



ENERGY &
ENVIRONMENT
AWARDS

Skills for a greener world

EEA Level 2 End-point Assessment for Engineering
Operative
(Maintenance; Mechanical manufacturing; Electrical and
electronic; Fabrication)

Supporting Documents

QAN: 610/6013/6

ST0537 V1.0 V1.1 V1.2 V1.3

Supporting Documents for

EEA Level 2 End-point Assessment for Engineering Operative (Maintenance; Mechanical manufacturing; Electrical and electronic; Fabrication)

QAN: 610/6013/6

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Updates to the supporting documents

version	Date first published	Section updated	Page(s)
V5.0	February 2026	Distinction criteria updated	55
v4.0	August 2025	Rebranded	All
v3.0	19 July 2023	New pathway introduced – Fabrication Role	All
		Updated Appendix C – Practical Skills Observation Planning Form	8
v2.0	24 May 2023	Rebranded	ALL
v1.0	1 March 2023	First published	ALL

Appendix A: Glossary

Amplification – provides more detail on how individual knowledge, skills or behaviours statements should be interpreted. Where the KSB statements, themselves are deemed self-explanatory, no amplification is provided. Assessment may include questions on anything identified in the amplification

Behaviours (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Elements – are the knowledge, skills and behaviours and what is needed to competently undertake the duties required for an apprenticeship standard

Gateway - the stage of the apprenticeship where the apprentice, employer and training provider determine whether the apprentice is ready to undertake end-point assessment

Guidance – is only provided where it is required to support interpretation of the KSB statements

Knowledge (as part of KSBs) – specific information, technical detail, and 'know-how' identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Pathways – a specialist route within an apprenticeship standard that builds on the occupational competence for a new entrant to the occupation

Skills (as part of KSBs) – the practical application of knowledge identified as part of the apprenticeship standard that must be evidenced during end-point assessment

Standard – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation's duties. Occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships and Technical Education current occupation criteria

Topic - is a collection of elements grouped into a theme e.g., Health and Safety

Appendix B: Gateway Eligibility Form

(Standard Version: ST0537 version 1.0 ; Assessment Plan Version: ST0537/AP V1.1)

Apprentice's name:		Apprentice's job title:	
Apprentice's ULN:			
Name of Employer:		Name of Training provider:	
Employer representatives present:		Training provider representatives present:	
Apprenticeship start date:		Apprenticeship on-programme end date:	
Was the apprentice aged 19 or over at the start of the programme?		Y / N	
Employer Decision for apprentices aged 19 or over only at the start of the programme:		We require the apprentice to attempt English and maths before taking the end-point assessment	Y / N
Gateway meeting date:			
Has the apprentice taken any part of the end-point assessment for this apprenticeship standard with any other End Point Assessment Organisation?		Y / N	
If 'Yes' please give details:			

Apprentice's details

Eligibility requirements:

Where applicable, the apprentice must confirm their achievement of the following

Note: For apprentices aged 19+, if maths and/or English have been attempted but not achieved evidence of the attempt should be submitted.

Eligibility requirement	Achieved by the apprentice? Y/N	Evidence (Scans of certificates MUST be included)
Achieved English Level 1		
Achieved maths Level 1		
Achieved Level 2 Diploma in engineering operations (competence)		
Achieved Level 2 Certificate or Diploma in engineering operations (knowledge)		
The employer must be satisfied that the apprentice has sufficient evidence in the form of a portfolio to allow the apprentice to consistently demonstrate KSBs		

Gateway Eligibility Declaration

The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:

1. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
2. The apprentice will only submit their own work as part of end-point assessment.
3. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
4. The apprentice has been on-programme for a minimum duration of 365 days.
5. The apprentice has achieved the mathematics and English requirements as detailed in this document.
6. The apprentice has achieved Level 2 Diploma in engineering operations (competence).
7. The apprentice has achieved Level 2 Certificate or Diploma in engineering

operations (knowledge).

8. The apprentice will be ready to submit a portfolio of evidence to support the professional discussion at least 2 weeks prior to the professional discussion.
9. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests
10. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship certificate from the ESFA who issue the certificate on behalf of the Secretary of State.
11. The apprentice has been directed to the Energy & Environment Awards Appeals Policy and Complaints Policy.
12. The employer/training provider has given Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
13. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to Energy & Environment Awards, the end-point assessment cannot take place.

