

Apprenticeships in

# Engineering and Manufacturing

Pearson Level 7 End-point Assessment for  
**Infrastructure Asset Management Professional**



Specification date: March 2024  
First assessment date: April 2025  
Issue 1





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# 1 The Infrastructure Asset Management Professional Apprenticeship

## What are Pearson End-point Assessments?

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End-point assessment (EPA) takes place at the end of the apprenticeship programme when the apprentice has passed through gateway and been signed off as ready for the assessment by their employer. It is a synoptic assessment of the knowledge, skills and behaviours outlined in the apprenticeship standard learnt throughout the apprenticeship programme.

## Purpose

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The purpose of the EPA is to confirm that the apprentice has met the required level of knowledge, skills and behavioural standards set by employers and that they are competent in their role as an Infrastructure Asset Management Professional.

These Professionals work in a range of industries that manage physical assets. They may be employed by asset owning companies, outsourced services companies or asset management consultants.

The broad purpose of the occupation is to lead the asset management function within an organisation. This involves formulation and leading the development of the asset management policy, strategy, plans, and objectives to ensure physical assets are managed in a way to achieve the organisation's objectives.

In their daily work, an employee in this occupation interacts with the wider business and executives in the organisation. In order to support their work, they will liaise with external and internal stakeholders. They will be responsible for ensuring asset management complies with legal frameworks and legislation, including public health, health and safety, economic and environmental.

This apprenticeship aligns with Institute of Asset Management for Membership.

The apprenticeship will either wholly or partially satisfy the requirements for registration at this level.

## 2 Summary of End-point Assessment

EPA Detail	Pearson Level 7 End-point Assessment for Infrastructure Asset Management Professional
Qualification number (QN)	610/3916/0
Regulation start date	13/03/2024
First Pearson assessment	14/04/2025
Assessment Methods	<ul style="list-style-type: none"> <li>▪ Work-based Project with Presentation and Questioning</li> <li>▪ Professional Discussion underpinned by a Portfolio of Evidence</li> </ul> <p><i>Refer to Section 5 for detailed information about each assessment method.</i></p>
Grading	Fail/Pass/Distinction  <i>Refer to Section 3 for detailed information.</i>
Duration of apprenticeship programme	The typical duration for this apprenticeship is 24 months but this will depend on the individual apprentice's previous experience and access to opportunities to gain the full range of competences.
Gateway requirements	<ul style="list-style-type: none"> <li>▪ Employer confident that the apprentice is working at or above the occupational standard</li> <li>▪ The apprentice must have achieved English and maths qualifications in line with the apprenticeship funding rules.</li> <li>▪ For the work-based Project with Presentation and Questioning, the Project's title and scope must be agreed with the EPAO and a Project summary submitted</li> <li>▪ For the Professional Discussion underpinned by a Portfolio of Evidence the apprentice must submit a Portfolio of Evidence.</li> </ul>

EPA Detail	Pearson Level 7 End-point Assessment for Infrastructure Asset Management Professional
Time period for completion of EPA	<p>The EPA will be completed within an EPA period lasting typically for six months, starting when the EPAO has confirmed that all gateway requirements have been met.</p> <p>The assessment methods can be delivered in any order.</p>
Apprenticeship certification	<p>The certificate for the apprenticeship is awarded by the Institute for Apprenticeships and Technical Education (IfATE), through a process administered by the Education and Skills Funding Agency (ESFA). As the end-point assessment organisation (EPAO), Pearson will claim certificates on behalf of apprentices.</p>
Digital badging	<p>On successful completion of their EPA, apprentices are issued a securely verified Credly digital credential or 'badge.' The digital badge can be easily shared online via social networks allowing them to showcase their talent and grow their presence in a Professional community.</p> <p>Further information about Credly digital credentials can be found at <a href="http://www.pearson.com/en-gb.html">www.pearson.com/en-gb.html</a> (Discover Pearson Businesses).</p>

### 3 EPA structure

## Pearson Level 7 End-point Assessment for Infrastructure Asset Management Professional

The EPA for the Infrastructure Asset Management Professional apprenticeship consists of the following two assessment methods:

- Work-based Project with Presentation and Questioning
- Professional Discussion underpinned by a Portfolio of Evidence.

The table below gives a summary of the structure of the end-point assessment.

End-point assessment methods	Duration	Assessment method grading
Work-based Project with Presentation and Questioning	Project: no time duration but 8000-word count +/- 10% for the Project report Presentation and Questioning 60 mins	Fail/Pass/Distinction
Professional Discussion underpinned by a Portfolio of Evidence	Professional Discussion must last for 90 minutes	Fail/Pass/Distinction

The assessment methods can be delivered in any order.

The result of one assessment method does not need to be known before starting the next.

## EPA Grading

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The grading for this EPA is Fail/Pass/Distinction.

The assessment methods contribute equally to the overall EPA pass grade. If the apprentice fails one or more assessment methods, they will be awarded an overall EPA fail.

To achieve an overall pass, the apprentice must achieve at least a pass in all the assessment methods. To achieve an overall EPA distinction, the apprentice must achieve a distinction in both assessment methods.

To achieve an overall EPA distinction, the apprentice must achieve a distinction in both assessment methods.

Grades from individual assessment methods must be combined in the following way to determine the grade of the EPA overall.

<b>EPA Assessment Method 1: Work-based Project with Presentation and Questioning</b>	<b>EPA Assessment Method 2 : Professional Discussion underpinned by a Portfolio of Evidence</b>	<b>End-point assessment grade</b>
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Pass
Distinction	Pass	Pass
Distinction	Distinction	Distinction

# 4 Assessment

## Assessment plan

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Pearson's approach to assessing this EPA is set by the assessment plan for the apprenticeship standard. This document is available in *Annexe A*.

## Language of assessment

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Apprentices must use English only during the assessment of this EPA.

An apprentice taking the EPA may be assessed in British Sign Language for the purpose of reasonable adjustment.

Further information on the use of language in assessment is available in our *Use of languages in qualifications policy*, available on our website.

## Gateway

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Before progressing to the EPA from on-programme, all apprentices must be signed off by their employer, through the 'gateway'. This gateway sign off confirms that apprentices have the level of occupational knowledge, skills and behaviours required to achieve the apprenticeship.

The EPA-specific requirements for gateway are stated in *Section 2: Summary of End-point Assessment* and the Assessment Plan in *Annexe A*.

Employers must complete a *Gateway Declaration Form and Portfolio Authentication Form* (see *EPA Resource Pack*) with the apprentice. The form and the associated gateway Evidence to prove apprentices have met the requirements must be supplied to Pearson before the EPA can take place.

# 5 End-point Assessment Methods

## Assessment Method 1: Work-based Project with Presentation and Questioning

### Structure

The Work-based Project with Presentation and Questioning assesses apprentices' knowledge, skills and behaviours from the apprenticeship standard, in line with the assessment plan requirements. It is assessed by a Pearson independent end-point assessor (IEA).

Work-based Project with Presentation and Questioning	
<p><b>Component 1:</b> Work based Project with a written report output</p> <p><b>Component 2:</b> Presentation with questions and answers</p>	<p>The Work-based Project with Presentation and Questioning involves the apprentice completing a significant and defined piece of work that has a real business application and benefit.</p> <p>The apprentice must agree the subject, title and scope for their Work-based Project proposal with their employer and Pearson by submitting a scoping document which will be no more than 500 words.</p> <p>The Presentation must focus on their Work-based Project and comprise an overview, scope, summary of actions and Work-Based Project outcomes and how these were achieved.</p>
Duration	<p>The apprentice must complete and submit the Work-based Project report and any Presentation materials to Pearson by the end of week 12 of the EPA period.</p> <p>The Presentation with questions must last 60 minutes. This will typically include a Presentation of 20 minutes and Questioning lasting 40 minutes.</p>
Grading	<p>Fail/ Pass/Distinction</p> <p>The grading criteria for this assessment method can be found in the assessment plan in <i>Annexe A</i>.</p>
Preparation	Employers will ensure apprentices have sufficient time and the necessary resources, within this period to plan and conduct the Work-based Project.

<b>Work-based Project with Presentation and Questioning</b>	
	The Work-based Project must meet the needs of the employer's business and be relevant to the apprentice's occupation and apprenticeship.
Delivery and conduct	<p>The Work-based Project report must have a word count of 8000 words. A tolerance of 10% above or below is permitted. The apprentice must produce and include a mapping in an appendix, showing how the report evidences the KSBs mapped to this assessment method.</p> <p>The Presentation and Questioning involves the apprentice presenting to an IEA, followed by questions from the IEA. It may be conducted either face-to-face or via online video conferencing. The IEA must ask at least six questions.</p> <p>To deliver the Presentation, the apprentice must have access to audio-visual equipment (if required) that facilitates presentations.</p> <p>The Presentation and Questioning must take place in a suitable venue selected by Pearson, for example the employer's premises. It should take place in a quiet room, free from distractions and influence.</p>
Assessment	The Work-based Project is submitted to Pearson once it is completed. It is assessed by the IEA using the published grading criteria. The IEA will identify questions based on the Project.

