



As of 1 August 2022, the English and maths requirements for on-programme and new apprentices undertaking level 2 apprenticeships have changed and are detailed as part of the [apprenticeship funding rules](#). These requirements supersede the current wording in this apprenticeship standard and EPA plan.

## End-point assessment plan for Fenestration Fabricator apprenticeship standard

Apprenticeship standard reference number	Apprenticeship standard level	Integrated end-point assessment
ST0744	2	No

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## Introduction and overview

This document sets out the requirements for end-point assessment (EPA) for the Fenestration fabricator apprenticeship standard. It is for end-point assessment organisations (EPAOs) who need to know how EPA for this apprenticeship must operate. It will also be of interest to fenestration fabricator apprentices, their employers and training providers.

Full time apprentices will typically spend 18-months on-programme (before the gateway) working towards the occupational standard, with a minimum of 20% off-the-job training. All apprentices must require and must spend a minimum of 12-months on-programme.

The EPA period should only start and the EPA be arranged, once all of the pre-requisite gateway requirements for EPA have been met and they can be evidenced/available to an EPAO. The employer must be satisfied that the apprentice is consistently working at or above the level set out in the occupational standard. Apprentices must have compiled a portfolio of evidence, which underpins the EPA interview. For level 2 apprenticeships, apprentices without English and mathematics at level 2 must achieve level 1 English and mathematics and take the tests for level 2 prior to taking their EPA<sup>1</sup>.

The EPA will be completed within an EPA period typically lasting three-months, after the apprentice has met the EPA gateway requirements.

EPA must be conducted by an organisation approved to offer services against this apprenticeship standard, as selected by the employer, from the Education & Skills Funding Agency's Register of End-Point Assessment Organisations (RoEPAO).

The EPA consists of three discrete assessment methods. The individual assessment methods will have the following grades:

### Assessment method 1 – observation with questioning

- fail
- pass
- distinction

### Assessment method 2 – interview, underpinned by portfolio of evidence

- fail
- pass
- distinction

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<sup>1</sup> For those with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

### Assessment method 3 – multiple-choice test

- fail
- pass

Performance in the EPA will determine the overall apprenticeship grade of:

- fail
- pass
- distinction

## EPA summary table

<b>On-programme</b> (typically 18-months)	Training to develop the occupation standard’s knowledge, skills and behaviours Training towards English and mathematics level 1 and 2, if required Compilation of a portfolio of evidence
<b>End-point assessment gateway</b>	Employer is satisfied the apprentice is consistently working at, or above, the level of the occupational standard Apprentice has achieved English and mathematics at Level 1 and taken the tests for level 2 Apprentice has compiled a portfolio of evidence, to underpin the EPA interview
<b>End-point assessment</b> (typically 3-months)	Assessment method 1: observation with questioning; graded fail, pass, distinction Assessment method 2: interview, underpinned by portfolio of evidence; graded fail, pass, distinction Assessment method 3: multiple-choice test; graded fail, pass Overall EPA/apprenticeship graded fail, pass, distinction

## Length of end-point assessment period

The EPA (including all assessment methods) will typically be completed within three-months of the gateway.

## Order of assessment methods

The assessment methods can be delivered in any order. The result of one assessment method does not have to be known before an apprentice starts the next one.

## Gateway

The EPA period should only start once the employer is satisfied that the apprentice is consistently working at or above the level set out in the occupational standard, that is to say they are deemed to have achieved occupational competence. In making this decision, the employer may take advice from the apprentice's training provider(s), but the decision must ultimately be made solely by the employer.

In addition, an apprentice must have completed the following gateway requirements prior to beginning EPA:

- apprentices without English and mathematics at level 2 must achieve level 1 English and mathematics and have taken the tests for level 2

For those with an education, health and care plan or a legacy statement the apprenticeship's English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualification are an alternative to English qualifications for whom this is their primary language.