Signed on behalf of the employer (print name):	Signature:	Date:
Signed on behalf of the training provider (print name):	Signature:	Date:
Apprentice's name (print):	Signature:	Date:

Energy & Environment Awards use only:

Energy & Environment Awards Sign off:	
Comments/actions:	

Appendix C: Practical Skills Observation Planning Form

Instructions

This form has two purposes:

1. To help you plan a practice Practical Skills Observation for your apprentices
2. To inform Energy & Environment Awards of the proposed task(s) for the live assessment

The apprentice is assessed:

- in their normal place of work in a suitable area away from the work-place
OR
- in a simulated environment that reflects the real working environment and realist work situation
- A total of 2 hours + or – 10 minutes is permitted for the practical skills observation with questioning
- Equipment and resources needed for the assessment must be in good and safe working condition

The activities should be designed to assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship. However, as a minimum the practical skills observation must cover the activities and KSBs listed in the Planning Form below.

Energy & Environment Awards offers a service to review the employer/training provider's Practical Skills Observation task brief.

Task variations: If you have more than one apprentice being assessed, use the "Practical Task variations" section of the form to indicate what the task variations that will be put in place so that apprentices are not asked to complete identical tasks.

Complete the 'Practical Skills Observation Planning Form' and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review 1 month before the start** of the end-point assessment.

Select the option applicable to the apprentice's job role from the list below and describe the task(s)

Option 1 – Maintenance Role Specialist Knowledge covered in the task-

Knows how to plan and carry out tasks in line with appropriate legislation, regulation and environmental requirements and in line with company;

KSBs covered: K6 K8

Option 2 – Mechanical Manufacturing Role Specialist Knowledge covered in the task -

Knows the uses of a range of manufacturing equipment and the associated quality outputs of that equipment:

KSBs covered: K9 K11

Option 3: Electrical and Electronic Engineering Role Specialist Knowledge covered in the task -

Knows the correct uses cables for a wide range of tasks in-line with safe working practices and procedures:

KSBs covered: K12 K14

Option 4: Fabrication Role Specialist Knowledge covered in the task - Knows how to prepare appropriately for tasks in-line with safe working practices and procedures:

KSBs covered: K15 K17

Core Skills covered in the task - Works safely, efficiently and effectively at all times ensuring that all appropriate legislation, regulation and environmental compliance has been adhered to in-line with company policies, procedures and practice:

KSBs covered: S1 S5 S6 S8

Select the option applicable to the apprentice's job role from the list below and describe the task(s)

Option 1 – Maintenance Role Specialist Skills covered in the task - Carries out fault finding and maintenance activities in-line with company processes, procedures and practice:

KSBs covered: S9 S10

Option 2 – Mechanical Maintenance Engineering Role Specialist Skills-covered in the task - Produces parts to the required specification:

KSBs covered: S14 S15

Option 3 – Electrical and Electronic Engineering Role Specialist Skills covered in the task - Tests and assembles parts to the required specification:

KSBs covered: S18 S19

Option 4 – Fabrication Role Specialist Skills covered in the task - Produces parts to the required specification:

KSBs covered: S22 S23

Practical Task Variations - Describe how you can vary this task to ensure that the task does not become predictable.

Variation 1:

Variation 2:

Variation 3:

Special requirements (for example: access arrangements/PPE):

Resources (for example: equipment/tools required):

Estimated total duration of practical task(s) must be 2 hours + or – 10 minutes.

Please state time for the practical task(s): _____

Remember:

- The specific detail of the tasks to be undertaken should be **kept confidential from the apprentices**

Practical Task: Include relevant photographs to illustrate task(s)

Energy & Environment Awards Office use only

Date received	
Date signed off	

Practical Skills Observation KSB Reference

This reference table will assist the employer and/or training provider identify the KSB.

KSB Reference
K1 How to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them
K3 Their individual roles and responsibilities within the organisation and the flexibility required to support the achievement of company targets
K4 Engineering operational practices, processes and procedures
K5 Potential problems that can occur within the engineering operations and how they can be avoided
K6 Maintenance planning
K8 Specific safe working practices, maintenance procedures and environmental regulations that need to be observed environmental regulations that need to be observed
K9 Specific equipment operating parameters
K11 Specific quality specifications for mechanical manufacturing operations
K12 Cable types and where they should be used
K14 Specific safe working practices, isolation procedures and safe reinstating of equipment/system that need to be observed
K15 Specific marking out and preparation techniques
K17 Specific safe working practices, isolation procedures and safe
Core Skills
S1 Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines
S5 Obtain and follow the correct documentation, specifications and work instructions in accordance with time constraints and the roles and responsibilities identified for the engineering activities, extracting the necessary data/information from specification and related documentation
S6 Select and use appropriate tools, equipment and materials to carry out the engineering operation

S8 Work efficiently and effectively at all times maintaining workplace organisation and minimising waste

S9 Carry out fault location on appropriate equipment using suitable maintenance diagnostic techniques

S10 Carry out maintenance activities in line with work instructions

S14 Mount and set the required work holding devices

S15 Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques

S18 Assemble and test a range of electrical components e.g. component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc.

