

## SCOSA Fire & Life Safety Working Group

### Stage 1 Report, May 2022

#### 1. Introduction

##### 1.1. Background/preamble

This document has been prepared by SCOSA in response to guidance issued by the ARB and RIBA, relating to Fire & Life Safety teaching in UK Schools of Architecture. It includes analysis of the guidance in the context of existing provision and regulatory requirements, discussion of Fire & Life Safety as a background for design, and provides suggested frameworks for delivery and assessment so as to allow Institutions to give explicit demonstration of required content. The intention of this is for SCOSA, as a distributed but coordinated voice of UK architectural education providers, to give a coherent and consistent baseline to its members and in turn to external approval bodies.

##### 1.2. Response to ARB Guidance & RIBA T&V4E

In December 2021 the ARB issued supplementary guidance for architectural education in response to a perceived need for clarification arising from the Grenfell disaster and the Climate Emergency phenomenon. Guidance was provided to address three themes: Fire & Life Safety; Climate Awareness; Ethical issues for these affecting Practice.

The RIBA issued proposals in March 2021 for a fundamental reframing of architectural education in the UK titled Themes and Values for Education, which included changed emphasis highlighting the importance of Ethics, Climate Awareness, and Fire & Life Safety. These are linked to new requirements for Mandatory Competences issued in November 2021 and indicate a complete break with the former Criteria.

##### 1.3. Working group formation & remit

SCOSA proposed the formation of Working Groups to investigate, analyse and suggest actions arising from the ARB and RIBA interventions. Three Groups were formed to focus separately on Climate Awareness, Fire & Life safety, and Ethical Practice.

The Working Group for Fire and Life Safety was formed to analyse the ARB and RIBA requirements and compare these against current provisions within Schools, with a view to formulating a unified and comprehensive guide for architectural educators in order to meet them. For the purpose of this Group, ARB Guidance points on ethics and professionalism are being investigated by a separate Working Group. This Group's remit does include ARB Guidance Points relating to risk management. The group is comprised of SCOSA member representatives with contributions from ARB and RIBA. A list of contributors and working group members is included at the end of the document.

## 1.4. Methodology

The working group carried out a review of fundamental principles of Fire & Life Safety in the UK context, in terms of professional practice and education. This process included a comparison matrix between the Criteria, ARB Guidance, Themes and values for education (T&V4E). The group also looked to carry out a review of current provision within Architectural Education providers.

## 2. Discussion of commonalities of Criteria with ARB Guidance, RIBA Themes & Values, Mandatory Competences.

### 2.1 Educational context:

UK Architectural education has been based on 11 General Criteria for many years as part of the Professional Qualifications Directive EU2005/36 (PQD). The QAA Benchmark, ARB Prescription and until 2021 the RIBA Validation process all used them as a common measure of curricular content. They are also embodied in international bodies such as the UNESCO Charter for architectural education and the Commonwealth Association of Architects. As such, they represent a significant degree of agreement and convergence of educational requirements across a large number of jurisdictions.

When the UK left the EU, mutual recognition treaties such as the PQD lapsed, but the General Criteria remain at the heart of UK education as prescribed by ARB. The recent decision by RIBA to abandon the Criteria in favour of a completely new approach to measuring educational delivery and outcomes make the process of assessing these immediately more difficult. Moving to a system of Mandatory Competences isn't problematic in itself, but inventing new systems which have to be learned by less sympathetic contexts than the UK is likely to cause unforeseen difficulty in the future. This is compounded when the Mandatory Competences seem to be a less complete description of architects' roles than the Criteria they replace. These issues were raised with the RIBA during one of the Working Group meetings, where it was suggested the Mandatory Competences were subject to change from feedback.

As a result, the mapping exercise carried out by the Working Group has not been able to use the RIBA standard to measure delivery and output of fire & life safety in a comprehensive way, as too many terms are not clearly understood in terms of application and impact. The Mandatory Competences for Fire and Life Safety document has many points relating to on-site safety for visitors, but only a relative footnote in terms of design for fire safety and nothing for the design of safe construction, operation or maintenance.

