

Document ID: EMCAPPEN001	Title: SaRS IEng. Application Form Part 6Statement of Competences and Commitment	Print Date: 15/10/2021 09:16:00
Version: 3 DOC UPDATE	Prepared By: EMC	Prepared Date: April 2020
	Updates by: JW	19082021
Issue Date: 15102021	Reviewed By: HFH	Review Date: 28042023
	Approved By: HFH	Approve Date: 23052023

### SaRS Guidance:

## SaRS IEng. Application Form Part 2 Academic Qualifications and Part 6 Statement of Competence and Commitment

The following information provides guidance and examples showing how you demonstrate meeting the qualifications and Competence and Commitment criteria for **Incorporated Engineer** as set out in the Engineering Council Standard for Professional Competence (UK-SPEC Fourth Edition).

For information about signatures, proposers and sponsors please see the SaRS website.

<https://www.sars.org.uk/section-membership/registration/>

### Part 2 Academic Qualifications: Engineering Knowledge and Understanding (UK&U)

UK-SPEC Edition 4 states that the requirements for registration includes knowledge, understanding and skills where formal education is one way of demonstrating the necessary underpinning knowledge and understanding but is not the only way.

UK-SPEC 4 defines, on page 15, the recognised qualifications which provide the evidence of UK&U to the required level without the need for further assessment to demonstrate meeting the requirement. Qualifications can be accredited, or alternatively, recognised in a number of ways, normally UK degrees accredited by an engineering institution in accordance with the [Engineering Council Standard for the Accreditation of Higher Education Programmes \(AHEP\)](#).

Where the applicant has a UK based qualification an initialled copy of the certificate is required to be submitted, this will be checked against the relevant Engineering Council database. There are in addition non-UK qualifications which are recognised through international agreements and protocols; for these evidence of the agreement or pathway understood to apply should be submitted together with that of the qualification, the application can then be checked against the appropriate agreement or database. Where the applicant has qualifications recognised by either of these routes progress is by the Recognised Qualifications Route. Where the applicant does not have a recognised qualification, they will progress via the Individual Assessment Route.

For the individual Assessment route UK&U equivalence to that of a recognised qualification must be demonstrated. This can be provided through a combination of education and qualifications (part 2 of the application form) work-based learning and experience (part 3 of the application form) and the statement of UK-SPEC Competence and Commitment (part 6 of the application form). The extent of the demonstration is determined by the gap between the attained qualifications and the recognised qualification standard.

The equivalence is determined by assessing the evidence against the 'will be able to' requirements specified in AHEP Fourth Edition. For this route the applicant will be required to submit additional information including: for academic courses- transcripts, and synopses of projects . For all Individual Assessment route applicants: details of the contents of training courses listed in Part 3; and the evidence in the C&C criteria in Part 6, which are mainly concerned with the application of the knowledge and

understanding, provided in such a way that it demonstrates, or at least clearly implies, a background level of UK&U which can be identified by the assessor. Additional information may be requested from the applicant to support the demonstration of academic equivalence.

Where this learning is not assessed as providing an equivalence after requests for additional evidence, further learning may be recommended, or a Technical Report option may be offered. This report can be of a similar style and scope to a dissertation or other equivalent report and this option will be offered when it is assessed that the applicant has the level of experience to be able to produce a report which will address the UK&U gap identified.

## **Part 6 Professional Development: Meeting the Competence and Commitment (C&C) requirements**

### **Introduction**

1. Part 6 is for recording the demonstration of meeting the Competence and Commitment requirements as detailed in the Engineering Council Standard UK-SPEC Fourth Edition. **Applicants should be familiar with UK-SPEC before completing the application form.** The application form repeats the competence and commitment criteria from UK-SPEC then provides space to record the evidence for each.
2. The purpose of the Application Form is to provide evidence for the documentation review stage of the Professional Review (PR), the formal part of the process, that the educational qualifications and work-based learning and experience meet the requirements of UK-SPEC and that if a Professional Review Interview (PRI) is offered as a result there is the likelihood that this will confirm that the applicant meets the requirements and that registration for the applied for Register will be recommended.
3. The boxes below each competence criterion include recommendations and suggestions for the evidence required. In many cases the descriptions and guidance in UK-SPEC are self-explanatory in terms of how the criteria are presented. UK-SPEC is however deliberately 'high level' or generic in the descriptions of the evidence required. It is not possible to specify in detail what a professional engineer does, only what knowledge, experience and professionalism is demonstrated; in addition, the Standard applies to engineers across the whole range of engineering disciplines and applications.
4. Guidance might be considered unnecessary; it might be assumed that the applicant will be able to understand what the competence and commitment statements are looking for, however the generic nature of the criteria has led to statements which are wide of the mark and could lead to the application being referred back to the applicant rather than a PRI being offered. What is entered for each criterion is however up to the applicant and their interpretation of the requirement however SaRS can advise if for an individual criterion, or taking the application as a whole, it is felt that a criterion has not been demonstrated. This is to reduce the possibility of an application submitted for the formal review failing to be offered a PRI.
5. An applicant through the SaRS route will be undertaking responsibility for activities involving safety engineering, reliability engineering, engineering risk management and specific or related