- for the interview, the apprentice must have completed and submitted a portfolio of evidence – see requirements below

### Portfolio of evidence requirements:

- apprentices must compile a portfolio of evidence during the on-programme period of the apprenticeship
- it must contain sufficient evidence to demonstrate the KSBs that will be assessed by the interview, underpinned by portfolio
- it will typically contain 10 discrete pieces of evidence
- evidence must be mapped against the KSBs
- evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is required
- evidence sources may include:
  - workplace documentation, for example job cards/job sheets, check sheets/quality check records, accident records, equipment check/maintenance records
  - annotated specifications, for example drawings, cutting lists, work instructions
  - annotated photographs
  - video clips (maximum duration in total 10-minutes)

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This is not a definitive list, other evidence sources are allowable

- it should not include any methods of self-assessment
- any employer contributions should focus on direct observation of evidence (for example witness statements) of competence rather than opinions
- the evidence provided must be valid and attributable to the apprentice; the portfolio of evidence must contain a statement from the employer confirming this
- the portfolio of evidence must be submitted to the EPAO at the gateway point
- the portfolio of evidence itself is not assessed, it is used to inform the questioning for the interview

## Assessment methods

### Assessment method 1: observation with questioning

#### Overview

This assessment method has two components: observation and questioning.

The rationale for this assessment method is:

- this is a practical role, best demonstrated through observation
- observation allows the assessment of work tasks in the apprentice's normal place of work, using tools and equipment with which they are familiar, which is likely to enable the apprentice to perform at their best
- observation is a cost-effective assessment method, as it makes use of the employer's premises and resources
- the tasks chosen reflect something that would be completed by fenestration fabricators in every company on a daily basis; tasks not necessarily completed on a daily basis or not best suited to direct observation are assessed via the other assessment methods
- the questioning component enables the checking of underpinning knowledge

#### Delivery

Apprentices must be observed by an independent assessor completing work in their normal workplace, in which they will be assessed against the KSBs assigned to this assessment method as shown in the mapping of KSBs.

EPAOs must arrange for the observation to take place in consultation with the employer.

An independent assessor must only observe one apprentice at any one time, to allow for quality and rigour. The independent assessor must be unobtrusive whilst conducting the observation.

The observation must take three-hours. The observation may be split into discrete sections held over a maximum of one working day. The length of a working day is typically considered to be 7.5 hours. There may be breaks during the observation to allow the apprentice to move from one location to another as required and meal/comfort breaks; such breaks will not contribute to the assessment time. The apprentice must not communicate with anyone else during any breaks. The independent assessor has the discretion to increase the time of the

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observation by up to 10%, to allow the apprentice to complete a task at the end of this component of the EPA.

In advance of the observation, apprentices must be provided with information on the format of the observation, including timescales; this is exclusive of the three-hour assessment time.

The following activities must be observed during the observation:

- selection of materials and equipment to meet product specification
- cutting and preparation of a fenestration product to specification
- assembly of a fenestration product, requiring at least one joining method to specification
- fitting of ancillary items to a fenestration product, for example locks, handles, hinges to specification
- restoring the work area on completion of work

The activities may relate to the same product or different products.

The fenestration product(s) must be:

- a window or door with opening sash

The activities must require the apprentice to select and use a range of machinery, equipment and/or tools.

Observation specifications must be of equal complexity, so as to require a competent person three-hours to complete.

Questions must be asked after the observation is complete on a one-to-one basis. The independent assessor must ask a minimum of 10 open questions. They may ask follow up questions where clarification is required. The purpose of the questioning is to assess underpinning knowledge and behaviours and to determine whether the apprentice has reached pass or distinction criteria. Questions must be asked within a time period not exceeding 45-minutes (additional to the observation time). The independent assessor has the discretion to increase the time of the questioning by up to 10%, to allow the apprentice to complete their last answer. Independent assessors can use questions from the EPAO's question bank, combined with questions they have devised themselves based on what they have observed. The questioning must take place in a quiet area free from distraction and influence.

KSBs observed, and answers to questions, must be documented by the independent assessor.

Independent assessors will make all grading decisions.

EPAOs must ensure that apprentices have a different observation specification and set of questions in the case of re-sits/re-takes.

## Venue

The observation must take place in the apprentice's employer's premises, under normal working conditions. The EPAO must ensure the necessary materials and equipment/tools are available to the apprentice.

## Supporting material

EPAOs must produce the following material to support this assessment method:

- observation specifications: The ‘specification bank’ must be of sufficient size to prevent predictability and reviewed regularly (at least once per year) to ensure they are fit for purpose.
- open questions to assess related underpinning KSBs. The ‘question bank’ must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure that it, and its content, are fit for purpose.
- assessment recording documentation
- guidance for apprentices and employers

It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers.