The ARB Guidance on Fire & Life Safety are more detailed and do include a clause on safe use and maintenance of buildings, but again there is no mention of designing buildings which explicitly consider risks to life during construction processes. Risk management, health & safety law, as well as the consequences of procurement routes for professional roles and responsibilities are required ARB elements in their Guidance as general principles.

On the basis of the above comments, the Working Group note that both ARB and RIBA guidance seem more concerned with fire safety rather than general life safety issues when concerned with design. The Criteria do include such concerns. Analysis of how the Criteria, ARB Guidance and RIBA Mandatory Competences are shown in table 1 and 2 below.

**Table 1: Comparative matrix of Fire & Life Safety ARB Guidance (Fire & Life Safety Design) against QAA Benchmark/ARB General Criteria**

<b>ARB Criteria (right)</b>	<b>GC1</b> GC1.2, regulatory requirements that apply to design and construction	<b>GC4</b> GC4.3 development control legislation, relevant to design development.	<b>GC6</b> GC6.1 duties and responsibilities of the architect GC6.2 understand the architect and design team	<b>GC7</b> GC7.1 critical review of precedents relevant to the function, organisation and technological strategy of design proposals	<b>GC8</b> GC 8.1 alternative constructional and material systems GC8.2 construction techniques GC8.3 properties and characteristics of materials	<b>GC10</b> GC10.3 ability to prepare designs that comply with legislation	<b>GC11</b> GC11.1 knowledge of professional responsibilities and law including building regulation and health and safety legislation.
<b>ARB Guidance (below)</b>							
FC1 Science of fire, smoke generation and spread	GC1.2	GC4.3	GC6.1, GC6.2	GC7.1			
FC2 Design principles to minimise the risk of smoke and fire	GC1.2			GC7.1	GC8.1, GC8.2, GC8.3	GC10.3	GC11.1
FC3 Means of escape in case of fire	GC1.2	GC4.3		GC7.1		GC10.3	GC11.1
FC4 Appropriate access to buildings and facilities for emergency services.	GC1.2	GC4.3		GC7.1		GC10.3	GC11.1
FC5 The significance of product specification to fire safety and performance as part of a construction system	GC1.2		GC6.1 GC6.2		GC8.1, GC8.2, GC8.3		
FC6 Protecting building users from hazards during use and maintenance	GC1.2	GC4.3	GC6.1 GC6.2				GC11.1

**Table 2: Comparative matrix of Fire & Life Safety ARB Guidance (Risk Management) against QAA Benchmark/ARB General Criteria**

<b>ARB Criteria (right)</b>	<b>GC1</b> GC1.2, regulatory requirements that apply to design and construction	<b>GC4</b> GC4.3 development control legislation, relevant to design development.	<b>GC6</b> GC6.1 duties and responsibilities of the architect GC6.2 understand the architect and design team	<b>GC7</b> GC7.1 critical review of precedents relevant to the function, organisation and technological strategy of design proposals	<b>GC8</b> GC 8.1 alternative constructional and material systems GC8.2 construction techniques GC8.3 properties and characteristics of materials	<b>GC10</b> GC10.3 ability to prepare designs that comply with legislation	<b>GC11</b> GC11.1 knowledge of professional responsibilities and law including building regulation and health and safety legislation. GC11.2 professional relationships and procurement
<b>ARB Guidance (below)</b>							
FB1 The principles of risk management	GC1.2		GC6.1, GC6.2	GC7.1	GC8.1 GC8.2 GC8.3	GC10.3	
FB2 The key pieces of legislation and regulations relating to health and safety	GC1.2		GC6.1, GC6.2	GC7.1			GC11.1 GC11.2
FB3 The risks and benefits of different procurement routes	GC1.2				GC8.1 GC8.2		GC11.1 GC11.2
FB4 The role of the architect within the design team and the importance of collaboration and consultation in fire safety design	GC1.2	GC4.3	GC6.1 GC6.2			GC10.3	

