



City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification (2347-03)

Version 1.1 (March 2024)

Qualification Handbook

Qualification at a glance

Subject area	Building Services Engineering
City & Guilds number	2347-03
Age group approved	19+
Entry requirements	<p>These are the prerequisite requirements for entry:</p> <ul style="list-style-type: none"> • minimum of three years' industry experience practising as an electrician • an industry recognised Level 2 Diploma in Electrical Installations (Building and Structures) or equivalent <p>* A Skills Scan must be completed as part of the initial assessment for learner entry on to this qualification</p>
Assessment	Portfolio of evidence
Grading	Pass/Fail
Approvals	Automatic approval from 5393-03, 5357-03/5357-23 and the 2346-03 / Full approval required for new centres
Support materials	Qualification Handbook, Workplace Logbook, Skills Scan, SmartScreen, Learning Assistant
Registration and certification	Consult the Walled Garden/Online Catalogue for last dates

Title and level	City & Guilds qualification number	Regulatory reference number	GLH	TQT
City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification	2347-03	610/3326/1	79	104

Version and date	Change detail	Section
Version 1.0 November 2023	Initial version	All
Version 1.1 March 2024	Updated hyperlinks to Skills Scan document Registration changed from 5 years to 18 months in line with TESP requirements	3. Delivering the qualification 4. Assessment

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1 Introduction

This document tells you what you need to do to deliver the qualification:

Area	Description
Who is the qualification for?	This qualification is designed solely for those persons who are, or have been, working in the Electrical industry, practicing as an Electrician, for a minimum of three years and who can demonstrate their technical knowledge, performance and competence to the industry standards at Level 3 and would like to gain a formal qualification in the Electrotechnical in Dwellings Experienced Worker route.
What does the qualification cover?	This qualification covers the knowledge, skills and competency required by a Electrician in domestic dwellings. This includes the application of health and safety, organising and overseeing electrical work, application of design and installation practices and procedures, inspection, testing, reporting and commissioning of electrical systems and fault diagnosis and rectification in domestic dwellings.
What opportunities for progression are there?	Learners who successfully complete the City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification as well as the occupational competence assessment (appropriate AM2), delivered by NET, will be judged to have met the eligibility requirements sufficient to apply for an ECS Installation Gold Card from the JIB.
Who did we develop the qualification with?	This qualification was developed through the partnerships made during the development of the City & Guilds Level 3 Electrotechnical in Dwellings (5393-03) as part of the Domestic Electrician apprenticeship, from a wide employer group, including, Centrica, Arena Electrical Services, She's Electric, Lincolnshire Housing Partnership and N-R-T Building Group Services.

Important information on delivering of this qualification

This qualification is designed solely for those who have been working in the electrical industry as a practicing electrician for a minimum of **three** years and who can demonstrate their technical knowledge, performance and competence to the industry standard at Level 3. It forms part of enabling the experienced worker to apply for an ECS Installation Electrical Gold Card.

This qualification is not suitable for new entrants to the electrical industry, apprentices, or other operatives who require any training, or those who have completed an electrical technical certificate with less than three years' relevant industry experience.

Where the learner cannot provide documented evidence of previous technical qualifications, or they have qualified outside the UK, the Assessor must provide auditable evidence that the knowledge and understanding evidence of each unit has been satisfied.

To be eligible to apply for the ECS gold card with this route, the learner must have achieved:

- This qualification, the City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification
- an industry recognised Level 2 Diploma in Electrical Installations (Buildings and Structures) or equivalent
- a current industry recognised Level 3 Award in the requirements for electrical installations (BS 7671) or equivalent
- a current industry recognised Level 3 qualification in Initial and Periodic Inspection and Testing of Electrical Installations or equivalent
- the AM2 appropriate Occupational Test (from NET).

Learners must work toward units in accordance with relevant health and safety legislation. This is particularly important when working at heights, inspecting and testing, and diagnosing faults.

Where cited legislation and regulations are not applicable (for example, where the qualification is being delivered outside of England) then substitutions applicable to the learner's jurisdiction can be made.

Meeting the assessment requirements of performance outcomes will need initial discussions and assessment planning between the learner and assessor as an essential activity to identify opportunities to assess real working environment evidence, gaps that need to be filled, or opportunities to recognise the prior achievement of the learner.

City & Guilds will monitor and carry out external quality assurance of the assessments conducted at the centre.

Important note:

This handbook contains all the assessment information needed to pass all the units within this qualification. However, for the learner to be eligible for the ECS Gold Card as part of the Experienced Worker route, the learner must also successfully complete the AM2 appropriate occupational test assessment.

The AM2 is a practical assessment where the learner must carry out a series of tasks covering safe isolation, installation, fault finding and inspection and testing, which are then marked by an assessor. It is identical to the AM2S assessment which is taken by apprentices at the end of their training programme. Full details about each section of the AM2 appropriate test and the tasks to be carried out are available on the NET website.

The AM2 is a robust, timed practical and theory assessment requiring the learner to perform a set of common tasks and procedures that a full scope electrical operative might face when working in commercial or premises as well as dwellings. It assesses the learner on installation, inspection and testing and fault-finding; their work must comply with BS 7671, be in line with relevant Health and Safety legislation and conform to current industry practices and procedures.

Structure

To achieve the **City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification (2347-03)**, learners must achieve all **five** mandatory units:

City & Guilds unit number	Unit title	GLH
Mandatory units:		
Learners must achieve all five mandatory units.		
102	Apply health, safety and environmental considerations in dwellings	10
106	Plan and oversee the electrical work activities in dwellings	12
109	Apply design and installation practices including termination and connection of conductors in dwellings	35
113	Inspect, test, report and commission electrical systems in dwellings	12
115	Apply fault diagnosis and rectification in dwellings	10

Important:

Learners must also satisfy the following requirements to achieve the 2347-03 qualification:

- a current industry recognised Level 3 Award in the requirements for electrical installations (BS 7671) or equivalent
- a current industry recognised Level 3 qualification in Initial and Periodic Inspection and Testing of Electrical Installations or equivalent.

These may be taken in advance of registering on the 2347-03 or may be taken alongside the 2347-03 but **must** be completed before claiming certification for the 2347-03.

Claiming for certification

The following must be claimed as proxy units, when claiming for the full certification for this qualification:

- 2347-801 - an industry recognised Level 2 Diploma in Electrical Installations (Buildings and Structures) or equivalent
- 2347-802 - a current industry recognised Level 3 Award in the requirements for electrical installations (BS 7671) or equivalent
- 2347- 803 - a current industry recognised Level 3 qualification in Initial and Periodic Inspection and Testing of Electrical Installations or equivalent.

