

**Annex 3B – WG3 Recommendations for ‘Fire Engineering’ core knowledge across other disciplines.**

| Recommended ‘Fire Engineering’ competencies  | Reasoning  | How can it be implemented? |
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| <p><b>General.</b></p> <p>In line with Angus Law’s comments to an early meeting of the CSG, WG3 recommends that there are 3 vital ‘facets’ that need to be covered in each of the WG’s reports as follows:</p> <ol style="list-style-type: none"> <li>1. Professionalism &amp; ethics (statement of ethics etc).</li> <li>2. Core Knowledge and Competencies that need to be considered as common to all disciplines.</li> <li>3. Discipline-specific knowledge/competency.</li> </ol>   | <p>Item 2 here can be considered akin to ‘foundation’ knowledge for Fire Engineering (a little like the ‘foundation’ mathematics which is required of undergraduates studying for different engineering degrees.</p> <p><b>In this respect, WG3 will be making its own recommendation as follows for Fire Engineers:</b></p> <ul style="list-style-type: none"> <li>• Any Fire Engineer should be bound and held to account by a code of conduct and ethics.</li> <li>• A minimum standard of relevant competence should be required for a Fire Engineer.</li> <li>• Professional registration with an appropriate body licensed by the Engineering Council, should be made a requirement for those carrying out Fire Engineering work on an ‘in scope’ building.</li> <li>• A preparedness for whistleblowing should be accepted and expected.</li> </ul> |                            |
| <p><b>WG1 – Engineers.</b></p> <ol style="list-style-type: none"> <li>a) Awareness of legal responsibilities and accountability set by duties under Building Act and CDM etc.</li> <li>b) Core definitions and principles relating to fire safety in buildings e.g.             <ol style="list-style-type: none"> <li>i. What is compartmentation?</li> <li>ii. Inter-reliance of B1 to B5 issues</li> </ol> </li> <li>c) WG3 expects that WG1 will recommend that designs/construction to be signed off by a registered engineer.</li> </ol> |  |                            |
| <p><b>WG2 – Installers.</b></p>  | <p>i.e. don’t just do ‘what you did</p>  |                            |

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| <p>a) Importance of fire compartmentation for anything that is M&amp;E related.</p> <p>b) Importance of checking that the installation meets the requirements of the project-specific specification.</p> <p>c) WG3 expects that WG1 will recommend that designs/construction to be signed off by a registered engineer.</p>  | <p>on the last job' that you think was the same.</p>   |  |
| <p><b>WG3 – Fire Engineers.</b></p> <p><i>[see the content of this document]</i></p>   |  |  |
| <p><b>WG4 – Fire Risk Assessors.</b></p> <p>a) Request to see and be able to understand the building fire strategy (i.e. interrelation of B1 to B5 aspects).</p> <p>b) Be able to identify whether the Fire Risk Assessor needs to ask the Responsible Person for a Fire Strategy report for the Fire Risk Assessor to do a suitable and sufficient Fire Risk Assessment.</p>  | <p><i>“I have to be able to understand how this building has been designed to do an acceptable Fire Risk Assessment”.</i></p> <p><i>e.g. cause and effects for smoke control system.</i></p> |  |
| <p><b>WG5 – Fire Safety Enforcement Officers.</b></p> <p>a) Understand interplay between Building Regulations, Approved Document B, Fire Safety Order and guidance in support of the FSO.<br/>E.g.</p> <ul style="list-style-type: none"> <li>i. Building Act – sets duties for compliance.</li> <li>ii. Building Regs – sets functional/prescriptive (i.e. new Reg 7) legislative requirements for duty holders.</li> <li>iii. Approved Documents and British Standards etc – guidance which, if followed, may evidence compliance with requirements, but may not be sufficient in some circumstances.</li> <li>iv. Understanding properly justified alternative approaches to AD/BS guidance.</li> </ul> <p>b) Knowing when it is appropriate to bring in a Fire Engineer for peer review.</p> <p>c) Be able to understand the fire strategy in relation to B1-B5 rather</p> |  |  |

