



End-point assessment plan for Construction Quantity Surveyor (Degree) apprenticeship standard

Apprenticeship standard number	Level of this end point assessment (EPA)	Integrated
ST0045	6	No

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Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Construction Quantity Surveyor (Degree) apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to Construction Quantity Surveyor apprentices, their employers and training providers.

Full time apprentices will typically spend 42 months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices will spend a minimum of 12 months on-programme.

The EPA period should only start, and the EPA be arranged, once the employer is satisfied that the apprentice is deemed to be consistently working at or above the level set out in the occupational standard, all of the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPAO.

All pre-requisites for EPA assessment methods must also be complete and available for the assessor, as necessary.

As a gateway requirement and prior to taking the EPA, apprentices must complete all approved qualifications mandated in the Construction Quantity Surveyor (Degree) standard:

A BSc (Hons) Quantity Surveying or equivalent Quantity Surveying Level 6 Diploma that meets the knowledge requirements of the standard and is approved by the industry's recognised professional bodies meeting the educational requirements for the professional bodies' full membership or chartered status.

Site Safety Plus – Site Managers' Safety Training Scheme

Site Safety Plus – Site Environmental Awareness Training Scheme

For level 3 apprenticeships and above, apprentices without English and mathematics at level 2 must achieve level 2 prior to taking their EPA.

The EPA must be completed within an EPA period lasting typically 6 month(s), beginning when the apprentice has passed the EPA gateway.

The EPA consists of 3 discrete assessment methods.

The individual assessment methods will have the following grades:

Assessment method 1: Online test

- Pass
- Fail

Assessment method 2: Project

- Pass
- Fail
- Distinction

Assessment method 3: Professional discussion

- Pass
- Fail
- Distinction

Performance in the EPA will determine the overall apprenticeship standard and grade of:

- Pass
- Fail
- Distinction

EPA summary table

On-programme (typically 42 months)	Training to develop the occupation standard's knowledge, skills and behaviours.
End-point Assessment Gateway	<ul style="list-style-type: none"> • Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard. • English and mathematics Level 2 • Apprentices must complete the following approved qualifications mandated in the standard: • A BSc (Hons) Quantity Surveying or equivalent Quantity Surveying Level 6 Diploma that meets the knowledge requirements of the standard and is approved by the industry's recognised professional bodies meeting the educational requirements for the professional bodies' full membership or chartered status • Site Safety Plus – Site Managers' Safety Training Scheme • Site Safety Plus – Site Environmental Awareness Training Scheme. <ul style="list-style-type: none"> ○ Apprentices must also complete: • An online or paper-based portfolio of evidence which demonstrates how the apprentice has met each of the knowledge, skills and behaviour statements in the standard. The portfolio can be used to help inform the employer that the apprentice is fully prepared to commence the end-point assessment process.
End Point Assessment (which would typically take 6 months)	<p>Assessment Method 1: Online test</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Pass • Fail <p>Assessment Method 2: Project</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Pass • Fail • Distinction <p>Assessment Method 3: Professional discussion</p> <p>With the following grades:</p> <ul style="list-style-type: none"> • Pass • Fail • Distinction

Length of end-point assessment period:

The EPA must be completed within an EPA period lasting typically 6 month(s), beginning when the apprentice has passed the EPA gateway.

The supporting materials defined on Page 3 are required in order to pass through the gateway.

If an EPA assessment method is failed, it should be resat/retaken within the EPA period and in-line with the requirements set out in this assessment plan.

Order of assessment methods

The assessment methods must be delivered in the following order:

- Online Test – The Online Test underpins the knowledge required to work as a Construction Quantity Surveyor so it needs to be completed and passed as the first element of the end-point assessment process.
 - Ideally, the Online Test should be taken and achieved in Month 1 following the gateway.
- Project – Apprentices must pass the project before taking the professional discussion.
 - The Project's subject, title and scope is agreed at the gateway.
 - The Project is then submitted following achievement of the Online Test by the end of Month 3 following the gateway. The Project grade should be communicated to the apprentice no later than 2 weeks following submission and assessment.
- Professional Discussion –
 - Ideally, the Professional Discussion should be taken and achieved by the end of Month 4 following the gateway.
 - Months 5 and 6 will allow for any re-sits or re-takes that may be required; these must be taken during the typical EPA period.

Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition to the employer's confirmation that the apprentice is working at or above the level in the occupational standard, the apprentice must have completed the following gateway requirements prior to beginning EPA:

English and mathematics at level 2.

For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

An online or paper-based portfolio of evidence which demonstrates how the apprentice has met each of the knowledge, skills and behaviour statements in the standard.

- There must be at least one piece of evidence relating to each knowledge, skill and behaviour in the standard.
- One piece of evidence can be referenced against more than one knowledge, skill or behavioural requirement.
- The portfolio will typically contain 40 pieces of evidence however a qualitative rather than quantitative approach is recommended.
- The portfolio should contain written accounts of real work activities and experience and be referenced against the knowledge, skills and behaviours, supported by appropriate evidence, including photographic evidence and work products, work instructions, safety documentation, company policies and procedures as appropriate to the activities. Progress review documentation should also be included.
- The portfolio must be verified by the apprentice's employer as being a true reflection of the apprentice's experience.
- The apprentice's Manager/Mentor will typically support the development of the portfolio in accordance with company policy and procedures.
- The portfolio produced must be the apprentice's work only; employer support should not extend to any direct contributions to the collation or production of the portfolio. Reflective accounts and self-evaluations should not be included as evidence.
- The portfolio is not assessed directly but informs the Summary of Experience which underpins the professional discussion.

Apprentices must complete the following approved qualifications as mandated in the standard:

- A BSc (Hons) Quantity Surveying or equivalent Quantity Surveying Level 6 Diploma that meets the knowledge requirements of the standard and is approved by the industry's recognised professional bodies meeting the educational requirements for the professional bodies' full membership or chartered status
- Site Safety Plus – Site Managers' Safety Training Scheme
- Site Safety Plus – Site Environmental Awareness Training Scheme

For Online test:

- no specific requirements

For Project:

- The Project's subject, title and scope will be agreed between the apprentice, the employer and the EPAO at the gateway

For Professional discussion, the apprentice will be required to submit:

- Apprentices will be required to provide a Summary of Experience in advance of the professional discussion. The Summary of Experience will typically be a 3600 word (with a 10% tolerance either way) written report. The report should be presented with an introduction explaining the purpose of the summary, then with a heading and a summary for each of the knowledge, skills and behaviours that will be assessed using this method, showing how each of these have been achieved. The Summary of Experience will be based upon the apprentice's portfolio of evidence. The EPAO should ensure that the assessor has received the Summary of Experience at least 2 weeks prior to the agreed professional discussion date. The summary of experience will then be reviewed by an independent assessor prior to the professional discussion. Apprentices will also be able to use their Summary of Experience during the Professional Discussion to underpin and explain how they met the KSB requirements during their apprenticeship. The Summary of Experience will not be assessed directly but will underpin the Professional Discussion.

Assessment methods

Assessment Method 1: Online test (This Method has 1 component.)

Method 1 Component 1: Online test

Overview

The rationale for this assessment method is:

The Online Test will assess and underpin the knowledge required to work as a Construction Quantity Surveyor.

The Online Test will cover the knowledge defined in the Mapping Section on Page 20 that will be assessed using this method. The online test will consist of 20 multiple choice questions. Each of the

questions will be followed by 4 possible answers. Questions will also include scenario based problems in the same multiple choice format. The EPAO will develop a question bank large enough to mitigate predictability from which the 20 questions will be randomly selected.

Test Format

The test will be:

- Computer based

It will consist of 20 questions. These questions will consist of:

- Questions will be multiple choice and will include a mix of knowledge and scenario based questions. Of the 20 questions, 8 will relate to Health, Safety and Welfare regulatory obligations in construction [K2], 6 to conflict avoidance and resolution [K3] and 6 to construction legislation and various forms of contract [K5]. 14 of the 20 questions (6 relating to Health, Safety and Welfare regulatory obligations in construction, 4 to conflict avoidance and resolution and 4 to construction legislation and various forms of contract) will be scenario based.

Test administration

Apprentices must have 40 minutes to complete the test.

The test will be closed book which means that the apprentice cannot refer to reference books or materials.

Apprentices must take the test in a suitably controlled environment that is a quiet space, free of distractions and influence, in the presence of an invigilator. The invigilator may be an independent assessor or another external person employed by the EPAO or specialised (proctor) software, if the test can be taken on-line. The EPAO is required to have an invigilation policy that will set out how the test/examination is to be carried out. This will include specifying the most appropriate ratio of apprentices to invigilators to best take into account the setting and security required in administering the test/examination.

