

# **Assessment Specification FESS-002b (EOS)**

## **BPEC Fire, Emergency and Security Systems Extension of Scope – Security**



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# 1. About BPEC

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BPEC is an industry leading specialised provider of qualifications, assessments, training courses and learning materials, working closely with a UK wide network of colleges, private training centres and industry stakeholders. BPEC is dedicated to supporting education and lifelong learning to those who work in the Building Services Engineering (BSE) sector.

Our aim is to identify and meet the skills needs for the future by providing employer driven, high-quality assessments, qualifications and learning materials; we want to be a key part of students 'Pride Through Achievement' experience.

BPEC Certification Ltd is a not-for-profit company; initially established in February 1997 to act as an autonomous, accredited Certification Body.

In 2010 BPEC established a recognised Awarding Organisation, offering a suite of regulated qualifications. These have been developed with the input of industry and learning providers to meet the demands of the BSE sector.

In 2017, BPEC Certification was approved and an independent end-point assessment organisation (EPAO) and were the first EPAO to deliver assessments against the Gas Engineering standard and assessment plan. Since that date our provision has expanded, working within the footprint of the wider BSE sector.

BPEC certification is a unique organisation, led by employers for the benefit of the sector. All surplus funds generated by our activities are re-invested by The BPEC Charity. The focus of the charity's work is to raise the knowledge and skills of those who work in the sector as well as providing opportunities for financial support to individuals and groups via a number of awards.

Should you wish to learn more about BPEC (including our charity work) please contact:

BPEC Certification Ltd  
1-2 Mallard Way  
Pride Park  
Derby  
DE24 8GX  
Tel: 01332 376000

Or visit our website at: [www.bpec.org.uk](http://www.bpec.org.uk)

## 2. Introduction

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### **Pre-requisites**

Candidates will need to demonstrate experience working within the industry on the pathway that was not practically assessed during the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard. Candidates must be able to evidence the achievement of the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard End-point Assessment. This must be in the form of an apprenticeship achievement certificate. Candidates must be registered within 12 months of the issue date of the apprenticeship certificate. A copy of the certificate must be provided to BPEC as part of the claim submission for each individual candidate.

Furthermore, candidates must be able to evidence which pathway practical assessment (e.g. fire systems or security systems) was completed as part of the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard End-point Assessment. The relevant evidence must be provided with each claims submission and can be evidenced by any of the following:

- Written confirmation from the End-point Assessment Organisation
- EPA Statement of Achievement Certificate from the End-point Assessment Organisation
- Screenshot of results including practical pathway assessment undertaken
- ECS Fire, Emergency and Security Systems (FESS) Systems Technician Gold Card (front and rear of card) – if held by the candidate

**Please note, this assessment is not applicable to candidates who have previously achieved the Fire, Emergency and Security Systems Technician (version 1.0) Apprenticeship standard.**

### **Assessment overview**

<b>Assessment title</b>	Fire, Emergency and Security Systems Extension of Scope-Security
<b>BPEC Assessment code</b>	FESS-002b
<b>Accreditation</b>	Assessment Assured by BPEC
<b>Assessment method(s)</b>	Evidenced work experience, practical competency test
<b>Assessment duration</b>	7.5 Hours
<b>Registration duration</b>	12 months – assessments must be completed within 12 months from the date of registration with BPEC
<b>Mandatory units</b>	N/A
<b>Optional units</b>	N/A

### **Registration Duration**

Candidates wishing to complete the FESS EOS, once registered with BPEC will have 12 months to complete the assessment from the initial date of registration with BPEC.

## **The purpose of the assessment**

This assessment assured by BPEC has been developed to enable candidates who have achieved the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard within the last 12 months of the apprenticeship achievement certification date to demonstrate their competencies in the pathway that was not practically assessed during the version 1.1 End point assessment:

- Full Technician – Full scope: *or*
- Installation Test and Commissioning Technician - Limited scope
- Installation Technician – Limited scope
- Test and Commissioning Technician – Limited scope
- Service and Repair Technician – Limited scope

## **Who this assessment is for**

The assessment is designed only for candidates who already have achieved the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard and were practically assessed in the Fire pathway and can demonstrate an understanding of the fundamental requirements of Security systems and who wish to demonstrate competency and professionalism and obtain an industry recognised competency card.