S19 Assemble and test a range of electronic components e.g. resistors,

S22 Join the materials using the appropriate methods and techniques

S23 Produce components which meet the specification requirements

Core Behaviours

B1 Personal responsibility and resilience:

Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.

Appendix D: Practice Practical Skills Observation Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice Practical Skills Observation prior to end-point assessment. The form below is for use by the person playing the part of the independent assessor.

Name of Apprentice	
Location(s) of Practice Practical Skills Observation	
Name of Independent Assessor	
Date of Practice Practical Skills Observation	
Start Time	
End Time	
Independent Assessor: Additional comments	

Please indicate the apprentice's practice practical skills observation grade (F/P):	Grade

Please Note:

To achieve a Pass, the Apprentice must achieve all the pass criteria.

Fail: the apprentice does not demonstrate the pass criteria.

Assessor questions: during the live assessment, the assessor will ask between 3 and 6 open questions.

Core Knowledge	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass - Check the box
<p>K1 How to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them</p> <p>K4 Engineering operational practices, processes and procedures</p> <p>K5 Potential problems that can occur within the engineering operations and how they can be avoided</p>	<p>Demonstrates their knowledge of how to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them.</p> <p>Evidence including:</p> <p>Can explain where to obtain the obtain the necessary job instructions, engineering drawings and specifications when questioned.</p> <p>Can interpret necessary job instructions, engineering drawings and specifications when questioned.</p> <p>Can outline the specific operational practices, processes and procedures relevant to their work activities when questioned.</p> <p>Can outline the potential problems that can occur within the engineering operations when questioned.</p> <p>Can explain the actions that can be taken to avoid problems from occurring when questioned.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions</p> <p><i>Develop some open ended questions</i></p>		

Comments: (what was observed)	Summary of response to question(s):	
	Audio recording reference/timeline	

Option 1: Maintenance Role Specialist Knowledge	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.		Pass – Check the box
<p>K6 Maintenance planning</p> <p>K8 Specific safe working practices, maintenance procedures and environmental regulations that need to be observed</p>	<p>Demonstrates their understanding of a maintenance operations.</p> <p>Evidence including:</p> <p>Use of technical language and detail covering the key elements of the knowledge relating to the maintenance activities they have been involved in when questioned.</p> <p>Can describe the planning carried out prior to the start of the maintenance operation when questioned.</p> <p>Can describe the specific safe working practices, maintenance procedures and environmental regulations that need to be observed when questioned.</p>		<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>			
Comments: (what was observed)	Summary of response to question(s):		
	Audio recording reference/timeline		

Option 2: Mechanical Manufacturing Role Specialist Knowledge	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>K9 Specific equipment operating parameters</p> <p>K11 Specific quality specifications for mechanical manufacturing operations</p>	<p>Demonstrates their understanding of a mechanical manufacturing operations.</p> <p>Evidence including:</p> <p>Use of technical language and detail covering the key elements of the knowledge relating to the mechanical manufacturing activities they have been involved in when questioned.</p> <p>Can describe the specific equipment operating parameters when questioned.</p> <p>Can describe the specific quality specifications for mechanical manufacturing operations.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions</p> <p><i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Option 3: Electrical and Electronic Engineering Role Specialist Knowledge	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>K12 Cable types and where they should be used</p> <p>K14 Specific safe working practices, isolation procedures and safe reinstating of equipment/system that need to be observed</p>	<p>Demonstrates their understanding of electrical and electronic engineering operations.</p> <p>Evidence including:</p> <p>Use of technical language and detail covering the key elements of the knowledge relating to the electrical and electronic engineering activities they have been involved in when questioned.</p> <p>Can describe the different cable types and where they have used them when questioned.</p> <p>Can describe the specific safe working practices, isolation procedures and safe reinstating of equipment/system that need to be observed.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Option 4: Fabrication Role Specialist Knowledge	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.		Pass – Check the box
<p>K15 Specific marking out and preparation techniques</p> <p>K17 Specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed</p>	<p>Demonstrates their understanding of fabrication operations.</p> <p>Evidence including:</p> <p>Can use technical language and detail the key elements of the knowledge relating to the fabrication activities they have been involved in when questioned.</p> <p>Can describe the marking out and preparation techniques and where they have used them when questioned.</p> <p>Can describe the specific safe working practices, isolation procedures and safe reinstating of equipment or system that need to be observed.</p>		<p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>			
Comments: (what was observed)	Summary of response to question(s):		
	Audio recording reference/timeline		

