A. Knowledge and understanding

A Member 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 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.

Objective	Evidence Examples	Façade Specific Evidence Examples
A1. Maintain and extend a sound theoretical approach to enable you to develop your particular role.	• Formal training related to your role • Learning and developing new engineering knowledge in a different industry or role • Understanding the current and emerging technology and technical best practice in your area of expertise • Developing a broader and deeper knowledge base through research and experimentation • Learning and developing new engineering theories and techniques in the workplace	• Understand that facades need to have structural integrity, to control energy and vapour and that they are made from a wide range of process and manufacturing methods. • Appreciate the diversity of fields within the façade construction industry and discuss with your supervisor. • Read and develop understanding of codes relevant to project tasks. • Attend training seminars. Discuss the role of the CWCT and SFE with your supervisor. • Read technical journals such as, New Civil Engineer, Building, Architects Journal, Detail, The Structural Engineer journal and other publications relating to –for example: Planning, materials, construction, architecture etc. Read Quality local and national newspapers. Watch and listen to news and current affairs. • Discuss the latest issues for the construction industry and issues of particular interest to you with your supervisor. • Stay aware of latest software developments and applications.

Objective	Evidence Examples	Façade Specific Evidence Examples
		• Involvement with industry bodies such as SFE and CWCT, contribution / commenting on standards, guidelines, publications, writing papers, attending relevant training courses and CPDs.
A2. Develop technological solutions to unusual or challenging problems, using your knowledge and understanding and/or dealing with complex technical issues or situations with significant levels of risk.	• Carrying out technical research and development • Developing new designs, processes or systems based on new or evolving technology • Carrying out complex and/or non-standard technical analyses • Developing solutions involving complex or multidisciplinary technology • Developing and evaluating continuous improvement systems • Developing solutions in safety-critical industries or applications	• Involvement in the development of a bespoke design of an element of a façade, ideally this should include involvement with design and testing. • Attend industry events, talks and conferences. • Write papers in collaboration with industry or academia. • Describe the limits of the standards and codes you have used, an awareness of other criteria for the design of buildings and an understanding the difference between legal requirements and best practice guidance. • Appreciation of- and involvement with- development of novel construction methods of bespoke façade solutions. • Developing and coordinating complex façade construction processes to reduce safety risks. • Establishing working groups.

B. Design, development and solving engineering problems

A Member 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 tasks which need to be undertaken in the applicant's role.

Objective	Evidence Examples	Façade Specific Evidence Examples
B1. Take an active role in the identification and definition of project requirements, problems and opportunities	• Identifying projects or technical improvements to products, processes or systems • Preparing specifications, taking account of functional and other requirements • Establishing user requirements • Reviewing specifications and tenders to identify technical issues and potential improvements • Carrying out technical risk analysis and identifying mitigation measures • Considering and implementing new and emerging technologies	• Evaluate and compare alternative methods for modelling, detailing or project delivery. • Discuss and propose new ideas for modelling techniques with others in your team. • The candidate needs to show that they have been involved in the identification of the principal criteria and drivers that inform the design solution for the façade. • They should show how these criteria and drivers have been used to develop proposals for the delivery of the façade. • Study examples of previous projects identifying drivers and solutions, and present findings. • Identify the performance characteristics of a façade on which the safety case of a complex building might rely. • Show examples of solutions that would and would not meet those performance characteristics, showing an appreciation of the influence of design and workmanship. • Identify gaps in the market to steer product development.
B2. Identify the appropriate investigations and research needed to	• Identifying and agreeing appropriate research methodologies	• The candidate shows that they have been involved in the preparation of a concept design or scheme design for a project.

