



ENERGY &
UTILITY SKILLS

Skills for a greener world

EUIAS Level 3 End-point Assessment for Power Industry
Overhead Linesperson
(Distribution; Transmission)

Supporting Documents

QAN 610/4881/1
ST1330 V1.1

Supporting Documents for

EUIAS Level 3 End-point Assessment for Power Industry Overhead Linesperson

(Distribution; Transmission)

QAN 460/4881/1

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Updates to the supporting documents

Since the first publication of the EUIAS Power Industry Overhead Linesperson (PIOL) Supporting Documents (Distribution; Transmission), the following updates have been made.

Version	Date first published	Section updated	Page(s)
V1.1	November 2024	Standard updated (V1.1) to include statement ' <i>The apprentice may choose to end the assessment method early.</i> ' For 3 assessment methods	5, 11, 24, 28, 30, 54, 56, 63, 65, 72-74, 109
V1.0	October 2024	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 occupational 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: ST1330 version 1.1; Assessment Plan Version: 1.1)

Apprentice's name:	Apprentice's job title:
Name of Employer:	Name of Training provider:
Employer representatives present:	Training provider representatives present:
Apprenticeship start date:	Apprenticeship on-programme end date:
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:

The apprentice must confirm their achievement of the following:

Eligibility requirement	Achieved by the apprentice? Y/N	Evidence (Scans of certificates MUST be included)
Achieved an English qualification in line with the apprenticeship funding rules		
Achieved a mathematics qualification in line with the apprenticeship funding rules		
Passed Emergency First Aid 1 day course		
Compiled and submitted an EPA portfolio that meets the specification requirements, for the interview based		

Gateway Eligibility Declaration

1. The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:
2. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with EUIAS.
3. EUIAS has been informed about any reasonable adjustment and/or special considerations requests.
4. The apprentice will only submit their own work as part of end-point assessment.
5. All parties agree that end-point assessment evidence may be recorded and stored by EUIAS for quality assurance purposes.
6. The apprentice has been on-programme for a minimum duration of 365 days.
7. The apprentice has achieved English and mathematics qualifications in line with the apprenticeship funding rules.
8. The apprentice has passed an Emergency First Aid 1 day course.
9. The apprentice has compiled and submitted a competent portfolio of evidence, on which the technical interview will be based.
10. The apprentice, if successful, gives permission for EUIAS 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 EUIAS Appeals Policy and Complaints Policy.
12. The employer/training provider has given the EUIAS 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 EUIAS, 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:
EUIAS use only:		
EUIAS Sign off:		
Comments/actions:		



Appendix C: Trade Test Practical Assessment Requirements and Mapping Form

Trade Test Practical Assessment with Questions Mapping Summary

Trade Test Practical Assessment Documentation

The following documentation must be provided to EUIAS upon request. This forms part of EUIAS' quality assurance process for the PIOL Standard. Please complete the table below by adding a reference(s) to your own paperwork in the document references column.

Documentation Requirements	Please provide the document filename(s)
Employer Assessor training and standardisation materials	
Employer Assessor documentation	
Guidance for Employer Assessors	
Guidance on invigilation of apprentices	
Grading guidance	
Question bank	
Guidance for apprentice and their manager	
Tasks for apprentices	

Trade Test Practical Assessment Requirements

Please complete the table below by adding a reference(s) to your own paperwork in the document references column. In the reference column include the page(s) where evidence of the practical assessment requirements for the trade test (TT) can be located within your trade test paperwork.

Trade Test Practical Assessment Requirements	Please provide a document reference of where your documentation references the requirement
Space for the start and end date of TT to be documented <i>The trade test practical assessment with questions may take place in parts but must be completed over no more than 21 working days.</i>	
TT total time documented	
Space to <ul style="list-style-type: none"> • document an apprentice’s request to end the assessment early • indicate whether the employer assessor suggested the assessment continues 	
Guidance includes identified simulated environment(s)/locations	
Task to be conducted during practical assessment:	
Core	
a) prepare for power overhead lines activities	
b) organise and supervise a working party including receiving and clearing a safety document, and briefing a working party	
c) maintain work site health, safety, and environmental compliance	



Trade Test Practical Assessment Requirements	Please provide a document reference of where your documentation references the requirement
including completing a risk assessment	
d) work at height including fitting and operating a rescue device	
e) identify apparatus to be worked on	
f) select, prepare, use and store tools and equipment	
g) communicate with others	
h) complete work records	
Distribution	
i) work on or in proximity to live apparatus (simulated)	
j) distribution lifting operations	
k) install distribution support structures and their support mechanisms	
l) install fixed and temporary earthing and cut outs	
m) install distribution conductors	
n) install and dismantle pole mounted plant and apparatus	
o) conduct electrical testing	
p) problem solving and fault-finding	
q) make and break live connections	
Transmission	
r) working in proximity to live apparatus (simulated)	
s) transmission lifting operations	
t) install temporary earthing	
u) install access equipment	



Trade Test Practical Assessment Requirements	Please provide a document reference of where your documentation references the requirement
v) install and test transmission conductors	
w) test compression joints	
KSBs are mapped to the assessment	
Guidance to employer assessor includes statement 'must ask at least 10 questions	
KSBs observed to be documented	
Space for apprentice's responses to be documented	
KSBs demonstrated in answers to questions are indicated	
Preliminary grade achieved recorded	
Guidance for resits to include: <ul style="list-style-type: none">• different questions and tasks• resit whole TT Practical Assessment in full	

Trade Test Practical Assessment Mapping

Please complete the table below by adding a reference(s) to your own paperwork in the document references column to indicate the page(s) where evidence of the KSBs can be located within your trade test practical assessment tasks.

Core

Trade Test Theme: Prepare for power overhead lines activities (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K20: Planning, prioritising, organisation, and time management techniques for self and working party.	
S1: Review drawings, instructions, or information to understand the task for example, work instructions, wiring diagrams, design specifications, utility plans, on-line search documents	
S2: Prioritise and plan work with consideration for safety, environmental impact, quality, and cost.	
S3: Identify and organise resources to complete tasks for example, consumables.	
S17: Select, check, and prepare resources.	

Trade Test Theme: Organise and supervise a working party (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S6: Receive and clear a safety document (permit to work). Brief a working party.	
B3: Take ownership for work and responsibility for its impact on others.	



Trade Test Theme: Organise and supervise a working party (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
For example, self-motivated, disciplined in the approach to work tasks, identify and deal appropriately with distractions to enable tasks to be achieved, work carried out in line with standards.	

Trade Test Theme: Maintain work site health, safety and environmental compliance (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K7: The hazards associated with work on or near electrical power networks.	
K10: Risk assessments and method statements. Emergency procedures. Personal protective equipment (PPE). Manual handling. Fire safety.	
K14: Asset security requirements.	
K18: Recycling and waste management requirements.	
S7: Identify hazards and risks and apply control measures.	
S8: Apply health and safety procedures in compliance with regulations, standards, and guidance. For example, safe access and egress, demarcate the work area, working at height, confined spaces, COSHH.	
S10: Apply measures to leave power work environments in a safe and secure condition for example, anticlimbing guards, danger notices, barriers, lighting.	



Trade Test Theme: Maintain work site health, safety and environmental compliance (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S12: Segregate waste for reuse, recycling, and waste transfer.	
B1: Prioritise health and safety. For example, risk aware, minimise risks, and proactively work towards preventing accidents.	

Trade Test Theme: Working at height (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K12: Working at height awareness. Safe access and egress methods: hierarchy of methods, inspection, operation, and maintenance requirements. Exclusion zone requirements to avoid risk from falling objects.	
K13: Working at height personal protective equipment: harnesses, fall restraint and arrest equipment. User inspection, operation, and maintenance requirements. Rescue from height equipment and methods.	
S14: Use working at height equipment for example, mobile working platforms, scaffolding, ladders.	
S15: Select, inspect, and use personal climbing equipment to access and manoeuvre to a work position at height on overhead line plant and apparatus.	
S16: Fit and operate a rescue device at height.	



Trade Test Theme: Identify apparatus (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S4: Identify apparatus to be worked on.	

Trade Test Theme: Tools and equipment (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S13: Select, check, prepare, use or operate, and store personal tools and equipment.	

Trade Test Theme: Communicate with others (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K21: Communication techniques. Industry terminology. Adapting style to audience.	
S20: Communicate with others to give and receive information for example, colleagues, customers, and stakeholders.	
B5: Perform in a professional manner for example, polite, courteous, and respectful to customers and members of the public.	

Trade Test Theme: Complete work records (Core)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K23: Documentation requirements; importance of accurate records.	
S18: Record information.	



Distribution

Trade Test Theme: Work on or in proximity to live apparatus (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K34: Working on live apparatus and working in proximity to live apparatus protocols. Justification for live working.	
S29: Follow procedures for working on or in proximity to live apparatus.	
S30: Select and use specialist LV live working PPE.	