Total Qualification Time (TQT)

Total Qualification Time (TQT) is the number of notional hours which represents an estimate of the total amount of time that could reasonably be expected for a learner to demonstrate the achievement of the level of attainment necessary for the award of a qualification.

TQT comprises of the following two elements:

- 1) the number of hours that an awarding organisation has assigned to a qualification for guided learning
- 2) an estimate of the number of hours a learner will reasonably be likely to spend in preparation, study or any other form of participation in education or training, including assessment, which takes place as directed by – but, unlike guided learning, not under the immediate guidance or supervision of – a lecturer, supervisor, tutor or other appropriate provider of education or training.

Title and level	GLH	TQT
City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification (2347-03)	79	104

2 Centre requirements

Approval

If your Centre is approved to offer any of the following qualifications:

- 5357-03/5357-23 City & Guilds Level 3 Electrotechnical Qualification (installation) or (maintenance)
- 5393-03 City & Guilds Level 3 Electrotechnical in Dwellings
- 2346-03 City & Guilds Level 3 Electrotechnical Experienced Worker Qualification

you will be automatically approved to offer the City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification (2347-03).

To offer this qualification, new centres will need to gain both centre and qualification approval. Please refer to the document [Quality Assurance Standards: Centre Approval Process](#) for further information.

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualification before designing a course programme.

Resource requirements

Centre staffing

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be occupationally competent or technically knowledgeable in the area(s) for which they are delivering training and/or have experience of providing training (this knowledge must be to the same level as the training being delivered)
- have recent relevant experience in the specific area they will be assessing
- have credible experience of providing training.

Assessors

Assessors **must** be working towards or have achieved a relevant recognised assessor qualification such as a Level 3 Certificate in Assessing Vocational Achievement and continue to practice to that standard. Assessors who hold earlier qualifications (D32 or D33 or TQFE/TQSE) should have CPD evidence to the most current standards.

They must be occupationally competent electricians. Evidence which supports this is by the assessor holding a relevant electrotechnical NVQ L3* and/or having registration with the JIB as 'Approved Electrician' status or Eng-Tech status via the IET.

*Assessors who qualified before NVQs were developed should provide evidence of how they are occupationally competent (such as through a CV together with any relevant references).

Assessors **must** be able to demonstrate evidence of being up to date with the electrical industry. This can be evidenced for example by either accessing trade publications, undertaking updates to wiring regulations or other course of learning, attending networking events relevant to this qualification and/or attending industry events. They must also satisfy any other Awarding Organisation requirements.

Expert Witnesses

Where "Expert Witnesses" are used in the assessment process, they must be sector competent individuals who can attest to the learner's performance in the workplace. It is **not** necessary for expert witnesses to hold an assessor qualification, as expert witnesses do **not** formally assess the work of a learner. A qualified assessor must assess the performance evidence endorsed or provided by an expert witness. Evidence from expert witnesses must meet the tests of validity, reliability, authenticity and sufficiency.

Expert witnesses will need to demonstrate:

- They have relevant current knowledge of industry working practices and techniques
- That they have no conflict of interest in the outcome of their evidence.

Continuing professional development (CPD)

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and quality assurance, and that it takes account of any national or legislative developments.

Quality assurance

Approved centres must have effective quality assurance systems to ensure optimum delivery and assessment of qualifications. Quality assurance includes initial centre approval, qualification approval and the centre's own internal procedures for monitoring quality. Centres are responsible for internal quality assurance and City & Guilds is responsible for external quality assurance. All external quality assurance processes reflect the minimum requirements for verified and moderated assessments, as detailed in the Centre Assessment Standards Scrutiny (CASS), section H2 of Ofqual's General Conditions. For more information on both CASS and City & Guilds Quality Assurance processes visit: the [What is CASS?](#) and [Quality Assurance Standards](#) documents on the City & Guilds website.

Standards and rigorous quality assurance are maintained by the use of:

- Internal quality assurance
- City & Guilds external quality assurance.

Internal Quality Assurance

Internal quality assurance is essential to ensuring that the assessment of evidence for units is of a consistent and appropriate quality. Those performing the internal quality assurance role must be occupationally knowledgeable and possess the skills necessary to make quality assurance decisions.

In order to carry out the quality assurance role, Internal Quality Assurers must

- have appropriate teaching and vocational knowledge and expertise
- have experience in quality management/internal quality assurance
- hold or be working towards an appropriate teaching/training/assessing qualification
- be familiar with the occupation and technical content covered within the qualification.

Internal quality assurers **must** have a minimum of occupational experience evidenced by having a building services engineering related qualification or proven sector competence/experience plus access to relevant 'occupational expertise' to enable them to conduct their role as an **internal quality assurer**. This evidence and access to 'occupational expertise' is quality assured by the Awarding Organisation.

They must be working towards or have achieved a relevant recognised internal quality assurance qualification such as the Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice and continue to practice to that standard. Assessors who hold earlier qualifications (D34 or V1) should have CPD evidence to the most current standards.

They **must** be able to demonstrate evidence of being up to date with building services engineering industry. This can be evidenced for example by either accessing trade publications, undertaking courses of learning, attending networking events relevant to this qualification and/or attending industry events.

External Quality Assurance

External quality assurance for the qualification will be provided by City & Guilds External

quality assurance process. External quality assurers (EQAs) are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External quality assurance is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres.

To carry out their quality assurance role, EQAs must have appropriate occupational and verifying knowledge and expertise. City & Guilds EQAs attend training and development designed to keep them up-to-date, facilitate standardisation between verifiers and share good practice.

The role of the EQA is to:

- provide advice and support to centre staff
- ensure the quality and consistency of assessments and marking/grading within and between centres by the use of systematic sampling
- provide feedback to centres and to City & Guilds.

EQAs must be accountable to the City & Guilds the Awarding Organisation. They must be working towards or have achieved the L4 Certificate in Leading the External Quality Assurance of Assessment Processes and Practice and continue to practice to that standard.

They must:

- be fully conversant with the assessment process
- have no connections with the assessment centre, in order to maintain objectivity
- have sufficient and relevant technical/occupational understanding in the qualification(s)/unit(s) being verified
- be fully conversant with the standards and performance criteria in the units to be assessed
- be able to provide centres with advice and guidance on assessment and internal quality assurance procedures.

EQAs must be occupationally competent electricians. Evidence which supports this is by holding a relevant electrotechnical NVQ L3* and/or having registration with the JIB as 'Approved Electrician' status or Eng-Tech status via the IET.

* EQAs who qualified before NVQs were developed should provide evidence of how they are occupationally competent (such as through a CV together with any relevant references).