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| <p>than simply 'measuring' it against AD/BS guidance.</p>  |  |  |
| <p><b>WG6 – Building Control/Building Standards Inspectors.</b></p> <p>a) Being able to assess the competency of those providing Fire Engineering solutions and carrying out any fire safety work that is subject to Building Regulations approval.</p> <p>b) Understand interplay between Building Regulations, national design guidance (e.g. the Approved Document B), Fire Safety Order and guidance in support of the FSO. E.g.</p> <ul style="list-style-type: none"> <li>i. Building Act – sets duties for compliance.</li> <li>ii. Building Regs – sets functional/prescriptive (i.e. new Reg 7) technical requirements for duty holders.</li> <li>iii. Approved Documents and British Standards etc – guidance which, if followed, may evidence compliance with requirements but may not be sufficient in some circumstances.</li> <li>iv. Acceptance of properly justified alternative approach to AD/BS guidance.</li> </ul> <p>c) Knowing when it is appropriate to bring in a Fire Engineer for peer review.</p> <p>d) Be able to understand the fire strategy in relation to B1-B5 rather than simply 'measuring' it against AD/BS guidance.</p> |  |  |
| <p><b>WG7 – Building Designers / Architects.</b></p> <p>a) Core definitions and principles relating to fire safety in buildings e.g.</p> <ul style="list-style-type: none"> <li>i. What is compartmentation?</li> <li>ii. Inter-reliance of B1 to B5 issues</li> </ul> <p>b) Understand interplay between Building Regulations, Approved Document B, Fire Safety Order and guidance in support of the FSO.</p>   | <p>The competencies required of an Architect are by necessity broad and detailed to help deliver a 'fire safe' building and they will need the assistance of competent professionally qualified fire engineers to do this.</p> <p>These recommendations are made by WG3 on the basis</p> | <p>RIBA to work with the Institution of Fire Engineers (IFE) on an IFE-accredited 'FAQ course' on understanding of fire engineering for designers.</p> |

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| <p>E.g.</p> <ul style="list-style-type: none"> <li>i. Building Act – sets duties for compliance.</li> <li>ii. Building Regs – sets functional/prescriptive (i.e. new Reg 7) legislative requirements for duty holders.</li> <li>iii. Approved Documents and British Standards etc – guidance which, if followed, may evidence compliance with requirements but may not be sufficient in some circumstances.</li> <li>iv. Understanding of properly justified alternative approach to AD/BS guidance.</li> </ul> <p>c) Be able to understand the fire strategy in relation to B1-B5 rather than simply ‘measuring’ it against AD/BS guidance.</p> <p>d) To be able to interpret the contents of the fire safety strategy and use the technical information therein to produce an architectural concept that delivers acceptable fire safety (especially means of escape and fire-fighting access and facilities)</p> <p>e) To be able to use the fire safety strategy as a key reference source for producing specifications for elements having a fire protection function (both passive and active fire protection)</p> <p>f) Being able to transfer the key components of the fire strategy onto plan drawings.</p> <p>g) Understand difference between certification, test and classification reports and product datasheets.</p> | <p>that WG3’s recommendations for involvement of a Fire Engineer at RIBA Stage 1 will be implemented.</p> |  |
| <p><b>WG8 – Building Safety co-ordinators.</b></p> <p>a) Core definitions and principles relating to fire safety in buildings</p> <p>e.g.</p> <ul style="list-style-type: none"> <li>i. What is compartmentation?</li> <li>ii. Inter-reliance of B1 to B5 issues</li> </ul> <p>b) Understand interplay between Building Regulations, Approved Document B, Fire Safety Order and guidance in support of the FSO.</p> <p>E.g.</p> <ul style="list-style-type: none"> <li>i. Building Act – sets duties for compliance.</li> <li>ii. Building Regs – sets functional/prescriptive (i.e.</li> </ul>  |   |  |