Trade Test Theme: Distribution lifting operations (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K38: Distribution rigging techniques on conductors and structures capable of carrying up to 132kv.	
S26: Select and operate lifting equipment in overhead lines distribution work for example, cranes and winches.	

Trade Test Theme: Install distribution support structures and their support mechanisms (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K35: Distribution support structures and their support mechanisms installation requirements.	
K36: Distribution network excavation methods and requirements.	
S31: Erect overhead lines plant and apparatus for example, poles, support mechanisms, stays.	



Trade Test Theme: Install fixed and temporary earthing (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K41: Awareness of domestic and industrial supply earthing. Earthing installation requirements. Earth electrode testing.	
S32: Install circuit main earths (CMEs) and additional (drain) earths.	
S33: Install fixed earthing conductors and carry out earth electrode testing.	

Trade Test Theme: Install distribution conductors (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K31: The installation and jointing methods of common conductor types; causes and consequences of common faults.	
K42: Cut out requirements.	
S34: Install cut outs.	
S35: Install or replace conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination where required.	

Trade Test Theme: Install and dismantle pole mounted plant and apparatus (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K39: Pole mounted plant and apparatus: installation, commissioning, and dismantling requirements.	



Trade Test Theme: Install and dismantle pole mounted plant and apparatus (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S36: Install, connect, and commission pole mounted plant and apparatus for example, transformers, pole mounted circuit breakers, and switchgear.	
S37: Dismantle pole mounted plant and apparatus for example, transformers, pole mounted circuit breakers, and switchgear.	

Trade Test Theme: Conduct electrical testing (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K45: Low voltage electrical testing requirements and result interpretation.	
S38: Conduct pre-energisation tests.	
S39: Conduct post-energisation (commissioning) checks.	
S41: Interpret testing procedure results and action required.	

Trade Test Theme: Problem solving and fault-finding (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K32: The symptoms and causes of common faults on electrical power circuits, plant and apparatus. Problem solving and fault-finding techniques: non-invasive visual examinations, testing procedures. Root cause analysis.	
S43: Recognise fault conditions and identify the root cause.	



Trade Test Theme: Problem solving and fault-finding (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S44: Replace components or resolve issues for example, replace high resistance joints or damaged conductor.	

Trade Test Theme: Make and break live connections (Distribution)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K44: Low voltage operational switching and testing requirements.	
S40: Perform testing procedures before and after switching operations.	
S42: Operate switchgear and fuses making and breaking live conductor connections.	



Transmission

Trade Test Theme: Work in proximity to live apparatus (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K48: Working in proximity to live apparatus protocols.	
S46: Follow procedures for working on or in proximity to live apparatus.	
S48: Check overhead line plant and apparatus is safe to access, install flag and check whistles if required.	

Trade Test Theme: Transmission lifting operations (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K51: Transmission rigging techniques on conductors and transmission towers.	
S47: Select and operate lifting equipment in overhead lines transmission work for example, cranes and winches.	

Trade Test Theme: Install access equipment (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S49: Install access equipment for example, platforms, ladders, and spacer trollies.	

Trade Test Theme: Install temporary earthing (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K52: High voltage temporary earthing requirements.	



Trade Test Theme: Install temporary earthing (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K53: Management of circulating currents.	
S50: Install high voltage temporary earthing equipment.	

Trade Test Theme: install and test transmission conductors (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
K47: The types and characteristics of common transmission conductors and joints; causes and consequences of common installation faults.	
S51: Install or replace conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination where required.	
S53: Connect spacers to conductors.	

Trade Test Theme: Test compression joints (Transmission)	Please provide a document reference of where the apprentice will be demonstrating the KSB
S52: Carry out conductor compression jointing	
S54: Test compression joints.	



Employer Declaration	
This is to confirm that our Trade Test Practical Assessment documentation maps to the Assessment Requirements as detailed above. A copy of the documentation has been provided for reference.	
Employer Name	
Contact Name:	
Job Title:	
Signature:	
Date:	

EUIAS Use Only			
Copy documentation received		Mapping references confirmed	
Start / End date and Total Time of TT documented		KSBs observed to be documented	
Space to document ending assessment early		Apprentice's responses to be documented	
Guidance includes identified simulated environment(s)/ locations		KSBs demonstrated in answers to questions are indicated	
Tasks (a)-(k) covered in employer-set tasks		Preliminary grade achieved recorded	
KSBs are mapped to the assessment		Guidance for resits / different	



EUIAS Use Only			
		questions / different tasks	
Guidance includes statement 'must ask at least 10 questions		Published grading descriptors are used	
EUIAS date of review			

Comments



Appendix D: Trade Test Technical Interview Requirements and Mapping Form

Trade Test Technical Interview Mapping Summary

Technical Interview Documentation

The following documentation must be provided to EUIAS upon request. This forms part of EUIAS' quality assurance process for the PIOL Standard. Please complete the table below by adding a reference(s) to your own paperwork in the document references column.

Documentation Requirements	Please provide the document filename(s)
Employer Assessor <i>training materials</i>	
Employer Assessor documentation	
Guidance for Employer Assessors	
Grading guidance	
Question bank	
Guidance for apprentice and their manager	

Technical Interview Requirements

Please complete the table below by adding a reference(s) to your own paperwork in the document references column to indicate the page(s) that where evidence of the technical interview requirements are found in your trade test paperwork.

Technical Interview Requirements	Please provide a document reference of where your documentation references the requirement
Space for the start and end time of TI to be documented <i>This will confirm that the TI has lasted at least 60 minutes</i>	
Space to document an apprentice's request to end assessment early and indicate employer assessor suggested assessment continues	
TI date documented	
Guidance includes resource requirements e.g. quiet place, procedures for remote interview	
Process in place to identify the identity of the apprentice and ensure the apprentice is not being aided	
Guidance to employer assessor includes statement 'must ask at least 4 questions (one for each theme minimum)'	
Space for apprentice's responses to be documented	
KSBs demonstrated in answers to questions are indicated	
Preliminary grade achieved recorded	
Guidance for resits / different questions	

Assessor Documentation

Please complete the table below by adding a reference(s) to your own paperwork in the document references column to indicate the page(s) that where evidence of the grading statements is found in your completed trade test paperwork. If there are sub bullets i.e. parts a, b, c etc then it would be helpful to identify where evidence for each of those sub bullets would be found.

Core

Technical Interview Theme: Roles and responsibilities	Please provide a document reference of where the assessor is assessing the grading descriptor
Pass descriptors	
Outlines their role as an overhead linesperson including their limits of responsibility and how they report or escalate issues. (K4, K5, S22, B4)	
Describes how they respond and adapt to work demands in line with organisational requirements, with reference to different teams and functions involved in operations and how they work together. (K4, S22, B4)	
Explains the responsibilities of persons as defined in the industry standard safety rules: supervising a working party, competent persons, and authorisation roles and responsibilities in relation to working under safety documentation. (K5)	

<p>Technical Interview Theme: Electrical danger – control and first aid</p>	<p>Please provide a document reference of where the assessor is assessing the grading descriptor</p>
<p>Pass descriptors</p>	
<p>Explains the dangers of electricity and how an electric shock can be received including direct contact, induced (impressed) voltage, and arcing. Outlines electric shock emergency procedures in line with company procedures. (K8)</p>	
<p>Describes how they would respond in the event of a first aid emergency, with reference to their emergency first aid training and responsibilities and measures they would take to avoid electrical risk in line with company procedures. (K11, S9)</p>	

<p>Technical Interview Theme: Power engineering electrical plant and apparatus</p>	<p>Please provide a document reference of where the assessor is assessing the grading descriptor</p>
<p>Pass descriptors</p>	
<p>Outlines power engineering electrical plant and apparatus, the properties and purpose of transformers, switchgear, earthing devices, voltage control and automated equipment. (K30)</p>	

Distribution

Technical Interview Theme: Conductor types and tensions	Please provide a document reference of where the assessor is assessing the grading descriptor
Pass descriptors	
Explains different distribution conductor types and tensions including all aluminium alloy conductor (AAAC) 30-175mm, Cross-linked polyethylene (XLPE), low voltage earthing, domestic and industrial service cables, cadmium and copper conductors 16-150mm. (K37)	

Transmission

Technical Interview Theme: Transmission support structures	Please provide a document reference of where the assessor is assessing the grading descriptor
Pass descriptors	
Explains transmission support structures' construction methods and requirements for support mechanisms and temporary stays. (K50)	

Employer Declaration

This is to confirm that our Trade Test Technical Interview documentation maps to the Assessment Requirements as detailed above. A copy of the requested documentation has been provided for reference:

Employer Name

Contact Name:

Job Title:

Signature:

Date:

EUIAS Use Only			
Copy documentation received		Guidance includes resource requirements e.g. quiet place, procedures for remote interview	
Mapping references confirmed		Guidance for resits / different questions	
Start / End time of TI documented		Published grading descriptors are used	
TI date documented		Apprentice's responses recorded	
Space to document ending assessment early		KSBs demonstrated in answers to questions are indicated	
Guidance includes statement 'must ask at least 4 questions (one for each theme min)'		Preliminary grade achieved recorded	
EUIAS date of review			

Comments



Appendix E: Practice Multiple-choice Test

Level: 3

Power Industry Distribution Overheads Linesperson

Practice Paper

This examination consists of 40 multiple-choice questions.