## Assessment method 2: interview, underpinned by portfolio

### Overview

This assessment method has one component: interview.

The rationale for this assessment method is:

- it allows the apprentice to be assessed against KSBs that may not occur naturally on a daily basis, would take too long to observe or do not lend themselves to direct observation
- the interview is underpinned by a portfolio of evidence, enabling the apprentice to demonstrate the application of skill and behaviours as well as knowledge
- allows for testing of responses where there are a number of potential answers that couldn't be tested through the multiple-choice test
- it is considered more appropriate than a written test requiring short/long answers for level 2 learners in a practical role
- it is a cost effective, as it makes use of the employer's premises and does not require additional resources

### Delivery

The interview must be appropriately structured to draw out the best of the apprentice's competence. Apprentices must be assessed against the KSBs assigned to this assessment method – as shown in mapping of KSBs.

EPAOs must make arrangements for this assessment method with the apprentice's employer.

Independent assessors must conduct and assess the interview on a one-to-one basis.

The interview must last for one hour. The independent assessor has the discretion to increase the time of the interview by up to 10% to allow the apprentice to complete their last answer.

The independent assessor must ask a minimum of eight open, competence-based questions, follow-up questions are allowed to seek clarification. Independent assessors must use questions from their EPAO question bank; these may be adapted following review of the portfolio of evidence. The independent assessor should consider the level of English that the apprentice is working at and pitch questions using appropriate language to ensure inclusivity. Apprentices are expected to understand and use relevant occupational language that would be typically used by someone in this occupation.

The interview will focus on coverage of the themes below. Apprentices should refer to and illustrate their answers with evidence from their portfolio of evidence however the portfolio evidence is not directly assessed.

Questions must cover the following themes (minimum one question per theme):

- the fenestration industry (K1)
- workplace operations (K3, K20)
- reporting (K9, S18)
- error investigation and rectification (K18, S13)
- packaging and storage (K19, S14)
- communication (S16, K10.i)
- documentation (K10.ii, S17)
- adjustability (B7)

The independent assessor must use the assessment tools and procedures that are set by the EPAO to record the interview.

Evidence from the questioning must be assessed holistically using the grading criteria for this assessment method. The independent assessor will make all grading decisions.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

Independent assessors must be developed and trained by the EPAO in the conduct of interviews and reaching consistent judgement.

## Venue

The interview, underpinned by portfolio of evidence can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO, for example a training provider's premises

Video conferencing can be used to conduct the interview, but the EPAO must have processes in place to verify the identity of the apprentice and ensure the apprentice is not being aided in some way.

The interview, underpinned by portfolio of evidence must take place in a quiet room, free from distractions and influence.

## Supporting material

EPAOs must produce the following material to support this assessment method:

- set questions: a question bank must be developed by EPAOs. The 'question bank' must be of sufficient size to prevent predictability and reviewed regularly (and at least once a year) to ensure that it, and its content, are fit for purpose.
- assessment recording documentation
- guidance for apprentices and employers

It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers.

## Assessment method 3: multiple-choice test

### Overview

This assessment method has one component: multiple-choice test.

The rationale for this assessment method is:

- it allows for the efficient testing of knowledge where there is a right or wrong answer
- it does not require independent assessor time, reducing cost
- it allows for flexibility in terms of when it is taken

### Delivery

Apprentices must be assessed against the knowledge assigned to this assessment method – as shown in mapping of KSBs.

The test can be:

- computer based
- paper based

It will consist of 40 questions. Five questions must relate to health and safety and five questions must relate to legislation, regulations and industry standards. Apprentices must correctly answer eight of these questions in order to pass. These questions will consist of closed response multiple-choice questions. Apprentices must choose one correct answer from a choice of four.

Each question answered correctly will be awarded one mark. Any incorrect or missing answers will be assigned nil marks.

Apprentices must have a maximum of one-hour to complete the test.

The test is closed book, which means that the apprentice cannot refer to reference books or materials.