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| <p>new Reg 7) technical requirements for duty holders.</p> <ul style="list-style-type: none"> <li>iii. Approved Documents and British Standards etc – guidance which, if followed, may evidence compliance with requirements but may not be sufficient in some circumstances.</li> <li>iv. Understanding of properly justified alternative approach to AD/BS guidance.</li> </ul> <p>c) Understand the need for a building fire strategy and how that building fire strategy works.</p>  |  |  |
| <p><b>WG9 – Site Supervisors.</b></p> <ul style="list-style-type: none"> <li>a) Core definitions and principles relating to fire safety in buildings e.g. <ul style="list-style-type: none"> <li>i. What is compartmentation?</li> <li>ii. Inter-reliance of B1 to B5 issues</li> </ul> </li> <li>b) Understand the need for a building fire strategy and how that building fire strategy works.</li> <li>c) Understand interplay between Building Regulations, Approved Document B, Fire Safety Order and guidance in support of the FSO. E.g. <ul style="list-style-type: none"> <li>i. Building Act – sets duties for compliance.</li> <li>ii. Building Regs – sets functional/prescriptive (i.e. new Reg 7) legislative requirements for duty holders.</li> <li>iii. Approved Documents and British Standards etc – guidance which, if followed, may evidence compliance with requirements but may not be sufficient in some circumstances.</li> </ul> </li> </ul> | <p>Assuming (as referenced by WG9 that this is a “clerk of works on steroids”).</p> <p>Also, this is not seen by WG3 as a substitution of appropriate inspection by a Fire Engineer which will be needed to ensure that the works comply with the fire strategy.</p> | <p>Will this really be a “Clerk of Works on steroids” if the Site Supervisor is employed by the person (contractor) he/she is supervising?</p> |
| <p><b>WG10 – Project Managers.</b></p> <ul style="list-style-type: none"> <li>a) Core definitions and principles relating to fire safety in buildings e.g. <ul style="list-style-type: none"> <li>i. What is compartmentation?</li> <li>ii. Inter-reliance of B1 to B5 issues</li> </ul> </li> <li>b) understanding of the duties of the members of the project team relating to design and construction</li> </ul>  | <p>Whilst not considered to need competencies related to Fire Engineering, a Project Manager has to have a ‘feel’ for what is needed across a wider range of disciplines and the liaison that is required between disciplines to get the job done.</p>               |  |

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| <p>c) ability to understand the scope and appreciate the importance of the Fire Engineer's input to the project.</p>  |  |  |
| <p><b>WG11 – Procurement</b></p> <p>a) When procuring professionals then understand the competencies required of those professionals as per the WG competencies outputs.</p> <p>b) Understand key principles of testing and certification of fire safety products/systems.</p>  | <p>Could be choosing Professionals (early in the project) as well as materials, products and systems (later in the project).</p>   | <p>Procurement professionals will need training/CPD e.g. fire door and fire damper testing and certification by an appropriate provider such as ASFP or FIA.</p> |
| <p><b>WG12 – Products</b></p> <p>a) Organisations involved in the manufacture and supply of fire safety products and systems or that supply products which may need to have a fire performance classification need to understand what they need to do to ensure that their product has been suitably tested and certified for the market into which they are selling that product.</p> <p>b) Understand the need to make testing, classification and certification information available to Fire Engineers and other professionals involved in the project.</p> <p>c) Ensure that product data sheets and marketing literature do not make potentially misleading claims for fire performance, and that what claims are made can be supported using appropriate evidence of fire performance.</p> | <p>This is all about:</p> <p>a) Testing properly<br/>b) Certifying properly<br/>c) Marketing properly</p> <p>Fire Engineers, and other professionals in the disciplines represented by the other WGs need full and proper information.</p> <p>For example, BRE's 'Regulatory Testing' web site lists the references of reports of BS8414 cladding test. It has proven difficult to obtain some of these test and classification reports.</p> |  |

