

Standard

L2: Fenestration Fabricator

UOS reference number

ST0744

Trailblazer reference number

TB0036

Title of occupation

Fenestration Fabricator

Trailblazer name

Fenestration

Core and options

No

Resubmission

No

Level of occupation

Level 2

Route

Engineering and Manufacturing

Typical duration of apprenticeship

18 months

Target date for approval

31 January 2019

Occupational profile

Summary

This occupation is found in the construction sector. Fenestration refers to the design, construction, or presence of openings in a building it can include windows, doors, louvres, vents, wall panels, skylights, storefronts, curtain walls, and slope glazed systems. Fabricators may supply directly to homeowners (retail/domestic market), the new-build market (house builders) or the commercial and public sector (local authorities, offices, shops, schools and hospitals etc). They can also supply the commercial refurbishment market.

The broad purpose of this occupation is to manufacture finished fenestration products such as conservatory roofing, curtain walls, glazed doors, glazed screening, roof lanterns, roof lights, patent/slope glazing, secondary glazing, shop fronts and windows. They usually specialise in a particular material – aluminium, timber, steel or uPVC and a range of products. They cut and assemble profiles together. Depending on the product they may add glass units, ancillary items for example, fixings and fastening, handles, hinges, locks and louvers, along

with weatherproofing for example, gaskets, seals, membranes and sealants. Regardless of the product or material, it involves working to a specification, in line with quality standards, health and safety and environmental considerations.

In their daily work, an employee in this occupation interacts with the production/general manager whom they report to and depending on the size of the organisation customers (internal/external), other fabricators, delivery personnel, design office, internal stores and suppliers.

An employee in this occupation will be responsible for completing their own work, with minimal supervision, ensuring they meet set deadlines. They may work as part of a team, with responsibility for a specific aspect of the fabricator process, contributing to the production of the overall product.

Typical job titles

Typical job titles: Aluminium/uPVC Fabricator, Double Glazing Window Factory Fabricator, Fabricator, Production Operative, Windows/Doors Fabricator.

| Duty | Criteria for measuring performance | Knowledge | Skills | Behaviours |
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| Receive, unload, check and store materials and components, for example profile material, glass units and ancillary items ready for the fabrication process; ensuring all materials are present and in good condition. | <ul style="list-style-type: none"> ☒ Efficient and timely preparation for the fabrication process ☒ Damage to materials minimised ☒ Compliance with Health and Safety, including manual handling ☒ Compliance with company procedures ☒ Shortages minimised | <ul style="list-style-type: none"> • How glass and profiles are manufactured including raw materials and processes. • Other functions that fabricators interact with, for example surveying, processing, despatch, installation, service engineers; their purpose and interdependencies. Internal and external customers. • 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. | <ul style="list-style-type: none"> • Following health & safety and environmental policy and procedures. • Communicating with colleagues/customers; using common industry terminology appropriately and accurately. • Completing workplace documentation • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • 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. |

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| | | <ul style="list-style-type: none"> • Safe handling/movement of profiles and product. Authority/licenses required to use moving and handling equipment such as cranes, forklift trucks and manipulators. Problems or damage that can occur and avoidance methods. • Who they need to communicate with and when, and communication techniques; verbal, written and digital. Documentation requirements. • Limits of autonomy; reporting channels. • 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. | | |
| <p>Identify and confirm fabrication requirements against work instructions/specifications.</p> | <p>☑ Correctly identified fabrication requirements using instructions and specifications that are assigned to the job</p> | <ul style="list-style-type: none"> • 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. | <ul style="list-style-type: none"> • Selecting the correct type and quantity of materials, components and equipment for each task in line with specifications/instructions. • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Planning work. • Identifying risks and hazards in the workplace and control measures. | <ul style="list-style-type: none"> • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. • Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| | | <ul style="list-style-type: none"> • 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). • 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. • 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. | | |

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| <p>Use fabrication equipment such as machines, hand and power tools; conducting equipment and/or machinery checks and adjustments in preparation for fabrication, including calibrations for accuracy of machine operation.</p> | <p>Compliance with manufacturer's instructions to check and adjust machinery</p> | <ul style="list-style-type: none"> • Contractual arrangements, for example penalty clauses. Consumer rights satisfactory quality, fit for purpose and as described. How the role contributes to commercial operations. • Employment rights and responsibilities, including Working Time Directive, Employment Rights Act 1996. • 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. • 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. | <ul style="list-style-type: none"> • Completing equipment and machinery checks and adjustments. • Selecting and using manual methods and machinery/workplace technology to join/assemble materials to specification. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. |