EQAs must be able to demonstrate evidence of being up to date with the electrical industry. This can be evidenced for example by either accessing trade publications, undertaking updates to wiring regulations or other course of learning, attending networking events relevant to this qualification and/or attending industry events.

Learner entry requirements

This qualification is for learners who are experienced workers, with at least **three** years' experience working in the electrical industry as a practising electrician. It is not suitable for new entrants into the electrical industry. Learners must also hold an industry recognised Level 2 Diploma in Electrical Installations (Buildings and Structures) or equivalent prior to entry on this qualification.

* A Skills Scan must be completed as part of the initial assessment for learner entry on to this qualification. Please refer to section 3 for further information relating to Skills Scan.

Age restrictions

This qualification is approved for learners aged 19 or above, however it is expected that, due to the three-year industry experience requirements, learners will be significantly older.

Access arrangements and reasonable adjustments

City & Guilds has considered the design of this qualification and its assessments in order to best support accessibility and inclusion for all learners. We understand however that individuals have diverse learning needs and may require reasonable adjustments to fully participate. Reasonable adjustments, such as additional time or alternative formats, may be provided to accommodate learners with disabilities and support fair access to assessment.

Access arrangements are adjustments that allow candidates with disabilities, special educational needs, and temporary injuries to access the assessment and demonstrate their skills and knowledge without changing the demands of the assessment. These arrangements must be made before assessment takes place.

The Equality Act 2010 requires City & Guilds to make reasonable adjustments where a disabled person would be at a substantial disadvantage in undertaking an assessment.

It is the responsibility of the centre to ensure at the start of a programme of learning that candidates will be able to access the requirements of the qualification.

Please refer to the JCQ access arrangements and reasonable adjustments and Access arrangements - when and how applications need to be made to City & Guilds for more information. Both are available on the City & Guilds website [Centre document library](#).

3 Delivering the qualification

Skills Scan - Initial assessment/Induction

This qualification is designed to take into account the existing qualifications and experience of the experienced worker.

It is a requirement that **prior** to undertaking this qualification, learners must have their suitability assessed by completing the [Domestic Electrician Experienced Worker Assessment Skills Scan](#) (this documentation is available on the 2347 City & Guilds website).

Training providers must carry out a recorded or documented technical discussion to confirm that the prospective learner has up to date knowledge to a Level 3 standard across all areas of the Skills Scan. Learners must hold at least a Level 2 qualification as detailed in the list below.

Documentation used to record this process may be subject to audit.

The list below details accepted qualifications from the EAS Qualifications Guide.

Qualification Title	Awarding Organisation	Qualification Numbers
Level 2 Certificate in Electrotechnical Technology	City & Guilds	2330
Level 2 Certificate for Domestic Electrical Installers	EAL	500/4385/7
Level 2 Certificate in Electrical Installations	City & Guilds	603/0228/8
Level 2 Intermediate Diploma in Electrical Installations	EAL	601/4561/4
Level 2 Diploma in Electrical (Buildings and Structures)	City & Guilds	600/5498/0
Level 2 Diploma in Electrical Installation	EAL	600/6724/X
Level 3 NVQ Diploma in Installing Electrotechnical Systems and Equipment (Building Structures and the Environment)	City & Guilds	501/2232/0
	EAL	501/1605/8
NVQ Level 3 Electrotechnical Services (Installation, Buildings and Structures)	City & Guilds SQA	100/2854/7 G7NY23
Level 3 NVQ/Diploma in Electrotechnical Services	EAL	500/3526/5
	EAL	100/4720/7
	SQA	100/3104/2

Qualification Title	Awarding Organisation	Qualification Numbers
Level 3 Advanced Technical Diploma in Electrical Installation	City & Guilds EAL	601/7307/5 601/4563/8
Level 3 Diploma in Electrical Installation (Buildings and Structures)	City & Guilds	600/5499/2
Level 3 Diploma in Electrical Installation	EAL	600/9331/6
Level 3 IVQ Advanced Diploma in Electrical installation	City & Guilds	500/6029/6
Level 3 SVQ Electrical Installation	SQA	N/A
Advanced Diploma in Engineering and Technology	EAL	N/A
Level 3 Award/Certificate in Building Engineering (Electrical)	ABC Awards ABC Awards	500/3925/8 500/5528/8
Electrical Installation Course Work (A and B Certificates)	City & Guilds	N/A
Level 3 Certificate in Electrical Installation Work C Course	City & Guilds	100/1291/6
Certificate in Electrical and Electronic Craft Studies	City & Guilds 236 Part 1 and Part 2 City & Guilds 2360 Part 1 and Part 2 City & Guilds 2367 and 2368 City & Guilds 51A and 51B (A and B Certs)	N/A
Level 3 Certificate in Electrical Installation Theory and Practice Part 2	City & Guilds	100/1290/4
NVQ Level 3 Electrical Installation Engineering	City & Guilds	100/1292/8
Level 3 Certificate in Knowledge of Electrical Installation Engineering	City & Guilds	N/A

Qualification Title	Awarding Organisation	Qualification Numbers
NVQ Level 3 in Installation and Commissioning Electrotechnical Systems	City & Guilds	Q1052155
Level 3 Certificate in Electrotechnical Technology Installation (Building and Structures)	City & Guilds	100/3602/7
Full Technological Certificate in Telecommunications	City & Guilds	N/A
SCOTVEC Modules in Electrical Installation	SCOTVEC (1985-1995)	N/A
Scottish Joint Industry Board Electrical Contracting Industry Craftsman Certificate	SJIB	N/A

If a learner holds another equivalent qualification not listed above which you think is relevant to the knowledge required, please contact EWA for further guidance.

Learners with qualifications gained outside of the UK

This qualification has been designed to take into account the existing qualifications and experience of the learner and therefore they must be able to demonstrate to an assessor their understanding of the industry theory and UK wiring and testing regulations as set out in the performance and knowledge requirements for entry on this qualification.

Learners with qualifications gained outside the UK will need to meet the same requirements as any learner following this assessment route. All non-UK qualifications must have been fully evaluated by UK Naric. However, under no circumstances can any UK Naric evaluation be used against the practical performance requirements of any unit.

Inclusion and diversity

City & Guilds is committed to improving inclusion and diversity within the way we work and how we deliver our purpose which is to help people and organisations develop the skills they need for growth.

More information and guidance to support centres in supporting inclusion and diversity through the delivery of City & Guilds qualifications can be found here:

[Inclusion and diversity | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

Sustainability

City & Guilds are committed to net zero. Our ambition is to reduce our carbon emissions by at least 50% before 2030 and develop environmentally responsible operations to achieve net zero by 2040 or sooner if we can. City & Guilds is committed to supporting qualifications that support our customers to consider sustainability and their environmental footprint.