The EPAO is responsible for ensuring the security of testing they administer to ensure the test remains valid and reliable (this includes any arrangements made using online tools). The EPAO is responsible for verifying the validity of the identity of the person taking the test.

The EPAO must verify the suitability of the venue for taking the test and the identity of the person taking the test.

Marking

Tests must be marked by independent assessors or markers employed by the EPAO following a marking guide produced by the EPAO. Alternatively, marking by computer is permissible where questions types allow this, to improve marking reliability.

For each question, there will be four answers available. There will be 1 fully correct answer which accurately reflects industry practice and legal and regulatory requirements and is worth one point.

Any wholly incorrect or missing answers must be assigned 0 marks.

Question and resources development

Questions must be written by EPAOs and must be relevant to the occupation and employer settings. EPAOs must develop 'question banks' of sufficient size to prevent predictability and review them

regularly (and at least once a year) to ensure they, and the questions they contain, are fit for purpose. Predictability of questions may also be reduced by the test being undertaken under controlled conditions either at an assessment centre operated by the EPAO or at the apprentice's place of work with former approval of the EPAO. This approval must include arrangements for independent invigilation. These arrangements must be in place before the test takes place. The EPAO will develop a question bank large enough to mitigate predictability from which 20 questions will be randomly selected.

Required supporting material

As a minimum EPAOs will produce the following material to support this method:

- A test specification
- Sample tests and mark schemes
- Live tests and mark schemes
- Analysis reports which show areas of weakness for completed tests/exams and an invigilation policy.

Assessment Method 2: Project (This Method has 1 component.)

Method 2 Component 1: Project

Overview

The project is compiled after the apprentice has gone through the Gateway process.

The work-based project should be designed to ensure that the apprentice's work meets the needs of the business, is relevant to their role and allows the relevant KSBs to be demonstrated for the EPA. Therefore the project's subject, title and scope will be agreed between the employer and the EPAO at the gateway. The employer will ensure it has a real business application and the EPAO will ensure it meets the requirements of the EPA (including suitable coverage of the KSBs assigned to this assessment method). The EPAO should sign-off the project subject, title and scope to confirm its suitability in agreement with the apprentice and employer at the gateway.

The project scope must include:

- A 500 word synopsis, completed by the apprentice, including details of the apprentice's role and the relevance of the project to the KSB's assigned to the assessment method
- The timeline for the project
- The date of the proposed submission of the written project

The rationale for this assessment method is:

The Project will have a factual business application. The main duties and tasks associated with the Construction Quantity Surveyor occupation are to manage commercial aspects of construction projects. Therefore detailing a work-based project is relevant to the Construction Quantity Surveyor working environment. The project should draw on the work the apprentice is doing, the standard of this work and how they are doing it including how they are approaching the work, dealing with any issues arising and applying any lessons learnt. Apprentices will undertake the project to cover the skills, knowledge and behaviour defined in the Mapping Section on Page 20 that will be assessed using this method.

Delivery

Apprentices will conduct a project in the form of a report.

The project is compiled after the apprentice has gone through the Gateway process. The apprentice will conduct their project and submit it to the EPAO after a maximum of 3 month(s) of the EPA start date. The project will have a typical duration of 3 months.

The employer will ensure the apprentice has sufficient time and the necessary resources, within this period, to plan and undertake the project.

Whilst completing the project, the apprentice should be subject to the supervision arrangements outlined below:

- Normal work based supervisor or line manager

The project must be in the form of an electronic document

The project may be based on any of the following:

- An idea/opportunity; see some sample titles below:
 - Construction Cost Analyses
 - Contractual Obligations and Decisions
 - Measurement - Documentation and Practicalities
 - Risk and Value - A strategic overview
 - Construction Technology - Its place in cost efficiency

As a minimum all projects must include:

The project should be completed within three months of the agreement of the project by the EPAO. The project must cover the knowledge, skills and behaviours set out in Mapping Section on Page 20 and must be verified by the apprentice's employer that the project is a true reflection of the apprentice's involvement and the report is their own work.

