

Level 6 Project Controls Professional (PCP)

End Point Assessment (EPA) Specification



Why choose NSAN as your End Point Assessment Organisation (EPAO)?

NSAN is led by nuclear sector employers, who live and breathe the skills needed in the whole of the UK nuclear industry, with client engagement at the heart of everything we do.

As a trusted and respected organisation leading skills delivery, we harmonise internal staff expertise with standard-specific subject matter experts from across relevant industries to develop and deliver our EPA.

As an approved EPAO since 2017, we have the expertise to ensure that you will be fully supported with navigating the EPA process and can be assured your apprentices are being tested against the latest industry standards.

What's involved in the NSAN Project Controls Professional (PCP) EPA?

There are 2 assessment methods for the PCP EPA, which can be completed in any order.

Method 1:

A significant technical work-based assignment with report and presentation (15 minutes) and questioning (45 minutes).

Method 2:

A 90-minute professional discussion, underpinned by a portfolio of evidence.

How long does the PCP EPA take?

The apprentice will typically spend 42 months on-programme before completing their end-point assessment (EPA). The EPA period is expected to take no longer than 6 months.

What criteria does the EPA test the apprentice on and how will they be assessed?

The PCP standard is broken down into three main areas: knowledge, skills and behaviours (KSBs). The apprentice must achieve all KSBs across the Standard.

KEY TA - Technical Assignment
PD - Professional Discussion

The right-hand columns show which assessment method(s) will be used to ensure a synoptic approach to assessment:

Ref	Skills Competencies - the Project Controls Professional is expected to demonstrate their ability to:	EPA	
		TA	PD
S1.	Determine and implement (adapt/refine) the project controls procedures, methods and systems incorporating the relevant employer organisation management systems and procedures for example quality, data management and security, document and version control and record keeping.	✓	
S2.	Use project controls related software and IT systems for tasks such as: planning and scheduling, cost management, cost and risk analysis, estimating, progress and performance monitoring and reporting; identify and select the right software package for the task.		✓
S3.	Application of and the integration of, software and IT systems to enhance the level of data processing. For example, the use of technology including BIM.	✓	
S4.	Technical and engineering principles: interpret technical information from different sources, identify and know the correct data and elements to monitor and control to ensure the basis for any recommendations are credible; review and interpret technical project documents (including scopes of work and engineering drawings etc.).	✓	
S5.	Breakdown and coding structures: develop and implement coding structures as well as critiquing technical coding and breakdown structures to ensure they provide a basis for project control.	✓	
S6.	Lead the creation of comprehensive project control plans and reporting frameworks that identify the right contextual elements to track and the working assumptions to use, to generate meaningful controls data, ensuring that project controls deliverables are achievable and in line with project objectives.		✓
S7.	Lead the preparation of the strategy for the development and maintenance of the baseline for control taking into account scope definition and schedule, risk and cost (ensuring alignment between cost and schedule using the coding structures).		✓
S8.	Implement and enforce project control change procedures, judge against evidence and decide if a change is within or without scope, evaluate its impact commercially and make recommendations or implement the change in a manner that reflects its scale.		✓
S9.	Ensure that project control work is undertaken in accordance with HSE regulations and requirements including applying knowledge of HSE with awareness of how it impacts on project control schedules and costs and ensuring that the schedule and resourcing for a project meets the requirements of regulations (including CDM and safety) and can be delivered in accordance with the requirements i.e. ensure everything is in place and accounted for to ensure the project is delivered safely.		✓
S10.	Identify opportunities within their remit in projects to contribute to net carbon zero and environmental sustainability, and then take action to minimise the environmental impact of the project.	✓	
S11.	Undertake project control work in accordance with ethics, codes of conduct and duty of care.		✓
S12.	Data assurance: challenge, verify and validate data reports and data to ensure their integrity, timeliness and technical appropriateness.	✓	
S13.	Identify stakeholders across the project for example: those to work with when developing estimates, schedules, and plans and those to deliver controls information and recommendations to. Modify communication style and method to stakeholders, for example to gather information needed.		✓
S14.	Risk management and analysis: undertake quantitative and qualitative analysis of risks; and lead regular reviews of risks and related assumptions in the project risk register such as questioning their presence and relevance in order to underpin the management of the project risk register.		✓
S15.	Identify opportunities to use data analysis techniques to benefit project controls' delivery such as automating repetitive processes or improving data quality or extracting deeper insights and, validate the related data analysis to ensure correct interpretation against which effective decisions can be made.	✓	
S16.	Commercial matters: identification and application of subcontract/supplier deliverables to project control in order to provide the ability to monitor subcontractor/supplier performance and create, record and store project controls content in support of legal and contractual requirements.		✓
S17.	Create project controls content to inform tenders and evaluate invitations to tender received and bid responses.		✓
S18.	Prepare an estimating framework and make recommendations on classes of estimate to meet project needs at different project stages.		✓
S19.	Use an evidence-based approach to select and apply the most suitable estimating technique for the purpose and undertake estimate assurance, cost risk analysis, prepare related detailed basis of estimate narrative(s) that are evidenced and explanatory - setting out the risks, assumptions, probabilities, uncertainties and contingencies in order to provide a sound basis for decision making.		✓