## **Support and accreditation**

This assessment is assured by BPEC and is supported by industry and recognised by the Electrotechnical Certification Scheme.

## **Relationship to other routes to competency cards**

The BPEC Fire, Emergency and Security Systems Extension of Scope is mapped directly into the Fire Emergency and Security Systems Apprenticeship and therefore holders of the BPEC Fire, Emergency and Security Systems Extension of Scope Certificate are entitled to apply for a full JIB/ECS technician gold card, or crosshatch gold card where limited scope has been achieved.

## **Category of technical card and assessment requirements**

		Specialist Technical Categories				
Assessment Requirements		Full technician	Installation, test and commissioning	Installation only	Test and commissioning only	Maintenance only
1	Core skills	✓	✓	✓	✓	✓
2	Service and repair	✓				✓
3	Installation	✓	✓	✓		
4	Test and commissioning	✓	✓		✓	

## **3. The Assessment**

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### **Assessment principles**

- 3.1. Assessment Centres must ensure that the assessment process is separate from training and that candidates cannot predict which system components they will be assessed on. There must be an element of unpredictability throughout all assessment processes.
- 3.2. Any persons conducting assessments or quality assurance for any given candidate must not have been involved in the training of any candidates at that centre during their apprenticeship and registration on this assessment.
- 3.3. This document details the training and assessment responsibilities for all assessment centre personnel. However, where roles are changed regularly the assessment centres must maintain detailed accurate records that will be subjected to external quality assurance. In this case it is vital that the management of the records and allocation of training and assessment activities ensures the impartiality of the process.
- 3.4. Assessment processes and facilities shall be secure from any influence and training must not be influenced by any knowledge gained by individuals changing roles. The BPEC Quality Assurance team will monitor this situation carefully and centre internal audits must scrutinise such arrangements.
- 3.5. Assessment centres must have an organisational structure and managerial systems to ensure the impartiality of the process. Where assessment centres are not able to operate with completely independent Assessors, Trainers and Internal Quality Assurers, centres must keep records to provide evidence of intent to rigorously enforce assessment

impartiality and the separation of training and assessment. Records must demonstrate the separation of the Trainer, Assessor, and Internal Quality Assurer for any given candidate.

### **Assessment aims**

The Extension of Scope Assessment is designed for those who wish to practice as a Fire, Emergency and/or Security Systems Technician or specialise in one of the technician categories. You will need to demonstrate achievement of the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship standard end point assessment and produce workplace evidence of working on the pathway that was not practically assessed during the end point assessment so that you can demonstrate you have the level of competence expected by the industry in the following key occupational areas depending on the assessment the candidate is applying for.

It is imperative that the candidate has a full understanding of **ALL** areas of their selected competency. The practical assessment will be selected from various tests and the candidate will not know what they areas they will be assessed against until immediately before the assessment.

The assessment will contain elements of:

- Risk assessment and Health and Safety
- Safe Isolation of a live electrical circuit
- The interpretation of specifications, drawings, and diagrams
- Planning and preparing to install, terminate and connect identified systems and associated components
- Installing, terminating, and connecting identified systems and associated components
- Inspection, testing and certification
- Fault diagnosis and rectification of faults
- The understanding and application of industry recognised procedures, working practices and the requirements of statutory and non-statutory regulations.

Extension of Scope candidates will be assessed on the following system disciplines:

- An intruder alarm system
- A surveillance system
- An access control system

### **Assessment methods and arrangements**

To demonstrate competency the candidate must satisfactorily complete **the relevant** elements of the assessment.

There are up to 4 elements to the assessment (see chart 1 in the self-assessment checklist to identify the assessments required to apply for the relevant category of card):

1. Core Skills – Practical
2. Service and Repair - Practical
3. Installation - Practical
4. Testing and Commission - Practical



### **Results submission form**

A Result Submission Form has been produced for the BPEC Fire, Emergency and Security Systems Extension of Scope Assessment. This document shall be used to record that the candidate has completed the whole assessment in a satisfactory manner. The document shall be completed and signed by the centre assessor and the internal quality assurer (IQA).

The completed Result Submission Form must be sent to BPEC Certification Ltd. for certification. Copies of the Candidate Result Form must also be retained by the centre along with assessment records for a minimum of 5 years.

The centre must also provide evidence of the Candidates JIB/ECS Gold Card (including front and back) with each Results Submission Form.

