



ENERGY &
ENVIRONMENT
AWARDS

Skills for a greener world

EEA Level 4 End-point Assessment for Electrical Power
Networks Engineer
(Asset Management; Planning and Design Engineer)

Supporting Documents

QAN 610/6008/2
ST0475 V1.0

Supporting Documents for

EEA Level 4 Electrical Power Networks Engineer (Asset Management; Planning and Design Engineer)

QAN 610/6008/2

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Updates to the supporting documents

Since the first publication of Energy & Environment Awards Electrical Power Networks Engineer Supporting Documents – Asset Management; Planning and Design Engineer, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v5.0	August 2025	Rebranded	All
v4.0	3 August 2023	Revised Appendix D	37 - 44
v3.1	13 July 2023	Revised practice knowledge test	10 - 34
		Revised Appendix D	37 - 40
v3.0	24 May 2023	Rebranded	All
v2.0	25 April 2023	New template and pathway specific criteria IDs	All
v1.0	2020	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: ST0475 version 1.0; Assessment Plan Version: ST0475/AP01)

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:

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

Eligibility requirement	Achieved by the apprentice? Y/N	Evidence (Scans of certificates MUST be included)
Achieved Level 2 English or higher		
Achieved Level 2 Maths or higher		
Satisfactory completion of the formal training plan agreed with apprentice by the employer		
Compiled and submitted a competent work log of evidence that meets the specification requirements, on which the technical interview will be based		

Gateway Eligibility Declaration

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

1. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with Energy & Environment Awards.
2. Energy & Environment Awards has been informed about any reasonable adjustment and/or special considerations requests.
3. The apprentice will only submit their own work as part of end-point assessment.
4. All parties agree that end-point assessment evidence may be recorded and stored by Energy & Environment Awards for quality assurance purposes.
5. The apprentice has been on-programme for a minimum duration of 365 days.
6. The apprentice has achieved English and maths Level 2 or higher as detailed in this document.
7. The apprentice has compiled and submitted a competent work log of evidence, on which the technical interview will be based.
8. The apprentice, if successful, gives permission for Energy & Environment Awards to request the apprenticeship certificate from the ESFA who issue the certificate on behalf of the Secretary of State.
9. The apprentice has been directed to Energy & Environment Awards Appeals Policy and Complaints Policy.
10. The employer/training provider has given Energy & Environment Awards at least three months' notice of requesting this EPA for this apprentice.
11. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to Energy & Environment Awards, the end-point assessment cannot take place.

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

Energy & Environment Awards use only:	
Energy & Environment Awards Sign off:	
Comments/actions:	

Appendix C: Practice Knowledge Test

Level: 3

Electrical Power Networks Engineer

Paper Code: Practice Paper

This examination consists of 40 multiple-choice questions.

The Pass mark is 32 correct answers.

A mark of 36 or more is a Distinction.

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
- access to the internet or intranet is NOT allowed
- apprentices can refer to any material as this test is open book i.e. Training Materials, Company Policies, Work Logs

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.

**This paper must be returned to Energy & Environment Awards
with the apprentice answer sheets.**

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

Question 1

Identify the material that is typically used in the design of a transformers core to reduce the level of hysteresis loss.

Possible answers

a)	Limited brass
b)	Cross link polyethylene
c)	Silicon alloys
d)	Tungsten carbide

Question 2

Identify the term that is used to describe the circulating movement of current back and forth in the core of a transformer creating heat.

Possible answers

a)	Copper losses
b)	Eddy currents
c)	Lenz law
d)	Electromotive force

[Turn to the next page for question 3]

Question 3

Identify the phrase that is correct for the following statement about the Root Mean Square (r.m.s) value.

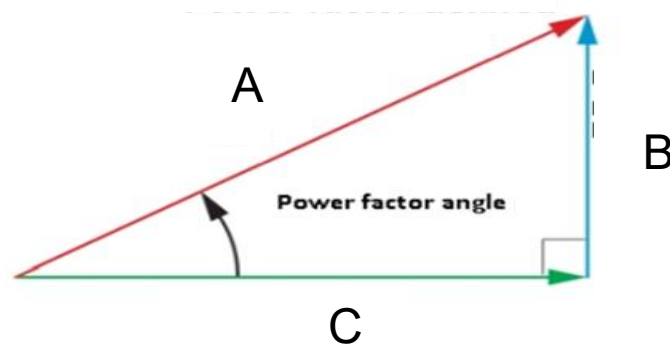
The r.m.s value of an a.c. circuit is _____ of direct current which would have the same effect or energy change as the alternating current.

Possible answers

a)	Equal to value
b)	Twice the value
c)	Half the value
d)	The square value

Question 4

Refer to the Power Factor diagram below. What do the letters A, B and C represent?



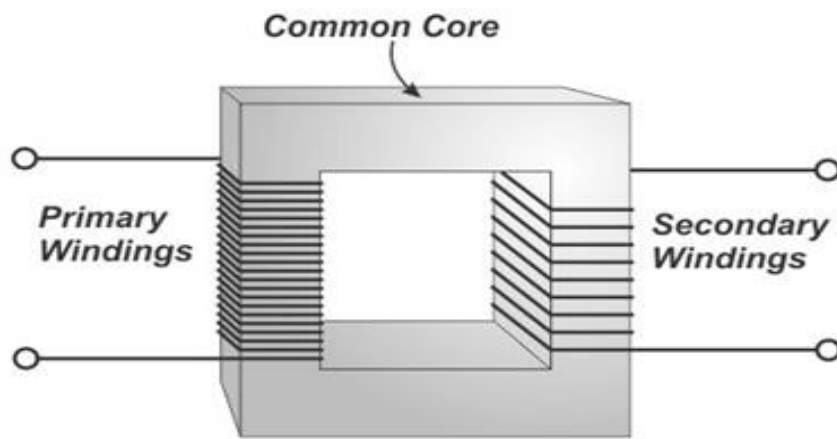
Possible answers

a)	A = Apparent Power, B = Real Power and C = Reactive Power
b)	A = Reactive Power, B = Apparent Power and C = Real Power
c)	A = Apparent Power, B = Reactive Power and C = Real Power
d)	A = Reactive Power, B = Real Power and C = Apparent Power

Question 5

The number of secondary windings on a transformer connected to an alternating current (AC) has been decreased.

What effect will this have on the output voltage?



Possible answers

a)	Decrease the output voltage
b)	Decrease the input voltage
c)	Increase the output voltage
d)	Increase the input voltage

[Turn to the next page for question 6]

Question 6

For a balanced three-phase system, which ONE of the following is the formula for calculating the PHASE voltage of a STAR connected transformer?

Abbreviations below stand for:

VP – Phase Voltage

VL – Line Voltage

IL – Line Current

Ip – Phase Current

$\sqrt{}$ - Root 3 (root of three)

Possible answers

a)	$VP = VL \div \sqrt{3}$
b)	$VP = VL$
c)	$VP = IL \div Ip$
d)	$VP = VL - \sqrt{3}$

Question 7

In a balanced star-connected three-phase system the value of the phase current:

Possible answers

a)	varies above and below the line current
b)	is higher than the line current
c)	is a third less than the line current
d)	is equal to the line current

Question 8

In a balanced three-phase system with delta-connected load and 415 V line voltage, what would the value of the phase voltage be?

Possible answers

a)	0 V
b)	240 V
c)	415 V
d)	440 V

Question 9

In a balanced three-phase system with a star-connected load and 10 A line current, what would be the value of the phase current?

Possible answers

a)	5.77 A
b)	10 A
c)	17.3 A
d)	30 A

[Turn to the next page for question 10]

Question 10

Which ONE of the following describes the effect of harmonics on a three-phase electrical network?