Core Skills	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>S1 Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines</p> <p>S5 Obtain and follow the correct documentation, specifications and work instructions in accordance with time constraints and the roles and responsibilities identified for the engineering activities, extracting the necessary data/information from specification and related documentation</p>	<p>Demonstrates their ability to work safely in an engineering environment to approved procedures.</p> <p>Evidence including:</p> <p>Can identify, assess and control health and safety risks within work environment as per company procedures and guidelines and record the necessary information appropriately.</p> <p>Can work efficiently and effectively while adhering to appropriate job instructions.</p> <p>Can select and use appropriate tools, equipment and materials to carry out the engineering operations.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

<p>S6 Select and use appropriate tools, equipment and materials to carry out the engineering operation</p> <p>S8 Work efficiently and effectively at all times maintaining workplace organisation and minimising waste</p>	<p>Can deal with problems that occur within the engineering environment.</p>	<input type="checkbox"/>
<p>Questions <i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Option 1: Maintenance Role Specialist Skills	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>S9 Carry out fault location on appropriate equipment using suitable maintenance diagnostic techniques</p> <p>S10 Carry out maintenance activities in line with work instructions</p>	<p>Demonstrates their ability carry out maintenance activities in line with work instructions.</p> <p>Evidence including:</p> <p>Follows the correct work instructions as part of their work commitments and shows an understanding of any operating rules in place within the instruction.</p> <p>Carries out fault location using suitable diagnostic techniques.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Option 2: Mechanical Manufacturing Engineering Role Specialist Skills	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>S14 Mount and set the required work holding devices</p> <p>S15 Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques</p>	<p>Demonstrates their ability to produce components sub-assemblies or completed assemblies to the required specification.</p> <p>Evidence including:</p> <p>Mounts and sets the required work holding devices.</p> <p>Follows the appropriate mechanical manufacturing techniques to produce individual components, sub-assemblies or completed assemblies, showing an understanding of the techniques used.</p>	<p style="text-align: center;"><input type="checkbox"/></p> <p style="text-align: center;"><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Option 3: Electrical and Electronic Engineering Role Specialist Skills		To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
S18 Assemble and test a range of electrical components e.g. component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc. S19 Assemble and test a range of electronic components e.g. resistors, capacitors, diodes, transistors, etc.	Demonstrates their ability to assemble and test a range of electrical and electronic components. Evidence including:		
	Follows the appropriate electrical assembly and testing, showing an understanding of the techniques used.		<input type="checkbox"/>
	Follows the appropriate electronic assembly and testing, showing an understanding of the techniques used.		<input type="checkbox"/>
Questions <i>Develop some open ended questions</i>			
Comments: (what was observed)		Summary of response to question(s):	
		Audio recording reference/timeline	

Option 4: Fabrication Role Specialist Skills		To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
S22 Join the materials using the appropriate methods and techniques S23 Produce components which meet the specification requirements	Demonstrates their ability to produce components which meet the specification requirements. Evidence including:		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
	Follows correct work instructions to produce components as part of their work commitments and shows an understanding of any operating rules in place within the instruction.		
	Can produce components which meet the specification requirements		
	Can join the materials using the appropriate methods and techniques		
Questions <i>Develop some open ended questions</i>			
Comments: (what was observed)		Summary of response to question(s):	
		Audio recording reference/timeline	

Core Behaviours	To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Pass – Check the box
<p>B1 Personal responsibility and resilience Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges</p>	<p>Demonstrates they comply with Health, Safety guidance and procedures.</p> <p>Evidence including:</p> <p>Always demonstrates understanding and importance of Health and Safety requirements.</p> <p>Dynamically assesses/controls risk in current environment.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>		
<p>Comments: (what was observed)</p>	<p>Summary of response to question(s):</p>	
	<p>Audio recording reference/timeline</p>	

Appendix E: Practice Professional Discussion Template

Employers/training providers are recommended to arrange for apprentices to carry out a practice Professional Discussion prior to end-point assessment. The form below is for use by the person playing the part of the independent assessor.

Name of Apprentice	
Location(s) of Practice Professional Discussion	
Name of Independent Assessor	
Date of Practice Professional Discussion	
Start Time	
End Time	
Independent Assessor: Additional Comments	

	Grade
Please indicate the apprentice's practice professional discussion grade (F/P/D):	

Please Note:

To achieve a Pass, the Apprentice must achieve all the pass criteria.

Fail: the apprentice does not demonstrate the pass criteria.

To achieve a Distinction, the Apprentice must achieve all the pass and the distinction criteria for the specialist job role they are working towards.

Fail: the apprentice does not demonstrate the pass criteria

During the live assessment, the assessor will ask between 5 and 7 open ended questions.

