



SVQ IN WOOD PRODUCTS MANUFACTURING AT SCQF LEVEL 6

Qualification Number: GK1N 46

Qualification Specification

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EXECUTIVE SUMMARY

The primary purpose of the qualification is to enable individuals to demonstrate job specific competence and knowledge appropriate for the day to day activities in a manufacturing environment using wood and wood-based materials.

The *SVQ in Wood Products Manufacturing at SCQF Level 6* is a nationally recognised qualification which also provides learners with skills and knowledge in roles designing and producing engineered wood component/ products.

The qualification is intended for both newcomers and experienced personnel within the industry and is designed to provide job specific knowledge appropriate for the day to day activities in a manufacturing environment.

Learners will be familiar with methods and knowledge pertinent to their own role – which may be one or more of the following:

- Manufacturing, fabrication, machining, finishing, assembly
- Compliance with legal, regulatory, ethical standards
- Controlling resources
- Advise customers
- Develop design specification
- Operate CAD equipment

To achieve the qualification, learners need to successfully complete 7 units: the 3 mandatory units plus 2 job specific units, plus 2 other units.

Programmes leading to the qualification can be organised and delivered by providers who have gained Centre and qualification approval from PIABC. To achieve this they need to complete the PIABC centre and qualification approval procedures available from www.piabc.org.uk. In completing the documentation and the approval visit, centres need to demonstrate their ability to deliver high quality education leading to the qualification.

Centres are expected to employ robust quality assurance processes. PIABC will appoint its own moderators to ensure the effective operation of these processes and the maintenance of standards of quality.

There is no necessity for any formal entry requirement to this qualification beyond the basic literacy and numeracy expected from anyone entering the manufacturing industry.

AIM

This national qualification is competence based and aims to confirm job specific competence and job knowledge.

The *SVQ in Wood Products Manufacturing at SCQF Level 6* is intended for those who are already in the industry and who wish to extend their knowledge and expertise. The qualification is also the main component of the Modern Apprenticeship in the Wood and Timber Industries.

OUTCOMES

In setting out a clearly-defined level of achievement, this qualification will:

1. Enable individuals to demonstrate trade specific competence and knowledge appropriate for the day to day activities in a manufacturing environment using wood.
2. Enhance the knowledge and job satisfaction of learners - providing them with a means of progression to higher level job roles and qualifications.
3. Provide employers with an open and transparent basis for judging the suitability of learners for employment and promotion.
4. Facilitate job movement throughout the timber sector and other related areas of the timber industry.

Specific outcomes for the qualification are listed under the individual unit description.

TARGET GROUP

This qualification is appropriate for those working in manufacturing, wanting to gain recognition for the competencies and understanding in one of the following job roles:

Job role	Type of company
<ul style="list-style-type: none">• Manufacturing, fabrication, machining, finishing, assembly• Compliance with legal, regulatory, ethical standards• Controlling resources• Advise customers• Develop design specification• Operate CAD equipment	Manufacturer of wood products – joinery, furniture

ENTRY REQUIREMENTS

There are no entry qualifications or age limits required for this qualification.

Assessment for this qualification is open to any learner who has the potential to reach the standards laid down for this qualification. An initial assessment of past experience and current skills, knowledge and understanding should be carried out prior to commencement, to determine suitability for this qualification.

Aids or appliances, which are designed to alleviate disability, may be used during assessment, providing they do not compromise the standard required.

PROGRESSION

Learners are encouraged to consider long term goals such as belonging to a professional institute or similar. Centres are encouraged to make learners aware of relevant associations and related professional bodies.

QUALIFICATION STRUCTURE

The qualification has been credit rated against the Scottish Credit and Qualifications Framework (SCQF).

The qualification is made up of mandatory and 'optional' units. The mandatory units cover those areas which have a common approach, such as safety and the principle learning outcomes for the job role. The optional units offer a choice that can be combined to meet the needs of an individual's specific job role together with the organisations and learners preferences.

Credit values are determined by the total notional learning hours (teaching + demonstrations + practice + reflection + assessment - including developing competence in the work environment etc) divided by 10. For example 4 credits reflect a total learning time of 40 hours. Learning time is usually much greater than direct tutor contact. Credit values have been calculated unit by unit - in isolation of each other - such that the unit is a standalone unit; therefore centres may find that where learners are completing a number of units to achieve the complete qualification, actual learning time will reduce (i.e. the actual learning time for the entire qualification is unlikely to be a sum total of the credits of the individual units taken).

Learning time will clearly be reduced if learners hold credits from prior learning. Learners will be expected to carry out additional reading, practice and other work to complete each unit and prepare for assessment.

Structure

Reference	3 Mandatory Units	SCQF Level	SCQF Credit
PROGEN01	Promote and maintain health and safety within the working environment	6	5
PROMC43	Contribute to sustainable business practice	5	3
PROWPF24	Control resource effectively within a furniture/wood working environment	7	14
Reference	Group A - Candidates must take 2 units from this group	SCQF Level	SCQF Credit
PROWTM05	Advise customers on the selection and application of timber and timber based products	5	10
PROAWO02	Ensure compliance with legal, regulatory, ethical and social requirements in wood operations	7	9
PROWPM02	Establish customer requirements	6	9
PROWPM03	Develop design specification for wood product manufacture	7	6
PROWPM04	Survey a location for the placement of wood products	6	12
PROWPF26	Operate CAD equipment	6	11
PROWPM05	Develop and present suitable design responses	7	15
PROWPM08	Evaluate and specify requirements for making wood products	6	14
Reference	Group B - Candidates must take 2 units from this group	SCQF Level	SCQF Credit
PROWPM01	Maintain tools and equipment used in wood products manufacturing	6	6
PROFM37	Produce and maintain jigs and templates	6	7
PROWPM13	Set up and operate woodworking machinery	5	11
PROWPM15	Manufacture complex wood components	6	15
PROWPM10	Assemble complex/non-routine components	6	11
PROWPM22	Attach fittings to complex products	6	11
PROGEN11	Prepare products for storage and delivery	4	6

PROWPM14	Prepare and programme CNC machinery	6	15
PROWPF26	Operate CAD equipment	6	11
PROWPM06	Prepare location for assembly and placement of wood products	4	6
PROAWO02	Ensure compliance with legal, regulatory, ethical and social requirements in wood operations	7	9
PROWPM32	Finish wood products by hand	5	7
PROWPM33	Finish wood products by spraying	5	4
PROPGSF17	Fabricate complex glass framing systems	6	9
PROAWO11	Produce machine finished complex or non-routine timber based products	6	12
PROAWO10	Use machinery to produce complex or non-routine sawn wood	6	12

QUALIFICATION LEVEL

This Scottish Vocational Qualification has been credit rated in accordance with the Scottish Credit and Qualifications Framework (SCQF) requirements and is at Level 6.

