

**EC
ITB***

ECITB products and services catalogue

January 2025

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Welcome

Welcome to the new ECITB products and services catalogue. This provides a complete reference guide to ECITB's products and services to develop the knowledge and skills of your workforce.

Our products and programmes are designed to support you to upskill your teams, grow in-house talent and build capability from trainee to senior management, to meet the emerging needs of the engineering construction workforce.

We offer more than 90 ECITB-approved courses from short bootcamp level courses to reskilling courses that are several weeks long, as well as several hundred specific technical tests, 43 suites of training standards and 31 qualifications.

All ECITB training and testing products are developed jointly with engineering construction companies to ensure they meet industry needs and are delivered by ECITB-approved training providers right across Great Britain.

With a projected boom in project activity for engineering construction employers, the ECITB's [Leading Industry Learning Strategy](#) aims to support industry growth by attracting and developing the next generation, delivering industry-leading standards, qualifications and competence assurance and helping employers retain and upskill a flexible and transferable workforce.

This catalogue outlines the ECITB training and testing products, training standards, technical tests and regulated qualifications for specific disciplines and professions for engineering construction employers working across the oil and gas, power generation, renewable energy, nuclear, chemicals, water treatment, pharmaceuticals and food and drink sectors.



A handwritten signature in black ink, appearing to read 'A. Hockey', written over a light blue horizontal line.

Andrew Hockey
CEO, ECITB

About the ECITB

The Engineering Construction Industry Training Board (ECITB) is the employer-led skills body for the Engineering Construction Industry in Great Britain.

We invest more than £20 million every year to enhance skills across the engineering construction industry, support growth through workforce training, and help to tackle labour shortages and skills gaps.

Our research provides labour market intelligence on the engineering construction industry (ECI) workforce and skills-related topics. We use this intelligence to inform ECITB priorities and our engagement with external partners, including Government.

We design and award a wide range of qualifications, covering craft, technical and managerial disciplines. We also develop and maintain National Occupational Standards for the industry, which form the basis of our training standards, vocational qualifications, technical tests and licensed programmes, delivered by our approved and quality-assured network of training providers.

What does this mean for engineering construction businesses?

- Support from a dedicated Relationship Manager who will work with you to identify training.
- Access to the ECITB Skills and Training Charter that demonstrates to your customers that you are invested in the training and development of your staff.
- Access to grant funding to offset against the cost of training within the ECI.

Find out more: www.ecitb.org.uk

Leading industry learning

Our vision is a trailblazing Engineering Construction Industry (ECI) where critical infrastructure, energy security and net zero ambitions are achieved.

Develop your workforce with ECITB products

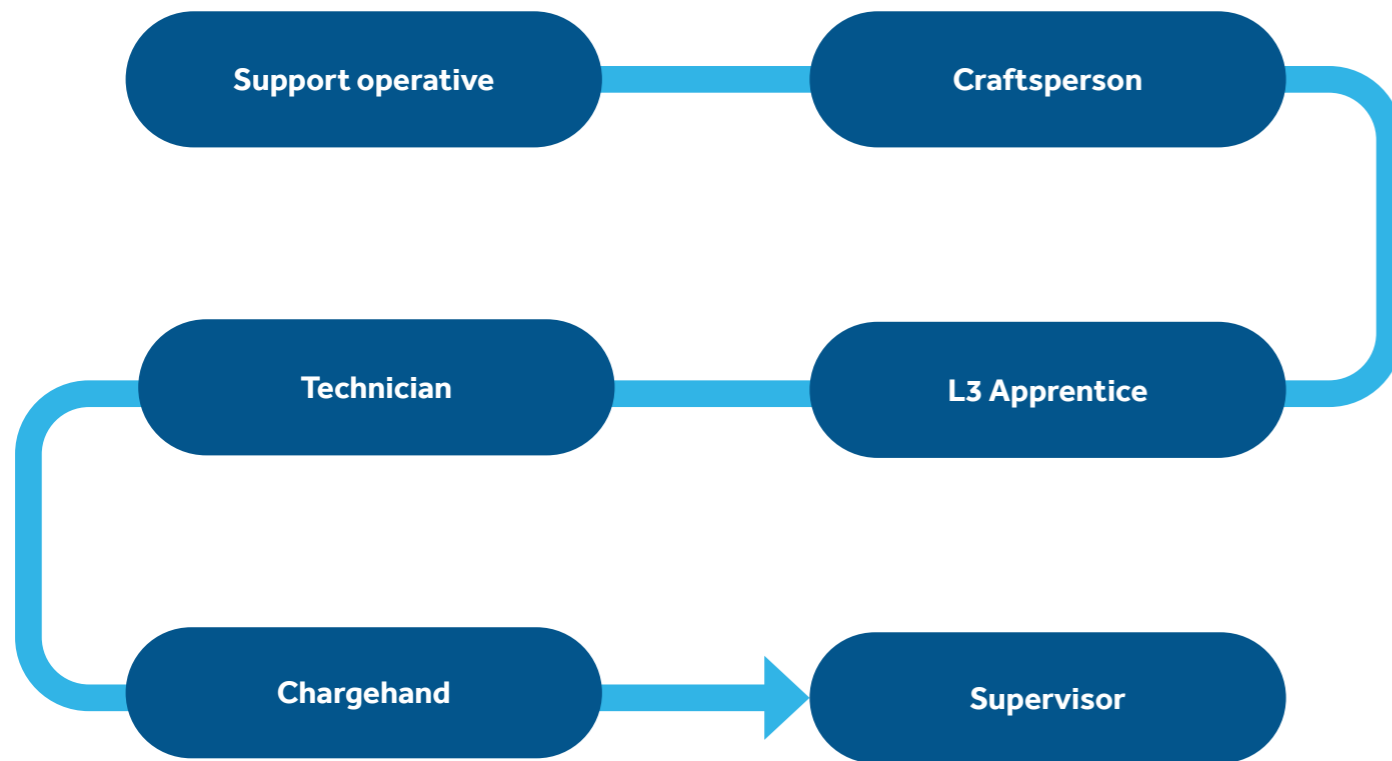
The ECITB has a range of products and programmes developed jointly with employers to upskill your existing team, grow in-house talent and build capability from trainee to senior management.

The ECITB works with companies to ensure there is a skilled workforce across the range of craft and technical roles. We provide introductory training for those starting out in the industry as operatives, support scholarships and apprenticeships and offer knowledge and skills training for workers to progress their careers (see example below).

All ECITB products are based on nationally recognised standards and developed with industry subject matter experts.

And you can be confident in training and testing delivery as well as content. These are delivered by approved training providers (ATP) and examiners who have been through a rigorous process to gain approval and who are audited to ensure they deliver effectively and consistently.

ECITB products provide you with the opportunity to upskill and train as well as assure the competence of your workforce.



Our products fit into three categories:

Upskill and train: Training programmes and training standards

Training courses range from short 1-2 days to longer training programmes including:

- ECITB training courses
- Approved provider courses based on ECITB training standards
- E-learning through the ECITB online learning academy
- Work Ready programme
- Scholarships
- Apprenticeships.

Technical competence: Testing

Assurance of task or skills and knowledge using standards-based tests, quality assured by the ECITB:

- ECITB technical tests
- 4-stage model of competence for specific engineering tasks
- Connected Competence.

Occupational competence: Qualifications

A full discipline assessed in a work environment using ECITB qualifications that are approved by national regulators across England, Scotland and Wales.

Upskill and train

ECITB training courses: All ECITB training courses are developed jointly with engineering construction industry (ECI) companies and delivered by ECITB-approved training providers (ATPs) and trainers.

They are designed for classroom and workshop training (in person and online). The ECITB provides all training materials. The training is a mixture of presentations, discussions and practical exercises along with consolidation of the learning – usually through assessment of the knowledge learned and/or a practical skills assessment.

Approved provider courses: ECITB ATPs develop training courses from one or more training standards to meet the training needs of a company. They then submit these for approval via the provider course approval scheme (PCAS).

There are over **90** PCAS courses available from our ATPs. These range from short 1-day courses focused on specific technical activities to longer bootcamp and reskilling courses that are several weeks long.

You can create your own training courses, or upskilling programme tailored specifically to your company's requirements based on one or more of ECITB's training standards. All courses developed this way must be approved by the ECITB before delivery. To ensure courses remain up to date, approval is granted for three years. Resubmission is then required.

ECITB training standards: The ECITB works closely with subject matter experts from across engineering construction employers, professional organisations and training providers to develop these.

Our training standards provide the outline content for a training course - they set out the training necessary to develop the knowledge and skills required to perform an activity in engineering construction.

Content is aligned to the performance and knowledge criteria of existing standards - be that national occupation standards (NOS) or a related ECITB-regulated qualification or another nationally recognised standard/ approved code of practice.

All training standards specify practical activities and consolidation of the training such as a knowledge test or submission of a personal action plan etc that must be included in any course developed against them. Some standards include prerequisites that must be met by learners attending a course developed against them.

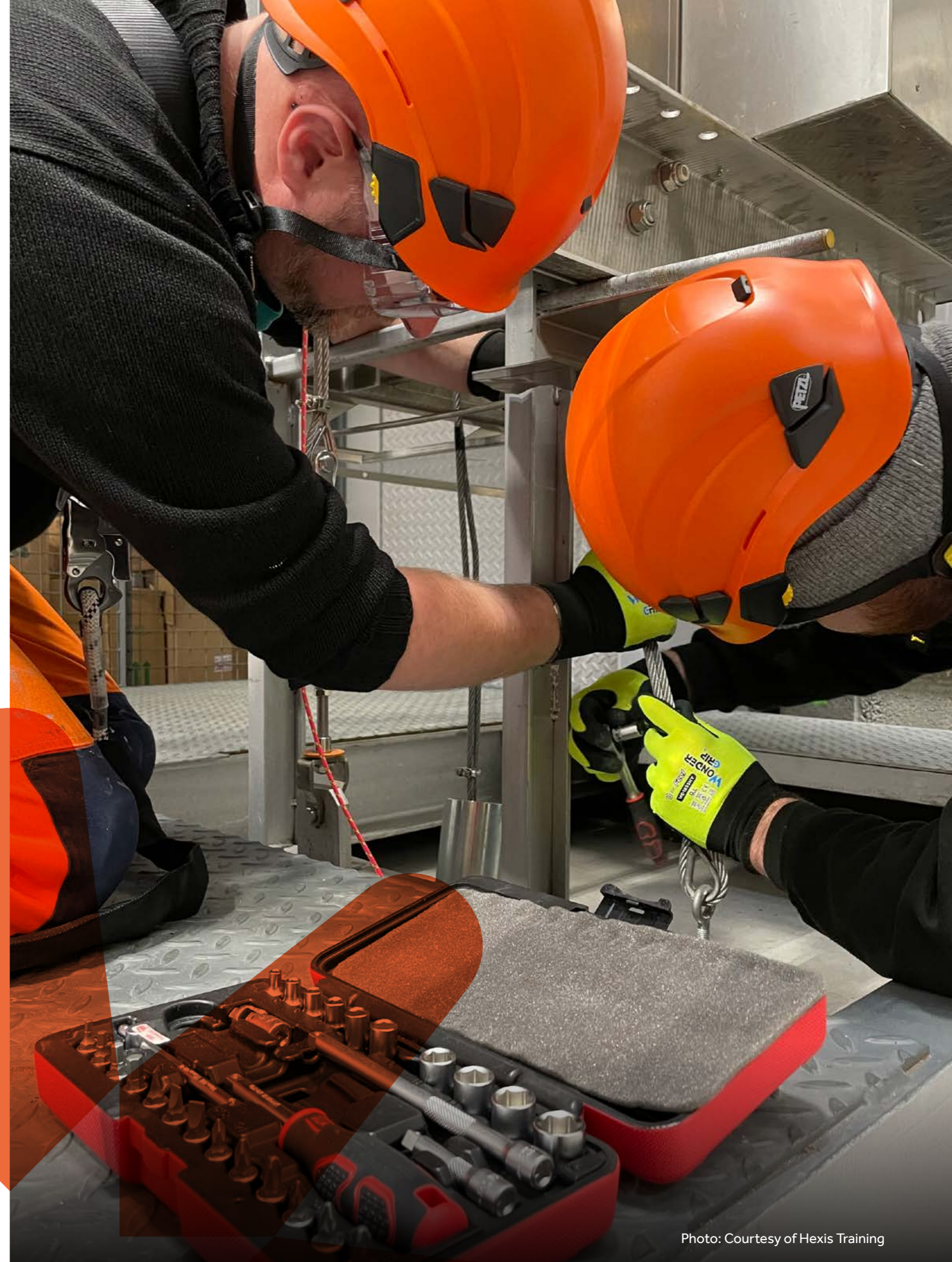


Photo: Courtesy of Hexis Training

ECITB Learner experience platform (LXP):

This is an online digital learning platform hosted by the ECITB. It provides ECI employers with free-to-access online learning from a range of recognised providers including IAM Learning, IHasco, Litmos.