The project will be presented as a 3000 word (with a 10% tolerance either way) written report and must include relevant and clearly presented methodology including detail on finance/accounting, financial control, contract practice, construction technology, procurement and tendering, measurement and costing, risk management, commercial management, planning and client care. The project must also include the following, as a minimum:

- Background
- Project brief and objectives detailing targets
- Project research
- Project plan
- Implementation – how targets were achieved
- Risk analysis
- The role the apprentice played, the contribution made and the technical skills used
- Project Outcomes
- Challenges faced/lessons learnt by the apprentice
- The apprentice must provide supporting evidence relating to the project in an appendix. Evidence could include spreadsheets, financial reports, data reports, build specifications, quality/compliance records or fault reports, pictures or links to video clips. This list is not definitive and other relevant sources are permissible. The appendix must include a mapping of the evidence to the relevant KSBs for this assessment method. It is expected that some evidence may cover multiple KSBs. The annex must also include a statement from the employer authenticating the apprentice's evidence and achievements.

The project will be assessed by an independent assessor. The assessor will give a Fail, Pass or Distinction grade in accordance with the grading criteria in the Grading Section on Page 12 to give the apprentice's project grade. The assessor will award a Pass grade if the apprentice meets all the pass criteria and a Distinction grade if the apprentice meets all the pass criteria and all the distinction criteria. The project grade must be advised to the apprentice within two weeks of submission of the project for assessment. This date must be at least two weeks before the date of the professional discussion. Apprentices must pass the project before taking the professional discussion. See the Re-takes/Re-sits Section on Page 18 for information regarding retakes/re-sits.

The project will have a word count of 3000. A tolerance on the word count of plus or minus 10% is allowed.

Appendices, references, diagrams etc. will not be included in this total.

The project must map, in an appendix, how it evidences the relevant KSBs for this assessment method.

Marking

The independent assessor will review and mark the project in a timely manner, as determined by the EPAO, and without extending the EPA unnecessarily. Similarly all quality control processes will also be conducted in a timely manner, as determined by the EPAO.

Required supporting material

EPAOs will produce the following material to support this assessment method:

Guidance document for apprentices describing the project requirements / parameters

Marking sheet to record evidence and gaps

Mark scheme document to mark the Project Fail, Pass or Distinction using the grading descriptors in the Grading Table

Assessment Method 3: Professional discussion (This Method has 1 component.)

Method 3 Component 1: Professional discussion

Overview

This assessment will take the form of a professional discussion, which must be appropriately structured to draw out the best of the apprentice's competence and excellence and cover the KSBs assigned to this assessment method. It will involve the questions that will focus on coverage of prior learning or activities.

The professional discussion can take place in any of the following:

- Employer's premises
- A suitable venue selected by the EPAO (e.g. a training provider's premises)

The rationale for this assessment method is:

Apprentices will undertake a Professional Discussion to cover the skills, knowledge and behaviours defined in the Mapping Section on Page 20 that will be assessed using this method.

Prior to the professional discussion, the apprentice will have submitted a summary of experience based upon their portfolio of evidence. The summary of experience will be reviewed by an assessor who will formulate the questions for the professional discussion. The questions must be consistent in terms of demand and level for all apprentices. Apprentices will also be able to use their summary of experience

during the professional discussion to underpin and explain how they met the KSB requirements being assessed using this method, during their apprenticeship.

The professional discussion will be in the form of an interview with one assessor and will take one hour + 10% in order to allow for an answer that has already begun to be completed. The professional discussion can be conducted face to face or via an online platform. The online platform must include a video link so that apprentices can see the assessor and the assessor can see the apprentice to ensure the apprentice is not being aided in some way. The identity of the apprentice must be checked and confirmed. The location or platform will be sourced by the EPAO. The professional discussion will explore with the apprentice what has been produced in the summary of experience. The assessor will:

- Clarify the evidence in the summary of experience
- Confirm and validate the behaviours and how they have been demonstrated
- Explore aspects of the work more fully including how it was carried out and the underpinning knowledge
- Explore the practical application of knowledge, skills and behaviours
- Give a Fail, Pass or Distinction grade in accordance with the grading criteria in the Grading Section on Page 12 to give the apprentice's professional discussion grade. The assessor will award a Pass grade if the apprentice meets all the pass criteria and a Distinction grade if the apprentice meets all the pass criteria and all the distinction criteria.

Delivery

An independent assessor will conduct and assess the professional discussion.

The professional discussion must last for 60 minutes. The independent assessor has the discretion to increase the time of the professional discussion by up to 10% to allow the apprentice to complete their last answer. Further time may be granted for apprentices with appropriate needs, for example where signing services are required.