Generally, learners will demonstrate basic knowledge and understanding of processes, materials and terminology relating ideas and knowledge to practical contexts in roles such as purchasing, sales and yard operative. Tasks may include selecting, adjusting and using appropriate tools and materials and/or advising customers using product knowledge.

Learners may be working alone or as part of a team and will show an awareness of the role of others associated with the job role.

PROGRAMME ORGANISATION

Programmes for this qualification can be organised and delivered by providers who have gained centre and qualification approval from PIABC. To achieve this they need to complete the PIABC centre and qualification approval procedures available from www.piabc.org.uk. In completing the documentation and the approval visit, centres need to demonstrate their ability to deliver high quality education leading to the qualification. Centres are expected to employ robust quality assurance processes. PIABC will appoint its own moderators to ensure the effective operation of these processes and the maintenance of standards of quality.

The organisation of the qualification is at the discretion of the centre and will take into account the aims, aspirations and experience of the learners.

Centres are encouraged to choose the most suitable curriculum model for their learners. Whilst the sequential delivery of parts of the unit is a possibility and may provide the most straightforward way of determining completion, it may be that some degree of integration of elements will occur, or that other methods of delivery are more appropriate to meet the needs of learners. It should be noted however that the whole unit and all the learning outcomes will be assessed.

Centres must ensure that adequate arrangements are in place for supporting learners. This could be either through separate tutorial sessions or through the use of time within structured study sessions. Centres using on-line or other forms of open learning must ensure that appropriate tutorial support is provided for learners.

The employer's engagement in learning and assessment opportunities will be paramount in securing timely achievement and a participative role should be encouraged.

In relevant circumstances, centres are recommended to provide career related information and guidance to their learners.

GUIDANCE ON LEARNING AND TEACHING

Learners employed in the timber and related industries will come to the qualification with varying levels of existing knowledge and/or practical experience of some parts of the qualification requirements. Training needs should be identified and gaps in knowledge and competency should be filled with a planned delivery of an individual learning plan. This should be utilised in preparing for teaching and assessment. The sharing of knowledge which has the potential to lead to a high level of understanding should be encouraged by the use of staff with direct experience in the role and related industries. This must, of course, be balanced against a sound understanding of the theoretical understanding.

The relationship between theory and practice is a theme that should be reflected in the assessments for the programme. Therefore in structured learning and individual work, learners should be aware of the requirement to develop a theoretical understanding to their practical work and a practical application to their theoretical understanding.

Those developing learning programmes should expect to achieve all the performance and knowledge criteria.

QUALIFICATION DESCRIPTION

This qualification follows the quality criteria for NOS for designing units and qualifications and contains the features listed as follows;

- Unit reference number, title, level and credit value.
- Each unit consists of;-
 - Performance Criteria: This describes what a learner needs to be able to do as a result of the process of learning.
 - Knowledge and understanding: These are the things learners are expected to know and understand as a result of the process of learning.

UNIT CONTENT

This qualification is a nationally recognised qualification which requires the learner to possess or acquire the competencies and knowledge in units such as: Manufacturing, fabrication, machining, finishing, assembly, Compliance with legal, regulatory, ethical standards, Controlling resources, Advise customers, Develop design specification, Operate CAD equipment

PROMOTE AND MAINTAIN HEALTH AND SAFETY WITHIN THE WORKING ENVIRONMENT

Unit No: PROGEN01

Unit Level: 6

Unit Credits: 5

Overview

This unit covers the need to not only meet the broad requirements of health and safety, but also ensure that other people also meet them. It deals with mainly preventative activities, the need to follow health and safety guidelines and ensuring the work area is free from hazards.

It also covers coping in an emergency, you are expected to ensure that medical assistance is summoned and that the emergency services are called where necessary. It is also concerned with promoting health and safety in the workplace to colleagues and visitors, trying to ensure they also comply with all relevant requirements. It is also important that developments in health and safety regulations are monitored and promoted.

Performance criteria

You must be able to:

- P1 follow the regulations and guidelines for health and safety protection at all times
- P2 carry out formal risk assessments and report findings to the appropriate person/authority
- P3 ensure the immediate work area is free from health and safety hazards
- P4 identify promptly any health and safety hazards and report them to an appropriate authority
- P5 take suitable action to prevent harm to individuals
- P6 plan and organise safe working practices
- P7 select and use safety equipment and personal protective equipment correctly
- P8 follow manufacturers' and other relevant instructions relating to the safe use of equipment and materials
- P9 inform visitors to the work area of health and safety procedures
- P10 prevent unauthorised access to hazardous and/or dangerous areas
- P11 report clearly accidents and emergencies in the appropriate information systems
- P12 monitor organisational changes in health and safety regulations and guidelines and implement their requirements as soon as possible
- P13 monitor colleagues to ensure they comply with health and safety requirements

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety regulations and guidelines
- K2 the health and safety hazards that could be found in the workplace
- K3 who should be informed of health and safety hazards
- K4 what safe and unsafe working practices are
- K5 the type of safety equipment and personal protective equipment should be used in different situations
- K6 the type of injuries that could occur
- K7 how to summon medical assistance
- K8 who are the qualified first-aiders that are available
- K9 the standard operating procedures are for dealing with different types of emergency
- K10 how to alert the emergency services, and what type of information will need to be provided
- K11 the evacuation procedures for workers and visitors and where should people gather
- K12 who is authorised to enter dangerous and/or hazardous areas
- K13 the accident reporting procedures
- K14 how to obtain information on changes to relevant health and safety regulations and guidelines

