

# Level 6: End-Point Assessment Plan

## Professional Economist

### Integrated Degree Apprenticeship

#### 1.0 Overview

This end-point assessment plan (EPA) is to accompany the Professional Economist level 6 apprenticeship standard.

The core responsibilities of a Professional Economist are to produce rigorous, relevant and impactful economic analysis to drive decision-making at all levels – from operational decisions to strategic business and policy decisions.

Professional economists usually work in teams, and at this level the apprentice will typically be working for more a senior economist as part of a team – for example by collating data, performing analysis of trends, writing briefing reports, analysing market share and size of companies, and presenting this analysis. They will also be required to impart their findings in a clear and concise way to other colleagues from different disciplines. Completion of this apprenticeship will enable individuals to work across employers of professional economists in the private, public and third sectors.

This is an integrated undergraduate degree level apprenticeship, which incorporates on-programme academic and workplace learning and assessment with an independent end-point assessment to test the knowledge skills and behaviours detailed in the standard. The awarding EPAO will be responsible for the on-programme and end-point assessment requirements. It will typically take four years to complete with the EPA taken in the last twelve months. Performance in the EPA will count towards the overall degree classification. Apprentices cannot successfully complete the undergraduate degree without passing the EPA. Performance in the EPA will determine the apprenticeship grade of distinction, merit, pass or fail.

The EPA should only start once the employer is satisfied that the apprentice is consistently working at, or above, the level set out in the standard, the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to the end-point assessment organisation (EPAO). As a gateway requirement, apprentices must successfully pass 300 on-programme credits (or equivalent - see footnote 1, page 3) and have had a dissertation outline agreed with their employer, academic representative and the independent assessor.

This EPA has been designed to test occupational competence. A panel is used to simulate the work environment, where economists will be expected to relay complex information to a variety of audiences (e.g. technical experts and non-technical experts) in a variety of ways (e.g. an oral presentation and a written report). The make-up of the panel has been set to include a professional economist, an academic and the independent assessor. The professional economist and academic bring different experiences and perspectives which will help support the independent assessor in making their independent decision when testing the knowledge, skill and behaviours (KSBs).

A dissertation is included in the EPA to ensure candidates can undertake work that requires both research to be carried out and in-depth knowledge to be built up. An applied analytical exercise forms part of the assessment to ensure that apprentices can give advice on a broader range of topics, with limited information and time, again simulating the range of situations likely to occur in the workplace.

The remaining aspects are included in the EPA to replicate a competency-based assessment centre, modelled on the typical work professional economists do. This approach has been designed to ensure apprentices can demonstrate competence and will have the skills to enable them to compete at competency-based assessment centres against traditional graduates, so they can move freely throughout the sector. It will also give employers confidence that the apprentice is competent as they will recognise the approach, which is tried and tested across the sector and has been refined over many years.

This plan details EPA requirements and will be of interest to assessors, apprentices, employers and universities.

## 2.0 Apprenticeship Structure

The undergraduate degree must consist of 360 credits or equivalent<sup>1</sup>. 120 credits must be at level 6, with 300 credits delivered on-programme and 60 through the EPA.

Universities will design on-programme training and assessment to develop the knowledge, skills and behaviours required in the published standard. It is recommended that when doing so they work with employers. In addition, employers should ensure that the working environment allows the apprentice the opportunity to demonstrate, reinforce and apply their learning.

Figures 1 and 2 (below) are two examples of how the on-programme training could be delivered. Figure 1 is an illustration of a reasonably traditional approach to academic study, proposing that the apprentices attend on-campus lectures regularly, particularly in the first year. Figure 2 is an illustration of a distance learning approach. This facilitates the

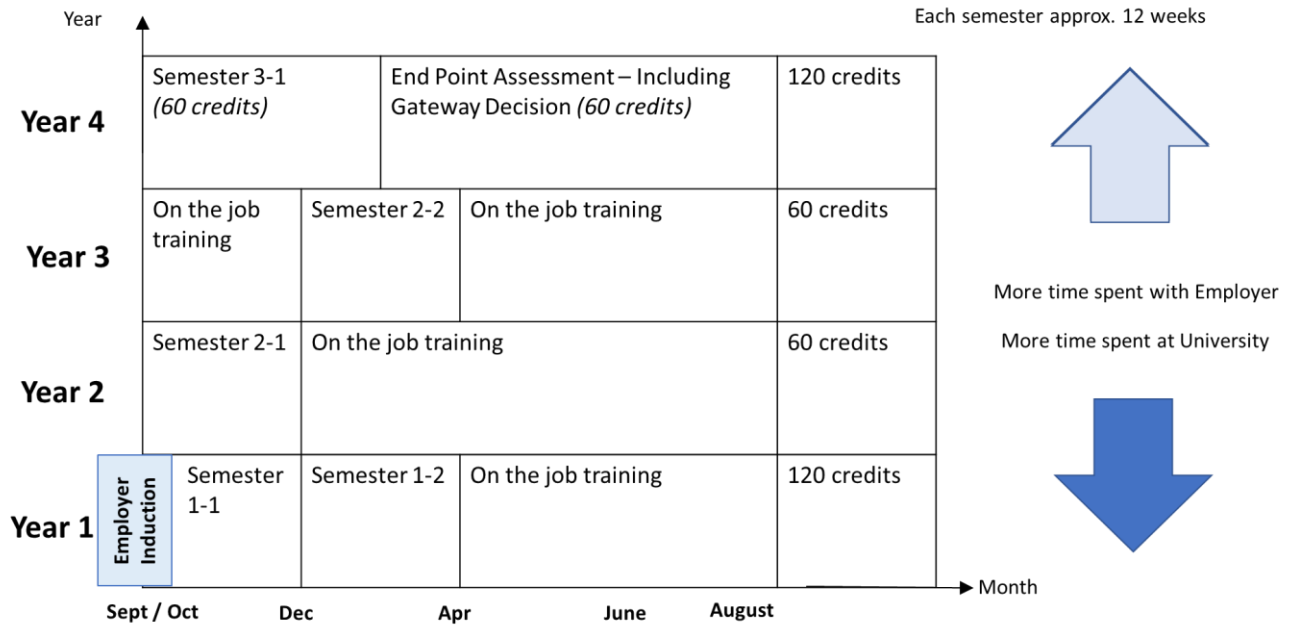
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<sup>1</sup> The example structures are expressed using the traditional credit system that is the industry standard for UK economics degrees. Some institutions use different systems. These institutions would not be precluded from delivering this apprenticeship; there would merely be an expectation that the credits would be delivered pro-rata i.e. 16.7% to be assessed by the EPA with the remainder on programme.