The Pass mark is 28 correct answers.

The duration of this examination is 60 minutes.

You must use a **pencil** to complete the answer sheet - pens must NOT be used.

When completed, please leave the examination answer sheet and question paper on the desk.

For this paper the use of a scientific calculator (non-programmable) is permitted.

For each question, fill in ONE answer ONLY.

If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:

MARKING INSTRUCTIONS

A B C D **ANSWER COMPLETED CORRECTLY**

Examples of how NOT to mark your examination sheet. **These will not be recorded**

A B C D **DO NOT** partially shade the answer circle.

A B C D **DO NOT** use ticks or crosses.

A B C D **DO NOT** use circles.

A B C D **DO NOT** shade over more than one circle.

You may use this page for rough work. This page must not be removed.

Question 1

What is a key difference between IDNOs (Independent Distribution Network Operators) and traditional DNOs (Distribution Network Operators)?

Possible answers

a)	IDNOs operate only in rural areas, while DNOs operate in urban areas
b)	IDNOs can operate nationwide without regional restrictions, while DNOs have specific geographic regions
c)	IDNOs generate electricity, while DNOs distribute it
d)	IDNOs regulate electricity prices, while DNOs do not

Question 2

What is ONE of the primary roles of an ICP (Independent Connections Provider)?

Possible answers

a)	Generating electricity
b)	Regulating electricity prices
c)	Supplying electricity to consumers
d)	Designing, constructing, and maintaining electrical infrastructure

Question 3

Which ONE of the following is a typical responsibility of an electricity supplier?

Possible answers

a)	Ensuring the stability and reliability of the distribution network
b)	Maintaining the high-voltage transmission grid
c)	Billing customers for electricity usage
d)	Installing home electrical systems

Question 4

What is the primary role of a power generator?

Possible answers

a)	Converting mechanical energy into electrical energy
b)	Distributing electricity to end consumers
c)	Maintaining the transmission grid
d)	Regulating electricity prices

Question 5

To achieve their objectives, Ofgem operate a statutory framework set by the:

Possible answers

a)	European Court of Human Rights
b)	Confederation of British Industry
c)	Department for Business, Enterprise and Regulatory Reform
d)	UK Parliament

Question 6

Identify ONE of the basic requirements of The Electricity at Work Regulations 1989.

Possible answers

a)	Employers must assess electrical risks and implement appropriate control measures
b)	Outlines quality standards for the voltage levels
c)	Employers must follow its guidelines for designing and installing electrical systems
d)	Sets standards for the frequency and duration of power outages

Question 7

The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) state that network owners shall ensure that their equipment is constructed, installed, protected, used and maintained to prevent danger, in which two areas?

Possible answers

a)	Electrical and mechanical operation
b)	Daytime and night-time working practices
c)	Indoor and outdoor asset housings
d)	Urban and rural locations

Question 8

Identify ONE role of customer feedback in power industry operations.

Possible answers

a)	To increase operational risks
b)	To improve service quality
c)	To increase operational costs
d)	To reduce energy production

Question 9

Identify ONE significant financial challenge for the UK power industry in achieving net-zero emissions by 2050.

Possible answers

a)	Increasing operational inefficiencies
b)	High initial investment costs
c)	Decreasing energy demand
d)	Lack of regulatory support

Question 10

Identify ONE impact of ethical business practices on an organisation.

Possible answers

a)	Maximised short-term profits
b)	Increased brand reputation
c)	Higher long-term operational costs
d)	Higher employee turnover rates

Question 11

Identify ONE penalty for power companies that fail to meet emission reduction targets?

Possible answers

a)	Financial fines
b)	Mandatory public apologies
c)	Suspension of operations
d)	Increased regulatory scrutiny

Question 12

If asbestos is left undisturbed and is in a reasonably good visible condition, which ONE of the following practices should the company adopt?

Possible answers

a)	By law, the company must remove the asbestos
b)	Carry out an inspection on an ad-hoc basis
c)	The asbestos should be removed from sight by use of boxing-in
d)	The asbestos should be left in-situ and monitored

Question 13

In the context of the Construction (Design and Management) Regulations 2015 (CDM 2015), what are individuals such as overhead linesmen, cable jointers and substation fitters defined as?

Possible answers

a)	Controller
b)	Designer
c)	Worker
d)	Delegate

Question 14

According to Section 2 of the Health and Safety at Work Act 1974, it is the responsibility of every employer, as far as is reasonably practicable, to ensure employees:

Possible answers

a)	health, safety and welfare
b)	have opportunities for future financial incentives
c)	have access to flexible working procedures
d)	Personal Protective Equipment (PPE) fits correctly

Question 15

According to The Confined Spaces Regulations 1997, before work commences, which ONE of the following key duties must be fulfilled?

Possible answers

a)	Vehicles near the work area are moved outside a five metre exclusion zone
b)	Inspection and maintenance records data must be referred to for guidance
c)	The local weather forecast must be consulted
d)	Adequate emergency arrangements must be put in place

Question 16

Which ONE of the following substances is covered by the Control of Substances Hazardous Health Regulations 2002 (COSHH)?

Possible answers

a)	White Spirit
b)	Radioactive substances
c)	Lead
d)	Asbestos

Question 17

Regulation 8(2) of the Lifting Operations and Lifting Equipment Regulations 1998 (LOLER) defines a lifting operation as 'an operation concerned with the lifting or lowering of:

Possible answers

a)	a pallet
b)	a load
c)	plant and switchgear
d)	any item requiring more than two persons to lift it

Question 18

Identify the regulations that requires employers to carry out lone worker risk assessments.

Possible answers

a)	The Provision and Use of Work Equipment Regulations 1998
b)	Management of Health and Safety at Work Regulations 1999
c)	Working Time Regulations 1998
d)	Health and Safety (Signs and Signals) Regulations 1996

Question 19

After how many days of absence due to a work-related injury must an employer report the incident under RIDDOR (Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013)?


Possible answers

a)	3
b)	7
c)	10
d)	14

Question 20

What type of sign is this?

Possible answers

a)	Prohibition	
b)	Warning	
c)	Mandatory	
d)	Help	

Question 21

Identify ONE purpose of the Environmental Protection Act (EPA) 1990.

Possible answers

a)	To increase industrial production
b)	To reduce government regulations
c)	To promote urban development
d)	To improve control of pollution

Question 22

Which ONE of the following is a primary environmental concern for power plants in England?

Possible answers

a)	Noise pollution
b)	Visual impact
c)	Light pollution
d)	Carbon emissions

Question 23

Who typically grants a wayleave?

Possible answers

a)	Local authorities
b)	Landowners or landlords
c)	Utility companies
d)	Government agencies

Question 24

If a stay wire is connected to a power line pole 12 metres above ground and attached to a ground anchor 5 metres from the pole, what is the length of the stay wire assembly?

Possible answers

a)	10 metres
b)	13 metres
c)	14 metres
d)	17 metres

Question 25

Using the formula:

$$s = \frac{wL^2}{8T}$$

Calculate the sag (s) in a power line, to 2 decimal places, where:

- Span length (L) = 100 metres
- Weight per unit length of the conductor (w) = 9.81 N/m
- Horizontal tension in the conductor (T) = 2000 N

Possible answers

a)	0.61 metres
b)	0.63 metres
c)	3.07 metres
d)	6.13 metres

Question 26

A project requires 200 metres of cable, but 15% of the cable will be wasted due to cutting and splicing.

How much cable should be ordered to account for the waste?

Possible answers

a)	210 metres
b)	220 metres
c)	230 metres
d)	240 metres

Question 27

A power company decides to upgrade an existing power line to handle increased demand from a new residential development.

Using Watt's Law, calculate the additional current that the conductors will need to handle, given:

- The total additional load (P) = 500 kW
- Voltage = 11 kV

Possible answers

a)	0.45 A
b)	4.54 A
c)	45.45 A
d)	454.50 A

Question 28

An overhead linesperson needs to convert the total length of power lines from miles to kilometres for a project report. The total length of the power lines is 31.07 miles. What is the distance in kilometres, to the nearest kilometre?

Assume 1 kilometre = 0.621 miles

Possible answers

a)	19 km
b)	21 km
c)	50 km
d)	62 km

Question 29

An overhead linesperson needs to install a new power pole and must calculate the volume of concrete required for the cylindrically shaped foundation.

Calculate the volume of the cylindrical foundation, given:

- Diameter of the cylindrical foundation: 1 metre
- Depth of the foundation: 2 metres

Assume $\pi = 3.14$

Possible answers

a)	1.57 m ³
b)	3.14 m ³
c)	6.28 m ³
d)	12.56 m ³

Question 30

Which ONE of the following best describes mass?