Possible answers

a)	The networks current and voltage are distorted and deviate from their standard sinusoidal waveforms
b)	The networks current and voltage are regulated and conform to their standard sinusoidal waveforms
c)	The networks current is decreased, and the voltage increased proportionally to regulate their standard sinusoidal waveforms
d)	The networks current and voltage is increased causing network problems and system faults

Question 11

Which harmonic typically causes neutral current to increase most significantly?

Possible answers

a)	The third harmonic
b)	The fifth harmonic
c)	The seventh harmonic
d)	The twelfth harmonic

[Turn to the next page for question 12]

Question 12

In a balanced three-phase system, what would be the value of the neutral current?

Possible answers

a)	Zero
b)	Line current
c)	Phase current
d)	3 x phase current

Question 13

Three-phase transformers should only be connected in parallel under which ONE of the following conditions?

Possible answers

a)	When they are identical in all respects
b)	When they have exactly the same losses
c)	When permission is obtained from the manufacturer
d)	When they have the same secondary voltages

[Turn to the next page for question 14]

Question 14

Refer to the diagram below.

In the order shown, which transformer wiring configurations does this diagram represent?



Possible answers

a)	Single-phase star, single-phase delta
b)	Three-phase star, three-phase delta
c)	Single-phase delta, single-phase star
d)	Three-phase delta, three-phase star

[Turn to the next page for question 15]

Question 15

The UK's electricity is typically generated in large commercial power stations.
At what voltage is it generated?

Possible answers

a)	11 kv
b)	25 kv
c)	132 kv
d)	400 kv

Question 16

At what voltage is the transmission of electricity across the UK primarily conducted?

Possible answers

a)	11 kv
b)	132 kv
c)	415 kv
d)	400 kv

[Turn to the next page for question 17]

Question 17

What are the typical voltage tolerances for high voltage (up to 132 kV) power networks?

Possible answers

a)	High voltage $\pm 3\%$ of nominal voltage
b)	High voltage $\pm 6\%$ of nominal voltage
c)	High voltage $+6\%$ to -10% of nominal voltage
d)	High voltage $\pm 10\%$ of nominal voltage

Question 18

Which statement describes the typical method for controlling the output voltage on a 33/11 kV transformer to keep it within its statutory limits?

Possible answers

a)	An automatic voltage control relay monitors the transformers output voltage and regulates the voltage via a tap changer
b)	A control engineer monitors the transformers output voltage and regulates the voltage via an automated tap changer
c)	A current transformer (CT) monitors the transformers output voltage and regulates the voltage via a tap changer
d)	An automated tap changer monitors the transformers output and regulates the voltage via an automatic voltage control relay

[Turn to the next page for question 19]

Question 19

An engineer needs to determine the electrical rating of a switchgear, that will be used on a power network.

What critical factor should the engineer consider?

Possible answers

a)	The manufacturer of the switchgear to be used
b)	The location of the switchgear in the electrical circuit
c)	The proximity of commercial and domestic buildings
d)	The ability to operate the switchgear manually or remotely

Question 20

'A low voltage network which has the neutral bonded to earth at several different points in the system.' What type of earthing system is the above known as?

Possible answers

a)	Terra Neutral Split system
b)	Terra Neutral Terra Firma system
c)	Protective Multiple Earthing system
d)	Earth Loop Impedance system

[Turn to the next page for question 21]

Question 21

A transformer which consists of a single winding and is used to step up or step down a constant supply voltage.

What type of transformer is this known as?

Possible answers

a)	Current transformer
b)	Voltage transformer
c)	Earthing transformer
d)	Auto-transformer

Question 22

What would be the effect of a fault on the protection of a low voltage network with a low earth loop impedance value?

Possible answers

a)	The fault current would take longer to activate the protection, the lower the value
b)	The fault current would activate the protection faster, the lower the value
c)	The fault current would activate the protection at the same time regardless of the value
d)	The fault current would not activate the protection if the value was below the UK standard

[Turn to the next page for question 23]

Question 23

When considering network protection there are devices that provide an advantage of being able to support overcurrent for a period of time and be reset.

Which device would provide this advantage?

Possible answers

a)	High Rupturing Capacity (HRC) fuses
b)	Rewireable fuses
c)	Contactor relays
d)	Rewireable relays

Question 24

Which ONE of the following is an example of a 'Rise in Earth Potential' (ROEP)?

Possible answers

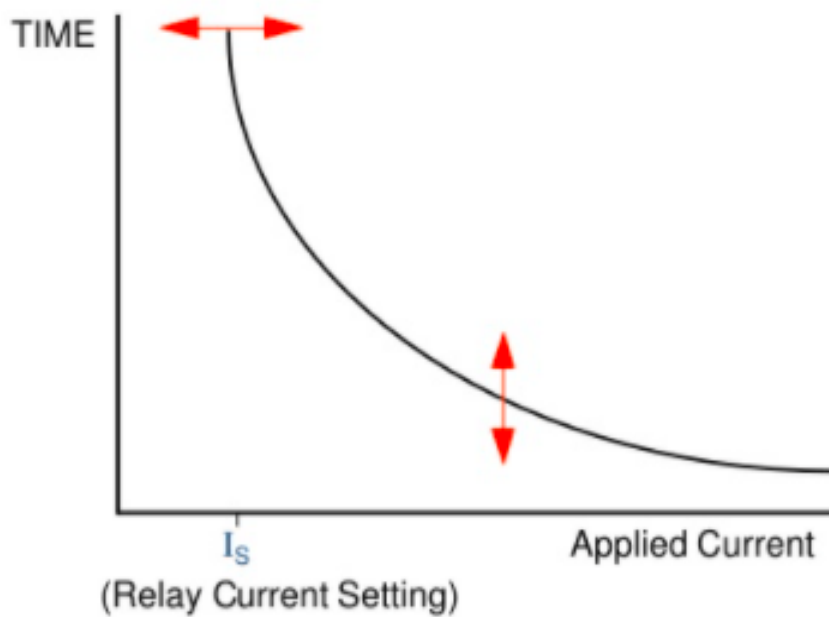
a)	A ROEP is created by increasing the number of earth electrodes in a substation to prevent system faults
b)	A ROEP is a phenomenon which occurs during long periods of high voltage switching in a substation which stresses the earth system
c)	A ROEP is created by bonding all auxiliary steelwork to earth in a substation together to prevent system faults
d)	A ROEP occurs when a large current flows to earth through the effects of a high voltage fault

[\[Turn to the next page for question 25\]](#)

Question 25

A relay operates by the principle that the higher the current value the lesser time it will take the relay to operate.

What protocol does this follow?



Possible answers

a)	Immediate Delay Measured Sequence (IDMS) protocol
b)	Inverse Definite Minimum Time (IDMT) protocol
c)	Inverse Decision Time Measure (IDTM) protocol
d)	Individual Delayed Time Sequence (IDTS) protocol

Question 26

Which piece of network equipment does the following sentence describe?

‘It reduces earth fault current and limits the amount of fault current returning to the transformer’.

Possible answers

a)	A voltage transformer
b)	A switch fuse
c)	A neutral earthing resistor
d)	A protective multiple earth

Question 27

Voltage transformers (VT) can be used for circuit control, safety protection and measurement.

Which ONE of the following describes the principle of VTs operation?