The test must be taken in the presence of an invigilator. The invigilator may be the independent assessor or another external person employed by the EPAO or specialised (proctor) software, if the test can be taken on-line. The EPAO is required to have an invigilation policy that will set out how the test/examination is to be carried out. This will include specifying

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the most appropriate ratio of apprentices to invigilators to best take into account the setting and security required in administering the test/examination.

Tests must be marked by independent assessors or markers employed by the EPAO following a marking guide produced by the EPAO. Alternatively, marking by computer is permissible, to improve marking reliability.

The EPAO must verify the suitability of the venue for taking the test and the identity of the person taking the test.

EPAOs must ensure that apprentices have a different set of questions in the case of re-sits/re-takes.

## Marking

The following grade boundaries apply to the test:

Grade	Minimum score	Maximum score
Pass	30, including 8/10 health and safety/legislation questions	40, including 8/10 health and safety/legislation questions
Fail	0	29

## Venue

Apprentices must take the test in a suitably controlled environment that is a quiet space, free of distractions and influence.

The test can take place in any of the following:

- employer's premises
- a suitable venue selected by the EPAO, for example a training provider's premises

## Supporting material

EPAOs must produce the following material to support this method:

- a test specification
- sample tests and mark schemes
- live tests and mark schemes
- analysis reports which show areas of weakness for completed tests/exams and an invigilation policy

EPAOs must develop a 'test specification' and 'question banks' of sufficient size to prevent predictability and review them regularly (and at least once a year) to ensure the test specification and the questions they contain, are fit for purpose.

It is recommended that questions are developed in consultation with employers of this occupation. EPAOs must maintain the security and confidentiality of their questions when consulting employers.

## Reasonable adjustments

The EPAO must have in place clear and fair arrangements for making Reasonable Adjustments for this standard. This should include how an apprentice qualifies for Reasonable Adjustment and what Reasonable Adjustments will be made. The adjustments must maintain the validity, reliability and integrity of the assessment methods outlined in this assessment plan.

## Weighting of assessment methods

All assessment methods are weighted equally in their contribution to the overall EPA pass grade. The observation and questioning and interview underpinned by portfolio assessment methods determine whether a distinction grade is awarded.

## Overall EPA grading

Performance in the EPA will determine the apprenticeship grade of fail, pass or distinction.

Independent assessors must individually grade each assessment method, according to the requirements set out in this plan.

EPAOs must combine the individual assessment method grades to determine the overall EPA grade.

Apprentices who fail one or more assessment method will be awarded an EPA 'fail'.

In order to achieve an overall 'pass' apprentices must achieve a pass in all three assessment methods.

In order to achieve an overall 'distinction', apprentices must achieve a distinction in the observation with questioning and interview underpinned by portfolio, and a pass in the multiple-choice test.

There are no restrictions on grading where apprentices re-sit/re-take an assessment method – see the re-sit/re-take section.

Grades from individual assessment methods should be combined in the following way to determine the grade of the EPA as a whole:

Assessment method 1 – observation with questioning	Assessment method 2 – interview, underpinned by portfolio	Assessment method 3 – multiple-choice test	Overall grading
Fail	Any grade	Any grade	<b>Fail</b>
Any grade	Fail	Any grade	<b>Fail</b>
Any grade	Any grade	Fail	<b>Fail</b>
Pass	Pass	Pass	<b>Pass</b>
Distinction	Pass	Pass	<b>Pass</b>
Pass	Distinction	Pass	<b>Pass</b>
Distinction	Distinction	Pass	<b>Distinction</b>

## Re-sits and re-takes

Apprentices who fail one or more assessment method will be offered the opportunity to take a re-sit or a re-take. A re-sit does not require further learning, whereas a re-take does.

Apprentices should have a supportive action plan to prepare for the re-sit or a re-take. The apprentice's employer will need to agree that either a re-sit or re-take is an appropriate course of action.

An apprentice who fails an assessment method, and therefore the EPA in the first instance, will be required to re-sit any failed assessment methods only. Re-sits/re-takes must be taken and passed within six-months of the fail notification, otherwise the entire EPA must be re-taken.

Re-sits and re-takes are not offered to apprentices wishing to move from pass to distinction.

Where any assessment method has to be re-sat or re-taken, the apprentice can be awarded fail, pass or distinction.