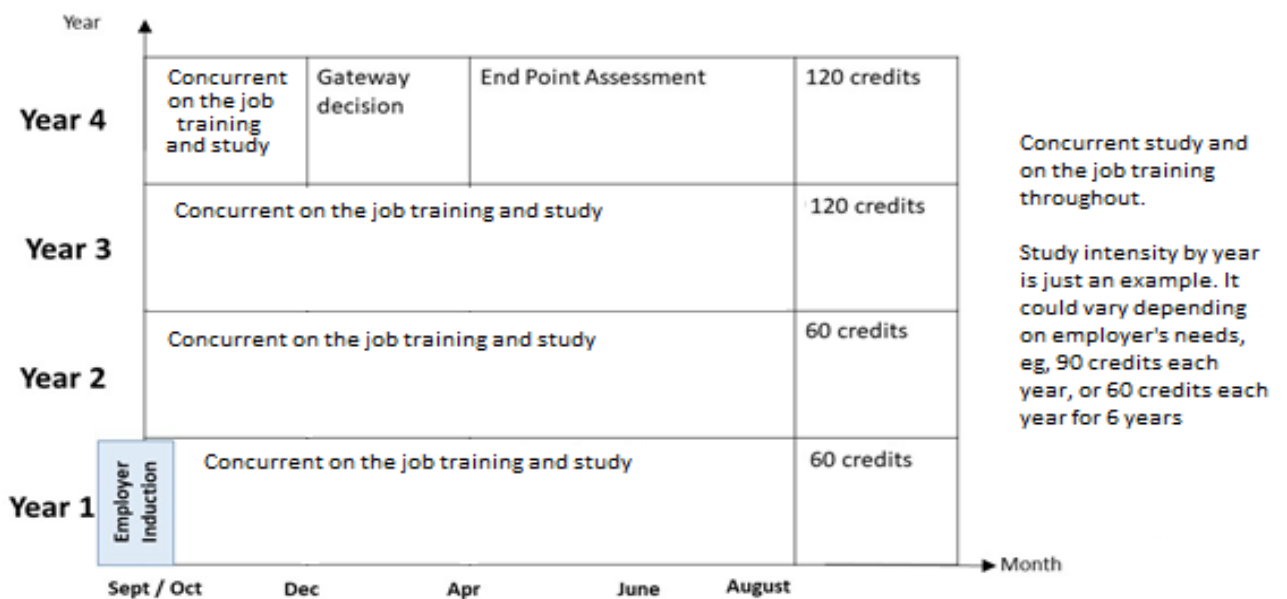
apprentice being present in the workplace on a day to day basis over the duration of the apprenticeship.

These figures are included as examples to show the extremes of approaches to delivering the on-programme training elements. Different approaches will be better suited to different employers, universities and apprentices. These example approaches should not restrict universities or employers who want to be innovative when agreeing delivery structures.

**Figure 1:** Example apprenticeship structure illustrating an on-campus approach to on-programme learning



**Figure 2:** Example apprenticeship structure illustrating a distance learning approach to on-programme learning



### 3.0 End-Point Assessment Gateway

The apprentice's employer must decide when the apprentice is eligible to enter the EPA. The employer may choose to seek the view of the Training Provider (the University) but the decision is the employers alone.

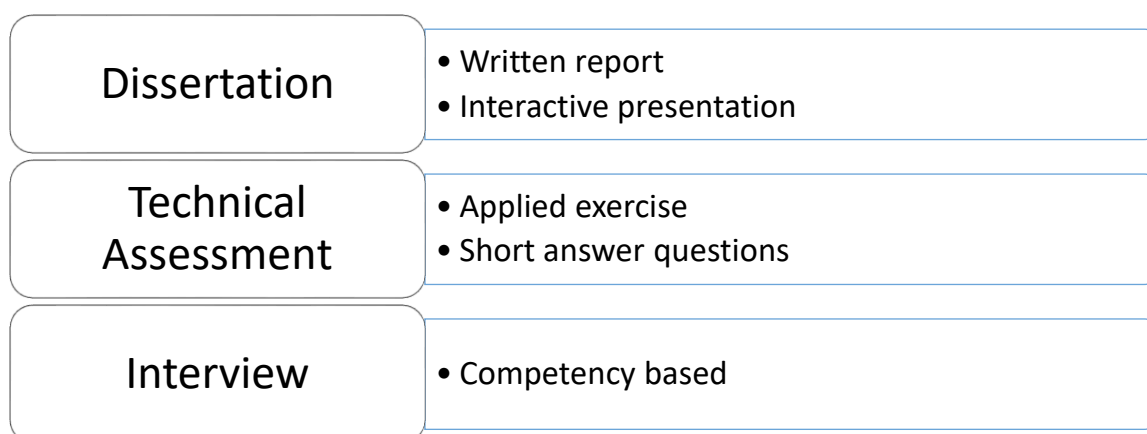
Prior to taking the EPA the employer must be satisfied that the apprentice meets the following criteria:

- Apprentices without level 2 English and Maths on entry have achieved this level prior to taking the EPA. For those with an education, health and care plan or a legacy statement, the apprenticeships English and Maths minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.
- The apprentice is consistently working at, or above, the level set out in the standard, the pre-requisite gateway requirements for EPA have been met and that they can be evidenced to an EPAO.
- The apprentice has completed the formal academic learning as defined by the EPAO, equating to 300 on-programme credits.
- The apprentice has sufficient evidence to demonstrate competence in all core knowledge, skills and behaviours.
- The apprentice has a dissertation outline agreed with their employer, academic supervisor and independent examiner.

Although the apprentice should only be recommended for EPA when they are ready, employers and EPAOs should have a remediation processes in place to support any apprentice who fails to meet the eligibility criteria to enter EPA.

### 4.0 End-Point Assessment

**Figure 3:** Synopsis of end-point assessment methods.



End-point assessment methods are summarised in figure three above and will be completed over a maximum twelve-month period to accommodate work scheduling and cost effective planning of resources. Moderation, EPAO quality assurance, and degree award processes must be concluded within 24-months of apprentice passing the EPA gateway.

The EPA will deliver Apprentices that receive either an overall pass, merit or distinction 60 credits to their Integrated Degree.

