Rail Engineering Apprenticeship Standard
Rail Engineering Operative (Level 2)
End Point Assessment Plan

Version:
26/09/17

Contents

Summary of assessment

The Rail Engineering Operative assessment plan is delivered within the 2 phases of the Apprenticeship, these being:
- On programme phase
- End Point Assessment and Employer Endorsement phase

Rail Engineering apprentices will be assessed for the following:
- Technical knowledge against the standard (core and pathway specific requirements)
- Occupational competence (knowledge, behaviours and occupational competencies) against the Standard (core and pathway specific requirements)

Detailed Requirements for Occupational Competence

The Rail Engineering employers are keen to ensure the consistency and standard of learning and qualification content is maintained across all Rail Engineering apprenticeships. To enable this they are developing a series of Detailed Requirements Documents which set out the detailed knowledge, skills and behaviours that sit behind the Standard. These are the requirements that the apprentice must achieve in order to demonstrate that they are occupationally competent in the specific job role including areas such as products, processes, procedures, tools, equipment, materials, documentation and information systems.
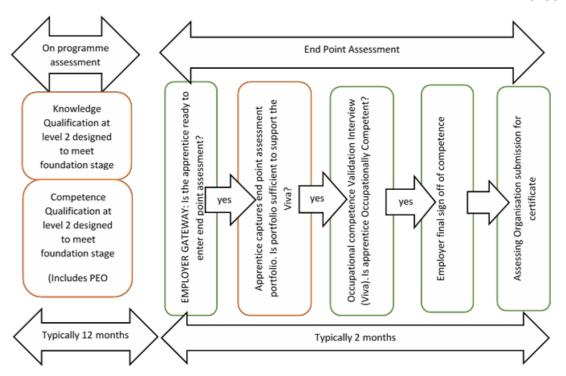
This approach will allow each organisation to develop their own specific and tailored apprentice on programme assessment structure whilst at the same time ensuring that the overall outcome delivers depth, breadth and stretch to enable progression and/or transferability to other employers.
The Detailed Requirements Documents use the National Occupational Standards (NOS) as their basis but also include content required by the Standards that has not yet been updated into the NOS. The employers are aware that the Government is currently reviewing the future of NOS and will consider the most appropriate approach regarding the Detailed Requirements Document once the Governments NOS review outcomes are known.

The Detailed Requirements Documents are under development and will be completed in Q2 2016. Once completed they will form part of the of the Employers Occupational Brief and will be held by The National Skills Academy for Rail (NSAR) on behalf of the Sector employers and will be freely available to all.

Assessment Overview

Following the on programme assessment and verification of employer developed competence and technical knowledge qualifications, the end point assessment takes place, using the following range of assessment methods:
- Apprentices portfolio of evidence of occupational competence
- Independent occupational competence validation interview (Viva)
- Final employer endorsement of occupational competence

On programme assessment

Knowledge Qualification at level 2 designed to meet foundation stage

Competence Qualification at level 2 designed to meet foundation stage (Includes PEO

Typically 12 months

End Point Assessment

EMPLOYER GATEWAY: Is the apprentice ready to enter end point assessment?

yes

Apprentice captures end point assessment portfolio. Is portfolio sufficient to support the Viva?

yes

Occupational competence Validation Interview (Viva). Is apprentice Occupationally Competent?

yes

Employer final sign off of competence

Assessing Organisation submission for certificate

Typically 2 months

The following summarises the assessment process:

Detailed End Point Assessment Plan: Rail Engineering Operative

Detailed End Point Assessment Plan : Rail Engineering Operative						
	On Programme (Development) Phase		Employer Gateway: Is the Apprentice ready for End of Apprenticeship Assessment?	End Point Assessment Phase		Assessing Organisation submission for apprentice certificate *see note*
				Stage 1	Stage 1	Stage 2	
Evidence of learning	Technical knowledge qualification (L2)*	Competence (Knowledge, Skills & Behaviour) based qualification (L2)*		End Point Portfolio of Evidence of Occupational Competence	End Point Portfolio of Evidence of Occupational Competence	Qualification certificates x 2 + Portfolio of Evidence & Record of Viva	
Assessment through	Knowledge based assignments and exams	Workplace assessment on a continuous basis * (Assessments internally and externally verified)		Review of Portfolio of Evidence of Occupational Competence – is it sufficient to support a Viva	End of Apprenticeship Assessment viva based on set criteria and specific requirements for recording of outputs	Final sign off as occupationally competent by employer. Behaviours, knowledge and occupational engineering competence	
Grading	Multi Grade	Binary (pass or fail)			Binary (pass or fail)	Binary (pass or fail)	
Independence through	External setting & marking of exams	External verification of assessment			Independent Assessor	Complete End Point Assessment process	
By	External setting & marking of exams	External verification of assessment			Assessor	Employer	
Output	Qualification certificate	Qualification certificate		Portfolio of Evidence	Record of Viva	Confirmation of Occupational Competence	

*   Due to the safety critical and complex nature of engineering training much of the assessment needs to be carried out 'on a continuous basis' to ensure that the skills, knowledge and behaviours that relate to company processes and procedures are fully embedded in the apprentice's skill set, any deficiencies or gaps in skills, knowledge and behaviours must be identified early and corrected.

**   In order to apply for their completion certificate the apprentice will need to have: achieved the competency and a knowledge qualifications at Level 2 as specified in this Standard; a fully completed Employer Portfolio Based Occupational Competence Viva Interview document signed by the employer and have a final sign off from the employer as being occupationally competent.

Professional Qualifications

Technical Knowledge and Occupational Competence Qualifications
The following qualification are mandatory for this Standard:
- *Level 2 Rail Engineering (Competence)*
- *Level 2 Rail Engineering (Technical Knowledge)*

Note: the qualifications are under development and the titles will be finalised once they are developed and ready.

On-programme Assessment

Knowledge and Competence Assessment
The qualifications above will be independently assessed and verified through Awarding Organisations regulated by Ofqual. These qualifications are achieved during the on programme phase of the of the Apprenticeship including:
- Technical knowledge based assignments including externally set exams. A grade of pass, merit or distinction will be applied to knowledge qualifications of the Apprenticeship
- Competency (Knowledge, Skills and Behaviours) will be assessed in the workplace and externally verified using a variety of methods including observation of performance and company job / work records. Apprentices will be assessed on a continuous basis with the final pieces of performance evidence accumulated typically during the last 2 months

Assessment Gateway
The employer, in discussion with the apprentice and the training provider where appropriate will decide if the apprentice is ready to pass the gateway to the "End Point Assessment Phase".
In order to do so the apprentice must have:
- successfully completed the mandatory knowledge and competence qualifications including demonstration of the behaviours expected.
- achieved level 1 English and maths and take the test for level 2 prior to taking their end-point assessment.

End Point Assessment – What will be assessed?

1. Portfolio of Evidence
On entry to the End Point Assessment phase each apprentice will complete and submit a supporting Portfolio of Evidence to the employer. The evidence in this portfolio is likely to be collected in the latter part of the on programme phase, it will showcase the depth and breadth of the apprentice's skills knowledge and behaviours and provide for synoptic assessment of competence. The Portfolio of Evidence will:
- Enable the apprentice to demonstrate to the employer the specific work related tasks that they have completed in order to show how they have achieved occupational competence as set out in the Standard and Detailed Requirements Document.
- Give the apprentice the opportunity to demonstrate to the employer that they understand the company in terms of their products, processes, procedures, tools, equipment, materials, documentation and information systems by showcasing what they have done, what they have learnt and how they have applied this knowledge and skill to real work tasks including solving engineering related problems.

The Portfolio of Evidence will include as a minimum:
Occupational Competence: Three different examples of competent performance evidence that must include:
- Products of the apprentices 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, together with
- 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.

Employer assessors/mentors and/or their nominated training provider/assessor should assist the apprentice in planning, creating and recording evidence to create the portfolio to ensure opportunities to obtain all the necessary competencies (skills, knowledge and behaviours) are identified.

How will the Portfolio of Evidence be assessed?
The compiled portfolio of evidence will be reviewed internally by the employer assessors/mentor to ensure it meets the required standard for occupational and professional competence.