During this method, independent assessors must use the questions that have been developed by the EPAO for the Professional Discussion. Assessors can also generate and record their own questions, to rephrase questions when further clarification is required by the apprentice.

The professional discussion will be conducted as set out here:

Video conferencing can be used to conduct the professional discussion, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the professional discussion.

The independent assessor will make all grading decisions.

Venue

The professional discussion should take place in a quiet room, free from distractions and influence.

Other relevant information

A structured specification and question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and review it regularly (and at least once a year) to ensure that it, and its content, are fit for purpose. The specifications, including questions relating to the underpinning knowledge, skills and behaviours, must be varied yet allow assessment of the relevant KSBs.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of carrying out a professional discussion and reaching a consistent judgement.

The professional discussion may be observed by people who will play the following role(s):

EPAO staff undertaking IQA duties or staff undertaking EQA duties on behalf of the relevant external quality assurance organisation.

EPAOs will produce the following material to support this assessment method:

Example template for summary of experience shown in Appendix A on Page 22

Guidance document for apprentices describing the professional discussion requirements / parameters

Marking sheet to record evidence and gaps

Mark scheme document to mark the professional discussion Fail, Pass or Distinction using the grading descriptors in the Grading Table below.

Weighting of assessment methods

Independent assessors will grade apprentices as Fail, Pass or Distinction using all the information gained in the EPA process described above and with reference to the grading criteria defined in Pages 12 to 15. The overall apprenticeship grade will be based on the outcomes of the three EPA components: the online test, the project and the professional discussion as detailed on Page 16.

A Pass represents achievement of at least the minimum standard for the industry and for which apprentices have achieved all the knowledge and skills required within the standard and demonstrated a consistent level of behaviours.

Grading

Assessment method 1: Online test

KSBs	Fail	Pass
K2 K3 K5	Apprentice achieves a score of <15 for the online test.	Apprentice achieves a score of ≥ 15 to ≤ 20 for the online test.

Assessment method 2: Project

KSBs	Fail	Pass	Distinction
K1 K6 K9 K10	Does not meet the pass criteria	Meets all the pass criteria defined below: Applies the Code of Conduct and conduct regulations, ethics and professional standards of the relevant PQSI when	Meets all the pass criteria plus all the distinction criteria defined below: Critically evaluates actions and methods chosen and explains how these were determined by

<p>S4 S5 S7 S8 S9 S10</p> <p>B1 B2</p>		<p>determining actions and methods during the project.(B1)</p> <p>Demonstrates how, and explains why, expectations are managed during the project. Shows how lessons learned and improvements were identified during or as a result of the project. (B2)</p> <p>Demonstrates knowledge and understanding of accounting concepts and the format and preparation of accounts, including profit and loss statements, cash flow statements, balance sheets and business plans within the construction project. (K1)</p> <p>Explains how costs are controlled and reported on during the construction project using cost information systems highlighting the legal constraints and how legal principles are applied to any problems which arise from the construction process. (K9)</p> <p>Advises on the legal aspects of the project and applies principles of law in the construction context. Evaluates the most suitable form of contract used within the context of commonly used standard forms of contract. Explains how this ensures fairness and the efficient use of resources in the project. (S4)</p> <p>Advises on the most suitable construction solutions used on the project showing knowledge and understanding of the construction process and of the materials and technology that comprise best practice. Explains how solutions and</p>	<p>the Code of Conduct and conduct regulations, ethics and professional standards of the relevant PQSI. (B1)</p> <p>Critically evaluates actions, methods, results and lessons learnt and evaluates the effect of decisions that were made and their short and long term implications. (B2)</p> <p>Demonstrates a systematic knowledge and understanding of the concepts and principles of cost modelling, cost information and management systems, whole life costing and supply chain management. Shows how these concepts and principles are used to advise on the choice and use of construction methods, measure completed works, report and control costs, identify risks and profitability. (K9, K6, S5, S7, S8, S9, S10)</p> <p>Demonstrates systematic knowledge and understanding of the contractual environment within which design and construction takes place, and the contractual arrangements under which construction projects are carried out. Applies legal principles to problems that arise and recognises obligations in respect to the contract and contract law. (S4)</p>
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		<p>processes used maximise value for the client and enhance the cost effectiveness of the project within the budget constraints.(K6, S5)</p> <p>Advises on appropriate methods of measurement of completed works and subsequently issues documentation required for payment to specialist contractors and the application for payment from the client. (S7)</p> <p>Advises the construction team and the client on strategies to control predicted expenditure in line with the budget. (S8)</p> <p>Understands the nature of risk and its effect on the management of a project. Carries out risk assessments and implements strategies to mitigate risk in the project. (K10, S9)</p> <p>Monitors, reports and advises the construction team on the cash flow and profitability of the project. Evaluates and advises on financial implications of decisions made during the construction phase of the project. (S10)</p>	
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Assessment method 3: Professional discussion