## Standards Assessed

The Work-based Project with Presentation and Questioning assesses the following areas from the Apprenticeship Standard:

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Knowledge</b>	K1	Communication and influencing techniques and strategies, both written and oral.
	K2	Decision making principles and techniques used in Infrastructure Asset Management.
	K4	Change management models and the link to organisational culture.
	K7	Stakeholder mapping and engagement approaches.
	K11	Portfolio management models and approaches.
	K15	Techniques to critically analyse asset management non-conformities such as causes and effects; Failure Mode Event/Effects Critically Analysis (FMEA/FMECA), and Root cause analysis.
	K17	Risk management and its application to infrastructure asset management: risk assessment, quantification, mitigation, and impact.
	K18	The application of system engineering and infrastructure models, tools, and frameworks e.g., Defra 4R's approach to resilience.
	K20	The application of decision-making frameworks.
	K21	Application of uncertainty analysis on outcomes and outputs.
	K23	Asset and project costing and valuation techniques; cost estimation (maintenance, operation, renewal, disposal), depreciation, whole life costing, and social, environmental, safety and reputational cost.
	K24	The requirements for an integrated infrastructure asset and investment management enterprise-wide approach and the high-level user case.
	K25	Information technology (IT) systems and processes asset registers, work management systems, word processing, spreadsheets, email, presentation.
K26	Critical data analysis and interpretation techniques; and data presentation techniques (charts, diagrams, and tables).	

Standard area	KSB ref	Apprenticeship standard outcomes
	K29	Problem solving techniques and their application.
	K32	The different stages of projects including the principles of planning, scheduling, and sequencing.
	K33	The ways of managing, influencing, and controlling outcomes through the application of project management techniques.

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Skills</b>	S1	Apply a consistent approach to asset risk management, risk assessed inspection, and maintenance programmes.
	S2	Use quantitative methods in the research, critical analysis and interpretation of complex data.
	S3	Adapt communication technique when communicating with others.
	S4	Specify and influence data and information requirements.
	S5	Use decision making principles and techniques in the infrastructure asset management environment.
	S8	Apply systems engineering models, tools, and frameworks within the infrastructure asset management environment.
	S9	Develop and evaluate options within a decision-making framework.
	S10	Monitor and report on the performance of asset and infrastructure asset management.
	S13	Apply leadership skills.
	S14	Develop and promote proposals and business cases.
	S24	Manage the balance between quality, costs, and time.
	S27	Use project management and planning techniques. Monitor progress towards project goals and identify corrective actions.

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Behaviour</b>	B1	Takes accountability and ownership of their tasks and workload.

## Assessment Method 2: Professional Discussion underpinned by a Portfolio of Evidence

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### Structure

The Professional Discussion underpinned by a Portfolio of Evidence assesses apprentices' knowledge, skills and behaviours from the apprenticeship standard, in line with the assessment plan requirements. It is assessed by a Pearson independent end-point assessor (IEA).

Professional Discussion underpinned by a Portfolio of Evidence	
Summary	<p>The Professional Discussion underpinned by a Portfolio of Evidence is a planned, structured discussion between the apprentice and the IEA. It is designed to draw out the best of the apprentice's competence and excellence to cover the mapped KSBs.</p> <p>The Professional Discussion is underpinned by a Portfolio of Evidence. Apprentices prepare the Portfolio of Evidence during the on-programme part of their apprenticeship. The Portfolio is not directly assessed, it supports the discussion.</p>
Duration	90 minutes (The IEA can increase the time by up to 10%)
Portfolio	Apprentices are required to provide work-based evidence in a Portfolio to validate and support their responses in the Professional Discussion. This Portfolio is submitted prior to the Professional Discussion.
Grading	<p>Fail/Pass/Distinction</p> <p>The grading criteria for this assessment method can be found in the assessment plan in <i>Annexe A</i>.</p>

<b>Professional Discussion underpinned by a Portfolio of Evidence</b>	
Delivery and conduct	<p>The Professional Discussion underpinned by a Portfolio of Evidence will be conducted face to face or remotely.</p> <p>For the Professional Discussion, the independent assessor must ask at least 10 questions. Follow-up questions are allowed.</p> <p>The apprentice must have access to their Portfolio of Evidence during the Professional Discussion. Apprentices can refer to and illustrate their answers with evidence from their Portfolio of Evidence.</p> <p>The Professional Discussion must take place in a suitable venue selected by Pearson (for example the employer's premises). The Professional Discussion should take place in a quiet room, free from distractions and influence.</p>
Assessment	<p>The IEA will review the apprentice's responses against the Pass and Distinction grade criteria.</p>

## Standards Assessed

The Professional Discussion assesses the following areas from the Apprenticeship Standard.

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Knowledge</b>	K3	Learning and development strategies, including personal and Professional development.
	K5	How culture and organisation structure impact the delivery of required performance.
	K6	Asset management standards such as ISO55000, British Standard Institute (BSI), Publicly Available Specification (PAS) 55.
	K8	Asset life cycle activities such as acquire/create, operate, maintain, and renew/dispose.
	K9	Sustainability development goals and impact on asset investments.
	K10	Principles of maintenance and reliability engineering.
	K12	Procurement and supply chain strategies and delivery management.
	K13	The use of horizon scanning techniques in the infrastructure asset management environment.
	K14	Performance monitoring of asset life cycle activities.
	K16	The application of contingency plans in the infrastructure asset management environment.
	K19	The importance of prioritisation and multi criteria optimisation techniques and tools (prescriptive analytics).
	K22	Understanding of balance sheets, profit and loss, and the difference between companies.
	K27	Range of asset and investment management tools.
	K28	The sources and types of funding for infrastructure asset management activities.
K30	Regulatory, legislative and policy/standards requirements such as data protection, cyber security, Environmental emissions limits, Pressure Systems Safety Regulations (PSSR), Construction, Design and Management Regulations (CDM), and Control of Major Accident Hazards (COMAH).	

Standard area	KSB ref	Apprenticeship standard outcomes
	K31	Principles of policy and strategic development in Infrastructure asset management.
	K34	Different, inclusive leadership styles and models, how to develop diverse teams and support people using coaching and mentoring.
	K35	Commissioning and facilitating research and development activities.

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Skills</b>	S6	Optimise and prioritise projects and programmes in a Portfolio of work in the infrastructure asset management environment.
	S7	Lead and manage the optimum delivery of life cycle activities and resources.
	S11	Procure, build, and manage relationships with the supply chain.
	S12	Lead, commission, and facilitate research and development activities, innovation, change and organisational development.
	S15	Identify and manage stakeholder needs and expectations.
	S16	Identify learning requirements and improvement opportunities for self and others.
	S17	Lead and encourage collaboration across the asset management life cycle stages.
	S18	Implement and create infrastructure asset management strategies and plans.
	S19	Challenge and provide feedback: colleagues and stakeholders.
	S20	Use horizon scanning techniques in the asset management environment.
	S21	Manage team resources to deliver the infrastructure asset management resource strategy.
	S22	Create long term investment plans aligned with organisational objectives.
	S23	Create, implement, and monitor Infrastructure asset management policy and strategic plans.
	S25	Apply contingency planning in Infrastructure asset management plans.
S26	Demonstrate fiscal rigour in Infrastructure asset management plans.	

Standard area	KSB ref	Apprenticeship standard outcomes
<b>Behaviours</b>	B2	Role models collaborative and inclusive working across organisational and cultural boundaries, driving diversity.
	B3	Seeks continuous professional development opportunities for self and wider team.
	B4	Acts in a professional manner with integrity and confidentiality.
	B5	Champions infrastructure asset management and influences its development.
	B6	Committed to compliance with legislation, asset management standards and company policies.

# 6 Delivery of End-point Assessment

## End-point assessment planning and scheduling

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Employers and/or training providers must have an agreement in place to conduct EPAs with Pearson, and apprentices must be registered on the ACE360 system. Once the gateway Evidence has been uploaded to ACE360, this will alert the IEA to review the Evidence and start the planning and scheduling process.

The purpose of the EPA planning meeting is to share information with the IEA in order to support the assessment process and to agree a plan for the upcoming assessment activities for the apprentices. The IEA will agree a plan and schedule for each assessment activity. The end-point assessment planning meeting can be conducted remotely using appropriate technology.

All assessment methods must be completed within the time period specified in *Section 2: Summary of End-point Assessment*.

## Reassessment

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Reassessment, including both resit and retake, is permitted in agreement between Pearson and the employer. The timescale will be agreed on a case-by-case basis with Pearson. As part of that agreement, any reassessments must not provide an apprentice with an unfair advantage over others.

For additional EPA-specific requirements, refer to the assessment plan in *Annexe B*.