Employers can access and use the LXP in several different ways:

- **ECITB Learn:** Access to the online learning platform, fully supported environment administered by ECITB.
- **Employer-owned:** Use the LXP to create your own online Employer Owned Academy (EOA) with personalised learning paths and adaptive learning to support continuous learning.
- **Already have an established LMS or LXP?** We can provide access to the content through your system by transferring the e-learning files, to you for access within your company system.

New entrant programmes

Work Ready programme (WR): This targets people who are not in employment, education or training, ex-offenders and service leavers to support individuals into employment and help tackle industry skills shortages.

The programme has two main pathways, the trainee maintenance operative (TMO) and the Industrial Services Operative (ISO). The TMO has craft-based sub-pathways, and the ISO has fabric maintenance and cleaning sub-pathways.

All learners complete the ECITB Pre Employment Programme (PEP) which includes several ECITB short courses for site working activities including the CCNSG Safety Passport. Both the ISO and TMO also have commonality to ensure transferability of workers between sites nationally.

Depending upon the pathway, the programme will last up to 16 weeks during which learners undertake full-time training and assessment in the centre interspersed with work placements and site visits.

Scholarships: Primarily designed for 16-19-year-olds, the ECITB scholarship programme supports scholars through the initial stages of their training and prepares them for an engineering career. With its close links to industry and many employer touch points, it equips learners with the skills, knowledge and behaviours in an engineering construction industry context. The programme does not offer guaranteed job outcomes.

Employers can support the recruitment and be involved in the selection process for prospective scholars. They can also host work placements, enabling them to see if a scholar is a good fit for their business before committing to employing them.

Scholarships typically last from 37 to 74 weeks depending on the level and complexity. Scholars undertake training off the job in a centre in a craft or technical discipline that includes a grounding in core engineering knowledge and skills, an understanding of new technologies, a foundation in digital skills and CCNSG Safety Passport.

Apprenticeships: Demand for skilled workers is increasing and engineering apprenticeships are a critical way of developing new talent in the engineering construction industry.

Apprenticeships provide a mixture of off-the-job learning and on-the-job practical experience to provide the skilled employees needed. The ECITB works with employers and training providers to support apprenticeships across a wide range of disciplines.

Disciplines include, but are not limited to: design and draughting, electrical, fabrication, instrument and control, mechanical, mechanical fitting, non-destructive testing (NDT), nuclear specific, pipefitting, project controls, project management, steel erecting/rigging, welding - including pipe and plate.

Technical competence

ECITB technical tests: In the ever-evolving world of engineering construction, technical tests from the ECITB are an effective way to ensure the critical skills of the industry's craftspeople and technicians match the demands of today. Tests are an instant way to assess and validate job knowledge and the ability of employees or prospective recruits to perform vocational skill-based tasks.

Each technical test examines a specific activity that is part of an engineering construction discipline. The tests consist of two elements: a knowledge test and a practical test:

- The knowledge test is online and assesses theoretical knowledge of the technical discipline or skill. The pass mark is 80% and it must be successfully completed before the candidate can move on to the practical element.
- The practical test is a specified technical task. The candidate is briefed so they understand what is being asked of them. The candidate carries out the task under continuous observation by an ECITB-approved examiner. All parts of the practical test must be completed to the required standard to achieve a pass.

The 4-stage model to technical competence: is available for the training and assessment of the following technical activities:

- Mechanical Joint Integrity
- Small Bore Tubing
- Appointed Persons Moving Loads
- Wind Turbine Statutory Inspection



Workers must undertake the following four stages to be deemed competent:

- 1) ECITB-approved classroom and practical training
- 2) Complete a logbook to provide evidence of completing practical activities in the workplace to meet employers' requirements
- 3) Successfully complete the approved ECITB technical test(s)
- 4) Be reassessed through an ECITB technical test every three years to demonstrate continuing technical competence



CONNECTEDCOMPETENCE

Connected Competence

Through industry-recognised, standardised testing, [Connected Competence](#) assures an ongoing base level of technical competence for workers to create a safer, technically competent and transferable workforce.

Developed with some of the UK's largest contracting companies, each one committed to working together to use standardised training and testing based on the ECITB's technical tests.

Connected Competence is valid for 3–4 years, depending on the specialist trade. At the end of this period, the test is renewed by workers to ensure the ongoing base level of technical competence is maintained.

Workers who achieve the full suite of tests for a discipline receive a Connected Competence digital award. Connected Competence is currently available for the following job disciplines:

- Appointed Person For Rigging
- Electrical installation
- Electrical maintenance
- Industrial coatings
- Instrumentation and control
- Mechanical maintenance
- Pipefitting
- Plating
- Rigger
- Thermal insulation



Occupational competence: Qualifications

ECITB qualifications: The ECITB develops and awards a range of regulated qualifications so you can gain independent assurance of the knowledge and skills of newly trained or experienced workers.

ECITB qualifications are approved by the relevant Government organisations: OfQual in England, SQA Accreditation in Scotland and Qualifications Wales.

They are developed jointly with subject matter experts from across engineering construction.

These vocational qualifications assess a worker's underpinning knowledge and safe, effective application of technical skills across a discipline either on-site or in a realistic working environment (off-site or in a training college).

They take 2 to 3 years to complete and provide assurance that those with an ECITB qualification meet the full occupational requirements of a role.

CCNSG Safety Passport – the engineering construction safety card

Workforce safety is a priority. [The Client Contractor National Safety Group \(CCNSG\) Safety Passport](#) is the nationally recognised safety card for the UK engineering construction industry and has delivered the best health and safety accreditation for over 30 years.

It provides a basic knowledge and understanding of health and safety suitable for all site personnel, enabling them to work on site more safely and reducing risk to themselves and others.

Since its introduction, over 1.2 million cards have been issued with 80,000 current card holders at any one time. It remains the safety passport of choice for many of the UK's top ECI clients and employers. Its transferability between all participating clients and sites reduces the need to duplicate training and has contributed to a significant reduction in incidents and lost time accidents where it has been adopted.

To obtain a passport an individual must attend a 2-day National Course at one of the ECITB's Approved Training Providers. Upon successful completion of the end-of-course test, the passport is valid for three years.

To maintain the card's validity there is a choice of attending either a 1-day refresher course or passing the test-only renewal route.

For supervisors and managers, a 1-day Leading a Team Safely (LaTS) Course is also available to supplement the CCNSG Passport.



CCNSG courses

Description of courses

CCNSG Safety Passport 2-day national course

For all new entrants into engineering construction.

On completion of this course, the learners will have the knowledge and understanding of the risks they will face, to be able to work safely on engineering construction sites.

The course covers:

- health and safety legislation, regulations and safe working practices and procedures
- safe use of tools and equipment in different working environments including hazards and risks
- safe solutions to problems and emergencies
- personal site safety responsibilities.

CCNSG renewal • 1-day refresher • 0.5 day test-only

The CCNSG safety passport must be renewed every 3 years either by attending a 1-day refresher course or taking a half-day test-only renewal. Renewal must be completed before the old card expires.

The test-only renewal can be taken a maximum of 2 times before attending a full 1-day CCNSG refresher course. It must also be taken at an approved training provider's centre.

CCNSG leading a team safely (LaTS)

Following the successful achievement of the CCNSG card, this 1-day workshop is for those supervising on-site teams.

This course introduces health and safety management within small teams including how to communicate health and safety requirements and processes effectively to help ensure workers operate on site safely, lowering risk to themselves and others.

The ECITB's technical training & testing products

This section provides an overview of the training and assurance products and programmes available to you through ECITB's trusted and experienced network of approved training providers and centres for the following disciplines:

Discipline	Scholarship Apprenticeship	Training Courses		Training Standards	Technical Tests (4-stage)	Connected Competence	Regulated Qualification
		ECITB	PCAS				
Site Operations	✓	✓	✓	✓	✓		✓
Fabric Maintenance	✓				✓	✓	
Pipefitting	✓		✓	✓	✓	✓	✓
Plating	✓		✓	✓	✓	✓	✓
Mechanical (fitting & maintenance)	✓		✓	✓	✓	✓	✓
On-site machining				✓	✓		
Electrical (fitting & maintenance)	✓		✓	✓	✓	✓	✓
Instrumentation & Controls					✓	✓	✓
Mechanical Joint Integrity (MJI)			✓	✓	✓ ⁴		
Small Bore Tubing (SBT)			✓	✓	✓ ⁴		
Welding	✓			✓	✓		
Rigging & Erecting	✓		✓	✓	✓	✓	✓
Appointed Persons Moving Loads /Rigging (APML)			✓	✓	✓ ⁴	✓	
Nuclear	✓			✓	✓		
Wind Turbine			✓	✓	✓ ⁴		
Supervision & leadership skills		✓					
Design & Draughting	✓			✓			✓
Commercial & Contract			✓	✓			
Project & cost control/estimator/scheduler/planner	✓	✓	✓	✓			✓
Project management		✓	✓				

Site Operations

Site operations activities underpin and are essential to on-site craft and technical work. The ECITB offers technical short courses ideal for upskilling site operatives new to working on-site, and who have completed initial health & safety training such as CCNSG.

These training courses are a mixture of knowledge theory and practical activities in the workshop.

Experienced site operatives can verify their technical skills with technical tests and their occupational competence through ECITB-regulated qualifications.

ECITB Technical short courses*

ECITB Abrasive wheels (1 day course) Safely and effectively operate hand-held and mounted abrasive wheel tools. Includes practical activities in the workshop and testing to reinforce the learning.

ECITB Firewatcher (1 day course) Observe and monitor fire risk and hot work areas, know what to do if a fire is discovered, follow a safe system of work, raise the alarm, evacuate others safely and discharge a fire extinguisher.

ECITB Confined space: low risk and medium risk. Safely work in a confined space – know the hazards and control measures, what safety measures and precautions should be taken when working in a confined space and demonstrate this twice in a controlled environment. One-day courses that include practical exercises and consolidation tests.

ECITB manual handling (1 day course) Use safe manual handling techniques and recognise the risks associated with poor manual handling techniques. This course includes knowledge and practical consolidation tests (both as an individual and as a team).

ECITB working at height (1 day course) Prepare for and work safely at height. This training aligns with the working-at-height regulations, British Standard and code of practice for working at height and rescue. It includes the fundamental principles of working at height, relevant legislation, hazards, control measures and practical activities.

ECITB working safely with hand and power tools (1 day course) Identify, safely use, store and check a range of tools to carry out basic engineering tasks. Tools include hammers, chisels and punches, files, screwdrivers, hacksaws, spanners and wrenches, powered drills, pillar drills, saws and grinders.

* Those taking these courses should complete initial health and safety training and gain a CCNSG card in advance.

ECITB training standards to develop own course

Abrasive wheels (TS AW01-03)

Three training standards that cover the principles of abrasive wheels, hand-held abrasive wheels and mounted abrasive wheels.