activities such as human factors studies and functional safety. A SaRS applicant will therefore be looking at the requirements from this point of view and it is expected that the applicant demonstrates an expertise in their particular area of application and the tools and techniques which are applied, in addition to the 'higher level' criteria set out in UK-SPEC.

6. The information in each box below and the suggested keywords are a guide to help the applicant interpret the UK-SPEC requirements however UK-SPEC remains the applicable standard against which the application will be reviewed.
7. The evidence must be about your personal role, responsibilities and contribution. The more generic (and broad brush) style of a CV is not acceptable. Words such as 'we' and 'team' should be avoided. Where a team effort is involved your personal role must be identified. The evidence must be clear, words such as 'facilitated', 'contributed', 'assisted' should be avoided unless the personal contribution is clear.
8. Applications are assessed by the SaRS Engineering Membership Committee (EMC) and comments fed back to the applicant, in order for the application to be strengthened. Where requested by the applicant a screening review is provided by a Lead Professional Review Advisor (PRA) prior to the formal assessment (Professional Review). Where, after this screening process, there is still doubt as to the certainty of a PRI being offered, or where the applicant specifically requests to continue, despite SaRS advising that the application requires further strengthening, or the application has received three rounds of PRA advice, the application will be forwarded to the next stage. If the applicant requests not to continue their decision will be upheld.
9. 9. There is no single right way of approaching the completion of the statement of competences (other than the need to read UK-SPEC carefully). A suggested way is to record all safety and reliability experiences, project tasks and responsibilities, presentations, meetings etc. then assign them to the relevant criterion or criteria. This would help to organise the evidence into the appropriate criteria and highlight areas of strength and weakness. Please see the SaRS website for CPD guidance and resources

<https://www.sars.org.uk/section-membership/continuing-professional-development-cpd/>10The description of the A competences refers to the use of knowledge and

understanding; A1 refers to 'maintain and extend a sound theoretical approach..' hence A1 is not specifically looking for a project based description, rather the means to achieve this, A2 is concerned with the application of knowledge, investigating and solving problems, and identifying improvement opportunities. Other aspects of the application of engineering knowledge and understanding are addressed in the B and C competences, the B competences with identifying, selecting and implementing of processes and requirements, and contributing to design and development, the C competences with leadership, management and quality. The D competences are personal qualities, and the E competences are commitments.

#### **Detailed Guidance:**

1. The information below is a guide to the type of evidence expected for each criterion. The detailed content and style is up to the applicant.
2. Use examples from your education and subsequent career development, (roles, projects, etc.) referred to as work-based learning and experience (part 3 on the application form), to provide evidence for demonstrating compliance with the 17 criteria below.

3. Evidence can be drawn from throughout the career development as not all competences are demonstrated on all projects however the more recent the example the better as you will have been more experienced and/or senior. There is no rule over how many examples should be used for each, it depends on how extensive the role and how good each example is as a demonstration.
4. Individual examples will probably show evidence for more than one criterion, describe them in the best way, however if the same example or project is used for more than one criterion try to make the specific evidence for each more prominent in the identified criterion. All evidence helps in the overall assessment as well as in the specific criteria as the assessor will gain an overall view of the applicant as well as considering each criterion.
5. The examples do not always have to describe success, not everything works however the criteria can still be demonstrated in projects which did not go ahead or designs that were not adopted.
6. The evidence overall should demonstrate the applicants understanding of the technical, financial and sustainability implications of decisions taken.
7. It is expected that evidence can be provided for each criterion, if not the applicant has probably not yet obtained sufficient experience. Evidence for some will inevitably be stronger than for others however the overall impression should be of operating across the range of criteria at the required level and that there are some criteria (perhaps only a small number) where the applicant can show some strength that is above the industry norm.
8. Be concise, minimum and maximum word limits of 200 and 500 are in place for each criterion. Over long background or project descriptions can make it difficult to identify the applicant's role and responsibility. Figures can be used sparingly where these are central to the evidence. Do not

pad out the evidence, it should be possible to be concise-someone has to read it. Please do not change the order of the template boxes when completing.

