

Pre-Assessment Manual: Fire, Emergency and Security Systems (FESS) Combined Pathway (Fire & Security)

February 2021



By the industry, for the industry

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Introduction

The FESS End Point Assessment is designed for those who need to demonstrate occupational competence in order to complete the FESS Apprenticeship Standard and practice as a Fire, Emergency and Security Systems Technician. It demonstrates that they have the level of competence expected by the industry in the following key occupational areas:

- **Completing risk assessments for given circumstances.**
- **The interpretation of specifications and diagrams.**
- **Safe isolation.**
- **Planning and preparing to install, terminate and connect identified components.**
- **Installing, terminating and connecting identified components.**
- **The inspection, verification, testing and certification of systems.**
- **Fault/non-compliance diagnosis and recommend appropriate rectification.**
- **Completion of documentation to include;**
 - **Testing and commissioning documentation.**
 - **Completion of hand-over documentation.**
- **Professional Discussion.**
- **The understanding and application of procedures, industry recognised working practices and the requirements of statutory and non-statutory regulations relevant to the industry.**

This Pre-Assessment Manual is designed to help candidates prepare for their upcoming assessment. In this document you'll be able to read:

- **Details on each section of the assessment**
- **Common areas – where candidates fail and how to address this**
- **General hints and tips for success.**

Are you ready for assessment?

Your first port of call should be NET's Candidate Self-Assessment Checklist. This is a compulsory piece of paperwork and we recommend that you use this well in advance of your assessment, as part of an honest review of your readiness, and to identify areas where further training or experience may be required.

The Checklist will show you everything you should have learned before going into the assessment - read through it and make sure you have done it all and that you are fully confident on what will be expected of you! It's your employer's and training provider's responsibility to make sure you've covered everything on the list, so they should go through this with you and help identify any areas of concern.

Your employer and training provider must also sign the checklist to confirm that you have completed everything on the list and that you are ready to complete your assessment. You won't be able to book your assessment until this document is complete, signed and submitted.

Special considerations

If there are health or other circumstances which may require an application for adjustment to the assessment, please refer to the NET Special Considerations and Reasonable Adjustments Policy which is available on the NET website.

Before you attend...

Common sense can desert the best of us when under pressure, so in the run up to the assessment it might be helpful to consider the following:

- **Get a good night's sleep the night before your first assessment day and during the assessment period - you need to be firing on all cylinders, so don't make big plans for the evenings!**
- **Make sure you know exactly where the test centre is and how to get there. Leave enough time to travel as well, you don't want to be late.**
- **Mobile phones, smart watches, mp3 players and all electronic devices are not allowed in the assessment area. If you have any of these with you, they will need to be handed in at the beginning of the assessment and signed out at the end of each day.**
- **Make sure you have your safety footwear and photo ID, so you don't forget them (no ID - no assessment).**

Centre Induction process

Before starting the assessment, the Centre Assessor will brief you on the Assessment Centre's Health and Safety policies and procedures including those for First Aid, emergencies and evacuation of the premises.

Before you start you must be happy that you fully understand the Assessment Centre's emergency procedures. You must ensure that you know the location of equipment, tools, materials and first aid facilities.

Candidates are NOT permitted to use their own tools, only those provided by the centre MUST be used.

The Centre Assessor will also brief you on the procedures and requirements of all sections of the assessment.

Publications and Documents

Here's a list of all the publications and documents that the Centre Assessor will provide to you at relevant times throughout the assessment:

- **Candidate Manual**
- **Data Sheets & Instructions for the components**

The 'Candidate Manual' is for your reference throughout the assessment but **must remain in the assessment area**. Non-compliance with this procedure will result in you being disqualified from the assessment.

When required, the following additional documents will be provided:

- **Risk Assessment**
- **Takeover Documentation**
- **Commissioning Documentation**

Brush up on these for your theory...

There's also a theory element of the assessment:

- **Industry Standards**
- **The Building Regulations**
- **Health & Safety**
- **Installation Practices & Procedures**

Make sure you revise these carefully - you don't want to spend three days in the assessment test rig getting everything right, only to end up losing points on the theory aspects.

