



**RAIL ENGINEERING  
TECHNICIAN  
APPRENTICESHIP  
(LEVEL 3)**

**VIVA ASSESSMENT GUIDANCE | FEBRUARY 2019**



## INTRODUCTION

This document provides guidance on how to conduct a Viva in line with the requirements set out in the assessment plan for the Rail Engineering Technician (Level 3). The guidance will also help with assessor consistency within End-Point Assessment Organisations and is part of a strategy to support comparability in assessment outcomes across End-Point Assessment Organisations.

As set out in the Rail Engineering Technician Assessment Plan, there is a relationship between the Portfolio of Evidence and Viva; both distinct in their assessment arrangements and requirements but interact with each other. For example, the Portfolio of Evidence contains work that will inform the nature of the questioning in the Viva, while the Viva has a role in authenticating the work within the Portfolio. The Viva also has a role in checking the sufficiency of evidence contained within the Portfolio of Evidence, (e.g. quality and quantity) and is used to explore areas where performance or competence against specific apprenticeship standards is less obvious. Any areas of identified weakness in performance or coverage are then used to inform Viva questioning. This latter function allows assessors to make assessment judgements with greater confidence. The Compliance Checking work done by NSAR, as part of the external quality assurance of the end-point assessment, explores how EPAOs manage this process.

The main risks to the assessment process are around:

- Potential for disagreement between employer-based and EPAO-based assessment of the evidence in the Portfolio, e.g. in demonstrating the appropriate coverage of the apprenticeship standard and apprentice's readiness for the Viva.
- Assessor inconsistency in making judgements about the Portfolio of evidence and how to use it in the Viva
- Assessor inconsistency in conducting the Viva and in assessing performance in the Viva

## COMPLIANCE WITH THE ASSESSMENT PLAN

The Viva is an interactive interview focused on all the components of the Apprenticeship Standard providing a synoptic view of the apprentice's competence and enabling the employer to validate the apprentice's occupational competence. It is a structured and formal discussion between the apprentice and the independent assessor drawing upon:

- the apprentice's work in their Portfolio of Evidence and
- records of how the apprentice has performed during the Apprenticeship.

The Viva enables synoptic assessment of the apprentice's knowledge, skills and behaviours, for example:

- methods and techniques used to safely maintain assets relevant to their chosen pathway
- company quality processes and procedures and documentation
- understanding the practical and theoretical requirements of rail engineering components/systems
- being proactive in finding solutions to problems.
- demonstrate effective interpersonal skills (behaviours)
- complying with statutory, organisational and health and safety regulations while carrying out manufacturing techniques.



The apprentice will need to demonstrate competence by drawing from real work- based tasks accomplished, presenting not only what they have done, but how they have done it and why. The apprentice's use of a Portfolio of Evidence is important here so that the employer can see tangible evidence of competence.

The Viva also represents an opportunity for the employer to:

- Clarify any points and/or probe the apprentice on the evidence they have presented in their portfolio
- Confirm and validate that the portfolio of evidence is the apprentices own work
- Confirm and validate the judgements about the quality of the work the apprentice has completed
- Explore particular areas of work presented in the portfolio, how it was carried out, any problems that they encountered and how these were resolved
- Validate the apprentice's skills, knowledge and understanding of the company in terms of their products, processes, procedures, tools, equipment, materials, and documentation and information systems.

The Viva can be assessed by the End-Point Assessment Organisation (where it can also include an employer's representative) or the employer. In the situation where an employer representative also takes part in the interview (optional) it is the End- Point Assessment Organisation who will have the final decision as to whether the apprentice has successfully completed the Viva or not.

If the Apprentice does not successfully complete the Viva, the apprentice as well as the apprentice's line manager, mentor and if appropriate training provider will be informed and provided with feedback. The apprentice will be advised about the shortfalls in evidence and how this can be addressed. If the apprentice completes the Viva successfully a report of the viva should be created and added to the assessment documentation. All documentation is then forwarded to the Professional Engineering Institution for Professional Engineering Competence assessment.

### KEY IMPLEMENTATION CONSIDERATIONS

- The Viva will be 60 minutes long (with +/-10 minutes permissible).
- The Viva must be conducted in an environment where the apprentice feels comfortable, is free from intrusion, intimidation or interference.
- The employer can also attend but the decision to allow the employer to attend should be based on whether this is likely to have a positive influence on the apprentice's comfort level.
- On completion of the Occupational Competence Validation Interview (Viva) the apprentice can be awarded a preliminary grade of Pass or Fail should the EPAO wish. The final grade should be subject to internal quality assurance processes.
- Each Viva must be recorded to help with any appeals procedure and with internal quality assurance. The EPAO should choose the method of recording that will enable the most appropriate form of checking in appeals, monitoring and quality assurance. Where there is recording, permission should be sought.