Possible answers

a)	The amount of matter in an object
b)	The force exerted by an object due to gravity
c)	The amount of space an object occupies
d)	The energy possessed by an object

Question 31

What is tensile strength?

Possible answers

a)	The ability of a material to resist deformation
b)	The maximum stress a material can withstand while being pulled before breaking
c)	The ability of a material to return to its original shape after deformation
d)	The resistance of a material to scratching or abrasion

Question 32

Which ONE of the following factors does **NOT** affect the mechanical advantage of a lever?

Possible answers

a)	Length of the input arm
b)	Length of the output arm
c)	Position of the fulcrum
d)	Weight of the lever

Question 33

Which ONE of the following is **true** for a system in static equilibrium?

Possible answers

a)	The system must be at rest
b)	The system must be accelerating
c)	The system must be moving at a constant velocity
d)	The sum of all external forces and moments must be zero

Question 34

What is the significance of understanding wind load in overhead line design?

Possible answers

a)	To measure the voltage drop
b)	To determine the power loss
c)	To calculate the electrical resistance
d)	To ensure the structural integrity of poles and towers

Question 35

Which component in a hydraulic system is responsible for converting fluid power into mechanical motion?

Possible answers

a)	Pump
b)	Actuator
c)	Reservoir
d)	Filter

Question 36

What is the primary function of a lever?

Possible answers

a)	To amplify an input force to provide a greater output force
b)	To change the direction of a force
c)	To decrease the weight of an object
d)	To increase the speed of an object



Question 37

Which type of circuit allows current to flow through multiple paths?

Possible answers

a)	Series Circuit
b)	Parallel Circuit
c)	Open Circuit
d)	Short Circuit

Question 38

What is the unit of magnetic flux?

Possible answers

a)	Farad
b)	Henry
c)	Tesla
d)	Weber

Question 39

Which law explains the operation of transformers?

Possible answers

a)	Ohm's Law
b)	Faraday's Law of Electromagnetic Induction
c)	Coulomb's Law
d)	Kirchhoff's Law

Question 40

Which device uses electromagnetic induction to produce electricity?

Possible answers

a)	Transformer
b)	Capacitor
c)	Resistor
d)	Generator

End of Questions

Practice Multiple-choice Test

Answer scheme

Question	Answer	Question	Answer	Question	Answer
1	B	15	D	29	A
2	D	16	A	30	A
3	C	17	B	31	B
4	A	18	B	32	D
5	D	19	B	33	D
6	A	20	B	34	D
7	A	21	D	35	B
8	B	22	D	36	A
9	B	23	B	37	B
10	B	24	B	38	D
11	A	25	D	39	B
12	D	26	C	40	D
13	C	27	C		
14	A	28	C		

Appendix F: Practice Interview based on an EPA Portfolio Form

Power Industry Overhead Linesperson - Distribution Interview

Full Name of Apprentice	
Apprentice ID checked	<input type="checkbox"/>
Location of End-point Assessment	
Full Name of Assessor	
Date of Interview	
Start Time	
End Time	
Apprentice asked to end the assessment early (check the box)	<input type="checkbox"/>
Ind. Assessor suggested assessment continues (check the box)	<input type="checkbox"/>
Resit (check the box)	<input type="checkbox"/>
Assessor additional comments	

	Grade
Please indicate the apprentice's preliminary grade for the interview (F/P/D):	

By signing below, I confirm that the information provided is correct and the preliminary grade awarded is a true reflection of the performance by the apprentice.

Assessor Signature:	Date:

Please Note:

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

To achieve a Distinction, the Apprentice must achieve all the pass descriptors and **all** the distinction descriptors.

Fail: the apprentice does not demonstrate all the pass descriptors.

Introduction

At the start of the interview the assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice prior to beginning the assessment
- Provide apprentice with information on the format of the with questions, including the timescales they will be working to

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Give their employer's name
- Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360°
- Confirm they are prepared for the interview; and confirm they can continue with the interview
- Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview

Important points to inform the apprentice

- Please don't judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts
- Please don't consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed
- Ensure the apprentice has a drink of water to hand
- Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview
- Confirm that a sign is placed on the door of the interview room. Interview in progress 'Do not disturb'

Note: The live interview will be fully recorded for the purpose of audit and quality assurance

Assessor Guidance

Delivery

- The interview will last 70 minutes. An additional 10% is allowed for the apprentice to complete their last answer
- You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
- The apprentice may choose to end the assessment method early
- You must ensure the apprentice is fully aware of all assessment requirements
- You cannot suggest or choose to end the assessment methods early, unless in an emergency
- You must ensure the apprentice understands the implications of ending an assessment early if they choose to do so
- You may suggest the assessment continues
- You must document the apprentice's request to end the assessment early
- You must ask a minimum of **eight** open questions
- The purpose of the questions is to cover the following topics: Communication and working with others; Sustainability; CPD and improvement activities; Working on the highway, location and avoidance of utilities and customer service
- Please work through the sections in the order they appear within this document
- Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
- The text of additional questions must be recorded on this document
- Adapt the questions to the apprentice's circumstances following your review of their portfolio evidence
- Supply brief written notes where each criterion has been met
- If the apprentice does not achieve a descriptor, provide written notes that EUIAS can feed back to the apprentice to help the apprentice prepare for a resit
- Both the recording and the written notes will be subject to IQA.

At the end of the interview - Thank the apprentice for their time

Task 1: Communication and working with others

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Describes how they apply written communication techniques to produce or amend documents in their work that are suitable for the context.	<input type="checkbox"/>		
Describes how they use information and digital technology – computers and mobile devices - in the workplace in compliance with their organisation's cyber security requirements. Outlines the requirements of the General Data Protection Regulation	<input type="checkbox"/>		
Describes how they apply team working principles to meet work goals and support inclusivity in line with their company's policy on equality, diversity, and inclusion.	<input type="checkbox"/>	Justifies the application of teamworking principles to meeting work goals.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		

Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria

Box will expand to take all comments

K22 S23 Written Communication

K24 S24 Information and digital technology

K25 K26 S21 B6 Teamwork

Task 2: Sustainability

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Describes how they consider and apply the principles of sustainability and the circular economy in their own work to support their employer's and the power industry's net zero strategy with reference to the impact of sites of special scientific interest and flora and fauna on work, and the potential effects on the environment of companies and individuals not complying with good environmental practices.	<input type="checkbox"/>	Justifies the application of sustainability practices in the power industry.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria Box will expand to take all comments		

K17 S11 B2 Sustainability

Task 3: CPD and improvement activities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Outlines the planned and unplanned learning and development activities they have carried out and recorded and shows a commitment to future continued professional development to maintain and enhance competence.	<input type="checkbox"/>		
Describes how they have identified an area for improvement in the workplace.	<input type="checkbox"/>	Justifies the potential impact of the improvement suggestion with consideration to benefits and any potential risks.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria Box will expand to take all comments		

S25 B7 CPD (Continued professional development)
S19 Contribute to improvement activities

Task 4: Working on the highway, location and avoidance of utilities and customer service

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors
Describes how they conduct plant or vehicle checks in line with company requirements.	<input type="checkbox"/>	
Explains requirements for signing, lighting, and guarding and safe excavation in line with the New Roads and Street Works Act.	<input type="checkbox"/>	
Describes how they carry out visual inspections, use electronic locating equipment to identify evidence of overhead services, buried utilities and other utility apparatus as per utility plan and mark the position of services and sub-structures on the work site in line with the health and safety executive guidance and requirements: HSG 47 (Avoiding danger from underground services) and GS6 (Avoiding danger from overhead power lines).	<input type="checkbox"/>	
Describes how they apply customer service techniques to meet company requirements.	<input type="checkbox"/>	

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>
--------------------------------------	--------------------------------------



Summary of response to question(s):

Box will expand to take all comments

Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria

Box will expand to take all comments

K15 S5 Plant or vehicle checks

K46 New Roads and Street Works Act

K33 K40 S27 S28 Location and avoidance of utilities

K43 S45 Customer Service

Power Industry Overhead Linesperson - Transmission Interview

Full Name of Apprentice	
Apprentice ID checked	<input type="checkbox"/>
Location of End-point Assessment	
Full Name of Assessor	
Date of Interview	
Start Time	
End Time	
Apprentice asked to end the assessment early (check the box)	<input type="checkbox"/>
Ind. Assessor suggested assessment continues (check the box)	<input type="checkbox"/>
Resit (check the box)	<input type="checkbox"/>
Assessor additional comments	

	Grade
Please indicate the apprentice's preliminary grade for the interview (F/P/D):	

By signing below, I confirm that the information provided is correct and the preliminary grade awarded is a true reflection of the performance by the apprentice.

Assessor Signature:	Date:
----------------------------	--------------

Please Note:

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

To achieve a Distinction, the Apprentice must achieve all the pass descriptors and **all** the distinction descriptors.