## Booking reassessment

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Reassessment is requested using the ACE360 system. Once the request is confirmed, the allocated IEA will liaise with the key contact to start the scheduling process.

## Appeals

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The *End-point assessment enquiries and appeals policy* is available on the Pearson website and ACE Knowledge base. This has full information about what will happen if an apprentice or centre wishes to query the result of an assessment.

# 7 Access to assessment

## Access to assessment for apprentices with disabilities or specific needs

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Equality and fairness are central to our work. Our *Equity, diversity and inclusion in Pearson qualifications and related services policy* requires all apprentices to have equal opportunity to access our assessments, and that our EPAs are awarded in a way that is fair to every apprentice.

We are committed to making sure that:

- apprentices with a protected characteristic (as defined by the Equality Act 2010) are not, when they are taking one of our assessments, disadvantaged in comparison to apprentices who do not share that characteristic
- all apprentices achieve the recognition they deserve from their EPA and that this achievement can be compared fairly to the achievement of their peers.

For apprentices with disabilities and specific needs, the assessment of their potential to achieve the EPA must identify, where appropriate, the support that will be made available to them during delivery and assessment.

Centres must deliver the EPA in accordance with current equality legislation. For full details of the Equality Act 2010, please [visit www.legislation.gov.uk](http://www.legislation.gov.uk)

## Reasonable adjustments

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A reasonable adjustment relates to an adjustment that helps to reduce the effect of a disability or a physical or mental health condition, which may place the apprentice at a disadvantage compared to others. If an apprentice requires any adjustment to their assessment then this must be recorded within the ACE360 system to support the Discussion at the EPA planning meeting.

Pearson will apply the *Reasonable adjustment matrix* published by the Institute for Apprenticeships and Technical Education (IfATE).

Further guidance: [Submitting Reasonable Adjustments Requests](#)

# 8 Malpractice

## Dealing with malpractice in assessment

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'Malpractice' refers to acts that undermine the integrity and validity of assessment, the certification of qualifications and/or may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actual or attempted malpractice by apprentices, centre staff or centres in connection with Pearson qualifications. Pearson may impose sanctions on apprentices, centre staff or centres where malpractice or attempted malpractice has been proven.

AI misuse is deemed by Pearson and the other JCO awarding organisations to be a form of plagiarism. AI misuse can involve plagiarising content produced by AI tools and/or incomplete or poor acknowledgement of AI use. More information can be found in the JCO AI Use in Assessments guidance here: *AI Use in Assessments: Protecting the Integrity of Qualifications* – JCO Joint Council for Qualification

Malpractice may occur or be suspected in relation to any unit or type of assessment within a qualification. For further details on malpractice and advice on preventing malpractice by apprentices, please see Pearson's *Centre Guidance: Dealing with Malpractice*, available on our website.

Centres are required to take steps to prevent malpractice and to assist with investigating instances of suspected malpractice. Apprentices must be given information that explains what malpractice is and how suspected incidents will be dealt with by the centre. The *Centre Guidance: Dealing with Malpractice* document gives full information on the actions we expect you to take.

Pearson may conduct investigations if we believe a centre is failing to conduct assessments according to our policies. The above document gives further information, examples, and details the sanctions that may be imposed.

In the interests of apprentices and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

## Apprentice malpractice

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The head of centre is required to report incidents of suspected apprentice malpractice that occur during the delivery of Pearson qualifications. We ask centres to complete JCO Form M1 ([www.jcq.org.uk/malpractice](http://www.jcq.org.uk/malpractice)) and email it with any supporting documents (signed statements from the apprentice, invigilator, copies of Evidence, etc) to the Investigations Processing team at [candidatemalpractice@pearson.com](mailto:candidatemalpractice@pearson.com). The responsibility for determining any appropriate sanctions on apprentices lies with Pearson.

Apprentices must be informed at the earliest opportunity of the specific allegation and the centre's malpractice policy, including the right of appeal. Apprentices found guilty of malpractice may be disqualified from the qualification for which they have been entered with Pearson.

Failure to report malpractice constitutes staff or centre malpractice.

## Tutor/centre malpractice

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The head of centre is required to inform Pearson's Investigations team of any incident of suspected malpractice (which includes maladministration) by centre staff, before any investigation is undertaken. The head of centre should inform the Investigations team by submitting a JCQ M2 Form (downloadable from [www.jcq.org.uk/malpractice](http://www.jcq.org.uk/malpractice)) with supporting documentation to [pqsmalpractice@pearson.com](mailto:pqsmalpractice@pearson.com). Where Pearson receives allegations of malpractice from other sources (for example Pearson staff, anonymous informants), the Investigations team will conduct the investigation directly or may ask the head of centre to assist.

Pearson reserves the right in cases of suspected malpractice to withhold the issuing of results/certificates while an investigation is in progress. Depending on the outcome of the investigation, results and/or certificates may not be released or they may be withheld.

You should be aware that Pearson may need to suspend certification when undertaking investigations, audits and quality assurances processes. You will be notified within a reasonable period of time if this occurs.

## Sanctions and appeals

Where malpractice is proven, we may impose sanctions such as:

- mark reduction for affected assessments
- disqualification from the qualification
- debarment from registration for Pearson qualifications for a period of time.

If we are concerned about your centre's quality procedures we may impose sanctions such as:

- requiring centres to create an improvement action plan
- requiring staff members to receive further training
- placing temporary suspensions on certification of apprentices
- placing temporary suspensions on registration of apprentices
- debarring staff members or the centre from delivering Pearson qualifications
- suspending or withdrawing centre approval status.

The centre will be notified if any of these apply.

Pearson has established procedures for considering appeals against sanctions arising from malpractice. Appeals against a decision made by Pearson will normally be accepted only from the head of centre (on behalf of apprentices and/or members or staff) and from individual members (in respect of a decision taken against them personally). Further information on appeals can be found in the JCQ Appeals booklet (<https://www.jcq.org.uk/exams-office/appeals>).

## 9 Further information

Edexcel, BTEC and Pearson Work Based Learning contact details:

- <https://qualifications.pearson.com/en/contact-us.html>

Books, software and online resources for UK schools and colleges:

- [www.pearsonschoolsandcolleges.co.uk](http://www.pearsonschoolsandcolleges.co.uk)

Document that further supports the information in this specification:

- *EPA Service Guide* (Pearson, this is made available to approved centres).

## 10 Glossary

Term	Description
Apprenticeship Standard	A short document prepared by a Trailblazer group that sets out concisely the requirements to be competent in a job role. All apprenticeship standards are published on <a href="http://www.gov.uk">www.gov.uk</a> .
Assessment Plan	This document is also prepared by a Trailblazer group and sets out the requirements that end-point assessment organisations must follow when assessing the EPA.
Cut Score	The standard mark set for a multiple-choice test pass/ merit/ distinction that remains in place for a period of time, usually the life of the EPA. These may be stated on the assessment plan or determined internally by Pearson.
Competence	The minimum knowledge, skills and behaviours (KSBs) required to perform a job role effectively.
Assessment Methods	The different assessments that form the overarching EPA. Most EPAs will typically have between two and four assessment methods that assess set parts of the overarching standard.
End-point Assessment	A synoptic assessment of the knowledge, skills and behaviours outlined in the apprenticeship standard that have been learned throughout the apprenticeship programme. The apprentice has to pass the EPA to be successful in their apprenticeship programme and demonstrate competence.
End-point Assessment Organisation (EPAO)	Approved to deliver EPA. Employers select an approved EPAO from the Education & Skills Funding Agency's Apprentice Provider and Assessment Register (APAR).
Gateway	The point at which the apprentice is identified as being competent by their employer and therefore ready to plan to take their end-point assessment. There are requirements for maths and English to enter gateway and there may be other requirements, such as mandatory qualifications, that vary depending on the apprenticeship standard.
Independent End-point Assessor	The assessor appointed by Pearson to work with the apprentice and employer to plan their EPA during gateway and then assess the apprentice in the final EPA.

Term	Description
On-programme	The first and main part of the apprenticeship when the apprentice is developing their KSBs towards competence. All apprentices must spend at least 20% of their on-programme time completing off-the-job training
Resit	Occurs when an apprentice feels comfortable to attempt their EPA again, with no additional training or learning, e.g. failing an assessment method on one or two criteria, due to test nerves
Retake	Occurs when an apprentice needs a period of additional training or learning to support them to reattempt their EPA, e.g. failing an assessment method on multiple criteria, due to lack of preparation or not being able to articulate their response in line with the criteria
Trailblazer group	A group of employers who have worked together to agree the apprenticeship standard and write the associated assessment plan.
Institute for Apprenticeships and Technical Education (IfATE)	IfATE is a non-departmental public body that oversees the development, approval and publication of apprenticeship standards and assessment plans. In addition, IfATE is responsible for technical education, including T Levels.