Objective	Evidence Examples	Façade Specific Evidence Examples
undertake the design, development and analysis required to complete an engineering task and conduct these activities effectively	• Investigating a technical issue, identifying potential solutions and determining the factors needed to compare them • Identifying and carrying out physical tests or trials and analysing and evaluating the results • Carrying out technical simulations or analysis • Preparing, presenting and agreeing design recommendations, with appropriate analysis of risk, and taking account of cost, quality, safety, reliability, accessibility, appearance, fitness for purpose, security (including cyber security), intellectual property constraints and opportunities, and environmental impact	• The candidate should demonstrate knowledge of why particular concept or scheme designs were chosen to be taken forward in the project. • Be involved in the development or reviewing of final façade design for construction. • Be involved in post tender design workshops, be part of team undertaking site inspections. • Consider key factors which drive façade design, cost, time, buildability and sustainability. • Assist project engineers with creating design options and proposals. • Contribute model output to design reports. • Understanding emerging industry requirements, with a view to inform development of new products and services.
B3. Implement engineering tasks and evaluate the effectiveness of engineering solutions.	• Ensuring that the application of the design results in the appropriate practical outcome • Implementing design solutions, taking account of critical constraints, including due concern for safety, sustainability and disposal or decommissioning • Identifying and implementing lessons learned • Evaluating existing designs or processes and identifying faults or potential improvements including risk, safety and life cycle considerations • Actively learning from feedback on results to improve future design solutions and build best practice	• Candidate demonstrates that they have been closely involved in the detailed development of the cladding on a project. • Participating in workshops, reviewing submissions witnessing testing, inspecting Works as they are constructed. • Implement solutions to analysis models that are not functioning as intended.. • Write some guidance material on how to resolve commonly encountered problems. • Consider the effectiveness of the design in relation to construction efficiency and safety of installation. • Demonstrate how experience on one project led to a different improved approach on subsequent projects.

C. Responsibility, management and leadership

A Member 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 the applicant is 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.

Objective	Evidence Examples	Façade Specific Evidence Examples
C1. Plan the work and resources needed to enable effective implementation of a significant engineering task or project.	• Preparing budgets and associated work programmes for projects or tasks • Systematically reviewing the factors affecting the project implementation including safety, sustainability and disposal or decommissioning considerations • Carrying out a task or project risk assessment and identifying mitigation measures • Leading on preparing and agreeing implementation plans and method statements • Negotiating and agreeing arrangements with customers, colleagues, contractors and other stakeholders, including regulatory bodies • Ensuring that information flow is appropriate and effective	• The candidate should demonstrate that they have been involved in the management of project for completion. • Tasks that are likely to need to be undertaken are the preparation of financial and resource proposals, delivery plans, CDM risk assessments, Quality Assurance planning, resource planning etc. • Contribute to a project's BIM Execution Plan. • Contribute to and/or manage delivery programme/schedule. • Advise others on the considerations that BIM will have on resourcing. • Estimate or plan installation, repair or dismantling works on a façade. • Prepare Risk Assessment and Method Statements for site works on facades.
C2. Manage (organise, direct and control), programme or schedule, budget and resource elements of a	• Operating or defining appropriate management systems including risk registers and contingency systems • Managing the balance between quality, cost and time • Monitoring progress and associated costs and cost forecasts, taking appropriate actions when required	• The candidate should show that they have managed the commercial, resourcing and/or delivery aspects of a project. • This should also include discussions with legal representatives around the company's contractual position or an understanding of negotiations around contract sums, fees and associated scope.

Objective	Evidence Examples	Façade Specific Evidence Examples
significant engineering task or project	• Establishing and maintaining appropriate quality standards within legal and statutory requirements • Interfacing effectively with customers, contractors and other stakeholders	• Understand and work to BIM standards and specifications such as PAS1192-2, COBie, Uniclass2015, etc. • Contru]ibute to the management of a site or factory project to build, repair or dismantle a façade. • Intervene on a project to assist in developing a recovery plan following unforeseen delays or uncontrolled mission creep.
C3. Lead teams or technical specialisms and assist others to meet changing technical and managerial needs	• Agreeing objectives and work plans with teams and individuals • Reinforcing team commitment to professional standards • Leading and supporting team and individual development • Assessing team and individual performance, and providing feedback • Seeking input from other teams or specialists where needed and managing the relationship • Providing specialist knowledge, guidance and input in your specialism to engineering teams, engineers, customers, management and relevant stakeholders • Developing and delivering a teaching module at Masters level, or leading a University research programme	The following are examples of different potential leadership roles for a façade engineer. It is recognised that it may not be possible to have experience in multiple examples: • Lead a site team installing or inspecting facades. • Lead a team fabricating or quality assuring facades in a factory. • Lead a façade design team. • Lead a team of building physics, structural engineering or other façade specialists in a design office. • Lead a team testing facades at a laboratory or on site. • Lead a team diagnosing, remediating or dismantling facades. • Develop a team of façade engineers within your organisation who are competent to work on complex buildings. • Lead or develop a technical sales and/or product support team. • Guide stakeholders and a design team by providing specialist façade engineering knowledge during design and construction stages.

