambitions in respect of improving building safety competence following the Grenfell Tower disaster and Dame Judith Hackitt's subsequent report, to respond to the Climate Emergency, and to improve Equality, Diversity and Inclusion within the profession.
- 2.9. We employed a technical author who is an expert in the pedagogy of architecture and we involved architects, subject-matter experts, academics and special interest groups in the iterative drafting process.
- 2.10. The outcomes were collected under five key domains:
- Contextual and Architectural Knowledge,
 - Design
 - Research & Evaluation
 - Management Practice & Leadership
 - Professionalism & Ethics

The key cross-cutting themes of building safety, sustainability, EDI and building technology weaved throughout them.

- 2.11. We proposed using Miller's Triangle² as a means of measuring different stages of competence, which we believed could be easily adapted from use within clinical regulation to use within architecture.

Consultation and adaption

² Knows/Knows how/Shows how/Does

- 2.12. The Consultation Report sets out in detail the positive feedback we received about the draft competency outcomes. We are delighted at how well they were received and are confident that they deliver a very significant step forward from the current Criteria.
- 2.13. While there were high levels of agreement for the proposed competency outcomes from the consultation, there was a wide range of sensible suggestions as to how they could be improved. Given the high volume of consultation responses, such suggestions were expected and welcomed.
- 2.14. Consultees suggested that the outcomes be strengthened to emphasise the importance of building technology. In response we have added an additional outcome to reflect this, but also will be graphically highlighting where building technology already features throughout the competence domains. We will carry out a similar exercise for building safety, sustainability and EDI, so that the importance of these areas of competence for future architects is more visible.
- 2.15. We also read consultee suggestions on tightening the language to ensure that the outcomes are deliverable and assessable by learning providers. Some of the revisions we have made in respect of this feedback has resulted in outcomes being separated for clarity; others led to duplication or tautology being removed. This means that the number of outcomes has been reduced from 49 to 44, but the amendments do not materially change the competences being required of future architects as originally proposed.
- 2.16. We received some challenge from academia and others that the outcomes weaken the existing competence requirements on sustainability and fire and life safety design, and that they are incompatible with the RIBA's Education Themes and Values. In our view the competence outcomes are a very significant enhancement from the current Criteria. However, one fair challenge we received during the consultation was confusion about the future use of current guidance on sustainability and fire and life safety design. We will clarify the status of ARB's existing guidance to support the delivery of the new competence outcomes, and publish updated versions of the guidance. We will also clarify how the competence outcomes map against current RIBA requirements.
- 2.17. A further challenge from some in academia was that the proposed Miller's Triangle would be difficult to apply in the pedagogy of architecture. The suggestion was that it could make it difficult for learning providers to assess students' levels of competence. To mitigate this risk, we have worked with SCOSA to refine our descriptors in a way that retains the basic pedagogical principle of

Miller's Triangle to a more bespoke model that schools of architecture are more familiar with³, and in a way that does not compromise our regulatory objectives.

Accreditation of qualifications

- 2.18. One of the key conclusions we drew from our research and engagement was the importance of moving away from the linear three-part educational requirements to a more flexible model, allowing the sector to create multiple routes to the Register.
- 2.19. To achieve this, it is recommended that ARB accredits qualifications in architecture at master's level 7 (or equivalent), and qualifications that certify that the outcomes have been achieved following a period of professional practical experience.
- 2.20. This approach would accord with the principle of better regulation on proportionality, in that ARB would only be intervening where necessary and appropriately to the risk posed, and that the administration and costs incurred in those interventions are minimised. While undergraduate degrees across the UK will remain regulated by the Higher Education sector, they will no longer be accredited by us. As a result, the reduced bureaucracy will result in reduced costs for both learning providers and the profession, which must ultimately bear the financial burden of ARB's activities.
- 2.21. We have received assurance from the relevant funding bodies across the UK that ceasing ARB accreditation of undergraduate qualifications will have no detrimental impact on students' access to funding. We will keep this under review.
- 2.22. We believe that the new approach will offer access to the profession to some of those that have previously been excluded from it, despite their potential to reach the required level of competence. It will offer access to those students who have relevant academic and vocational experience, but may not have the specific undergraduate qualifications required under the current system.
- 2.23. We further believe that this will create an environment which will promote greater diversity in the profession, but we will carry out further evaluation and research to track the effectiveness of our reform.

³ Knowledge, Understanding, Ability, Performance

3. Risk Implications

- 3.1. There are inevitable risks created when moving away from a long-established standard of competence required for entry into the profession. One of those risks is that we have 'missed' areas of competence or set them at an insufficient level, which will lower standards of architects on the Register.
- 3.2. We also need to ensure the competency outcomes are 'deliverable' and that the competency outcomes reflect threshold standards, not a higher standard which could reduce access and destabilise the sector.
- 3.3. The Board should however have confidence in the process that has been followed. We have carried out extensive research and engagement. We have employed experts in the design of competence frameworks. We have consulted with the profession and beyond, and adapted our approach where the evidence suggests a change is required.