## USE OF THE PORTFOLIO OF EVIDENCE IN THE VIVA

The Portfolio of Evidence must include as a minimum, three different examples of competent performance evidence that must include:

- Products of the apprentice's work, such as items that have been produced or worked on, drawings, plans, production and/or quality records, reports, documents produced as part of a work activity, records or photographs of the completed activity
- Evidence of the way the apprentice carried out the activities to meet the requirements of the Standard, such as assessor observations, supervisor/mentor references/ witness testimonies or authenticated apprentice reports of the activities undertaken

The assessor will also have records of how the apprentice has performed during the apprenticeship made available to them to help shape the nature of the enquiry. These records should be forwarded in advance, along with the Portfolio of Evidence contents.

With at least three substantial assessment artefacts in the portfolio capable of demonstrating the apprentice's knowledge, skills and understanding, assessors need to lead the Viva with questions looking to establish the extent to which the apprentice has sufficient:

- General and specialist knowledge
- General and specialist skills
- Evidence and examples exhibiting the appropriate behaviours

The assessor will establish the extent to which the apprentice is able to demonstrate that the work in the portfolio:

- Is their own
- Adequately addresses the quality of work expected in the standard
- Appropriately covers the content of the standards

The End-Point Assessment Organisation must be able to demonstrate that they use assessors who:

- Are independent with no conflict of interest. This means that they have not had direct involvement with the apprentice as their mentor, coach, direct trainer or direct supervisor / line manager
- Have successfully undertaken appropriate Assessor training
- Hold a current and appropriate Assessor qualification
- Have relevant rail knowledge and recent rail experience
- Are able to demonstrate the processes they adhere to ensure consistency across assessments
- Agree to provide management data regarding Apprenticeships and apprentices to the Employers Group or their nominated organisation on a regular basis as required in order to collate sector Apprentice intelligence
- Are selected from the ESFA's Register of Apprenticeship Assessment Organisations





## STANDARDISING ASSESSORS

End-Point Assessments Organisations are expected to train end-point assessors in how to conduct Vivas in high-stakes, end-point assessment environments. The training should address the key risks in administering this form of assessment as well as how best to use this form of assessment to determine the capability of the apprentice.

The aim of any standardisation training should be to ensure each end-point assessor is able to conduct a Viva in a way that is consistent and comparable with their assessor peers also administering the same assessment method in the same context.

Assessors should be able to conduct Vivas in ways that are free of bias and that allow the apprentice to demonstrate their abilities and competence. This will mean acknowledging any personal or work-based bias and prevent this from influencing the assessment judgement. Assessors also need to understand how to put the apprentice at their ease to mitigate the risks associated with implementing this form of assessment, e.g. nerves associated with being assessed by someone they are not familiar with.

## ASSESSOR QUESTIONING IN THE VIVA

The rigour and robustness of the Viva assessment is achieved by targeting questions at key areas of the standards without the apprentice knowing the precise nature of what will be asked. The apprentice will know that nothing will be asked that is not in the standard and that the level of questioning will be directed at larger workplace competences that they should be able to discuss using examples from their portfolio.

Questioning will also largely involve subject matter related to the portfolio evidence and the apprentice's role and chosen specialist area.

There will be six key discussion areas in the Viva with each able to be developed or checked to confirm level of understanding or performance. Each discussion area must result in satisfactory responses in order to achieve a pass for the Viva. Discussion during the Viva must look to determine the level of understanding of and performance in the six areas. Note that responses should be given within the contexts of the apprentice's chosen pathway:

1. Methods and techniques used to safely maintain assets relevant to their chosen pathway
2. Company quality processes and procedures and documentation
3. Understanding the practical and theoretical requirements of rail engineering components/systems
4. Being proactive in finding solutions to problems and identifying areas for improving the business
5. Demonstrate effective interpersonal skills (behaviours)
6. Complying with statutory, organisational and health and safety regulations while carrying out manufacturing techniques.

These areas are open and able to be shared with the apprentice, employer and provider well in advance of any formal assessment intervention.

A satisfactory response to questions asked in the Viva is one that:

- Reassures the assessor/s that the apprentice is demonstrating the required level of knowledge, ability and/or performance.

