The Institution of StructuralEngineers

ice Institution of Civil Engineers

HRB Structures Register

Chartered Engineer guidance for applicants

Author: IStructE/ICE Joint Committee

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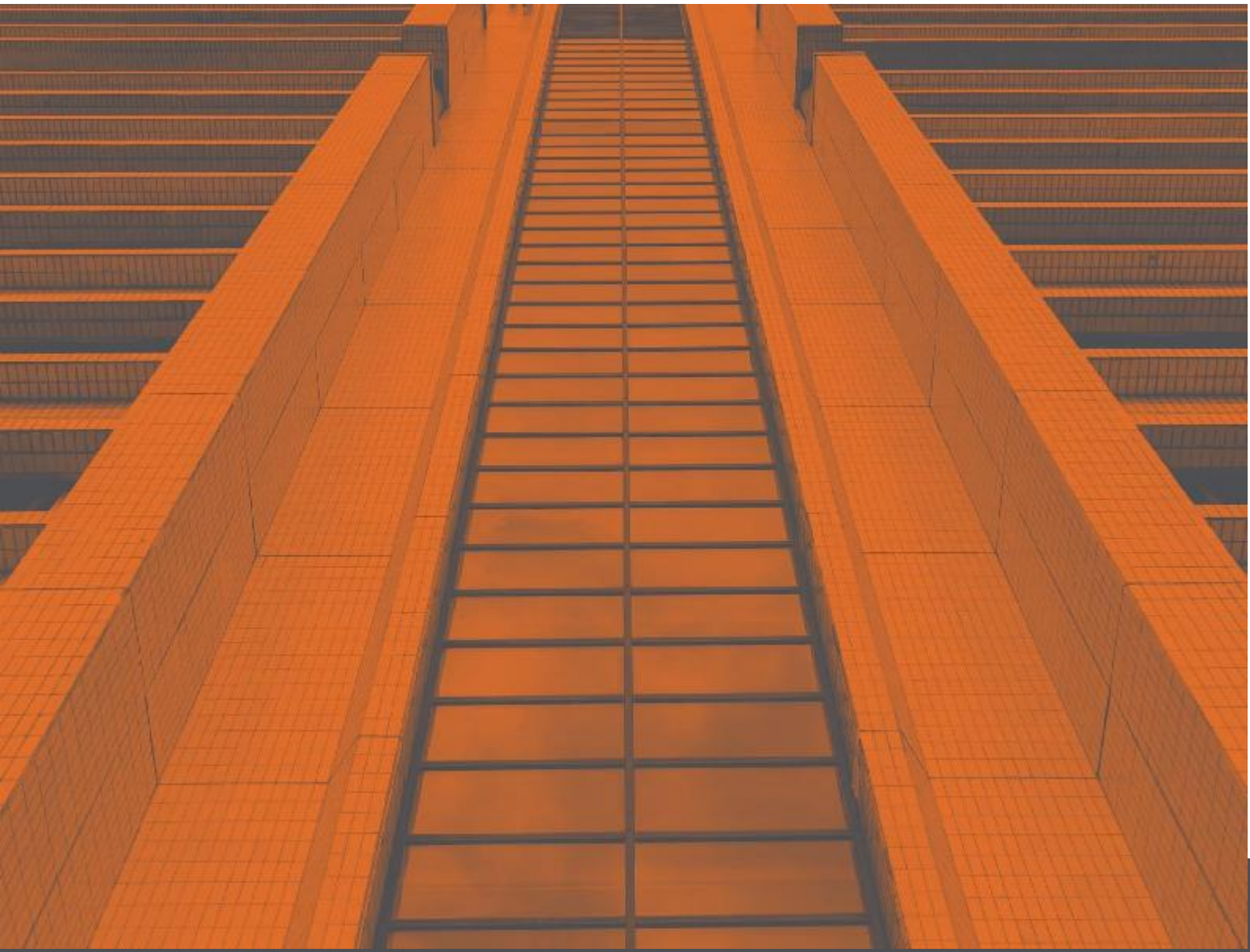