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| | | <ul style="list-style-type: none"> • 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. • Preparation techniques and planning work and resources. • Techniques for measuring, marking, cutting and drilling materials to the required size and shape, accurately, safely and economically. • Product assembly methods, including welding, fusing, crimping; order of processes. | | |

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| Measure, cut, drill and prepare the profile length of various materials (aluminium, uPVC, wood etc.) that will form the finished product. | <ul style="list-style-type: none"> ☑ Accuracy of work ☑ Speed of work ☑ Compliance with company procedure and method statements correctly ☑ Compliance with Health and Safety | <ul style="list-style-type: none"> • 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). | <ul style="list-style-type: none"> • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Planning work. • Preparing the work area effectively. • Completing equipment and machinery checks and adjustments. • Accurately measuring, calculating, marking and cutting materials to requirements in accordance with work instructions and to best practice industry standards. • Following health & safety and environmental policy and procedures. • Checking and inspecting work ☑ interim and final. • Labelling of product; protecting, packaging product for safe transportation. • Re-using, re-cycling and disposing of material, waste and scrap from the work area, as appropriate. • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. • Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| | | <ul style="list-style-type: none"> • 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. • Environmental considerations: safe disposal of waste, minimising waste (re-use and re-cycle), waste contractors permit, energy efficiency. • 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. • Preparation techniques & planning work and resources. • Techniques for measuring, marking, cutting and drilling materials to the required size and shape, accurately, safely and economically. | | |

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| <p>Manufacture the product including mullions (vertical bars) and transoms (horizontal bars) using the relevant jointing method and/or machinery.</p> | <ul style="list-style-type: none"> ☒ Compliance with instructions or specifications and fabrication manuals ☒ Speed to ensure the production programme is maintained. ☒ Compliance with Health & Safety | <ul style="list-style-type: none"> • Types of errors that occur, investigation and rectification techniques, such as manual or mechanical adjustment. • Processes for handover to other functions/customers. • 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. | <ul style="list-style-type: none"> • Selecting the correct type and quantity of materials, components and equipment for each task in line with specifications/instructions. • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Planning work. • Preparing the work area effectively. • Completing equipment and machinery checks and adjustments. • Selecting and using manual methods and machinery/workplace technology to join/assemble materials to specification. • Following health & safety and environmental policy and procedures. • Identifying risks and hazards in the workplace and control measures. • Checking and inspecting work ☒ interim and final. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. • Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| | | <ul style="list-style-type: none"> • 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. • Safe handling/movement of profiles and product. Authority/licenses required to use moving and handling equipment such as cranes, forklift trucks and manipulators. Problems or damage that can occur and avoidance methods. | | |

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| | | <ul style="list-style-type: none"> • 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. • 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. • Preparation techniques and planning work and resources. • Techniques for measuring, marking, cutting and drilling materials to the required size and shape, accurately, safely and economically. • Product assembly methods, including welding, fusing, crimping; order of processes. • Interim and final checking requirements and what needs checking (size, shape, design, components) and why. • Processes for handover to other functions/customers. | | |

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| Assemble the product including opening frames, sashes or vents if applicable using fabrication methods such as crimping, sawing, welding, machining, bending and beading. | <ul style="list-style-type: none"> ☒ Compliance with instructions or specifications and fabrication manuals ☒ Speed to ensure the production programme is maintained. ☒ Compliance with Health & Safety | <ul style="list-style-type: none"> • 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. • 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). | <ul style="list-style-type: none"> • Selecting the correct type and quantity of materials, components and equipment for each task in line with specifications/instructions. • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Completing equipment and machinery checks and adjustments. • Accurately measuring, calculating, marking and cutting materials to requirements in accordance with work instructions and to best practice industry standards. • Selecting and using manual methods and machinery/workplace technology to join/assemble materials to specification. • Following health & safety and environmental policy and procedures. • Identifying risks and hazards in the workplace and control measures. • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. • Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| Fit the required additional elements to complete the product, for example ancillary items, beading, glass units, locks, handles etc. | <ul style="list-style-type: none"> ☒ Compliance with work instructions, specifications and fabrication manuals. ☒ All work carried out to agreed production programme. | <ul style="list-style-type: none"> • 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. • Other functions that fabricators interact with, for example surveying, processing, despatch, installation, service engineers; their purpose and interdependencies. Internal and external customers. • 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). | <ul style="list-style-type: none"> • Selecting the correct type and quantity of materials, components and equipment for each task in line with specifications/instructions. • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Selecting and using manual methods and machinery/workplace technology to join/assemble materials to specification. • Installing ancillary, glazing, weatherproofing items to products in accordance with work instructions/standard operating procedures. • Following health & safety and environmental policy and procedures. • Identifying risks and hazards in the workplace and control measures. • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. • Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| | | <ul style="list-style-type: none"> 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. Techniques for fitting components, for example ancillary items, beading and glazing. | | |
| Check and inspect the product (such as windows, doors etc.) for any damage or imperfections in the frame or paintwork. Rectifying any defects, passing it on to appropriate colleagues or reporting the issue. | <ul style="list-style-type: none"> ☑ Compliance with works instructions, specifications and fabrication manuals. ☑ All work carried out to an agreed production programme. | <ul style="list-style-type: none"> 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. How glass and profiles are manufactured including raw materials and processes. Other functions that fabricators interact with, for example surveying, processing, despatch, installation, service engineers; their purpose and interdependencies. Internal and external customers. | <ul style="list-style-type: none"> Reading and interpreting specifications, diagrams and work instructions; following instructions. Checking and inspecting work ☑ interim and final. Identifying and rectifying any work that is incorrect or incomplete. Communicating with colleagues/customers; using common industry terminology appropriately and accurately. Completing workplace documentation Reporting work outcomes and problems. | <ul style="list-style-type: none"> 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. Takes responsibility, for example, completes own work to required quality standards. Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. Adjustable when required, for example adapts to changes to work instructions or variations in workplace contexts and environments. |