Possible answers

a)	A VT can be used to step down the voltage of the system to a value which is acceptable to the lower rating of meters and relays
b)	A VT can be used to step up the voltage of the system to a value which is acceptable to the higher rating of meters and relays
c)	A VT can be used to convert the alternating waveform of the system to a direct waveform to supply meters and relays
d)	A VT can be used to accept the voltage of the system and connect it directly to the higher rated meters and relays

Question 28

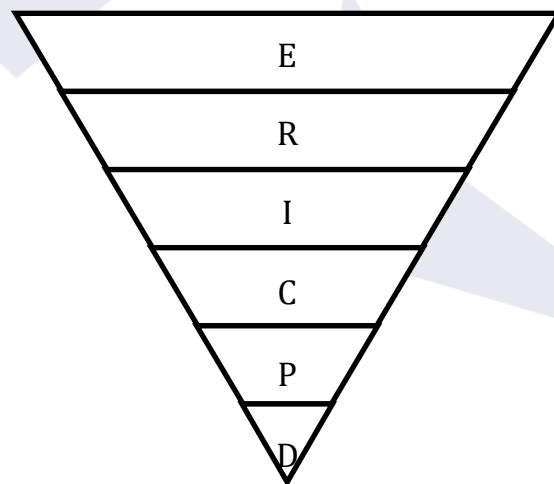
Which ONE of the following describes the typical capabilities of a high voltage switch?

Possible answers

a)	The switch is load making but not load breaking or fault making
b)	The switch is non-load making but is load breaking and fault making
c)	The switch is load making and breaking, and fault making
d)	The switch is non-load making or breaking but is fault making

Question 29

ERICPD is an acronym used by health and safety organisations as a risk assessment model to help prioritise health and safety measures in the workplace. What does ERICPD stand for?


Possible answers

a)	Eliminate, Report, Investigate to Control Potential Danger
b)	Eliminate, Remove, Insulate, Caution, Protect and Discipline
c)	Eliminate, Reduce, Isolate, Control, PPE and Discipline
d)	Eliminating Risks Insures Complete Protection from Danger

Question 30

Which ONE of the following identifies the primary purpose of a risk management strategy?

Possible answers

a)	A risk management strategy provides a cost efficient approach to identifying, assessing, and managing the company's financial risk
b)	A risk management strategy provides a timely and effective method of measuring the exposure to risk in the event of an incident
c)	A risk management strategy provides a structured and coherent approach to identifying, assessing, and managing risk
d)	A risk management strategy provides an auditable process which protects a company from any liability in the event of an incident

Question 31

Which ONE of the following describes the primary purpose of the Electricity at Work Regulations 1989?

Possible answers

a)	They aim to prevent the loss of time or production in the process of maintaining an electrical supply in a work environment
b)	They aim to prevent death or injury to any person from electrical causes while working or in a work environment
c)	They aim to improve electrical working practices to provide a more efficient use of tools and equipment in a work environment
d)	They aim to reduce death or injury to an acceptable level to any person from electrical causes while working or in a work environment

Question 32

A 'permit-to-work' system is a formal written system used to control certain types of work that are potentially hazardous.

Identify the elements which must be included on a 'permit-to-work' document?

Possible answers

a)	Date of issue, description of work, points of contact, signature of document receiver
b)	Date and time of issue, location of work, points of isolation, signatures of issuer and receiver
c)	Date and time of issue, cost of work, points of switching, signature of company director
d)	Date and time of issue, description of work, points of switching, signatures of the working party

Question 33

In relation to commercial projects, the Construction Design and Management (CDM) Regulations 2015, require that under certain circumstances construction work is notifiable in writing to the HSE.

Which statement identifies ONE of those circumstances?

Possible answers

a)	Where planned construction work will last longer than 20 working days
b)	Where planned construction work will last longer than 30 working days
c)	Where planned construction work will last longer than 40 working days
d)	Where planned construction work will last longer than 50 working days

Question 34

The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) places duties to report certain incidents that may involve the safety of those not employed by the duty holder.

Which of the following identifies ONE of these incidents?

Possible answers

a)	Any single interruption of supply of 5 megawatts or more at the time of the interruption for a period of one hour or longer
b)	Any single interruption of supply of 1 megawatt or more at the time of the interruption for a period of five hours or longer
c)	Any multiple interruption of supply of 20 megawatts or more for more than two 5 minutes periods
d)	Any single interruption of supply of 20 megawatts or more at the time of the interruption for a period of one hour or longer

Question 35

Which statement states the principles of maintenance as defined by the Electricity at Work Regulations 1989?

Possible answers

a)	As may be financially viable to prevent danger, all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger
b)	As may be necessary to improve performance, all systems shall be maintained on an annual basis to prevent any loss of power to the system
c)	As may be convenient to prevent danger, all systems shall be isolated to prevent injury to operatives working on the system, based on time and cost of maintenance operation
d)	As may be necessary to prevent danger, all systems shall be maintained so as to prevent, so far as is reasonably practicable, such danger

Question 36

What is meant by the term achieving 'Safety from the System'?

Possible answers

a)	Safeguards that all equipment shall be made dead, prior to any work activities being permitted on the electrical system
b)	The condition which safeguards tools and equipment from the dangers of work being conducted on the electrical system
c)	The condition which safeguards persons working on or near to equipment from the dangers which are inherent in that system
d)	The condition which safeguards persons, tools, equipment, and plant when working near the electrical system

Question 37

Ofgem set price controls on the revenues of Transmission and Distribution Companies using the RIIO model to encourage Companies to consider a number of factors.

What factors do the initials RIIO stand for?

Possible answers

a)	Revenue = Ideas + Implementation + Outlay
b)	Reward = Input + Investment + Outlay
c)	Reward = Innovation + Ideas + Outputs
d)	Revenue = Incentives + Innovation + Outputs

Question 38

The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) place duties on persons to report certain instances.

Which ONE of the following is reportable under ESQCR?

Possible answers

a)	More interruptions to the electricity supply
b)	Major interruptions to the electricity supply
c)	All interruptions to the electricity supply
d)	All planned interruptions to the electricity supply

Question 39

The Construction Design and Management Regulations 2015 (CDM) place certain responsibilities on duty holders involved in the work project to improve health and safety.

Which ONE of following states an aim of the CDM regulations?

Possible answers

a)	To appropriately cost the work so the tasks involved are managed to achieve financial success
b)	To carefully plan the work so the risks involved are kept to a minimum and recorded for audit purposes
c)	To plan the work to ensure the project is delivered within the set timescales
d)	To sensibly plan the work so the risks involved are managed from start to finish

Question 40

The regulator Ofgem set targets for the Energy Network Companies.

Which ONE of the following identifies three of the targets?

Possible answers

a)	Consumer value, economical network design and good waste disposal
b)	Customer service, network reliability and environmental performance
c)	Customer communication, network performance and cost reduction
d)	Consumer interaction, network monitoring and reduced wastage

End of Questions

Practice Knowledge Assessment

Answer scheme

Question	Answer
1	C
2	B
3	A
4	C
5	A
6	A
7	D
8	C
9	B
10	A
11	A
12	A
13	D
14	D
15	B
16	D
17	B
18	A
19	B
20	C

Question	Answer
21	D
22	B
23	C
24	D
25	B
26	C
27	A
28	C
29	C
30	C
31	B
32	B
33	B
34	A
35	D
36	C
37	D
38	B
39	D
40	B

SAMPLE ANSWER SHEET

Candidate ID	Attempt
Last Name	
First Name	
Exam Date	Paper
Centre Name	
Centre Number	

MARKING INSTRUCTIONS

Answers should be completed using a HB pencil.

☐ ☐ ☐ ☒ **ANSWER COMPLETED CORRECTLY**

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

☐ ☐ ☐ ☐ **DO NOT** partially shade the answer circle.

☐ ☐ ☒ ☒ **DO NOT** use ticks or crosses.

☐ ☐ ☐ ☐ **DO NOT** use circles.

☐ ☐ ☒ ☒ **DO NOT** shade over more than one circle.