KSBs	Fail	Pass	Distinction
K4 K7 K8 K11 K12	Does not meet the pass criteria	<p>Meets all the pass criteria defined below:</p> <p>Evaluates different techniques for communication, negotiation, arbitration and adjudication in the surveying environment and the impact</p>	<p>Meets all the pass criteria plus all the distinction criteria defined below:</p> <p>Evaluates the most suitable means of dispute avoidance associated with the project and dispute resolution procedures</p>

<p>S1 S2 S3 S6 S11</p> <p>B3 B4</p>		<p>these have had on conflict avoidance and dispute resolution between project stakeholders (B3, S1)</p> <p>Identifies learning experiences that have helped to develop critical thinking skills. Identifies own development needs by analysing experience and any resulting shortcomings and takes action to meet development needs. (B4)</p> <p>Identifies risks to health, safety and welfare on the project in line with current legislation. Understands and recognises how hazards associated with the works are identified and managed and how safe systems of work applied. (S2)</p> <p>Evaluates the environmental impact of construction activities and proposes how to minimise negative impacts during all stages of the project justifying this through cost/benefit analysis. (K4, S3)</p> <p>Understands the principles and evaluates the impact during the construction phase of:</p> <ul style="list-style-type: none"> • Accurate measurement and costing • Detailed financial and legal management <p>on project completion to time and budget. (K8, K11)</p> <p>Understands the main types of procurement and the related tendering and negotiating processes required to select specialist contractors. Evaluates these procurement routes and advises on their appropriateness. Demonstrates management of, and reports on, the tendering</p>	<p>appropriate to different circumstances, demonstrating an appreciation of when to seek further specialist advice. Advises on third-party resolution processes and the associated management of these processes. (B3, S1)</p> <p>Recognises and details the need to consider health, safety and welfare issues at all stages of construction projects from inception through to the management of the completed building / asset. (S2)</p> <p>Evaluates long term environmental / cost impacts:</p> <ul style="list-style-type: none"> • Advises on the financial impact of sustainability on the project • Explains the measures undertaken by governments and international bodies to encourage the reduction of the environmental impact of construction and development. • Interprets environmental reports and gives reasoned advice on the financial impact and programme implications on the project • Analyses life cycle cost which takes account of sustainability issues on a construction project (K4, S3, K12, S11) <p>Critically evaluates systems that promote efficient use of resources in the supply chain. Applies whole life costing techniques to evaluate alternative procurement proposals during negotiation and selection. (K7, S6)</p> <p>Identifies and defines complex problems on a construction</p>
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		<p>and negotiation processes to select specialist contractors on the project. (K7, S6)</p> <p>Describes the principles of programming and scheduling on the project. Assesses, interprets and reports on progress and assists in the control of programmes during the construction phase. (K12, S11)</p>	<p>project. Identifies investigative strategies used to undertake an analysis and evaluate the outcomes on measurement, costing, financial and legal management aspects on the project. (K8, K11)</p>
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Overall EPA grading

To achieve a pass or higher grade the apprentice must achieve a minimum of a pass in each of the end point assessment components. Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 Online test	Assessment method 2 Project	Assessment method 3 Professional discussion	Overall grading
Fail	Any grade	Any grade	Fail
Any grade	Fail	Any grade	Fail
Any grade	Any grade	Fail	Fail
Pass	Pass	Pass	Pass
Pass	Pass	Distinction	Pass
Pass	Distinction	Pass	Pass
Pass	Distinction	Distinction	Distinction

Roles and responsibilities

Role	Responsibility
Apprentice	<ul style="list-style-type: none"> Participate in development opportunities to improve their knowledge skills and behaviours as outlined in the standard Meet all gateway requirements when advised by the employer Understand the purpose and importance of EPA and undertake EPA
Employer	<ul style="list-style-type: none"> Support the apprentice to achieve the KSBs outlined in the standard to their best ability