# Annexe A: Assessment Plan

# End-point assessment plan

V1.0

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## Introduction and overview

This document explains the requirements for end-point assessment (EPA) for the infrastructure asset management professional apprenticeship. End-point assessment organisations (EPAOs) must follow this when designing and delivering the EPA.

Infrastructure asset management professional apprentices, their employers and training providers should read this document.

A full-time apprentice typically spends 24 months on-programme (this means in training before the gateway) working towards competence as an infrastructure asset management professional. All apprentices must spend at least 12 months on-programme. All apprentices must complete the required amount of off-the-job training specified by the apprenticeship funding rules.

This EPA should then be completed within an EPA period lasting typically 6 months.

Occupational competence is outlined by the EPA grade descriptors and determined, when assessed in accordance with this EPA plan, by an independent assessor who is an occupational expert and confirms the overall EPA grade.

This EPA has 2 assessment methods.

The grades available for each assessment method are:

Assessment method 1 - work based project with presentation and questioning:

- fail
- pass
- distinction

Assessment method 2 - professional discussion underpinned by a portfolio of evidence:

- fail
- pass
- distinction

The result from each assessment method is combined to decide the overall apprenticeship grade. The following grades are available for the apprenticeship:

- fail
- pass
- distinction

## EPA summary table

<p><b>On-programme</b> (typically 24 months)</p>	<p>The apprentice must complete training to develop the knowledge, skills and behaviours (KSBs) of the occupational standard.</p> <p>The apprentice must complete training towards English and maths qualifications in line with the apprenticeship funding rules.</p> <p>The apprentice must compile a portfolio of evidence.</p>
<p><b>End-point assessment gateway</b></p>	<p>The employer must be content that the apprentice is working at or above the occupational standard.</p> <p>The apprentice's employer must confirm that they think the apprentice:</p> <p>is working at or above the occupational standard as a infrastructure asset management professional</p> <p>has the evidence required to pass the gateway and is ready to take the EPA</p> <p>The apprentice must have achieved English and maths qualifications in line with the apprenticeship funding rules.</p> <p>For the work based project with presentation and questioning, the apprentice must submit the following supporting material: project scoping document requirements. To ensure the project allows the apprentice to meet the KSBs mapped to this assessment method to the highest available grade, the EPAO should sign-off the project's title and scope at the gateway to confirm it is suitable. A brief project summary must be submitted to the EPAO. It should be no more than 500 words. This needs to show that the project will provide the opportunity for the apprentice to cover the KSBs mapped to this assessment method. It is not assessed.</p> <p>For the professional discussion underpinned by a portfolio of evidence the apprentice must submit a portfolio of evidence.</p> <p>The apprentice must submit any policies and procedures as requested by the EPAO.</p>

<p><b>On-programme</b> (typically 6 months)</p>	<p>Grades available for each assessment method:</p> <p>Work based project with presentation and questioning</p> <ul style="list-style-type: none"> <li>· fail</li> <li>· pass</li> <li>· distinction</li> </ul> <p>Professional discussion underpinned by a portfolio of evidence</p> <ul style="list-style-type: none"> <li>· fail</li> <li>· pass</li> <li>· distinction</li> </ul> <p>Overall EPA and apprenticeship can be graded:</p> <ul style="list-style-type: none"> <li>· fail</li> <li>· pass</li> <li>· distinction</li> </ul>
<p><b>Professional recognition</b></p>	<p>This apprenticeship aligns with Institute of Asset Management for Member</p> <p>The apprenticeship will either wholly or partially satisfy the requirements for registration at this level.</p>
<p><b>Re-sits and re-takes</b></p>	<p>Re-take and re-sit grade cap: pass</p> <p>Re-sit timeframe: typically 2 months</p> <p>Re-take timeframe: typically 3 months</p>

## Duration of end-point assessment period

The EPA is taken in the EPA period. The EPA period starts when the EPAO confirms the gateway requirements have been met and is typically 6 months.

The expectation is that the EPAO will confirm the gateway requirements have been met and the EPA starts as quickly as possible.

## EPA gateway

The apprentice's employer must confirm that they think their apprentice is working at or above the as a occupational standard. They will then enter the gateway. The employer may take advice from the apprentice's training provider(s), but the employer must make the decision.

The apprentices must meet the gateway requirements before starting their EPA. These are:

- for the work based project with presentation and questioning apprentices must submit: project scoping document
- the apprentice must agree the subject, title and scope for their project proposal with their employer and EPAO by submitting a scoping document which will be no more than 500 words.

The apprentices must submit any policies and procedures as requested by the EPAO.

The EPA period starts when the EPAO confirms all gateway requirements have been met. The expectation is they will do this as quickly as possible.

## Order of assessment methods

The assessment methods can be delivered in any order.

The result of one assessment method does not need to be known before starting the next.

# Work based project with presentation and questioning

## Overview

A work based project involves the apprentice completing a significant and defined piece of work that has a real business application and benefit. The work based project must meet the needs of the employer's business and be relevant to the apprentice's occupation and apprenticeship.

This assessment method has 2 components:

- work based project with a written report output
- presentation with questions and answers

Together, these components give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method. They are assessed by an independent assessor.

## Rationale

This assessment method is being used because:

- The work-based project is the most valid method as it allows the demonstration of professional competence. The project will contribute to the employer's business and be part of the apprentices' everyday work, ensuring that they can demonstrate KSBs in practice. Producing a report reflects normal practice in the workplace for an infrastructure asset management professional, so this assessment method is appropriate.
- It is a significant and complex piece of work that thoroughly tests both higher and lower order knowledge and skills.
- Note that it is essential that the project articulates the apprentice's own work practice rather than the activities performed by the team of which they were part.

## Delivery

The apprentice must complete a work based project project based on any of the following:

Examples of the types of projects an apprentice could submit include:

- Development and implementation of an approach for understanding risk appetite and tolerance in infrastructure asset management decision making.
- Optimising maintenance through the use of predictive maintenance approaches on critical assets.
- The application of real options analysis to develop adaptive strategies.
- The use of predictive analytics to improve systems performance.
- Creation of an infrastructure asset management strategy that incorporates environmental, social and governance and their contribution to net carbon zero.
- Development and introduction of through life benefits in the assessment of projects.
- Asset health indicators used to track asset performance over the short and long term.
- The creation of a system thinking approach to improve operational resilience considering systemic and asset risks.

To ensure the work based project allows the apprentice to meet the KSBs mapped to this assessment method to the highest available grade, the EPAO should sign-off the work based project's title and scope at the gateway to confirm it is suitable. The EPAO must refer to the grading descriptors to ensure that work based projects are pitched appropriately.

The work based project output must be in the form of a work based project report and presentation.

The apprentice must start the work based project after the gateway. The employer should ensure the apprentice has the time and resources, within the project period, to plan and complete their project.

The apprentice may work as part of a team to complete the work based project, which could include internal colleagues or technical experts. The apprentice must however, complete their work based project report and presentation unaided and they must be reflective of their own role and contribution. The apprentice and their employer must confirm this when the work based project report and any presentation materials are submitted.

## Component 1: Work based project report

The report must include at least:

- Executive summary
- Outcome – the delivered outcome
- Benefits – the positive impact on the business
- Barriers – the problems and how they were overcome
- Actions – detailed analysis, options and conclusions
- Support – the stakeholder and collaborators; and underpinning theory
- Measurement – the delivered short and long term benefits maps
- Appendices – supporting information
- References – list of references

The work based project report must have a word count of 8000 words. A tolerance of 10% above or below is allowed at the apprentice's discretion. Appendices, references and diagrams are not included in this total. The apprentice must produce and include a mapping in an appendix, showing how the report evidences the KSBs mapped to this assessment method.

The apprentice must complete and submit the work based project report and any presentation materials to the EPAO by the end of week 12 of the EPA period.

## Component 2: Presentation with questions

The presentation with questions must be structured to give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

The apprentice must prepare and deliver a presentation to an independent assessor. After the presentation, the independent assessor must ask the apprentice questions about their project, report and presentation.

The presentation should cover:

- an overview of the work based project
- the project scope (including key performance indicators)
- summary of actions undertaken by the apprentice
- project outcomes and how these were achieved

The presentation with questions must last 60 minutes. This will typically include a presentation of 20 minutes and questioning lasting 40 minutes. The independent assessor must use the full time available for questioning. The independent assessor can increase the time of the presentation and questioning by up to 10%. This time is to allow the apprentice to complete their last point or respond to a question if necessary.

The independent assessor must ask at least 6 questions. They must use the questions from the EPAO's question bank or create their own questions in line with the EPAO's training. Follow up questions are allowed where clarification is required.

The purpose of the independent assessor's questions is:

- to verify that the activity was completed by the apprentice
- to seek clarification where required
- to assess those KSBs that the apprentice did not have the opportunity to demonstrate with the report, although these should be kept to a minimum
- to assess level of competence against the grading descriptors

The apprentice must submit any presentation materials to the EPAO at the same time as the report - by the end of week 12 of the EPA period. The apprentice must notify the EPAO, at that point, of any technical requirements for the presentation.