Know your paperwork

Make sure you're confident in completing all documentation including Takeover and Commissioning Certification and be certain you know how to carry out all the necessary tests for these.

Follow the Specification!

A fundamental aspect of industry competence is being able to follow a specification. Even if your work is safe and meets industry standard, if you have fundamentally not followed the specification details, you will not pass the assessment.

Candidates regularly fail because they do not follow the written instructions in areas such as positioning of components, measurements, or cable types and sizes. The fact your alternative approach may have been safe or deemed acceptable in your workplace is irrelevant – the ability to follow a specification as set out is a core competence for a FESS engineer.

In your Assessment Area:

The following documents are displayed in your assessment area:

- a) Health and safety information and fire procedures.
- b) Risk Assessment Information

You should:

- Carefully read all assessment instructions.
- Study the diagrams, system instructions and information provided.
- Use the information throughout the assessment

If you do not understand any of the instructions, the Centre Assessor can provide further explanation if required.

Your Responsibilities:

You should bring to the attention of the assessor, any materials or equipment you consider are damaged or unsuitable.

You are responsible for your own safety, and the safety of others who may be affected by your work and any unsafe practice will result in your assessment being stopped.

Assessment sections and sequence:

The assessment contains the following sections:

- Section A – Working Safely
- Section B – Takeover Existing Systems
- Section C – Addition to Systems
- Section D – Commission Systems
- Section E – Assessment of Underpinning Knowledge
- Section F – Professional Discussion

Section A - Working Safely

Maximum Time Allowed: 30 minutes, plus a minimum of 10 minutes to read this section and prepare for assessment.

To demonstrate occupational competence, you will be required to:

- Carry out a review of safe working practices.
- Carry out a risk assessment that agrees with organisational requirements and procedures prior to commencing the assessment.
- Record the findings on the relevant documentation.

Risk Assessment

This is a careful examination of the risks associated with both working practices and candidate and centre staff activities.

- A hazard is anything that may cause harm.
- A risk is a chance, great or small, that someone will be harmed by a hazard.

The aim is to make sure that no one becomes ill or gets hurt at the facility. There are three steps to achieve this:

1. Identify the Hazards

Look at what may cause harm to candidates, centre staff, or other people because of a work activity.

2. Decide Who Might be Harmed and How

Look at who may be affected by the work activity, how they may be affected; this may include other candidates and centre staff.

3. Evaluate the Risks and Decide on Precautions

If you find a hazard, there may be a risk to other people; you need to decide what steps must be taken to eliminate or reduce those risks as far as is reasonably practical:

- What needs to be done depends on whether the hazard is low risk or high risk
- You can determine this by looking at what type of injury may occur and how often it may happen
- It may be possible to remove the hazard altogether or to take steps to reduce this risk to an acceptable level
- If there is no risk present, then you do not need to take any action
- Record 'No action required' on the Risk Assessment document

Section A - Top Tips & Common Errors

- Read all documentation supplied.
- Look at what might cause harm to individuals because of work-related activity.
- Decide who might be harmed and how.
- Evaluate the risks and decide on precautions.
- Record everything!

Common Errors:

- Documentation not fully completed.
- All applicable hazards not identified.



Section B - Takeover Existing Systems

Maximum Time Allowed: 3 hours, plus a minimum of 10 minutes to read this section and prepare for assessment.

To demonstrate occupational competence, you will be required to, in accordance with statutory and non-statutory regulations and approved industry working practices:

- Check the systems for operation and compliance with current standards.
- Carry out the correct sequence for safe isolation of a system you will be working on. You must inform the assessor when you have finished, and the circuit/system is now safe. The safe isolation procedure will be fully observed by the Centre Assessor.
- Complete Takeover Certificates for each system.
- If any faults/non-compliances are found, list the circuit/component, type of fault/non-compliance and suggest a rectification.

System Specification:

- This is a small commercial unit with stand-alone systems.
- The existing systems are to be verified before additions are made to each system.