	<ul style="list-style-type: none"> • Determine when the apprentice is working at or above the level outlined in the standard and is ready for EPA • Select the EPAO • Confirm all EPA gateway requirements have been met • Confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner • Ensure apprentices are well prepared for the EPA
EPAO	<p>As a minimum EPAOs should:</p> <p>The EPAO will internally provide quality assurance by:</p> <ul style="list-style-type: none"> • Provide assessor training at least once a year • Arrange new assessors to undertake mock assessments • Sample assessment decisions. A minimum of 20% of assessment decisions to be sampled. Sampling should be of all elements of the entire process of assessment including submissions and assessor feedback and should be used to review consistency of feedback and approach by assessors • Require assessors to attend at least one standardisation event per year and deliver standardisation events • Undertake moderation of assessment decisions. The method used must ensure consistency of grading between assessors. Moderation should review all marks of all assessors to enable consideration of the overall standard and to enable comparison of the marking standards applied by different assessors and for different components of the EPA. • Adopt a performance management process for assessors and use training to address poor performance • Undertake annual performance appraisals of assessors • Appoint internal verifiers
Independent assessor	<p>As a minimum an Independent assessor should:</p> <ul style="list-style-type: none"> • Understand the standard and assessment plan • Deliver the end-point assessment in-line with the EPA plan • Comply to the IQA requirements of the EPAO • Be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest • Satisfy the criteria outlined in this EPA plan • Hold or be working towards an independent assessor qualification e.g. A1 and have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading • Have the capability to assess the apprentice at this level attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section) • Have a minimum of 3 years post professional qualification experience • Be an Associate or chartered professional of the RICS or a Member or Fellow of the ICES or other recognised professional body • Have evidence of up to date CPD (as required by the relevant professional body)

	<ul style="list-style-type: none"> • Have experience of assessing learners or willingness to undertake training
Training provider	<p>As a minimum the training provider should:</p> <ul style="list-style-type: none"> • Work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period • Advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway • Play no part in the EPA itself

Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPA organisations must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPA organisations for this EPA must:

- The EPAO will provide independent assessment of the apprentice's knowledge, skills and behaviour through the computer marked online test and assessment of the project and professional discussion. All EPAOs must be on the Register of Apprentice Assessment Organisations.
- Appoint independent assessors who are members of relevant professional bodies.
- Provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading.
- Have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time.
- Operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this standard and before they deliver an updated assessment method for the first time.
- Comply with the standardisation and moderation requirements as defined with the Roles and Responsibilities table.

Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit any failed assessment methods only.

Any assessment method re-sit or re-take must be taken during the maximum EPA period, otherwise the entire EPA must be taken again, unless in the opinion of the EPAO exceptional circumstances apply outside the control of the apprentice or their employer.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to merit/distinction or merit to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EPAO determines there are exceptional circumstances requiring a re-sit or re-take.

Affordability

Affordability of the EPA will be aided by using at least some of the following practice:

- Online assessment
- Using an employer's premises

Professional body recognition

This Apprenticeship will include the knowledge, skills and behaviours typically required to achieve full member or chartered status with the industry's recognised professional bodies. The final assessment process for this Apprenticeship will typically be partly representative of the review process required for professional registration.

Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making reasonable adjustments for this apprenticeship standard. This should include how an apprentice qualifies for Reasonable Adjustment and what Reasonable Adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

Mapping of knowledge, skills and behaviours (KSBs)

Assessment method 1: Online test

Knowledge
K2 Understand obligations for Health, Safety and Welfare issues on site, know to identify potential hazards and manage the risk.
K3 Understand the principles of conflict and dispute resolution between stakeholders in a project.
K5 Understand and evaluate construction legislation and various forms of contract used in a project.

Assessment method 2: Project

Knowledge
K1 Demonstrate understanding of balance sheets, profit and loss accounts and business plans.
K6 Demonstrate knowledge and understanding of the construction process and of the material and technology that comprise best practice.
K9 Understand how costs are controlled and reported on and the legal constraints.
K10 Understand the nature of risk and its effect on the management of a project.