More information and guidance to support centres in developing sustainable practices through the delivery of City & Guilds qualifications can be found here:

[Our Pathway to Net Zero | City & Guilds \(cityandguilds.com\)](https://www.cityandguilds.com)

Centres should consider their own carbon footprint when delivering this qualification and consider reasonable and practical ways of delivering this qualification with sustainability in mind. This could include:

- reviewing purchasing and procurement processes (such as buying in bulk to reduce the amount of travel time and energy, considering and investing in the use of components that can be reused, instead of the use of disposable or single use consumables)
- reusing components wherever possible
- waste procedures (ensuring that waste is minimised, recycling of components is in place wherever possible)
- minimising water use and considering options for reuse/salvage as part of plumbing activities wherever possible.

Support materials

The following resources are available for this qualification:

Description	How to access
Workplace logbook	www.cityandguilds.com
SmartScreen	www.smartscreen.co.uk
Skills Scan	Skills Scan – Experienced Worker Assessment – TESP (electrical-ewa.org.uk)

4 Assessment

Assessment of the qualification

All **five** mandatory units of this qualification are assessed as a portfolio of evidence.

Assessment strategy

All units (102, 106, 109, 113 and 115) will be evidenced through a workplace evidence record which will form part of the candidate's portfolio. These units should be assessed through naturally occurring opportunities whilst in the workplace. The workplace evidence record allows candidates to demonstrate the practical skills and associated underpinning knowledge required of a domestic electrician.

Assessment of performance should be carried out holistically using a range of approved assessment methods as part of the portfolio of evidence (eg. observations, reflective account*, witness testimony, professional discussion**, authenticated and verified photographs).

The centre assessor must observe the learner on at least **two** separate occasions as part of the evidence gathering process.

*Reflective accounts must be endorsed by an expert witness (for further information of who can act as a witness please see page 12)

**All professional discussions must be recorded.

Portfolio of evidence

City & Guilds has developed a workplace logbook specifically designed to meet the needs of candidates and assessor for this qualification. The **City & Guilds Level 3 Electrotechnical in Dwellings (5393-03) and City & Guilds Level 3 Electrotechnical in Dwellings Experienced Worker Qualification (2347-03) Workplace Logbook** is available on the 2347 qualification page on the City & Guilds website.

Although new centres are expected to use this logbook, centres may devise or customise their own recording forms, which must be approved for use by the External Quality Assurer, before they are used by candidates and assessors at the centre. Amendable (MS Word) versions of recording forms are available on the City & Guilds website.

Candidates and centres may decide to use electronic method or paper based versions for the recording of evidence.

City & Guilds endorses several ePortfolio systems, including our own, **Learning Assistant**, an easy-to-use and secure online tool to support and evidence learners' progress towards achieving qualifications. Further details are available at www.cityandguilds.com/eportfolios.

Evidence sources

A portfolio of evidence will typically include several pieces of evidence – it must contain sufficient evidence to demonstrate the knowledge and skills required for each appropriate unit.

Evidence sources may include:

- workplace logbooks
- centre-produced worksheets and activities
- annotated photographs
- video clips (maximum duration in total = 10 minutes)
- workplace documentation/records, for example job cards/job sheets, equipment check/maintenance/service records, parts order records.

This is not a definitive list; other evidence sources are permitted.

The evidence provided must be valid and attributable to the candidate; the portfolio of evidence must contain a statement from the centre confirming this.

Evidence **must not** include any methods of self-assessment and any employer contributions should focus on direct observation of evidence (for example witness statements) of competence rather than opinions.

Time constraints

In line with TESP requirements for the completion of the EWA route qualifications, qualification registration is valid for 18 months only.

5 Units

Structure of the units

These units each have the following:

- City & Guilds reference number
- title
- level
- guided learning hours (GLH)
- unit aim
- assessment type
- learning outcomes, which are comprised of a number of assessment criteria
- range statements
- supporting information

Guidance for delivery of the units

This qualification comprises a number of **units**. A unit describes what is expected of a competent person in particular aspects of their job.

Each **unit** is divided into **learning outcomes** which describe in further detail the skills and knowledge that a candidate should possess.

Each **learning outcome** has a set of **assessment criteria** (performance and knowledge and understanding) which specify the desired criteria that must be satisfied before an individual can be said to have performed to the agreed standard.

Range statements define the breadth or scope of a learning outcome and its assessment criteria by setting out the various circumstances in which they are to be applied.

Supporting information provides guidance of the evidence requirement for the unit and specific guidance on delivery and range statements. Centres are advised to review this information carefully before delivering the unit.

Unit 102

Apply health, safety and environmental considerations in dwellings

Level:	3
GLH:	10
Assessment type:	Portfolio of evidence
Aim:	This unit will enable learners to develop the competence required to apply Health and Safety legislation, practices and procedures when installing and maintaining electrical systems and equipment in dwellings.

Learning outcome

The learner will:

LO1 be able to apply relevant Health and Safety legislation in the workplace

Assessment criteria

The learner can:

AC1.1 identify which workplace Health and Safety procedures are relevant to working in domestic dwelling environments and comply with their duties and obligations as defined by current legislation and organisational procedures

AC1.2 produce a risk assessment and method statement in accordance with organisational procedures for a given work activity

AC1.3 work within the requirements of:

- a. risk assessments
- b. method statements
- c. safe systems of work

Learning outcome

The learner will:

LO2 be able to assess the work environment for hazards and identify remedial actions in accordance with Health and Safety legislation

Assessment criteria

The learner can:

- AC2.1 identify unsafe situations and conditions and take remedial actions
- AC2.2 assess the work environment and revise work practices accordingly to take into account hazards which could cause harm, including the handling of potentially hazardous:
- a. materials
 - b. tools
 - c. equipment
- AC2.3 identify any hazards which may present a high risk and report their presence to relevant persons who have overall responsibility for Health and Safety in the workplace
- AC2.4 apply measures to control Health and Safety hazards
- AC2.5 select and use correct personal protective equipment
-

Learning outcome

The learner will:

- LO3 be able to apply methods and procedures to ensure work on site is in accordance with Health and Safety legislation

Assessment criteria

The learner can:

- AC3.1 ensure that the Health and Safety of themselves and others is not endangered through personal conduct and behaviour within the workplace
- AC3.2 apply procedures to ensure the safe use, maintenance and storage of tools, plant and equipment as stipulated in:
- a. workplace policies (company and site)
 - b. supplier information
 - c. manufacturer's instructions
- AC3.3 comply with information, warning, mandatory instruction and prohibition notices
- AC3.4 apply procedures to ensure the safety of the work location through the correct use of guards, barriers and notices
- AC3.5 use access equipment correctly:
- ladder
 - tower scaffold or mewp
 - stepladder
 - platform
-