## 5.0 End-Point Assessment Organisation – Roles and Responsibilities

Professional economists are respected experts whose judgements and recommendations help to shape and direct the organisations in which they work. As such it is vital that competence is thoroughly assessed, as their judgements are required to be reliable, empirically evidenced and robust.

As this is an integrated apprenticeship, the EPA will be delivered by the EPAO that is awarding the degree. Universities must develop and deliver the EPA as defined in this plan, ensuring independence as described. Universities must be approved to deliver the EPA for this standard and be on the Skills Funding Agency Register of EPA organisations (RoEPA). In this context, universities are termed the EPAO.

EPAOs must appoint appropriately qualified and experienced staff to conduct EPAs as detailed below.

**Table 1.** Roles and Responsibilities of End-point Assessment Organisations Approved and Appointed Staff

Title	Criteria	Role
Academic representative of EPAO board of examiners	<ul style="list-style-type: none"> <li>• Minimum level: senior lecturer in economics</li> <li>• Employed by the examining EPAO</li> <li>• Experience of examining dissertations, appointing academic economists, admitting students onto post-graduate programmes expected.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides assurance and support to the independent examiner.</li> <li>• Supervises the production of the dissertation written report.</li> <li>• Attends and engages as a panel member for both the interactive dissertation presentation and the competency based interview.</li> </ul>
Independent assessor	<ul style="list-style-type: none"> <li>• Independent of the EPAO – No conflict of interest.</li> <li>• Experience of teaching and examining on similar undergraduate programmes, using a range of assessment methods, examining dissertations, interviewing students and running a board of examiners expected.</li> <li>• Holds a minimum of a degree (or equivalent) qualification in economics.</li> </ul>	<ul style="list-style-type: none"> <li>• Attends and is accountable for scoring all aspects of the technical assessment and competency based interview.</li> <li>• Accountable for marking the dissertation including attending and marking the interactive dissertation presentation.</li> <li>• Accountable for grading all aspects of the EPA, supported by the professional economist and academic representative, who will provide assurance that the work is</li> </ul>

		<p>the apprentice's own, and will help simulate the work environment by providing a diverse panel to probe different aspects of work presented.</p> <ul style="list-style-type: none"> <li>• The EPAO will find and appoint professional economists and academic representatives to support the independent assessor. The independent assessor will be accountable for ensuring that they are suitable and requesting replacements as necessary.</li> </ul>
Professional economist	<ul style="list-style-type: none"> <li>• Professional economist nominated by the apprentice's employer and approved by the independent assessor.</li> <li>• Holds a minimum of a degree (or equivalent) qualification in economics.</li> <li>• Holds a senior economist role or equivalent, and has experience of appraising and / or appointing early career professional economists.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides assurance and support to the independent assessor.</li> <li>• Reads at least the executive summary of the dissertation.</li> <li>• Attends and engages as a panel member for both the interactive dissertation presentation and the competency based interview.</li> </ul>

## 6.0 End-Point Assessment Methods

The end-point assessment consists of three assessment methods: dissertation, technical assessment and competency based interview. **Annex A** details which method is assessing which Knowledge, Skill and Behaviour.

### 6.1 Dissertation

The dissertation assessment method consists of a dissertation written report and an interactive dissertation presentation on the findings of that report.

Time: The dissertation written report will usually be completed within the first four months of the EPA period, with a maximum of eight months allowed. Once completed, the dissertation written report should be passed in digital format to the independent assessor typically three weeks before the date of the presentation. The presentation should take 45 minutes (+/- 10% tolerance) and must be completed and passed within the 12 month EPA period.

Weighting: The dissertation is worth 30 credits (50% of the EPA).

Assessors involved: The academic representative will supervise the development of the dissertation written report. The independent assessor will mark the written dissertation report. The independent assessor, academic representative and professional economist will all engage as panel members for the interactive dissertation presentation. The professional economist must have at least read the Executive Summary of the dissertation written report prior to this. The independent assessor will have the final say on all marking.

Rationale for this assessment method: By this assessment, apprentices should be able to understand how economists approach questions and construct persuasive arguments supported by theory and empirical evidence. Apprentices will develop the ability to frame a research question, identify and apply an appropriate model to address their question, develop an appropriate data set, select appropriate ways to test a specific hypothesis or answer a specific question, use their results to create a scholarly argument, present their research orally to an audience and in a written form.

The interactive presentation aspect is designed to test the apprentice's ability to demonstrate the depth of their understanding of their research question, and communicate their research to an audience of other professional economists. Assessors can probe the candidate's understanding of their research, including the underlying theory, the analytical approach taken, and the implications of their results. It will also assure the panel that the dissertation is the apprentice's own work.

Detailed requirements: The dissertation should be based on a well-formulated research question, which should be agreed between the EPAO, employer, independent assessor and the apprentice. This research question should involve applied data analysis and lend itself to the candidate being able to satisfy the detailed requirements below:

- It must be an applied piece of economic analysis that involves using and manipulating data. Where practicable this should relate to the apprentice's work environment.
- The following elements must be included in the dissertation written report: Executive Summary, Introduction / Rationale, Literature Review, Data and Methodology, Results, Conclusion.
- The academic representative will supervise the development of the dissertation, and will log the title and scope of the dissertation with the independent assessor, detailing the nature of the relationship with the standard and demonstrating how it addresses the intended coverage. The independent assessor will then confirm their approval of this as a suitable topic for a dissertation. Should the topic be seen to be insufficiently challenging or unsuitable in relation to the apprenticeship standard, the apprentice, in discussion with the academic representative, and employer, will be asked to amend, develop further or change the focus to provide an appropriate coverage of the standard. Approval will signify the start of the EPA period.
- There must be an executive summary of not more than 800 words, which forms part of the 8000-overall word limit that will also include all appendices, annexes, tables etc. No tolerance in excess of 8000 words will be allowed and any words over this will not form part of the mark, although shorter documents can be submitted.
- The independent assessor will determine whether the written dissertation meets the criteria for the apprentice to proceed to the interactive presentation stage of the assessment of the dissertation. In reaching this decision, the independent assessor will review the written dissertation, together with the report and the moderated mark awarded for the written dissertation through the EPAO's internal marking and moderating process.
- If the independent assessor deems the written report to be of insufficient quality, the apprentice will have the opportunity to review and amend the written report and re-submit (see section 6.4 below).
- The candidate will be informed of the need to produce the interactive presentation and provided with an assessment date with a minimum of a two-week lead time.
- The interactive dissertation presentation must cover the following elements of the research: the process of determining a research question, a review of existing literature, how they decided on the analytical approach, their results and the implications of these results. Candidates should be free to use whatever medium they wish, such as a poster, slides, or handouts. The interactive dissertation presentation will be given in an interview-like environment, free from distractions (i.e. just presenting to the three assessors). The assessors should not see the interactive dissertation presentation materials beforehand. Ordinarily assessors will remain silent throughout the initial 25 minutes of the interactive dissertation presentation to enable the candidate to provide a synopsis of their work. The Assessors should use the remaining 20 minutes allocated to ask questions, covering: 1) why the candidate chose the topic of research and how they formulated the question – to test their professional scepticism, 2) their understanding of the theory and analytical approach, 3) a broader discussion about what their results means in an applied, real-world context. Assessors should also use their judgement to