**Table 3: Comparative matrix of RIBA Mandatory Competencies (Fire & Life Safety) against QAA Benchmark/ARB General Criteria**

<b>ARB Criteria (right)</b>	<b>GC1</b> GC1.2 regulatory requirements that apply to design and construction	<b>GC4</b> GC4.3 development control legislation, relevant to design development.	<b>GC6</b> GC6.1 duties and responsibilities of the architect GC6.2 understand the architect and design team	<b>GC7</b> GC7.1 critical review of precedents relevant to the function, organisation and technological strategy of design proposals	<b>GC8</b> GC 8.1 alternative constructional and material systems GC8.2 construction techniques GC8.3 properties and characteristics of materials	<b>GC10</b> GC10.3 ability to prepare designs that comply with legislation	<b>GC11</b> GC11.1 knowledge of professional responsibilities and law including building regulation and health and safety legislation.
<b>RIBA Mandatory Competences (below)</b>							
ignition, development and spread of fire	GC1.2			GC7.1	GC8.1 GC8.2 GC8.3		
fire performance of construction materials	GC1.2				GC8.1 GC8.2 GC8.3		
design for fire safety	GC1.2	GC4.3	GC6.1 GC6.2	GC7.1	GC8.1 GC8.2 GC8.3	GC10.3	GC11.1
fire safety information (Regulation 38 of the Building Regulations)	GC1.2		GC6.1 GC6.2				GC11.1

## 2.2 Mapping Analysis

From Table 1 and 2 the ARB Guidance can be mapped against the General Criteria. For the purposes of this analysis, only sub-criteria have been used. From the matrix, it's clear that each of the Guidance points are met by at least 3 of the Criteria, suggesting unsurprisingly that the points of concern are elements which should already be embedded within an architecture curriculum. It was noted that GC1.2 (regulatory requirements that apply to design & construction) demonstrated all of the ARB guidance points for fire.

Table 3 also shows that the Criteria map well with the RIBA Mandatory Competences. As noted in 2.1 above, the level of detail requirements for fire & safety knowledge are less explicit than the Criteria. Many of the Competences are not referenced here as they are concerned with site visit

safety rather than design issues. It was noted, as with the ARB Guidance, that design was a linking theme: GC1.2 applies to all the design Competences, while 'design for fire safety' maps against all the relevant Criteria.

### **2.3 Discussion of delivered content**

Discussion within the group suggested that the general subject matter is covered in the course of study, the specifics of curriculum delivery, level of detail and method of assessment were variable within the working group sample and this would be common across the UK.

Common themes were that general principles of fire and smoke ignition and spread, as well as current regulations governing design, were covered through dedicated lectures and or workshops with case studies, as well as using design studio modules as ways of demonstrating understanding and knowledge. A similar approach was taken in consideration of risk management, health & safety and procurement.

Areas of divergence were mainly linked to assessment, with the extent to which a detailed understanding and demonstration of fire design are required, for instance whether specific drawings showing strategic designs such as compartmentation, means of escape etc, examples of envelope design showing how compartmentation is achieved using an assembly of specific materials and components. For health & safety, a similar range of assessments from written materials related to management, practice & law topics, to required design risk assessments and construction method statements within design studio projects was shown. Further to this, discussion suggested there was a need to clearly define different levels of attainment at each Part stage.

At this point it became clear that an exhaustive survey of delivery at School level, while interesting in its own right, would not be an exercise useful enough to justify the resources needed to carry it out. Instead, the working group decided to concentrate on exploring ways in which the requirements of ARB Guidance and RIBA Competences could be achieved so as to have maximum impact with the most efficient use of available capacity.

## **3 Discussion of potential changes arising, as relevant to different stages / Parts**

### **3.1 Building Regulations and fire.**

It was noted that, while many Schools refer to 'Part B', fire design regulations in the UK have different regimes in different jurisdictions within the UK, but all derive from British Standards. The different regulations are:

- The Building regulations for England & Wales; Approved Document B: Fire safety. This is in 2 volumes, Vol 1 for dwellings and Vol 2 for buildings other than dwellings.
- Scotland operates a system of Building Standards designed to meet the requirements of the Building Regulations (2004). The current document is the 2020 technical handbooks, domestic and non-domestic.
- Northern Ireland publishes Technical Booklets B – V, E is Fire Safety.