### Competence Criteria

#### A. Knowledge and understanding

**Incorporated Engineers shall use a combination of general and specialist engineering knowledge and understanding to apply existing and emerging technology. The applicant shall demonstrate that they:**

A1 Have maintained and extended a sound theoretical approach to the application of technology in engineering practice. This could include:

- Identifying the limits of your knowledge and skills
- Taking steps to develop and extend personal knowledge of appropriate technology, both current and emerging
- Applying newly gained knowledge successfully in a task
- or project
- Reviewing current procedures and processes and recommended improvements or changes to reflect best practice
- Developing knowledge needed to work in a new industry area or discipline

**A1 Keywords: 'Fundamental engineering knowledge' and 'engineering understanding'-** including scope and limits.

-Describe where knowledge and understanding has been gained:

- Formal qualifications- degrees, diplomas, certificates, etc. plus motivation for undertaking these.
- Additional courses with learning content (not just training).
- Learning in order to carry out role and gained in the work environment (experiential learning), noting where self-identified or self-taught or responding to identified limit of current knowledge.
- Where additional knowledge is continuously being gained and updated- e.g. meetings, books, journals, codes and standards, magazines, websites, in house activities, personal 'research'.
- -Plan for keeping up to date and any longer-term plans.

**A2 Use a sound evidence-based approach to problem-solving and contribute to continuous improvement.**

[A2 is concerned with the application of engineering knowledge ]

This could include:

- Applying knowledge and experience to investigate and solve problems arising during

engineering tasks and implementing corrective action.

- Identifying opportunities for improvements and how these have been (or could be) implemented
- Using an established process to analyse issues and establish priorities.

**A2 Keywords:** Problem solving, continuous improvement,

**Examples of Evidence:**

- Personal involvement in the selection and application of approaches, methodology and data to identify, investigate and analyse problems, solutions and improvements to plant, processes and methodology.

## B. Design, development and solving engineering problems.

[The B competences are concerned with the contribution to engineering tasks, processes, design and developments.]

Incorporated Engineers shall apply appropriate theoretical and practical methods to design, develop, manufacture, construct, commission, operate, maintain, decommission and recycle engineering processes, systems, services and products. The applicant shall demonstrate that they:

**1 Identify, review and select techniques, procedures and methods to undertake engineering tasks. This could include:**

- Establishing the engineering steps needed to carry out a task efficiently
- Identifying the available products or processes needed to undertake an engineering task and establishing a means of identifying the most suitable solution
- Preparing technical specifications
- Reviewing and comparing responses to the technical aspects of tender invitations
- Establishing user requirements for improvements

**B1 Keywords:** Identification of techniques, procedures and methods

**Examples of Evidence:**

Identification of assessment requirements, option selection, methodology, data requirements and output. Involvement in tendering process and progressing further studies.

**B2 Contribute to the design and development of engineering solutions. This could include:**

- Contributing to the identification and specification of design and development requirements for engineering products, processes, systems and services
- Identifying operational risks and evaluating possible engineering solutions, taking account of cost, quality, safety, reliability, accessibility, appearance, fitness for purpose, security (including cyber security),
- intellectual property constraints and opportunities, and environmental impact
- Collecting and analysing results
- Carrying out necessary tests

**B2 Keywords:** Design and Development, engineering solutions

**Examples of Evidence:**

- Contribution to the design and development of plant and processes.
- Carry out assessments, reviews, studies including selection of methodology, data, and outputs, assess for example options, trade-offs, cost benefit, sensitivities, etc.
- Support tests and assess results.
- Identify further studies.