Core Knowledge	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must achieve ALL of the pass and ALL the distinction criteria for the specialist job role they are working towards.	Achieved Check the box
K2 Relevant statutory, quality, environmental compliance procedures/systems, organisational and health and safety regulations relating to engineering operations	Demonstrates their understanding of statutory, quality, environmental compliance procedures, systems, organisational and health and safety regulations. Evidence including: Able to outline the specific statutory, quality, environmental compliance procedures/systems, organisational and health and safety regulations relevant to their work activities.	<input type="checkbox"/>	N/A	N/A
Questions <i>Develop some open ended questions</i>				
Timeline reference:		Portfolio reference:		
Comments				

Core Knowledge	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must achieve ALL of the pass and ALL the distinction criteria for the specialist job role they are working towards.	Achieved Y/N*
K4 Engineering operational practices, processes and procedures	Demonstrates their understanding of improvement techniques. Evidence including: Able to outline the specific operational practices, processes and procedures relevant to their work activities	<input type="checkbox"/>	N/A	N/A
Questions <i>Develop some open ended questions</i>				
Timeline reference:		Portfolio reference:		
Comments				

Timeline reference:		Portfolio reference:	
Comments			

Option 2: Mechanical Manufacturing Role Specialist Knowledge	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must achieve ALL of the pass and ALL of the distinction criteria for the specialist job role they are working towards.	Achieved Check the box
<p>K9 Specific equipment operating parameters</p> <p>K10 Mechanical manufacturing techniques</p>	<p>Demonstrates their understanding of a mechanical manufacturing operations.</p> <p>Evidence including:</p> <p>Use of technical language and detail covering the key elements of the knowledge relating to the mechanical manufacturing activities they have been involved in.</p> <p>Can describe the specific equipment operating parameters.</p> <p>Can describe the mechanical manufacturing techniques they have used.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Use of technical language and detail to give an in-depth* explanation of the key elements relating to knowledge in the mechanical manufacturing activities they have been involved in.</p> <p>In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail e.g., processes, equipment, materials used and the reason behind their use.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions</p> <p><i>Develop some open ended questions</i></p>				

Timeline reference:		Portfolio reference:	
Comments			

Option 3: Electrical and Electronic Engineering Role Specialist Knowledge	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must achieve ALL of the pass and ALL of the distinction criteria for the specialist job role they are working towards.	Achieved Check the box
<p>K12 Cable types and where they should be used</p> <p>K13 Electrical and electronic assembly and testing techniques</p>	<p>Demonstrates their understanding of electrical and electronic engineering operations.</p> <p>Evidence including:</p> <p>Use of technical language and detail covering the key elements of the knowledge relating to the electrical and electronic engineering activities they have been involved in.</p> <p>Can describe the different cable types and where they have used them.</p> <p>Can describe the electrical and electronic assembly and testing techniques they have used.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Use of technical language and detail to give an in-depth* explanation of the key elements relating to knowledge in the electrical and electronic engineering activities they have been involved in.</p> <p>In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail e.g., processes, equipment, materials used and the reason behind their use</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

Questions <i>Develop some open ended questions</i>			
Time reference:		Portfolio reference:	
Comments			

Option 4: Fabrication Role Specialist Knowledge	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must achieve ALL of the pass and ALL of the distinction criteria for the specialist job role they are working towards.	Achieved Check the box
<p>K15 Specific marking out and preparation techniques</p> <p>K16 Different fabrication and joining techniques</p>	<p>Demonstrates their understanding of electrical and electronic engineering operations.</p> <p>Evidence including:</p> <p>Can use technical language and detail the key elements of the knowledge relating to the materials, processing, finishing activities they have been involved in.</p> <p>Can describe the machinery, equipment and tooling required for the materials, processing, finishing operation and where they have used them.</p> <p>Can describe the different materials, processing, finishing techniques.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Use of technical language and detail to give an in-depth* explanation of the key elements relating to knowledge in the electrical and electronic engineering activities they have been involved in.</p> <p>In-depth* = explanation includes detail of key aspects of the work they have carried out and can answer questions using relevant detail e.g., processes, equipment, materials used and the reason behind their use</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

Questions <i>Develop some open ended questions</i>			
Time reference:		Portfolio reference:	
Comments			

<p>S2 Identify and deal appropriately with any risks, hazards, hazardous situations and problems that may occur within the engineering environment within the limits of their responsibility</p>	<p>Can identify, assesses/ and controls risk within work environment.</p>	<p><input type="checkbox"/></p>		
<p>S6 Select and use appropriate tools, equipment and materials to carry out the engineering operation</p>	<p>Can select and use appropriate tools, equipment and materials to carry out the engineering operations.</p>	<p><input type="checkbox"/></p>		