probe the candidate on any aspect that was not clear from the dissertation written report or interactive dissertation presentation. Candidates should be allowed to refer to their dissertation written report.

- There is no preparatory work prior to the interactive dissertation presentation for assessors other than having read the dissertation written report (the professional economist need only read the executive summary).

**Grading:** The independent assessor marks the dissertation assessment method holistically. That is, they consider both the written report and the interactive dissertation presentation in the round, using the grading criteria found in **Annex D**

## 6.2 Technical Assessment

This is the second method in the EPA. It consists of an exam with two parts: an applied exercise and a short answer question section.

**Rationale for this assessment method:** This exam is designed to test a broader range of knowledge, skills, and behaviours than the more in-depth dissertation assessment method. This will simulate the day-to-day work of professional economists, and ensure an ability to apply a breadth of knowledge in a variety of settings where professional economists could find themselves working. This will ensure competence across the breadth of professional economist jobs.

**Time:** This is a single two-hour exam, in two consecutive parts. Candidates should be advised to spend one hour on the applied exercise and one hour on the short answer question section.

**Weighting:** The technical assessment is worth 15 credits (25% of the EPA).

**Assessors involved:** The Independent Examiner is accountable for invigilation (which can be delegated – see ‘Conditions’ below) and marking the exam (which cannot be delegated).

**Conditions:** The entire exam should be undertaken in traditional exam conditions i.e. in an exam hall setting, on paper and be closed book. It should be invigilated either by the independent assessor or someone they appoint to do so on their behalf. The venue should typically be provided by the EPAO to keep costs to a minimum.

End-point assessment organisations must develop their own questions and materials based on the information and examples given in this EPA. End-point assessment organisations must always hold a minimum of two sets of questions and materials, to allow for one set to be used for first end-point assessments, and a second set should a re-sit be required. In the unlikely event that subsequent resits should be required the EPAO must develop further papers. All papers will be refreshed each year and must be kept secure with candidates having no access to any of the materials prior to the exam.

## **Exam Section A - Applied Exercise**

**Rationale for this element of the exam:** This is designed to simulate the time-pressured work that professional economists might typically do, where they must synthesise evidence from a variety of sources to give a considered assessment of a situation to a client, whether in the private or public sector.

**Detailed requirements:** This element of the exam should work as follows:

- The candidate is given a commission in the form of an email (provided on paper) from a client or manager, asking them to consider a certain issue and advise a course of action. This could cover a range of topics, such as:
  - A business-oriented question, e.g. “What is your assessment on the future price of mobile phones?”; “How will the depreciation of sterling affect our business?”
  - A policy-focused question, e.g. “How should we encourage consumers to switch electricity supplier?”; “Give me an overview of the macro economy, and whether you think interest rates will rise next month”
- They will then be provided with a pack of information containing nine further elements: eight pieces of research, surveys, or articles; one data table that they can analyse. Therefore, no prior knowledge of the question at hand is needed; rather, the task tests their skills in synthesising evidence, prioritisation, and applying their economics knowledge to the question.
- The data provided should be limited to one data table – for example, representing a time series of prices, or raw statistics on demographic breakdowns. This will allow the candidate to turn these into index numbers or percentages, or to represent them in a chart to include in their report.
- The candidate will then have to write a report summarising the evidence and reaching a conclusion. This report should be written for a lay audience, as the client or manager requesting the advice will not always be an economist.
- The length of the written report is up to the candidate – this task will test their planning and prioritisation skills, so assessors can judge whether their report represents a good use of the time available (the Independent Assessor will consider this when grading applied economic and data analysis (see grading descriptors)).

## **Exam Section B - Short Answer Questions**

**Rationale for this section of the exam:** This is designed to test the apprentice’s ability to draw on basic economic theory and principles and apply these to give a short answer to a broad range of questions. This will allow the apprentice to demonstrate their ability to flexibly apply economic principles across a range of questions which could arise across employing organisations.

**Detailed requirements:** This element of the exam should work as follows:

- There will be 10 questions in total. These will be split into three sections;
  - microeconomic – containing four questions,

- macroeconomic – containing four questions,
- econometric or quantitative – containing two questions.
- Questions are required to be structured to elicit answers that will typically be less than 200 words. Assessors will have a marking guide to award marks per question. An example set of questions is given in **Annex B** at the end of this document.
- Candidates must answer five questions in total. Candidates must ensure their selection includes questions from all three sections of the paper (microeconomics, macroeconomics and econometric or quantitative) to demonstrate sufficient breadth of knowledge to demonstrate competence.

**Grading:** The Independent Assessor marks the Technical Assessment holistically. That is, they consider the Apprentices' responses to the two exam elements in the round using the grading criteria found in **Annex D**.

### 6.3 Competency Based Interview

This is the third and final method of the EPA

**Time:** The interview should last on average 50 minutes (+/- 10% tolerance either side).

**Weighting:** The competency based interview is worth 15 credits (25% of the EPA).

**Rationale for this assessment method:** Competency based interviews are systematic ways of gathering evidence on a candidate's skills and behaviours, and are successfully used across a variety of employers.

**Assessors involved:** The independent assessor, academic representative and professional economist will all engage as panel members for the competency based interview. The independent assessor will have the final say on all marking.

**Detailed requirements:** Candidates will be asked questions relating to their behaviour in specific circumstances, which they then need to back up with specific examples. The interviewers will then dig further into the examples by asking for further details about the candidate's behaviour or skills. There should be five pre-prepared questions, each covering one of the skills / behaviours being tested. This interview must take place face to face and must be undertaken in an appropriate interview environment free from distractions. There is no mandatory preparation but the apprentice can bring notes. Candidates will not receive questions in advance but will be given prior notice of the competencies that will be assessed.