During the presentation, the apprentice must have access to:

- Audio-visual presentation equipment
- Flip chart and writing and drawing materials
- Computer
- any other requirements as previously notified to the EPAO

The independent assessor must have at least 2 weeks to review the project report and any presentation materials, to allow them to prepare questions.

The apprentice must be given at least 1 weeks' notice of the presentation with questions.

## Assessment decision

The independent assessor must make the grading decision. They must assess the project components holistically when deciding the grade.

The independent assessor must keep accurate records of the assessment. They must record:

- the KSBs demonstrated in the report and presentation with questions
- the apprentice's answers to questions
- the grade achieved

## Assessment location

The presentation with questions must take place in a suitable venue selected by the EPAO for example, the EPAO's or employer's premises. It should take place in a quiet room, free from distractions and influence.

The presentation with questions can be conducted by video conferencing. The EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided.

## Question and resource development

The EPAO must develop a purpose-built assessment specification and question bank. It is recommended this is done in consultation with employers of this occupation. The EPAO should maintain the security and confidentiality of EPA materials when consulting with employers. The assessment specification and question bank must be reviewed at least once a year to ensure they remain fit-for-purpose.

The assessment specification must be relevant to the occupation and demonstrate how to assess the KSBs mapped to this assessment method. The EPAO must ensure that questions are refined and developed to a high standard. The questions must be unpredictable. A question bank of sufficient size will support this.

The EPAO must ensure that the apprentice has a different set of questions in the case of re-sits or re-takes. EPAO must produce the following materials to support the project:

- independent assessor EPA materials which include:
  - training materials
  - administration materials
  - moderation and standardisation materials
  - guidance materials
  - grading guidance
  - question bank
- EPA guidance for the apprentice and the employer

The EPAO must ensure that the EPA materials are subject to quality assurance procedures including standardisation and moderation.

# Professional discussion underpinned by a portfolio of evidence

## Overview

In the discussion, an independent assessor and apprentice have a formal two-way conversation. It gives the apprentice the opportunity to demonstrate their competency across the KSBs mapped to this EPA method.

## Rationale

This assessment method is being used because:

- it allows the apprentice to be assessed against KSBs that may not naturally occur as part of a work-based project
- it allows the apprentice to show case their depth of understanding relating to the KSBs
- it allows the independent assessor to consider the context and sector that the apprentice operates within, giving flexibility to ensure that all the KSBs can be assessed appropriately
- it is cost effective, and it allows consideration of the potential need to conduct the EPA remotely.

## Delivery

The professional discussion must be structured to give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method to the highest available grade.

The independent assessor conducts and assesses the professional discussion.

The purpose of the independent assessor's questions will be to further clarify skills demonstrated in a portfolio of evidence.

The EPAO must give an apprentice 1 weeks notice of the professional discussion. The independent assessor must have at least 2 week(s) to review the supporting documentation.

The apprentice must have access to their portfolio of evidence during the professional discussion.

The apprentice can refer to and illustrate their answers with evidence from their portfolio of evidence, however the is not directly assessed.

The professional discussion must last for 90 minutes. The independent assessor can increase the time of the professional discussion by up to 10%. This time is to allow the apprentice to respond to a question if necessary.

For the professional discussion, the independent assessor must ask at least 10 questions. Follow-up questions are allowed. The independent assessor must use the questions from the EPAO's question bank or create their own questions in-line with the EPAO's training. The professional discussion must allow the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method at the highest possible grade.

The independent assessor must keep accurate records of the assessment. The records must include the KSBs met, the grade achieved and answers to questions.

The independent assessor will make all grading decisions.

## Assessment location

The professional discussion must take place in a suitable venue selected by the EPAO (for example the EPAO's or employer's premises).

The professional discussion can be conducted by video conferencing. The EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided.

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

## Question and resource development

The EPAO must write an assessment specification and question bank. The specification must be relevant to the occupation and demonstrate how to assess the KSBs shown in the mapping. It is recommended this is done in consultation with employers of this occupation. The EPAO should maintain the security and confidentiality of EPA materials when consulting employers. The questions must be unpredictable. A question bank of sufficient size will support this. The assessment specification and questions must be reviewed at least once a year to ensure they remain fit-for-purpose.

The EPAO must develop purpose-built question banks and ensure that appropriate quality assurance procedures are in place, for example, considering standardisation, training and moderation. The EPAO must ensure that questions are refined and developed to a high standard.

The EPAO must ensure that apprentice has a different set of questions in the case of re-sits or re-takes.

The EPAO must produce the following materials to support the professional discussion underpinned by a portfolio of evidence:

- independent assessor EPA materials which include:
  - training materials
  - administration materials
  - moderation and standardisation materials
  - guidance materials
  - grading guidance
  - question bank
- EPA guidance for the apprentice and the employer

## Grading

### Work based project with presentation and questioning

Fail – does not meet pass criteria

THEME KSBS	PASS <b>APPRENTICES MUST DEMONSTRATE ALL THE PASS DESCRIPTORS.</b>	DISTINCTION <b>APPRENTICES MUST DEMONSTRATE ALL THE PASS DESCRIPTORS AND ALL OF THE DISTINCTION DESCRIPTORS.</b>
Leadership and management K1 K2 K4 S3 S13 B1	<p>Applies leadership skills, decision making principles and techniques within the project, linking organisational culture to change management models, taking accountability and ownership of their tasks and workload in line with organisational policies and expectations. (K2, K4, S13, B1)</p> <p>Adapts written and oral communication techniques according to the audience, employing influencing techniques and strategies where appropriate within the project. (K1, S3)</p>	N/A
Infrastructure asset management principles, planning and delivery K7 K15 K20 K24 K29 S5 S9 S14	<p>Justifies their prioritisation of the project, explaining how they balance key factors such as stakeholder mapping and critically analyse asset management non-conformities. (K7, K15, S5)</p> <p>Applies decision-making frameworks and problem-solving techniques to develop and promote proposals and business cases in line with the project brief. (K20, K24, K29, S9, S14)</p>	<p>Justifies how project priorities were achieved by using decision making principles and techniques to critically analyse asset management non-conformities. (K15, S5)</p> <p>Critically evaluates the use of decision-making frameworks and problem-solving techniques applied to develop and promote proposals and business cases in line with the project brief. (K20, K29, S9, S14)</p>

<p>Risk and resilience management K17 K18 K21 S1 S8 S10</p>	<p>Applies the principles of risk management including risk assessment, quantification, mitigation, and impact to risk assessed inspections and maintenance programmes to manage product and process safety in line with the project brief. (K17, S1)</p> <p>Applies system engineering and infrastructure models, tools and frameworks including uncertainty analysis, to monitor and report on the interrelationships between assets and systems performance, to achieve project objectives. (K18, K21, S8, S10)</p>	<p>Critically evaluates their approach to risk management, quantification, mitigation and the impact to product and process safety in line with the project brief. (K17, S1)</p>
<p>Financial and cost management K23 S24</p>	<p>Applies asset and project costing and valuation techniques to manage the balance between quality, costs, and time to achieve project objectives. (K23, S24)</p>	<p>Critically evaluates their application of asset and project costing and valuation techniques used to manage the balance between quality, costs, and time to achieve project objectives. (K23, S24)</p>
<p>Digital asset management K25 K26 S2 S4</p>	<p>Applies IT systems and processes to collect interpret and analyse complex data selecting critical data analysis, interpretation, and presentation techniques relevant to the project brief. (K25, K26, S2, S4)</p>	<p>Critically evaluates the extent to which methods used in the project to collect and analyse data contributed to expected outcomes. (S2)</p>
<p>Portfolio, project and innovation management K11 K32 K33 S27</p>	<p>Applies project management and planning techniques, monitoring progress through stages, and identifying relevant corrective actions to control outcomes. (K11, K32, K33, S27)</p>	<p>N/A</p>