Ref	Skills Competencies - the Project Controls Professional is expected to demonstrate their ability to:	EPA	
		TA	PD
S20.	Prepare planning and scheduling strategic framework(s) and make recommendations on different levels of plans and schedules to meet different project needs for example, milestones or detailed engineer schedules.		✓
S21.	Use an evidence-based approach to create credible, achievable control schedules, applying relevant assumptions and contingency and undertaking schedule assurance, schedule risk analysis and compile a related basis of schedule that is explanatory, setting out the risks, assumptions, probabilities, uncertainties, contingencies,		✓
S22.	Model the potential for improved efficiency against time, cost and quality, review and make recommendations.	✓	
S23.	Apply cost engineering practice to: recast the estimate and set the budget baseline and; select and apply proven cost control techniques to capture actual commitment and expenditure data with appropriate use of accruals; and integrate cost and schedule data to develop project cashflow projections and assessments of value of work done over time.		✓
S24.	Monitor and control project progress and performance by establishing a progress baseline and selecting and applying the right analysis techniques (for example, earned value analysis) for the size and complexity of the project.		✓
S25.	Identify variations from the progress baseline and assess their potential impact, explain the variations to the project, portfolio or programme manager.		✓
S26.	Select and use the most appropriate forecasting techniques, considering the technical and sector requirements and related assumptions and metrics used. Combine statistical analysis skills with engineering knowledge to create and model different scenarios to reforecast likely out-turns and create recommendations.	✓	
S27.	Communicate and justify own conclusions and recommendations for example for project recovery or to lead to improved project delivery by influencing and, when necessary, challenging key stakeholders to make informed decisions. Key stakeholders include the project manager, portfolio manager or programme manager when necessary.	✓	
S28.	Steer across project controls functions in accordance with organisational core values and specific guidelines; mentor and coach team members such as Project Controls Technicians to meet project control requirements.		✓
S29.	Apply continuous improvement approaches for example using emerging technologies and lessons learnt from previous projects.	✓	