You will be working on the following systems:

- Pyronics intruder alarm system
- HIKVision CCTV system
- Paxton door entry & access system
- Kentec/Hochiki addressable & non-addressable systems

Section B - Top Tips & Common Errors

- Read all documentation supplied, including system/component instructions.
- Attempt to identify all faults/non-compliances for each system to industry standards.
- Employ good time management to ensure that you don't run out of time.
- Complete the required paperwork fully and record all your findings.
- Practice safe isolation as much as possible prior to the assessment - this is an instant fail if not completed correctly.
- Ask your training provider and employer for support and practice the systems covered in the checklist before attending the assessment.
- Remember you will be asked to takeover Access Control, CCTV, Intruder Alarm, Addressable Fire and Non-Addressable Fire systems, so ensure that you are fully conversant on these types of systems, including their operation, etc, before you attend your assessment.

Common Errors:

- Insufficient faults/non-compliances identified.
- All components are not checked for their correct function.
- Documentation not completed fully/correctly.
- Safe Isolation not completed correctly/in a safe manner.



Section C - Addition to Systems

Maximum Time Allowed: 5 hours 20 minutes, plus a minimum of 10 minutes to read this section and prepare for assessment.

To demonstrate occupational competence, you will be required to, in accordance with statutory and non-statutory regulations and approved industry working practices:

- From the given specification select the correct equipment to expand the existing systems.
- Position the equipment in the specified position.
- Select the correct cable and install to current standards.
- Correctly connect the additional equipment to the existing systems as stated within the given specification.
- You are working as if you are at a customer's premises. The work area is to be kept as clean, tidy and hazard free, as far as possible at all times.

In this section you must install all cabling and equipment required for the additions to the systems. You will be allowed to programme in the Commissioning Section (D). However, if you do complete the installation of cabling and equipment you may start programming in Section C if time allows.

In the Commissioning Section (D) you can alter any errors found i.e. if you have a faulty cable you can replace it.

You will be working on the following systems:

- Pyronics intruder alarm system
- HIKVision CCTV system
- Kentec/Hochiki non-addressable system

Section C - Top Tips & Common Errors

- Read all documentation supplied.
- Familiarise yourself with all the systems identified within the checklist.
- Attempt to complete all systems within the time allocated and employ good time management.
- Remember you will be asked to add to CCTV, Intruder Alarm and Non-Addressable Fire Alarm systems, so ensure that you are fully conversant on these types of systems, including their operation, etc, before you attend your assessment.
- Ensure all connections are tight and all cabling/equipment is installed to industry standards.

Common Errors:

- Components installed in the incorrect location/not to specification.
- Components/cabling installed in a way as to affect the correct function of the system.
- Components/cabling not installed to industry standards.
- Loose terminations.
- Poor time management.



Section D - Commission Systems

Maximum Time Allowed: 1 hour 50 minutes, plus a minimum of 10 minutes to read this section and prepare for assessment.

To demonstrate occupational competence, you will be required to, in accordance with statutory and non-statutory regulations and approved industry working practices:

- Complete the required tests.
- Correctly complete the System Installation Records/Commissioning Documentation.

In the Commissioning Section (D) you can alter any errors found i.e. if you have a faulty cable you can replace it.

You will be working on the following systems:

- Pyronics intruder alarm system
- HIKVision CCTV system
- Kentec/Hochiki non-addressable system

Section D - Top Tips & Common Errors

- Carry out all required tests on the systems – don't lose marks on missed tests!
- Carefully complete the System Installation Record/Commissioning Documentation for all systems and ensure all sections are fully completed.
- Read all documentation supplied.
- Remember you will be asked to commission CCTV, Intruder Alarm and Non-Addressable Fire Alarm systems, so ensure that you are fully conversant on these types of systems, including their operation etc, before you attend your assessment.



Common Errors:

- All required tests are not completed correctly/fully.
- The correct function of all components is not checked/confirmed.
- Documentation is not completed fully completed/completed correctly.

Section E - Assessment of Underpinning Knowledge

Maximum Time Allowed: 1 hour 30 minutes, plus a minimum of 10 minutes to read this section and prepare for assessment.