## Roles and responsibilities

Role	Responsibility
Apprentice	<ul style="list-style-type: none"> <li>• participate in development opportunities to develop/improve their knowledge skills and behaviours (KSBs) as outlined in the occupational standard</li> <li>• meet all gateway requirements</li> <li>• understand the purpose and importance of EPA and undertake EPA</li> </ul>
Employer	<ul style="list-style-type: none"> <li>• support the apprentice to achieve the KSBs outlined in the occupational standard to their best ability</li> <li>• determines when the apprentice is working at or above the level outlined in the occupational standard and is ready to enter the gateway</li> <li>• select the EPAO</li> <li>• confirm all EPA gateway requirements have been met</li> <li>• confirm arrangements with EPAO for the EPA (who, when, where) in a timely manner</li> <li>• ensure apprentice is well prepared for the EPA</li> </ul>
EPAO	<p>As a minimum EPAOs should:</p> <ul style="list-style-type: none"> <li>• understand the occupational role</li> <li>• appoint independent assessors to assess the EPA</li> <li>• provide training and CPD to the independent assessors they employ to undertake the EPA</li> <li>• provide adequate information, advice and guidance documentation to enable apprentices, employers and providers to prepare for the EPA</li> <li>• deliver the EPA outlined in this plan in a timely manner</li> <li>• prepare and provide all required material and resources required for delivery of the EPA in-line with best practices</li> <li>• use appropriate assessment recording documentation to ensure a clear and auditable mechanism for providing assessment decision feedback to the apprentice</li> <li>• have no direct connection with the apprentice, their employer or training provider i.e. there must be no conflict of interest</li> <li>• maintain robust internal quality assurance (IQA) procedures and processes, and conduct these on a regular basis</li> </ul>

	<ul style="list-style-type: none"> <li>• conform to the requirements of the nominated external quality assurance body</li> <li>• organise standardisation events and activities in accordance with this plan's IQA section</li> <li>• organise and conduct moderation of independent assessors' marking in accordance with this plan</li> <li>• have, and operate, an appeals process</li> <li>• arrange for certification with the relevant training provider</li> <li>• confirm when the apprentice is ready to exit the gateway and undertake EPA</li> </ul>
Independent assessor	<p>As a minimum an Independent assessor should:</p> <ul style="list-style-type: none"> <li>• understand the occupational standard and EPA plan</li> <li>• deliver the EPA in-line with this plan</li> <li>• comply to the IQA requirements of the EPAO</li> <li>• be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest</li> <li>• satisfy the criteria outlined in this EPA plan</li> <li>• have had training from their EPAO in terms of good assessment practice, operating the assessment tools and grading</li> <li>• have recent relevant experience of the occupation/sector gained in the last two years or significant experience of the occupation/sector. This should be at least at the same level as the apprenticeship standard</li> <li>• attend the required number of EPAOs standardisation and training events per year (as defined in the IQA section)</li> </ul>
Administrator/invigilator	<p>As a minimum an administrator/invigilator should:</p> <ul style="list-style-type: none"> <li>• be independent of the apprentice, their employer and training provider(s) i.e. there must be no conflict of interest</li> <li>• have had training from their EPAO in terms of administration/invigilation good practice</li> </ul>
Training provider	<p>As a minimum the training provider should:</p> <ul style="list-style-type: none"> <li>• work with the employer to ensure that the apprentice is given the opportunities to develop the KSBs outlined in the standard and monitor their progress during the on-programme period</li> <li>• advise the employer, upon request, on the apprentice's readiness for EPA prior to the gateway</li> <li>• Plays no part in the EPA itself</li> </ul>

## Internal Quality Assurance (IQA)

Internal quality assurance refers to the requirements that EPAOs must have in place to ensure consistent (reliable) and accurate (valid) assessment decisions. EPAOs for this EPA must:

- appoint independent assessors who have:
  - comprehensive experience of fenestration fabrication i.e. three years or more experience in the sector
  - recent relevant experience of the occupation/sector i.e. worked in the sector in the last three years or can demonstrate current knowledge and skills developed through continued professional development
  - hold or be working towards an independent assessor qualification, for example TAQA (Training and Quality Assessment)
- provide training for independent assessors in terms of good assessment practice, operating the assessment tools and grading
- have robust quality assurance systems and procedures that support fair, reliable and consistent assessment across the organisation and over time
- operate induction training and standardisation events for independent assessors when they begin working for the EPAO on this apprenticeship standard and before they deliver an updated assessment method for the first time