- K15 how to monitor colleagues complying with health and safety requirements
- K16 the duties of employers and employees in relation to health and safety
- K17 how to identify different types of health and safety hazards
- K18 what actions should be taken to minimise the risks when health and safety hazards that are identified
- K19 what health surveillance procedures are available and where to obtain information and training on them
- K20 which work areas contain hazardous activities
- K21 where to obtain information on the safe use of equipment
- K22 the health and safety procedures for visitors
- K23 which equipment should be used for different types of emergency
- K24 who is authorised to use emergency equipment
- K25 what information systems should be used
- K26 why it is important to use the information systems

CONTRIBUTE TO SUSTAINABLE BUSINESS PRACTICE

Unit No: PROMC43

Unit Level: 5

Unit Credits: 3

Overview

This unit is about supporting sustainable business practice through the application of resource efficient working practices. It includes being able to work effectively to ensure the efficient use of resources and to minimise waste. In addition, you need to assess your own performance and identify and implement opportunities to improve efficiency. An understanding of the importance of resource efficiency is essential to this unit.

Performance criteria

You must be able to:

- P1 work effectively according to organisational procedures and production specifications
- P2 assess own performance to identify opportunities for improving resource efficiency improvements
- P3 report accurately any opportunities to improve the efficiency of resource usage
- P4 report promptly and accurately any suspected inefficiency within organisational procedures or production specifications
- P5 support the implementation of actions to improve the efficiency of resource usage within limits of own authority
- P6 work to actively avoid and minimise waste

Knowledge and understanding

You need to know and understand:

- K1 what is meant by sustainable business practice
- K2 organisational sustainability targets and their importance
- K3 how organisational procedures and production specifications support sustainable business practice
- K4 why resource usage efficiency is important to sustainability in relation to environmental, economic and social factors
- K5 how to assess own performance to identify opportunities for improving resource usage efficiency
- K6 the importance of reporting any suspected inefficiency within organisational procedures or production specifications
- K7 how not working to organisational procedures and production specifications can impact on resource usage and sustainability
- K8 opportunities for improving resource usage efficiency
- K9 potential sources of waste within area of responsibility
- K10 how waste is avoided and minimised through recycling and reuse
- K11 how waste minimisation supports sustainability
- K12 how the efficient use of resources supports the economic sustainability of the organisation
- K13 the social benefits associated with sustainable business practice
- K14 individual responsibilities relevant to the development of sustainable business practice

CONTROL RESOURCE EFFECTIVELY WITHIN A FURNITURE/WOOD WORKING ENVIRONMENT

Unit No: PROWPF24

Unit Level: 7

Unit Credits: 14

Overview

The unit covers the skills and knowledge required to control resources efficiently within the working environment. Covering the following:

1. occupational work methods
2. confirming work activities and resources for a work area

The unit is aimed at operators working in a furniture wood machining environment.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 identify work activities, assess required resources and plan the sequence of work
- P3 identify work activities and formulate a plan for their own sequence of work
- P4 seek advice and clarity from appropriate sources on resources available and the alternatives that can be used for the work when required resources are not available
- P5 assess progress of work against project requirements, taking into account external factors relating to:
1. other occupations and /or customers
 2. resources
 3. weather conditions
 4. health and safety requirements
- P6 determine work activities that have an influence on each other
- P7 inform line management and/or customers on the type and extent of any required changes to the work programme
- P8 interpret and extract information from drawings, specifications, schedules, manufacturer's information, methods of work, risk assessments and programmes of work
- P9 collect and collate additional information from alternative sources to clarify the work to be carried out
- P10 examine potential work methods to carry out the occupational work activity
- P11 determine which work methods will make best use of relevant resources and meet health and safety requirements relating to technical and/or project criteria
- P12 recognise any difficulties with the process to the required quantity and quality and correct them, report difficulties outside your control to the correct person
- P13 carry out your work to the required quality and output to meet production schedules and targets
- P14 record information on the process in the appropriate information systems

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 the relevant health and safety procedures that need to be followed
- K3 the types of work relative to the occupational area and how to identify different work activities
- K4 methods of assessing the resources needed from a range of available information
- K5 the required information and the different methods used to prepare a work programme relative to the occupational area

- K6 the different sources and methods that can be used to obtain clarification and advice when the required resources are not available
- K7 different methods of evaluating work activities against the following project requirements:
1. contract conditions
 2. contract programme
 3. health and safety requirements of operatives
- K8 the requirements of significant external factors that could affect the progress of work, in relation to:
1. other related programmes
 2. special working conditions
 3. weather conditions
 4. other occupations/people
 5. resources
 6. health and safety requirements
- K9 different methods and sources that can identify which work activities influence each other
- K10 how work activities and different ways of using resources can impact on zero and low carbon requirements, and make a positive contribution to the environment
- K11 how to identify possible alterations to the work programme to meet changed circumstances relating to action lists, method statements, duration, schedules and/or occupation specific requirements
- K12 how to assess contractual/work effects resulting from alterations to the work programme
- K13 the methods used to justify to decision makers on the effects resulting from alterations to the work programme
- K14 how to summarise the following project data:
- K3.1 required quantities
 - K3.2 specifications
 - K3.3 detailed drawings
 - K3.4 health and safety requirements
 - K3.5 timescales
 - K3.6 scope of works
- K15 the different methods of assessing available project data
- K16 how to use project data to interpret the work method, In relation to:
- K5.1 standard work procedures
 - K5.2 sequence of work
 - K5.3 organisation of resources (people, equipment, materials)
 - K5.4 work techniques
 - K5.5 working conditions (health, safety and welfare)
 - K5.6 risk assessment
- K17 different methods and techniques of obtaining additional information from the following alternative sources when available project data is insufficient:
- K6.1 customers or representatives
 - K6.2 suppliers
 - K6.3 regulatory authorities
 - K6.4 manufacturer's literature
- K18 how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against technical criteria, in relation to:
- K7.1 health and safety welfare (principles of protection)
 - K7.2 fire protection
 - K7.3 access and egress
 - K7.4 equipment availability
 - K7.5 availability of competent workforce
 - K7.6 pollution risk
 - K7.7 waste and disposal
 - K7.8 zero and low carbon outcomes
 - K7.9 weather conditions
- K19 how to identify work methods that make best use of resources and meet project, statutory and contractual requirements against project criteria, in relation to:

- K8.1 conforming to statutory requirements
- K8.2 customer and user needs
- K8.3 contract requirements in terms of time, quantity and quality
- K8.4 environmental considerations
- K20 the principles of equality and diversity and how to apply them when working and communicating with others.
- K21 the different techniques and methods of confirming and communicating work methods to relevant people.
- K22 what information systems should be used
- K23 why it is important to use the information systems

ADVISE CUSTOMERS ON THE SELECTION AND APPLICATION OF TIMBER AND TIMBER BASED PRODUCTS

Unit No: PROWTM05

Unit Level: 5

Unit Credits: 10

Overview

This unit covers the skills and knowledge required to be able to understand timber and timber based products and provide information and guidance to customers.