Confined space (including low, medium & high risk) (TS CS01-05)

Five training standards that cover the appreciation and principles of working in confined spaces and the requirements that are specific to working in low, medium and high risk confined spaces.

Basic grinding, profiling and polishing (TS GPP01)

A training standard (TS) for basic grinding, profiling and polishing pipework and plate that, along with the abrasive wheels TS, details the requirements for a foundation level course on removing marks, levelling and cleaning the surface of materials.



Verify knowledge and skills with ECITB technical tests

Move engineering loads by manual operation (TSE-01)

Safely move an engineering load by manual operation from a storage area to its final location, securing it for work execution.

Mark out to required specification (TSE02)

Mark out to metal plates for fabrication and production of components to a required specification.

Read and extract information from engineering drawings and specifications (TSE03)

Read and extract information from engineering drawings and specifications to enable correct preparation of the work area and select the correct equipment and materials.

Shape engineering components by material removal using hand tools (TSE04)

Mark out and shape engineering components by material removal using hand tools.

Join materials by manually controlled welding process (TSE05)

Join materials by manually controlled welding process – prepare four test pieces for welding and tack weld two sections of the joint securely.

Thermal insulation (TTI01)

Safe and accurate application of insulation and non-metallic cladding to pipework to specification.

Specialist safely working at height tests (TWAH01, TWAHR02)

Working at height tests verify the skills and ability to:

- set up working-at-height resources correctly
- carry out a rescue of a simulated unconscious casualty, working as a team of two.

Independently-recognised certification with ECITB qualifications

ECITB Level 2 Diploma in supporting the installation of engineering construction plant and systems (RQF) with pathways for:

- mechanical fitting
- pipefitting
- plating.

ECITB Level 2 Diploma in erecting steelwork components (RQF).

ECITB Level 2 Diploma in lifting and positioning engineering construction loads (RQF):

- simple lifting and positioning
- moving loads under supervision.

ECITB Certificate in supporting engineering construction activities at SCQF level 5.



Fabric Maintenance

Good fabric maintenance helps maintain asset integrity. This suite of ECITB technical tests for sprayers, blasters and painters and thermal insulation provides independent verification of technical competence of workers.

Verify knowledge and skills with ECITB technical tests

Knowledge only tests	Industrial surface preparation (KT ICA-P) Industrial cleaning (KT INDCO1) Industrial spray application (KT ICA-S) Industrial brush application (KT ICA-B).
Abrasive blast cleaning (direct pressure) (TICA-A01)	Safely and accurately pre-clean and prepare a mild steel plate to specification in preparation for industrial coating using abrasive blast cleaning equipment, needle gun and bristle blaster.
Industrial coatings airless spray application (TICA-A02)	Safely and accurately prepare airless spray equipment and apply a two-part industrial coating to a specific dry film thickness.
Industrial coatings brush application (TICA-A03)	Safely and accurately apply an industrial coating to a specific dry film thickness.

 **Connected competence is available for those working in industrial coatings.**



Pipefitting

ECITB's approved pipefitting training provides upskilling to help ensure pipefitters can position, assemble, fabricate, test, maintain, repair and dismantle piping systems such as those that carry water, steam, chemicals and fuel.

ECITB's technical test and regulated qualifications provide pipefitters with the opportunity to gain independent verification of their technical skills and their occupational skills.

There are ECITB scholarships for pipefitters and apprenticeships available. If you are interested in the scholarship programme or in taking on an apprentice and want to know more about the support ECITB offers, please contact your Relationship Manager.

Approved provider reskill programme

Reskill pipefitter	This 6-week intensive training programme is for existing operatives who have experience of pipefitting in engineering construction but who lack the formal training to back up their occupational knowledge. The programme is based on ECITB training standards that align to ECITB regulated qualifications for pipefitting. The training is 80% practical and 20% knowledge training and includes relevant offshore health and safety practices.
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Verify knowledge and skills with ECITB technical tests

Pipefitters (KT PF TPF01-TPF12)	A series of tests that assess the pipefitter's ability to interpret drawing specifications and then prepare, fabricate and assemble pipework using hand and power tools: <ul style="list-style-type: none"> • setting and marking out • developing patterns • preparing pipe ends using portable edge preparation • bending pipes • hotwork preparation of welded pipework • non-metallic pipework, small bore non-ferrous pipework, GRP pipework, pipework supports, and pipework systems • undertake hydrostatic pressure testing of pipework systems.
Welding pipes	• Welding pipework can be an integral part of a fitter's job – see welding section for more information.

 **Connected competence is available for pipefitters.**

Independently-recognised certification with ECITB qualifications

ECITB Level 2 Diploma in supporting the installation of engineering construction plant and systems (RQF): pipefitting.

ECITB Level 3 Diploma in installing engineering construction plant and systems (RQF): pipefitting.

ECITB Diploma in supporting the installation of engineering construction plant and systems: pipefitting at SCQF Level 5.

ECITB Diploma in installing engineering construction plant and systems: pipefitting at SCQF Level 6.



Plating

ECITB's approved plating training provides upskilling to ensure platers are proficient at safely and effectively interpreting engineering drawings, measuring, forming, joining, and using hand skills alongside working with complex machinery to deliver to requirements.

ECITB's technical tests and regulated qualifications provide platers with the opportunity to gain independent verification of their technical and occupational skills.

ECITB scholarships are available for plating. If you are interested in the scholarship programme and want to know more, please contact your Relationship Manager.

Approved provider reskill programme

Reskill plater

This 6-week intensive training programme is for existing operatives who have experience of plating in engineering construction but who lack the formal training to back up their occupational knowledge.

The programme is based on ECITB training standards that align to ECITB regulated qualifications for plating. The training is 80% practical and 20% knowledge training and includes relevant offshore health and safety practices.

Verify knowledge and skills with ECITB technical tests

Platers (KT PL TPL01-TPL09)

A series of tests that assess the plater's ability to interpret drawings and follow specifications to correctly:

- set out platework and rolled steel sections
- form plate by rolling
- mark out and burn marine platework
- develop patterns for platework
- make templates for structural steelwork
- assemble platework
- undertake hot work fabrication
- inspect steelwork.

Welding plate

Welding plate can be an integral part of a plater's job – see the welding section for more information.



Connected competence is available for platers.

Independently-recognised certification with ECITB qualifications

ECITB Level 2 Diploma in supporting the installation of engineering construction plant and systems (RQF): plating pathway.

ECITB Level 3 Diploma in installing engineering construction plant and systems (RQF): plating pathway.

Mechanical (includes on-site machining)

ECITB's technical tests and regulated qualifications provide independent verification of the competence of mechanical fitters and maintenance technicians. Developed in partnership with industry experts, the tests confirm a fitter's ability to safely and effectively measure, mark out, fit, install, repair, and diagnose as well as their ability to undertake machining with milling machines and grinders.

Regulated qualifications confirm occupational competence - from entry-level support through to fitter and then technician level. There are also approved provider training courses for on-site machining.

There are ECITB mechanical maintenance scholarships and apprenticeships available. If you are interested in the scholarship programme or in taking on an apprentice and want to know more about the support ECITB offers, please contact your Relationship Manager.

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Approved provider training

On-site pipe cutting and pipe end weld preparation (2 days) Training on the theory and practical skills required for the trainee to be able to safely and effectively cut and prepare pipework for welding to specification (based on TS OSM 01).

On-site joint face machining - basic (2 days) This training course covers how to set up and use flange facing machines to safely and effectively machine flat and raised face flanges to the correct finish and specification (based on TS OSM 02)

On-site joint face machining - advanced (3 days) Training in the health, safety, quality, technical and practical skills required to carry out advanced joint facing of RTJ flanges and clamp hubs using portable machine tools (based on OSM 05).

On-site milling (2 days) Training in health, safety, quality, technical and practical aspects of milling of pump beds and shaft keyways using portable machine tools (based on OSM 04).

ECITB training standards to develop own courses

On-site machining (TS OSM01-OSM05) Standards that set out the requirements to create training courses and give workers the knowledge and skills to safely and correctly undertake:

- on-site pipe cutting and pipe end weld preparation
- on-site joint face machining (full and raised flanges, RTJ and clamp connector hubs)
- on-site drilling and thread tapping
- on-site milling.

Verify knowledge and skills with ECITB technical tests

Machining (an integral part of mechanical fitting) (TMMC01-TMMC11)

A series of tests that assess the mechanical fitter's ability to safely and accurately prepare and use:

- lathes for turning operations and advanced turning operations
- milling machines for milling and advanced milling operations
- horizontal boring
- surface and cylindrical grinders
- radial arms drills

Plus, 2 tests that assess the ability to safely and correctly produce components using CNC turning and milling machines.

Mechanical fitting (TMF01-TMF16)

These verify a mechanical fitter's ability to effectively and safely:

- accurately measure
- mark out
- make and fit
- assemble components
- prepare for installation
- position plant and equipment
- align, level and set equipment
- install drive systems
- repair faults
- diagnose faults
- prepare and assemble small bore pipework
- remove and install mechanical components.

Mechanical maintenance (KT MM or KT MMM TMM01-TMM17)

Knowledge tests for manufacturing, mechanical maintenance and mechanical maintenance. Plus, a series of practical tests that assess the maintenance technician's ability to safely and effectively maintain a range of equipment and systems, including:

- hydraulic, pneumatic, compressed air, brake, heating, ventilating and air conditioning systems
- shafts, bearings and seals
- pumps
- geared and actuating mechanisms
- belt and chain drives
- shafts and couplings
- clutches
- valves
- diesel engines

There are also practical tests for diagnosing mechanical faults, removing and installing mechanical valves, and charging accumulator systems.

Independently-recognised certification with ECITB qualifications

ECITB Level 2 Diploma in supporting the installation of engineering construction plant and systems (RQF): mechanical fitting.

ECITB Level 3 Diploma in installing engineering construction plant and systems (RQF): mechanical fitting.

ECITB Level 3 Diploma in engineering construction maintenance (RQF): mechanical.

ECITB Diploma in maintaining engineering construction plant and systems: mechanical SCQF Level 7.



Electrical

Both electrical installers and electrical maintenance technicians can gain independent verification of their technical competence through ECITB's technical tests and verification of occupational competence with ECITB's regulated qualifications.

Suitable for those working on petrochemical plants, oil and gas installations and power generating plants and developed in partnership with industry experts and companies, they confirm knowledge and technical ability to safely and effectively follow procedures, install & terminate, test, inspect, and diagnose faults in electrical systems and the associated cabling and equipment.

Approved provider training

Test the performance and condition of engineering construction electrical plant and equipment (5 days)	Training in the testing of electrical plant and equipment. Learners are expected to refer to manufacturer's manuals, follow company procedures and take account of the relevant installation procedures and safe working practices (based on TS MPSE14).
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Verify knowledge and skills with ECITB technical tests

Electrical maintenance (KT EM TEM01-TEM14)	<p>Once the knowledge test has been passed, there are a range of practical tests which assess the electrical maintenance technician's ability to carry out checks, inspections and maintenance (including fault diagnosis, where relevant) on one of the following types of electrical equipment:</p> <ul style="list-style-type: none"> • test circuits with pre-set faults • portable equipment • three phase distribution board • 3-phase system • battery and UPS systems • industrial switch gear • AC and DC electric motors • HVAC and HV equipment <p>Plus, practical tests that require electrical inspection in a hazardous area and safe isolation.</p>
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Independently-recognised certification with ECITB qualifications

ECITB Level 3 Diploma in installing engineering construction plant and systems (RQF): electrical fitting.

ECITB Level 3 Diploma in engineering construction maintenance (RQF): electrical pathway.

ECITB Diploma in maintaining engineering construction plant and systems: electrical SCQF Level 7.

Instrumentation & control

An instrumentation and control technician can gain independent verification of their ability to maintain, overhaul and condition control systems with ECITB's technical tests.

Occupational competence is verified by ECITB's regulated qualifications and confirms the technician can assemble, install, remove and replace components, disassemble, test functionality and operability as well as maintain and repair instrumentation systems and their components.