Learning outcome

The learner will:

- LO4 be able to work in accordance with environmental legislation for electrical services

Assessment criteria

The learner can:

AC4.1 use appropriate procedures for the safe handling, storage and disposal of hazardous materials and products, in accordance with the:

- Environmental Protection Act
- Hazardous Waste Regulations
- Pollution Prevention and Control Act
- Control of Pollution Act
- Control of Noise at Work Regulations
- Environment Act

Unit 102

Apply health, safety and environmental considerations in dwellings

Supporting Information

Unit guidance

Evidence requirements

Learning outcomes 1 to 4:

Auditable evidence sourced from a real working environment must be provided to illustrate that the learner has demonstrated on **two** separate occasions they can apply Health and Safety legislation and working practices when Installing and Maintaining Electrical Systems and Equipment in accordance with approved industry practices, statutory and non-statutory regulations and the assessment criteria for each of the learning outcomes.

In this unit, the learner is subject to direct observation on at least **two** separate occasions in the workplace by a qualified assessor. Reflective accounts will not be accepted as evidence for this unit. Any outstanding performance criteria that are not met through the direct observation must be supplemented by alternate evidence provided by the employer.

As a minimum, one of the two direct observations must be a physical, face to face, site visit with an assessor. The second direct observation may be live streamed online assessment with an assessor.

On both occasions this must be fully documented and made available for quality assurance.

AC3.5 use access equipment correctly. Assess **two** from the following:

- ladder
- tower scaffold or mewp
- stepladder
- platform

AC4.1 use appropriate procedures for the safe handling, storage and disposal of hazardous materials and products, in accordance with **one** of the following:

- Environmental Protection Act
- Hazardous Waste Regulations
- Pollution Prevention and Control Act
- Control of Pollution Act
- Control of Noise at Work Regulations
- Environment Act

Unit 106

Plan and oversee the electrical work activities in dwellings

Level:	3
GLH:	12
Assessment type:	Portfolio of evidence
Aim:	This unit will enable learners to develop the competence required to implement practices and procedures for overseeing and organising the work environment for the installation of electrical systems and equipment.

Learning outcome

The learner will:

- LO1 be able to provide relevant people with technical and functional information for work on electrical systems and equipment

Assessment criteria

The learner can:

- AC1.1 liaise with relevant people to evaluate the information they require to ensure that systems, equipment or components can be operated safely and effectively
- AC1.2 identify appropriate technical and functional information that is required for the work activity
- AC1.3 provide information in a timely, courteous, suitable and professional manner in accordance with organisational procedures and engineering standards

Learning outcome

The learner will:

- LO2 be able to co-ordinate liaison with other relevant persons during work activities

Assessment criteria

The learner can:

- AC2.1 select effective methods to co-ordinate with other workers/contractors, including steps to resolve issues or delays
- AC2.2 apply communication techniques that are clear, accurate and appropriate to the situation

AC2.3 apply principles of customer service

Learning outcome

The learner will:

LO3 be able to organise and oversee work activities and operations in dwellings

Assessment criteria

The learner can:

AC3.1 organise operatives by allocating duties and responsibilities to make the best use of their competence and skill

AC3.2 monitor the work of operatives to ensure it is in accordance with

- a. industry working practices
 - b. programme of work
 - c. Health and Safety requirements
 - d. cost effectiveness
 - e. environmental considerations
-

Learning outcome

The learner will:

LO4 be able to organise a programme for working on single-phase electrical systems and equipment

Assessment criteria

The learner can:

AC4.1 produce a simple programme of work from the work specification, including requirements for the following:

- a. estimate of the amount of time required for completion of the work
- b. liaison with other trades where necessary

AC4.2 communicate with others clearly and concisely

AC4.3 liaise with other relevant parties to resolve issues or delays

Learning outcome

The learner will:

LO5 be able to organise the resource requirements for work on electrical systems and equipment in dwellings

Assessment criteria

The learner can:

AC5.1 organise provision of resources to include:

- a. materials
 - b. fixings
-

- c. plant
- d. labour
- e. tools

AC5.2 confirm that materials available are:

- a. the right type
- b. fit for purpose
- c. in the correct quantity
- d. suitable for work to be completed cost efficiently

AC5.3 ensure that resources are undamaged at the point of delivery

AC5.4 implement measures which ensure the safe and effective storage of materials, tools and equipment in the work location

Unit 106

Plan and oversee the electrical work activities in dwellings

Supporting Information

Unit guidance

Evidence requirements

Learning Outcomes 1 to 5 – Auditable evidence sourced from a real working environment must be provided to illustrate that the learner has demonstrated, on **two** separate occasions, they can implement practices and procedures for overseeing and organising the work environment for the installation of electrical systems and equipment in accordance with the assessment criteria for each of the learning outcomes.

In the delivery of this unit an emphasis shall be made to the learner on the necessity to keep up to date with the latest standards, technologies and practices which relate to and affect the topics covered in this unit. This is in keeping with good industry practice.

Unit 109

Apply Design and Installation Practices including Termination and Connection of Conductors in Dwellings

Level:	3
GLH:	35
Assessment type:	Portfolio of evidence
Aim:	<p>This unit will enable learners to demonstrate the understanding and competence required to terminate and connect conductors and cables in electrical systems, and plan, prepare and install wiring systems and associated equipment in dwellings in accordance with approved industry practices, statutory and non-statutory regulations:</p> <ul style="list-style-type: none">• The Electricity at Work Regulations• The current edition of BS 7671• Health & Safety at Work etc Act• Building Regulations

Learning outcome

The learner will:

LO1 prepare to install wiring systems, enclosures and associated equipment in dwellings

Assessment criteria

The learner can:

AC1.1 apply appropriate procedures to include:

- a. adopting appropriate PPE
- b. following a safe system of work (eg working in accordance with a risk assessment and method statement)
- c. selecting appropriate tools/equipment for the installation work

AC1.2 prepare to install wiring systems, enclosures and associated equipment, to include:

- a. report any pre-work damage/defects to existing equipment or building features, to the relevant person (such as customer/client, site/line manager)
- b. confirm site readiness for installation work to begin
- c. confirm authorisation for the installation work to start

AC1.3 use documentation to confirm that materials and equipment are of the correct quantity and are free from damage

AC1.4 ensure the planned locations for the wiring system and associated equipment are compatible with other building services (eg gas, water or other electrical services)

AC1.5 check the planned locations for the wiring system in terms of:

- a. cosmetic appearance
- b. external influences

Learning outcome

The learner will:

LO2 interpret appropriate information for the installation of wiring systems, enclosures and associated equipment

Assessment criteria

The learner can:

AC2.1 use sources of information to enable the installation of wiring systems, enclosures and associated equipment to be carried out including:

- specifications
- work schedules/programmes
- manufacturer instructions
- layout drawings
- other appropriate source of information (eg BS 7671, other plans or diagrams, 'approved documents', Building Regulations)

Learning outcome

The learner will:

LO3 install wiring systems, and equipment in accordance with current relevant statutory and non-statutory regulations

Assessment criteria

The learner can:

AC3.1 use measuring and marking out techniques which are appropriate to the wiring system, wiring enclosure and/or associated equipment that is being installed

AC3.2 install cables in accordance with BS 7671, the installation specification and programme of work:

- single core (singles)
- multicore insulated
- PVC - PVC flat profile cable
- DC cabling
- SWA cable
- data including PoE
- fire resistant cabling (not including MICC)

AC3.3 install the following in accordance with the wiring regulations, the installation specification and agreed planned programme of work:

- PVC conduit
- PVC trunking

- cable basket
- cable tray

AC3.4 install the following types of electrical equipment and accessories, in accordance with, BS 7671, the installation specification, manufacturers' instructions and the programme of work:

- a. distribution boards/consumer units
 - b. socket outlets
 - c. luminaires
 - d. isolators/switches
 - e. overcurrent protective devices
- and

- electric vehicle charging point
- fire detection components
- data socket outlets
- WI-FI router
- Smart camera and or Smart doorbell
- Smart lighting control (not individual Smart lamp)
- Smart heating controls including hard wired connections
- other appropriate equipment within a dwelling (eg heating system components, control equipment)

AC3.5 dispose of waste materials in accordance with site procedures and statutory requirements

Learning outcome

The learner will:

LO4 confirm the quality of the completed work

Assessment criteria

The learner can:

AC4.1 make good all parts of the building following installation work

AC4.2 ensure the installed wiring system/s and enclosure/s meet specified requirements including that they:

- a. are the correct type and fit for purpose
- b. are installed in accordance with BS 7671
- c. meet the installation specification/other relevant plans/instructions
- d. are installed in accordance with any relevant manufacturer instructions

Learning outcome

The learner will:

LO5 prepare to terminate and connect cables and conductors used in dwellings

Assessment criteria

The learner can:

AC5.1 apply appropriate procedures to include:

- a. selecting appropriate tools/equipment to enable termination and connection
- b. adopting appropriate PPE
- c. following a safe system of work (eg risk assessment, method statement, permit to work procedure)

AC5.2 ensure it is safe to complete termination and connection in terms of:

- a. checking for presence of supply/carrying out safe isolation
- b. mechanical soundness of the electrical equipment to be connected to
- c. checking for unsafe situations

Learning outcome

The learner will:

LO6 terminate and connect conductors and cables used in dwellings

Assessment criteria

The learner can:

AC6.1 terminate and connect cables and conductors in accordance with manufacturers' instructions, BS 7671, and any relevant drawing or specification:

- single core (singles)
- multicore insulated
- PVC - PVC flat profile cable
- DC cabling
- SWA cable
- data including PoE
- fire resistant cabling (not including MICC)

AC6.2 connect to electrical equipment in accordance with manufacturers' instructions, BS 7671, and any relevant drawing or specification:

- isolators/switches
- socket outlets
- distribution boards/consumer control units
- luminaires
- overcurrent protective devices
- earthing terminals
- data socket outlets or data connections
- wired fire detection/alarm components
- other appropriate equipment within a domestic dwelling (such as heating system components)

AC6.3 terminate and connect conductors, using appropriate methods:

- screwing
- crimping
- non-screw compression

- insulation displacement

AC6.4 ensure that terminations and connections are electrically and mechanically sound (inspecting and testing terminations)

AC6.5 ensure cables have appropriate identification in accordance with BS 7671

Learning outcome

The learner will:

LO7 understand design and installation practices and procedures

Assessment criteria

The learner can:

AC7.1 describe the **procedures** required for establishing safe working systems on domestic work sites during installation

AC7.2 explain the **processes** required when selecting the appropriate cables and wiring systems in accordance with current BS 7671 requirements for the installation

AC7.3 explain how to ensure installation **requirements** are met when using

- a. protective devices
- b. basic and fault protection

AC7.4 explain how cables and equipment are installed in accordance with

- a. BS 7671 current requirements and the IET On-Site Guide
- b. Building Regulations

AC7.5 describe how **fire safety standards** are met, including **detection and alarm systems** used in domestic dwellings

Range

AC 7.1 **Procedures:**

Working in accordance with:

- Risk assessments
- Method statements
- Permit to work (where applicable, dependent on type of domestic site)
- Safe Isolation

AC 7.2 **Processes**

Selection of suitable cables and wiring systems for installation and client specifications in line with current BS 7671 regulations:

- determine the design current
 - select a suitably rated protective device
 - establish the installation method reference
 - determine appropriate rating factors
 - determine the minimum cross-sectional area of live conductors, taking into consideration current carrying capacity and voltage drop
 - establish if the voltage drop is acceptable
 - verify disconnection times have been achieved
 - evaluate thermal constraints
 - interpret the requirements of sources of information in the design of an installation
-

AC7.3a Requirements

Working in accordance with the requirements of Part 4 (Protection for Safety) of BS 7671.

Protective devices

- Semi-enclosed rewirable fuses
- Cartridge fuses
- Circuit breakers
- RCDs
- RCBOs
- AFDDs
- SPDs

AC7.3b Basic protection

- Insulation of live parts
- Use of barriers
- Use of enclosures
- Use of Extra-Low Voltage (ELV)

Fault Protection

- Earthing of exposed conductive parts
- Bonding of extraneous conductive parts
- Achieving ADS

AC7.5 Fire safety standards

- Building Regulations document B
- BS 5839-6:2019+A1:2020

Fire detection and alarm systems in domestic dwellings

- Smoke detectors
- Heat detectors
- Sounders
- Control panels
- Flashing beacons

Unit 109

Apply Design and Installation Practices including Termination and Connection of Conductors in Dwellings

Supporting Information

Unit guidance

Learning Outcomes 1 to 6 – Auditable evidence sourced from a real working environment must be provided to illustrate that the learner has demonstrated, on **two** separate occasions, they can understand and apply design and installation practices including termination and connection of conductors in accordance with the assessment criteria for each of the learning outcomes.

Learning Outcome 7 – Learners are required to demonstrate their underpinning knowledge in the design and installation practices including termination and connection of conductors as part of this unit. This will be assessed on **one** occasion by the assessor through a professional discussion. The professional discussion will take place as part of the overall evidence requirements for this unit, covering all the learning outcome and assessment criteria as detailed. Full details are available in the relevant logbook for this qualification.