## Professional discussion underpinned by a portfolio of evidence

Fail – does not meet pass criteria

THEME KSBS	PASS APPRENTICES MUST DEMONSTRATE ALL THE PASS DESCRIPTORS.	DISTINCTION APPRENTICES MUST DEMONSTRATE ALL THE PASS DESCRIPTORS AND ALL OF THE DISTINCTION DESCRIPTORS.
<p>Leadership and management K3 K5 K31 K34 S15 S16 S17 S19 S23 B2 B3 B4 B5</p>	<p>Explains how they act with integrity and confidentiality to manage their own development and support others to grow personally and professionally too, including the impact this has had on the individual, the team, and the business. (K3, S16, S19, B4)</p> <p>Evaluates how inclusive leadership styles can be used to develop diverse teams, applying coaching and mentoring techniques where relevant in line with the cultural and organisational boundaries to deliver collaborative working practices. (K5, K34, S17, B2)</p> <p>Articulates how they prioritise the creation, implementation, and monitoring of infrastructure asset management policies and strategic plans, identifying and managing stakeholder needs and expectations in line with business needs. (K7, K31, S15, S23, B5)</p> <p>Articulates how they have identified personal and professional development opportunities for self and wider team. (B3)</p>	<p>N/A</p>
<p>Infrastructure asset management principles K6 K9 K13 K30 K35 S12 S20 B6</p>	<p>Justifies the need to prioritise compliance with regulatory and legislative asset management standards and company policies. (K6, K30, B6)</p> <p>Critically evaluates the use of horizon scanning techniques to inform sustainability development goals and the impact this has on asset investments. (K9, K13, S20)</p> <p>Articulates how they commission, lead and facilitate research and development activities to support innovation change and organisational development. (K35, S12)</p>	<p>Critically analyses the sustainability of asset management projects and investments. (K9)</p>

<p>Asset planning and delivery management K8 K10 K19 K27 S6 S7 S18 S21 S22</p>	<p>Articulates how they lead and manage the delivery of lifecycle activities and resources, strategies, and plans. (K8, S7)</p> <p>Critically analyses their choice of asset and investment management tools for the management of team resources and creating long term investment plans aligned with organisational objectives. (K27, S21, S22)</p> <p>Critically evaluates optimisation and prioritisation projects and programmes in relation to the infrastructure management environment with reference to maintenance and reliability engineering principles. (K10, K19, S6)</p>	<p>Evaluates their leadership and management of infrastructure asset management lifecycle activities and resources. (K8, S7)</p>
<p>Risk and resilience management K14 K16 S25</p>	<p>Evaluates the impact of contingency planning and performance monitoring of asset life cycle activities. (K14, K16, S25)</p>	<p>N/A</p>
<p>Financial and cost management K22 K28 S26</p>	<p>Articulates how they prioritise fiscal rigour, identifying sources and types of funding, employing balance sheets showing profit and loss, and evaluate the difference in these matters between companies. (K22, K28, S26)</p>	<p>Critically analyses the impact different types and sources of funding have on organisational activities. (K28)</p>
<p>Portfolio, project and innovation management K12 S11</p>	<p>Critically analyses their use of procurement and supply chain strategies and relationships and the longer-term impact of these on meeting business objectives within the overall organisational strategy. (K12, S11)</p>	<p>N/A</p>

## Overall EPA grading

The assessment methods contribute equally to the overall EPA pass grade. Performance in the EPA determines the apprenticeship grade of:

- fail
- pass
- distinction

An independent assessor must individually grade the: work based project with presentation and questioning and professional discussion underpinned by a portfolio of evidence in line with this EPA plan.

The EPAO must combine the final grades for the individual assessment methods to determine the overall EPA grade. If the apprentice fails one or more assessment methods, they will be awarded an overall EPA fail.

To achieve an overall pass, the apprentice must achieve at least a pass in all the assessment methods. To achieve an overall EPA distinction, the apprentice must achieve a distinction in both assessment methods.

To achieve an overall EPA distinction, the apprentice must achieve a distinction in both assessment methods.

Grades from individual assessment methods must be combined in the following way to determine the grade of the EPA overall.

<b>WORK BASED PROJECT WITH PRESENTATION AND QUESTIONING</b>	<b>PROFESSIONAL DISCUSSION UNDERPINNED BY A PORTFOLIO OF EVIDENCE</b>	<b>OVERALL GRADING</b>
Fail	Any grade	Fail
Any grade	Fail	Fail
Pass	Pass	Pass
Pass	Distinction	Pass
Distinction	Pass	Pass
Distinction	Distinction	Distinction

## Re-sits and re-takes

An apprentice who fails one or more assessment method(s) can take a re-sit or a re-take at their employer's discretion. The apprentice's employer needs to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, whereas a re-take does.

An apprentice should have a supportive action plan to prepare for a re-sit or a re-take.

The employer and EPAO agree the timescale for a re-sit or re-take. A re-sit is typically taken within 2 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 3 months of the EPA outcome notification.

Failed assessment methods must be re-sat or re-taken within a 6-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.

Re-sits and re-takes are not offered to an apprentice wishing to move from pass to a higher grade.

An apprentice will get a maximum EPA grade of pass for a re-sit or re-take, unless the EPAO determines there are exceptional circumstances.

## Roles and responsibilities

ROLES	RESPONSIBILITIES
Apprentice	<p>As a minimum, the apprentice should:</p> <ul style="list-style-type: none"> <li>· participate in and complete on-programme training to meet the KSBs as outlined in the occupational standard for a minimum of 12 months</li> <li>· complete the required amount of off-the-job training specified by the apprenticeship funding rules and as arranged by the employer and training provider</li> <li>· understand the purpose and importance of EPA</li> <li>· meet the gateway requirements</li> <li>· undertake the EPA</li> </ul>
Employer	<p>As a minimum, the apprentice's employer must:</p> <ul style="list-style-type: none"> <li>· select the EPAO and training provider</li> <li>· work with the training provider (where applicable) to support the apprentice in the workplace and to provide the opportunities for the apprentice to develop the KSBs</li> <li>· arrange and support off-the-job training to be undertaken by the apprentice</li> <li>· decide when the apprentice is working at or above the occupational standard and is ready for EPA</li> <li>· ensure that supporting evidence required at the gateway is submitted in line with this EPA plan</li> <li>· liaise with the training provider and EPAO to ensure the EPA is booked in a timely manner</li> <li>· Post-gateway, the employer must: <ul style="list-style-type: none"> <li>· confirm arrangements with the EPAO for the EPA (who, when, where) in a timely manner (including providing access to any employer-specific documentation as required, for example company policies)</li> <li>· ensure that the EPA is scheduled with the EPAO for a date and time which allows the opportunity for the apprentice to be assessed against the KSBs</li> <li>· remain independent from the delivery of the EPA</li> <li>· ensure the apprentice is given sufficient time away from regular duties to prepare for, and complete all post-gateway elements of the EPA, and that any required supervision during this time (as stated within this EPA plan) is in place</li> <li>· where the apprentice is assessed in the workplace, ensure that the apprentice has access to the resources used on a regular basis</li> </ul> </li> <li>· pass the certificate to the apprentice upon receipt from the EPAO</li> </ul>

EPAO	<p>As a minimum, the EPAO must:</p> <ul style="list-style-type: none"> <li>• conform to the requirements of this EPA plan and deliver its requirements in a timely manner</li> <li>• conform to the requirements of the register of end-point assessment organisations (RoEPAO)</li> <li>• conform to the requirements of the external quality assurance provider (EQAP) for this apprenticeship</li> <li>• understand the occupational standard</li> <li>• make the EPA contractual arrangements, including agreeing the price of the EPA</li> <li>• develop and produce assessment materials as detailed for each assessment method in this EPA plan</li> <li>• appoint qualified and competent independent assessors in line with the requirements of this EPA plan to conduct assessments and oversee their working</li> <li>• appoint administrators (and invigilators where required) to administer the EPA</li> <li>• provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading</li> <li>• provide information, advice, guidance and documentation to enable apprentices, employers and training providers to prepare for the EPA</li> <li>• confirm all gateway requirements have been met as quickly as possible</li> <li>• arrange for the EPA to take place, in consultation with the employer</li> <li>• ensure that the apprentice has access to the required resources and liaise with the employer to agree this if necessary, where the apprentice is not assessed in the workplace</li> <li>• develop and provide assessment recording documentation to ensure a clear and auditable process is in place for providing assessment decisions and feedback to stakeholders</li> <li>• have no direct connection with the apprentice, their employer or training provider in all instances; there must be no conflict of interest</li> <li>• have policies and procedures for internal quality assurance (IQA), and maintain records of IQA activity and moderation for external quality assurance (EQA) purposes</li> <li>• deliver induction training for independent assessors, and for invigilators and markers (where used)</li> <li>• undertake standardisation activity on this apprenticeship for an independent assessor before they conduct an EPA for the first time, if the EPA is updated and periodically (a minimum of annually)</li> <li>• manage invigilation of the apprentice to maintain security of the assessment in line with the EPAO's malpractice policy</li> <li>• verify the identity of the apprentice</li> <li>• use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard</li> </ul>
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Independent assessor	<p>As a minimum, an independent assessor must:</p> <ul style="list-style-type: none"> <li>· have the competence to assess the apprentice at the level of this apprenticeship and hold any required qualifications and experience in line with the requirements of the independent assessor as detailed in the IQA section of this EPA plan</li> <li>· understand the occupational standard and the requirements of this EPA</li> <li>· have, maintain and be able to evidence, up-to-date knowledge and expertise of the occupation</li> <li>· deliver the end-point assessment in-line with this EPA plan</li> <li>· comply with the IQA requirements of the EPAO</li> <li>· have no direct connection or conflict of interest with the apprentice, their employer or training provider; in all instances; there must be no conflict of interest</li> <li>· attend induction training</li> <li>· attend standardisation events when they start working for the EPAO, before they conduct an EPA for the first time and a minimum of annually for this apprenticeship</li> <li>· assess each assessment method, as determined by the EPA plan</li> <li>· assess the KSBs assigned to each assessment method, as shown in the mapping of KSBs to assessment methods in this EPA plan</li> <li>· make the grading decisions</li> <li>· record and report assessment outcome decisions, for each apprentice, following instructions and using assessment recording documentation provided by the EPAO, in a timely manner</li> <li>· use language in the development and delivery of the EPA that is appropriate to the level of the occupational standard</li> <li>· mark open (constructed) test answers accurately according to the EPAO's mark scheme and procedures</li> </ul>
Training provider	<p>As a minimum, the training provider must:</p> <ul style="list-style-type: none"> <li>· work with the employer and support the apprentice during the off-the-job training to provide the opportunities to develop the KSBs as listed in the occupational standard</li> <li>· conduct training covering the KSBs agreed as part of the Commitment Statement or the Individual Learning Plan</li> <li>· monitor the apprentice's progress during any training provider led on-programme learning</li> <li>· advise the employer, upon request, on the apprentice's readiness for EPA</li> <li>· remain independent from the delivery of the EPA</li> </ul>