**B3 Implement design solutions for equipment or processes and contribute to their evaluation.**

**This could include:**

- Identifying the resources required for implementation
- Implementing design solutions, taking account of critical constraints, including due concern for safety and sustainability
- Identifying problems during implementation and taking corrective action
- Contributing to recommendations for improvement and actively learning from feedback on results

**B3 Keywords: Implementation, Evaluation**

**Examples of Evidence:**

- Contributing to the implementation of designs and developments,
- checking conformity to assessment assumptions,
- advising on and assessing changes, conflicts and modifications,
- learning from feedback and suggesting improvements.

## C. Responsibility, management and leadership

[The C criteria are concerned with the management of people and resources- planning, management, teams, and quality]

**Incorporated Engineers shall provide technical and commercial management. The applicant shall demonstrate that they:**

**C1 Plan the work and resources needed to enable effective implementation of engineering tasks and projects. This could include:**

- Identifying factors affecting the project implementation
- Carrying out holistic and systematic risk identification, assessment and management
- Preparing and agreeing implementation plans and method statements
- Securing the necessary resources and confirming roles in a project team
- Applying the necessary contractual arrangements with other stakeholders (clients, subcontractors, suppliers, etc.)

**C1 Keywords: Planning****Examples of Evidence:**

- Involvement in the overall planning of tasks or projects:
- Plan tasks and studies contributing to the project implementation-
- Contribute to preparing and agreeing plans, timescales, key dates, critical items, etc.;
- Securing resources, identifying team and supporting requirements.

C2 Manage (organise, direct and control), programme or schedule, budget and resource elements of engineering tasks or projects. This could include:

- Operating appropriate management systems
- Working to the agreed quality standards, programme and budget, within legal and statutory requirements
- Managing work teams, coordinating project activities
- Identifying variations from quality standards, programme and budgets, and taking corrective action
- Evaluating performance and recommending improvements

**C2 Keywords: Management Examples of Evidence:**

- Involvement in project management process.
- Working to agreed budget, timescales, quality and reporting requirements.
- Reporting and presenting study results. managing work teams and other resources, monitoring quality and work flow.
- Responding to changes in deliverables, timescale or delays.
- Evaluating performance and identifying improvements.

**C3 Manage teams, or the input of others, into own work and assist others to meet changing technical and management needs. This could include:**

- 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.

**C3 Keywords: Leading Teams****Examples of Evidence:**

- Managing the work of the team and input from others- agreeing and monitoring requirements, timescale, quality, reviewing results and reports, managing conflicts, supporting and contributing to personal development including liaising with others.



**C4 Take an active role in continuous quality improvement. This could include:**

- Ensuring the application of quality management principles by team members and colleagues
- Managing operations to maintain quality standards eg ISO 9000, EQFM
- Evaluating projects and making recommendations for improvement
- Implementing and sharing the results of lessons learned

**C4 Keywords: Quality Management****Examples of Evidence:**

- Application of quality management (quote systems familiar with and using) to self and team.
- Recommend improvements, share lessons learned

**D. Communication and interpersonal skills**

The D criteria are concerned with personal qualities]

**Incorporated Engineers shall demonstrate effective communication and interpersonal skills. The applicant shall demonstrate that they:**

**D1 Communicate effectively with others, at all levels, in English. This could include:**

- Contributing to, chairing and recording meetings and discussions
- Preparing communications, documents and reports on technical matters
- Exchanging information and providing advice to technical and non-technical colleagues
- Engaging or interacting with professional networks

**D1 Keywords: Communication****Examples of Evidence:**

- Presentations- to team, staff, senior management, clients, contractors, regulators, at meetings and conferences.
- Contributions to technical discussions and meetings e.g. HAZOPs
- Chairing meetings- progress meetings, HAZID, HAZOP, etc.
- Ad-hoc and informal exchanges- to team, management, clients, contractors, etc.
- Written communication- including e-mail, letters, progress reports, requirements, specifications, technical reports, conference and journal papers, etc.

**D2 Clearly present and discuss proposals, justifications and conclusions. This could include:**

- Preparing and delivering appropriate presentations
- Managing debates with audiences
- Feeding the results back to improve the proposals.
- Contributing to the awareness of risk

**D2 Keywords: Proposals****Examples of Evidence:**

- Preparation and presentation of proposals, including- problem definition or opportunity, proposed work, approach, methodology, management, costs and benefits, outcomes, approvals, implementation
- Presenting company profile, record, experience, resources.
- Discussion and negotiation, reaching agreement and recording, resolving different views, agreeing options, recording management requirements, agreeing outcome and next steps.