The Section E assessment will last for 1 hour and 30 minutes and will be in the form of an online multiple-choice examination. You will be expected to answer 60 questions.

The examination will be Closed Book.

Section E - Top Tips & Common Errors

- The questions in this section should have been taught and tested as part of the knowledge criteria of your training programme. Ask your training provider for help with preparation in this area.
- Ensure that you keep an eye on the timer on screen, because you don't want to run out of time with unanswered questions.
- Ensure you answer every question, to at least give you a chance of a correct answer. No answer means no mark.

Common Errors:

- Not preparing fully and subsequently not answering enough questions correctly.



Section F - Professional Discussion

Maximum Time Allowed: 45 minutes, plus a minimum of 10 minutes to read this section and prepare for assessment.

You will be required to demonstrate knowledge and competence, by means of a Professional Discussion. This will include a range of standard and scenario-based questions and covers the following selection of behaviours:

- Honesty and Integrity
- Dependable and Responsible
- Positive and Can-Do Attitude
- Openness to Learning
- Maintain Continuous Professional Development
- Work with Others
- Safe and Sustainable Working

Preparation is Key!

We recommend that you prepare for this section as much as possible. You are allowed to bring notes with you to refer to during the discussion, so don't rely on your memory! Think about each heading, write down your thoughts and use your notes as reference on the day.

Before Your Assessment:

- 1) Think about examples where you have demonstrated these behaviours in the workplace.
- 2) Discuss them with your employer, as they may remind you of situations that you've forgotten.
- 3) Use the boxes below to write down your answers and other notes – you can bring this to your assessment

On the Day:

- Bring your notes with you and refer to them at each stage.
- There are no trick questions – you'll only be asked questions that allow you to explain how you act, or have acted, in the workplace against the behaviours listed above.
- If you do not understand any question, ask for it to be repeated.
- You may be asked to expand on your answers if the assessor needs more information, to demonstrate your knowledge or competence.
- Most importantly: **speak up!** If you only give short answers this will affect your chances of success. Without a detailed answer from you, the assessor can't confirm that you have comprehensively demonstrated those behaviours in the workplace.

Please use the boxes on the next page to record some of your evidence and experiences.

Section F - Top Tips & Common Errors

- There are no trick questions in this section.
- If you do not understand the question you are asked, ask for it to be repeated or ask for it to be asked in a different way.
- You may be asked to expand on your answers, if the assessor needs more information to demonstrate your knowledge or competence.
- Remember it's a discussion of your experience and knowledge in the industry.

Common Errors:

- Insufficient preparation and subsequently the candidate is having to think on their feet.