The guidance within all these different regimes are fundamentally similar in terms of accepted means of compliance. Means of escape, compartmentation, materials specification and fire services access all follow the same set of assumptions and rules. The Working Group noted that other jurisdictions outside the UK can operate on very different assumptions, with different acceptable designs as a result. For example, the maximum height of domestic buildings without a protected and enclosed stair is 2 storeys, whereas 3-storey dwellings with stairs open to habitable rooms including kitchens is commonplace in other European settings. This is an indicator of the importance of understanding cultural and historic influences on technical guidance.

### **3.2 BBA.**

The Working Group noted the importance of the British Board of Agreement in certifying materials, products and assemblies in the context of building systems design and fire performance, and the impact this has on architectural practice.

### **3.3 Fire design and limits to 'knowledge'.**

The Working Group noted that graduates of any level of architectural education won't 'know' fire design, but only aspects of it. A key learning outcome for students at all levels is a reflection on the limits of their own expertise, how to carry out further investigation and when to seek specialist input.

### **3.4 Health & Safety in design and construction.**

As Health & Safety in construction has been the focus of sustained regulatory efforts to improve chronic problems over many years, this was seen by the working group to be a more clearly embedded area of the curriculum. However, it was also seen that re-emphasising the topic as part of this review, especially in terms of creating a baseline for consistent assessment, would be beneficial.

### **3.5 Impact of 'additional' curriculum.**

The Working Group discussed:

- Pressure on timetables if content is significantly more than current (this will vary by School)
- Delivery – possibilities include dedicated lectures, workshop sessions. Modules seen to be too intensive.
- Relationship / tension between technical content and creativity. The group concluded that these are not mutually exclusive issues.

The conclusion reached was that the new guidance did not represent a wholly new set of learning outcomes as additional to the Criteria, and that as 'technical' elements of the design process and outcomes they should also be seen as part of the creative challenges faced by architects in Practice.

#### 4 Recommendations.

From the discussions outlined above, the Working Group suggest that, with reference to Graduate Attributes, the Guidance could be appropriately met at each Part:

- Taught content: Shared curriculum to include fundamental principles of fire behaviour and design mitigation; role and impact of design and risk on buildings in construction and use; impact of different procurement routes and contract forms, referenced to regulatory frameworks. Delivery through (potentially) shared learning resources including introductory short lectures, case studies, links to further references and resources, developed and applied through design projects. These would be applicable to all levels but especially design projects, which would be tailored to appropriate FHEQ levels.

The shared content should be seen as a benchmark from which diverse curricula and delivery can develop, not the basis for a restrictive national curriculum.

- Assessment: As design issues have been shown to be the common denominator linking Guidance and Criteria, these are an appropriate way to demonstrate knowledge and understanding and may well be simpler to benchmark than dedicated coursework or other test. The inclusion of a Fire Strategy Report, Design Risk Assessment and Construction Method Statement within design submissions can include the key requirements of the Guidance in an explicit way appropriate to each Part.

A summary of these proposals is set out in Table 4 below.

**Table 4: Proposed teaching and assessment to demonstrate Guidance requirements.**

Graduate Attributes (Relevant to Fire & Life Safety)	Taught Content	Assessment	Comments
<p><b>Part I</b></p> <p>1 ability to generate design proposals using understanding of a body of knowledge, some at the current boundaries of professional practice and the academic discipline of architecture;</p> <p>3 understanding of the alternative materials, processes and techniques</p>	<p>Curriculum content to coincide with the ARB Guidance, as this is shown to overlap with the General Criteria and Mandatory Competences.</p> <p>Learning outcomes should be appropriate to the FHEQ level – important for students to understand the limits of knowledge.</p>	<p>Multiple choice tests could be used as formative assessments, could include online interactive if feasible.</p> <p>Workshops could include review of previous design studio projects against current regulations, ‘compliance’ projects, critiques of existing buildings.</p> <p>Definitive assessment through design:</p>	<p>Delivery and assessment of additional content risks losing quality in other areas.</p> <p>The inclusion of technical content cannot be seen as an ‘either or’ issue relative to creativity.</p> <p>Much of the ‘proposed’ content should be implicit within course</p>