1	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	11	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	21	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	31	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
2	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	12	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	22	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	32	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
3	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	13	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	23	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	33	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
4	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	14	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	24	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	34	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
5	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	15	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	25	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	35	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
6	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	16	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	26	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	36	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
7	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	17	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	27	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	37	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
8	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	18	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	28	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	38	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
9	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	19	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	29	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	39	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
10	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	20	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	30	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	40	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>

Appendix D - Level 4 Electrical Power Networks Engineer Practical Observation Planning Form

Instructions

This form has two purposes:

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

The apprentice is assessed:

- in a real working environment
- typically be one day i.e. between 5 and 6 hours depending on the activity(s) and a maximum of 6 hours. The actual time allowed will be based on the comparable time an industry competent worker would take to achieve successful task(s) completion

Equipment and resources needed for the assessment must be in good and safe working condition.

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

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

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

Complete the 'Level 4 Electrical Power Networks Engineer Practical Observation Planning Form' and submit it to the Service Delivery team via enquiries@energyenvironmentawards.co.uk, for **review 1 month before the start of the end-point assessment**.

Level 4 Electrical Power Networks Engineer Practical Observation Planning Form

Employer name and site address:	
Training provider (if applicable)	
Standard:	Electrical Power Networks Engineer
Pathways: (Select a pathway)	Asset Management Engineer <input type="checkbox"/> Design Engineer <input type="checkbox"/> Planning Engineer <input type="checkbox"/>
Level	4
Location of practical	
Summary of activity: Please provide a brief summary of the overall task/s to be completed during the assessment period	
Contact Details: Employer/training provider representative, email address and contact number overseeing the setup of the competency test (documents and site).	
Date submitted to Energy & Environment Awards	

Estimated total duration of practical task(s) must be typically one day i.e. between 5 and 6 hours depending on the activity and a maximum of 6 hours.

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

Practical Observation Checklist

This checklist will assist the employer and/or training provider with planning the activity. Please confirm all required elements are covered:

Core knowledge to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned practical observation activities for each criteria.	
Explain how the apprentice will meet: K6 Company requirements with regard to project management tools, techniques and processes.	<input type="checkbox"/>
Explain how the apprentice will meet: K9 Company business planning and resource control measures.	<input type="checkbox"/>

Core Skills to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned practical observation activities for each criteria.	
Explain how the apprentice will meet: S1 Comply with company and industry health, safety and environmental standards, regulations, company operating procedures and working practices relating to the health, safety and environmental practices used within the sector.	<input type="checkbox"/>

Core Skills to be covered in the task	Covered on activity
Explain how the apprentice will meet: S2 Ensure that all safety considerations are incorporated and evident in all working practices relating to the preparation and monitoring of safety practices during the observation.	<input type="checkbox"/>
Explain how the apprentice will meet: S4 Produce timely communications providing information to stakeholders both in writing and verbally relating the use and dissemination of information relevant to their job role.	<input type="checkbox"/>
Explain how the apprentice will meet: S8 Use company IT systems to provide accurate and reliable data to support business decisions relating to the use of IT systems and equipment during the course of their job role.	<input type="checkbox"/>
Explain how the apprentice will meet: S11 Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment relating to the identification and control of risks	<input type="checkbox"/>

Core Behaviours to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned practical observation activities for each criteria.	
Explain how the apprentice will meet: B1 Health, Safety and Environment - follows health, safety and environmental policies and procedures and is prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with teams. Demonstrates high concentration and the desire to reduce risks through regular monitoring and checking information.	<input type="checkbox"/>
Explain how the apprentice will meet: B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time.	<input type="checkbox"/>
Explain how the apprentice will meet: B5 Risk Awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis	<input type="checkbox"/>

PLUS Select the Pathway Specialist Skills to be covered in the task	
Pathway: Asset Management Engineer Specialist Skills	Covered on activity
Asset Management Engineer will be observed developing aspects of network reinforcement plans that include making plant and equipment proposals as well as including the plan information in regulatory returns.	
Please use the space below to provide a summary of the planned practical observation activities for each criteria.	
Explain how the apprentice will meet: AM2 Plan, develop and produce long term network reinforcement plans taking into account emerging technologies and projected future load requirements.	<input type="checkbox"/>
Explain how the apprentice will meet: AM3 Understand and interpret Regulatory requirements and business plans and contribute to the production of regulatory technical returns	<input type="checkbox"/>
Explain how the apprentice will meet: AM4 Assimilate complex external information to inform company decisions.	<input type="checkbox"/>
Explain how the apprentice will meet: AM5 Undertake Evaluate plant and equipment proposals and recommend company approaches.	<input type="checkbox"/>

<p>Explain how the apprentice will meet:</p> <p>AM6 Instigate, as appropriate, investigations into asset, systems or process failures as well as undertaking network performance analysis.</p>	<input type="checkbox"/>
Pathway: Design Engineer Specialist Skills	Covered on activity
<p>Design Engineer will be observed undertaking a detailed electrical network design, demonstrating load calculations, production of network diagrams and the benefits of their proposed design.</p>	
<p>Please use the space below to provide a summary of the planned practical observation activities for each criteria.</p>	
<p>Explain how the apprentice will meet:</p> <p>DE1 - Taking the long term network plan into consideration, translate company strategies into specific electrical designs</p>	<input type="checkbox"/>
<p>How will the apprentice meet:</p> <p>DE2 - Make proposals regarding appropriate plant and equipment to be used and the benefits of the proposals</p>	<input type="checkbox"/>
<p>How will the apprentice meet:</p> <p>DE5 Demonstrate the application of appropriate methods to identify correct load calculations and produce network diagrams?</p>	<input type="checkbox"/>

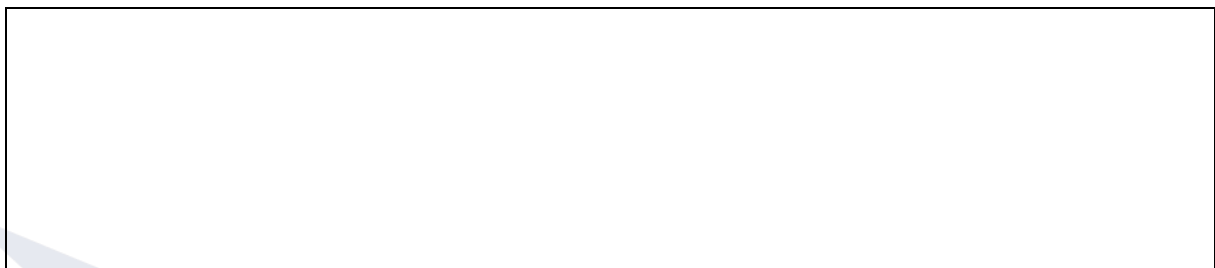
Pathway: Planning Engineer Specialist Skills	Covered on activity
Planning Engineer will be observed preparing and communicating work plans that take into account all resource requirements and their associated skills, other network considerations and demonstrating how they achieve outcome targets.	
Please use the space below to provide a summary of the planned practical observation activities for each criteria.	
Explain how the apprentice will meet: PE2 - Prioritise all works to be delivered taking into account capital delivery and contractor resources ensuring that all outcome targets are considered	<input type="checkbox"/>
How will the apprentice meet: PE5 - Ensure all planning decisions are documented in the relevant systems and are communicated with reasoning to all relevant stakeholders	<input type="checkbox"/>
Practical Task Variations - Describe how you can vary this task/s to ensure that the assessment does not become predictable. Variation 1: Variation 2: Variation 3:	

Specific requirements (for example: authorisations/access arrangements/PPE):

Remember:

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

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



Energy & Environment Awards Office use only

Date received	
Date signed off	

Appendix E: Practice Practical Observation Template

This document is for use by the person from the employer/training provider playing the role of the assessor during the practice practical observation. It is designed to help replicate the live assessment experience and to enable feedback to be provided to the apprentice.

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

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

Please Note:

The Practical Observation is graded out of 100.

Pass: Each criteria must be met to achieve a pass, which will provide 60 marks.