They ensure technicians have a good understanding of engineering theory, the functions of components within systems, and the maintenance of systems to minimise the likelihood of failure.



Verify knowledge and skills with ECITB technical tests

Instrumentation and controls (KT IC TMI01-TMI17)

Once the knowledge test has been passed, there are a range of practical tests to assess the instrumentation and control technician's ability to maintain, overhaul and commission control systems for:

- pressure
- levels
- flow
- temperature
- fire and gas detection
- fiscal metering and distribution

The tests include:

- maintaining typical process control valve assemblies and spring return actuators (pneumatic process control)
- reconfiguring programmable logic control systems
- fitting new analysers
- using protection methods for instruments in hazardous areas.

Independently-recognised certification with ECITB qualifications

ECITB Level 3 Diploma in engineering construction maintenance (RQF): instrumentation and control pathway.

ECITB Diploma in maintaining engineering construction plant and systems: instrumentation and controls SCQF Level 7.

 **Connected competence is available for instrumentation and control technicians.**



Mechanical Joint Integrity

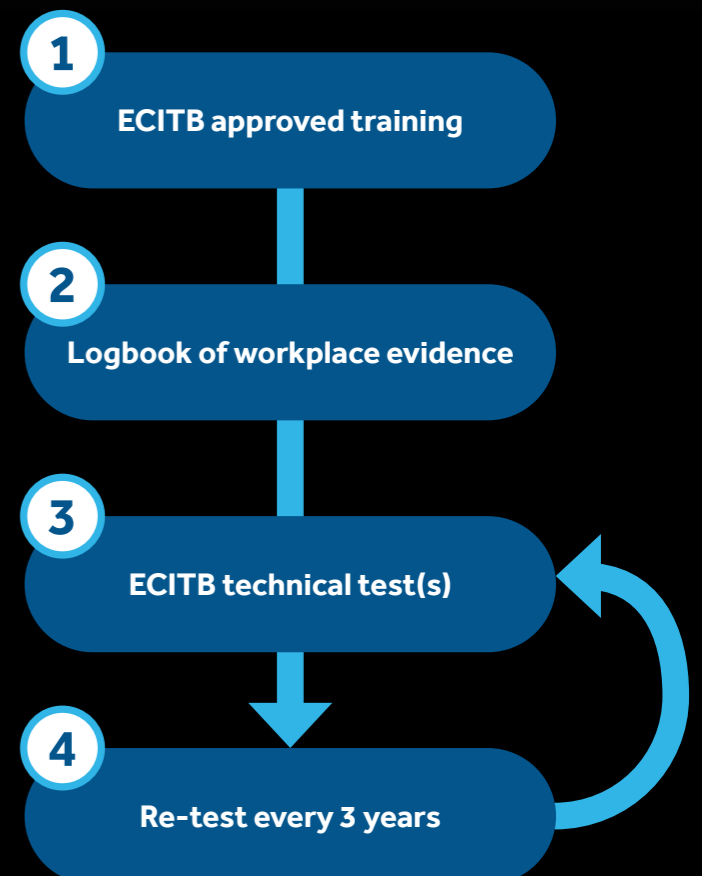
Mechanical Joint Integrity (MJI) involves the controlled and verified bolting of pipework, flanges, and other assemblies to eliminate the risk of hydrocarbon and non-hydrocarbon releases during mechanical joint activities.

The ECITB's four-stage model of training and testing is applicable to a range of engineering construction industry sectors, including oil and gas and wind turbines.

It ensures the safe and effective tightening and bolting of mechanical joints, maintaining structural integrity and minimising leaks to prevent personal injury and environmental damage.

Mechanical joint integrity (MJI) 4-stage model

This 4-stage training and testing model increases competency in the use of hand and hydraulic torque and tensioning equipment.



Stage 1: upskill and train with approved provider training courses

Approved provider training courses for MJI vary in the types of connections and techniques covered. Training is in person or sometimes in a virtual classroom. Some knowledge elements may be available through e-learning. Skills training is in person.

All training courses give candidates the skills required to dismantle, inspect, prepare, assemble and tighten joints.

Approved provider training courses	Course length
MJI First Principles (based on TS MJ101)	0.5 day
Torque and tension bolted connection techniques (based on TS MJ101, 10, 11, 18, 19, 20).	2.5 days
Hand & hydraulically torqued bolted connection techniques (based on TS MJ101, 10, 11 & 19, 20).	1.5 days
Hand torqued bolted connections (based on TS MJ101, 10, 11).	1 day
Hand torque clamp connectors (based on TS MJ111)	2 hours
Hydraulically tensioned bolted connections (based on TS MJ101, 18).	1 day
Hydraulically torqued bolted connections (based on TS MJ101, 19)	1 day
Hydraulic torque clamp connectors (based on TS MJ120)	0.5 day
Powered torque gun bolted connections (based on TS MJ123).	0.5 day
Torque and tension wind turbine bolted connections (based on TS WT02-MJ133).	1 day
Subsea: Hydraulically tensioned subsea bolted connections (based on TS MJ121).	1 day
Subsea: Hydraulically torqued subsea bolted connections (based on TS MJ122).	1 day

ECITB training standards to develop own MJI courses

MJI (TS MJ101, 10-23, TS WT02-MJ133)

Ten training standards that detail the content of training courses from MJI first principles to the following for bolted connections:

- hand torque (flanges and clamps)
- hydraulic torque (flanges and clamps)
- hydraulic tensioned (flanges including subsea)
- powered torque gun (flanges and clamps)
- torque and tension for wind turbines (MJ133).

Stage 2: Logbook of workplace evidence

After training, for a period of several months, the worker is expected to practise and consolidate the new skills and knowledge on site, undertaking a range of tasks of varying complexity as specified in the ECITB logbook provided to them.

Stage 3 & 4: Verify MJI knowledge and skills through testing

On completion of stages 1 & 2 (training and logbook), the candidate then completes a technical test to verify their competence in specific MJI activities. If the candidate successfully passes the technical test, they are awarded a certificate of achievement.

To maintain this verification of competence, the ECITB technical test must be retaken every 3 years.



Verify knowledge and skills with ECITB technical tests

MJI technical tests (TMJ10-TMJ23, TWTMJ133)

This series of MJI technical tests covers the safe dismantling and assembly of a range of different types of pipe flanges, clamps and bolted connections (including a specific test for wind turbines) using:

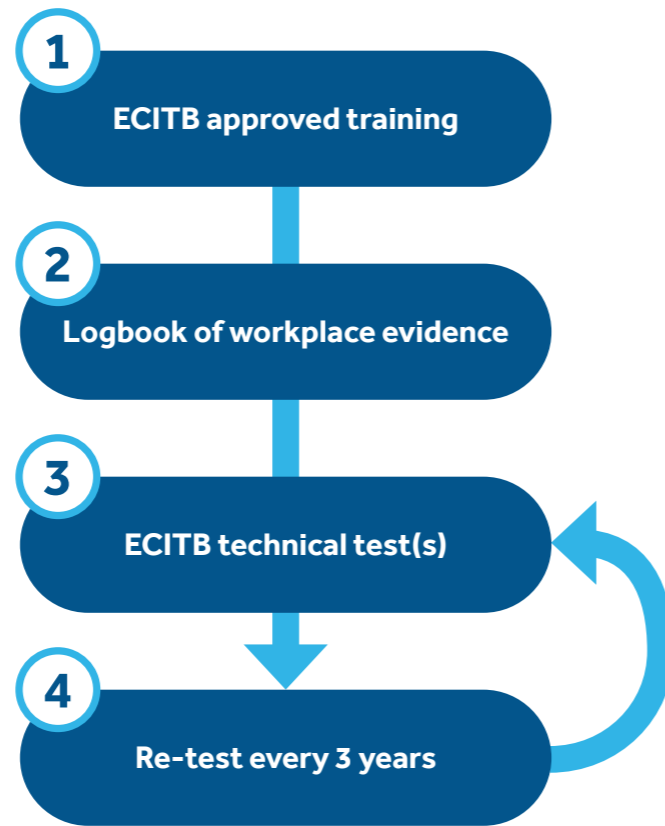
- hand torque
- hydraulic tensioning
- hydraulic torque.

Small Bore Tubing

Ensuring fittings and assemblies are effectively installed helps minimise hydrocarbon releases, leading to a reduced environmental impact and improved safety.

Small bore tubing (SBT) 4-stage model

This 4-stage ECITB training and testing was developed to increase the standard of workmanship and integrity of SBT connections and installations in industrial applications. This training aims to minimise accidental releases of gasses and liquids in a process environment and to provide a base standard of quality.



Stage 1: upskill and train

Approved provider training courses

SBT-01 Assemble and install small bore tubing with twin ferrule mechanical grip fittings (2 days)

Training in the knowledge and practical skills required for undertaking operations on small bore tubing assemblies and systems using twin ferrule, mechanical grip fittings across all industries. Includes a knowledge test and practical exercises. Ideal for those new to working with small bore tubing assemblies (based on TS SBTC 01).

SBT-02 Assemble and install small bore tubing with cone & threaded medium and high pressure module (1 day)

Learn to assemble and install SBT with cone and threaded medium and high-pressure module. This training course can only be completed by learners who have already completed the initial ECITB approved training course in SBT (SBT01) or who has a valid ECITB technical test certificate for TSBT01 (based on TS SBTC 02).

SBT-03 Assemble and install small bore tubing with cone & threaded medium and high pressure (2 days)

This two-day cone and threaded medium and high pressure course is aimed at learners with no previous small bore tubing training (based on TS SBTC 03).

SBT-04 Hydrotest small bore tubing assemblies (2 days)

On completing this two-day course, operatives will be able to hydrotest SBT assemblies (based on TS STBC 04).



ECITB training standards to develop own SBT courses

SBT (TS SBTC01-SBTC04)

SBT training standards detail the content for training courses that cover isolations, dismantling techniques, inspection of components, shaping components, replacing components and installing small bore tubing assemblies:

- assemble and install small bore tubing
- assemblies - twin ferrule
- with cone & threaded medium and high pressure
- hydrotest SBT assemblies.

Stage 2: Logbook of workplace evidence

After training, for a period of several months, the worker is expected to practise and consolidate the new skills and knowledge on site, undertaking a range of tasks of varying complexity as specified in the ECITB logbook provided to them.

Stage 3 & 4: verify SBT knowledge and skills through testing

On completion of stages 1 & 2 (training and logbook), the candidate then completes a technical test to verify their competence in specific SBT activities. If the candidate successfully passes the technical test, they are awarded a certificate of achievement.

To maintain this verification of competence, the ECITB technical test must be retaken every 3 years.

Verify knowledge and skills with ECITB technical tests

SBT tests (TSBT01-TSBT04)

Four tests, each with a knowledge and practical element that assess safely undertaking SBT assembly activities to specification including:

- assembling and installing twin ferrule, cone and threaded assemblies
- disassembly, fault and defect identification and reinstallation
- hydrostatic pressure testing.

Welding

Demand for welders is set to increase dramatically across all sectors of the engineering construction industry due to the growth in planned construction and infrastructure projects, particularly those related to net zero.

The ECITB's suite of technical tests provides independent verification of technical competence for preparing pipe and plate for welding and carrying out non-critical and high-integrity welds using a range of techniques. There are specific tests in welding for nuclear new builds.

The ECITB's approved provider reskill welding course covers rules and regulations, welding different types of materials using a range of techniques, correct PPE, risk assessments, inspecting welds to identify defects and following welding specifications and codes.

There are ECITB scholarships for welders and apprenticeships available. If you are interested in the scholarship programme or in taking on an apprentice and want to know more about the support ECITB offers, please contact your Relationship Manager.

Approved provider reskill programme

Reskill welder (5 weeks)

This 5-week intensive training programme is for existing operatives who have experience of welding in engineering construction but who lack the formal training to back up their occupational knowledge. The programme is based on ECITB training standards.