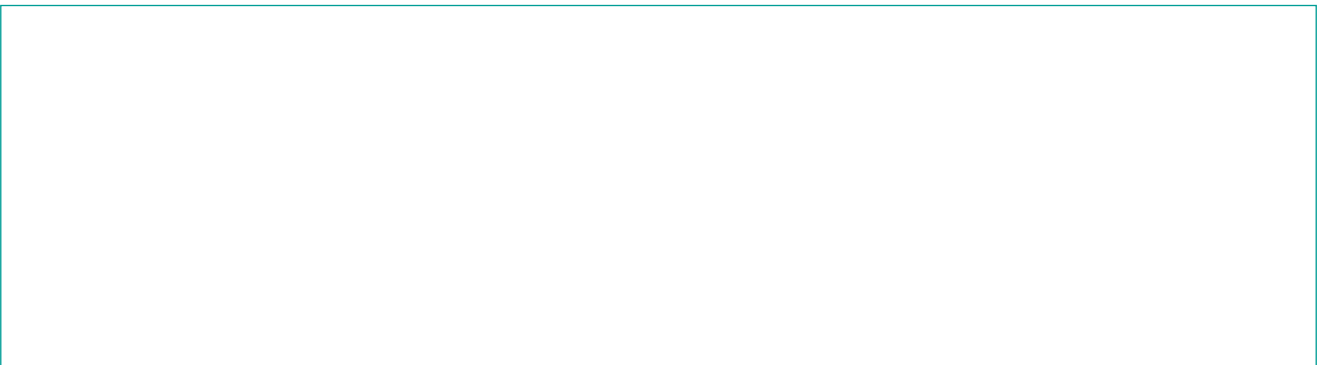
Honesty and Integrity



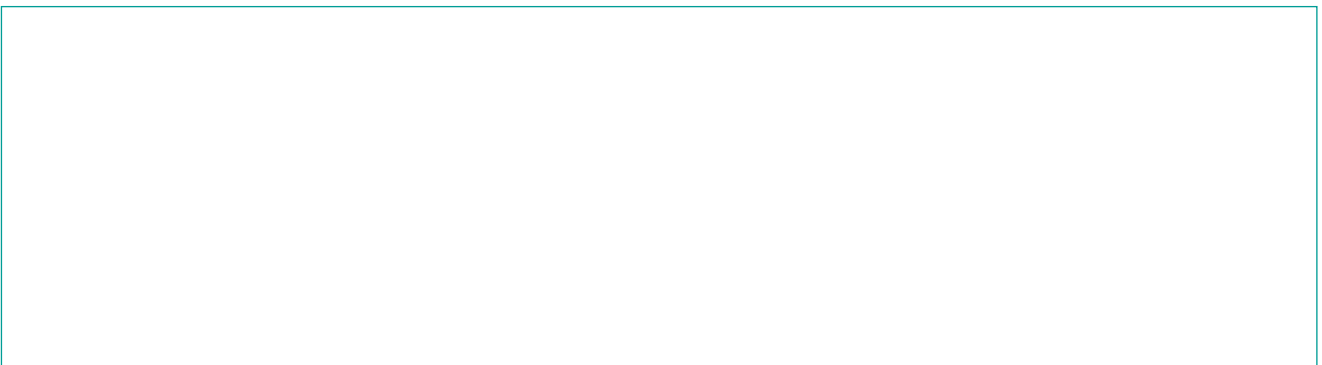
Dependable and Responsible



Positive Can-Do Attitude



Openness to Learning



Maintain Continuous Professional Development



Work with Others



Safe and Sustainable Working



FAQs

Q: Who can I speak to if I have a query about my assessment or booking an assessment?

A: All assessment enquiries must be made directly to the centre of your choice from the list of NET licenced Centres.

Q: If the centre I contact has a waiting time for assessment availability, can I go to another centre?

A: Yes - candidates are free to book with any assessment centre. Please bear in mind that selecting an alternative centre located further away may incur additional travel or accommodation costs.

Q: How can I book an assessment re-sit?

A: You can re-sit your assessment at the centre where you sat it initially - or any other centre of your choice. Please contact the centre directly to arrange.

Q: Is there any preparation I can do prior to taking my assessment?

A: The Candidate Readiness for Assessment Checklist must be completed, signed and submitted before you can book an assessment. The checklist will help you to prepare by outlining all areas of the assessment and what is expected from you.

Q: I have not received my results. Where can I enquire?

A: Please note that NET cannot provide candidate results over the phone. To enquire about assessment results, please contact your chosen assessment centre. Most issues surrounding the non-receipt of results arise because of incorrect email addresses being provided at the point of booking.

If your centre experiences technical problems during the assessment process, they must raise a query with NET's IT support and will contact you with an update once the matter has been resolved.

Q: Can I get feedback on my results?

A: On completion of your assessment, you will not be given any direct feedback or indication of the result by the Assessor. The NET system will provide you with your results, five days after the assessor has completed the marking.

If you are unsuccessful, the results emailed to you will give a general feedback statement on how you did not meet the criteria for the section/s in question. It will not provide you with a specific marking detail, but the general feedback statement will give you an indication of where further training or improvement may be required before you re-sit the assessment.

NET is unable to provide specific marking detail as the assessment marking criteria must remain confidential.

Q: How much does an assessment or re-sit cost?

A: Please contact your assessment centre directly to enquire about their fees.

Q: How do I obtain a replacement or duplicate certificate?

A: To request a replacement certificate, please visit www.netservices.org.uk/certification to access our online replacement certificate form. We aim to process certificate requests within one week.

Contacting NET

National Electrotechnical Training

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