Distinction: All of the Pass criteria must be met and ONE of the criteria from each of the distinction areas, which will provide additional 25 – 40 marks.

Fail: The apprentice does not demonstrate the pass criteria.

K6 Company requirements with regard to project management tools, techniques and processes B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time.					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Chooses and uses the appropriate company project/engineering management tools, techniques and processes in their project work Uses project management tools to present technical information in a clear and concise manner to sufficient depth for the audience Demonstrates how they can work well with people from different disciplines, backgrounds and expertise to develop their projects 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the management of their projects Demonstrates how they are able to transmit difficult technical operational information in an understandable manner 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

K9 Company business planning and resource control measures					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Chooses and uses the appropriate company business planning and resource control measures in their work Presents business planning/resource control measures information in a clear and concise manner to sufficient depth for the audience Identifies the risks of inadequate business planning/ resource control measures in their asset project/s Demonstrates they have an embedded desire to reduce risks through systematic monitoring and checking of information on an on-going basis and taking mitigation actions when required 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the planning process Demonstrates how they are able to transmit difficult planning and/or resource information in an understandable manner 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

S1 Comply with company and industry health, safety and environmental standards, regulations, company operating procedures and working practices

B1 Health, Safety and Environment - follows health, safety and environmental policies and procedures and is prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with teams. Demonstrates high concentration and the desire to reduce risks through regular monitoring and checking information

To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Takes actions to ensure their project work complies with the health, safety and environmental considerations which affect their projects • Chooses and uses the appropriate company health, safety and environmental policies and procedures • Presents health, safety and environmental information in a clear and concise manner to sufficient depth for the audience • Demonstrates how they follow health, safety and environmental policies and procedures in their designs and where necessary challenge unsafe behaviour/practices using appropriate techniques • Demonstrates high levels of concentration and the desire to reduce risks through regular monitoring and checking of information in their designs 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the health, safety or environmental arrangements of their operational procedures • Assesses the impact of a health, safety or environmental problem and seeks out solutions by making suggestions to remedy or resolve the situation 	<input type="checkbox"/> <input type="checkbox"/>

Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.
Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

S2 Ensure that all safety considerations are incorporated and evident in all working practices					
B5 Risk awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Uses and follows the appropriate company health, safety and environmental policies and procedures • Recognises and identifies specific risks associated with their designs and chooses an appropriate course of action • Presents safety information in a clear and concise manner to sufficient depth for the audience • Demonstrates they have an embedded desire to reduce risks through systematic monitoring and checking of information on an on-going basis and taking mitigation actions when required 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to ensure safety considerations are incorporated into their operational procedure/s • Assesses the impact of an operational problem and seeks out solutions by making suggestions to remedy or resolve the situation safely 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

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S4 Produce timely communications providing information to stakeholders both in writing and verbally in relation to their role activities

B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Presents information in a clear and concise manner to sufficient depth for the audience • Demonstrates that others' views are considered and support, where required, is offered to them • Speaks confidently, listens to others and takes required action to progress work • Demonstrates how they can work well with people from different disciplines, backgrounds and expertise • Demonstrates how they take others' needs and concerns into account and supports them to accomplish an activity safely and on time 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Communicates effectively with stakeholders to provide operational information in both written and verbal formats to keep them informed • Communicates effectively to transmit complex operational information in an understandable manner 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.
Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded
				<input type="checkbox"/>

S8 Use company IT systems to provide accurate and reliable data to support business decisions					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Chooses and uses the appropriate company IT systems, techniques and processes used in their project work Uses IT systems to present information in a clear and concise manner to sufficient depth for the audience 		<input type="checkbox"/> <input type="checkbox"/>			
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

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S11 Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment					
B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Chooses and uses the appropriate company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment used in their planning designs Presents all information in a clear and concise manner to sufficient depth for the audience Recognises risks and chooses appropriate action depending on the situation Demonstrates they have an embedded desire to reduce risks through systematic monitoring and checking of information on an on-going basis and taking mitigation actions when required 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to predict the reliability of engineering systems and equipment in their planned operational procedures Assesses the impact of an operational problem and seeks out solutions by making suggestions to remedy or resolve the situation safely 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

Pathway: Asset Management Engineer Role Specific Skills

AM2 Plan, develop and produce long term network reinforcement plans taking into account emerging technologies and projected future load requirements									
B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time									
To achieve a Pass the apprentice must achieve ALL of the following:				P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:				D
<ul style="list-style-type: none"> Identifies budget/resource considerations through their planning to support emerging technologies and / or projected future load requirements Identifies and justifies the company's long term network reinforcement plan and justifies the approach taken Demonstrates how they work well with people with different disciplines and expertise, taking their needs/concerns into account and supporting them to deliver asset projects safely and on time 				<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they are able to consult and involve appropriate people to capitalise on different skills/perspectives/experience/knowledge to support the development of network plans which account for the requirements of emerging technologies and future load requirements Demonstrates how they can evaluate and predict the impact of problems in projects and seek out solutions and make suggestions for future improvement 				<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.				Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.				Recording timeline.	
Questions <i>Develop some open ended questions</i>									
Fail Awarded		<input type="checkbox"/>	Pass Awarded		<input type="checkbox"/>	Distinction Awarded		<input type="checkbox"/>	

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AM3 Understand and interpret regulatory requirements and business plans and contribute to the production of regulatory technical returns

B5 Risk awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Identifies the company's regulatory requirements and justifies the approach taken to achieve them Presents all regulatory information in a clear and concise manner to sufficient depth for the audience Demonstrates they have an embedded desire to reduce regulatory risks through systematic monitoring and checking of information on an on-going basis and taking mitigation actions when required 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they are able to consult and involve appropriate people to capitalise on different skills/perspectives/experience/knowledge to help to understand regulatory requirements and support the delivery of accurate information Demonstrates how they can evaluate and predict the impact of regulatory problems and seek out solutions and make suggestions for future improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

AM4 Assimilate complex external information to inform Company decisions					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none">• Presents complex external information in a clear and concise manner to sufficient depth for the audience• Demonstrates that other stakeholders' views are considered and acted on where required		<input type="checkbox"/>	<ul style="list-style-type: none">• Demonstrates how they are able to consult and involve appropriate people to capitalise on different skills/perspectives/experience/knowledge to help to understand complex external information and support company decisions• Demonstrates they are able to assimilate complex external information and transmit it in an understandable manner		<input type="checkbox"/>
		<input type="checkbox"/>			<input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

AM5 Evaluate plant and equipment proposals and recommend company approaches

B5 Risk awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrates how they have used company policies and procedures to conduct investigations into asset system or process failure and network performance analysis • Presents information clearly and concisely to conduct the investigation of asset system or process failure • Demonstrates they have an embedded desire to reduce risks to the network through the evaluation and checking of information and taking mitigation actions when required 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they are able to consult and involve appropriate people to capitalise on different skills/perspectives/experience/knowledge to evaluate equipment to be used on the network • Demonstrates they are able to assimilate complex external information from manufactures/specifications and transmit it in an understandable manner 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		
Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded
				<input type="checkbox"/>

AM6 Instigate, as appropriate, investigations into asset, systems or process failures as well as undertaking network performance analysis

B1 Health, Safety and Environment - follows health, safety and environmental policies and procedures and is prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with teams. Demonstrates high concentration and the desire to reduce risks through regular monitoring and checking information

To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrates how they have used company policies and procedures to conduct investigations into asset system or process failure and network performance analysis • Presents information clearly and concisely to conduct the investigation of asset system or process failure • Demonstrates how they consider health, safety and environmental policies and procedures when investigating system or process failure • Demonstrates high levels of concentration and the desire to reduce risks through monitoring and checking of network information 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on their experience/knowledge to support their analysis of network performance and system failure • Demonstrates how they can evaluate and predict the impact of asset, systems or process failures and seek out solutions and make suggestions for future improvement 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