## Affordability

Affordability of the EPA will be ensured by using at least some of the following practice:

- online testing for the multiple-choice test
- video-conferencing for the interview underpinned by portfolio of evidence
- observation contributing to workplace activity
- using an employer's premises, equipment and resources for the observation
- scheduling the observation and interview on the same day

# Mapping of knowledge, skills and behaviours (KSBs)

## Assessment method 1: Observation with questioning

Knowledge
<b>K8</b> Environmental considerations: safe disposal of waste, minimising waste (re-use and re-cycle) and energy efficiency.
<b>K11</b> System (manufacturers manuals) and specifications - what they are and how to interpret them; what to do if suspect the specification is wrong or have any queries about the specification
<b>K13</b> Preparation techniques – planning work and resources.
<b>K14</b> Techniques for measuring, marking, cutting and drilling materials to the required size and shape, accurately, safely and economically.
<b>K15.i</b> Product assembly methods, including welding, fusing, crimping <b>K15.ii</b> Order of processes.
<b>K16</b> Techniques for fitting components, for example ancillary items, beading and glazing.
<b>K17</b> Interim and final checking requirements– what needs checking (size, shape, design, components) and why.
Skills
<b>S1</b> Select the correct type and quantity of materials and components for each task.
<b>S2</b> Read and interpret specifications, diagrams and work instructions; follow instructions.
<b>S3</b> Plan work.
<b>S4</b> Prepare the work area effectively.
<b>S5</b> Complete equipment and machinery checks and adjustments.
<b>S6</b> Measure, calculate, mark and cut materials.
<b>S7</b> Select and use manual methods and machinery/workplace technology.
<b>S8</b> join/assemble materials.
<b>S9</b> Fix ancillary items to product.
<b>S10</b> Follow health & safety and environmental policy and procedures.
<b>S11</b> Identify risks and hazards in the workplace and control measures.
<b>S12</b> Check and inspect work – interim and final.
<b>S15</b> Re-use, re-cycle and dispose of material, waste and scrap from the work area, as appropriate.

Behaviours
<b>B1</b> Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices.
<b>B2</b> Professional, for example, develops good working relationships recognising dependencies, uses co-operative approaches to optimise workflow and productivity with limited supervision, shows respect for colleagues.
<b>B3</b> Takes responsibility, for example, completes own work to required quality standards.
<b>B4</b> Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions.
<b>B5</b> Works effectively, for example, undertakes work in a reliable, tidy and productive manner.
<b>B6</b> Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time.

## Assessment method 2: Interview, underpinned by portfolio

Knowledge
<b>K1</b> The role of fabrication in the fenestration industry. Key markets for fenestration products - domestic, commercial, public sector and their requirements. Different types of products and their purpose, including specialist products for enhanced performance, safety, security and fire rating.
<b>K3</b> Other functions that fabricators interact with, for example surveying, processing, despatch, installation, service engineers; their purpose and interdependencies. Internal and external customers.
<b>K9</b> Limits of autonomy; reporting channels.
<b>K10</b> Who they need to communicate with and when, and communication techniques; verbal, written and digital. Documentation requirements.
<b>K18</b> Types of errors that occur, investigation and rectification techniques, such as manual or mechanical adjustment.
<b>K19</b> How to stack and store products and materials safely, effectively and securely. Problems or damage that can occur with stored resources and how to overcome them.
<b>K20</b> Processes for handover to other functions/customers.
Skills
<b>S13</b> Identify and rectifying any work that is incorrect or incomplete.
<b>S14</b> Labelling of product; protect, package product for safe transportation.

<b>S16</b> Communicate with colleagues/customers; using common industry terminology appropriately.
<b>S17</b> Completing workplace documentation
<b>S18</b> Reporting work outcomes and problems.
<b>Behaviours</b>
<b>B7</b> Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments.