The independent assessor will record the apprentices' answers on a template supplied by the EPAO. EPAOs must develop 'practical specification banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure they, and the specifications they contain, are fit for purpose. An example set of questions is given in **Annex C** at the end of this document.

**Grading:** Grading descriptors can be found in **Annex D**.

## 6.4 Re-sits / re-takes

Each of the three assessment methods contained in this plan must be completed within a maximum period of 12 months.

A re-sit is where an apprentice is ready to take the EPA again without new learning. A re-take is where additional learning is first required. Re-sits/re-takes may not be used to advance an existing pass grade. The number of permissible re-sits/re-takes is for individual employers to determine. However, any re-sit/retake, unless taken in exceptional circumstances, will be capped at a pass.

Exceptional circumstances are for the independent assessor to determine, but will typically be situations beyond the Apprentices control, such as ill health.

Apprentices who do not meet any of the timescales for either improving or resitting their work must retake the entire EPA. With regard to the dissertation, on such occasion that the independent assessor considers the written report is not of sufficient quality for the presentation to go ahead, the apprentice will be given one opportunity (still within the maximum 12-month timeframe for all assessment methods) to improve their written report so that the presentation may go ahead. In such circumstances, the inadequate written report is not graded. Therefore, on second submission of the written report, the apprentice may still achieve a fail/pass/merit/distinction.

## 7 Grading

### 7.1 Degree Grading

The degree will be classified in accordance with the EPAO integrated degree regulations. Where a pass or above is awarded, the EPA will represent 60 credits (or equivalent - see footnote 1, page 3) towards the final degree classification.

### 7.2 Apprenticeship Grading

Performance in the EPA will determine the apprenticeship grade of distinction, merit, pass or fail. Each assessment method will be graded distinction, merit, pass or fail. An apprenticeship pass award represents minimum competence against the standard.

**Annex D** outlines the scoring criteria that will be applied for each assessment method. Detailed guidance will be developed by end-point assessment organisations, based on the following principles:

- All pass criteria need to be reached; in achieving this, the apprentice will be demonstrating a minimum competence level in all knowledge, skills and behaviours in the standard
- Merit demonstrates a higher level of competence than the pass criteria
- Distinction builds on all pass and merit criteria

Individual assessment method grades will be collated using table 2 below to produce an overall EPA / Apprenticeship grade.

**Table 2. How assessment method grades collate to an overall EPA/Apprenticeship grade**

<b>Dissertation Grade</b>	<b>Technical Assessment Grade</b>	<b>Competency Based Interview Grade</b>	<b>EPA/Apprenticeship Grade</b>
Fail	Fail	Fail	<i>Fail</i>
Fail	Pass or above	Fail	<i>Fail</i>
Fail	Fail	Pass or above	<i>Fail</i>
Fail	Pass or above	Pass or above	<i>Fail</i>
Pass or above	Fail	Fail	<i>Fail</i>
Pass or above	Pass or above	Fail	<i>Fail</i>
Pass or above	Fail	Pass or above	<i>Fail</i>
Pass	Pass	Pass	<i>Pass</i>
Pass	Pass	Merit	<i>Pass</i>
Pass	Merit	Pass	<i>Pass</i>
Pass	Merit	Merit	<i>Pass</i>
Pass	Merit	Distinction	<i>Merit</i>
Pass	Distinction	Merit	<i>Merit</i>
Pass	Distinction	Distinction	<i>Merit</i>
Merit	Pass	Pass	<i>Merit</i>
Merit	Pass	Merit	<i>Merit</i>
Merit	Merit	Pass	<i>Merit</i>
Merit	Merit	Merit	<i>Merit</i>
Merit	Merit	Distinction	<i>Merit</i>
Merit	Distinction	Merit	<i>Merit</i>
Merit	Distinction	Distinction	<i>Distinction</i>
Distinction	Pass	Pass	<i>Merit</i>
Distinction	Pass	Merit	<i>Merit</i>
Distinction	Merit	Pass	<i>Merit</i>
Distinction	Merit	Merit	<i>Distinction</i>
Distinction	Merit	Distinction	<i>Distinction</i>
Distinction	Distinction	Merit	<i>Distinction</i>
Distinction	Distinction	Distinction	<i>Distinction</i>

### 7.3 End-point Assessment Organisation – Internal Quality Assurance Requirements

EPAOs must:

- Develop and provide end-point assessment guidance to apprentices, employers and on-programme EPAO personnel in relation to the EPA requirements.
- Develop detailed marking criteria for assessment methods, in-line with **Annex A** and **Annex D**.
- Develop compensatory assessment for learners with special requirements to allow reasonable adjustments to be made to assess the knowledge, skills and competence of

the apprentice through alternative assessment techniques. Whilst these will remove barriers to participation, they must be designed to ensure judgements are not compromised.

- Appoint EPA personnel in line with Table 1 – *Roles and Responsibilities of End-point Assessment Organisations Approved and Appointed Staff*.
- Provide training for EPA personnel in terms of requirements of the operation and marking of the assessment methods and in undertaking fair and impartial assessment.
- Monitor and support EPA personnel where required, to ensure consistent assessment.
- Develop and provide documentation for recording assessment decisions.
- Hold bi-annual standardisation events for EPA personnel to ensure consistent application of the guidance. These should include discussion of assessment materials e.g. exam questions.
- Provide guidance around when end-point assessments need to be halted due to unforeseen circumstances e.g. apprentice illness.
- Ensure EPA personnel undertake regular continuing professional development.
- Work collaboratively with other EPA assessment organisations for this Standard, to ensure consistency in EPA delivery and sharing of good practice. This should include discussion of appropriate assessment materials e.g. exam questions.

#### 7.4 External Quality Assurance

As this is an integrated degree apprenticeship we anticipate that External Quality Assurance of (EPAO) EPAOs will be delivered by the normal HEFCE/QAA process.

#### 7.5 Professional Body Recognition

No professional body recognition is associated with this apprenticeship.

#### 7.6 Implementation

##### 7.6.1 Affordability

The initial, indicative EPA costs are expected to be in the region of 8% of the total external apprenticeship costs.