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Introduction

There is one Standard pathway to registration on the Higher Risk Buildings (HRB) Competency Register for Structural Engineering. This is a jointly held licence by the Institution of Civil Engineers (ICE) and the Institution of Structural Engineers (IStructE), with the latter administering the Register. All applicants, regardless of their registration/membership level and original route to professional registration, will be required to submit a complete application and undertake the full Professional Review Interview (PRI) against the UK-SPEC HRB Structures Annex competences authored and endorsed by the Engineering Council.

Once successfully added to the HRB Structures Register there is not a designated HRB postnominal, but the appropriate descriptor can be used: Chartered Engineer (HRB), Incorporated Engineer (HRB) or Engineering Technician (HRB).

Please ensure you read this document thoroughly to avoid any delays in processing your application.

Eligibility

Applicants for the HRB Structures register need to meet the following criteria:

1. Current membership of either ICE or IStructE in the relevant professional grade of membership*
2. Meet the academic standard in force at the time of their application for either ICE or IStructE professional membership (which may have been determined through an Individual Case Procedure (ICP), also known as an Academic Assessment.
3. A minimum of 5 years' experience post-registration in/election to the relevant professional grade of membership

*Note that the applicant does not need to hold current EngTech, IEng or CEng registration with the Engineering Council at the time of applying to join the HRB Structures register.

Application Documents

Applicants are required to submit the following documents before the PRI can be arranged:

- Completed and signed application form
- CV that contains relevant information pertaining to your experience on working on HRB projects
- 5 x Experience Report Forms – one for each of the five UK-SPEC HRB Structures Annex competences AA to EE
- A portfolio of evidence to support the statements made in the Experience Report Forms
- Application fee of £210 (charged after application is received)

Application Process

Administration for the HRB (Structures) Competency Register application and assessment process is undertaken by staff at the IStructE.

- On receipt of application IStructE will check eligibility, qualification details and completeness of the application.
- The assessment fee will be added to your account and you will be asked to make the payment online.
- After receipt of assessment fee payment, your application will be sent to two HRB Reviewers who will contact you to arrange a time and date for your interview.
- The HRB reviewers will make a recommendation based on the outcome of the interview which will be submitted to the Joint ICE/IStructE HRB Committee for review.
- The HRB Interview result will be approved by the Joint ICE/IStructE HRB Committee at the next quarterly meeting.
- If you fail the HRB PRI, you will be informed of the result by email and given the option to request feedback from the HRB Reviewers.
- If you pass the HRB PRI, you will be informed of the result by email and advised to pay the HRB Registration fee to the IStructE which will be passed to the Engineering Council.
- On payment of the HRB registration fee you will be added to the HRB Structures Register.
- IStructE will invoice for the first registration fee, then either ICE or IStructE will charge the subsequent yearly fee, depending on what you designate as your 'main' institution.

Application Guidance

The following text provides specific guidance on the preparation of making an application to be a registrant on the HRB Competency Register for structural engineering. It should be read in conjunction with the procedure of making the application. Please note that the HRB competence registration is unique from other grades of membership in that it is an adjunct to a candidate's professional qualification they already hold with either the IStructE or ICE.

When preparing the Experience Report Forms, the contents of them must from the first person. They must describe the actions the candidate has undertaken and how they relate to the specific competence being addressed. The content of the Experience Report Forms is the primary source of information that the reviewers will read prior to an interview taking place. This must be kept in mind by the candidate as they prepare the Experience Report Forms. It is therefore recommended that candidates should avoid high-level statements and assertions that cannot be easily proven. Instead, candidates should focus on specific tasks that they personally carried out to demonstrate how they have sufficient understanding and experience against a specific competency.