Objective	Evidence Examples	Façade Specific Evidence Examples
C4. Bring about continuous quality improvement and promote best practice.	• Promoting quality throughout the organisation as well as its customer and supplier networks • Developing and maintaining operations to meet quality standards eg ISO 9000, EQFM • Supporting or directing project evaluation and proposing recommendations for improvement • Implementing and sharing the results of lessons learned	• Write methods and standards for aspects of work on facades or their design; eg, site re-glazing of SSG. • Publish lessons learned from project experience and promote adoption of better practice, which could relate to design, materials selection, manufacturing, installation or repair, even new ways to diagnose and remediate façade problems. • Communicate the aspects of façade engineering that become more demanding on complex buildings and set out the criteria for qualifying members of your team to work on them. • Contribute to maintaining certification, eg: by providing evidence to auditor or relevant certification body.

D. **Communication and interpersonal skills**

A Member 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

Objective	Evidence Examples	Façade Specific Evidence Examples
D1. Communicate effectively with others, at all levels, in English.	• Preparing reports, drawings, specifications and other documentation on complex matters • Leading, chairing, contributing to and recording meetings and discussions • Exchanging information and providing advice to technical and non-technical colleagues • Engaging or interacting with professional networks	• Preparing, reviewing or contributing to Façade Engineering design stage reports outlining the different façade types, thermal and structural calculation results and co-ordination of performance criteria. Preparing detailed project specifications for tender. • Leading façade engineering workshops with design teams and clients with a particular view to explaining complex engineering challenges to non-technical people. Evidence may also include follow-up to the meetings, for example preparing and sharing notes or minutes from meeting, or reviewing minutes prepared by others and providing comments. "Listening in" on meetings and effectively following up can also constitute evidence of good communication skills. • Relevant training: such as English language courses, report-writing courses, management courses, etc. • Engagement with the engineering and construction community, for example: contributing to podcasts, relevant websites, attending or presenting at seminars/conferences, delivering CPDs to other members of the construction community. • Internal presentations and CPDs prepared and delivered by the candidate for the benefit of colleagues, outlining challenges and technical solutions on previous projects or research.

Objective	Evidence Examples	Façade Specific Evidence Examples
D2. Clearly present and discuss proposals, justifications and conclusions	• Contributing to scientific papers or articles as an author • Preparing and delivering presentations on strategic matters • Preparing bids, proposals or studies • Identifying, agreeing and leading work towards collective goals	• Contributing to publications in Façade engineering related journals and/or presentations at conferences, in particular at SFE presentations and events. • Preparing or contributing to façade engineering fee proposals and managing the scope of services on a project. • Preparing and presenting strategies related to marketing, procurement, expansion, diversification, research, etc. to higher management to achieve overall long-term goals set by the candidate's past or current employer. • Preparing technical literature for existing/new façade products for distribution to construction professionals. • Technical report writing centred around specific matters, for example: drafting responses to specific design queries from clients/third parties, reports for façade failure investigations or façade testing, condition surveys, site visits, etc. • Preparing tender bids: including clarifications, exclusions (and reasoning), and value engineering proposals. • Reviewing and reporting back on tender bids: including commentary on quality of submittals, comparison between bidders, and concise notes and recommendations for clients capturing the essence of the process • Successfully persuading relevant parties, by providing evidence, logical arguments and relatable examples, to modify their current approach or goals; for example to avoid preventable risks or establishing environmental goals. • Authoring relevant scientific papers.

Objective	Evidence Examples	Façade Specific Evidence Examples
D3. Demonstrate personal and social skills and awareness of diversity and inclusion issues.	• Knowing and managing own emotions, strengths and weaknesses • Being confident and flexible in dealing with new and changing interpersonal situations • Identifying, agreeing and working towards collective goals • Creating, maintaining and enhancing productive working relationships, and resolving conflicts • Being supportive of the needs and concerns of others, especially where this relates to diversity and inclusion	• Providing examples of dealing with difficult situations within team of colleagues or within a design team illustrating resolution of differences. • Providing examples of mentoring less experienced façade engineers and encouraging their professional growth. • Providing evidence of identifying personal weaknesses and addressing these through continuing professional education. • Examples of situations where the candidate was requested to answer questions outside their personal expertise and how this was dealt with. • Examples of how situations where requests are made by clients or design team that are beyond the agreed contractual scope have been effectively dealt with. • Examples of situations where the candidate was required to operate within a dispute or similar sensitive situations, for example in relation to interpretation and delivery of contract requirements, arbitration procedures, legal disputes. Evidence may also include relevant training such as expert witness or arbitration training. • Dealing with changing contractual scenarios, for example novation processes. • Networking on a personal and company level to maintain working and collaborative relationships outside project-specific settings.