Fail: the apprentice does not demonstrate all the pass descriptors.

Introduction

At the start of the interview the assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice prior to beginning the assessment
- Provide apprentice with information on the format of the with questions, including the timescales they will be working to.

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Give their employer's name
- Confirm their location and that no one else is present in the room, if remote apprentice to pan camera 360°
- Confirm they are prepared for the interview; and confirm they can continue with the interview
- Confirm that the evidence within the portfolio relates to the KSB's that will be assessed during the interview.

Important points to inform the apprentice

- Please don't judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts.
- Please don't consider me rude if I tell you that we need to move onto the next question. This will ensure that you get the opportunity to fully demonstrate your competencies within the time allowed.
- Ensure the apprentice has a drink of water to hand
- Please ensure that your mobile is switched off or placed somewhere where you will not be interrupted during the interview.
- Confirm that a sign is placed on the door of the interview room. Interview in progress 'Do not disturb'.

Note: The live interview will be fully recorded for the purpose of audit and quality assurance

Assessor Guidance

Delivery

- The interview will last 60 minutes. An additional 10% is allowed for the apprentice to complete their last answer
- You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
- The apprentice may choose to end the assessment method early
- You must ensure the apprentice is fully aware of all assessment requirements
- You cannot suggest or choose to end the assessment methods early, unless in an emergency
- You must ensure the apprentice understands the implications of ending an assessment early if they choose to do so
- You may suggest the assessment continues
- You must document the apprentice's request to end the assessment early
- You must ask a minimum of **six** open questions
- The purpose of the questions is to cover the following topics: Communication and working with others; Sustainability; CPD and improvement activities; Locating and avoiding utilities
- Please work through the sections in the order they appear within this document
- Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
- The text of additional questions must be recorded on this document
- Adapt the questions to the apprentice's circumstances following your review of their portfolio evidence
- Supply brief written notes where each criterion has been met
- If the apprentice does not achieve a descriptor, provide written notes that EUIAS can feed back to the apprentice to help the apprentice prepare for a resit
- Both the recording and the written notes will be subject to IQA.

At the end of the interview - Thank the apprentice for their time



Task 1: Communication and working with others

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Describes how they apply written communication techniques to produce or amend documents in their work that are suitable for the context.	<input type="checkbox"/>		
Describes how they use information and digital technology – computers and mobile devices - in the workplace in compliance with their organisation's cyber security requirements. Outlines the requirements of the General Data Protection Regulation	<input type="checkbox"/>		
Describes how they apply team working principles to meet work goals and support inclusivity in line with their company's policy on equality, diversity, and inclusion.	<input type="checkbox"/>	Justifies the application of teamworking principles to meeting work goals.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		



Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria

Box will expand to take all comments

K22 S23 Written Communication

K24 S24 Information and digital technology

K25 K26 S21 B6 Teamwork

Task 2: Sustainability

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Describes how they consider and apply the principles of sustainability and the circular economy in their own work to support their employer's and the power industry's net zero strategy with reference to the impact of sites of special scientific interest and flora and fauna on work, and the potential effects on the environment of companies and individuals not complying with good environmental practices.	<input type="checkbox"/>	Justifies the application of sustainability practices in the power industry.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria Box will expand to take all comments		

K17 S11 B2 Sustainability



Task 3: CPD and improvement activities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P	To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors	D
Outlines the planned and unplanned learning and development activities they have carried out and recorded and shows a commitment to future continued professional development to maintain and enhance competence.	<input type="checkbox"/>		
Describes how they have identified an area for improvement in the workplace.	<input type="checkbox"/>	Justifies the potential impact of the improvement suggestion with consideration to benefits and any potential risks.	<input type="checkbox"/>

Portfolio reference	
Pass questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Distinction questions - to be tailored to apprentice portfolio	
Develop some open-ended questions	
Note any additional questions asked during interview	

Fail <input type="checkbox"/>	Pass <input type="checkbox"/>	Distinction <input type="checkbox"/>
Summary of response to question(s): Box will expand to take all comments		
Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria Box will expand to take all comments		

S25 B7 CPD (Continued professional development)
S19 Contribute to improvement activities



Task 4: Locating and avoiding utilities

<p>To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors</p>	<p>P</p>	<p>To achieve a DISTINCTION the apprentice must achieve ALL the pass descriptors and ALL the distinction descriptors</p>
<p>Explains methods for locating and avoiding utilities in line with the health and safety executive guidance and requirements: HSG 47 (Avoiding danger from underground services) and GS6 (Avoiding danger from overhead power lines).</p>	<p><input type="checkbox"/></p>	<p style="background-color: #cccccc;"></p>

<p>Portfolio reference</p>	
<p>Pass questions - to be tailored to apprentice portfolio</p>	
<p>Develop some open-ended questions</p>	
<p>Note any additional questions asked during interview</p>	

<p>Fail <input type="checkbox"/></p>	<p>Pass <input type="checkbox"/></p>
<p>Summary of response to question(s): Box will expand to take all comments</p>	
<p>Feedback that you can provide to the apprentice if the apprentice has failed to meet the Pass criteria Box will expand to take all comments</p>	

K49 Locating and avoiding utilities

Appendix G: Example: Trade Test Practical Assessor Recording Form

Power Industry Overhead Linesperson

Trade Test Practical Assessment with Questions

Instructions for the employer assessor

Delivery

- The trade test practical assessment with questions:
 - must take 30 - 37.5 hours
 - may take place in parts but must be completed over no more than 21 working days. A working day is typically considered to be 7.5 hours long
- You must:
 - observe apprentices in line with the employer's trade test assessment specification including the ratio of employer assessors to apprentices. You must be as unobtrusive as possible
 - explain to the apprentice the format and timescales of the trade test practical assessment with questions tasks before they start. This does not count towards the assessment time
 - ask at least 10 questions. Questioning can occur both during and after the practical assessment
 - use the questions from the employer's question bank or tailor questions to suit individual circumstances
 - write each tailored question below the sample standardised question
- You can ask follow-up questions to clarify answers given by the apprentice. These questions are in addition to the above set number of questions for the trade test practical assessment with questions

The time for questioning is included in the overall assessment time.

Answers to questions, must be documented.

The apprentice may choose to end the assessment method early

- You must ensure the apprentice is fully aware of all assessment requirements

- You cannot suggest or choose to end the assessment methods early, unless in an emergency
- You must ensure the apprentice understands the implications of ending an assessment early if they choose to do so
- You may suggest the assessment continues
- You must document the apprentice's request to end the assessment early

Name of Apprentice	
<input type="checkbox"/> Apprentice ID checked	
Option	
Are Reasonable Adjustments required? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Please give details	
Location of Trade test	
Full Name of Employer Assessor	
Date(s) of Trade Test	
Total Assessment Time	
Apprentice asked to end the assessment early (check the box)	<input type="checkbox"/>
Employer Assessor suggested assessment continues (check the box)	<input type="checkbox"/>

Grading

Fail - does not meet pass criteria

To achieve a PASS the apprentice must demonstrate ALL the PASS descriptors for the Core and their option

To achieve a DISTINCTION the apprentice must achieve ALL the PASS descriptors and ALL the DISTINCTION descriptors for the Core and their option

Preliminary Grade awarded (Please indicate in the relevant box)	Distinction	Pass	Fail
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employer Assessor Justification for Preliminary Grade awarded:			



Trade Test Practical Assessment Summary	Pass	Distinction
Core		
Group 1: Prepare for power overhead lines activities K20 S1 S2 S3 S17	<input type="checkbox"/>	<input type="checkbox"/>
Group 2: Organise and supervise a working party S6 B3	<input type="checkbox"/>	
Group 3: Maintain work site health, safety, and environment compliance K7 K10 K14 K18 S7 S8 S10 S12 B1	<input type="checkbox"/>	<input type="checkbox"/>
Group 4: Work at height K12 K13 S14 S15 S16	<input type="checkbox"/>	
Group 5: Identify apparatus S4	<input type="checkbox"/>	
Group 6: Tools and equipment S13	<input type="checkbox"/>	
Group 7: Communicate with others K21 S20 B5	<input type="checkbox"/>	
Group 8: Complete work records K23 S18	<input type="checkbox"/>	
Distribution		
Group 9: Work on or in proximity to live apparatus K34 S29 S30	<input type="checkbox"/>	
Group 10: Distribution lifting operations K38 S26	<input type="checkbox"/>	
Group 11: Install distribution support structures and their support mechanisms K35 K36 S31	<input type="checkbox"/>	
Group 12: Install fixed and temporary earthing K41 S32 S33	<input type="checkbox"/>	
Group 13: Install distribution conductors K31 K42 S34 S35	<input type="checkbox"/>	



Trade Test Practical Assessment Summary	Pass	Distinction
Group 14: Install and dismantle pole mounted plant and apparatus K39 S36 S37	<input type="checkbox"/>	
Group 15: Conduct electrical testing K45 S38 S39 S41	<input type="checkbox"/>	<input type="checkbox"/>
Group 16: Problem solving and fault-finding K32 S43 S44	<input type="checkbox"/>	
Group 17: Make and break live connections K44 S40 S42	<input type="checkbox"/>	
Transmission		
Group 9: Work in proximity to live apparatus K48 S46 S48	<input type="checkbox"/>	
Group 10: Transmission Lifting operations K51 S47	<input type="checkbox"/>	
Group 11: Install access equipment S49	<input type="checkbox"/>	
Group 12: Install temporary earthing K52 K53 S50	<input type="checkbox"/>	
Group 13: Install and test transmission conductors K47 S51 S53	<input type="checkbox"/>	
Group 14: Test compression joints S52 S54	<input type="checkbox"/>	<input type="checkbox"/>

Introduction

At the start of the trade test the Employer Assessor will:

- Introduce themselves
- Confirm their role
- Provide apprentice with information on the format of the trade test, including the timescales they will be working to

(The Employer Assessor can share the grading guidance with the apprentice as this appears in the assessment plan)

The apprentice will:

- Give their full name
- Their date of birth
- Confirm they are prepared for the trade test; and confirm they can continue with the trade test.