Performance criteria

You must be able to:

- P1 demonstrate knowledge of the products and materials your company sells and advise customers accordingly
- P2 use appropriate questioning techniques to get information from customers
- P3 advise customers on the suitable uses for the different products in your organisation
- P4 advise customers on the types of adhesives to use
- P5 explain the limitations of products to customers
- P6 provide technical information on products to customers
- P7 provide information on wood treatments to customers
- P8 find out what the customer is using the product for

Knowledge and understanding

You need to know and understand:

- K1 the products and materials your company sells and how to advise customers accordingly
- K2 where information on products is stored and how to access this
- K3 the key features, advantages and limitations of the different timbers and timber based products sold at your company and where to access this information
- K4 the differences between softwood and hardwood
- K5 the major commercial species and their countries of origin for hardwoods and softwoods
- K6 how knots are formed
- K7 the difference between a live and dead knot
- K8 what is meant by natural durability in timber
- K9 the main trade sizes for sawn square-edged timber
- K10 the factors that influence the pricing of timber
- K11 how to calculate prices for timber purchases and sales
- K12 the difference between the principle systems for grading sawn timber
- K13 the end use applications for strength graded timber and appearance graded timber
- K14 the reasons for drying timber
- K15 the moisture content in wood the effects this has
- K16 the recommended moisture content for end uses of timber
- K17 the methods used to improve the durability of timber
- K18 types of timber preservation
- K19 manufacturing processes and construction of the main types of wood based products
- K20 categories of adhesives used
- K21 how the grading systems for wood based panels relate to their properties and application
- K22 the differences between carcassing and joinery timber
- K23 load bearing timbers and their functions
- K24 strength reducing characteristics in timber
- K25 visual strength grading
- K26 the principles involved in machine strength grading
- K27 the key differences between a strength grade and a strength class
- K28 the purpose of Chain of Custody and why this is important

- K29 who needs Chain of Custody Certificates
- K30 the different Chain of Custody schemes and the differences between the standards
- K31 the purpose of the CE Mark and why this is important
- K32 the methods for clarifying and confirming customers requirements
- K33 the main geographical sources of supply of timber and timber based materials and products

ENSURE COMPLIANCE WITH LEGAL, REGULATORY, ETHICAL AND SOCIAL REQUIREMENTS IN WOOD OPERATIONS

Unit No: PROAWO02

Unit Level: 7

Unit Credits: 9

Overview

This unit covers the skills and knowledge required to comply with legal, regulatory, ethical and social requirements in wood operations. This includes chain of custody and European Union Timber Regulations.

This unit applies to those working in the wood, timber and related industries.

Performance criteria

You must be able to:

- P1 obtain information from suitable sources on the current organisational and operational procedures
- P2 make sure relevant people have a clear understanding of the policies and procedures and the importance of putting them into practice
- P3 monitor the way policies and procedures are put into practice and provide support
- P4 identify and correct any failures to meet the requirements
- P5 identify reasons for not meeting requirements and adjust the policies and procedures to reduce the likelihood of failures in the future
- P6 provide full reports about any failures to meet the requirements to the relevant stakeholders
- P7 recognise changes in circumstances promptly and adjust plans and activities accordingly
- P8 make time available to support others
- P9 give feedback to others to help them improve their performance
- P10 identify and raise ethical concerns
- P11 identify potential risks
- P12 make appropriate information and knowledge available promptly to those who need it and have a right to it
- P13 encourage others to share information and knowledge within the constraints of confidentiality
- P14 show sensitivity to stakeholders needs and manage these effectively

Knowledge and understanding

You need to know and understand:

- K1 methods of monitoring developments in legislation and regulations
- K2 the importance of having an ethical and value based approach to governance and how to put this into practice
- K3 relevant organisational and operational procedures
- K4 the organisations approach to current and emerging social attitudes to management and leadership practice and the importance of being sensitive to these
- K5 regulatory, ethical and operational requirements both national and international
- K6 procedures to follow if you do not meet the requirements
- K7 ways in which other organisations deal with current and emerging social concerns and expectations
- K8 the culture and values of your organisation and what effect they have on corporate governance
- K9 policies and procedures that make sure people meet the requirements
- K10 the processes for maintaining the relevant policies and procedures and making sure they continue to be effective and sustainable
- K11 the different ways in which people may not meet the requirements and the risks of these actually happening

K12 the procedures for dealing with people who do not meet the requirements, including requirements for reporting

ESTABLISH CUSTOMER REQUIREMENTS

Unit No: PROWPM02

Unit Level: 6

Unit Credits: 9

Overview

This unit addresses the competence required to establish customer requirements. This involves:

1. obtaining all necessary information from the customer
2. providing all necessary information to the customer

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 obtain all necessary information from the customer
- P2 provide all necessary information to the customer
- P3 correctly record what information has been obtained from and given to the customer
- P4 establish the most effective communication method to gain customer confidence and cooperation
- P5 offer advice to the customer and recommend the most appropriate action
- P6 accurately report and record the results of the customers technical requirements
- P7 deal promptly and effectively with problems and report those that cannot be solved within own limits of control

Knowledge and understanding

You need to know and understand:

- K1 the information that needs to be obtained from the customer
- K2 the information that needs to be given to the customer
- K3 why it is important to obtain and give relevant information from/to customer
- K4 how to use different communication channels to inform customers and what approaches can be used
- K5 the best way to utilise customer service skills to ensure that the customer's expectations are fully met
- K6 the extent of own responsibility and to whom problems that cannot be solved should be reported to
- K7 the basic properties of timber that is in use within the wood industry
- K8 the different species of commonly used timber
- K9 how the company ensures that the timber is legal and sustainable and why this is important
- K10 the main geographical sources of supply of timber and timber based materials and products
- K11 the purpose of Chain of Custody and why this is important
- K12 who needs Chain of Custody Certificates
- K13 the different Chain of Custody schemes and the differences between the standards
- K14 the purpose of the CE Mark and this is important

DEVELOP DESIGN SPECIFICATION FOR WOOD PRODUCT MANUFACTURE

Unit No: PROWPM03

Unit Level: 7

Unit Credits: 6

Overview

This unit addresses the competence required to develop design specifications for wood product manufacture. This involves:

1. constructing specifications
2. producing production plans
3. communicating specifications to relevant people

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 construct a specification on an accurate evaluation of the outcomes from product trials
- P2 define the production methods which will be used
- P3 define the production sequences which will be used
- P4 agree the material, components and equipment requirements with the relevant people
- P5 specify all the necessary quality requirements and measure them
- P6 specify all the necessary methods to achieve and measure them
- P7 assess production costs
- P8 estimate final price of product.
- P9 clearly define the final product characteristics
- P10 develop specifications that are clear and unambiguous
- P11 communicate the recommendations relating to manufacture to the relevant people

Knowledge and understanding

You need to know and understand:

- K1 the typical components of a specification
- K2 how to define and compile specifications
- K3 the relationship between quality assurance and a specification
- K4 the impact of legal issues on product specifications
- K5 systems that enable the development process
- K6 the reasons for accepting or rejecting specifications
- K7 how to analyse data from the trials
- K8 methods to measure outcomes of product trials
- K9 the factors involved in calculating production costs
- K10 the factors involved in estimating the final price of product
- K11 which people need to receive technical data about product manufacture
- K12 how to make recommendations relating to manufacture promptly
- K13 how to communicate technical data to relevant people and the importance of doing this
- K14 the basic properties of timber that is in use within the wood industry
- K15 the different species of commonly used timber
- K16 how the company ensures that the timber is legal and sustainable and why this is important
- K17 the main geographical sources of supply of timber and timber based materials and products

SURVEY A LOCATION FOR THE PLACEMENT OF WOOD PRODUCTS

Unit No: PROWPM04

Unit Level: 6

Unit Credits: 12

Overview

This unit addresses the competence required to assess, measure and record relevant information for the fitting and fixing of wood products. This involves:

1. taking measurements and other relevant data of the location
2. sketching elevation and plan views
3. working in ways which maintain your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 check that you have the required tools, equipment and materials to achieve the specification
- P2 determine and record the working space and/or safety parameters required by existing opening components
- P3 carry out checks to confirm accuracy of measurement
- P4 determine and record the material used in the construction of structural components as appropriate to the placement requirements of the installation
- P5 determine and record the condition of the walls, floors, ceilings and components as appropriate to the placement requirements of the installation
- P6 seek expert assistance on any aspects of the information you obtain which require clarification
- P7 determine and record site access conditions to ensure successful delivery and placement of wood products
- P8 determine and record site conditions to ensure disposal of waste in accordance with current legislation
- P9 determine and record the site conditions so that the provision of suitable and adequate working space for the placement can be arranged
- P10 determine and record site conditions so that adequate storage of the products for the placement can be arranged
- P11 comply with current health and safety legislation
- P12 produce a representational image which records the appropriate and accurate measurements of the location for the placement
- P13 record the type of building fabric which the wood product will be fixed to
- P14 record the condition of the building fabric
- P15 record relevant potential problems associated with the design and installation

Knowledge and understanding

You need to know and understand:

- K1 why it is important to ensure that measuring tools and equipment produce accurate recordings
- K2 how to care for measuring equipment and tools
- K3 what location features are likely to determine the critical points of measurement
- K4 how uneven structural components/ surfaces might affect the points of measurement
- K5 how to identify which existing opening or moving components are likely to impact upon the final design
- K6 ways of determining the type of background material/ cavity to enable the placement
- K7 when the poor condition of a background may affect the placement

- K8 what features of a location might affect access and storage
- K9 your personal responsibilities towards health and safety whilst carrying out a survey
- K10 how to keep sketches in proportion
- K11 what features are shown on a plan view and an elevation
- K12 the importance of referencing records/sketches: title, job number, revision number
- K13 the symbols, shading, hatching, abbreviations and conventions used by the organisation within specifications to convey information on components and materials
- K14 the importance of accurate, unambiguous detailing and recording
- K15 why it is necessary to record the space taken up by some existing opening or moving components
- K16 ways of recording the type of background material/ cavity to enable the placement
- K17 how to record/highlight the poor condition of a background which may affect the placement
- K18 how to record/highlight features of a location which might affect access and storage
- K19 what features of a location might affect working space and the disposal of waste during the placement

OPERATE CAD EQUIPMENT

Unit No: PROWPF26

Unit Level: 6

Unit Credits: 11

Overview

The unit covers the skills and knowledge required to improve process and quality control in a commercial environment. This includes:

1. operating computer and peripheral hardware
2. producing drawings using computer aided drawing software

The unit is aimed at anyone who has to use CAD equipment.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 check that the computer peripherals are securely connected to the outlet ports and all leads are in good condition following company procedures and manufacturers' instructions
- P3 follow sequence to power up, check peripheral operating status and close down equipment following company procedures and manufacturers' instructions
- P4 access and terminate the correct software application following company procedures and manufacturers' instructions
- P5 identify the type of drawing required and choose a suitable start point following company procedures and manufacturers' instructions
- P6 use appropriate techniques to create the required drawing following company procedures and manufacturers' instructions
- P7 save drawings in appropriate locations following company procedures and manufacturers' instructions
- P8 produce hard copies of the finished drawings following company procedures and manufacturers' instructions
- P9 recognise any difficulties with the process to the required quantity and quality and correct them, report difficulties outside your control to the correct person
- P10 carry out your work to the required quality and output to meet production schedules and targets
- P11 record information on the process in the appropriate information systems