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| <p>Clean and finish the product using appropriate materials and chemicals safely and ensuring the finished product functions correctly.</p> | <p>☑ Compliance with works instructions, specifications and company policy. ☑ All work carried out to an agreed production programme.</p> | <ul style="list-style-type: none"> • Interim and final checking requirements☑ what needs checking (size, shape, design, components) and why. • Types of errors that occur, investigation and rectification techniques, such as manual or mechanical adjustment. • Processes for handover to other functions/customers. • Contractual arrangements, for example penalty clauses. Consumer rights ☑ ☑satisfactory quality, fit for purpose and as described.☑ How the role contributes to commercial operations. • 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. • How glass and profiles are manufactured including raw materials and processes. | <ul style="list-style-type: none"> • Selecting the correct type and quantity of materials, components and equipment for each task in line with specifications/instructions. • Preparing the work area effectively. • Following health & safety and environmental policy and procedures. • Identifying risks and hazards in the workplace and control measures. • Checking and inspecting work ☑ interim and final. • Communicating with colleagues/customers; using common industry terminology appropriately and accurately. • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • 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. • Takes responsibility, for example, completes own work to required quality standards. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. |

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| Protect and/or tape finished product and store ready for transportation. | <ul style="list-style-type: none"> ☒ Compliance with health & safety, including manual handling. ☒ Compliance with work instructions, specifications and company procedures. ☒ All work should be carried out to an agreed production programme. | <ul style="list-style-type: none"> • 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. • Types of errors that occur, investigation and rectification techniques, such as manual or mechanical adjustment. • Processes for handover to other functions/customers. • 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. • How glass and profiles are manufactured including raw materials and processes. | <ul style="list-style-type: none"> • Labelling of product; protecting, packaging product for safe transportation. • Communicating with colleagues/customers; using common industry terminology appropriately and accurately. • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • Has a health & safety-first attitude, for example, resists pressures to follow unsafe working practices. • 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. • Takes responsibility, for example, completes own work to required quality standards. |

| Duty | Criteria for measuring performance | Knowledge | Skills | Behaviours |
|------|------------------------------------|--|--------|------------|
| | | <ul style="list-style-type: none"> • 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. • 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. • Safe handling/movement of profiles and product. Authority/licenses required to use moving and handling equipment such as cranes, forklift trucks and manipulators. Problems or damage that can occur and avoidance methods. | | |

| Duty | Criteria for measuring performance | Knowledge | Skills | Behaviours |
|------|------------------------------------|--|--------|------------|
| | | <ul style="list-style-type: none"> • Who they need to communicate with and when, and communication techniques; verbal, written and digital. Documentation requirements. • 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. • 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. • Processes for handover to other functions/customers. | | |