<p>that apply to architectural design and building construction;</p> <p>5 knowledge of the context of the architect and the construction industry, and the professional qualities needed for decision making in complex and unpredictable circumstances;</p> <p>6 ability to identify individual learning needs and understand the personal responsibility required for further professional education.</p>	<p>Different regulatory frameworks apply within the UK, derived from British Standards.</p> <p>Delivery suggestions:</p> <p>Lectures to introduce topics: Building Blocks proposal used to set up and introduce curriculum. Links to further study.</p> <p>Workshops and case studies to explore implications: case studies of building failure (Summerland, Grenfell, World Trade Towers etc.)</p> <p>Design projects to apply &amp; develop learning.</p>	<p>Evaluation of a design proposal for a simple building comprising</p> <ol style="list-style-type: none"> <li>1 Means of escape plan</li> <li>2 Compartmentation plan/section</li> <li>3 Detail design and outline specification of a part/component element.</li> <li>4 Fire access site plan</li> </ol> <p>Must be passed to progress</p> <p>Design risk assessment. To show understanding of basic issues of risk particular to the project.</p> <p>Construction method statement. To show understanding of site constraints and typical construction forms.</p> <p>This can be at level 5 or level 6</p>	<p>content as it is already covered by the Criteria.</p> <p>Design projects are an ideal context to assess the application of knowledge and understanding.</p> <p>Part I should include Fire &amp; Life safety, regardless of onward destination of graduates (60% away from architecture).</p> <p>We cannot base requirements around students leaving the profession</p>
<p><b>Part II</b></p> <p>1 ability to generate complex design proposals showing understanding of current architectural issues, originality in the application of subject knowledge and, where appropriate, to test new hypotheses and speculations; .</p> <p>3 ability to evaluate materials, processes and techniques that apply to complex architectural designs and building construction, and to integrate these into practicable design proposals; .</p> <p>5 understanding of the context of the architect and the construction</p>	<p>Lectures and workshops</p> <p>Content as above: consider students entering from overseas schools of architecture / returning after several years in practice</p> <p>Deeper understanding application of floor space factors, widths of escape routes, compartmentation, cavity barriers, unprotected areas etc.</p> <p>BS9999 / BS9991 / BS8414-2/ BS7974</p> <p>Materials Specification</p> <p>Case studies of integrated fire design in a professional context of more complex buildings than part 1</p>	<p>Direct application to studio design projects</p> <p>Production of fire plan (e.g. ground floor only)</p> <p>Self-evaluation of studio design project against building regulations / BS9999</p> <ol style="list-style-type: none"> <li>1 Evaluation of a case study of fire integration in an existing (complex) building comprising means of escape plan, detail design and specification.</li> <li>2 Evaluation of a design proposal for a complex building comprising             <ol style="list-style-type: none"> <li>1 Means of escape plan</li> <li>2 Compartmentation plan/section</li> </ol> </li> </ol>	<p>Consider students entering from overseas schools of architecture / returning after several years in practice</p> <p>BS9999: Code of practice for fire safety in the design, management and use of buildings</p> <p>BS9991: 2015 Fire safety - design, management &amp; use residential buildings</p> <p>BS8414-2: Fire performance of external cladding systems</p> <p>BS5839: Fire detection &amp; alarm systems</p> <p>BS7974: Fire safety engineering</p>