### **Permitted documents**

The assessment pack will indicate if the candidate is permitted to refer to documents during any assessment. These must be provided by the centre.

## **4. Assessment Delivery**

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### **Centre recognition**

Centres wishing to deliver this assessment will need to gain centre recognition and assessment approval. For full details of the recognition process please contact:

BPEC Certification Ltd  
1-2 Mallard Way  
Pride Park  
Derby  
DE24 8GX

E: AOadmin@bpec.org.uk

Tel: 01332 376000

### **Assessment approval**

Centres wishing to deliver this assessment who are already recognised by BPEC Awarding Organisation should complete and submit a BPEC FESS Application for Additional Assessment Form to BPEC Certification Ltd.

Centres wishing to deliver this assessment who are not recognised by BPEC Awarding Organisation should complete and submit a BPEC FESS Centre Contract to BPEC Certification Ltd.

Before the submission centres should ensure they can meet the delivery requirements.

Centres who are approved to deliver this assessment and wish to extend delivery to satellite sites must seek approval for each additional site.

### **Physical resources**

General – centres must provide a safe environment for candidates and staff with appropriate policies and procedures in place which are adhered to.

Assessment provision – Centres must provide facilities and equipment which allow assessments to be conducted in accordance with assessment criteria/guidance. This includes the provision of spare components, in case of failure. All relevant manufacturers manuals and data sheets for the listed component must be available to the candidate.

### **Facilities and equipment**

The Centres will provide all consumable materials to be used by candidates required for the assessment.

All tools (including instruments), equipment and materials provided must be fit for purpose to the relevant British Standard, or European Standard, in good working condition and calibrated where required. Centres are required to hold sufficient stocks for the number of candidates being assessed, together with reasonable forward supplies.

Centres must have an adequate number of serviceable test instruments and test leads appropriate to the range, scale and category(s) of the assessment being undertaken.

## Security Equipment List

### Intruder Alarm Equipment – Grade 3

- 1 – Multizone expandable panel & Keypad
- 1 – Wireless zone expander module
- 1 - Wired zone expander module
- 1 - Mini Magnetic Contact
- 2 - Dual Technology Detector
- 1 - Indoor passive infrared detector
- 1 – Twin movement detector
- 1 - Self-activating external audible sounder
- 1 - Lone worker panic hold up
- 1 - Wireless Shock sensor
- 100m - 8 core cables

### Video Surveillance Equipment

- 1 - 8CH 8MP BNC/VGA/HDMI 8/4 I/O H.264+ 1TB HDD
- 1 - 8 port power over ethernet switch 123W
- 1 - IP EXT Dome 5MP VF 2.8-12mm EXIR 2.0 DC12V & power over ethernet audio
- 1 - IP EXT Bullet 5MP VF 2.8-12mm ICR DC12V& power over ethernet audio
- 1 - Ext Dome 2MP 2.8-12mm 40M EXIR 12VDC/power over ethernet
- 100m - RG59 Coaxial cable 100m
- 100 - BNC male crimps
- 1 - Cat 6e UTP 305m Box
- 50 - RJ45 connector
- 1 - 21.5-inch LED Monitor VGA DVI HDMI input
- 2 - 12vdc 1A power supply unit
- 12 - 2VDC plug for CCTV cameras male
- 2 - Back box for series dome cameras

### Access Control Equipment

- 2 - Break Glass to exit
- 2 - Maglocks
- 2 – Push to Exit Button
- 1 - Single door access control unit with:
  - Video entry attachment
  - External door station
  - Internal door phone
  - Proximity reader
- 1 - Proximity 10 keyfob pack
- 100m – Proximity reader cable

### Mains Distribution Equipment

- 1 - 4-way main consumer distribution board with 3 x 16A MCBs
- 2 - Unswitched fuse spur (safety isolators) and surface box
- 1 - Single socket outlet and surface box
- 1 - 4" light duty cable tray 3M
- 2 - Right angle bends for above

Instruments and testers (per candidate)	Hand tool kit (per candidate)
1 - Safe isolation lock off kit 1 - Multi-meter 1 - Voltage tester and proving unit 1 - Data cable tester	1 - Tape rule (3m) 1 - Flat screwdriver medium 1 - Flat screwdriver terminal 1 - Pozi-drive screwdriver (1) 1 - Pozi-drive screwdriver (2) 1 - Side-cutters 1 - Wire strippers 1 - Electricians clasp knife 1 - Insulated bull nosed pliers 1 - Insulated long nosed pliers 1 - RJ 45 crimping tool 1 – BNC male crimping tool 2 - Adjustable spanner (25mm max) 1 - Punch down insertion tool (IDC) 1 - Bradawl 1 - Spirit level 1 - Claw hammer 1 - Data cable stripping tool