The evidence of the assertions made in the Experience Report Forms should be contained principally in the portfolio, entries for which should be cross referenced to the relevant competence. The CV can also be used as a source of information for relevant experience that supports the candidate's application.

Reading List

The list of documents below is suggested reading for candidates prior to making their application:

- Grenfell Tower Inquiry Phase 2 report
- Part A of the Building Regulations etc. (Amendment) (England) Regulations 2023
- What you need to know about Higher-Risk Buildings (HRBs) safety case reports – IStructE
- Structural submissions for HRBs under the Building Safety Act: guidance for Gateways 2 and 3 – IStructE
- Section 11F of the Building Regulations etc. (Amendment) (England) Regulations 2023
- Manual for the systematic risk assessment of high-risk structures against disproportionate collapse – IStructE
- Assessing higher-risk buildings under the Building Safety Act: a compendium of structural typologies - IStructE

Professional Review Interview (HRB PRI)

The HRB PRI is undertaken by two appropriately qualified and trained HRB Reviewers.

The HRB PRI will be conducted online and will be approximately 60 to 90 minutes in duration, but this can vary depending on the Reviewers' need to gain sufficient information of each of the competence areas. At the start of the interview, the applicant will be asked to give an informal 5-10 minute presentation without slides. This presentation should only cover the areas of your career and experience that are relevant to HRB structures. The Reviewers will then commence with discussion/questions based on the content of your documentation.

HRB PRI Failures

You will be deemed to have failed your HRB PRI if you are not able to satisfy the Reviewers of each of the 21 competence areas of the UK-SPEC HRB Structures Annex to the required level of competency (knowledge, experience or ability).

If you fail in five or fewer of the competence areas you will only be assessed against those areas when making a re-submission, provided you resubmit within three years of the first HRB PRI decision. However, if you fail in six or more of the competence areas you will require a full assessment when you reapply.

When the failure result has been ratified by the ICE/IStructE HRB Joint-Committee you will be informed of the outcome by email. You will be able to request feedback to support a future application.

Portfolio guidance

All candidates are required to prepare a portfolio of work in support of their HRB experience report forms. This must be submitted when you submit your HRB application to the IStructE. Applications received without the completed portfolio cannot be processed in full, and the PRI will not be arranged.

The portfolio must demonstrate that you have attained at least the minimum level of competence and responsibility for HRB registration. It is a vital element of the PRI process, and you should devote the necessary time and care to its production.

Portfolio format

The portfolio must be a single PDF with a maximum of 300 pages including drawings, sketches and any calculations. You should also include a hyperlinked index to the sections of your portfolio and bookmarking if possible. If you exceed the number of pages, your reviewers will remove any pages beyond the 300-page limit or consequently may decline to interview you.

The pages of text within the portfolio must be A4 size, i.e. you cannot reduce your pages to A5 to fit two pages onto an A4 sheet. Drawings must be no greater than A3 size. The font size used in your portfolio and Experience Report Forms must be no smaller than Arial 10. You must ensure that all A3 pages can be clearly read on a computer screen and not contain information that is too small to be viewed.

The portfolio must contain evidence relating to all competencies on which you are being assessed and allow easy cross-referencing with the Experience Report Forms. Make sure that the information provided is relevant and relates directly to the competencies and how you have achieved the standards.

You will be expected to include examples of work from a variety of projects that you have worked on. The portfolio must be sub-divided into the competencies with only the relevant documents included in each section.

Where appropriate, you should provide comments and annotations on the submitted information to help demonstrate an understanding of the work and its relevance to the competencies.

All work included within the portfolio must be your own. Submitting work carried out by other people is not permitted.

Examples of the type of information and documents you may wish to include are detailed within each competence later in the guidance. You should avoid submitting repetitive designs or drawings and full reports of projects.