A satisfactory response where performance of work-based tasks is involved will always include how the apprentice took responsibility for their own work; completed relevant integrity and compliance checks and reinstated the work area after engineering activity, as well as how the relevant documentation was handled. If this is not an immediate



inclusion in the initial response it can be probed for but must feature at some point for the response to be satisfactory.

Where performance is being questioned, a satisfactory response needs to also include how the correct utilisation and storage of tools, materials and equipment as carried out, and how the lifting and moving of materials, components and equipment was done correctly. If this is not an immediate inclusion in the initial response it can be probed for but must feature at some point for the response to be satisfactory.

Satisfactory responses also need to include the appropriate behaviours needed when performing, participating or identifying suitable responses to the performance or work-task or rail engineering problem. If this is not evident in the apprentice's initial response it can be probed for but must feature at some point for the response to be satisfactory.

An unsatisfactory response or responses will:

- Leave the assessor uncertain whether the apprentice has understood, demonstrated or performed in a way that meets with the expectations set out in the standard.

OR

- Leaves the assessor certain that the apprentice has not understood, demonstrated or performed in a way that meets with the expectations set out in the standard.

End-Point Assessment Organisation guidance about what to expect in a Viva assessment situation can include the importance of always discussing how the relevant level of responsibility, necessary safety considerations and appropriate behaviours were demonstrated.

Note that any guidance and support material should share what the structure of an appropriate response looks like. Apprentices should be able to practice framing what they know and can do appropriately and in ways that best demonstrates their abilities. This transparency about how to formulate a satisfactory response will help prevent the form of assessment becoming an unnecessary barrier to demonstrating ability and competence.



## EXAMPLES OF VIVA DISCUSSION POINTS

### Initial Discussion Point:

- Can you give an example of how you were involved in replacing a component on isolated and live signalling equipment?

Take time to explain how you demonstrated safe and professional working practices and kept yourself and others safe.

### *Follow-up questions if not volunteered:*

- What were the statutory regulations and organisational safety requirements you were working to as you did this work?

### *Developing the question more widely:*

- What quality processes and procedures were involved?
- Was there any important documentation needed/produced?
- Were there any scientific, engineering or mathematical principles involved?

### Discussion point:

- Can you tell me about the key quality processes and procedures that are most relevant to [specialist pathway]?

### *Follow-up:*

- Why do you think these are important? What could go wrong? What happens when something goes wrong? How do you prevent something going wrong?

## Permanent Way – Competence

### Initial Discussion Point:

- Can you explain how you would ensure that authorisation is obtained for both the inspection and use of equipment for Permanent Way infrastructure?

### *Follow-up:*

- What process will you follow should you identify that a piece of equipment is not fit for service?

## Signalling – Competence

### Initial Discussion Point:

- Please explain how identified defects and variations can affect the safety and performance of a signalling system.

### *Follow-up:*

- What type of defects are most commonly identified and can you give an example of how would you go about rectifying the problem (answer should include process, documentation, authorisations, fault finding processes etc.)?



### Telecommunications – Knowledge

#### **Initial Discussion Point:**

- Can you describe the key principles and benefits of analogue to digital conversion?

#### ***Follow-up:***

- Can you describe an application that you have followed which has used both modulation and multiplexing?
- What types of data were being transferred?
- What process did you follow and how?
- How did you ascertain that all of the data passed from source to destination intact?

### Traction and Rolling Stock (Underground) – Knowledge

#### **Initial Discussion Point:**

- Can you explain how a failed suspension unit can affect the track and wheels?

#### ***Follow-up:***

- What types of damage would you expect to see from a damaged suspension unit?
- Can you describe the task of the removal of a train wheel? (Response should include authorisations, procedure followed, validation of procedure prior to use, tooling and equipment, task allocation, safety considerations to self and team).





## **RECORDING THE VIVA ASSESSMENT**

The Viva should be recorded in a way that will allow EPAO internal quality assurance arrangements to monitor and evaluate the Viva assessment judgements in light of the apprentice performance and evidence seen. Recording should allow EPAOs to evaluate assessor performance and to check for assessor consistency with other assessor approaches within the EPAO.

## **VIVA ASSESSMENT ACROSS EPAOS**

The Viva is a pivotal part of the externality (independence) in the end-point assessment for this apprenticeship standard. Thus, the Viva and apprentice responses to the Viva as an assessment component will be subject to external quality assurance work looking at comparability across EPAOs. How best to do this will be subject to discussion with the relevant EPAOs undertaking end-point assessment and a methodology will be agreed as a result of this consultation process.

If you have any questions, or would like any further information, please do not hesitate to contact us using the contact details below:

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