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 the relevant health and safety procedures that need to be followed
- K3 the various types and application of peripherals such as printers, plotters, scanners, digitisers and tablets, light pens
- K4 how to identify correct cables/leads and connectors
- K5 how to check peripheral devices are correctly connected
- K6 how to identify typical equipment faults
- K7 action to be taken when dealing with equipment faults
- K8 the use of computer operating systems
- K9 the requirement for start-up and shutdown procedures
- K10 the importance of adherence to start-up and shutdown procedures
- K11 the use of technical manuals to check for correct hardware connections
- K12 own responsibilities under the relevant computer and software related acts
- K13 the national, international and organisational standards with regard to engineering drawings

- K14 the various types of drawing layouts that are used for mechanical, fabrication and electrical/electronic applications
- K15 the symbols and abbreviations used on drawings
- K16 how to determine the scale to be used and methods of indicating this on the drawing
- K17 the methods of constructing drawings and the application and use of drawing tools
- K18 the methods of constructing lines and curves, circles and ellipses
- K19 the types and application of dimension lines
- K20 how to enter text onto drawings
- K21 the procedures and methods for editing drawings and text
- K22 how to produce hard copies
- K23 the advantages and disadvantages of printers and plotters
- K24 what information systems should be used
- K25 why it is important to use the information systems

Additional information

Scope/range

Computer systems: To include relevant knowledge of computer operating systems. The importance of shutting down, starting up correctly and how to use technical manuals to aid operation of the system.

Software Application: To include the relevant software packages for computer aided design used by the organisation.

Standards: To include organisational, national and international standards where appropriate.

Peripheral equipment: To include the various types and application of peripherals such as printers, plotters, scanners, digitisers, tablets, light pens and also to include checking the connection of these peripheral pieces of equipment.

Problems: Problems and faults may occur with achieving any aspect of the equipment set up and operation. Some problems may be serious enough to mean that the equipment cannot be used as intended; other problems may need some minor adjustments to the computer and/ or peripheral equipment. Solving the problem may require direct action by the individual or reference to another within the organisation

DEVELOP AND PRESENT SUITABLE DESIGN RESPONSES

Unit No: PROWPM05

Unit Level: 7

Unit Credits: 15

Overview

This unit is about creating a professional response to a design brief. This involves:

1. selecting and developing options that meet the client brief
2. presenting these to the client and agreeing any amendments to be incorporated in the final design proposal

The unit is aimed at operatives who prepare drawings and specifications in manufacturing wood products.

Performance criteria

You must be able to:

- P1 select suitable criteria to use in the evaluation process, based on the client brief and agreed design objectives
- P2 evaluate the viability of designs and identify any differences between the design ideas and agreed criteria
- P3 take account of relevant data, own and others views to arrive at an objective evaluation of the designs
- P4 identify and agree any modifications that may be needed to the brief and to designs
- P5 propose and agree an appropriate form of visual interpretation for the selected design with the decision-maker
- P6 select and use suitable media, techniques and technology to prepare the design
- P7 produce visuals that clearly demonstrate how the design meets the requirements of the brief
- P8 research and prepare any supporting information needed to communicate clearly and accurately the design features and realisation options
- P9 prepare visuals and supporting information in a format that is suitable for presentation to the client within the limits of time and budget
- P10 agree the objectives, roles and format of the presentation meeting with the decision-maker and others involved
- P11 present design options clearly, accurately and enthusiastically by using suitable visuals and providing additional information where requested
- P12 encourage client and others involved to seek clarification and make comments and suggestions at appropriate stages
- P13 define, agree and accurately record the results of the meeting and any amendments or variations required

Knowledge and understanding

You need to know and understand:

- K1 how to derive evaluation criteria for use within the wood industry
- K2 how to evaluate design ideas for wood products in terms of fitness for purpose and aesthetic qualities
- K3 the procedure to analyse the visual qualities and features of a design
- K4 how to predict the viability of a design for realisation
- K5 details of the client brief and design objectives
- K6 what quantitative evaluation techniques can be used
- K7 what qualitative evaluation techniques can be used
- K8 current British and European performance standards for wood products
- K9 technical constraints on design development and design realisation

- K10 how to prepare and present a visual interpretation of a design to a professional standard
- K11 the procedure to prepare and present written material in support of a design
- K12 how to communicate design proposals visually and in writing to non-designers
- K13 how to use design and presentation media, techniques and technology
- K14 what forms of visual interpretation are appropriate to the wood industry
- K15 how the design or design product will be used
- K16 how the final design or design product will be realised/ produced/ installed/replicated
- K17 presentation techniques to communicate design options visually, in writing and orally to non-designers
- K18 how to take part in a design presentation
- K19 how to structure an argument in support of a design option
- K20 presentation formats used in the wood industry:
 - 1. for visuals
 - 2. for 3D displays
- K21 the use of presentation media, techniques and technology
- K22 recording techniques and why it is important to ensure that records are kept

EVALUATE AND SPECIFY REQUIREMENTS FOR MAKING WOOD PRODUCTS

Unit No: PROWPM08

Unit Level: 6

Unit Credits: 14

Overview

This unit covers the skills and knowledge required to evaluate and specify the work to be done to prepare and finish wood products. This involves:

1. assessing the implications of a specification
2. specifying methods, techniques, tools and materials to be used
3. proposing material purchases
4. taking account of health and safety implications

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 obtain clear and complete details of the work required
- P2 make an accurate assessment of the types, qualities and quantities of material resources that will be needed to meet the requirements
- P3 evaluate the skill and knowledge base needed to carry out the techniques and methods involved
- P4 identify the types of tools and equipment that will be needed to meet the requirements
- P5 estimate the time needed to achieve the requirements
- P6 check and confirm the availability of required personnel, time, resources, tools and equipment and any constraints on their use for the piece of work in question
- P7 identify technically suitable alternatives where requirements cannot be met in full
- P8 bring any issues which arise from the requirements to the prompt attention of the appropriate person to deal with them
- P9 agree which option to be followed where choices are possible
- P10 clearly specify the outcome qualities which must be met
- P11 specify measurements and tolerances
- P12 specify appropriate processes, methods and techniques to achieve the required results
- P13 specify appropriate tools and equipment for the work to be done
- P14 detail the type and quality of materials to be used
- P15 detail the allowed time for each stage of the process and the overall deadlines within which it must be completed
- P16 make sure that the specification is clearly and accurately recorded
- P17 include examples and comparison standards to provide an accurate specification of colour and finish requirements
- P18 record and report the specification following organisational procedures
- P19 identify the materials required to meet work requirements
- P20 check and confirm whether stock levels of required materials are sufficient to meet demand
- P21 accurately and clearly specify the types and quantities of materials that need to be purchased to meet requirements
- P22 agree on alternatives that fulfil the design specification where preferred materials cannot be supplied
- P23 identify where forthcoming work requirements mean that bulk purchases and savings can be made
- P24 check and confirm that purchases are within budget before placing an order
- P25 clearly specify delivery timescales