It comprises 80% practical and 20% knowledge training and includes relevant offshore health and safety practices.

If you want to develop your own tailored courses for welding, you can use the ECITB training standards to do this in collaboration with an ECITB-approved training provider.

There are three suites of welding training standards that detail the knowledge, skills and assessment that should form the basis of training courses:

ECITB training standards to develop own courses

Welding pipe (TS WPP01-WPP05 WPL07)

This suite of training standards sets out the knowledge and skills requirements for training in interpretation of welding procedures, specifications and standards in engineering construction and joining pipe through the following welding methods:

- TIG
- flux cored
- TIG/MMA
- MMA
- MIG/MAG.

Welding plate (TS WPL01-WPL07)

This suite of training standards sets out the knowledge and skills requirements for training in the interpretation of welding procedures, specifications and standards in engineering construction, gouging and joining plate by:

- TIG
- flux cored
- TIG/MMA
- MMA
- MIG/MAG.



ECITB training standards to develop own courses

- High integrity welding (TS HIW01-HIW16)** This suite of training standards sets out the training requirements for:
- welding metallurgy
 - main steam pipe CrMoV high integrity manual and semi-automated welding (paired welder)
 - TIG welding – tight access, restricted visual access, high alloy ferritic, creep resistant steel, duplex steel, high nickel alloy
 - TIG/MMA welding – tight access (paired welder), stainless steel large bore pipe, nickel alloy large bore pipe and window welding
 - MMA welding – stainless steel pipe and high alloy creep resistant
 - non-purged welding of high alloy pipe
 - orbital welding.

Verify knowledge and skills with ECITB technical tests

- Non-critical welding pipe and plate tests (TNCMIG01-MIG07 TNCMMA01-MMA07 TNCTIG01-TIG06 TNCTFCAW01)** The candidate is expected to prepare and weld a low-carbon steel pipe or plate joint in line with a given weld procedure specification. The welded joint must then pass a visual inspection:
- Non-critical welding pipe tests: there are tests for butt welds using MIG, MMA and TIG welding
 - Non-critical welding plate tests: there are tests for 1G and 2G butt welds and 1F and 2F single-sided fillet welds using MIG, MMA and TIG plate welding and in FCAW thick plate welding (3G single V butt weld).

- Welding preparation pipe and plate tests (TTIG01-TIG06 TMIG01-MIG05 TFCAW01-FCAW03 TMMA01-MMA09)** The candidate must prepare and set up a variety of butt joints in different pipe and plate materials (carbon and low alloy, stainless steel, nickel and nickel alloy, aluminium) ready for the selected welding process to the welder-approved standards (in BS EN 287):
- Welding pipe preparation: 12 individual tests for a variety of different pipe materials and incline positions in preparation for different welding techniques
 - Welding plate preparation: 14 individual tests for a variety of different plate materials in preparation for different welding techniques.

- Welding for nuclear new builds** See the nuclear section.

Rigging & erecting (plus Appointed person moving loads)

Steel erectors and riggers are integral to the construction, day-to-day activities and maintenance of the UK's engineering construction sites.

The technical competence of riggers & erectors can be verified with ECITB technical tests and occupational competence through ECITB's regulated qualifications. There is an ECITB-approved provider reskill course for riggers. The training, tests and qualifications cover the correct selection of equipment and PPE, as well as safely slinging, lifting and moving unequally weighted loads.

Appointed Persons Moving Loads (APML) is critical to the development and execution of lifting plans to ensure loads are safely and correctly moved. See later in this section.

Approved provider reskill course

- Reskill rigger** This 5-week intensive training programme is for existing operatives who have experience of rigging in engineering construction but who lack the formal training to back up their occupational knowledge. The programme is based on ECITB training standards that align with the ECITB-regulated qualifications for rigging.

This comprises 80% practical and 20% knowledge training and includes relevant offshore health and safety practices.

ECITB training standards to develop own courses

- Slinger/banksman (TS SB01)** Sets out the requirements to train and assess a slinger/banksman to understand and carry out their role including:
- different equipment to use
 - related health and safety legislation, regulations and codes of practice
 - methods of communication
 - requirements for inspection and risk assessment
 - preparing loads for lifting
 - under supervision, performing a lifting operation in accordance with the lift plan
 - carrying out post lift completion checks correctly.

Verify knowledge and skills with ECITB technical tests

Rigging / Moving loads (KT RIG TML03)

Correct selection of equipment and lifting accessories, safely sling, lift and move an unequally weighted load through a restricted access to an identified location, to specification and regulations.

Steel erecting (TER02-TER04)

These tests assess if candidates can safely, successfully and to industry regulations and procedures:

- lift and move an identified item
- rig, lift, position, assemble and align a steelwork structure
- erect a stair assembly and pre-formed plate flooring components.

 **Connected competence is available for riggers and appointed person riggers.**

Independently-recognised certification with ECITB qualifications

ECITB Level 2 Diploma in lifting and positioning engineering construction loads (RQF):

- simple lifting and positioning
- moving loads under supervision

ECITB Level 2 Diploma in erecting steelwork components (RQF)

ECITB Level 3 Diploma in engineering construction lifting, positioning and installing structures, plant and equipment (RQF)

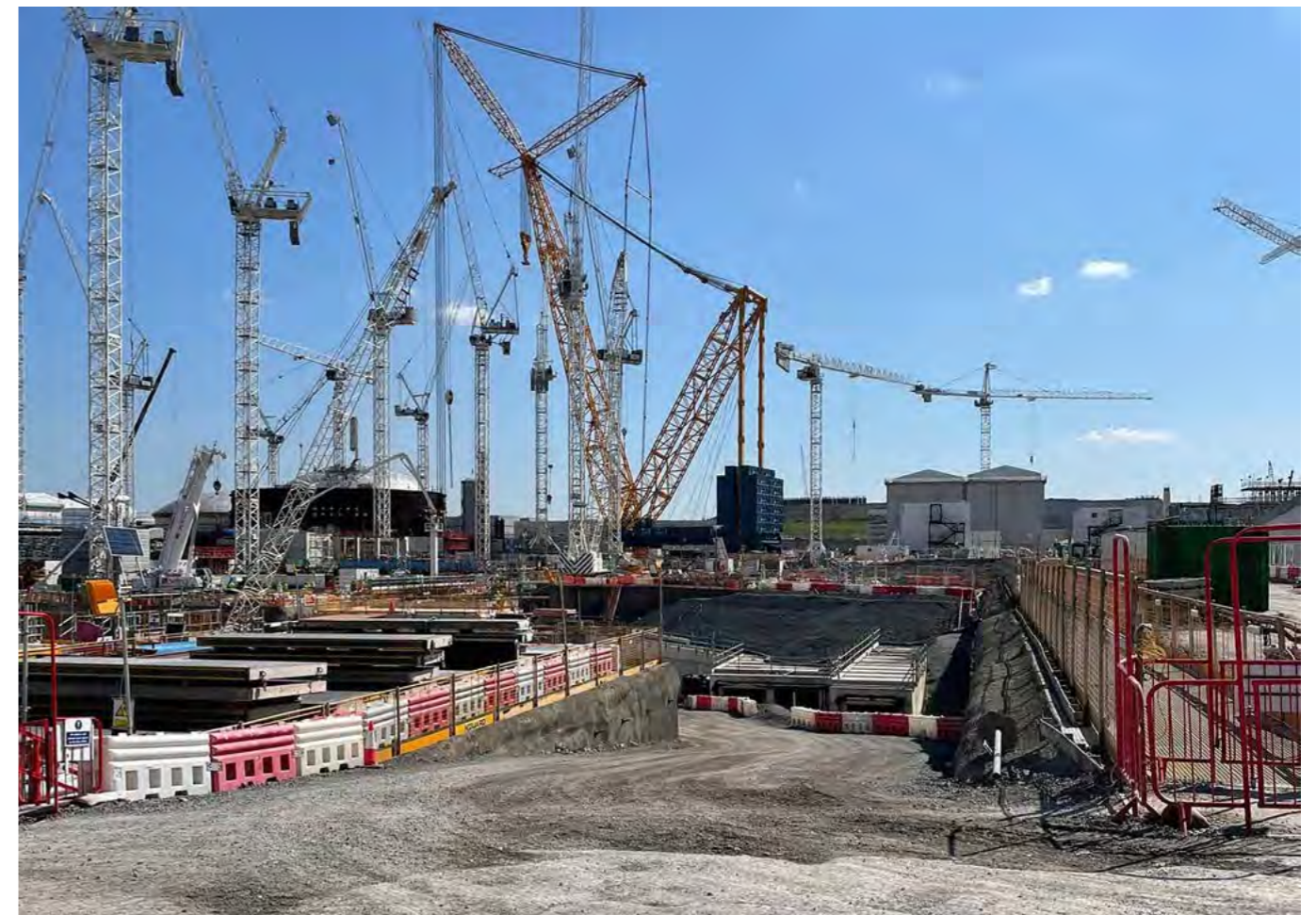
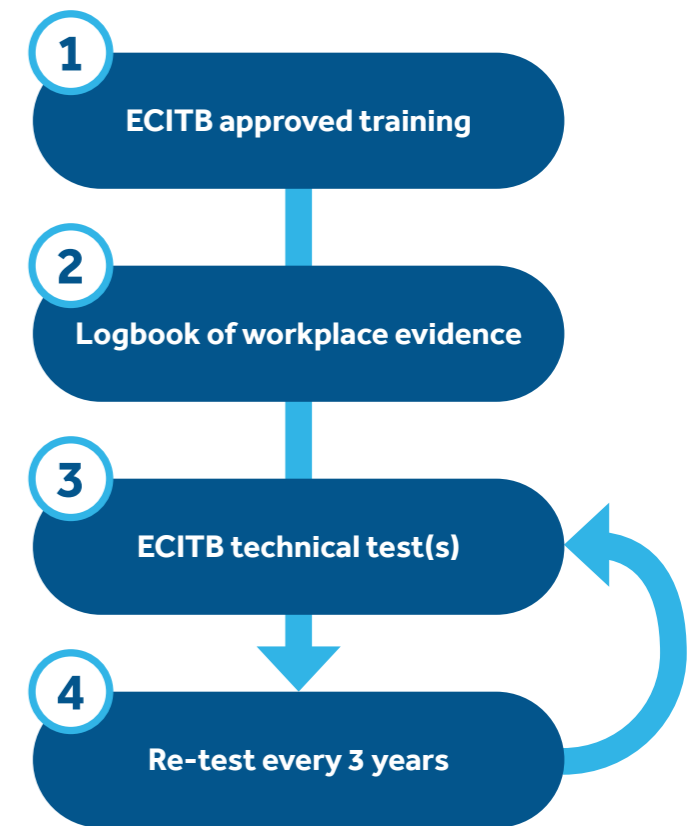
- erecting
- rigging

Diploma in moving engineering construction loads at SCQF level 6.



Appointed Persons Moving Loads (APML) 4-stage model of competence

Appointed persons moving loads (APML) is critical to the development and execution of lifting plans to ensure loads are safely and correctly moved. To support upskilling in this area, ECITB's 4-stage model for technical competence is available (this includes approved provider training courses, logbooks and technical tests). It provides independent verification of technical competence and should be renewed every 3 years.



Stage 1: upskill and train with approved provider training courses

Several ATPs have approved training courses, each with the same learning outcomes.

Approved provider course

Appointed Persons Moving Loads PCAS (4 days)	On completion of this ECITB-approved 4-day training course, the worker will have the skills and knowledge to manage and plan lift and moving loads operations (based on TS APML 01). Includes: <ul style="list-style-type: none">• relevant legislation and safe working practices• the activities of the appointed person role• calculating forces• planning and performing rigging.
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ATPs can use the Appointed Persons Moving Loads training standard (TS APML01) to develop their own training course.

Stage 2: logbook – the worker completes a logbook of workplace evidence and provides this to an ECITB-approved provider as a pre-requisite for the technical tests at stage 3.