S7 Deal appropriately with any problems that may occur within the manufacturing environment within the limits of their responsibility	Can use effective communication using a range of techniques.	<input type="checkbox"/>		
	Can deal with problems that occur within the engineering environment.	<input type="checkbox"/>		
	Can work efficiently and effectively while adhering to appropriate job instructions.	<input type="checkbox"/>		
Questions <i>Develop some open ended questions</i>				
Time reference:		Portfolio reference:		
Comments				

Core Skills	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the following core pass and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must be able to achieve all of the pass criteria and at least 2 of the 3 core skills distinction criteria as laid out below and the distinction criteria for the specialist job role they are working towards	Achieved Check the box
<p>S3 Demonstrate effective communication skills which include oral, written, electronic</p> <p>S4 Complete appropriate documentation accurately efficiently and legibly using the correct</p>	<p>Demonstrates their ability to work safely in an engineering environment to approved procedures.</p> <p>Evidence including:</p> <p>Can use effective communication using a range of techniques.</p> <p>Can complete documentation accurately, efficiently and legibly using the correct terminology.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>N/A</p>	<p>N/A</p>

terminology where required				
Questions <i>Develop some open ended questions</i>				
Timeline reference:		Portfolio reference:		
Comments				

Option 1: Maintenance Role Specialist Skills	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the core pass criteria and ALL the pass criteria for one of the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must be able to achieve all of the pass criteria and at least 2 of the 3 core skills distinction criteria as laid out above and the distinction criteria for the specialist job role they are working towards	Achieved Check the box
<p>S9 Carry out fault location on appropriate equipment using suitable maintenance diagnostic techniques</p> <p>S10 Carry out maintenance activities in line with work instructions</p>	<p>Demonstrates their ability carry out maintenance activities in line with work instructions.</p> <p>Evidence including:</p> <p>Carries out fault location using suitable diagnostic techniques.</p> <p>Provides evidence of having followed the correct work instructions as part of their work commitments and shows an understanding of any operating rules in place within the instruction.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Demonstrates that they can consistently carryout fault finding and maintenance efficiently and can overcome problems.</p>	<p><input type="checkbox"/></p>

<p>S11 Carry out tests on the maintained equipment in accordance with test schedule/defined test procedures</p> <p>S12 Follow appropriate completion activities and restore equipment to service by replacing or repairing components</p>	<p>Carries out sufficient tests on the maintained equipment.</p> <p>Carries out correct completion activities and restores equipment to a serviceable condition.</p>	<input type="checkbox"/>		
<p>Questions <i>Develop some open ended questions</i></p>				
<p>Timeline reference:</p>		<p>Portfolio reference:</p>		<p>Comments</p>

Option 2: Mechanical Manufacturing Engineering Role Specialist Skills	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the core pass criteria and ALL the pass criteria for one of the the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must be able to achieve all of the pass criteria and at least 2 of the 3 core skills distinction criteria as laid out above and the distinction criteria for the specialist job role they are working towards	Achieved Check the box
S13 Plan the mechanical manufacturing operation before they start	Demonstrates their ability to produce components subassemblies or completed assemblies to the required specification. Evidence including: Provides evidence of having used appropriate mechanical manufacturing techniques to produce individual components,	<input type="checkbox"/>	Demonstrates that they can consistently produce high quality parts efficiently and can overcome problems.	

<p>S14 Mount and set the required work holding devices</p>	<p>sub-assemblies or completed assemblies, showing an</p>			
<p>S15 Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques</p>	<p>understanding of the techniques used.</p>	<input type="checkbox"/>		
<p>S16 Carry out quality checks during and after mechanical manufacturing operations</p>	<p>Mounts and sets the required work holding devices.</p>	<input type="checkbox"/>		
	<p>Can plan mechanical manufacturing operation before they start.</p>	<input type="checkbox"/>		
	<p>Carries out appropriate quality checks during and after mechanical manufacturing operation to confirm components sub-assemblies or completed assemblies meet the required specification.</p>	<input type="checkbox"/>		

Questions <i>Develop some open ended questions</i>			
Timeline reference:		Portfolio reference:	
Comments			

Option 3: Electrical and Electronic Engineering Role Specialist Skills	Pass Criteria To achieve a PASS the apprentice must achieve ALL of the core pass criteria and ALL the pass criteria for one of the the specialist job role as laid out below.	Achieved Check the box	Distinction Criteria To achieve a distinction the apprentice must be able to achieve all of the pass criteria and at least 2 of the 3 core skills distinction criteria as laid out below and the distinction criteria for the specialist job role they are working towards.	Achieved Check the box
<p>S17 Wire and terminate different types of cabling e.g. single core, multi core, screened, fire resistant, armoured, etc.</p> <p>S18 Assemble and test a range of electrical components e.g. component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc.</p>	<p>Demonstrates their ability to assemble and test a range of electrical and electronic components.</p> <p>Evidence including:</p> <p>Can wire and terminate different types of cabling.</p> <p>Provides evidence of having used appropriate assembly and testing,</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Demonstrates that they can consistently assemble and test electrical and electronic equipment efficiently and can overcome problems.</p>	<p><input type="checkbox"/></p>