The apprentice will be asked to show their identification to the Employer Assessor prior to beginning the assessment.

Important points to inform the apprentice

- If at any point during the trade test you perform an unsafe act/task which contravenes Health and Safety, I will immediately stop the trade test
- Please do not judge anything by me taking notes and you should not infer anything positive or negative from how long the trade test lasts
- Ensure that your mobile is turned off or placed somewhere where you will not be interrupted during the trade test

Group 1: Prepare for power overhead lines activities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Reviews drawings, instructions, or information to understand the task's requirements. (S1)	<input type="checkbox"/>
Plans tasks and identifies and organises resources required to complete tasks for self and working party using planning, prioritising, and time management techniques with consideration for safety, environmental impact, quality, and cost. (K20, S2, S3)	<input type="checkbox"/>
Selects, checks and prepares resources in line with task requirements. (S17)	<input type="checkbox"/>

To achieve a DISTINCTION the apprentice must achieve ALL the PASS descriptors and ALL of the following:descriptors	D
Justifies their planning in terms of efficiencies achieved and the balance of safety, environmental impact, quality, and cost in planning decisions. (K20, S2, S3)	<input type="checkbox"/>

Comments: (what was observed)
<p>Questions to help evidence the Pass and Distinction descriptors above Develop some open-ended questions</p>
Write down the question(s) asked:
Summary of response to question(s):



Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 1: Prepare for power overhead lines activities

Group 1 - Fail	<input type="checkbox"/>	
Group 1 - Pass	<input type="checkbox"/>	
Group 1 - Distinction	<input type="checkbox"/>	

K20: Planning, prioritising, organisation, and time management techniques for self and working party.

S1: Review drawings, instructions, or information to understand the task for example, work instructions, wiring diagrams, design specifications, utility plans, on-line search documents

S2: Prioritise and plan work with consideration for safety, environmental impact, quality, and cost.

S3: Identify and organise resources to complete tasks for example, consumables.

S17: Select, check, and prepare resources.



Group 2: Organise and supervise a working party

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Receives and clears a safety document and briefs a working party in line with company requirements taking ownership for work and responsibility for the impact of the work on others. (S6, B3)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 2: Organise and supervise a working party	
Group 2 - Fail	<input type="checkbox"/>
Group 2 - Pass	<input type="checkbox"/>

S6: Receive and clear a safety document (permit to work). Brief a working party.
B3: Take ownership for work and responsibility for its impact on others. For example, self-motivated, disciplined in the approach to work tasks, identify and deal appropriately with distractions to enable tasks to be achieved, work carried out in line with standards.

Group 3: Maintain work site health, safety, and environmental compliance

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Identifies hazards and risks in the workplace and applies control measures including consideration of hazards associated with work on or near electrical power networks. (K7, K10, S7, S8, B1)	<input type="checkbox"/>
Prioritises and applies health and safety procedures in compliance with regulations and standards mitigating against risks including emergency procedures, personal protective equipment, manual handling, and fire safety. (K7, K10, S7, S8, B1)	<input type="checkbox"/>
Applies measures to leave power work environments in a safe and secure condition in line with company procedures. (K14, S10)	<input type="checkbox"/>
Segregates resources for reuse, recycling, and waste handling in line with company procedures for recycling and waste transfer. (K18, S12)	<input type="checkbox"/>
To achieve a DISTINCTION the apprentice must achieve ALL the PASS descriptors and ALL of the following:descriptors	D
Justifies how the controls they applied eliminated or reduced risks to an acceptable level using a hierarchical approach to risk assessment. (K7, K10, S7)	<input type="checkbox"/>
Comments: (what was observed)	
Questions to help evidence the Pass and Distinction descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	



Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 3: Maintain work site health, safety, and environmental compliance

Group 3 - Fail	<input type="checkbox"/>	
Group 3 - Pass	<input type="checkbox"/>	
Group 3 - Distinction	<input type="checkbox"/>	

- K7:** The hazards associated with work on or near electrical power networks.
- K10:** Risk assessments and method statements. Emergency procedures. Personal protective equipment (PPE). Manual handling. Fire safety.
- K14:** Asset security requirements.
- K18:** Recycling and waste management requirements.
- S7:** Identify hazards and risks and apply control measures.
- S8:** Apply health and safety procedures in compliance with regulations, standards, and guidance. For example, safe access and egress, demarcate the work area, working at height, confined spaces, COSHH.
- S10:** Apply measures to leave power work environments in a safe and secure condition for example, anticlimbing guards, danger notices, barriers, lighting.
- S12:** Segregate waste for reuse, recycling, and waste transfer.
- B1:** Prioritise health and safety. For example, risk aware, minimise risks, and proactively work towards preventing accidents.



Group 4: Work at height

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Uses working at height equipment for safe working at height access and egress in line with hierarchy of methods, inspection, and operation requirements and exclusion zone requirements to avoid risk from falling objects. (K12, K13, S14, S15, S16)	<input type="checkbox"/>
Selects personal climbing equipment suitable for the context. Inspects and uses it to access and manoeuvre to a work position at height on overhead line plant and apparatus in line with company procedures for inspection and operation. (K12, K13, S14, S15, S16)	<input type="checkbox"/>
Fits and operates a rescue device at height suitable for context and in line with company procedures. (K12, K13, S14, S15, S16)	<input type="checkbox"/>
Explains maintenance requirements for working at height equipment and personal climbing equipment in line with company procedures. (K12, K13, S14, S15, S16)	<input type="checkbox"/>

Comments: (what was observed)
Questions to help evidence the Pass descriptors above Develop some open-ended questions
Write down the question(s) asked:
Summary of response to question(s):



Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 4: Work at height

Group 4 - Fail	<input type="checkbox"/>	
Group 4 - Pass	<input type="checkbox"/>	

K12: Working at height awareness. Safe access and egress methods: hierarchy of methods, inspection, operation, and maintenance requirements. Exclusion zone requirements to avoid risk from falling objects.

K13: Working at height personal protective equipment: harnesses, fall restraint and arrest equipment. User inspection, operation, and maintenance requirements. Rescue from height equipment and methods.

S14: Use working at height equipment for example, mobile working platforms, scaffolding, ladders.

S15: Select, inspect, and use personal climbing equipment to access and manoeuvre to a work position at height on overhead line plant and apparatus.

S16: Fit and operate a rescue device at height.



Group 5: Identify apparatus

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Identifies apparatus to be worked on using identification methods suitable for the equipment and the situation. (S4)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 5: Identify apparatus	
Group 5 - Fail	<input type="checkbox"/>
Group 5 - Pass	<input type="checkbox"/>

S4: Identify apparatus to be worked on.



Group 6: Tools and equipment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Selects, checks, and prepares personal tools and equipment suitable for the task in line with company procedures. (S13)	<input type="checkbox"/>
Uses or operates personal tools and equipment in line with safety and operational requirements. (S13)	<input type="checkbox"/>
Stores personal tools and equipment in line with company procedures. (S13)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 6: Tools and equipment	
Group 6 - Fail	<input type="checkbox"/>
Group 6 - Pass	<input type="checkbox"/>

S13: Select, check, prepare, use or operate, and store personal tools and equipment.



Group 7: Communicate with others

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Communicates with others to give and receive information in a professional manner using communication techniques and industry terminology suitable for the context. (K21, S20, B5)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 7: Communicate with others	
Group 7 - Fail	<input type="checkbox"/>
Group 7 - Pass	<input type="checkbox"/>

K21: Communication techniques. Industry terminology. Adapting style to audience.
S20: Communicate with others to give and receive information for example, colleagues, customers, and stakeholders.
B5: Perform in a professional manner for example, polite, courteous, and respectful to customers and members of the public.