Stage 3 & 4: verify APML knowledge and skills through testing

On completion of stage 1 & 2 (training and logbook), the candidate then undertakes a technical test to verify their competence in specific APML activities. If the candidate successfully completes the technical test, they are awarded a certificate of achievement.

To maintain this verification of competence, the ECITB technical test must be retaken every 3 years.

Verify knowledge and skills with ECITB technical tests

APML (KT APML TAP01)	This test requires the candidate to support a complex rigging operation to regulations and requirements by: <ul style="list-style-type: none">• generating a lift plan including calculations• undertaking a risk assessment• providing a toolbox talk• executing the lift.
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 **Connected competence is available for Appointed Persons Moving Loads.**

Nuclear

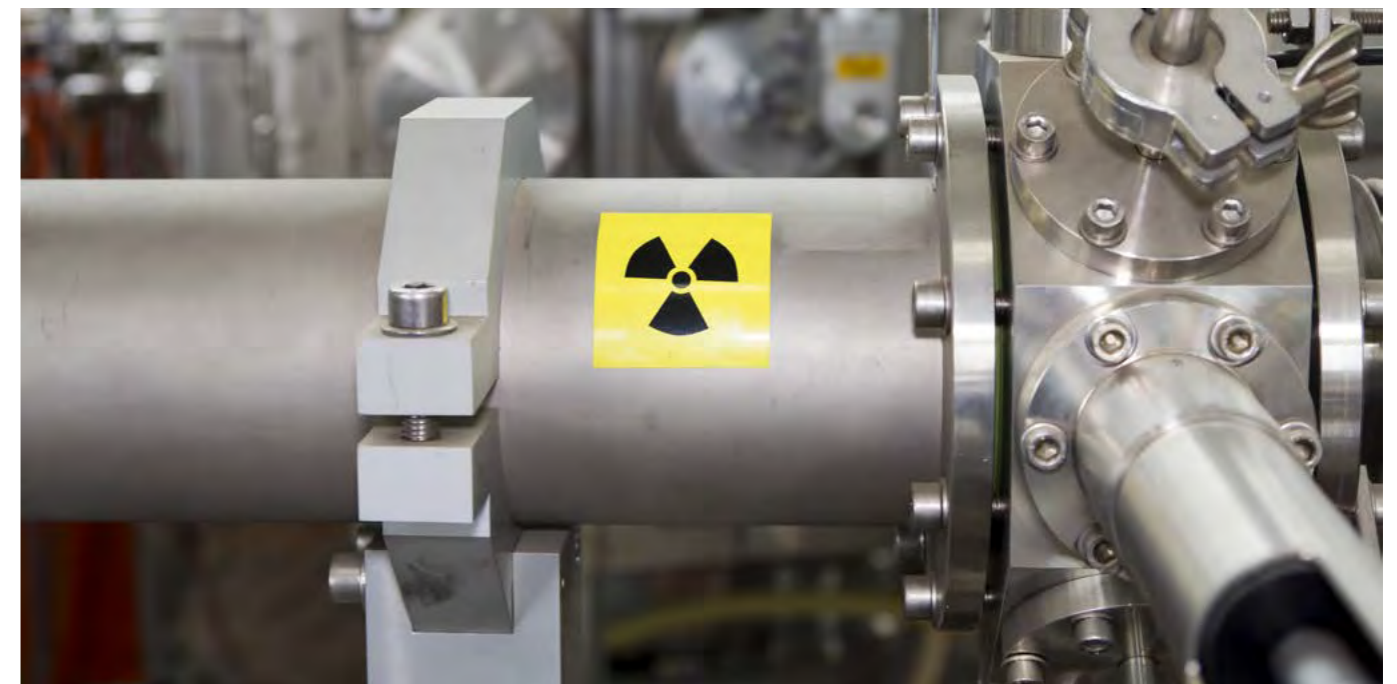
The ECITB works closely with companies working on new nuclear build and existing nuclear plants and have created training courses and standards tailored for use on a nuclear site.

This includes developing training for use at Hinkley Point C such as the RCC-M (2012) site welding mentor guide and the HSO bronze training programme for new entrants.

Many of the other ECITB products included in this catalogue are also suitable for use on nuclear sites.

Verify knowledge and skills with ECITB technical tests

Welding for nuclear new builds (TNNBNC): <ul style="list-style-type: none">• TIG01• MMA01,3 & 4• FSS03• FCAW01• TIGFFS• TIGSS01• TIGMMASS01• MAG01)	<ul style="list-style-type: none">• There is a range of practical tests to assess a welder's ability to prepare and carry out welding to the required, specific standards on a nuclear site.• There are ten practical tests that cover non-coded welding of low carbon steel and stainless steel pipes and plate joints• using the following welding techniques<ul style="list-style-type: none">• TIG• MMA• FCAW• MAG• to carry out<ul style="list-style-type: none">• butt welds• fillet welds• cross welds• the completed weld must pass a visual examination.
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Industrial drone operators

The industrial sector's growing use of drones/ unmanned aircraft systems (UAS) in operations is improving safety, increasing efficiency and reducing workers' exposure to working at height risks and other hazardous environments.

The ECITB foundation UAS training course provides an understanding of drone functionality and how to conduct operations on industrial sites safely, effectively and efficiently. Independent verification of technical competence in using industrial drones can be gained through ECITB's technical tests.

ECITB training course

Foundation unmanned aircraft systems (UAS) training course 5-days

- Drones – various types, capabilities and operating limitations
- How to conduct UAS operations on industrial sites, safely and effectively, in compliance with site policies and procedures
- How to control a drone and factors that can impact its control including typical hazards and weather
- Practical exercises including:
 - pre-flight risk assessments, checks and procedures
 - piloting a drone to capture, store and share viable images
 - recover a UAS in flight
- How to plan and carry out commercial drone operations and post-flight activities
- How the data should be handled and stored.

Verify knowledge and skills with ECITB technical tests

Foundation industrial drones UAS operations (TT IDO-02)

- This technical test requires the candidate to:
- complete a risk assessment
 - plan the flight
 - complete notifications before conducting the flight
 - fly to an object and collect data from around the object by taking photographs that meet strict quality requirements
 - download the data in a usable format.

Wind turbine

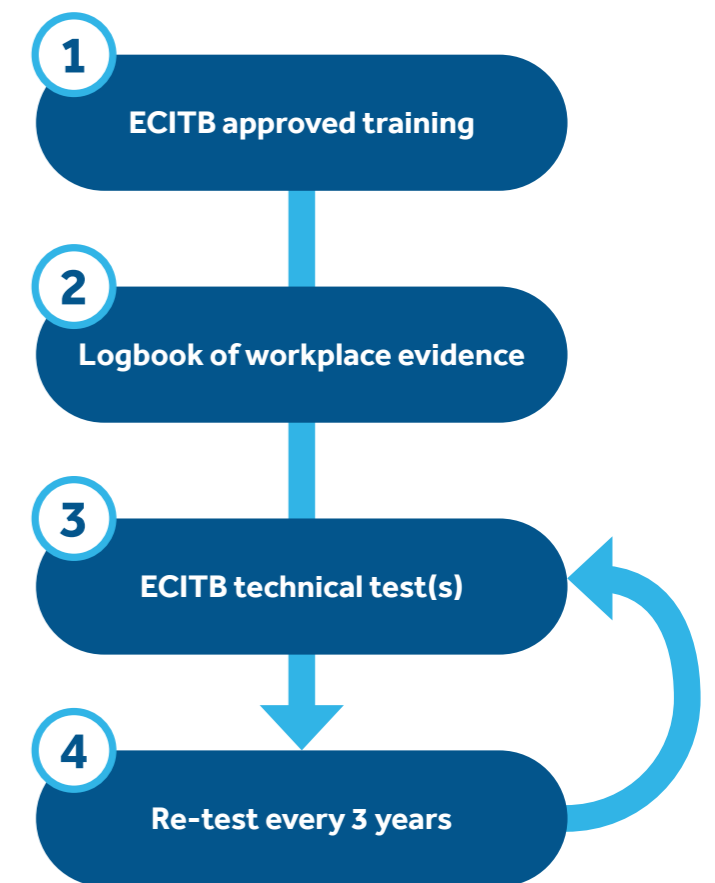
The ECITB provides independent verification of technical competence for wind turbine statutory inspection and maintenance through the 4-stage model – for which a worker must renew their certification every 3 years.

In addition to this, there is specific approved provider training for wind turbine hub rescue and mechanical joint integrity.

Verify technical competence through the ECITB's 4-stage model for statutory inspection and maintenance

Statutory inspection and maintenance are critical to the safe operation of the UK's wind farms. The ECITB's 4-stage model for competence supports upskilling in this area.

Candidates that successfully meet the requirements of this 4-stage model will have confirmed that they can correctly inspect the in-service lift, compact and davit cranes, fall arrest equipment, first aid safety boxes and certify the turbine as safe for the turbine technician to safely enter, access, egress and carry out their duties ensuring the turbine generates electricity.



Stage 1: upskill and train with approved provider courses

Approved provider courses

Wind core (3 days)
This training course is a pre-requisite for the 3 training courses below

The principles and concepts that underpin the safe and effective inspection and maintenance of wind turbine statutory equipment such as the service lift. The course covers materials, principles, legislation, role of the examiner and maintainer to ensure compliance with legislation and the correct completion of thorough examination reports and records.

Includes a detailed examination of wire rope and chain and the related mandatory measurements for compliance (Based on TS WT01-01).

Compact and Davit Cranes (2 days)

This course builds on the core knowledge and principles to conduct thorough examinations and maintenance of compact and davit cranes. It includes hands-on practical activities including wire changes and load testing. Report writing is further practised for inspections (based on TS WT01-02).

Wind turbine lift maintenance and inspection (2.5 days)

In this course you will build on the core knowledge and principles to examine the various types of Inservice lifts, both wire guided and ladder guided. You also conduct thorough examinations and maintenance of a lift. This course includes lots of hands-on practical activities including component changes and load testing. Report writing is further practised for inspections (based on TS WT01-03).

Inspection of working at height systems and equipment (1 day)

This course builds on the core knowledge and principles for examining various WAH systems and equipment. You will conduct thorough examinations and examine PPE and fall arrest systems for compliance & complete mandatory reports. This course includes hands-on practical activities and inspections of the WAH systems both fixed and temporary (based on TS WT01-04).

ATPs can use the wind turbine statutory inspection and maintenance suite of training standards to develop their own training courses ((TS WT01-WT04)

Stage 2: logbook – the worker completes a logbook of workplace evidence and provides this to an ECITB-approved provider as a pre-requisite for stage 3.

Stage 3 & 4: verify knowledge and skills with technical tests

Verify knowledge and skills with ECITB technical tests

Wind core assessment (TWT01-01)

This test is a pre-requisite and confirms the candidate has the essential underpinning knowledge and skills required for each of the other three tests.

The following 3 tests are part of the 4-stage model of competence and must be retaken every 3 years to verify competence TWT01-02, 03 & 04.

Verify knowledge and skills with ECITB technical tests

Wind turbine statutory lift assessment (TWT01-02)

This test requires the candidate to inspect an Inservice lift. Predetermined faults must be identified in a thorough examination. It also requires the candidate to complete a report and confirm if the lift is serviceable.

Wind turbine compact and Davit crane assessment (TWT01-03)

This test requires the candidate to inspect either a compact or davit crane which has predetermined faults. These must be identified in a thorough examination. The candidate must complete a report and confirm if the crane is serviceable.

Wind working at height equipment and systems assessment (TWT01-04)

This test requires the candidate to inspect an installed Working At Height system and Personal Protective Equipment thorough examination. The candidate must complete a report and confirm if the PPE or WAH equipment is serviceable.

Stage 4: every 3 years the worker must re-take the relevant technical test to gain re-approval of their technical competence from ECITB.