## 5. Staff Conducting Assessments

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### Technical/occupational competency

The assessor must:

- Be technically competent in the occupation covered by this assessment
- Have knowledge and understanding of the structure and content of this assessment

The assessor must hold:

- Level 3 Award in Assessing Vocationally Related Achievement **or**
- Level 3 Award in Assessing Competence in the Work Environment **or**
- Level 3 Certificate in Assessing Vocationally Related Achievement **or**
- A1 or D32 /D33 with an Upgrade to A1 as a minimum\*

\*Other Assessors awards may also be accepted by BPEC including End-point Assessor Awards and BPEC approved Assessor training programmes. The Centre will need to contact BPEC to discuss further regarding the suitability of any assessor awards or training programmes.

### Assessor CPD

- The occupational competence of assessors must be updated on a regular basis through CPD and/or requalification if required.
- Records of assessor CPD should be maintained for quality assurance by the external quality assurer.

### **Assessor approval**

Assessors must be approved by BPEC Certification Ltd before undertaking any assessments.

Candidate assessors:

- Must be registered on a programme to attain their assessor qualification and have a clear action plan for achieving the qualification within 18 months
- Must be supervised and their assessment decisions countersigned by a qualified assessor who is approved by BPEC Certification Ltd.

## **6. Staff Conducting Internal Quality Assurance (IQA)**

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### **Technical/occupational competence**

The IQA must:

- Have knowledge and understanding of the occupation covered by this assessment
- Have knowledge and understanding of the structure and content of this assessment
- Have access to an independent technically competent expert in the occupation covered by this assessment if the IQA doesn't hold the relevant technical competencies

### **IQA Competence**

The IQA must hold:

- Level 3 Certificate in Assessing Vocationally Related Achievement or A1; or
- D32 /D33 with an Upgrade to A1 as a minimum; and
- Level 4 Award in Internal Quality Assurance of Assessment Processes and Practice; or
- Level 4 Certificate in Leading the Internal Quality Assurance of Assessment Processes and Practice; or
- V1 or D34 with an upgrade to V1 as a minimum.

### **IQA CPD**

- The occupational competence of IQA's must be updated through CPD and/or requalification if required on a regular basis.
- Records of an IQA's CPD should be maintained for quality assurance by the external quality assurer.

### **IQA approval**

- IQA must be approved by BPEC Certification Ltd before undertaking any IQA activity.

Candidate IQA's:

- Must meet the technical/occupational competences detailed above.
- Must hold Level 3 Certificate in Assessing Vocationally Related Achievement or A1 or D32/33 with an upgrade to A1

- Must be registered on a programme to attain their IQA qualification and have a clear action plan for achieving the qualification within 18 months (candidate IQA approval may be withdrawn if the qualification has not been attained in this period).
- Must be supervised and their decisions countersigned by a qualified IQA who is approved by BPEC Certification Ltd.

### **Equivalent assessor/IQA qualifications**

Assessors:

- The Teaching Qualification for Secondary Education (TQSE) or the Teaching Qualification for Further Education (TQFE) (which is recognised in Scotland) these awards are acceptable providing they are the versions that are recognised as equivalents to the A1 award plus appropriate CPD.
- SQA Accredited Learning and Development Unit L&D 9D Assess workplace competence using direct methods.

IQA:

- SQA Accredited Learning and Development Unit L&D 11 “Internally monitor and maintain the quality of workplace assessment”.

## **7. Support Materials**

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### **Result Submission Form**

A Result Submission Form is available for this assessment. This should be completed for each candidate and submitted when certification is required.

Centres are reminded that they should retain a copy of the candidate result submission form in centre for a period of 5 years.

A copy of the Fire, Emergency and Security Systems Technician (version 1.1) Apprenticeship Standard certificate must be provided to BPEC as part of the claims submission for each individual candidate including evidence of which pathway practical assessment was completed, please see evidence requirements in section 2.

## **8. Contact Details**

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BPEC Certification Ltd  
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Pride Park  
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DE24 8GX

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Tel: 01332 376000