COMPETENCE & COMMITMENT CRITERIA

The Engineering Technician (EngTech) Standard

The PWI competence and commitment criteria fully comply with UK-SPEC. Recognising the risk inherent in railway transport, the PWI requires an enhanced focus on safety and candidates must demonstrate their absolute commitment to the application of safe systems of work and understand the safety implications of their role.

Engineering Technicians apply proven techniques and procedures to the solution of practical engineering problems in Rail Infrastructure.

A Knowledge and Understanding

Engineering Technicians shall use engineering knowledge and understanding to apply technical and practical skills.

This competence is about having knowledge of the technologies, standards and practices relevant to the applicant's area of work and having evidence of maintaining and applying this knowledge.

The applicant shall demonstrate they:		Examples of evidence may include:
A1	Review and select appropriate techniques, procedures and methods to undertake engineering tasks	• Evaluating potential methods of carrying out an engineering task and selecting the most appropriate solution • Recognising a technical difficulty and then identifying an approach to resolve it • Identifying an improvement in a technique, procedure, process or method • Interpreting and carrying out test procedures
A2	Use appropriate scientific, technical or engineering principles	• Using your technical knowledge to complete a task or resolve a problem • Performing calculations using standard formulae • Analysing performance or test data or comparing performance information with published material

B Design, development and solving engineering problems

Engineering Technicians shall contribute to the design, development, manufacture, construction, commissioning, decommissioning, operation or maintenance of products, equipment, processes, systems or services.

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.

The applicant shall demonstrate they:		Examples of evidence may include:
B1	Identify problems and apply appropriate methods to identify causes and achieve satisfactory solutions	• Using knowledge to identify a problem or an opportunity for improvement • Investigating a problem to identify the underlying cause • Identifying a solution to a problem or an improvement opportunity • Contributing to the design of an item or process
B2	Identify, organise and use resources effectively to complete tasks, with consideration for cost, quality, safety, security and environmental impact	• Balancing these factors in selecting appropriate materials • Identifying precautions as a result of evaluating risks and other factors • Considering how waste can be minimised, recycled or disposed of safely if recycling is not possible • Contributing to best practice methods of continuous improvement • Improving the quality of an operation or process

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C	Responsibility, management and leadership	
Engineering Technicians shall accept and exercise personal responsibility. This competence is about the ability to plan and manage the applicant's own work effectively and efficiently. It is also about the ability to consider and identify improvements to maintain quality in their work.		
The applicant shall demonstrate they:		Examples of evidence may include:
C1	Work reliably and effectively without close supervision, to the appropriate codes of practice	• Completing challenging tasks successfully within your area of work • Identifying issues which fall outside of your current knowledge and seeking advice • Identifying standards and codes of practice relevant to a new task
C2	Accept responsibility for the work of themselves or others	• Fully understanding drawings, permits to work, instructions or other similar documents after appropriate checking, and identifying issues • Inspecting work carried out by others • Confirming infrastructure condition prior to handing back into service • Checking the status of equipment, the work environment and facilities and taking appropriate actions before commencing work
C3	Accept, allocate and supervise technical and other tasks	• Providing technical direction of a rail infrastructure task • Ensuring the scope of a task is clear before accepting and/or allocating it to others • Querying any aspect of a task which is not clear and/or providing an explanation if a query is raised by others • Learning from your own experience and/or providing constructive feedback when supervising or working with others

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D	Communication and interpersonal skills	
Engineering Technicians shall use effective communication and interpersonal skills. This competence is about the ability to work with others constructively, to explain ideas and proposals clearly and to discuss issues objectively and constructively.		
The applicant shall demonstrate they:		Examples of evidence may include:
D1	Communicate effectively with others, at all levels, in English	• Contributing to meetings and discussions • Preparing communications, presentations, documents and reports on technical matters • Exchanging information and providing advice to technical and non-technical colleagues, ensuring it was understood
D2	Work effectively with colleagues, clients, suppliers or the public	• Contributing constructively as part of a team • Successfully resolving issues in discussions with team members, suppliers, clients and/or others • Persuading others to accept suggestions or recommendations • Identifying, agreeing and working towards collective goals
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 • Knowing protected characteristics and employee duties under the Equality Act 2010 • Having an awareness of the risk of unconscious bias and how this can be dealt with • 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

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E	Personal and professional commitment	
Engineering Technicians shall demonstrate commitment to an appropriate code of professional conduct, 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. An Engineering Technician should set a standard and example to others with regard to professionalism.		
This shall include the ability to:		Examples of evidence may include:
E1	Understand and comply with relevant codes of conduct	• Demonstrating compliance with the PWI's Code of Professional Conduct • Working within all relevant legislative and regulatory frameworks, including social and employment legislation
E2	Understand the safety implications of their role and apply safe systems of work	• Providing evidence of applying current safety requirements, such as risk assessment and other examples of good practice you adopt in your work • Having a sound knowledge of health and safety legislation in your role, for example: HASAW 1974, CDM regulations, ISO 45001 and company safety policies • Understanding railway system safety and its management, particularly at subsystem interfaces • Improving safety and working with colleagues to deliver improvement in safety • Putting safety first during the design, construction, operation or maintenance of equipment and assets and identifying and challenging unsafe activities, assets or equipment
E3	Understand the principles of sustainable development and apply them in their work	• Recognising how sustainability principles can be applied in your day-to-day work in the rail infrastructure industry – Recognise the challenges of decarbonisation and climate change adaptation in contributing to building a sustainable society, present and future – Apply professional and responsible judgement and take a leadership role – Do more than just comply with legislation and codes – Use resources efficiently and effectively – Seek multiple views to solve sustainability challenges – Manage risk to minimise adverse impact to people or the environment • Identifying actions that you can and have taken to improve sustainability
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 • Explaining how you plan your personal development • Carrying out and recording planned and unplanned CPD activities and maintaining evidence of competence development • Evaluating CPD outcomes against any plans made • Supporting others with their own development • Attending PWI meetings, seminars or technical courses
E5	Understand the ethical issues that may arise in their role and carry out their responsibilities in an ethical manner	*Examples could be drawn from safety, diversity and inclusion, or sustainability* • Understanding the ethical issues that you may encounter in your role • Giving an example of where you have applied ethical principles – Honesty and integrity – Respect for life, law, the environment and public good – Accuracy and rigour – Leadership and communication • Giving an example of where you have applied or upheld ethical principles as defined by your organisation or company

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