Pathway: Design Engineer Role Specialist Skills

DE1 Taking the long term network plan into consideration, translate company strategies into specific electrical designs					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D	
<ul style="list-style-type: none">• Presents design information in a clear and concise manner to sufficient depth for the audience• Demonstrates that others' views are considered in their designs and support/solutions are offered to them• Recognises risks to project designs and chooses an appropriate course of action to ensure targets are met and successful outcomes achieved• Demonstrates they have an embedded desire to reduce network risks through systematic monitoring and checking of information on an on-going basis in their design work and taking mitigation actions when required		<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	<ul style="list-style-type: none">• Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspectives/ experience and/or knowledge to support them in the delivery of their designs• Demonstrates how they can assess the impact of problems in designs, resolve issues and make suggestions for future improvement	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

DE2 Make proposals regarding appropriate plant and equipment to be used and the benefits of the proposals					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Presents all design information in a clear and concise manner to sufficient depth for the audience • Demonstrates the impact of their design proposals on the regulatory outcomes of the business • Identifies budget/resource considerations in their network proposals • Demonstrates how they can work well with people from different disciplines, backgrounds and expertise to communicate and agree their design proposals 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates they are able to assimilate complex design information and communicate it in an understandable manner to stakeholders • Demonstrates how they can assess the impact of problems in network designs and resolve the issues making suggestions for improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

DE5 Demonstrate the application of appropriate methods to identify correct load calculations and produce network diagrams					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Conducts load calculations to support the network and produce clear and concise network diagrams Recognises network load risks and chooses appropriate course of action/design solution depending on the situation Demonstrates the impact of their load calculations on the regulatory requirements of the business Demonstrates they have an embedded desire to reduce network risks through systematic monitoring/checking of network information to control network loadings in their designs 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates they are able to assimilate complex design information and communicate it in an understandable manner to stakeholders Demonstrates how they can assess the impact of problems in network designs and resolve the issues making suggestions for improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

Pathway: Planning Engineer Role Specific Skills

PE2 Prioritise all works to be delivered taking into account capital delivery and contractor resources ensuring that all outcome targets are considered					
B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Presents planning information in a clear and concise manner to sufficient depth for the audience • Recognises risks to projects and chooses an appropriate course of action to ensure targets are met and outcome actions achieved • Identifies capital delivery and contractor resources in their projects and prioritises actions to achieve outcome targets • Demonstrates how they take others' needs and concerns into account and supports them to deliver plans which will meet targets 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspective/experience and/or knowledge to support them in delivery of their planning targets • Demonstrates how they can assess the impact of problems in planning projects, resolve issues and make suggestions for future improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

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PE5 Ensure all planning decisions are documented in the relevant systems and are communicated with reasoning to all relevant stakeholders

B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> Chooses and uses the appropriate company policies and procedures to document and record planning decisions Presents all planning information in a clear and concise manner to sufficient depth for the audience Communicates planning information to stakeholders confidently and listens to queries/concerns Demonstrates how they can work well with people from different disciplines, backgrounds and expertise to record and communicate planning decisions 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates they are able to assimilate complex planning information and communicate it in an understandable manner to stakeholders Demonstrates how they can assess the impact of problems in planning decisions and resolve the issues making suggestions for improvement 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		
Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded
				<input type="checkbox"/>

Appendix F: Practice Technical Interview Template

This document is for use by the employer/provider person playing the role of the assessor during a practice technical interview. It is designed to help replicate the live assessment experience and to enable feedback to be provided to the apprentice. The practice technical interview must be conducted under examination conditions and recorded. The apprentice must be asked questions.

Apprentice Full Name:					
Employer and location:					
Assessor Full Name:					
Date of Interview:		Start time:		Finish time:	

Please Note:

The Technical Interview is graded out of 100.

Pass: Each criteria must be met to achieve a pass, which will provide 60 marks.

Distinction: All of the Pass criteria must be met and ONE of the criteria from each of the distinction areas, which will provide additional 25 – 40 marks.

Fail: The apprentice does not demonstrate the pass criteria.

K7 Company engineering policies appropriate to their role					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Demonstrate how they have gathered and analysed relevant information to apply the relevant Company engineering policies to their asset projects to achieve workable solutions Explain the link between their asset projects and how they have ensured compliance with the relevant technical specifications Explain how they have used their knowledge of the company engineering policies to support their asset projects to achieve regulatory objectives 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Confidently explains in detail the relevant company engineering policies which support sound engineering principles in their work projects Confidently explains how they have used their knowledge of relevant engineering policies to improve the integrity, safety and longevity of the electrical network in their asset projects 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

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K8 Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness

B4 Analysing and solving problems - takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D	
<ul style="list-style-type: none">• Demonstrate how they have gathered and analysed relevant information to implement solutions to resolve engineering problems• Explain how they have recognised, and defined problems associated with their work projects• Explain how they have tackled asset issues in a step by step logical way and made suggestions for solving problems which benefit customers and the business• Explain how operational analysis they have undertaken supports the company strategies and policies ensuring compliance with technical requirements		<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	<ul style="list-style-type: none">• Confidently explains how they have resolved engineering problems based on sound principles to improve the integrity / safety / longevity of the network• Explains how they have assessed the effect of differing approaches to resolve engineering problems and made suggestions for improvement	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

K9 Company business planning and resource control measures			
B6 Planning and Organising - takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning			
To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> Explain how they have gathered and analysed relevant information in order to implement effective planning solutions or resource requirements in their asset projects Demonstrate how they have linked their asset work to company strategies and policies to ensure compliance with the company business planning and resource control measures Demonstrate how they have developed project plans/designs that contain objectives, budgets, desired outcomes, timescales and evaluation records Explains how they have taken a forward looking perspective when considering delivery planning decisions and ensured that plans are in place to manage anticipated issues, including contingency planning 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Confidently explains the principles of the company's business planning policy and resource control measures and the effect on their work projects Explains how they have used their knowledge of business planning and resource control measures to assess different approaches to their asset projects and made suggestions for improvement 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded

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S3 Apply asset management, design, planning, control, electrical project, or operational engineering principles as appropriate to their role to maintain and improve the integrity, safety and longevity of the transmission/distribution electrical network

B6 Planning and Organising - takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning

To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> Explain how they have gathered and analysed relevant information in order to maintain and improve the integrity/safety/longevity of the electrical network Demonstrate how they have linked their asset work to company strategies and policies to ensure compliance with the company engineering principles Explain how their engineering asset work supports the business/client to achieve regulatory incentive mechanisms Explains how they have taken a forward looking perspective when considering the delivery of asset projects and ensured that plans are in place to manage anticipated issues, including contingency planning 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Confidently discusses and justifies their application of sound engineering principles in their asset projects to improve the integrity, safety and longevity of the electrical network Demonstrates how they have assessed the impact of differing engineering approaches and made suggestions for improvement in the integrity, safety, or longevity of the electrical network 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

S5 Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Explain how they have gathered and analysed relevant information in order to produce asset projects/designs which meet company requirements/ specifications Demonstrate how they have used and interpreted technical Information to develop project plans that contain objectives / budgets / desired outcomes / timescales/evaluation records Demonstrate how they have used technical information to recognise and define design problems which they have tackled in a logical manner 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they have used technical information to apply engineering principles which have led to improved integrity, safety and longevity of the electrical network Demonstrates how they used technical information to consider the inclusion of new technologies or innovations which have been implemented in their work projects 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