##### 7.6.2 Manageability / Feasibility of the Standard and Assessment Plan

Whilst the major focus of this plan is to ensure that it delivers robust and high quality assessments that accurately assess competence against the Standard, the practicalities of implementation have been carefully considered in the light of the proposed number of apprenticeships and geographic coverage.

We anticipate approximately 40 apprentices to be recruited to this apprenticeship in the first year. As the economist occupation is entirely new to the apprenticeship programme, we anticipate employers will want to pilot some apprentices alongside their traditional graduate recruitment methods. We expect recruitment to grow to around 100 apprentices in future years due to three main factors – the impact of the Apprenticeship Levy;

apprenticeships becoming more established in the sector with stronger links to career paths; employers' growing confidence that this apprenticeship has significant advantages over the traditional graduate route in delivering competence.

The main factors that will make our approach implementable and cost effective for the numbers of apprentices anticipated are:

- Several EPAO's who are highly experienced in delivering the BSc and BA Economist degree programmes have been carefully consulted to ensure we have a model that is deliverable.
- The use of tried and tested assessment methods that will allow robust determination of competence.
- The use of existing assessment expertise, assessment tools and robust QA processes to give impartial assessment without the need to develop everything from scratch, which would incur additional costs in the assessment.

The exact structure of the on-programme, off the job integrated degree training is for each employer and EPAO to agree, but we have modelled different scenarios that are likely to be used (see Figures 1 and 2 above). We are confident that these approaches can be used by organisations of any size within the sector.

**ANNEX A - Knowledge, Skills and Behaviours to be assessed by each assessment method**

		DISSERTATION	TECHNICAL ASSESSMENT	COMPETENCY INTERVIEW
<b>KNOWLEDGE</b>	Economic theory	X	X	
	Applied statistical analysis	X	X	
<b>SKILL</b>	Applied economic and data analysis	X	X	
	Communication	X	X	
	Synthesising evidence	X	X	
	Quality Assurance	X		
	Planning and Prioritisation			X
	Team Working & Collaboration			X
<b>BEHAVIOUR</b>	Professional Scepticism		X	
	Leadership			X
	Adaptability			X
	Collaborating and Partnering			X
	Ethics and Integrity			X



## ANNEX B: Example Short Answer Questions

Some example questions, and the example marking scheme, are provided below.

### Q. Is street lighting a public good and would it be sensible to charge for its use?

Public goods are non-rival and non-excludable. Street lighting is non-rival but tolls could be charged for its use, so it is not a pure public good. [50%]

Tolls, unless through a technology such as GPS, would have high transaction costs as barriers to non-paying vehicles would have to be in place. Also, unless there was a mechanism to turn the lights on and off when in use or not, there is no marginal costs for the use of the lighting, hence a positive charge would mean a Pareto welfare loss. But alternative funding could also cause a welfare loss unless it is funded by a lump sum tax that everyone was willing to pay for the lighting. [50%]

### Q. Give economic reasons why banning the sale of ivory might endanger elephants as a species.

By making it, in effect, illegal to rear elephants as a 'cash crop' this decreases the incentive to breed and protect elephants as an asset. It may also decrease the return to protecting elephants from poachers. [50%]

Banning sales will reduce ivory supply and could drive-up its price. Hence increasing the incentive to poach elephants. [25%]

The banning of ivory sales may reduce its demand by increasing awareness of ethical considerations. But this may not result in more elephants; there would certainly be less not more cows if the sale of dairy and beef products were banned! [25%]

### Q. What are likely to be the short-run and long-run effects on price of levying a tax on the profits of a perfectly competitive industry?

Post-tax profit will still be greatest when pre-tax profit is maximized. That is, as a profit tax does not affect variable costs, or revenues, the profit maximizing output will be unaltered. Hence, neither price nor quantity will be affected in the short-run. [50%]

If the industry was earning zero pure/normal profits before the tax, then it will be earning negative/sub-normal profits after the tax. Firms will thus leave the industry in the long-run until output has decreased enough for the price to rise to the new Average Total Cost and so for zero/normal profits to be earned again. [50%]

### Q. What is the opportunity cost of owning a bar of gold?

Opportunity cost is the cost of something in terms of the best alternative forgone. [25%]

Gold is an extremely durable asset and historically a good 'store of value'. Current consumption is forgone by owning gold, and the timing of consumption may have a utility, but the value of the gold is not 'lost' i.e. wealth is transferred to the future. [25%]

There are other financial assets available for carrying wealth through time; hence the return available from these other assets (dividends, interest) is forgone by holding gold. [25%]

Part of the overall return to holding gold will depend on movements in the price of gold. So, the expected capital appreciation on gold and other assets would have to be compared to see if the expected gain from holding wealth in gold exceeds the expected overall opportunity cost. [25%]

**Q. Describe the difference between adaptive and rational expectations in relation to inflation?**

Adaptive expectations adjust to inflation on the basis of current and past inflation. Hence, if inflation is increasing expectations will tend to lag behind the current level of inflation, depending on the weights given to past and present values. [50 %]

In rational expectations, all available information is used to anticipate changes in inflation, if information is unbiased and agents rational then on average expectations will equal the actual rate. [50 %]

**Q. Explain what happens to the UK exchange rate if domestic interest rates rise? Specify an assumption that you have made in your reasoning.**

A positive interest rate difference will quickly attract 'footloose' capital to take advantage of higher interest rates in the UK. The demand for sterling, and sale of other currencies, will drive up its value against other currencies (if more ambiguous terms such as 'appreciation' or 'up or down' is used there should also be an indication that this denotes the strengthening of the pound). [75%]

Inflationary and exchange rate expectations do not offset the expected interest differential. [25%]

**Q. An econometrician obtains data on the amount of income tax evaded by a set of individuals. A regression analysis generates the following fitted equation (t-stats beneath the coefficients):**

$$\log E = 1.74 + 0.74 MRT + 0.84 \log Y - 0.5 F$$

5.44
1.26
3.11
-4.23

**where: E = amount of income tax evaded; MRT = marginal tax rate; Y = income; F = fine per £ of evaded tax.**

**Describe the results from this fitted equation.**

The observations that can be made are: The signs on the explanatory variables suggest that tax evasion increases with the marginal rate of tax, increases with the level of income, falls with the level of fine. [50%]

Income and fine are statistically significant (the t-statistic is above 2). The marginal rate of tax is insignificant. [25%]

The specification is logarithmic in  $E$  and  $Y$ . Therefore, the elasticity of evasion with respect to income is less than 1. A smaller proportion of income is evaded as income rises. [25%]

## **ANNEX C: Example Competency Interview questions and indicators**

Examples of competency based interview questions include:

- Describe a situation when you assumed the role of leader. Were there any challenges, and how did you address them?
- Tell me about a time when you have had to influence a senior manager, stakeholder or partner and how you went about this?
- Tell me about a time you supported a member of your team who was struggling.
- Give an example of change in the workplace. How did you handle this?
- Give an example of a time you identified a new approach to a problem?
- Give an example of a time you've had to improvise to achieve your goal?