E. Personal and professional commitment

A Member 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 Member should set a standard and example to others with regard to professionalism.

Objective	Evidence Examples	Façade Specific Evidence Examples
E1. Understand and comply with relevant codes of conduct	• Demonstrating compliance with your Licensee's Code of Professional Conduct • Identifying aspects of the Code which are particularly relevant to your role • Being aware of the legislative and regulatory frameworks relevant to your role and how they conform to them • Leading work within relevant legislation and regulatory frameworks, including social and employment legislation	• Demonstrating awareness and compliance with the SFE and CIBSE Code of Professional Conduct • Demonstrate awareness of local regulations such as the MHCLG guidelines, Building regulations, Health and Safety regulations, CWCT standards and relevant British and European standards for façade engineering.Contributing to development of standards and guidance (eg: providing comments on draft documents), anddissemination of knowledge with the SFE.
E2. Understand the safety implications of their role and manage, apply and improve safe systems of work	• Identifying and taking responsibility for your own obligations and ensuring that others assume similar responsibility for health, safety and welfare issues • Ensuring that systems satisfy health, safety and welfare requirements • Developing and implementing appropriate hazard identification and risk management systems and culture • Managing, evaluating and improving these systems • Applying a sound knowledge of health and safety legislation, for example: HASAW 1974, CDM regulations, ISO 45001 and company safety policies	• Demonstrating and managing project risk assessments such as glass risk assessments, CDM design risk assessments or task-specific RAMS. • Contributing to Health and Safety in-house guidelines relating to site visits, or factory work. • Consider material use in façades and overhead glazing and how such may pose a risk to those who may come into contact with them • Identify details in façade construction that incorporates risk mitigating features to allow the design to be executed.

Objective	Evidence Examples	Façade Specific Evidence Examples
		• Understand that Building Regulations are a minimum requirement and that existing published standards and guidance may not necessarily cover unusual conditions which may present their own special risks.
E3.Understand the principles of sustainable development and apply them in their work	• Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously • Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives • Recognising how sustainability principles, as described in the Guidance on Sustainability, can be applied in your day-to-day work • Understanding and securing stakeholder involvement in sustainable development • Using resources efficiently and effectively in all activities • Taking action to minimise environmental impact in your area of responsibility	• Show how alternative transport arrangements and opportunities for reusable materials for packing and protection of products can be implemented • Show how the selected materials can be manufactured, transported and installed with minimum requirement for excessive protection during the process and after install. • Contributing to sustainability objectives of the project, including thermal properties, management of daylight and solar heat gain, and occupant comfort studies, life cycle assessments, design for disassembly/easy recycling, and embodied carbon. • Contribution to the CWCT Sustainability guidance. • Persuading stakeholders to pursue sustainability targets.
E4. Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice	• Undertaking reviews of your own development needs • Planning how to meet personal and organisational objectives • Carrying out and recording planned and unplanned CPD activities • Maintaining evidence of competence development • Evaluating CPD outcomes against any plans made • Assisting others with their own CPD	• Evidence of proactively managing CPD with emerging façade engineering industry challenges such as fire safety and embodied carbon. • Mentoring less experienced engineers to guide their own professional development, this could be within your company or outside it. • Attend conferences, seminars, industry events, factory visits, system-specific or component-specific training, etc.

Objective	Evidence Examples	Façade Specific Evidence Examples
E5. Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	• Understanding the ethical issues that you may encounter in your role • Giving an example of where you have applied ethical principles as described in the Statement of Ethical Principles. • Giving an example of where you have applied or upheld ethical principles as defined by your organisation or company.	• Demonstrating an understanding of the different drivers in façade engineering design and how these can pull in different directions (for example fire safety and thermal requirements, or fire safety and post-breakage performance). • Giving an example of where you have applied ethical principles as described in the CIBSE Statement of Ethical Principles, for example in challenging the use of particular materials, façade designs or procurement. • Giving examples of management of conflict of interest in procurement or legal matters. • Evidence of duty of care, in relation to aspects outside your immediate scope, eg: highlighting H+S risks on site such as temporary protection or potential safety-critical installations for non-façade works, etc.