<p>industry, including the architect's role in the processes of procurement and building production, and under legislation; .</p> <p>6 problem solving skills, professional judgment, and ability to take the initiative and make appropriate decisions in complex and unpredictable circumstances;</p> <p>7 ability to identify individual learning needs and understand the personal responsibility required to prepare for qualification as an architect.</p>	<p>Integrated design proposals including:</p> <p>A design proposal for a complex building including a part B study comprising:</p> <p>1 Means of escape 2 Compartmentation 3 Detail design and detailed specification of a part/component element 4 Fire access site plan</p>	<p>3 Detail design and detailed specification of a part/component element. Must be passed to progress</p> <p>Design risk assessment to highlight analysis and mitigation of elements with residuals.</p> <p>Construction method statement to include critical analysis of alternative methodologies.</p> <p>This can be at level 7a or level 7b</p>	
<p><b>Part III</b> PC 1.1, 1.2, 1.10 PC 2.4, 2.7, 2.10 PC 3.3, 3.6 PC 4.1, 4.2 PC 5.3, 5.5, 5.7</p> <p>RIBA Health and Life safety Knowledge schedule</p>	<p>Case studies of legal challenges Roles and responsibilities of design team, client, contractor, 'responsible person'</p> <p>CDM Hazards in construction use and maintenance.</p>	<p>Specific analysis of fire safety, design risk and construction method within Part III case studies</p> <p>Compulsory (scenario based) questions within examinations</p>	<p>Gateway to profession – ethical, technical and contractual responsibilities Annual CPD</p>

### Building Blocks.

SCOSA have separately put forward proposals to develop shared learning resources for use by Providers within the UK. These are in the form of short pre-recorded talks, made freely available, which would serve as introductions and overviews to the topics highlighted by ARB and RIBA. The Working Group further considered that each 'Building Block' talk should include links to further reading and reference material, allowing for further study.

As a key concern for Providers is being able to interpret and apply the new Guidance in such a way as to demonstrate that appropriate learning outcomes are being achieved, it has been considered convenient to organise the talks in alignment with the ARB Guidance descriptors. As has been shown in table 4 above, taught content can be demonstrated in an explicit way within the submission materials of design studio projects for Parts 1 and 2, and within building case studies for Part 3. Using this approach, Providers can demonstrate the delivery of taught curriculum via the Building Blocks and the demonstration of knowledge and understanding via design studio projects.

Table 5 below shows the alignment of each talk with ARB Guidance points, indicative subject scope for each talk and initial further reference materials.

**Table 5: Proposed Building Blocks talks and suggested additional resources /references.**

Talk title	ARB guidance descriptor	SCOSA content briefing notes	Further references
	Managing Risk:		
AB1 An introduction to the principles of risk management	B1 The principles of risk management	Definitions and significance of risk; likelihood and impact; analysis, mitigation, residual. Design risk, construction risk	Risk management for design and construction Cretu, Ovidiu.; Stewart, Robert, Berends, Terry.
AB2 An introduction to health and safety legislation	B2 The key pieces of legislation and regulations relating to health & safety	Health & Safety at work 1974, 1992, Construction Design & Management 2015, Principal designer, Principal Contractor, (Duty Holders)	Construction (Design & Management) Regulations 2015. HSE Principal Designer's Handbook: Guide to the CDM Regulations APS
AB3 Procurement routes: comparative risks and benefits	B3/B4 The risks and benefits of different procurement routes. The role of the architect within the design team	Review of traditional, contractor-led, collaborative, roles, responsibilities, lines of communication and liability within each.	The Construction Playbook. Gov.uk. (contains overt guidance!) Introduction to Building Procurement. Greenhalgh, Squires.
	Fire and life safety design:	Refs to UK building control codes. Differences.	The BS 9999 handbook : effective fire safety in the design, management and use of buildings Green, Michael, Joinson, Jonathan.
AC1 An introduction to the science of fire	C1 The science of fire, smoke generation and spread	Fuel, heat, oxygen. Fuel sources, critical temperatures, spontaneous ignition. Combustion products: smoke particles, gases. Principles of convection for smoke spread. Effects of radiant heat.	Fire from first principles : a design guide to building fire safety Stollard, P. Abrahams, John
AC2 An introduction to the principles of designing for fire	C2 Design principles to minimise the risk of smoke and fire	Compartmentation. Fire resistant materials, classification. Surface spread of flame. Smoke ventilation	Fire from first principles : a design guide to building fire safety Stollard, P. Abrahams, John,