Core Behaviours	Pass Criteria Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected. To achieve a pass the apprentice must achieve all of the behaviours pass criteria as laid out below.	Achieved Check the box	Distinction Criteria The apprentice must demonstrate consistent and positive behaviours. To achieve a distinction the apprentice must be able to achieve ALL of the pass criteria and ALL of the distinction criteria.	Achieved Check the box
<p>B1 Personal responsibility and resilience Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.</p>	<p>Demonstrate they comply with Health, Safety and guidance procedures.</p> <p>Evidence including:</p> <p>Always demonstrates understanding and importance of Health and Safety requirements.</p> <p>Assesses/controls risk in current environment.</p> <p>Can be trusted to work on own when appropriate, knowing who and where to seek help from if needed.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Can challenge others on Health and Safety compliance.</p> <p>Can proactively assesses/controls risk without the need to be prompted.</p> <p>Sets an example to others by always working hard even when on own.</p> <p>Can reflect on how to do things more effectively.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>

	Can manage own time and workload Stays motivated and committed, when facing small challenges.	<input type="checkbox"/>		
Questions <i>Develop some open ended questions</i>				
Timelines reference:		Portfolio reference:		
Comments				

Core Behaviours	Pass Criteria Apprentice demonstrated an acceptable level of behaviour and meets the minimum level of behaviour expected. To achieve a pass the apprentice must achieve all of the behaviours pass criteria as laid out below.	Achieved Check the box	Distinction Criteria The apprentice must demonstrate consistent and positive behaviours. To achieve a distinction the apprentice must be able to achieve ALL of the pass criteria and ALL of the distinction criteria.	Achieved Check the box
<p>B2 Work effectively in teams Integrate with the team, support other people, consider implications of their own actions on other people and the business whilst working effectively to get the task completed.</p>	<p>Demonstrate they can work well within a team</p> <p>Evidence including:</p> <p>Makes effort to integrate within a team.</p> <p>Will help and support when asked.</p> <p>Considers impact of own actions on other people or activities.</p> <p>Contributes positively to team deliverables.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>Proactively and regularly supports others.</p> <p>Seeks support and advice and will share learning.</p> <p>Provides encouragement as appropriate to keep the team on track.</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>
<p>Questions <i>Develop some open ended questions</i></p>				

to others and have a positive and respectful attitude.	Pays attention and asks relevant questions to clarify understanding. Has a positive and respectful attitude.	<input type="checkbox"/> <input type="checkbox"/>		
Questions <i>Develop some open ended questions</i>				
Timelines reference:		Portfolio reference:		
Comments				

environments or technologies and have a positive attitude to feedback and advice.	<p>Can reflect on behaviours and seeks opportunities to develop.</p> <p>Can adapt to different Situations, Environments or Technologies.</p> <p>Has a positive attitude to feedback and advice.</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Proactively seeks feedback and acts upon it.	
Questions <i>Develop some open ended questions</i>				
Timelines reference:		Portfolio reference:		Comments

Appendix F: Portfolio Mapping Document

Introduction

Use this document to map the portfolio of evidence to the KSBs assessed during the professional discussion.

Apprentice's next steps

1. Complete all the details on the first page and include employer details of where relevant competencies from their experience at work was gained.
2. The apprentice can use a number of different types of evidence to demonstrate their competence as described in Section 5 of the Specification – 'What to include in the portfolio?'. For further guidance, the apprentice must seek advice from their tutor/supervisor/mentor and training provider.
3. Map evidence to the criteria in the following pages using a referencing system indicating where the evidence for the criteria is located in the portfolio e.g., work based evidence Job 1 (J1) page 5 paragraph 2. This will allow the independent assessor to locate the section or specific piece of evidence being discussed and referred to during the professional discussion.
4. Place the portfolio mapping document at the front of the portfolio of evidence.

The apprentice's training provider must make arrangements for Energy & Environment Awards to have access to the apprentice's portfolio including the portfolio mapping document at least 2 weeks before the professional discussion. For apprentices using e-portfolios such as ONEFILE, SMARTASSESSOR, the reference used must simply be the file or folder name you used when uploading the evidence to such systems.