P26 make sure that the specifications are clear, complete and unambiguous before passing them on for processing

P27 submit material purchase specifications for processing following organisational procedures

Knowledge and understanding

You need to know and understand:

- K1 the steps, techniques, timings, skills, materials, tools and equipment that are needed to manufacture a range of wood products
- K2 the skills and knowledge needed to carry out different processes
- K3 the handling characteristics of different species of wood and wood composites and how these affect their use for different items of wood products
- K4 the identification and growth characteristics of different species of timber and its importance to tensile and compression strength, seasoning, durability, degradation, infestation and density
- K5 typical time requirements for production of wood products
- K6 why it is important to check the availability of different sorts of resources before committing to a piece of work
- K7 the constraints that can arise and why these might interfere with the meeting of requirements
- K8 your personal responsibilities with regard to health and safety
- K9 conventions used in preparing work specifications and specifying measurements and tolerances for wood products
- K10 the uses of different methods, techniques and processes involved in making wood products
- K11 different materials used within wood product manufacturing and what they are used for and why
- K12 the uses and descriptions of fixings, fittings and other attachments used in wood product manufacturing
- K13 why it is of value to include examples such as colour boards, colour samples and other comparison standards when describing finishes and outcomes to be achieved
- K14 what personal protective equipment should be worn when handling different sorts of materials and using different types of tools and equipment, and why
- K15 stock control systems in use for different types of materials
- K16 materials/components that could be used instead of the preferred ones
- K17 typical time requirements for production of wood products and the budgetary limits that apply to the specification
- K18 who is authorised to make changes to budgetary limits
- K19 supplier sales, ordering and delivery arrangements
- K20 procedures for submitting purchase specifications for processing
- K21 why it is important to adhere to accurate purchase specifications

MAINTAIN TOOLS AND EQUIPMENT USED IN WOOD PRODUCTS MANUFACTURING

Unit No: PROWPM01

Unit Level: 6

Unit Credits: 6

Overview

This unit addresses the competence required to maintain hand tools and equipment used in wood products manufacturing. This involves:

1. checking the condition of tools
2. carrying out routine maintenance
3. bringing tools into working condition
4. working in ways which maintains your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 check the condition of tools on a regular basis
- P2 sharpen cutting edges to keep them in effective working condition as required for your craft
- P3 oil and grease tools as required to prevent them being damaged and to maintain their effectiveness
- P4 keep tools clean and free from dust and debris
- P5 accurately identify tools that are damaged and remove them for repair
- P6 make sure that tools are stored away safely and tidily in the designated locations when not in use
- P7 follow safe working practices when handling tools, equipment, oils and greases
- P8 wear the appropriate personal protective equipment (PPE) for the work you are doing
- P9 make an accurate assessment of what needs to be done to bring the tool back into working condition
- P10 promptly report any tools which are beyond repair
- P11 use the appropriate equipment and techniques to achieve the required tolerances
- P12 use suitable tests to check the condition of the tool
- P13 confirm that the tool is of the required sharpness and performance accuracy before returning it as ready for use

Knowledge and understanding

You need to know and understand:

- K1 the different sorts of tools that are used
- K2 what to look for when checking the condition of different sorts of tools
- K3 the implications of not keeping cutting edges sharp
- K4 where and how often to oil and grease tools and what sorts of oils/greases to use
- K5 the implications of not keeping tools clean and free of dust and debris
- K6 why it is important to put tools away properly
- K7 how to recognise tools that are damaged and need more than routine maintenance to bring them into working condition
- K8 the types of damage that can occur to tools and how to recognise them
- K9 the implications for your work of the relevant regulations, including where to find out about relevant risk assessment and control measures that have been set by your organisation
- K10 the potential hazards that can arise from defective and faulty tools
- K11 the different sorts of tools that are used in making wood products by hand

- K12 what needs to be done to bring tools into a working state
- K13 the purpose of different materials and techniques and when to use them
- K14 how to recognise damage that can be repaired as well as damage that cannot be repaired
- K15 how to test tools for sharpness and performance accuracy

PRODUCE AND MAINTAIN JIGS AND TEMPLATES

Unit No: PROFM37

Unit Level: 6

Unit Credits: 7

Overview

This unit addresses the competence required to produce and maintain jigs and templates for use within furniture production. This involves:

1. measuring and marking out accurately
2. maintenance of surfaces and edges
3. using cutting and shaping tools and equipment
4. working in ways that ensure your own and others' safety

There is also a scope statement which defines the coverage of this unit.