<p>AC3 An introduction to fire access and egress</p>	<p>C3/C4 Means of escape in case of fire. Appropriate access to buildings and facilities for emergency services</p>	<p>Protected routes. Minimum escape distances &amp; relationship to time. Domestic vs non-domestic and high-rise. Fire service access externally. Fire service access within buildings, fire-fighting shafts &amp; lifts, fire management plans.</p>	<p>Fire and Rescue Service manual. Vol. 2, Fire service operations. Incidents involving rescue from road vehicles Great Britain. Fire Service Inspectorate. 2007</p>
<p>AC5 Fire safety and performance in detailed design</p>	<p>C5 The significance of product specification to fire safety and performance as part of a construction system</p>	<p>Construction detailing for envelopes and compartments: fire separation, fire rating of material assemblies to give timed resistance to flame; smoke; radiant heat, fire barriers, doors, curtains. Unforeseen routes for fire spread, building voids.</p>	<p>Principles of architectural detailing Emmitt, Stephen.; Olie, John.; Schmid, Peter, Architects' working details 5 Dawson, Susan. 1998 National Audit Office. Ministry of Housing, Communities &amp; Local Government; Investigation into remediating dangerous cladding on high-rise buildings: HC 370 UK Parliament National Audit Office (NAO) UK Parliament House of Commons Paper, 2020-06-19</p>
<p>AC6 Designing for safety of buildings in use</p>	<p>C6 Protecting building users from hazards during use and maintenance</p>	<p>What about safety during construction? In terms of designing for safe site operations. For post occupancy, safe access for maintenance and use, design to avoid need for hazardous access, consideration of finishes for safety, visual clarity of design eg level changes, glazed partitioning. Ramps stairs &amp; guarding.</p>	<p>ICE manual of health and safety in construction McAleenan, Ciaran.; Oloke, David.; Institution of Civil Engineers (Great Britain) 2015</p>

### **Conclusion.**

The SCOSA Working Group for Fire & Life Safety, through a comparative analysis of ARB Guidance points and the RIBA Themes & Values for Education with the General Criteria, have found that all the 'new' requirements are demonstrated by the Criteria. In this way, the task for architectural education providers is not to undertake a wholesale change to curricula, but to examine and if necessary to adjust the way the points are explicitly demonstrated. The introduction of shared curriculum content in the form of the proposed Building Blocks talks provide a clearly identifiable benchmark for both providers and external assessors alike. The process of analysis has further shown that, since 'design' comes out as the linking theme of all the points, design projects are ideal contexts in which to develop and demonstrate knowledge and understanding. Using this approach for assessment embodies a very clear advantage over the General Criteria and Graduate Attributes, in that they can be explicitly tailored to demonstrate appropriate levels of achievement for all three Parts.

This Report therefore shows a clear and explicit methodology by which UK Providers of architectural education can:

- Evidence general coverage of the required curriculum with links to further learning;
- Evidence explicit and appropriate assessment of learning outcomes for each Part of architectural education;
- Use this evidence as a common benchmark for internal and external review.

The Working Group notes that, notwithstanding the levels of knowledge, understanding and expertise of architecture graduates and practitioners, there is a practical limit as to how this impacts design and construction processes unless it is either enforced, through professional authority and regulations, or shared, through equivalent levels of education and values and/or collaborative working.

**Working Group members**

Alex Tait, RIBA

Carl Callaghan, University of East London

David Hasson, University of Central Lancashire

Graeme Barker, University of Nottingham

Justin Lunn, University of Leeds (Chair)

Manja van de Worp, Royal College of Art

Peter Holgate, University of Nottingham

Sam Adjei, Royal College of Art