In the delivery of this unit, an emphasis shall be made to the learner on the necessity to keep up to date with the latest standards, technologies and practices which relate to and affect the topics covered in this unit. This is in keeping with good industry practice.

Evidence requirements

AC2.1 use sources of information to enable the installation of wiring systems, enclosures and associated equipment to be carried out

Assess **two** of the following:

- specifications
- work schedules/programmes
- manufacturer instructions
- layout drawings
- other appropriate source of information (eg BS 7671, other plans or diagrams, 'approved documents', building regulations)

AC3.2 install cables in accordance with BS 7671, the installation specification and programme of work

Assess **four** from:

- single core (singles)
- multicore insulated
- PVC - PVC flat profile cable
- DC cabling
- SWA cable
- data including PoE

- fire resistant cabling (not including MICC)

AC3.3 install the following in accordance with the wiring regulations, the installation specification and agreed planned programme of work:

Assess **three** from:

- PVC conduit
- PVC trunking
- cable basket
- cable tray

AC3.4 install the following types of electrical equipment and accessories, in accordance with, BS 7671, the installation specification, manufacturers' instructions and the programme of work

Assess the following:

- a. distribution boards/consumer units
- b. socket outlets
- c. luminaires
- d. isolators/switches
- e. overcurrent protective devices

and

Assess **four** from the following:

- electric vehicle charging point
- fire detection components
- data socket outlets
- WI-FI router
- smart camera and or smart doorbell
- smart lighting control (not individual smart lamp)
- smart heating controls including hard wired connections
- other appropriate equipment within a dwelling (eg heating system components, control equipment)

AC6.1 terminate and connect cables and conductors in accordance with manufacturers' instructions, BS 7671, and any relevant drawing or specification:

Assess **four** from the following:

- single core (singles)
- multicore insulated
- PVC - PVC flat profile cable
- DC cabling
- SWA cable
- data including PoE
- fire resistant cabling (not including MICC)

AC6.2 connect to electrical equipment in accordance with manufacturers' instructions, BS 7671, and any relevant drawing or specification:

Assess **five** from the following:

- isolators /switches
- socket outlets
- distribution-boards / consumer control units
- luminaires
- overcurrent protective devices

- earthing terminals
- data socket outlets or data connections
- wired fire detection/alarm components
- other appropriate equipment within a dwelling (such as heating system components)

AC6.3 terminate and connect conductors, using appropriate methods:

Assess **two** from the following:

- screwing
- crimping
- non-screw compression
- insulation displacement

Unit 113

Inspect, test, report and commission electrical systems in dwellings

Level:	3
GLH:	12
Assessment type:	Portfolio of evidence
Aim:	<p>This unit will enable learners to develop the competence required to inspect, test, commission and certify or report on electrical systems and equipment in buildings, structures and the environment in accordance with approved industry practices, statutory and non-statutory regulations:</p> <ul style="list-style-type: none">• The Electricity at Work Regulations• The current edition of BS 7671• Health & Safety at Work etc Act• Building Regulations

Learning outcome

The learner will:

- LO1 be able to confirm safety of the system and equipment prior to completion of inspection, testing and commissioning of single-phase systems in accordance with statutory and non-statutory regulations

Assessment criteria

The learner can:

- AC1.1 carry out safe isolation procedures in accordance with regulatory requirements for electrical installations
- AC1.2 check for diverted neutral currents on PME installations
- AC1.3 ensure the Health and Safety of themselves and others within the work location during inspection, testing and commissioning
- AC1.4 check the safety of electrical systems prior to the commencement of inspection, testing and commissioning

Learning outcome

The learner will:

LO2 be able to inspect single-phase electrical systems and equipment

Assessment criteria

The learner can:

AC2.1 assess whether the safe system of work is appropriate to the work activity

AC2.2 carry out a visual inspection in accordance with the requirements of the installation specification, BS 7671 and IET Guidance Note 3

AC2.3 complete necessary inspections documentation in accordance with the BS 7671 and IET Guidance Note 3 making technical decisions

Learning outcome

The learner will:

LO3 be able to test and commission single-phase electrical systems and equipment

Assessment criteria

The learner can:

AC3.1 select the correct test instruments and their accessories for tests

AC3.2 carry out tests in accordance with the installation specification and BS 7671 and manufacturer's instructions. Tests include:

- a. continuity
- b. insulation resistance
- c. polarity
- d. earth fault loop impedance/earth electrode
- e. prospective fault current
- f. RCD operation
- g. functional testing

AC3.3 verify test results reporting all findings to relevant persons, as appropriate:

- a. representatives of other services/colleagues
- b. customers/clients

AC3.4 complete in accordance with BS 7671 and IET Guidance Note 3:

- a. Electrical Installation Certificates and associated documents
- b. Minor Electrical Installation Works Certificates

AC3.5 complete the handover of electrical systems and equipment to relevant persons including the provision of accurate and completed documentation regarding the completed inspection, testing, commissioning and customer satisfaction

AC3.6 demonstrate to the customer/client that the operation of the circuits, equipment and components are in accordance with the installation specification and customer/client requirements

Learning outcome

The learner will:

LO4 be able to inspect, test and report on the condition of an existing electrical installation

Assessment criteria

The learner can:

- AC4.1 collate the information that is needed to enable sampling to be set
- AC4.2 agree and set samples with client and other stakeholders based on the quality of information and systems and maintenance
- AC4.3 agree extents and limitations with client and/or other stakeholders
- AC4.4 carry out an inspection of an installation in accordance with the agreed sample, extents and limitations
- AC4.5 carry out the necessary tests of an installation in accordance with the agreed sample, extents and limitations
- AC4.6 report on the condition of an installation using the correct report codes and documentation
- AC4.7 communicate findings of report to necessary stakeholders following completion of the report

Unit 113

Inspect, test, report and commission electrical systems in dwellings

Supporting Information

Unit guidance

Evidence requirements

Learning Outcome 1:

- Authorised confirmation that the learner has had involvement and experience in safe-isolation procedures as relevant on two separate occasions.
- Auditable evidence must be provided that the learner has demonstrated that they have competently undertaken a risk assessment on two separate occasions.

Learning Outcomes 2 to 4 – Auditable evidence sourced from a real working environment must be provided to illustrate that, the learner has demonstrated on two separate occasions they can apply the principles and follow the procedures for the inspecting, testing, commissioning, certifying or reporting on the condition of electrical systems and equipment in buildings, structures and the environment in accordance with approved industry practices, statutory and non-statutory regulations and the assessment criteria for each of the learning outcomes.