S6 Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders			
B2 Stakeholder management - is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely			
To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information in order to produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders • Explain how their asset reports they have produced link to company strategies and policies • Demonstrate how operational reports/plans they have produced have been used to support internal and/or external stakeholders and meet their requirements • Explain how they have dealt with stakeholder queries/problems in a logical way and made suggestions for resolution which resulted in a benefit to stakeholders/business 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they have used their knowledge gained from project monitoring and the evaluation of records to produce clear and precise reports which benefit the business • Discusses reports produced which demonstrate their skills in assessing the impact in different approaches, and provides analysis to support suggestions for improvement 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

S7 Develop and agree project plans to undertake their activities. These plans will contain clear objectives, budgets, desired outcomes and timescales. Also included will be implementation criteria, monitoring process controls and evaluation records

B6 Planning and organising - takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none">• Demonstrate how they have gathered and analysed relevant information in order to develop and agree project plans• Demonstrate how they have developed project plans that contain objectives, budgets, desired outcomes, timescales and evaluation records and where appropriate budgets• Demonstrate how asset plans they have produced have been used to deliver required stakeholder outcomes by following implementation criteria, monitoring process controls and using evaluation records• Explains how they have taken a forward looking perspective when considering the delivery of asset management activities and ensured that plans are in place to manage anticipated issues, including contingencies		<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	<ul style="list-style-type: none">• Demonstrates confidently how they have applied sound engineering principles to develop project plans to undertake projects which contain clear objectives, budgets, desired outcomes and timescales• Discusses project plans produced which demonstrate their skills in assessing the impact in different approaches, and provide analysis to support suggestions for improvement	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

S9 Demonstrate that their work activities support the business to achieve its regulatory incentive mechanisms						
B2 Stakeholder management - – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely						
To achieve a Pass the apprentice must achieve ALL of the following:			P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none">• Demonstrate how they have gathered and analysed relevant operational information in order to support the business to achieve its regulatory incentive mechanisms• Explain how their asset projects link to company strategies and polices and support the achievement of regulatory incentive mechanisms• Explain how the company regulatory incentive mechanisms impact/affect relevant stakeholders and their requirements• Identifies the relevant regulatory stakeholders and how the business manage their expectations by presenting appropriate information to them clearly and concisely			<input type="checkbox"/>	<ul style="list-style-type: none">• Confidently discusses the company’s asset engineering principles and the part they play in supporting the business to achieve its regulatory incentive mechanisms• Confidently explains how the company’s inclusion of new technologies and engineering innovations are supporting the business to achieve its regulatory incentive mechanisms	<input type="checkbox"/>	
			<input type="checkbox"/>		<input type="checkbox"/>	
			<input type="checkbox"/>			
			<input type="checkbox"/>			
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.	
Questions <i>Develop some open ended questions</i>						
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>	

S10 Provide information to support business planning processes in relation to their role activities			
B6 Planning and organising - takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning			
To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant operational information in order to support the business planning processes in relation to their job role • Demonstrate how they have developed asset plans that support/comply with the business planning processes • Identifies the stakeholders which are affected by the business planning processes and how they are affected • Demonstrate how they have developed asset project plans that take a forward-looking perspective and manage anticipated issues • Explain how their work planning links/supports Company strategies and policies and supports the achievement of regulatory incentive mechanisms • Demonstrate how their asset planning has managed anticipated operational issues and considered contingency planning 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Explains how they have monitoring / evaluated projects produced which has led to learning points to support future planning processes • Discusses project plans produced which demonstrate their skills in assessing the impact in different approaches, and provide analysis to support suggestions for improvement in the planning process 	<input type="checkbox"/> <input type="checkbox"/>

Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.
Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

Pathway: Asset Management Engineer Role Specific Skill

AM1 Support the development of innovative policy solutions to best serve the needs of customers and stakeholders					
B2 Stakeholder management - is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Demonstrate how they have gathered and analysed relevant information in order to support the development of innovative policy solutions Explains how the development of the innovative policy solutions link to the company long term strategies and comply with technical requirements/specifications Identifies the stakeholders which are affected by the policy solutions developed and how they have managed their expectations, presenting appropriate information to them clearly and concisely are affected 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they have supported the inclusion of new technologies and engineering innovations in their work to best serve the needs of customers and stakeholders Demonstrates their skills in assessing the impact of differing innovative policy solutions and provide analysis to best serve the needs of customers and stakeholders 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

AM7 Support the identification of new and existing innovation projects					
B4 Analysing and solving problems - takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Demonstrates how they have gathered and analysed relevant information in order to support the identification of new innovative policy solutions • Explains how the identification of innovative policy solutions link to the company long term strategies and comply with technical requirements/specifications • Identifies the stakeholders which are affected by the policy solutions developed and how they are affected • Demonstrates how they have taken responsibility for solving problems by identifying and analysing issues and drawing logical solutions that benefit customers and the business 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they have supported the identification of new or existing innovation projects in their work to improve the operation of the network • Demonstrates their skills in assessing the impact of new or existing innovation projects and provide analysis to support their findings and make suggestions for improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

AM8 Identify the implications of the next generation of low carbon energy and how it influences the way the network is operated					
B4 Analysing and solving problems - takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Explains how they have gathered and analysed relevant information in order to understand the implications of the next generation of low carbon energy and how it influences the way the network is operated Explains how the identification of innovative policy solutions link to the Company long term strategies and comply with technical requirements / specifications Identifies the stakeholders which are affected by the next generation of low carbon energy and how they are affected 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Demonstrates how they have considered the implications and effects of the next generation of low carbon energy in their work projects Demonstrates their skills in assessing the impact of the next generation of low carbon energy on the network and provide analysis to support their findings and make suggestions for improvement 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

Pathway: Design Engineer Role Specific Skills

DE3 Undertake all aspects of design from outlines to detailed plans. This involves approvals, wayleaves, consents, appropriate regulations and costing information					
B2 Stakeholder management – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information in order to develop designs which meet the company needs • Demonstrate how they have developed design projects that contain approvals, wayleaves, consents appropriate regulations and costing information and meet the required objectives • Explain how they have developed designs which identify and deal with problems in a logical way and result in a positive outcome/benefit to the customer/business • Takes a forward-looking perspective in their design projects which ensure plans are in place to manage anticipated issues and take not account contingency planning 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Confidently explains the engineering principles they have used for developing designs which have improved the integrity, safety and/or longevity of the network • Explains the lessons they have learnt from their previous designs and how they have used the findings to inform/improve their performance 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

DE4 Take into account the implications of safety and environmental requirements, statutory and industry standards, technical system requirements and commercial constraints on design plans					
B6 Planning and organising – takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information in order to develop designs which take into account a range of safety, environmental and technical requirements • Clearly identifies the relevant stakeholders, their requirements and the outcomes which have to be met • Recognises and defines problems which affect their designs and tackles them in a logical way to achieve a successful outcome • Demonstrates how they have taken a forward looking perspective in their design decisions/projects by considering contingency planning and managing anticipated issues 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Confidently explains the engineering principles they have used for developing designs which have improved the integrity, safety and/or longevity of the network • Demonstrates their skills in assessing and analysing the impact of differing design solutions which has led to an improved performance 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

DE6 Ensure that proposed designs meet commercial, investment requirements and take into account innovation developments			
B4 Analysing and solving problems – takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business			
To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information to ensure that their designs meet commercial investment requirements and take into account innovation developments • Explains how their designs align with the company strategies/policies to meet commercial investment requirements • Describes how their designs take into account innovation developments to support the business to achieve its commercial/regulatory requirements/targets • Takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Demonstrates how they have considered/included new technologies or innovations in their designs which have led to an improved performance • Demonstrates they have gathered and analysed technical information to improve network design/performance and made suggestions which has led to an improved performance 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