## Reasonable adjustments

The EPAO must have reasonable adjustments arrangements for the EPA. This should include:

- how an apprentice qualifies for reasonable adjustment
- what reasonable adjustments may be made

Adjustments must maintain the validity, reliability and integrity of the EPA as outlined in this EPA plan.

## Internal quality assurance

Internal quality assurance refers to how the EPAO ensures valid, consistent and reliable EPA decisions. The EPAO must adhere to the requirements within the roles and responsibilities section and:

The EPAOs for this EPA must adhere to the requirements within the roles and responsibilities table and:

- appoint independent assessors who are competent to deliver the EPA and who:
- have recent relevant experience of the occupation or sector to at least occupational level 7 gained in the last 3 years or significant experience of the occupation or sector

## Value for money

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

- utilising digital remote platforms to conduct applicable assessment methods
- using the employer's premises
- conducting assessment methods on the same day

## Professional recognition

This apprenticeship aligns with:

Institute of Asset Management for Member

### KSB mapping table

KNOWLEDGE	ASSESSMENT METHODS
K1 Communication and influencing techniques and strategies, both written and oral.	Work based project with presentation and questioning
K2 Decision making principles and techniques used in Infrastructure asset management.	Work based project with presentation and questioning
K3 Learning and development strategies, including personal and professional development.	Professional discussion underpinned by a portfolio of evidence
K4 Change management models and the link to organisational culture.	Work based project with presentation and questioning
K5 How culture and organisation structure impact the delivery of required performance.	Professional discussion underpinned by a portfolio of evidence
K6 Asset management standards such as ISO55000, British Standard Institute (BSI), Publicly Available Specification (PAS) 55.	Professional discussion underpinned by a portfolio of evidence
K7 Stakeholder mapping and engagement approaches.	Work based project with presentation and questioning
K8 Asset life cycle activities such as acquire/create, operate, maintain, and renew/dispose.	Professional discussion underpinned by a portfolio of evidence

<p>K9</p> <p>Sustainability development goals and impact on asset investments.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K10</p> <p>Principles of maintenance and reliability engineering.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K11</p> <p>Portfolio management models and approaches.</p>	<p>Work based project with presentation and questioning</p>
<p>K12</p> <p>Procurement and supply chain strategies and delivery management.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K13</p> <p>The use of horizon scanning techniques in the infrastructure asset management environment.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K14</p> <p>Performance monitoring of asset life cycle activities.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K15</p> <p>Techniques to critically analyse asset management non-conformities such as causes and effects; Failure Mode Event/Effects Critically Analysis (FMEA/FMECA), and Root cause analysis.</p>	<p>Work based project with presentation and questioning</p>
<p>K16</p> <p>The application of contingency plans in the infrastructure asset management environment.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K17</p> <p>Risk management and its application to infrastructure asset management: risk assessment, quantification, mitigation, and impact.</p>	<p>Work based project with presentation and questioning</p>
<p>K18</p> <p>The application of system engineering and infrastructure models, tools, and frameworks e.g., Defra 4R's approach to resilience.</p>	<p>Work based project with presentation and questioning</p>

<p>K19</p> <p>The importance of prioritisation and multi criteria optimisation techniques and tools (prescriptive analytics).</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K20</p> <p>The application of decision-making frameworks.</p>	<p>Work based project with presentation and questioning</p>
<p>K21</p> <p>Application of uncertainty analysis on outcomes and outputs.</p>	<p>Work based project with presentation and questioning</p>
<p>K22</p> <p>Understanding of balance sheets, profit and loss, and the difference between companies.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K23</p> <p>Asset and project costing and valuation techniques; cost estimation (maintenance, operation, renewal, disposal), depreciation, whole life costing, and social, environmental, safety and reputational cost.</p>	<p>Work based project with presentation and questioning</p>
<p>K24</p> <p>The requirements for an integrated infrastructure asset and investment management enterprise-wide approach and the high-level user case.</p>	<p>Work based project with presentation and questioning</p>
<p>K25</p> <p>Information technology systems and processes such as asset registers, work management systems, word processing, spreadsheets, email, presentation.</p>	<p>Work based project with presentation and questioning</p>
<p>K26</p> <p>Critical data analysis and interpretation techniques; and data presentation techniques (charts, diagrams, and tables).</p>	<p>Work based project with presentation and questioning</p>
<p>K27</p> <p>Range of asset and investment management tools.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K28</p> <p>The sources and types of funding for infrastructure asset management activities.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>

<p>K29</p> <p>Problem solving techniques and their application.</p>	<p>Work based project with presentation and questioning</p>
<p>K30</p> <p>Regulatory, legislative and policy/standards requirements such as data protection, cyber security, Environmental emissions limits, Pressure Systems Safety Regulations (PSSR), Construction, Design and Management Regulations (CDM), and Control of Major Accident Hazards (COMAH).</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K31</p> <p>Principles of policy and strategic development in Infrastructure asset management.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K32</p> <p>The different stages of projects including the principles of planning, scheduling, and sequencing.</p>	<p>Work based project with presentation and questioning</p>
<p>K33</p> <p>The ways of managing, influencing, and controlling outcomes through the application of project management techniques.</p>	<p>Work based project with presentation and questioning</p>
<p>K34</p> <p>Different, inclusive leadership styles and models, how to develop diverse teams and support people using coaching and mentoring.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>K35</p> <p>Commissioning and facilitating research and development activities.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>

<b>SKILL</b>	<b>ASSESSMENT METHODS</b>
<p>S1</p> <p>Apply a consistent approach to asset risk management, risk assessed inspection, and maintenance programmes.</p>	<p>Work based project with presentation and questioning</p>
<p>S2</p> <p>Use quantitative methods in the research, critical analysis and interpretation of complex data.</p>	<p>Work based project with presentation and questioning</p>
<p>S3</p> <p>Adapt communication technique when communicating with others.</p>	<p>Work based project with presentation and questioning</p>
<p>S4</p> <p>Specify and influence data and information requirements.</p>	<p>Work based project with presentation and questioning</p>
<p>S5</p> <p>Use decision making principles and techniques in the infrastructure asset management environment.</p>	<p>Work based project with presentation and questioning</p>
<p>S6</p> <p>Optimise and prioritise projects and programmes in a portfolio of work in the infrastructure asset management environment.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S7</p> <p>Lead and manage the optimum delivery of life cycle activities and resources.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S8</p> <p>Apply systems engineering models, tools, and frameworks within the infrastructure asset management environment.</p>	<p>Work based project with presentation and questioning</p>
<p>S9</p> <p>Develop and evaluate options within a decision-making framework.</p>	<p>Work based project with presentation and questioning</p>
<p>S10</p> <p>Monitor and report on the performance of asset and infrastructure asset management.</p>	<p>Work based project with presentation and questioning</p>

<p>S11</p> <p>Procure, build, and manage relationships with the supply chain.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S12</p> <p>Lead, commission, and facilitate research and development activities, innovation, change and organisational development.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S13</p> <p>Apply leadership skills.</p>	<p>Work based project with presentation and questioning</p>
<p>S14</p> <p>Develop and promote proposals and business cases.</p>	<p>Work based project with presentation and questioning</p>
<p>S15</p> <p>Identify and manage stakeholder needs and expectations.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S16</p> <p>Identify learning requirements and improvement opportunities for self and others.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S17</p> <p>Lead and encourage collaboration across the asset management life cycle stages.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S18</p> <p>Implement and create infrastructure asset management strategies and plans.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>S19</p> <p>Challenge and provide feedback: colleagues and stakeholders.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>