**D3 Demonstrate personal and social skills and awareness of diversity and inclusion issues. This could include an ability to:**

- 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

**D3 Keywords: Personal and Social****Examples of Evidence:**

- Interaction with people at all levels within organisation or projects. Examples of issues and outcomes, examples showing ability to interact, dealing with conflict, contribution to meetings, workshops, decisions, etc.
- Knowledge of and adherence to diversity and anti-discrimination legislation.
- Activities involving people outside the workplace, both work related (institution, society) and other (sport, hobby, pastime, charity, etc.)
- Familiarity with and conformity to the SaRS Diversity and Inclusion Policy.

**E. Personal and professional commitment**

[The E criteria are concerned with personal commitment]

**E1 Understand and comply with relevant codes of conduct. This includes:**

- Demonstrating compliance with your Licensee's Code of Professional Conduct
- Identifying aspects of the Code particularly relevant to your role
- Managing work within all relevant legislative and regulatory frameworks, including social and employment legislation

**E1 Keywords: Professional Standards****Examples of Evidence:**

- Knowledge of and adherence to (with examples where possible) Institution and industry Codes and Rules of Conduct e.g. SaRS (the Rules are based on UK-SPEC guidance), company or client codes.
- Involvement in, and contribution to, professional bodies.
- Knowledge of and adherence to relevant legislation, codes and standards for work area- HSW Act, OSCR, DSEAR, DEFSTANs, JSPs, etc.

**E2 Understand the safety implications of their role and manage, apply and improve safe systems of work. This could include an ability to:**

- Identifying and taking responsibility for your own obligations for health, safety and welfare issues
- Managing systems that 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

**E2 Keywords: Health and Safety (safe systems of work)****Examples of Evidence:**

- Concerned with safe systems of work and safety culture rather than technical safety (HAZOP, QRA, etc.), since this Standard applies to all engineers not just safety engineers.
- Contribution, in safety studies, to safety of workers, safe systems, provision of safety equipment.
- Developing and promoting a safety culture and risk management approach.
- Adherence to workplace health and safety procedures.
- Producing, operating, supervising, auditing, safe operations, including work plans, permits to work, safety inspections and testing, notices, training, toolbox talks.

**E3 Understand the principles of sustainable development and apply them in their work. This could include:**

- Operating and acting responsibly, taking account of the need to progress environmental, social and economic outcomes simultaneously
- Recognising how sustainability principles, as described in the Guidance on Sustainability on page 48 can be applied in your day-to-day work
- Providing products and services which maintain and enhance the quality of the environment and community, and meet financial objectives
- Understanding and encouraging stakeholder involvement in sustainable development
- Using resources efficiently and effectively

- Taking action to minimise environmental impact in your area of responsibility

**E3 Keywords: Sustainability****Examples of Evidence:**

- Contribution to sustainability in technical studies- for example loss prevention (personal injury, property, resources), reliability (reduction in downtime, spares, waste), optimising of resources (equipment, materials, spares, maintenance),
- Inherent safety.
- Contribution to option selection for sustainability.
- Environmental assessments, audits.
- Personal, day to day, and outside workplace contribution.

**E4 Carry out and record the Continuing Professional Development (CPD) necessary to maintain and enhance competence in their own area of practice including:**

- 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

**E4 Keywords: Personal Development, CPD****Examples of Evidence:**

- Current CPD activities for keeping up to date and extending experience- meetings, publications, websites, involvement with professional body and contribution to activities, etc.
- Evaluating and reflecting on activities
- Review career position and progress
- Plans for ongoing development and actions being taken to progress, both short term and long term e.g. academic courses, training, secondment,
- Maintaining records
- Monitoring progress against plan
- Helping others

**E5 Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner. This could include:**

- 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 UK-SPEC Statement of Ethical Principles on page 47.
- Giving an example of where you have applied or upheld ethical principles as defined by your organisation or company.

**E5 Keywords: Ethics****Examples of Evidence:**

- Awareness of and compliance with the Statement of Ethical principles and familiarity with the Royal Academy of Engineering report 'Engineering Ethics: Maintaining society's trust in the Engineering Profession
- Personal examples of applying or upholding the ethical principles