### Assessment method 3: Multiple-choice test

<b>Knowledge</b>
<b>K2</b> How glass and profiles are manufactured including raw materials and processes.
<b>K4</b> Materials used in fenestration fabrication - aluminium, timber, steel or uPVC; their mechanical properties, uses and design limitations. Ancillary items - for example fixings and fastening, handles, hinges, locks and louvers; their purpose and how/where they should interact. Weatherproofing products and systems - for example, gaskets, membranes, sealants, weather seals and drainage systems; their purpose, compatibility, conditions for storage and use (shelf life).
<b>K5</b> Legislation, regulations and industry standards, including window energy rating standards, CE marking, secured by design, building regulations documents AD-K, Product Standard (BS 7412, 8529), British standard testing for temperature, tolerance and weld, Health and Safety (Safety Signs and Signals Regulations) and Quality Management System (ISO 9001) application in the workplace.
<b>K6</b> Health and safety, including: Health & Safety at Work Act, Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), personal protective equipment (PPE), manual handling, Control of Substances Hazardous to Health (COSHH), Provision and Use of Work Equipment Regulations (PUWER), Hand Arm Vibration Syndrome (HAVS), Local Exhaust Ventilation (LEV); how they must be applied in the workplace. Risk assessments and dynamic risk assessments.
<b>K7</b> Safe handling/movement of profiles and product/Safe handling, movement and storage of glass. Problems or damage that can occur and avoidance methods. Which authority/licenses are needed to use moving and handling equipment, such as cranes, forklift trucks and manipulators (it is not a requirement to hold such authority/licenses).
<b>K12</b> Tools, equipment and plant used in fenestration fabrication, including saws, routers, welding machinery, electrical/hand drills, screwdrivers, cranes and manipulators. What they are used for, correct safe use and storage. How to conduct machinery and equipment checks and adjustments. Start-up and shutdown procedures including emergency stops. Use of CAD (computer-aided design) and CNC (Computer Numerically Controlled) equipment in fabrication.

<b>K21</b> Contractual arrangements, for example penalty clauses. Consumer rights – ‘satisfactory quality, fit for purpose and as described.’ How the role contributes to commercial operations.
<b>K22</b> Employment rights and responsibilities, including Working Time Directive, Employment Rights Act 1996.
<b>K23</b> Equality & Diversity in the workplace.

# Grading descriptors

## Assessment method 1: Observation with questioning

KSB	Pass – apprentices must demonstrate all of the following	Distinction – apprentices must demonstrate seven or more of the following eleven statements
<b>Manufacturing</b> <b>K11</b> <b>K14</b> <b>K15.i</b> <b>K16</b> <b>S1</b> <b>S6</b> <b>S8</b> <b>S9</b> <b>B3</b>	<p>Product(s) meets specifications/instructions and is within product tolerances</p> <p>Selects the correct type and quantify of materials and components</p> <p>Measures, calculates, marks and cuts materials correctly</p> <p>Joins/assembles materials correctly</p> <p>Fixes ancillary items to product correctly</p> <p>Fabrication meets specification, regulations and manufacturer’s instructions</p> <p>Explains appropriate action they would take if they suspected the specification was wrong or if they had any queries about the specification</p> <p>Explains why the techniques/methods used are appropriate for the material/components specified</p> <p>Correctly identifies what techniques/methods would be correct for at least one other type of material and at least one other type of component</p> <p>Takes responsibility for completing the work</p>	<p>Product(s) is of high quality, i.e. within the upper 50% of product tolerances</p> <p>Activities completed within 2.5-hours</p> <p>Explains at least two consequences for the job and/or wider stakeholders of not using correct material, components, techniques and/or methods</p> <p>Compares two different types of fabrication methods and justifies use of one over the other</p>