4. Equality and Diversity implications

- 4.1. The proposed outcomes significantly strengthen the skills, knowledge, experience and behaviours that future architects must demonstrate in respect of equality, diversity and inclusion, when compared to the existing Criteria.
- 4.2. These reforms, when allied with the Standards for Providers and, when consulted on in 2024 the Architects Code of Conduct and Practice, will leave the profession in a better position to respond to the EDI challenges it faces.

5. Recommendations

That the Board

- i) approves the competence outcomes (**Annexe A**) that an individual must meet in order to be eligible to register as an architect;
- ii) directs that from 6 September 2023 new qualifications prescribed section 4(1)(a) Architects Act 1997 must meet the competence outcomes at level 7 master's (or equivalent) or diploma (or equivalent) following a period of practical experience.

Architects Competencies

Introduction

This document outlines the threshold competencies required for registration as an architect irrespective of the route taken to registration. Competence is defined as a professional's ability to carry out their role successfully, having the relevant knowledge and skills and behaviours necessary to achieve this. This is defined through five competency areas:

1. Contextual and Architectural Knowledge
2. Design
3. Research and Evaluation
4. Management Practice and Leadership
5. Professionalism and Ethics

The competence statements reflect the required competencies at the point of entry into the profession.

Levels of Competency and their Assessment

Depending upon whether students are being assessed for entry into the profession, or for an intermediate qualification, each outcome will be assessed to a different level. The four levels below are a development of "Miller's Triangle" which has previously been used to assess competencies in clinical disciplines¹ but has been adapted to architecture.

Level 1 – Knowledge (Knows): The student has gained sufficient grounding in an area to know that this aspect is important and relevant to the subject and practice of architecture and when and where it is relevant. This includes both knowledge of the subject and also the behavioural norms expected of an architect. At this level they will not necessarily have put this knowledge into practice.

Level 2 - Understanding (Knows how): The student is able to work with their knowledge and apply it to tasks or processes relevant to the practice of architecture, but in a limited, managed situation.

Level 3 – Ability (Shows how): The student is able to demonstrate their capabilities in authentic situations where there is a need to work within multiple constraints and complexities. This might include a comprehensive design project or supervised professional experience. It is recognised that not every student will have the opportunity to demonstrate all competency outcomes within architectural practice, so these competencies may also be assessed through simulated scenarios.

Level 4 – Performance (Does/Is): The student performs in a consistent and independent way within complex, professional situations. At this level the student should be able to demonstrate the skill, knowledge and behaviours of an architect through engagement with architectural practice. At this level a student will demonstrate a commitment to the aspects being covered, even if they have not personally undertaken a task of that nature.

The outcome tables below show the level by which each outcome is to be demonstrated at the conclusion of a Level 7 qualification or Level 11 in Scotland (Academic Outcomes) and at the point of entry into the profession following any requisite period of professional practical experience (Practice Outcomes).

¹ Cruess, R.L., Cruess, S.R. and Steinert, Y., 2016. Amending Miller's pyramid to include professional identity formation. *Academic Medicine*, 91(2), pp.180-185.

1. Contextual and Architectural Knowledge

A candidate showing competence in this area will demonstrate knowledge of:

	Outcome	Academic Outcomes	Practice Outcomes
CK1	How diverse global, cultural, social and economic factors influence aspects of architecture and urban design	Knowledge	
CK2	The role of architects in society, the design team and the construction industry	Knowledge	
CK3	The principles and relevance of social sustainability, social value and inclusive design.	Knowledge	
CK	The principles of climate change and biodiversity	Knowledge	
CK5	The principles of building construction, services, structure, materials use, assembly and manufacture	Knowledge	
CK6	The principles of building physics and environmental design	Knowledge	
CK7	The principles required to ensure that buildings are safe to construct, inhabit, use and maintain, refurbish, re-use and deconstruct	Knowledge	

2. Design

A candidate demonstrating competence in this area will:

	Outcome	Academic Outcomes	Practice Outcomes
D1	Prepare, and present architectural design projects of diverse scale, complexity, and type in a variety of contexts, using a range of media, responding critically to a brief.	Ability	
D2	Prepare, appraise, refine and engage with building briefs of diverse scales and types, accounting for client, user, site and contextual requirements.	Ability	
D3	Demonstrate a critical and creative approach to architectural design.	Ability	
D4	Produce designs that integrate the artistic, spatial, environmental, social and experiential aspects of a building with the technical requirements of its construction.	Ability	
D5	Propose strategies for structure, construction technology, materials, services, , thermal environment, lighting and acoustics that are appropriate to a project's brief and context.	Ability	
D6	Produce the designs that consider the relationship between people and built environment, between buildings and their context, and the need to relate buildings and the spaces between them to human needs, inclusivity, user experience and scale.	Ability	
D7	Understand the consequences of design decision making on value to clients and communities over the life-cycle of built projects and the costs to the environment.	Understanding	
D8	Propose design solutions that achieve or exceed relevant performance standards and requirements.	Ability	
D9	Understand the implications and benefits of regenerative design solutions and ethical sourcing and supply chains throughout the life cycle of architectural projects that meet or go beyond minimum standards.	Understanding	

D10	Understand the implications and benefits of working with existing buildings including potential for re-use and retrofit, and the resulting environmental impact.	Understanding	
D11	Prepare and document designs that demonstrate appropriate consideration of fire safety, life safety and wellbeing and inclusivity of users, the public and building constructors.	Ability	
D12	Use appropriate digital systems for creating, modelling, processing, presenting, and sharing design, building and project information.	Understanding	Ability

3. Research & Evaluation

A candidate demonstrating competence in this area will:

	Outcome	Academic Outcomes	Practice Outcomes
RE1	Use techniques of research, enquiry and experimentation to develop effective solutions to architectural problems and to broaden their knowledge base.	Ability	
RE2	Work with clients and other stakeholders to gain a mutual understanding of constraints and opportunities, identify immediate and long-term interests, set project agendas, define desirable and feasible project outcomes, and develop appropriate briefs for projects.	Understanding	Ability
RE3	Critically evaluate a diverse range of architectural precedents in order to inform design thinking.	Ability	
RE4	Locate, evaluate and apply relevant legislation, regulations, standards, codes of practice and policies related to the development of the built environment.	Understanding	Ability
RE5	Locate and evaluate evidence that may be incomplete or contradictory, critically evaluating the quality of knowledge sources, making judgements and drawing appropriate conclusions that can inform architectural practice.	Ability	
RE6	Understand how modelling and post occupancy evaluation informs design.	Understanding	

4. Management, Practice and Leadership

A candidate demonstrating competence in this area will:

	Outcome	Academic Outcomes	Practice Outcomes
M1	Make use of the principles of sustainable, responsible and ethical practice, and recognise how they relate to running an architect's practice.	Knowledge	Ability
M2	Understand the financial and resource management aspects of running an architectural practice including the means of professional remuneration and fee setting.		Understanding
M3	Recognise the ethical and legal impact of practice structures, recruitment and employment terms and their impact on work/life balance, health and the wellbeing of colleagues.		Understanding
M4	Manage and structure projects, administer construction contracts and resolve common construction-related challenges.	Understanding	Ability
M5	Manage the inter-relationships of individuals, organisations, statutory bodies, and professions involved in procuring and delivering architectural projects, recognising how these are defined through contractual and organisational structures.	Understanding	Ability
M6	Select appropriate procurement routes and means of delivery, recognising their relative risks to contractual parties, their implications for sustainable design outcomes and how these influence the selection and management of construction contracts.	Understanding	Ability
M7	Demonstrate the principles of risk management, liabilities, and insurance to architectural projects.	Understanding	Ability
M8	Apply the principles of cost management, control, and budgeting to architectural projects.	Understanding	Ability
M9	Plan, manage, monitor and communicate health and safety arrangements for construction projects as required by current legislation.	Understanding	Ability

M10	Resource, plan, implement and record project tasks to achieve stated goals, either individually or within a team.	Understanding	Ability
M11	Communicate effectively with both specialists and non-specialist audiences through a range of media.	Understanding	Ability

5. Professionalism & Ethics

A candidate demonstrating competence in this area will:

	Outcome	Academic Outcomes	Practice Outcomes
PE1	Recognise the significance of the Architects Code of Conduct, and the need for architects to act in an ethical and professional manner.	Knowledge	Performance
PE2	Display a committed approach to equity, diversity and inclusion, including in their approach to designing environments and in their relationships with colleagues, employees, clients and communities.	Ability	Performance
PE3	Work constructively with and within a broader team, exercising leadership, effective communication and personal responsibility.	Ability	Performance
PE4	Uphold the architect's obligations to the health and safety of the public and building users and building constructors.	Understanding	Performance
PE5	Uphold the architect's obligation to the environment, society, and the wellbeing and quality of lives of current and future generations.	Understanding	Performance
PE6	Recognise the responsibilities and duties of care that architects have towards their clients, users, the public and those with whom they work.	Knowledge	Performance
PE7	Identify individual learning needs required for further development within the profession, ensuring they are up to date with current standards and best practice.	Ability	Performance
PE8	Acknowledge and work within the limits of their competence, expertise, and experience.	Knowledge	Performance