If the review and assessment of the portfolio of evidence, in its entirety does not contain sufficient evidence to meet the Standard then it will be deemed not yet ready to submit for Viva. The apprentice will be advised about the shortfalls in evidence and how this can be addressed.
When agreed it does contain sufficient evidence, the portfolio will be submitted to the independent assessor undertaking the Viva.

2. Occupational Competence Validation Interview (Viva)
The Occupational Competence Validation Interview (Viva) is an interactive interview focused on all the components of the Standard providing a synoptic view of the apprentice's competence enabling the employer to validate the apprentice's occupational competence. It covers the tasks the

apprentice has completed in the workplace, the standard of their work, and the behaviours they have demonstrated throughout, such as, being a team player, having a positive attitude, a strong work ethic and being a responsible employee. It is a structured and formal discussion between the apprentice and the independent assessor, drawing upon:

- the Portfolio of Evidence and
- records of how the apprentice has performed during the Apprenticeship.

How will the Viva be assessed?
The Viva enables the end point assessment to assess the apprentice synoptically, covering a broad range of knowledge, skills and behaviours, for example:
- the 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 undertaking their occupation.

During the Viva the apprentice will need to demonstrate competence of the appropriate knowledge, skills and behaviours to the employer, 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 their Portfolio of Evidence is important here so that the employer can see tangible evidence of competence. It will also be 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 and knowledge and understanding of the company in terms of their products, processes, procedures, tools, equipment, materials, and documentation and information systems.

To ensure a consistency of approach, a guidance document on how to conduct a robust Viva will be published and freely available from NSAR.

On completion of the Occupational Competence Validation Interview (Viva) the apprentice will be awarded a grade of Pass or Fail i.e. Competent or not yet Competent.

Who will assess the Viva?

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

Independent Assessment Organisation criteria:

The organisation must to be able to demonstrate that they are able to provide assessors who:

- are able to demonstrate independence from the Apprentice. 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 SFA's Register of Apprenticeship Assessment Organisations

The employer will be able to choose which Independent Assessment Organisation they wish to use as long as they fulfil the criteria above.

On successful completion of the Viva i.e. achieving a pass grade the apprentice will pass to the End Point Final Sign Off stage of the End Point Assessment (see below)

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. In company processes will be reviewed to develop an understanding of why the apprentice was unsuccessful and if necessary rectifying actions taken.

The Apprenticeship assessment processes (on programme and end point assessment) have been developed as a series of stage gates to ensure that and apprentice cannot proceed to the next stage of the Apprenticeship until they have proved competence at each stage. By the time they reach the Viva they should have successfully completed the mandatory qualifications and completed a Portfolio of Evidence which demonstrates sufficient evidence of competence. They will only pass the Viva if they can demonstrate that they are occupationally competent. As such there should be no circumstance in which an apprentice could completed all necessary stages of the end point assessment and still not be deemed competent.

End Point Final Sign Off – Employer Endorsement

Following the Viva, if successful, the employer will undertake the Final Sign Off / Employer Endorsement stage of the Apprenticeship by signing the Occupational Competence Validation Interview (Viva) document along with the apprentice and the employer nominated Training Provider (optional).

The Assessing Organisation will then make an application to the designated body for the Apprenticeship completion certificate.

Independence
Independence will be ensured by

- **Awarding Organisations** awarding the mandatory qualifications (on programme)

- **Independent Assessment Organisation** undertaking the Viva (selected from the SFA Register of Assessors)

End Point Summary of Roles and Responsibilities

The end point assessment will be undertaken by a range of parties depending upon the nature of what is being assessed. For final judgements to be made the following is required:

Assessor	Role
Awarding Organisations	Confirmation that require mandatory vocational qualifications have been achieved as part of on programme assessment
Employer: Apprentices mentor and /or line manager	Together with Apprentice and Training Provider (as appropriate): • make gateway decisions • decide if the Portfolio of Evidence is sufficient for Viva Final judgement on the Occupational Competence of the Apprentice Final Sign Off / Employer Endorsement stage of the Apprenticeship as detailed above.
Independent Assessment Organisation	Undertake the Viva to judge occupational competence and make decision regarding the outcome of the Viva Ensure that the Apprentice has been assessed in a fair and consistent way Sit on the SFA register of Assessment Organisations

Quality Assurance

External Quality Assurance

The Rail Employer Trailblazer group have chosen the Employer Led EQA model, and this will provided by the National Skills Academy for Rail.