Ref	Knowledge Competencies - the Project Controls Professional is expected to demonstrate an understanding of:	EPA	
		TA	PD
K1.	Organisational and business strategies: and how these impact on the strategy for project control and its execution.	✓	
K2.	Principles of project control including the principles of the project life cycle; and the role project control plays in the governance of a project.	✓	
K3.	Project control procedures and methods including employer organisation management systems that are critical to project control for example: quality control, configuration management, document and version control.	✓	
K4.	The benefits, attributes, limitations and use of project controls related software used for key tasks such as planning and scheduling, cost management, cost and risk analysis, estimating, progress and performance monitoring and reporting.		✓
K5.	Underlying engineering/manufacturing principles including the principles of reviewing and interpreting technical project documents such as scopes of work and engineering drawings.	✓	
K6.	Breakdown and coding structures: purpose, creation and use for accurate control. Their relevance in the creation of data models to help feed integrated and intelligent reporting and insights; familiarisation with standard coding structures and how they are used to underpin data flow systems as well as underpin the use and integration of new technology into project controls delivery including BIM.	✓	
K7.	Project Control Plans and reporting frameworks - their purpose and content and how they underpin the generation and reporting of meaningful controls data.		✓
K8.	Strategic principles of creating and managing the project controls baseline (including scope definition, schedule, risk and cost), throughout the project life cycle.		✓
K9.	HSE knowledge relative to the industry and project controls, including related national and industrial health, safety and environmental standards and legislation, the obligations of safety in design and CDM (construction, design and management) regulations.		✓
K10.	The environmental impact of a project's activities, how it could contribute to the drive towards net carbon zero and how to minimise negative impacts on environmental sustainability, within the context of the role.	✓	
K11.	Principles of ethical conduct, diversity and inclusion, including codes of conduct and duty of care, corporate social responsibility, equality, diversity and inclusivity in the workplace.		✓
K12.	Data assurance: approaches to gathering data; ensuring the validity and integrity of data (consistent, quality, technical controls information); and how to review the assumptions used to establish the data, as well as the inherent risks associated with these assumptions.	✓	
K13.	Analysis techniques: different approaches to data analysis, the benefits of each, what the analytics are indicating and why and how this may impact on decisions and recommendations.	✓	
K14.	Approaches to communicating with different stakeholders in order to influence key decision-makers and colleagues.	✓	

Ref	Knowledge Competencies - the Project Controls Professional is expected to demonstrate an understanding of:	EPA	
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K15.	The principles of risk management and the risk process; different risk analysis techniques; the methodologies and considerations for mitigating risk.		✓
K16.	Approaches to integrating cost and planning with a consistent basis for project risks and opportunities including cost and schedule risk analysis and associated contingency calculations.		✓
K17.	Project control change management and control: the principles of project control change procedures; how these procedures may vary in owner/contractor organisations, and when and how to use and apply them including project closeout procedure(s).		✓
K18.	Commercial matters: different types of contracts and their legal principles; contractual requirements and how they impact on project controls and the auditable recording, sharing, and storing of information.		✓
K19.	Key principles of invitations to tender received and bid responses.		✓
K20.	Estimating techniques and application (cost, time and resources): different methodologies for estimating including approaches to various estimating outcomes, pros and cons and degree of certainty/uncertainty for each; approaches to creating an estimating framework and basis of estimate.		✓
K21.	Assurance techniques including benchmarking, comparisons to historical data, published data and other projects and how to apply them for example to assure estimated schedules, cost estimates and cost forecasting.	✓	
K22.	Planning and scheduling practice: different planning and scheduling techniques; how to create schedules to all levels; understanding, maintaining and establishing the impacts of schedule constraints; and the principles of resource loading.		✓
K23.	Modelling techniques (what-if scenarios and impact analysis) used to optimise the potential for improved efficiency against time, cost and quality and for improved project outcomes.	✓	
K24.	Cost engineering practice: approaches to the creation of budget baselines and estimate recasting; cost control hierarchy; budget transfers and other budget variances.		✓
K25.	Financial controls as relevant to project control, including taxation, cashflow, accruals, payment terms. The monitoring and reporting of supplier and contractor commitments and expenditures.		✓
K26.	Techniques for monitoring and measuring progress including rules of credit and performance including earned value analysis, their pros and cons and what key points to share with different stakeholders.		✓
K27.	Progress and performance measurement: how to establish a progress baseline and identify trends/variances using different analysis techniques.		✓
K28.	Approaches to using statistical analysis, productivity and performance analysis.	✓	
K29.	Forecasting techniques used to forecast cost and schedule out-turns, and the use of predictive statistical analysis techniques and engineering knowledge to generate accurate forecasts of work to complete in sufficient time for action to be taken.	✓	
K30.	Leadership: strategies to, lead, coach, motivate and develop members of the team; different leadership styles.		✓
K31.	Continuous improvement including how to: capture good practice and lessons learned from experience; keep up to date with new technology and ways of working and drive forwards continuous improvement.	✓	