Group 8: Complete work records

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Records information for work tasks in line with company documentation requirements. (K23, S18)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 8: Complete work records	
Group 8 - Fail	<input type="checkbox"/>
Group 8 - Pass	<input type="checkbox"/>

K23: Documentation requirements; importance of accurate records.

S18: Record information.



Distribution

Group 9: Work on or in proximity to live apparatus

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Follows procedures for working on or in proximity to live apparatus with justification for live working including selection and use of specialist LV live working PPE in line with protocols. (K34, S29, S30)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 9: Work on or in proximity to live apparatus	
Group 9 - Fail	<input type="checkbox"/>
Group 9 - Pass	<input type="checkbox"/>

K34 Working on live apparatus and working in proximity to live apparatus protocols. Justification for live working.

S29: Follow procedures for working on or in proximity to live apparatus.

S30: Select and use specialist LV live working PPE.

Group 10: Distribution lifting operations

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Selects and operates lifting equipment suitable for the task and in line with company procedures for distribution rigging on conductors and transmission towers. (K38, S26)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 10: Distribution lifting operations	
Group 10 - Fail	<input type="checkbox"/>
Group 10 - Pass	<input type="checkbox"/>

K38 Distribution rigging techniques on conductors and structures capable of carrying up to 132kv.

S26: Select and operate lifting equipment in overhead lines distribution work for example, cranes and winches.

Group 11: Install distribution support structures and their support mechanisms

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Erects overhead lines plant and apparatus in line with task requirements and company installation procedures for distribution support structures and their support mechanisms and distribution network excavation. (K35, K36, S31)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 11: Install distribution support structures and their support mechanisms	
Group 11 - Fail	<input type="checkbox"/>
Group 11 - Pass	<input type="checkbox"/>

K35: Distribution support structures and their support mechanisms installation requirements.

K36: Distribution network excavation methods and requirements.

S31: Erect overhead lines plant and apparatus for example, poles, support mechanisms, stays.

Group 12: Install fixed and temporary earthing

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs circuit main earths, additional (drain) earths, and fixed earthing conductors and carries out earth electrode testing in line with task requirements and company procedures for earthing installation an earth electrode testing. (K41, S32, S33)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 12: Install fixed and temporary earthing	
Group 12 - Fail	<input type="checkbox"/>
Group 12 - Pass	<input type="checkbox"/>

K41: Awareness of domestic and industrial supply earthing. Earthing installation requirements. Earth electrode testing.

S32: Install circuit main earths (CMEs) and additional (drain) earths.

S33: Install fixed earthing conductors and carry out earth electrode testing

Group 13: Install distribution conductors

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs or replaces conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination in line with task requirements and company procedures taking account of the types and characteristics of common distribution conductors and joints and the causes and consequences of common installation faults. (K31, S35)	<input type="checkbox"/>
Installs cut outs in line with company procedures in compliance with the domestic and industrial supply earthing and cut out requirements. (K42, S34)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 13: Install distribution conductors	
Group 13 - Fail	<input type="checkbox"/>
Group 13 - Pass	<input type="checkbox"/>



K31: The installation and jointing methods of common conductor types; causes and consequences of common faults.

K42: Cut out requirements.

S34: Install cut outs.

S35: Install or replace conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination where required.

Group 14: Install and dismantle pole mounted plant and apparatus

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs, connects, and commissions pole mounted plant and apparatus in line with task requirements and company procedures for installation and commissioning. (K39, S36, S37)	<input type="checkbox"/>
Dismantles pole mounted plant and apparatus in line with task requirements and company procedures for dismantling. (K39, S36, S37)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 14: Install and dismantle pole mounted plant and apparatus	
Group 14 - Fail	<input type="checkbox"/>
Group 14 - Pass	<input type="checkbox"/>

K39: Pole mounted plant and apparatus: installation, commissioning, and dismantling requirements.

S36: Install, connect, and commission pole mounted plant and apparatus for example, transformers, pole mounted circuit breakers, and switchgear.

S37: Dismantle pole mounted plant and apparatus for example, transformers, pole mounted circuit breakers, and switchgear.

Group 15: Conduct electrical testing

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors		P
Conducts pre-energisation tests and post-energisation checks in line with task requirements and company procedures for low voltage electrical testing. (K45, S38, S39, S41)	<input type="checkbox"/>	
Interprets testing procedure results accurately and action required in line with company procedures. (K45, S38, S39, S41)	<input type="checkbox"/>	
To achieve a DISTINCTION the apprentice must achieve ALL the PASS descriptors and ALL of the following:descriptors		D
Evaluates the test procedure results to determine potential underlying cause.	<input type="checkbox"/>	
Comments: (what was observed)		
Questions to help evidence the Pass and Distinction descriptors above Develop some open-ended questions		
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 15: Conduct electrical testing		
Group 15 - Fail	<input type="checkbox"/>	



Group 15 - Pass	<input type="checkbox"/>	
Group 15 - Distinction	<input type="checkbox"/>	

K45: Low voltage electrical testing requirements and result interpretation.

S38: Conduct pre-energisation tests.

S39: Conduct post-energisation (commissioning) checks.

S41: Interpret testing procedure results and action required.

Group 16: Problem solving and fault-finding

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Recognises fault conditions on electrical power circuits, plant and apparatus using problem solving and fault-finding techniques including non-invasive visual examinations and testing procedures to identify the root cause. (K32, S43, S44)	<input type="checkbox"/>
Replaces components or resolves issues to address faults in line with company procedures. (K32, S43, S44)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 16: Problem solving and fault-finding	
Group 16 - Fail	<input type="checkbox"/>
Group 16 - Pass	<input type="checkbox"/>

K32: The symptoms and causes of common faults on electrical power circuits, plant and apparatus. Problem solving and fault-finding techniques: non-invasive visual examinations, testing procedures. Root cause analysis.



S43: Recognise fault conditions and identify the root cause.

S44: Replace components or resolve issues for example, replace high resistance joints or damaged conductor.



Group 17: Make and break live connections

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Operates switchgear and fuses making and breaking live conductor connections and performs testing procedures before and after switching operations in line with task requirements and company procedures for low voltage operational switching and testing. (K44, S40, S42)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 17: Make and break live connections	
Group 17 - Fail	<input type="checkbox"/>
Group 17 - Pass	<input type="checkbox"/>

- K44:** Low voltage operational switching and testing requirements.
- S40:** Perform testing procedures before and after switching operations.
- S42:** Operate switchgear and fuses making and breaking live conductor connections.



Transmission

Group 9: Work in proximity to live apparatus

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Follows procedures for working in proximity to live apparatus, checks overhead line plant and apparatus is safe to access including installing flag and check wristlets if required in line with company procedures in compliance with working in proximity to live apparatus protocols. (K48, S46, S48)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 9: Work in proximity to live apparatus	
Group 9 - Fail	<input type="checkbox"/>
Group 9 - Pass	<input type="checkbox"/>

K48 Working in proximity to live apparatus protocols.

S46: Follow procedures for working on or in proximity to live apparatus.

S48: Check overhead line plant and apparatus is safe to access, install flag and check wristlets if required.

Group 10:Lifting operations

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Selects and operates lifting equipment in line with task requirement and company procedures for transmission rigging on conductors and transmission towers. (K51, S47)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 10: Lifting operations	
Group 10 - Fail	<input type="checkbox"/>
Group 10 - Pass	<input type="checkbox"/>

K51: Transmission rigging techniques on conductors and transmission towers.
S47: Select and operate lifting equipment in overhead lines transmission work for example, cranes and winches.



Group 11: Install access equipment

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs access equipment to meet task requirements in line with company procedures. (S49)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 11: Install access equipment	
Group 11 - Fail	<input type="checkbox"/>
Group 11 - Pass	<input type="checkbox"/>

S49: Install access equipment for example, platforms, ladders, and spacer trollies.

Group 12: Install temporary earthing

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs high voltage earthing equipment to meet task requirements and manage circulating currents in line with company procedures for high voltage temporary earthing. (K52, K53, S50)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above <i>Develop some open-ended questions</i>	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 12: Install temporary earthing	
Group 12 - Fail	<input type="checkbox"/>
Group 12 - Pass	<input type="checkbox"/>

K52: High voltage temporary earthing requirements.
K53 Management of circulating currents.
S50: Install high voltage temporary earthing equipment.



Group 13: Install and test transmission conductors

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Installs or replaces conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination and connects spacers to conductors in line with task requirements and company procedures taking account of the types and characteristics of common transmission conductors and joints and the causes and consequences of common installation faults. (K47, S51, S53)	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass descriptors above	
Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 13: Install and test transmission conductors	
Group 13 - Fail	<input type="checkbox"/>
Group 13 - Pass	<input type="checkbox"/>

K47: The types and characteristics of common transmission conductors and joints; causes and consequences of common installation faults.

S51: Install or replace conductors, insulators and ancillary equipment on overhead line plant or apparatus including sagging, tensioning and termination where required.