Appeals Procedure

The IStructE has an appeals procedure for candidates who have been unsuccessful in their application. An appeal may be made on the following grounds only:

- Extenuating circumstances occurring immediately before or during the application process or interview, and/or
- Departure from the application or interview procedures

Full details of the procedures are published on the Institution website.

Please note that recording of your interview by any means is not permitted and any such recording cannot therefore be used as evidence in an appeal or other disagreement with the judgement of the reviewers.

HRB (Structures Annex) Competences

Introduction

The following list of compulsory Competences AA to EE, as set out in UK-SPEC HRB, details the requirements for candidates intending to apply for the HRB PRI. Please refer to the correct registration level (CEng, IEng or EngTech) related to the registration level that you currently hold.

The minimum standards required for the Competences are:

	Standard	Description
K	Knowledge	The lowest level, requiring an understanding of the subject and how it is applied.
E	Experience	The ability to operate independently or with some supervision.
A	Ability	Performing independently with no supervision, possibly supervising the work of others.

The competences, plus notes and examples, are included below.

HRB Experience Report

You need to complete one HRB Experience Report form for each of the five HRB competence areas, AA to EE. The HRB experience form is available to download from the website.

General advice for completing the HRB experience report form

Personal: the reviewers will not be interested in what your company does, they are only interested in what you have done. Therefore, ensure that you state what you have personally undertaken and try to avoid generic statements about how your company operates.

Positive: do not sell yourself short. Try to avoid statements such as 'I have limited/some experience' – you either have the required experience or not. Try and ensure that the correct words are applied to the relevant competence, e.g., if it's an 'ability' competence, do not use 'experience' or 'knowledge', always use 'ability'.

Practical: ensure you state how you have achieved the competence area standards.

Chartered Engineer (CEng) Competences

AA Knowledge and understanding

Chartered Engineers shall use a combination of general and specialist engineering knowledge and understanding to optimise the application of advanced and complex systems.

This competence is about the ability to understand underpinning technical principles in fire, structural and life safety relevant to the applicant's area of practice and applying them to develop technical solutions. This could involve technical solutions for novel problems or dealing with significant technical complexity. This may involve the integration of a range of technologies and consideration of other factors. This competence requires that an applicant is maintaining and developing their knowledge in their field of practice and not just that required for specific tasks.

HRB competency To the extent that it is relevant to their role, the candidate shall demonstrate that they:	IStructE/ICE standard and examples of evidence to demonstrate compliance with this objective
AA1 Maintain, extend and develop a sound theoretical approach to application of relevant fire, structural and building life safety systems, principles and practices throughout the building life cycle of HRBs.	Minimum standard – Ability Example: Demonstrate application of approaches in design and execution of design that align with current requirements for fire and structural safety.
AA2 Address and develop solutions to complex or challenging building safety problems with significant levels of risk. Apply knowledge and understanding of relevant principles and technical standards to co- ordinate and integrate these into the building design.	Minimum standard – Ability Example: Application of current requirements in relation to the two key events, fire spread and structural integrity as identified in the Building Safety Act.

BB Design, development and solving engineering problems

Chartered Engineers shall apply appropriate theoretical and practical methods to the analysis and solution of engineering problems.:

This competence is about the ability to apply engineering knowledge effectively and efficiently to the individual task which need to be undertaken in the applicant's role in relation to HRBs.

HRB competency To the extent that it is relevant to their role, the candidate shall demonstrate that they:	IStructE/ICE standard and examples of evidence to demonstrate compliance with this objective
BB1 Take an active role in the identification and definition of project requirements, problems and opportunities throughout the building life cycle of HRBs.	Minimum standard – Ability Example: Identify aspects of the design of the structure of the HRB are affected by fire spread and structural integrity. Staircase layout, fire rating of elements, and tying action across the structure are examples of these.
BB2 Undertake research, analysis and development to define, refine and apply relevant standards, testing, assessment, site inspection and maintenance procedures for building materials, products, components, assemblies and systems effectively throughout the building life cycle.	Minimum standard – Ability Example: Identify where optimisation in the design of the structure can be applied without compromising the safety requirements of the building's occupants. Use of testing and research into material sciences are examples of this.
BB3 Can implement engineering tasks and evaluate the effectiveness of engineering solutions.	Minimum standard – Ability Example: Execute and/or guide the analysis and design of structures to HRBs. Fire engineering of structural elements is an example of this. Also being able to respond to change and how that affects the safety of the occupants of the HRB.