The National Skills Academy for Rail (NSAR) will carry out the function of External Quality Assurance (EQA) of the end-point assessment that is required as part of the Rail Engineering Operative Standard. NSAR will ensure the EPA is assessed in a consistent way regardless of AAO, with successful completion acting as a mark of occupational competence that is respected across the rail industry. NSAR will work with any Professional Bodies for the sector as necessary in respect of this function.

Contact Kim Millen for more details at kim.millen@nsar.co.uk

End Point Grading

The following grading will apply for the End Point Assessment:

- For the Occupational Competence Validation Interview (Viva) this will be a binary pass /fail grade
- Overall Apprenticeship will be a binary pass /fail grade

Summary of End Point Grading Process

End Point Assessment Stage	Grade	Action as a result of grade	Grade	Action as a result of grade
1. End Point Assessment Portfolio		Is the portfolio sufficient to support a Viva, if so the Apprentice progresses to Viva		If insufficient, the Apprentice to improve the portfolio to expected Standard and resubmit to Gateway
2. Viva – assessing Occupational Competence	Pass	Apprentice's qualification certificates, EPA portfolio and record of Viva passed to Independent Assessor	Fail	Apprentice resits the Viva
3. Independent Assessment of evidence	Pass	Assessing Organisation notifies employer that the evidence demonstrates that the Apprentice has met the requirements. Employer provides final sign off of Occupational Competence	Fail	Independent Assessor provides feedback to employer as to why the Apprentice has failed. Apprentice addresses feedback through either resitting their Viva and if required upgrading their EPA portfolio. Employer reviews processes to understand why the Apprentice was allowed through to Independent Assessment stage
Overall Apprenticeship Grade	**Pass**	Independent assessor applies for Apprenticeship certificate	**Fail**	The Apprentice is required to pass all EPA stages of the End Point Assessment in order to achieve and overall pass grade

It is important to note the Standard has mandatory qualifications as part of "On programme assessment". The knowledge qualifications will be assessed on a multiple grade basis (e.g. pass, merit and distinction grading). The occupational competence will be a binary grade pass or fail i.e. "competent" "not yet competent".

Implementation

Affordability and Costs of End Point Assessment

The end point assessment process developed is both efficient and cost effective. It builds on processes in place and does not require additional assessment facilities (above those required for delivery of the apprenticeship). It is affordable for employers of all size.

The costs for the delivery of the apprenticeship and hence the proportion of this that will incurred through the end point assessment has not yet been assessed. The cost for end point assessment is estimated to be in the region of 5 – 10% of the total apprenticeship costs and will include the following:

- Occupational Competence Validation Portfolio collation and review
- Occupational Competence Validation Interview (Viva)
- Cost of independent assessor
- Employer "Final sign off"
- Apprenticeship Certificate

Consistency of end point assessment

The sector has required a collaborative approach in developing the Standards and the Assessment Plans involving the following:

- Employer representatives
- Awarding Organisations
- National Skills Academy
- Sector Skills Council
- Professional Engineering Institutions

To ensure standardisation and consistency the sector will continue to work on a collaborative basis across Rail Engineering and other related engineering sectors. There is good evidence of collaboration between the Awarding Organisations to minimise potential future risk in terms of capacity and infrastructure.

Numbers of Apprentices

The number of Rail Engineering Apprentices for this Apprenticeship Standard is estimated to be in the region of 200 -300 for the first year raising to between 400 – 500 p.a. by 2020

This number is an estimate based on the DfT Apprenticeship target on 30k apprentices across the period of the current Government.

Documents Under Development

The following documents that will support the delivery of the end point assessment plan are under development and will be completed and agreed by all involved in the end point assessment prior to the apprenticeship programmes "going live" (currently targeted for September 2016).

- Detail Requirements Documents for each pathway.
- Occupational Competence Validation Interview (Viva) guidance & record format.

These documents are under development and will be completed in Q2 2016. Once completed they will be held by The National Skills Academy for Rail (NSAR) on behalf of the Sector employers and will be freely available to all.