The marking of answers to these questions should judge against how well the candidate has met a list of desirable 'indicators' for each competency being tested. There will inevitably be a degree of judgement here, as mark schemes cannot be prescriptive due to the open-ended nature of the questions.

The indicators should be decided as part of the assessment process, but examples are given below.

### **Planning and prioritisation**

- Take responsibility for delivering expected outcomes on time and to standard.
- Plan ahead but reassess workloads and priorities if situations change or people are facing conflicting demands
- Show a positive approach in keeping their own and the team's efforts focused on the goals that really matter
- Remain positive and focused on achieving outcomes despite setbacks
- Check own and team performance against outcomes, make improvement suggestions or take corrective action when problems are identified

### **Team working and collaboration & Collaborating and Partnering**

- Establish relationships with stakeholders to further a business aim.
- Actively seek input from a wide range of people.
- Readily share resources to support higher priority work.
- Deal with conflict in a prompt, calm and constructive manner.

### **Adaptability**

- Find ways to improve systems and structures.
- Be willing to meet the challenges of difficult or complex changes, encouraging and supporting others to do the same.
- Take initiative to suggest ideas for improvements, sharing this feedback with others in a constructive manner.
- Prepared to take risks, but ensuring these are managed and their impact assessed.

### **Leadership**

- Taking responsibility for own area of work
- Demonstrate the drive and energy to get things done, even when under pressure.
- Proactively suggest areas for new and useful analysis
- Anticipate where future demand for analysis will be needed.

### **Ethics and Integrity**

- Honest and principled in actions and interactions.
- Sees the value in quality assurance of analytical results, to ensure the best possible outputs.
- Stands by economic analysis, makes objections known about special interests or organisational pressure applied to distort results of analysis.

**Annex D: Grading Criteria by Assessment Method**

The table below details the grading criteria for the three assessment methods. It is based on the following principles **for each assessment method**:

- The merit and distinction grading descriptors build on what is set out in the pass grading descriptor; a distinction should therefore be able to meet all criteria set out under pass, merit and distinction and not just what is written under distinction.
- To achieve a pass: pass or above must be demonstrated for every KSB.
- To receive a merit: merit or distinction must be demonstrated against all KSB statements or, where one or more criteria are demonstrated at a pass, it must be offset by demonstrating a distinction in a corresponding number of KSBs. For example, if there are four KSBs achieving a merit and one achieving a pass, the apprentice will only achieve a pass. However, if there are three KSBs achieving a merit, one achieving a pass, and one a distinction, then the overall grade will be a merit.
- To receive a distinction: 4 out of the 6 KSBs tested under each method must be demonstrated at distinction, with all other KSBs demonstrated at merit.
- See Table 2 (above) for a summary of how assessment method grades are collated to an overall EPA / Apprenticeship grade.

**DISSERTATION GRADING CRITERIA**

	<b>Fail</b>	<b>Pass</b>	<b>Merit</b>	<b>Distinction</b>
<b>KNOWLEDGE: Economic theory</b>	The minimum pass criteria as defined in this table are not met.	Displays evidence in the written report of having understood the relevant theory behind their research question, and is able to cite the main concepts and models needed to understand this.	Displays a clear understanding in both the written report and presentation of the relevant theory, and is able to discuss the limits of that theory when it comes to real world application.	Displays a deep and broad understanding of the relevant theory in both the written report and presentation. Demonstrates an ability to draw on theory from different branches of economics, for example microeconomics and behavioural economics, or macroeconomics and economic history.
<b>KNOWLEDGE: Applied statistical analysis</b>	The minimum pass criteria as defined in this table are not met.	Displays evidence in the written report of having constructed a data set and used statistical software to analyse it. Displays knowledge of the correct data to use and the outcomes of their analysis is interpreted correctly. Clear	Displays evidence of understanding statistical concepts relevant for their research question, in both the written report and presentation, such as how to prove causality or how to construct a counterfactual when there is none,	Displays evidence of understanding a range of statistical techniques, and is able to explain how they went about choosing the appropriate method of their analysis in the presentation. Displays evidence of having considered how the data being

		evidence demonstrated of knowing the difference between causality and correlation.	or whether to carry out a time-series or cross-sectional study.	used has been constructed and what impact this might have on the analysis. Statistical software is used without errors to carry out the analysis.
<b>SKILL: Applied Economic and Data Analysis</b>	The minimum pass criteria as defined in this table are not met.	Displays an ability to choose an appropriate analytical approach by drawing on past research and theory.	Demonstrates a considered, use of analytical approaches to answer the research question. In the written report and during the presentation, shows an awareness of the limitations of their research.	Demonstrates a deep judgment when deciding on the overall approach, taking into account data availability, time pressures, and is able to judge between methods to choose one which will have the best chance at showing causality or robust findings. This ability should be evident in both the written report and the presentation. Shows a clear consideration of the uncertainty around analytical results, and the limits of their analysis.
<b>SKILL: Synthesising Evidence</b>	The minimum pass criteria as defined in this table are not met.	Summarises the key evidence for the dissertation question in the literature review section of the written report. Able to compare and contrast at least two studies.	Summarises, compares and contrasts the relevant studies in the literature review section of the written report. Shows an ability to explain why their results differ from other studies, or why not.	Displays an ability to assess the validity of different studies, different methods or data being used in the various studies being considered, and to comment on the appropriateness of these methods. Able to confidently and convincingly explain any differences in results from their research when compared to other published studies in the presentation.
<b>SKILL: Quality Assurance</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence, via an example during the presentation, of an awareness of the need to quality assure results and an ability to do this diligently and carefully.	Provides evidence in both the written report and presentation of not just checking the results and process, but also checking for data inaccuracies and the appropriateness of the approach.	Demonstrates evidence of having run the appropriate sensitivity or robustness tests on their results, and can explain in the presentation what these mean and why they matter, and any remaining uncertainties which they have not been able to account for.
<b>SKILL: Communication</b>	The minimum pass criteria as defined in this table are not met.	Writing and oral communication is clear and has structure. Some grammatical or spelling mistakes, but this does not detract from overall understanding.	Demonstrates evidence of writing and oral communication being clear, and has a distinct and helpful structure, and no repetition in written work or	Displays an ability to use language (written and oral) which is clear, formal, structured, succinct and addresses the relevant issues. Demonstrates an ability to