CC Responsibility, management and leadership

Chartered Engineers shall demonstrate technical and commercial leadership.

This competence is about the ability to plan the applicant's own work and manage or specify the work of others effectively, efficiently and in a way which provides leadership at an appropriate level, whether technical or commercial. Leadership is not necessarily about having a formal line management role. In matrix management and other types of organisational structure, where Chartered Engineers are working within complex and varied working relationships, they will provide leadership to achieve objectives. This competence is also about the ability to consider and identify improvements to quality.

HRB competency To the extent that it is relevant to their role, the candidate shall demonstrate that they:	IStructE/ICE standard and examples of evidence to demonstrate compliance with this objective
CC1a Plan the work and resources needed to enable effective implementation of significant engineering tasks or projects in association with or to fulfil key roles, responsibilities and duties relating to HRBs.	Minimum standard – Ability Example: Comparison against the design and construction programme and how resources were applied to achieve the requirements described in BB2.
CC1b Develop effective approaches and use appropriate information management principles to manage, distribute and maintain information which is critical to ensuring that HRBs are built, operated and maintained to be safe throughout the building lifecycle.	Minimum standard – Ability Example: Minutes of meetings, emails to other team members and sketches/notes provided to other relating to decisions made concerning the design of the structure to the HRB.
CC2 Develop, manage, maintain and use systems to challenge unacceptable behaviour or practice where duties are not being effectively met and raise, report, escalate or flag risks to safety with clients, managers, duty holders or regulators.	Minimum standard – Experience Example: Identify when design development and criteria divert away from the safety requirements of HRBs and/or originate CROSS reports pertaining to potentially unsafe practices/narrow misses.
CC3a Lead teams or technical specialisms to assist others, including Duty Holders and Regulators, to meet changing requirements for technical and procedural requirements for safe outcomes.	Minimum standard – Experience Example: Direct and/or advise others in the design team and the PAP to ensure the requirements of the BSA in relation to HRBs is maintained.
CC3b Define requirements for competence, identify and manage the limits of competence of self and others and undertake appropriate mitigating actions to manage risk including developing procedures to procure more specialist advice when necessary and use appropriate evidence in the management of 'soft hazards'.	Minimum standard – Ability Example: Explanation to the PAP and other members of the design team what the structural engineer can and will do within the confines of their own expertise in relation to the design, construction and management of the structure of the HRB
CC4 Bring about continuous quality improvement and promote best practice.	Minimum standard – Ability Example: Following a QMS and identifying how it is applied to the design of an HRB.

DD Communication and interpersonal skills

Chartered Engineers shall demonstrate effective communication and interpersonal skills.

This is the ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively.

HRB competency To the extent that it is relevant to their role, the candidate shall demonstrate that they:	IStructE/ICE standard and examples of evidence to demonstrate compliance with this objective
DD1 Develop procedures and approaches to enable effective and appropriate communications with occupants, the public and with others, orally and in writing.	Minimum standard – Experience Example: Engaging with local authorities and other relevant government bodies.
DD2 Clearly present and discuss proposals, justifications and conclusions.	Minimum standard – Ability Example: Communication of concept designs, articulation of the scope of work in fee proposals and/or internal technical memos.
DD3 Demonstrate personal and social skills and awareness of diversity and inclusion issues	Minimum standard – Knowledge Example: Empathetic based actions with respect to working with other members of the design team and the PAP and the building occupants. Demonstrating an understanding of how diversity and inclusivity may affect the design decisions and identify the impact a Structural Engineer has on the eventual users of the building.