Ref	Behaviours - the Project Controls Professional is expected to demonstrate:	EPA	
		TA	PD
B1.	Safety: Promotes and adopts a safety culture within the organisation, demonstrating a commitment to personal safety and the safety and wellbeing of others.		✓
B2.1.	Demonstrating resilience and taking account of the need to progress environmental outcomes.	✓	
B2.2.	Leadership: leads by example, acting responsibly, and ethically, taking account of the need to progress ethical, social and economic outcomes.		✓
B3.	Commercially astute: Recognising when to leverage the contract commercial terms to maximise profitability for example how the commercial agreements generate cost and revenue streams for the organisation and how this links to generation of profit.		✓
B4.	Pre-emptive: Foresees events and issues that might impact project performance.	✓	
B5.	Integrity: Challenges areas of concern and acts with assertiveness and confidence.	✓	
B6.	Impartial: Responds to feedback and challenging questions professionally and objectively by reference to evidence.	✓	
B7.	Accountable: Takes responsibility for the accuracy and integrity of project controls reporting and recommendations.	✓	
B8.	Collaboration interacts within a wide, multi-disciplinary project team, building co-operative relationships. Encourages team effort and promotes an interdependent culture.		✓
B9.	Innovation: Learns from innovative solutions and seeks out new ideas to deliver improvements.	✓	
B10.	Personal & professional development: Takes responsibility for personal learning and professional development. Demonstrates commitment to learning and improvement of themselves, providing and receiving feedback and with a commitment to professional standards.		✓
B11.	Adaptable: able to adapt to evolving circumstances.		✓

What does the apprentice need to do to prepare for the PCP EPA?

During the on-programme phase of the apprenticeship, the apprentice will need to gather a portfolio of evidence and also consider the basis of a technical work-based assignment they will complete as part of their EPA.

Before taking the EPA, the apprentice will also need to meet the requirements of the Gateway.

What are the requirements of the PCP EPA Gateway?

Prior to the EPA the employer and provider will confirm that the apprentice has satisfactorily met the on-programme training requirements and has achieved mandatory gateway requirements for EPA.

The mandatory requirements are:

- a declaration of readiness, signed by the apprentice, employer and training provider
- a 500-word 'basis of assignment' for the technical work-based assignment
- portfolio of evidence

If the apprentice was aged under 19 on the start date of their apprenticeship, they will **also** need to provide:

- evidence of achievement of Level 2 (or equivalent) maths and English

How is the PCP EPA graded?

Each of the two assessment methods of the EPA will be graded as Pass, Distinction or Fail. The final overall grade will be determined by collective performance in the two assessment methods, which are equally weighted. The grid below shows how the overall grade will be calculated.

Results achieved for each of the methods	Overall grade
Distinction for both assessments	Distinction
One Distinction and one Pass	Merit
Pass for both assessments	Pass
Fail in either method	Fail

How much does the PCP EPA cost?

£3,400. This is a fixed cost, which covers the full EPA process including planning, guidance, development, delivery, assessor expenses and certification.

Fees are payable at three points of the EPA.

- 10% non-refundable deposit at contract agreement
- 70% at gateway
- 20% on completion of the first attempt at the final method of assessment

Progression route - where can it lead?

Apprentices who achieve the PCP EPA will be eligible to apply for membership of the Association of Cost Engineers (ACostE) as an Associate Member and will also be eligible to apply for registration as an Engineering Technician (EngTech), subject to having suitable engineering experience and undergoing a professional review process.