Mechanical joint integrity (MJI) for wind turbines approved provider course

Wind turbine bolted connections. Blended and e-learning options are available from 1/2 day to 1 day

This training course provides the knowledge and skills to work safely in verified bolting activities on wind turbines and includes the following for wind turbine bolted connections:

- hand torque
- hydraulic torque
- hydraulic tension

This training is based on TS WT01-MJI 33.

Verify knowledge and skills in MJI for wind turbines with ECITB technical tests

TS WT02-MJI33 Torque and tension wind turbine bolted connections.

Wind turbine hub rescue approved provider course

Wind turbine hub rescue (1 day)

This course requires learners to have a level of skill in first aid, rope access, confined space, working at height and manual handling. The training covers hub rescue, the equipment required, evacuating a casualty and actions to take after rescuing the casualty.

This training practises recovering an incapacitated person and the difficulties of hub rescue (based on TS HBR 01).

Supervision and leadership skills

Effective supervision, chargehand, personal and leadership skills are integral to the successful running of engineering construction projects. The ECITB has worked with companies and industry experts from across the UK to develop a range of courses that are ideal for developing chargehand/team leaders and supervisors/lead engineers.

These courses provide the tools, techniques and training that lead to increased confidence and enhanced respect in the workplace for those working in these positions. This makes team management and delivery more effective.

Supervision and management are careers in their own right, with opportunities for individuals to progress to higher levels of supervision and management within areas of their expertise.

ECITB's supervisor training

The ECITB Supervisor training has four modules that provide practical knowledge and skills for those either moving into supervision or looking to refresh their knowledge and skills.

Those who complete all 4 modules of this supervision programme can apply for the ECITB's silver card for supervision. The modules can be completed in any order.



Photo: Courtesy of EDF

ECITB's supervisor training – Giving Supervisors the Edge

Module 1 Taking the lead (3 days) Manage self, others and resources. Using effective communication to enhance leadership, delegating effectively, motivating others, empathising and ensuring inclusiveness.

Module 2 Achieving performance (2 days) Performance management techniques and team development to deal effectively with change management, human factors and unplanned events.

Module 3 Sustaining Success (2 days) Practical tools to lead a team including task planning, project delivery and budgeting. Plus, project planning and contracting and ensuring quality in delivery.

Module 4 Supervising for effective on-site safety (2 days) Prepare a site-based work team to work safely through activity briefings, leading and monitoring the team and individuals. It also provides tools for risk assessment and control measures for hazardous working environments and simultaneous operations.

ECITB training courses to develop leadership / personal skills

Chargehand training course (2 days) Develops knowledge and skills in communicating effectively, managing performance and engaging with people – resulting in more effective and safer working on site.

The training is for new and experienced chargehands with little or no previous training. Training includes the main differences between being a team member and a team leader: 'What do I have to do?' and 'What do I need to be?' in the new role.

Coaching skills (1 day) Facilitate a person's development to make them effective in their position or help them towards a promotion. Prior knowledge of coaching is not assumed or required. An interactive course, which provides the opportunity in a safe and structured environment to practice coaching skills and receive feedback.

National Agreement for Engineering Construction Industry (NAECI) industrial relations (2 days) Understand the requirements of working on engineering construction projects using the National Agreement for ECI, including managing employee relations so that contracts are completed on time and to budget. NAECI supports all parties to work together to achieve success.

This course is best delivered during the initial stages of specific contracts, a time when team relationships and styles of working are evolving.

Specialised supervision training

The ECITB has a role to support engineering construction companies in leading skills and ensure there is training for skills in specific disciplines. We have also worked with employers to create specialised supervision training. This includes the RCC-M site welding control mentor guide. This training ensures those who supervise welding at Hinkley Point C are able to interpret and apply RCC-M 2012.

There are several training standards that can be used by ATPs to create courses.

ECITB training standards to develop own course

Human performance TS HUP 01

This standard sets out the key learning needed to be able to explain the importance of taking a human performance (HuP) approach to safety and business effectiveness, the range of HuP models, error prevention tools and how to apply them to reduce errors.

Managing welding operations TS MWO 01-09

A series of training standards that detail the learning required to supervise welding operations including controlling welding operations on site, determining and securing resources, welding procedures and processes, characteristics of materials as well as interaction with other departments including quality and subcontractors for heat treatment and non-destructive testing.

Root cause analysis TS RCA 01

This standard sets out the learning required to undertake root cause analysis including identifying the goals, pulling together a team, gathering the data, analysing the data and producing an effective report.



Management and professional skills

ECITB professional and management training focuses on project and team management, and project delivery. The courses and training standards support the development of professional competency for project managers, project and cost controllers, estimators, planners, schedulers and engineers, for career progression and in the journey towards chartered status. This also includes diversity and inclusion and carbon literacy.

Design and draughting, plant layout and design

Engineering design and draughting technicians produce designs and drawings for structures, piping, electrical systems, control and instrumentation systems and mechanical components used in industrial and commercial construction.

ECITB-regulated qualifications provide independent verification of occupational competence to work as an engineering design and draughting technician on projects across a range of sectors including engineering, manufacturing, infrastructure, pharmaceuticals, utilities, transport and defence.

There are specialist approved provider courses for commissioning and start-up and offshore decommissioning as well as ECITB scholarships for design & draughting and apprenticeships available. If you are interested in the scholarship programme or in taking on an apprentice, please contact your Relationship Manager.

Approved provider courses

Masterclass: commissioning and start up (CSU) engineer (3 days) Training on the critical success factors for CSU, including methods, processes, tools and latest technologies to ensure safe and successful project delivery. Ideal for ensuring the UK has skilled, qualified people to safely deliver CSU for essential projects to take the UK towards decarbonisation of energy supply and Net Zero (based on TS CSU 02).

Masterclass: commissioning and start up: civil nuclear (3 days) Training on the critical success factors for CSU for nuclear projects. Includes methods, processes, tools and latest technologies to ensure safe and successful project delivery across the nuclear estate. This training supports the UK in having skilled, qualified people to safely deliver CSU for the nuclear projects that are part of the decarbonisation of the UK's energy supply (based on TS CSU 02).

Introduction to offshore decommissioning (2 days or 10+ hours online spread across a month) Delivered by the National Decommissioning Centre, this training is ideal for those wishing to gain a greater understanding of the issues and activities associated with offshore decommissioning, including oil and gas industry professionals, engineers, managers, finance and procurement personnel, as well as those working in related industries or regulatory bodies. Includes an overview of the health, safety, environmental and legal considerations associated with offshore decommissioning and the principles of managing an offshore decommissioning project (based on TS OSD 01).

ECITB training standards to develop own course

Commissioning and start up TS CSU01-02 (manager & engineer) These training standards set out the requirements to create training courses on commissioning and start-up (CSU) including developing the processes and procedures as well as implementing CSU through to testing and handover.

Introduction to offshore decommissioning TS OSD 01 This training standard sets out the requirements to create a training course that provides a deeper understanding of the environmental, legal, economic and health and safety aspects of decommissioning.

Plant layout and design (TS PLD 01, 04, 08, 10, 12, 13, 24-28) A series of standards that set out the key learning points for training in plant layout and design such as incorporating pipe racks and sleepers, flares, fired heaters, heat exchangers and air coolers, storage tanks, horizontal and sloping vessels, pumps and turbines etc.

Independently-recognised certification with ECITB qualifications

ECITB Level 3 Diploma in engineering design and draughting (RQF).

ECITB Diploma in engineering construction design and draughting, SCQF level 6.

Commercial and contract awareness

Commercial awareness, together with knowledge and understanding of contractual requirements, are an inherent part of effective project delivery. The ECITB has approved several provider-developed training courses on this topic. These courses meet the requirements of ECITB training standards that were developed in partnership with industry experts and which specify the knowledge and skills to be included in approved training courses on commercial and contractual acumen.

Approved provider courses

Foundations in commercial awareness (1 day in classroom, 2x 3 hours virtual) An introductory course, ideal for building commercial and contractual awareness throughout engineering and construction project teams (based on TS CA01 01).

Contracts for engineers (1 day, 2x 3 hours virtual) Training that provides a pragmatic view of pre and post contract essentials for engineers involved with engineering, procurement and construction projects of any size (based on TS HCA1 02).

Competitive tendering: bid strategy & proposal management (1.5 days, 4x 3 hours virtual) Training for engineering construction project professionals responsible for winning contracts through improved strategy and positioning activities and increasing bid-winning opportunities through enhanced proposal management (based on TS PC05 17).

Commercial competence X-series (8-10 hours, e-learning) E-learning training to improve commercial outcomes in projects through a greater understanding of change, its potential impact on projects and how to best manage the contractual and relational aspects of this (based on TS HCA1 03).

ECITB training standards to develop own course

Commercial awareness (TS CA01-01 HCA01-HCA04)

A series of training standards starting with an introduction to commercial awareness alongside higher level commercial knowledge and skills including commercial and contract terms, setting up projects in a modern contracting environment, managing expectations and commercial performance of engineering construction projects. Available ECITB-approved courses, developed against these standards are:

- Contracts for engineers (1-day)
- Competitive tendering (1-day)
- Commercial competence X-series (1.5 days e-learning)
- Foundations in commercial awareness.



Project control, estimating, planning and scheduling, cost control

Demand for project controllers is increasing due to growth in planned construction and infrastructure projects.

Project controllers play a critical role in the successful delivery of construction and maintenance of engineering projects to time, cost and quality. Especially on projects where the level of risk (commercial; safety; environmental; legal; and/or people) is sufficiently great to require independent assurance and verification of technical information.

ECITB's project control training courses and qualifications provide skills training and occupational verification for all roles from those new to the career, competent technicians through to professional project controllers, estimators, planners, schedulers and cost engineers.

Developed with industry stakeholders, the training and qualifications focus on developing technical expertise as well as honing communication skills, fostering governance acumen, promoting continuous improvement, leveraging data analytics and contributing to carbon reduction and environmental sustainability.

Apprenticeships

- Project control technician apprenticeship (L3 in England, equivalent to L7 in Scotland)
- Project controls professional apprenticeship (L6 in England, degree level equivalent)

ECITB short courses: project control, planning, scheduling and estimating

Introduction to project controls (3 days, 6x 3.5 hours virtual)

The purpose and benefits of project controls as well as the fundamentals of project control including:

- estimating
- planning and scheduling
- cost engineering
- risk
- information management
- critical communication skills.

Managing risk as part of a project team (1 day, 2x 3.5 hours virtual)

Understanding risk management including:

- risk terminology
- risk management process
- the practical implementation of a risk management plan
- the tools and techniques commonly used in good practice project risk management.

ECITB short courses: project control, planning, scheduling and estimating

Estimating methodology and practice (3 days)

The principles and practices of estimating and how the role is linked to all activities company-wide. It includes:

- interpersonal skills for gathering the data required
- different theories and estimating techniques
- how to prepare an estimate
- practical exercises throughout.

Project document managers course (1 day)

The principles of project document management:

- ensuring transferability across a company and the supply chain
- understanding requirements
- setting up processes
- leading the document management function.

ECITB training course (non-regulated qualification)

Certificate in project controls (9 months. One day a month in classroom plus monthly assignments)

This comprehensive programme covers all aspects of estimating, planning, scheduling, monitoring and control.

Learners are taught through a blend of classroom workshops that include theory and practical exercises alongside assessments and work on a simulated project.

Modules include

- the fundamentals of project management and project initiation
- risk and change management
- estimating and scope definition
- procurement
- document control
- planning and scheduling
- work breakdown structures and cost control
- progress monitoring and forecasting
- jobsite management.

Learners research and review how estimating, planning and control are done in their own company and, in teams, complete a simulated industrial project that runs throughout the course. This brings the learning to life and reinforces how to apply the skills.

Approved provider courses

Introduction to planning (5 days)

A comprehensive introduction to planning, covering breakdown structures, planning and scheduling (based on TS PC02, 09)

Project planning and practice (3 days)

For those with some experience, this comprehensive training on the theory and practice provides aspiring planning and scheduling professionals with the confidence to deliver their role (based on TS PC03 09).