S53: Connect spacers to conductors.

Group 14: Test compression joints

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Carries out conductor compression jointing and tests compression joints in line with task requirements and company procedures. (S52, S54)	<input type="checkbox"/>

To achieve a DISTINCTION the apprentice must achieve ALL the PASS descriptors and ALL of the following:descriptors	D
Conductor compression joint tolerance is within set parameters and confirmed right first time.	<input type="checkbox"/>

Comments: (what was observed)	
Questions to help evidence the Pass and Distinction descriptors above Develop some open-ended questions	
Write down the question(s) asked:	
Summary of response to question(s):	
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 14: Test compression joints	
Group 14 - Fail	<input type="checkbox"/>
Group 14 - Pass	<input type="checkbox"/>
Group 14 - Distinction	<input type="checkbox"/>

S52: Carry out conductor compression jointing

S54: Test compression joints.



Appendix H: Example: Trade Test Technical Interview Assessor Recording Form

Power Industry Overhead Linesperson

Trade Test Technical Interview – Example of Assessor Recording Form

Instructions for the employer assessor

Delivery

- The interview will last at least 60 minutes
- This is an Employer Assessor led formal interview and not a professional discussion. You must be in full control. Time management is key! If the apprentice veers off track, they need to be reined back in
- You must ask a minimum of four open questions
- Tailor questions to suit individual circumstances
- The purpose of the questions is to cover the following topics:

Core

- role and responsibilities
- electrical danger and control
- power engineering electrical plant and apparatus

Distribution maintenance

- conductor types and tensions

Transmission maintenance

- transmission support structures

- Answers to questions, must be documented.
- If the interview is conducted by video conferencing, timeline each question to the recording. Only log the time for the start of each question asked
- Additional follow-up questions are allowed to seek clarification and to make a judgement against grading descriptor
- Supply brief written notes where each criterion has been met
- Complete the summary report page
- Record a preliminary grade
- Complete the justification for the preliminary grade
- Both the recording and the written notes will be subject to IQA by EUIAS



The apprentice may choose to end the assessment method early

- You must ensure the apprentice is fully aware of all assessment requirements
- You cannot suggest or choose to end the assessment methods early, unless in an emergency
- You must ensure the apprentice understands the implications of ending an assessment early if they choose to do so
- You may suggest the assessment continues

At the end of the interview -Thank the apprentice for their time and wish them good luck



Name of Apprentice	
<input type="checkbox"/> Apprentice ID checked	
Option	
Are Reasonable Adjustments required? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Please give details	
Location of Technical Interview	
Full Name of Employer Assessor	
Date of Technical Interview	
Start Time	
End Time	
Apprentice asked to end the assessment early (check the box)	<input type="checkbox"/>
Employer Assessor suggested assessment continues (check the box)	<input type="checkbox"/>

Grading

Fail - does not meet pass criteria

To achieve a PASS the apprentice must demonstrate ALL the PASS descriptors for the core and their option

Preliminary Grade awarded (Please tick the relevant box)	Pass	Fail
	<input type="checkbox"/>	
Employer Assessor Justification for Preliminary Grade awarded:		



Trade Test Technical Interview Summary	Pass
Core	
Group 1: Role and responsibilities K4 K5 S22 B4	<input type="checkbox"/>
Group 2: Electrical danger - control and first aid K8 K11 S9	<input type="checkbox"/>
Group 3: Power engineering electrical plant and apparatus K30	<input type="checkbox"/>
Distribution	
Group 4: Conductor types and tensions K37	<input type="checkbox"/>
Transmission	
Group 4: Transmission support structures K50	<input type="checkbox"/>

Introduction

At the start of the trade test the Employer Assessor will:

- Introduce themselves
- State their role
- State the date of the interview
- Request and confirm ID from the apprentice
- Provide apprentice with information on the format of the technical interview, including the timescales they will be working to

The apprentice will:

- Confirm their full name
- Confirm their date of birth
- Confirm they are prepared for the interview; and confirm they can continue with the interview

Important points to inform the apprentice

- Please do not judge anything by the notes being taken, nor infer anything positive or negative from how long the interview lasts
- We are not allowed to give you feedback at any point. So unfortunately, we will not be able to give you any indication of your grade and whether you have passed or failed at the end
- Please ensure that your mobile off or somewhere where you will not be interrupted during the interview
- Sign placed on the door of the interview room. Interview in progress 'Do not disturb'
- This interview will be fully recorded for the purpose of audit and quality assurance

Group 1: Role and responsibilities

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors		P
Outlines their role as an overhead linesperson including their limits of responsibility and how they report or escalate issues. (K4, S22, B4)		<input type="checkbox"/>
Describes how they respond and adapt to work demands in line with organisational requirements, with reference to different teams and functions involved in operations and how they work together. (K4, S22, B4)		<input type="checkbox"/>
Explains the responsibilities of persons as defined in the industry standard safety rules: supervising a working party, competent persons, and authorisation roles and responsibilities in relation to working under safety documentation. (K5)		<input type="checkbox"/>
Timeline reference:	<i>Record time if interview conducted by video conferencing</i>	
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail or Pass grade awarded for Group 1: Role and responsibilities		
Group 1 - Fail	<input type="checkbox"/>	
Group 1 - Pass	<input type="checkbox"/>	

K4: Overhead linesperson's role and responsibilities. Limitations of role and escalation procedures. Different teams and functions involved in operations: how they work together.



K5: Responsibilities of persons as defined in industry standard safety rules: supervising a working party, competent persons. Authorisation roles and responsibilities. Safety documentation.

S22: Report or escalate issues outside limits of responsibility.

B4: Respond and adapt to work demands. For example, adapt working methods to reflect changes in working environment, take initiative -making on the spot decisions, re-prioritise workloads to react to emergency response and to fault scenarios.



Group 2: Electrical danger - control and first aid

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors	P
Explains the dangers of electricity and how an electric shock can be received including direct contact, induced (impressed) voltage, and arcing. Outlines electric shock emergency procedures in line with company procedures. (K8)	<input type="checkbox"/>
Describes how they would respond in the event of a first aid emergency, with reference to their emergency first aid training and responsibilities and measures they would take to avoid electrical risk in line with company procedures. (K11, S9)	<input type="checkbox"/>

Timeline reference:	<i>Record time if interview conducted by video conferencing</i>	
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail or Pass grade awarded for Group 2: Electrical danger - control and first aid		
Group 2 - Fail	<input type="checkbox"/>	
Group 2 - Pass	<input type="checkbox"/>	

K8: The dangers of electricity and how an electric shock can be received: direct contact, induced (impressed) voltage, and arcing. Electric shock emergency procedures.

K11: Emergency First Aid.

S9: Respond in the event of an emergency first aid situation including situations where there is electrical risk.



Group 3: Power engineering electrical plant and apparatus

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors		P
Outlines power engineering electrical plant and apparatus, the properties and purpose of transformers, switchgear, earthing devices, voltage control and automated equipment. (K30)		<input type="checkbox"/>
Timeline reference:	<i>Record time if interview conducted by video conferencing</i>	
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail, Pass or Distinction grade awarded for Group 3: Power engineering electrical power plant and apparatus		
Group 3 - Fail	<input type="checkbox"/>	
Group 3 - Pass	<input type="checkbox"/>	

K30: Power engineering electrical plant and apparatus, the properties and purpose of transformers, switchgear, earthing devices, voltage control and automated equipment.



Distribution

Group 4: Conductor types and tensions

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors		P
Explains different distribution conductor types and tensions including all aluminium alloy conductor (AAAC) 30-175mm, Cross-linked polyethylene (XLPE), low voltage earthing, domestic and industrial service cables, cadmium and copper conductors 16-150mm. (K37)		<input type="checkbox"/>
Timeline reference:	<i>Record time if interview conducted by video conferencing</i>	
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail or Pass grade awarded for Group 4: Conductor types and tensions		
Group 4 - Fail	<input type="checkbox"/>	
Group 4 - Pass	<input type="checkbox"/>	

K37: Distribution conductor types, construction, features and tensioning of: all aluminium alloy conductor (AAAC) 30-175mm, Cross-linked polyethylene (XLPE), low voltage earthing, domestic and industrial service cables, cadmium and copper conductors 16-150mm.



Transmission

Group 4: Transmission support structures

To achieve a PASS the apprentice must demonstrate ALL the following pass descriptors		P
Explains transmission support structures' construction methods and requirements for support mechanisms and temporary stays. (K50)		<input type="checkbox"/>
Timeline reference:	<i>Record time if interview conducted by video conferencing</i>	
Write down the question(s) asked:		
Summary of response to question(s):		
Provide comments explaining the reasons for awarding a Fail or Pass grade awarded for Group 4: Transmission support structures		
Group 4 - Fail	<input type="checkbox"/>	
Group 4 - Pass	<input type="checkbox"/>	

K50: Transmission support structures construction methods. Requirements for support mechanisms and temporary stays.



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