EE Personal and professional commitment

Chartered Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.

This competence is about ensuring that the applicant is acting in a professional manner in their work and in their dealings with others. A Chartered Engineer should set a standard and example to others with regard to professionalism.

HRB competency To the extent that it is relevant to their role, the candidate shall demonstrate that they:	IStructE/ICE standard and examples of evidence to demonstrate compliance with this objective
EE1 Demonstrate leadership, understanding and ability to manage complex ethical considerations relating to the occupation of HRBs and apply these to self and others in practice.	Minimum standard – Experience Example: Knowledge of the relevant PEI's code of conduct and how the candidate has demonstrated these values when designing HRBs.
EE2a Maintain, extend and contribute to development of good practice in complying with relevant legislation, regulations, standards of performance applicable to HRBs.	Minimum standard – Ability Example: Application of current guidance on health and safety systems that pertain to HRBs.
EE2b Develop effective approaches to risk management and apply knowledge and understanding of specific and complex risks relevant to HRBs in the development and application of risk management frameworks and safe systems of work.	Minimum standard – Experience Example: Understand how risk is related to events in the context of the BSA for HRBs and/or demonstrate use and application of relevant CROSS articles in the course of project delivery.
EE2c Identify and refine procedures to work within or apply in practice statutory process and procedures for HRBs.	Minimum standard – Experience Example: Sharing of knowledge on the BSA to colleagues and other members of the design team.

Chartered Engineers shall demonstrate a personal commitment to professional standards, recognising obligations to society, the profession and the environment.	
EE3 Understand the principles of sustainable development and apply them to their work.	Minimum standard – Ability Example: Internal initiatives relating to sustainability and how they are applied to the design of HRBs.
EE4 Carry out and record the CPD necessary to maintain and enhance competence in HRBs.	Minimum standard – Ability Example: Attending CPD talks, reading articles in technical journals, news reports on fires and structural damage to HRBs.
EE5 Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner.	Minimum standard – Ability Example: Recognise the duty of care and advise the PAP of their obligations under the BSA in relation to HRBs and demonstrate knowledge of root causes of previous events to HRBs and how these would be avoided in similar circumstances.

IEng and EngTech competences

The HRB competence requirements for IEng and EngTech registrants are provided in separate guidance documents. If you require further information on these, please contact the Registrations Team on registrations@istructe.org

HRB Registration Process

Once your HRB PRI pass result has been approved by the Joint ICE/IStructE HRB Committee, the initial registration fee will be added to your IStructE account and you will be contacted to make payment online, via the secure portal. Once paid, IStructE will pass your details to the Engineering Council and it will add you to the HRB Structural Register.

There is not a designated HRB postnominal, but the appropriate descriptor can be used: Chartered Engineer (HRB), Incorporated Engineer (HRB) or Engineering Technician (HRB).

HRB Renewals/re-registration

Your home/main Institution, either ICE or IStructE, will add the annual registration fee to your account the year after your initial registration. This will be the institution through which you normally pay your CEng/IEng/EngTech fees.

Please note that the HRB renewal fee is in addition to your usual CEng/IEng/EngTech fees, if this is applicable to you.

This Registration will be valid for 5 years from your HRB PRI pass. IStructE will carry out the re-registration after 5 years in accordance with the Engineering Council's procedures.

Appendix: definitions

Acronym	Definition
PRI	Professional Review Interview
PEI	Professional Engineering Institution
HRB	Higher Risk Buildings
CROSS	Collaborative Reporting for Safer Structures. Confidential safety reporting system for buildings and other structures. Operated jointly by IStructE and ICE
UK-SPEC	UK Standard for Professional Engineering Competence and Commitment
QMS	Quality Management System
BSA	Building Safety Act
PAP	Principle Accountable Person
CPD	Continuing Professional Development