Skills
S4 Be able to advice on the legal aspects of a project and the most suitable form of contract to be used to ensure fairness and efficiency.
S5 Be able to advice on the most suitable construction solutions that maximise value for clients and enhance the cost effectiveness of the project within the budget constraints.
S7 Be able to advice on appropriate methods of measurement of completed works and issue documentation required for payment to specialist contractors and income from client.
S8 Advise construction team and the client on strategies to control predicted expenditure in line with the budget.
S9 Carry out risk assessments and implement strategies to mitigate risk.
S10 Monitor, report and advise construction team on project cash flow and profitability. Evaluate and advise on financial implication of decisions during the construction phase.

Behaviours
B1 Understand and apply the Code of Conduct and conduct regulations, ethics and professional standards of the relevant PQSI.
B2 Demonstrate knowledge and ability to manage expectations and identify improvements.

Assessment method 3: Professional discussion

Knowledge
K4 Understand the environmental impact of construction activities and how to minimise negative impacts during all stages of the project.
K7 Understand the main types of procurement and the related tendering and negotiating processes required to select specialist contractors.
K8 Understand the principles of measurement and costing of construction work and their relationship to the financial control of the project.
K11 Demonstrate knowledge and understanding of the principles of the financial and legal management of construction projects during the construction phase.
K12 Describe the principles of the programming and scheduling aspects of projects during the construction phase that ensure completion on time.
Skills
S1 Be able to apply and evaluate the principles for the avoidance of conflict and dispute resolution such as the adjudication and arbitration between project stakeholders.
S2 Be able to identify and manage risks of health, safety and welfare in line with legislation, hazards and safe systems of work.
S3 Analyse costs and benefits of sustainability initiatives on a project.
S6 Be able to advice on the appropriateness of various procurement routes and manage and report on the tendering and negotiation processes to select specialist contractors.
S11 Assess, interpret and report on progress and assist in the control of programmes during the construction phase.
Behaviours
B3 Be able to work with others towards common goals and understand different techniques for communication and negotiation.
B4 Identify own development needs and take action to meet those needs.

Appendix A: Example Template for the Summary of Experience

The Summary of Experience should reflect the role and level of the activities undertaken by the apprentice in the KSBs below

KNOWLEDGE	APPRENTICE STATEMENT OF HOW KNOWLEDGE HAS BEEN GAINED <i>(approximately 250 words per area of knowledge)</i>	EXAMPLES OF WORK TASKS UNDERTAKEN THAT HAVE USED THIS KNOWLEDGE <i>(approximately 50 words per area of knowledge)</i>
Sustainability Understand the environmental impact of construction activities and how to minimise negative impacts during all stages of the project.		
Procurement and Tendering Understand the main types of procurement and the related tendering and negotiating processes required to select specialist contractors.		
Measurement and Costing Understand the principles of measurement and costing of construction work and their relationship to the financial control of the project.		
Commercial Management Demonstrate knowledge and understanding of the principles of the financial and legal management of construction projects during the construction phase.		
Planning Describe the principles of the programming and scheduling aspects of projects during the construction phase that ensure completion on time.		

SKILLS	APPRENTICE STATEMENT OF HOW SKILL HAS BEEN ACHIEVED THROUGH WORK EXPERIENCE (approximately 250 words)	EXAMPLES OF WORK TASKS UNDERTAKEN THAT SHOWS EACH SKILL (approximately 50 words per skill)
Conflict Avoidance Be able to apply and evaluate the principles for the avoidance of conflict and dispute resolution such as the adjudication and arbitration between project stakeholders.		
Health and Safety Be able to identify and manage risks of health, safety and welfare in line with legislation, hazards and safe systems of work.		
Sustainability Analyse costs and benefits of sustainability initiatives on a project.		
Procurement and tendering Be able to advise on the appropriateness of various procurement routes and manage and report on the tendering and negotiation processes to select specialist contractors.		
Planning Assess, interpret and report on progress and assist in the control of programmes during the construction phase.		
BEHAVIOURS	APPRENTICE STATEMENT OF HOW BEHAVIOUR HAS BEEN DEMONSTRATED THROUGH LEARNING AND WORK EXPERIENCE (approximately 250 words)	EXAMPLES OF WORK WHERE BEHAVIOUR HAS BEEN ADOPTED (approximately 50 words per behaviour)
Team working and communication Be able to work with others towards common goals and understand different techniques for communication and negotiation.		

Maintain Continuing Professional Development Ability to identify own development needs and take action to meet those needs.		
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