| Duty | Criteria for measuring performance | Knowledge | Skills | Behaviours |
|--|---|---|--|---|
| Completing documentation, for example worksheets, quality and environmental records. | Compliance with regulations or company procedure. | <ul style="list-style-type: none"> • 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. • Other functions that fabricators interact with, for example surveying, processing, despatch, installation, service engineers; their purpose and interdependencies. Internal and external customers. • 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). | <ul style="list-style-type: none"> • Reading and interpreting specifications, diagrams and work instructions; following instructions. • Following health & safety and environmental policy and procedures. • Checking and inspecting work ☒ interim and final. • Labelling of product; protecting, packaging product for safe transportation. • Communicating with colleagues/customers; using common industry terminology appropriately and accurately. • Completing workplace documentation • Reporting work outcomes and problems. | <ul style="list-style-type: none"> • 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. • Takes responsibility, for example, completes own work to required quality standards. • Applies logical thinking, for example, uses clear and valid reasoning when making decisions related to undertaking the work instructions. • Works effectively, for example, undertakes work in a reliable, tidy and productive manner. • Applies time management, for example uses their time effectively to complete work to schedule and always arrives at, and ready to work on time. |

| Duty | Criteria for measuring performance | Knowledge | Skills | Behaviours |
|------|------------------------------------|---|--------|------------|
| | | <ul style="list-style-type: none"> • 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. • Environmental considerations: safe disposal of waste, minimising waste (re-use and re-cycle), waste contractors permit, energy efficiency. • Who they need to communicate with and when, and communication techniques; verbal, written and digital. Documentation requirements. • Limits of autonomy; reporting channels. • Interim and final checking requirements? what needs checking (size, shape, design, components) and why. • Processes for handover to other functions/customers. • Contractual arrangements, for example penalty clauses. Consumer rights ? ?satisfactory quality, fit for purpose and as described.? How the role contributes to commercial operations. • Equality & Diversity in the workplace. | | |

| Duty | Training requirement | Method of delivery | Provider type | OTJ days |
|--|----------------------|--------------------|---------------|----------|
| Receive, unload, check and store materials and components, for example profile material, glass units and ancillary items ready for the fabrication process; ensuring all materials are present and in good condition. | | | | 6 |
| Identify and confirm fabrication requirements against work instructions/specifications. | | | | 5 |
| Use fabrication equipment such as machines, hand and power tools; conducting equipment and/or machinery checks and adjustments in preparation for fabrication, including calibrations for accuracy of machine operation. | | | | 5 |
| Measure, cut, drill and prepare the profile length of various materials (aluminium, uPVC, wood etc.) that will form the finished product. | | | | 4 |
| Manufacture the product including mullions (vertical bars) and transoms (horizontal bars) using the relevant jointing method and/or machinery. | | | | 5 |
| Assemble the product including opening frames, sashes or vents if applicable using fabrication methods such as crimping, sawing, welding, machining, bending and beading. | | | | 5 |
| Fit the required additional elements to complete the product, for example ancillary items, beading, glass units, locks, handles etc. | | | | 4 |
| Check and inspect the product (such as windows, doors etc.) for any damage or imperfections in the frame or paintwork. Rectifying any defects, passing it on to appropriate colleagues or reporting the issue. | | | | 3 |
| Clean and finish the product using appropriate materials and chemicals safely and ensuring the finished product functions correctly. | | | | 3 |
| Protect and/or tape finished product and store ready for transportation. | | | | 7 |
| Completing documentation, for example worksheets, quality and environmental records. | | | | 0 |

Entry requirements

No entry requirements specified

Professional recognition

No professional body recognition specified

Trailblazer membership details

Chair

Katie Thornton (The Window Company Ltd)

Facilitator

Thomas Jeavons (Sunray Construction)

Employer members

| Name | Employer |
|----------------------|--|
| Aaron Petersen | UK Glass Force |
| Andy Clegg | Safestyle |
| Chris Costall | Nationwide Windows |
| Darren Wright | Anglian Home Improvements |
| David Leighton-Berry | Eurocell |
| Derren Gittins | Synseal/Global Glass |
| Gareth Jones | Rehau |
| Jennifer Dinnies | Saint Gobain |
| John Mannell | Prentice Glass |
| Karen Lund | Independent Network (Veka) |
| Mark Knight | Cornwall Glass & Glazing |
| mark Smith | Everest |
| Mark Wadsworth | SAS (Senior Architectural Systems) |
| Michael Ings | VPS Evander |
| Neil Powell | Continental Installations |
| Paul Yeo | Comar Architectural Aluminium Systems (Parkside Group) |
| Tony Powell | SAS (Senior Architectural Systems) |

Other members

| Name | Employer |
|------------------|-----------------------------------|
| Chris Mayne | Corgi |
| Clive Gibbs | CERTASS |
| Daryl Evans | Total Support Training |
| Jim Swainston | Northern Skills Group |
| Justin Ratcliffe | Council for Aluminium in Building |

Additional information (continued)

| Name | Employer |
|---------------|------------------------|
| Mick Clayton | GQA Qualifications |
| Paul Gray | The Vocational College |
| Rachel Culpan | FENSA |
| Richard Hearn | GGF |