Portfolio Mapping Document

Mapping Sign off on Portfolio Completion:

Apprentice Name (Print)	Apprentice Signature	Training Provider (Company)	Training Provider Signatory	Date of Sign Off

Core Knowledge for all pathways:

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K1	How to obtain the necessary job instructions, engineering drawings and specifications and how to interpret them			
K2	Relevant statutory, quality, environmental compliance procedures/systems, organisational and health and safety regulations relating to engineering operations			
K3	Their individual roles and responsibilities within the organisation and the flexibility required to support the achievement of company targets			
K4	Engineering operational practices, processes and procedures			
K5	Potential problems that can occur within the engineering operations and how they can be avoided			

Option 1: Specific Job Role Knowledge: Maintenance role

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K6	Maintenance planning			
K7	Diagnostic and fault finding techniques			
K8	Specific safe working practices, maintenance procedures and environmental regulations that need to be observed			

Option 2: Specific Job Role Knowledge: Mechanical Manufacturing Role:

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K9	Specific equipment operating parameters			
K10	Mechanical manufacturing techniques			
K11	Specific quality specifications for mechanical manufacturing operations			

Option 3: Specific Job Role Knowledge: Electrical and electronic engineering role:

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K12	Cable types and where they should be used			
K13	Different fabrication and joining techniques			
K14	Specific safe working practices, isolation procedures and safe reinstating of equipment/system that need to be observed			

Option 4: Specific Job Role Knowledge: Fabrication role:

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
K15	Specific marking out and preparation techniques			
K16	Different fabrication and joining techniques			

Core Skills for all pathways:

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S1	Work safely at all times, complying with health and safety legislation, regulations, environmental compliance procedures and systems and other relevant guidelines			
S2	Identify and deal appropriately with any risks, hazards, hazardous situations and problems that may occur within the engineering environment within the limits of their responsibility			
S3	Demonstrate effective communication skills which include oral, written, electronic			
S4	Complete appropriate documentation accurately, efficiently and legibly using the correct terminology where required			
S5	Obtain and follow the correct documentation, specifications and work instructions in accordance with time constraints and the roles and responsibilities identified for the engineering activities, extracting the necessary data/information from specification and related documentation			
S6	Select and use appropriate tools, equipment and materials to carry out the engineering operation			
S7	Deal appropriately with any problems that may occur within the manufacturing environment within the limits of their responsibility			
S8	Work efficiently and effectively at all times maintaining workplace organisation and minimising waste			

Option 1: Specific Job Role Skills: Maintenance role

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S9	Carryout fault location on appropriate equipment using suitable maintenance diagnostic techniques			
S10	Carryout maintenance activities in line with work instructions			
S11	Carryout tests on the maintained equipment in accordance with test schedule/defined test procedures			
S12	Follow appropriate completion activities and restore equipment to service by replacing or repairing components			

Option 2: Specific Job Role Skills: Mechanical Manufacturing engineering role

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S13	Plan the mechanical manufacturing operation before they start			
S14	Mount and set the required work holding devices			
S15	Produce individual components, sub-assemblies or completed assemblies using mechanical manufacturing techniques			
S16	Carryout quality checks during and after mechanical manufacturing operations			

Option 3: Specific Job Role Skills: Electrical and electronic engineering role

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S17	Wire and terminate different types of cabling e.g., single core, multi core, screened, fire resistant and armoured			
S18	Assemble and test a range of electrical components e.g., component panels, isolator switches, fuses, circuit breakers, contactors, relays, rail mounted terminal blocks, etc			
S19	Assemble and test a range of electronic components e.g., resistors, capacitors, diodes, transistors, etc.			
S20	Follow appropriate completion activities and restore equipment/system to service after the assembly and testing has been completed			

Option 4: Specific Job Role Skills: Fabrication role

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
S21	Shape the materials using the appropriate methods and techniques			
S22	Join the materials using the appropriate methods and techniques			
S23	Produce components which meet the specification requirements			
S24	Carry out quality checks during and after the fabrication activities			

Core Behaviours

Ref. (KSB)	Apprenticeship Standard Criteria	PORTFOLIO EVIDENCE REFERENCE (Apprentice Input)		
		1	2	3
B1	Personal responsibility and resilience – Comply with the health and safety guidance and procedures, be disciplined and have a responsible approach to risk, work diligently regardless of how much they are being supervised, accept responsibility for managing time and workload and stay motivated and committed when facing challenges.			
B2	Work effectively in teams – Integrate with the team, support other people, consider implications of their own actions on other people and the business whilst working effectively to get the task completed.			
B3	Effective communication and interpersonal skills – An open and honest communicator, communicates clearly using appropriate methods, listen well to others and have a positive and respectful attitude.			
B4	Focus on quality and problem solving – Follow instructions and guidance, demonstrate attention to detail, follow a logical approach to problem solving and seek opportunities to improve quality, speed and efficiency.			
B5	Continuous personal development – Reflect on skills, knowledge and behaviours and seek opportunities to develop, adapt to different situations, environments or technologies and have a positive attitude to feedback and advice.			

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