Pathway: Planning Engineer Role Specific Skills

DE1 Build and be accountable for a rolling and dynamic plan, including managing conflicts and changes, for all operational and capital works			
B2 Stakeholder management – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely			
To achieve a Pass the apprentice must achieve ALL of the following:	P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information in order to develop dynamic planning projects which meet the company needs • Demonstrate how they have developed project plans that manage potential issues and meet the required objectives • Explain how they have developed plans which deal with potential stakeholder conflicts in a logical way and prevent/resolve problems • Is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Confidently explains the engineering principles for developing a rolling and dynamic project plan to support the development of the network • Explains the lessons they have learnt from previous plans and how they have used the findings to inform/improve their performance 	<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.		Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

DE3 Ensure area plans are built optimally, utilising resource skill sets appropriately and plan the outages, negotiating and confirming them by utilising the switching matrix

B6 Planning and organising – takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> • Demonstrate how they have gathered and analysed relevant information in order to develop optimal work plans which make the best use of resources • Identifies the stakeholders required for the planned work activities and their requirements • Explain how they have developed plans which have identified problems and how they have dealt with them to resolve conflict / issues in a logical way • Demonstrates how they have taken a forward looking perspective in the delivery of planning decisions / projects by considering contingency planning and managed anticipated issues 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> • Explains how they have evaluated the development/delivery of their area plans to inform future actions and improve performance • Demonstrates their skills in assessing and analysing the impact of differing methods for developing their area plans and improving their performance 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

DE4 Ensure all risk assessments are initiated in a timely manner, that any constraints are assessed and managed and any mitigating actions are determined

B4 Analysing and solving problems - takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none">• Demonstrate how they have gathered and analysed relevant information in order to produce risk assessments which identify and manage safety issues in the planned work• Explains how the risk assessment process aligns with the company strategies and policies to ensure compliance with safety requirements• Explain how they have conducted risk assessments which have identified safety issues and how they have dealt with them in a logical way• Takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business		<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	<ul style="list-style-type: none">• Confidently explains the principles for incorporating a safety strategy into their planning process which identifies potential risks and allows for mitigating actions to be determined• Demonstrates their skills in assessing and analysing the differing approaches to developing a safety strategy and how this has improved the overall planning performance	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

DE6 Ensure assets are compliant with statutory requirements, company policy obligations and optimal/limit dates and assess asset condition data against maintenance policy risk & criticality criteria

B4 Analysis and solving problems - takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business

To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D
<ul style="list-style-type: none">• Demonstrate how they have gathered and analysed relevant asset information in order to confirm their planning projects meet with statutory requirements and company policy• Explains how plans they have produced align and link with the company strategies and policies to ensure compliance• Explain how they have recognised and identified potential issues with assets used in their planning process and have dealt with the issues in a logical way and made suggestions for improvement• Takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business		<div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div> <div><input type="checkbox"/></div>	<ul style="list-style-type: none">• Confidently explains the company engineering principles for ensuring assets are compliant with statutory and company requirements• Explains how they have evaluated the performance/data of assets on the network which has supported and informed their actions	<div><input type="checkbox"/></div> <div><input type="checkbox"/></div>
Assessor must ask the following standardised questions.	Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.

Questions <i>Develop some open ended questions</i>				
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded <input type="checkbox"/>

DE7 Be accountable for both resource and outage planning ownership and authority of work to be included or removed from the plan					
B6 Planning and Organising – takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning					
To achieve a Pass the apprentice must achieve ALL of the following:		P	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:		D
<ul style="list-style-type: none"> Explain how they have been accountable for developing project plans that include both resource and outage planning objectives Clearly identifies the stakeholders affected by the planning projects they have produced Explain how they have identified issues with their planning projects and have dealt with the issues in a logical way Takes a forward-looking perspective when considering the delivery of planning decisions/activities/projects and ensures plans are in place to manage anticipated issues, considers contingency planning 		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<ul style="list-style-type: none"> Confidently discusses how they have been accountable for the ownership of both resource and outage planning on the network Demonstrates their skills in assessing and analysing the differing approaches for an effective planning strategy and how this has improved their overall planning performance 		<input type="checkbox"/> <input type="checkbox"/>
Assessor must ask the following standardised questions.		Assessor must record all additional questions asked for clarification and the responses provided by the apprentice including examples.			Recording timeline.
Questions <i>Develop some open ended questions</i>					
Fail Awarded	<input type="checkbox"/>	Pass Awarded	<input type="checkbox"/>	Distinction Awarded	<input type="checkbox"/>

Appendix G: Work Log Mapping Document

Introduction

Throughout the on-programme part of the apprenticeship, the apprentice will need to compile a work log of evidence to support the requirements of the technical interview which is based on the work log. The evidence within the work log will need to be mapped using the work log mapping document by the apprentice to the KSB requirements, and this would normally come from the evidence relating to at least 5 holistic jobs.

The independent assessor will use the work log mapping document to review the evidence in the apprentice's work log in preparation for the technical interview.

The work log mapping document below consists of the core requirements and specialist skills.

Apprentices next steps

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

4. Place the work log mapping document at the front of the work of evidence.

The apprentice's training provider must make arrangements for Energy & Environment Awards to have access to the apprentice's work log including the portfolio mapping document at Gateway. For those using e-portfolios such as ONEFILE or SMARTASSESSOR the reference used must simply be the file or folder name you used when uploading the evidence to such systems.

Work Log Mapping Document

This document must be placed at the front of the work log and submitted to Energy & Environment Awards with the work log of evidence.

Mapping Sign off on Completion:

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

Core Knowledge

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
K7	Company engineering policies appropriate to their role			
K8	Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness			
K9	Company business planning and resource control measures			
Assessor Comments:				

Core Skills

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
S3	Apply asset management, design, planning, control, electrical project, or operational engineering principles as appropriate to their role to maintain and improve the integrity, safety and longevity of the transmission/distribution electrical network			
S5	Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications			
S6	Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders			
S7	Develop and agree project plans to undertake their activities. These plans will contain clear objectives, budgets, desired outcomes and timescales. Also included will be implementation criteria, monitoring process controls and evaluation records			
S9	Demonstrate that their work activities support the business to achieve its regulatory incentive mechanisms			
S10	Provide information to support business planning processes in relation to their role activities			
Assessor Comments:				

Core Behaviours

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
B2	Stakeholder management			
B4	Analysing and solving problems			
B6	Planning and Organising			
Assessor Comments:				

Pathway: Asset Management Engineer Role Specific Skills

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
AM1	Support the development of innovative policy solutions to best serve the needs of customers and stakeholders			
AM7	Support the identification of new and existing innovation projects			
AM8	Identify the implications of the next generation of low carbon energy and how it influences the way the network is operated			
Assessor Comments:				

Pathway: Design Engineer Role Specific Skills

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
DE3	Undertake all aspects of design from outlines to detailed plans. This involves approvals, wayleaves, consents, appropriate regulations and costing information			
DE4	Take into account the implications of safety and environmental requirements, statutory and industry standards, technical system requirements and commercial constraints on design plans			
DE6	Ensure that proposed designs meet commercial, investment requirements and take into account innovation developments			
Assessor Comments:				

Pathway: Planning Engineer Role Specific Skills

Ref.	Apprenticeship Standard Criteria	WORK LOG REVIEW (Assessor Use Only)		
		1	2	3
PE1	Build and be accountable for a rolling and dynamic plan, including managing conflicts and changes, for all operational and capital works			
PE3	Ensure area plans are built optimally, utilising resource skill sets appropriately and plan the outages, negotiating and confirming them by utilising the switching matrix			
PE4	Ensure all risk assessments are initiated in a timely manner, that any constraints are assessed and managed and any mitigating actions are determined			
PE6	Ensure assets are compliant with statutory requirements, company policy obligations and optimal/limit dates and assess asset condition data against maintenance policy risk & criticality criteria			
PE7	Be accountable for both resource and outage planning ownership and authority of work to be included or removed from the plan			
Assessor Comments:				

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