Learning Outcome 4 must be undertaken in a real working environment on an installation having a minimum of six existing circuits that have been in operation a minimum of three years. This assessment may be undertaken before new, additional or altered wiring is installed within the same building but is not valid if undertaken alongside an initial verification of any new parts of the installation.

In the delivery of this unit an emphasis shall be made to the learner on the necessity to keep up to date with the latest standards, technologies and practices which relate to and affect the topics covered in this unit. This is then in keeping with good practice.

Unit 115

Apply fault diagnosis and rectification in dwellings

Level:	3
GLH:	10
Assessment type:	Portfolio of evidence
Aim:	<p>This unit will enable learners to develop the competence required to diagnose and correct electrical faults in electrical systems and equipment in buildings, structures and the environment in accordance with approved industry practices, statutory and non-statutory regulations:</p> <ul style="list-style-type: none">• The Electricity at Work Regulations• The current edition of BS 7671• Health & Safety at Work etc Act• Building Regulations

Learning outcome

The learner will:

LO1 prepare to carry out fault diagnosis in dwellings

Assessment criteria

The learner can:

AC1.1 check it is safe to carry out fault diagnosis

AC1.2 inform the relevant personnel of the fault diagnosis work (such as personnel on the premises, users of electrical equipment)

AC1.3 carry out the safe isolation procedure

AC1.4 apply appropriate methods to ensure the safety of themselves and others when diagnosing and correcting electrical faults

Learning outcome

The learner will:

LO2 carry out fault diagnosis in dwellings

Assessment criteria

The learner can:

- AC2.1 communicate effectively with relevant personnel (eg customer) to ascertain the nature of the fault
- AC2.2 interpret documents which relate to the electrical systems and equipment being worked upon
- AC2.3 communicate potential disruption that may be a consequence of fault diagnosis and correction work to relevant people, to include:
 - a. other workers/colleagues
 - b. customers/clients
- AC2.4 carry out relevant inspections of electrical equipment analysing findings
- AC2.5 confirm test instruments are fit for purpose, functioning correctly and are correctly calibrated
- AC2.6 perform suitable diagnostic tests, based on engineering decision, to identify electrical faults:
 - loss of supply
 - overload
 - short-circuit
 - earth fault
 - high resistance joints/loose terminations
 - component, accessory or equipment faults
 - open circuit
- AC2.7 use appropriate methods for locating faults including:
 - a. using a logical approach
 - b. using safe working practices
 - c. interpretation of test readings
- AC2.8 use appropriate instruments correctly to carry out fault diagnosis:
 - voltage indicator
 - low resistance ohm meter
 - insulation resistance tester
 - EFLI and PFC tester
 - RCD tester
 - ammeter
 - other appropriate instrument

Learning outcome

The learner will:

LO3 carry out fault rectification in dwellings

Assessment criteria

The learner can:

AC3.1 assess the appropriate repairs, removals and replacements and their implications with relevant people:

- other workers/colleagues
- customers/clients

AC3.2 perform fault correction procedures correctly and safely using appropriate tools, equipment and material

AC3.3 verify that replacement components and associated equipment maintain:

- a. ease of access to enable future maintenance
- b. compliance with relevant regulations
- c. compliance with manufacturer's instructions/organisational procedures

AC3.4 apply procedures to ensure electrical equipment and components are left safe, in accordance with industry regulations, if the fault cannot be corrected immediately based on technical assessment

AC3.5 perform an inspection and testing procedure to confirm that circuits/equipment/components are functioning correctly after completion of fault correction work

AC3.6 record test results and other information regarding the fault correction work clearly and accurately and report it to relevant people:

- other workers/colleagues
- customers/clients
- representatives of other services

Unit 115

Apply fault diagnosis and rectification in dwellings

Supporting Information

Unit guidance

Learning Outcomes 1 to 3 – Auditable evidence sourced from a real working environment must be provided to illustrate that, the learner has demonstrated on two separate occasions they can apply fault diagnosis and rectification in accordance with the assessment criteria for each of the learning outcomes.

In the delivery of this unit an emphasis shall be made to the learner on the necessity to keep up to date with the latest standards, technologies and practices which relate to and affect the topics covered in this unit. This is then in keeping with good practice.

Evidence requirements

AC2.6 perform suitable diagnostic tests, based on engineering decision, to identify electrical faults:

Assess **three** from the following:

- loss of supply
- overload
- short-circuit
- earth fault
- high resistance joints/loose terminations
- component, accessory or equipment faults
- open circuit

AC2.8 use appropriate instruments correctly to carry out fault diagnosis:

Assess **three** of the following:

- voltage indicator
- low resistance ohm meter
- insulation resistance tester
- EFLI and PFC tester
- RCD tester
- ammeter
- other appropriate instrument

AC3.1 assess the appropriate repairs, removals and replacements and their implications with relevant people:

Assess **one** of the following:

- other workers/colleagues

- customers/clients

AC3.6 record test results and other information regarding the fault correction work clearly and accurately and report it to relevant people:

Assess **one** of the following:

- other workers/colleagues
- customers/clients
- representatives of other services

Appendix 1 Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centre document library** on **www.cityandguilds.com** or click on the links below:

Centre Handbook: Quality Assurance Standards

This document is for all approved centres and provides guidance to support their delivery of our qualifications. It includes information on:

- centre quality assurance criteria and monitoring activities
- administration and assessment systems
- centre-facing support teams at City & Guilds/ILM
- centre quality assurance roles and responsibilities.

The Centre Handbook should be used to ensure compliance with the terms and conditions of the centre contract.

Centre Assessment: Quality Assurance Standards

This document sets out the minimum common quality assurance requirements for our regulated and non-regulated qualifications that feature centre-assessed components. Specific guidance will also be included in relevant qualification handbooks and/or assessment documentation.

It incorporates our expectations for centre internal quality assurance and the external quality assurance methods we use to ensure that assessment standards are met and upheld. It also details the range of sanctions that may be put in place when centres do not comply with our requirements or actions that will be taken to align centre marking/assessment to required standards. Additionally, it provides detailed guidance on the secure and valid administration of centre assessments.

Access arrangements: When and how applications need to be made to City & Guilds

provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **Centre document library** also contains useful information on such things as:

- conducting examinations
- registering learners
- appeals and malpractice.

Useful contacts

Please visit the **Contact us** section of the City & Guilds website.

City & Guilds

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We partner with our customers to deliver work-based learning programmes that build competency to support better prospects for people, organisations and wider society. We create flexible learning pathways that support lifelong employability because we believe that people deserve the opportunity to (re)train and (re)learn again and again – gaining new skills at every stage of life, regardless of where they start.

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