Foundations in stakeholder management (1 day)

This course gives the participant skills in the identification, analysis and planning of stakeholder management and includes industry-specific case studies and scenarios resulting in aspiring project managers and key project team members being able to build and manage the most critical relationships on projects (based on TS PC03 15).

Skills bootcamp training for project control (16 days)

Introductory level training that provides an understanding of the core elements of project controls for those with no or little formal training or experience of project controls. This bootcamp includes the ECITB-approved courses for planning and scheduling practice, introduction to estimating and introduction to commercial awareness.

Introduction to estimating (2 courses 0.5 or 1 day)

Introductory courses. A half-day course for those new to estimating with little or no existing formal training (based on TS PC02 06).

There is also a more in-depth one-day course for those with some experience – an introduction to cost estimating (based on TS PC03 08).

Principles of estimating (2 days, 3x 3.5 hour sessions)

This training course introduces the techniques and methodologies of estimating and the effective implementation of these in engineering and construction projects (based on TS PC03 08).

Introduction to commercial awareness and risk (0.5 day)

An introduction to commercial awareness and risk management within the project control environment. An introductory level course ideal for those with little or no formal training and for those looking to improve their knowledge (based on TS PC02 02).

Applied risk management (1 day, 2x 3 hours virtual)

Introduction to the principles of risk management and the effective implementation of these in engineering and construction projects. This is not a course about another risk tool or piece of software but rather more an inquiry into the deployed efficacy of such items (based on TS PC03 04).

ECITB training standards to develop own course

Project controls, estimating, planning, scheduling and cost control (TS PC 02 01-11 TS PC 03 01-17 TS PC 05 01-23)

A series of training standards each setting out the key learning required for different elements of project control including:

- estimating
- planning, scheduling
- requirements definition and setting the baseline
- cost control
- risk and assumption management
- statistical analysis including earned value analysis
- optimisation.

Independently-recognised certification with ECITB qualifications

Project controls technician

ECITB Level 3 Diploma in project controls practice and techniques (RQF).

Project controls professional Lead estimator Leader planner or scheduler Lead cost engineer

ECITB Level 6 Diploma in advanced project controls practice and techniques (RQF) with specialist pathways for:

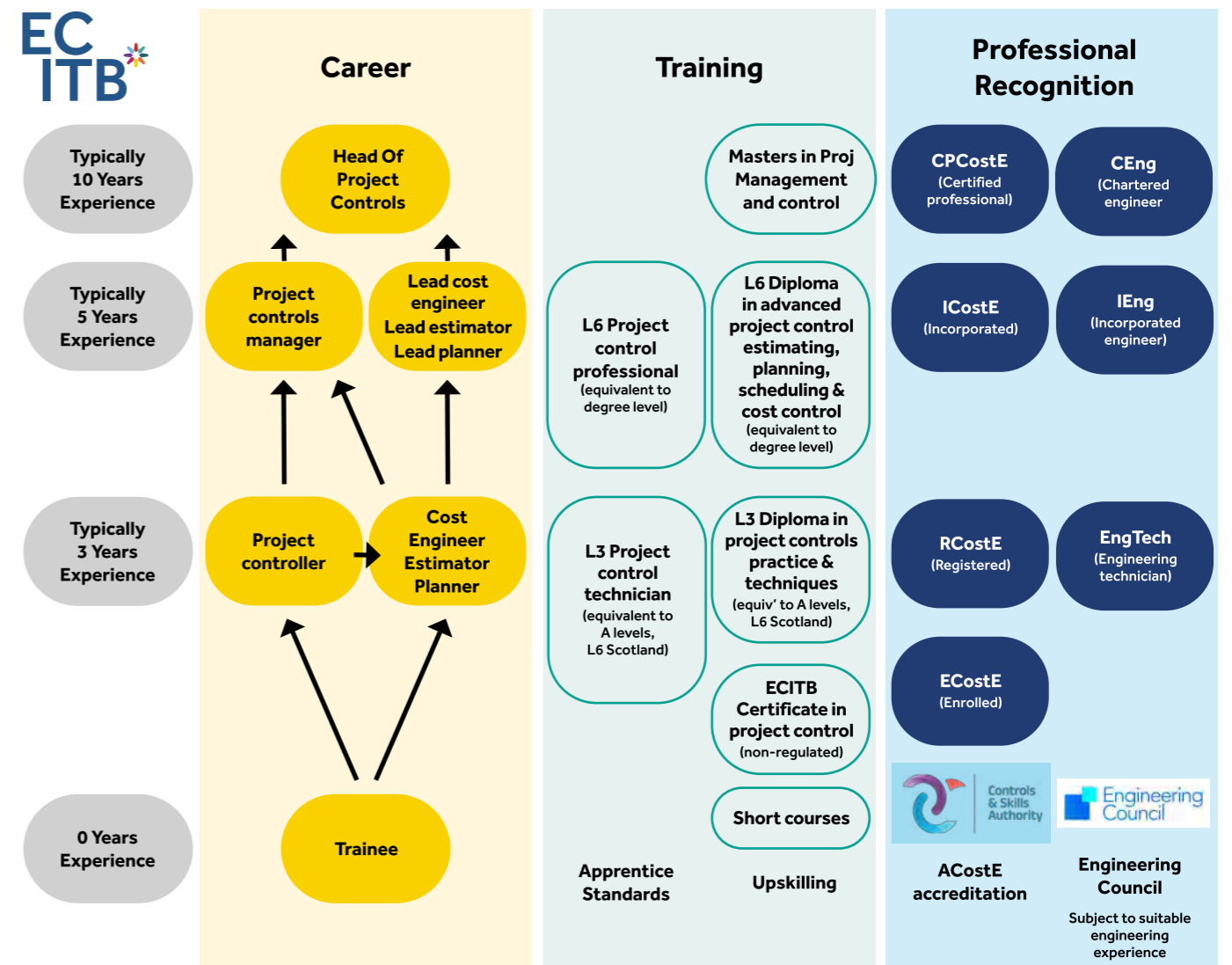
- estimators
- planning and scheduling
- cost control
- integrated project control.

Career progression, training, upskilling and professional recognition

Integrating this industry-led framework, training, qualifications and apprenticeship standards into your staff development will support you in nurturing talent and provides a clear pathway for career progression from new entrant through to competent professional and senior management.

For the specialist and experienced: there may be Masters courses available for those wishing to progress further. Plus, professional recognition and Chartership – a Chartered engineer (through ACostE, renamed to the Controls and Skills Authority).

If you wish to move into project management, there are options for project management training and chartership.



Project management skills

ECITB training course

Foundations of effective project collaboration (5 hours e-learning)

This eLearning training course is ideal for those looking to implement collaborative project delivery.

It highlights the benefits of collaboration, offers strategies to build trust and overcome resistance, and explores models and standards for effective implementation.

The course includes case studies, tips on using ECITB's [Project Collaboration Toolkit](#) and a review of collaborative contracts.

By the end, learners will understand how to implement collaboration to enhance project performance and achieve success.

The ACTIVE Cup

The [ACTIVE Cup project management competition](#) has been run for the engineering construction industry for more than 20 years. Delivered by Cranfield University on behalf of the ECITB and the European Construction Institute, this hugely popular competition welcomes delegates from companies representing a range of sectors.

The ACTIVE Cup typically runs three times each year, twice in England and once in Scotland, and can also be delivered virtually. Opportunities are advertised to employers in advance, with the ECITB paying the course fees and employers paying any travel and accommodation costs for their delegates. A company enters a team of up to five people.

During the ACTIVE Cup, each company team manages a complex project from concept to completion through a simulation activity. The competition enables teams to experience the whole project management process and tests a wide range of project management skills.

Project Management Mentoring Programme

The [Project Management Mentoring Programme](#) brings together mentors and mentees from cross sector/nuclear and oil & gas operators, tier-one contractors and the wider supply chain. Over an eight-month period, senior industry mentors are paired with developing project managers to share knowledge and experience.

Coordinated by the Project Management Steering Group (PMSG) and the ECITB, the programme is an excellent example of how industry cooperation works for the benefit of the sector as a whole. The PMSG comprises senior industry practitioners collaborating to provide experiential development and guidance within the engineering, design and procurement community in sectors such as power, water, nuclear, pharmaceutical and chemical, renewables, oil and gas, and food and drink.



Chartership scheme

The Association for Project Management (APM) [Chartered Project Professional \(ChPP\)](#) is a pan-sector standard for competence in project management. This ECITB-Registered Project Professional (RPP) programme supports professionals who wish to demonstrate to APM their capabilities as responsible leaders with the skills and abilities required to manage complex projects using appropriate tools, processes and techniques.

Successful candidates are added to the APM Register of Chartered Project Professionals. This demonstrates to users of project management services and the wider public that these professionals have met the standard for RPP.

The programme is delivered by several APM training providers, and the ECITB can grant fund individuals to attend those programmes through the normal grant funding process.

Graduate grant scheme

The ECITB has developed this scheme in response to demand from industry to support the development of engineering graduates' soft skills detailed in the Engineering Council Standard for Professional Engineering Competencies

The scheme includes the development of graduates in the areas of project capability, diversity and inclusion, communication, digital leadership and sustainable development which supports the journey towards engineering chartership.

Developing graduates in these areas should increase their ability to bring value within the company and, in particular, the effective delivery of projects and the creation of a welcoming, forward-thinking and innovative working environment.

Read more on [training grants on the ECITB website](#).

Glossary

Acronym Explanation

ACostE	Association of Cost Engineers, the professional association for project controls.
ATP	An ECITB-approved training provider.
CCNSG	Client Contractor National Safety Group. The Safety Passport scheme overseen by the CCNSG ensures a basic knowledge and understanding of health and safety for all site personnel. Representatives from major clients sit on the CCNSG along with contractors, training providers and trade unions to ensure it meets industry needs.
ChPP	Chartered Project Professional – the highest professional recognition level for project managers.
ECI	Engineering construction industry is the cornerstone of Britain’s energy and process industries operating across the oil and gas, nuclear and renewables sectors, as well as major process industries, such as chemicals, pharmaceuticals, food processing, water and waste treatment sectors.
FCAW	A welding technique – flux cored arc welding also known as dual shield welding.
L2 RQF	L2 RQF is an equivalent level to GCSEs (England and Wales) or level 5 in Scotland.
L3 RQF	Level 3 RQF is the equivalent of A Levels (England and Wales) or Scottish Highers (L6)
L6 RQF	Level 6 RQF is equivalent to degree level.
LXP	Learner experience platform (LXP) – an online digital learning platform hosted by the ECITB.
MAG	A welding technique – metal active gas welding.
MIG	A welding technique – metal inert gas welding.
MMA	A welding technique – manual metal arc welding.
MJI	Mechanical joint integrity.

Acronym Explanation

NAECI	The National Agreement for the Engineering Construction Industry sets the terms and conditions of employment for hourly-paid engineering construction workers on major and basic engineering construction projects, repair and maintenance sites and events / outages throughout the UK.
PCAS	ECITB’s provider course approval scheme. The name for the process by which training courses developed by ATPs are submitted to ECITB for approval.
PMSG	ECITB’s Project Management Steering Group comprises representatives from leading oil and gas, renewables and energy transition companies and related stakeholders located in the Northeast of Scotland. It aims to drive and positively influence the skills and competency development for project management and project leadership.
RQF	Qualifications regulated by Ofqual (England) and Qualification Wales have ‘RQF’ in their title and can be delivered at college or in the workplace.
SBT	Small bore tubing.
SCQF	Qualifications accredited by SQA Accreditation have ‘SCQF’ in their title (Scotland). These are delivered in the workplace only.
TIG	A welding technique – tungsten inert gas welding
TS	Training standards. Industry subject matter experts work together to identify the learning outcomes and content required from a training course.
UK SPEC	The Engineering Council’s specification which sets out the knowledge, skills and behaviour required for the different levels of professional recognition towards engineering chartership.

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