		Charts and tables are used to aid understanding. Word count is adhered to.	in presentation. Delivery of presentation is confident and succinct. Explanation of economic concepts is straightforward and answers are structured and correct.	convey complicated economic concepts very simply and directly. Presentation is delivered confidently and clearly, with evidence of having used effective approaches (e.g. regressions, tables, charts, diagrams) to aid understanding.
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### TECHNICAL ASSESSMENT GRADING CRITERIA

	Fail	Pass	Merit	Distinction
<b>KNOWLEDGE: Economic theory</b>	The minimum pass criteria as defined in this table are not met.	Demonstrates an ability to identify the core economic theory needed to understand the issue, and scores over 40% in the short answer questions.	Demonstrates an ability to identify and explain the theory needed to understand the issue, drawing on both microeconomic and macroeconomic considerations; scores over 60% in the short answer economic questions.	Demonstrates an ability to identify the main theoretical issues and explain them, and to consider why the theory might not be directly applicable to real-world situations; scores over 70% in the short answer questions.
<b>KNOWLEDGE: Applied statistical analysis</b>	The minimum pass criteria as defined in this table are not met.	Displays a working knowledge of: spreadsheet software by being able to produce basic statistics (averages, proportions, growth rates) needed to answer the question.	Demonstrates a knowledge of how to overcome gaps or inconsistencies in the data, such as by converting the data so that it is all on the same units / basis. One of the data-based questions of the short-answer questions is answered correctly at over 60%.	Demonstrates an ability to consider the validity of data, such as whether it is based on a small sample size or whether it has been inflation-adjusted, and to adapt analysis accordingly. All the data-based questions of the short-answer questions are answered correctly at above 70%.
<b>SKILL: Applied Economic and Data Analysis</b>	The minimum pass criteria as defined in this table are not met.	Displays an ability to choose the appropriate data for the task at hand, and to choose an appropriate method to analyse that data.	Demonstrates an ability to draw on several sources of data, combine this data to produce new data, and show evidence of being able to present this data in an effective format.	When writing up the data analysis, demonstrates an ability to use the data to draw clear and correct conclusions that consider the uncertainty, time period or wider external factors which could have affected the statistical results.
<b>SKILL: Synthesising Evidence</b>	The minimum pass criteria as defined in this table are not met.	Summarises the key evidence provided for the applied exercise, and is able to link at least two sources of evidence to each other.	Combines evidence from different sources to illustrate the issue at hand in the applied exercise, and to give an	Displays an ability to synthesise evidence from all the sources provided, drawing linkages with their data analysis and the



			evidence-based recommendation or conclusion.	supporting evidence to construct a coherent message and recommendation.
<b>SKILL: Communication</b>	The minimum pass criteria as defined in this table are not met.	Writing is clear and has structure. Some grammatical or spelling mistakes, but this does not detract from overall understanding. If economics terms are used, they are explained in laymans terms.	Writing is clear and succinct in both sections of the assessment; the structure clearly draws out the main points. Economics jargon is avoided where possible. If economics terms are used, they are explained clearly.	Displays an ability to write with clarity and to highlight the main conclusions so that a busy reader can easily understand their recommendations in both sections of the assessment. Written report is entirely accessible for a non-economist.
<b>BEHAVIOUR: Professional scepticism</b>	The minimum pass criteria as defined in this table are not met.	Displays evidence of not taking analysis at face value in the applied exercise; does not simply report evidence of others' without an assessment of its reliability.	Demonstrates an ability to assess likely direction of bias from different sources in the applied exercise, and does not include clearly inaccurate or biased figures from their report.	Displays a commitment to being alert to likely bias, shows evidence of considering methodological failings in analysis and what this means for how reliable the analysis is.

### COMPETENCY INTERVIEW GRADING CRITERIA

	Fail	Pass	Merit	Distinction
<b>Skill: Planning and prioritisation</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of how they were able to prioritise and keep work on track to meet deadlines.	Demonstrates evidence (illustrating by using an example) of planning, prioritisation, and reassessing priorities, and an ability to be proactive in managing stakeholder expectations around deadlines.	Demonstrates an ability to improve processes so that deadlines are met more effectively, and also to motivate the team in order to meet those deadlines.
<b>Skill: Team working and collaboration</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of working well in a team and being a team player, and an appreciation of how to work in a collaborative environment.	Demonstrates evidence of being able to work in a team and resolve differences of opinion, while remaining focused on the task at hand.	Demonstrates an ability to bring together a team to work on a project and seek input from a diverse range of people.
<b>Behaviour: Collaborating and Partnering</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of identifying the main stakeholders needed to complete a project, and building a good relationship with them.	Demonstrates evidence of successfully working across different organisations, and building links with stakeholders outside the immediate team.	Demonstrates an ability to identify and appreciate where the team has gaps in expertise, and then proactively builds relationships to allow the team to draw on that expertise.

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<b>Behaviour: Adaptability</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of being able to identify areas of improvements and successfully implementing them.	Demonstrates evidence of being adaptable to unexpected changes and proactively identifying, implementing, and evaluating improvements in systems, structures, or other approaches to work.	As well as demonstrating evidence of being adaptable to unexpected changes, demonstrates an ability to be prepared to take a risk with appropriate measures to mitigate it, and convince others of their plans.
<b>Behaviour: Leadership</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of taking responsibility for producing work and a drive to complete it to a high standard.	Demonstrates evidence of being self-motivated, and an ability to take the initiative in scoping out new areas of work.	Demonstrates an ability to proactively and independently suggest helpful work for the business and subsequently deliver this work.
<b>Behaviour: Ethics and Integrity</b>	The minimum pass criteria as defined in this table are not met.	Provides evidence of ensuring robust quality assurance and an honest presentation of results.	Demonstrates evidence of being open and honest with stakeholders in the process and presentation of analysis, even where the conclusions challenge the stakeholders' preconceptions.	Demonstrates an ability to stand their ground and defend their analysis when challenged.