<b>S2</b>	Correctly identifies task(s) requirements, for example materials, size, safety practices	Explains at least two consequences of not following and correctly interpreting specifications, diagrams and work instructions
<b>Work preparation</b> <b>K13</b> <b>K15.ii</b> <b>S3</b> <b>S4</b> <b>B5</b> <b>B4</b> <b>B6</b>	Explains how at least one factor was taken into account when planning/preparing work, with reasoned justification  Cleans and tidies work ensuring it is free from hazards  Explains at least two reasons for the fabrication order  Completes task(s) within time specified  Completes task(s) in logical order	Work completed in order that optimises use of time, for example does not have to redo work  Explains at least two reasons why effective time management of the task is important to the organisation and the potential consequences of ineffective time management
<b>Equipment checks</b> <b>S5</b>	Completes equipment checks in line with method statement/manufacturer's instruction/specification	Explains at least two reasons for carrying out tool and equipment checks on the equipment they are using for the task and the consequences of not doing so
<b>Methods of work</b> <b>S7</b>	Use manual methods and machinery/equipment appropriate for the task and in accordance with method statement/manufacturer's instructions/specification	Identifies at least one alternative manual method and justifies why it wasn't used
<b>Health &amp; safety</b> <b>S10</b> <b>S11</b> <b>B1</b>	Wears correct PPE for the task  Explains why the PPE that they are wearing is needed  Conducts work in line with method statement, including environmental requirements  Identifies risks and hazards in the workplace and control	

	measures; conducts Dynamic risk assessments	
<b>Checking work</b> <b>K17</b> <b>S12</b>	Correctly identifies what needs to be checked and why  Completes interim and final checks correctly  Issues identified where applicable, for example cracked welds, faulty mechanism, visual flaws	Explains at least two potential consequences of not undertaking a particular check in relation to the task
<b>Environmental considerations</b> <b>K8</b> <b>S15</b>	Identifies at least two ways in which their approach to work has taken account of environmental considerations during the task  Correctly categories materials for re-use, re-cycling or disposal; processes in line with company/site instructions	Explains the purpose/benefits of these approaches and the risks of not making such considerations
<b>Professionalism</b> <b>B2</b>	Wears work attire according to company and requirements  Polite and respectful, for example uses appropriate language, adapts communication to the needs of the audience	
<b>Fail – apprentices will fail the assessment method where they do not demonstrate all of the pass criteria</b>		

## Assessment method 2: Interview, underpinned by portfolio

KSB	Pass - apprentices must demonstrate all of the following-	Distinction – apprentices must demonstrate six or more of the following nine statements
<b>Fenestration industry</b> <b>K1</b>	Explains what the product is, its purpose, key markets for the product and their requirements, including any specialist features, in relation to one fenestration product produced by their company	Compares and contrasts the product against another product produced by their company or another fabricator company
<b>Workplace operations</b> <b>K3</b> <b>K20</b>	Correctly identifies the purpose of at least two other functions, how they need to work together including processes for handover  Provides at least two examples of internal and external customers in relation to their company	Explains how these interactions improve the efficiency of the business and customers' experience
<b>Reporting</b> <b>K9</b> <b>S18</b>	Describes their own limits of autonomy, when to escalate tasks and issues and who to  Explains how and to whom they report work outcomes with an example	Explains at least one consequence of carrying out work beyond the limitations of responsibility  Explains the importance of effective reporting with an example
<b>Error investigation and rectification</b> <b>K18</b> <b>S13</b>	Provides at least two examples of where they have identified incorrect or incomplete work and the steps taken to rectify it	Explains underlying reasons for errors, or potential prevention methods, or potential consequences of not identifying and rectifying the errors
<b>Packing and storage</b> <b>K19</b> <b>S14</b>	Identifies at least two problems/ damage that can occur with stored products/materials  Explains the correct procedures they have	Explains at least two consequences of in-correct labelling, packaging or storing

	<p>followed to avoid the problems/damage</p> <p>Provides at least one example of completing each of the following: labeling, protecting, packaging and storage</p>	
<p><b>Communication</b></p> <p><b>S16</b></p> <p><b>K10.i</b></p>	<p>Communication is clear and would be understood by the audience; industry terminology used accurately</p> <p>Provides examples of written and digital communication completed in the workplace</p>	<p>Explains how they would adapt the communication and why when presented with a different audience</p>
<p><b>Documentation</b></p> <p><b>K10.ii</b></p> <p><b>S17</b></p>	<p>Identifies the purpose and requirements for completing at least two types of documentation</p>	<p>Explains the potential consequences of not completing the documentation correctly or completely</p>
<p><b>Adjustability</b></p> <p><b>B7</b></p>	<p>Describes at least two situations when they have adjusted their approach able when asked</p>	<p>Provides a separate example of <u>proactively</u> adjusting approach for workplace benefit</p>
<p><b>Fail – apprentices will fail the assessment method where they do not demonstrate all of the pass criteria</b></p>		