S20 Use horizon scanning techniques in the asset management environment.	Professional discussion underpinned by a portfolio of evidence
S21 Manage team resources to deliver the infrastructure asset management resource strategy.	Professional discussion underpinned by a portfolio of evidence
S22 Create long term investment plans aligned with organisational objectives.	Professional discussion underpinned by a portfolio of evidence
S23 Create, implement, and monitor Infrastructure asset management policy and strategic plans.	Professional discussion underpinned by a portfolio of evidence
S24 Manage the balance between quality, costs, and time.	Work based project with presentation and questioning
S25 Apply contingency planning in Infrastructure asset management plans.	Professional discussion underpinned by a portfolio of evidence
S26 Demonstrate fiscal rigour in Infrastructure asset management plans.	Professional discussion underpinned by a portfolio of evidence
S27 Use project management and planning techniques. Monitor progress towards project goals and identify corrective actions.	Work based project with presentation and questioning

<b>BEHAVIOUR</b>	<b>ASSESSMENT METHODS</b>
<p>B1</p> <p>Takes accountability and ownership of their tasks and workload.</p>	<p>Work based project with presentation and questioning</p>
<p>B2</p> <p>Role models collaborative and inclusive working across organisational and cultural boundaries, driving diversity.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>B3</p> <p>Seeks continuous professional development opportunities for self and wider team.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>B4</p> <p>Acts in a professional manner with integrity and confidentiality.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>B5</p> <p>Champions infrastructure asset management and influences its development.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>
<p>B6</p> <p>Committed to compliance with legislation, asset management standards and company policies.</p>	<p>Professional discussion underpinned by a portfolio of evidence</p>

## Mapping of KSBs to grade themes

### Work based project with presentation and questioning

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
Leadership and management K1 K2 K4 S3 S13 B1	Communication and influencing techniques and strategies, both written and oral. (K1)  Decision making principles and techniques used in Infrastructure asset management. (K2)  Change management models and the link to organisational culture. (K4)	Adapt communication technique when communicating with others. (S3)  Apply leadership skills. (S13)	Takes accountability and ownership of their tasks and workload. (B1)
Infrastructure asset management principles, planning and delivery K7 K15 K20 K24 K29 S5 S9 S14	Stakeholder mapping and engagement approaches. (K7)  Techniques to critically analyse asset management non- conformities such as causes and effects; Failure Mode Event/Effects Critically Analysis (FMEA/FMECA), and Root cause analysis. (K15)  The application of decision-making frameworks. (K20)  The requirements for an integrated infrastructure asset and investment management enterprise-wide approach and the high-level user case. (K24)  Problem solving techniques and their application. (K29)	Use decision making principles and techniques in the infrastructure asset management environment. (S5)  Develop and evaluate options within a decision- making framework. (S9)  Develop and promote proposals and business cases. (S14)	None

<p>Risk and resilience management K17 K18 K21 S1 S8 S10</p>	<p>Risk management and its application to infrastructure asset management: risk assessment, quantification, mitigation, and impact. (K17)</p> <p>The application of system engineering and infrastructure models, tools, and frameworks e.g., Defra 4R's approach to resilience. (K18)</p> <p>Application of uncertainty analysis on outcomes and outputs. (K21)</p>	<p>Apply a consistent approach to asset risk management, risk assessed inspection, and maintenance programmes. (S1)</p> <p>Apply systems engineering models, tools, and frameworks within the infrastructure asset management environment. (S8)</p> <p>Monitor and report on the performance of asset and infrastructure asset management. (S10)</p>	<p>None</p>
<p>Financial and cost management K23 S24</p>	<p>Asset and project costing and valuation techniques; cost estimation (maintenance, operation, renewal, disposal), depreciation, whole life costing, and social, environmental, safety and reputational cost. (K23)</p>	<p>Manage the balance between quality, costs, and time. (S24)</p>	<p>None</p>
<p>Digital asset management K25 K26 S2 S4</p>	<p>Information technology systems and processes such as asset registers, work management systems, word processing, spreadsheets, email, presentation. (K25)</p> <p>Critical data analysis and interpretation techniques; and data presentation techniques (charts, diagrams, and tables). (K26)</p>	<p>Use quantitative methods in the research, critical analysis and interpretation of complex data. (S2)</p> <p>Specify and influence data and information requirements. (S4)</p>	<p>None</p>

<p>Portfolio, project and innovation management</p> <p>K11 K32 K33</p> <p>S27</p>	<p>Portfolio management models and approaches. (K11)</p> <p>The different stages of projects including the principles of planning, scheduling, and sequencing. (K32)</p> <p>The ways of managing, influencing, and controlling outcomes through the application of project management techniques. (K33)</p>	<p>Use project management and planning techniques. Monitor progress towards project goals and identify corrective actions. (S27)</p>	<p>None</p>
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## Professional discussion underpinned by a portfolio of evidence

KSBS GROUPED BY THEME	KNOWLEDGE	SKILLS	BEHAVIOUR
<p>Leadership and management K3 K5 K31 K34 S15 S16 S17 S19 S23 B2 B3 B4 B5</p>	<p>Learning and development strategies, including personal and professional development. (K3)</p> <p>How culture and organisation structure impact the delivery of required performance. (K5)</p> <p>Principles of policy and strategic development in Infrastructure asset management. (K31)</p> <p>Different, inclusive leadership styles and models, how to develop diverse teams and support people using coaching and mentoring. (K34)</p>	<p>Identify and manage stakeholder needs and expectations. (S15)</p> <p>Identify learning requirements and improvement opportunities for self and others. (S16)</p> <p>Lead and encourage collaboration across the asset management life cycle stages. (S17)</p> <p>Challenge and provide feedback: colleagues and stakeholders. (S19)</p> <p>Create, implement, and monitor Infrastructure asset management policy and strategic plans. (S23)</p>	<p>Role models collaborative and inclusive working across organisational and cultural boundaries, driving diversity. (B2)</p> <p>Seeks continuous professional development opportunities for self and wider team. (B3)</p> <p>Acts in a professional manner with integrity and confidentiality. (B4)</p> <p>Champions infrastructure asset management and influences its development. (B5)</p>

<p>Infrastructure asset management principles</p> <p>K6 K9 K13 K30 K35</p> <p>S12 S20</p> <p>B6</p>	<p>Asset management standards such as ISO55000, British Standard Institute (BSI), Publicly Available Specification (PAS) 55. (K6)</p> <p>Sustainability development goals and impact on asset investments. (K9)</p> <p>The use of horizon scanning techniques in the infrastructure asset management environment. (K13)</p> <p>Regulatory, legislative and policy/standards requirements such as data protection, cyber security, Environmental emissions limits, Pressure Systems Safety Regulations (PSSR), Construction, Design and Management Regulations (CDM), and Control of Major Accident Hazards (COMAH). (K30)</p> <p>Commissioning and facilitating research and development activities. (K35)</p>	<p>Lead, commission, and facilitate research and development activities, innovation, change and organisational development. (S12)</p> <p>Use horizon scanning techniques in the asset management environment. (S20)</p>	<p>Committed to compliance with legislation, asset management standards and company policies. (B6)</p>
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<p>Asset planning and delivery management K8 K10 K19 K27 S6 S7 S18 S21 S22</p>	<p>Asset life cycle activities such as acquire/create, operate, maintain, and renew/dispose. (K8)</p> <p>Principles of maintenance and reliability engineering. (K10)</p> <p>The importance of prioritisation and multi criteria optimisation techniques and tools (prescriptive analytics). (K19)</p> <p>Range of asset and investment management tools. (K27)</p>	<p>Optimise and prioritise projects and programmes in a portfolio of work in the infrastructure asset management environment. (S6)</p> <p>Lead and manage the optimum delivery of life cycle activities and resources. (S7)</p> <p>Implement and create infrastructure asset management strategies and plans. (S18)</p> <p>Manage team resources to deliver the infrastructure asset management resource strategy. (S21)</p> <p>Create long term investment plans aligned with organisational objectives. (S22)</p>	<p>None</p>
<p>Risk and resilience management K14 K16 S25</p>	<p>Performance monitoring of asset life cycle activities. (K14)</p> <p>The application of contingency plans in the infrastructure asset management environment. (K16)</p>	<p>Apply contingency planning in Infrastructure asset management plans. (S25)</p>	<p>None</p>
<p>Financial and cost management K22 K28 S26</p>	<p>Understanding of balance sheets, profit and loss, and the difference between companies. (K22)</p> <p>The sources and types of funding for infrastructure asset management activities. (K28)</p>	<p>Demonstrate fiscal rigour in Infrastructure asset management plans. (S26)</p>	<p>None</p>

Portfolio, project and innovation management K12 S11	Procurement and supply chain strategies and delivery management. (K12)	Procure, build, and manage relationships with the supply chain. (S11)	None
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