Performance criteria

You must be able to:

- P1 make sure that you have an accurate and complete work specification to follow
- P2 select materials of a suitable size for the item to be produced
- P3 be accurate in measuring and marking out
- P4 make efficient use of materials and minimise wastes
- P5 handle jigs and templates in ways that protect them from damage
- P6 cut, shape and finish jigs and templates to the specified requirements
- P7 work efficiently in ways that avoid having to re-work areas of the jig or template
- P8 store completed jigs and templates under suitable conditions to keep them in good order
- P9 keep clear and accurate records of the details of completed jigs and templates
- P10 follow safe and effective working practices at all times, in line with current health and safety legislation
- P11 routinely examine jigs and templates for signs of damage
- P12 use the correct specifications to check jigs and templates
- P13 take account of feedback from users when assessing whether or not jigs and templates are suitable for continuing use
- P14 accurately identify damage that affects the use of a jig or template
- P15 deal safely and promptly with damage that can be effectively repaired
- P16 clean jigs and templates using methods and equipment that are suited to that purpose
- P17 remove and report jigs and templates which are damaged beyond use
- P18 follow safe and effective working practices at all times, in line with current health and safety legislation
- P19 keep accurate, clear and up to date records of jig and template checks and maintenance

Knowledge and understanding

You need to know and understand:

- K1 how to read and interpret technical specifications, including drawings, correctly, including the meanings of abbreviations, symbols and units of measurement
- K2 what different materials are used in the furniture, furnishings and interiors sector to produce jigs and templates for cutting, laying up and shaping wood and metal components
- K3 how to establish a suitable datum so that your measurements are accurate in all dimensions
- K4 what techniques are used to produce jigs and templates
- K5 why the sequence of actions used to produce a jig or template is important to efficiency
- K6 what steps to take to protect jigs and templates from common forms of damage and why it is important to do this

- K7 how to protect jigs and templates and what sort of conditions they require to be kept in if they are to stay in good order
- K8 what sorts of records need to be kept and why it is important that they are accurate and clear
- K9 the implications for your work of the HASAWA and COSHH Regulations, including where to find out about relevant risk assessment details and control measures that have been set by your organisation
- K10 why it is important to examine jigs and templates on a routine basis
- K11 how to read and interpret technical specifications, including drawings, correctly, including the meanings of abbreviations, symbols and units of measurement
- K12 what sorts of damage can occur to jigs and templates used with different types of furniture production equipment
- K13 what the tolerance levels are that you must work to when assessing if a jig or template is beyond use
- K14 what sort of damage you are competent to repair and when to seek assistance
- K15 why it is important to use appropriate solvents, cleaning materials and cleaning agents when cleaning jigs and templates
- K16 the implications for your work of the HASAWA and COSHH Regulations, including where to find out about relevant risk assessment details and control measures that have been set by your organisation
- K17 what sorts of records need to be kept and why it is important that they are accurate, clear and up to date

Additional information

Scope

Damage: Problems and faults may occur in the production or maintenance of jigs and templates. Some problems may be serious enough to mean that the jig or template cannot be used as intended; other problems may simply mean some additional maintenance is needed before it can be used (e.g. cleaning). Solving problems may require direct action by the individual carrying out the work or reference to an authority within the organisation.

Jigs: A jig is used for guiding a tool, such as a cutting blade, so that the position of a cut or drill hole (for example) is positionally accurate. Jigs may be simple, (e.g. straight lines, limited numbers of positions), or complex (e.g. complicated angles and curves, and multiple positions).

Materials: Jigs and templates may be made of wood, metal or plastic.

Templates: Templates are used in the furniture industry to ensure that shapes can consistently be reproduced to accurate dimensions. A template is only as good as its ability to reproduce the required shape and size over a specified number of occasions. Some templates are intended for single use, but the majority are used on numerous occasions. As with jigs, templates may be used for the reproduction of simple shapes or complex ones.

SET UP AND OPERATE WOODWORKING MACHINERY

Unit No: PROWPM13

Unit Level: 5

Unit Credits: 11

Overview

This unit covers the skills and knowledge required to make timber and timber based products using wood working machinery. This involves:

1. interpreting information
2. planning, organising and adopting safe working practices
3. selecting and maximising resources
4. preparing and setting up machinery to work timber and timber-based materials to a specification

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 check that you have the required tools, equipment and fitting to achieve the work specification
- P3 obtain and clarify all necessary information
- P4 obtain and check the resources to make sure they are suitable for the work and meet the information requirements
- P5 take the necessary corrective action when resources are incomplete or unsuitable
- P6 set up the machinery to enable it to be used safely and effectively and to meet the information requirements
- P7 confirm that the machinery is ready and able to carry out the relevant machining operations on the specified materials
- P8 identify when repairs to machinery are necessary and/or when replacement is required
- P9 ensure that support personnel are in place before and during operations
- P10 operate and maintain the machinery in compliance with manufacturer's recommendations and industry codes of practice
- P11 produce finished machined products which conform to the information requirements
- P12 complete the machining operations within the allocated times and operational constraints
- P13 take the necessary corrective action in the event of machinery malfunction or material fault
- P14 carry out work practices to keep areas clean, and free from debris and waste, in accordance with the given information
- P15 identify potential hazards arising from your work practices, which might affect yourself and others, and take the necessary corrective action
- P16 carry out work practices to comply with the given information, to maintain safe and healthy working conditions

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 the relevant health and safety procedures that need to be followed
- K3 the relevant health and safety legislation required for the particular machines to be used
- K4 what sources of information to use
- K5 which lines and methods of effective communication to use
- K6 the location of resources you will need
- K7 relevant dimensional control aids and their uses

- K8 how to run the machine operating systems
- K9 how to achieve the correct positioning and securing of tooling
- K10 the names, characteristics, uses and limitations of timber and timber-based materials
- K11 the compatibility of materials with machines
- K12 common defects and discrepancies in materials and machines and how to identify them
- K13 the correct use of relevant lubricants
- K14 relevant Personal Protective Equipment (PPE) to use and how to use it
- K15 risk assessment techniques that should be followed
- K16 what environment control equipment is used with the machines
- K17 documentation requirements you need to follow
- K18 the particular machine to be used
- K19 how to interpret specifications
- K20 the names, characteristics, uses and limitations of sawing, planing and morticing machines
- K21 lines and methods of effective communication to use
- K22 how to run the machine operating systems
- K23 how damage can be caused to materials and machines and how to avoid it
- K24 how to dispose of waste in accordance with current legislation
- K25 safe methods that exist for removal and disposal of waste materials/components relating to your occupation and associated occupations from the work area
- K26 the basic properties of timber that is in use within the wood industry
- K27 the different species of commonly used timber
- K28 how the company ensures that the timber is legal and sustainable and why this is important
- K29 the main geographical sources of supply of timber and timber based materials and products

MANUFACTURE COMPLEX WOOD COMPONENTS

Unit No: PROWPM15

Unit Level: 6

Unit Credits: 15

Overview

This unit covers the skills and knowledge required to manufacture complex and non-routine wood components. In order to manufacture complex or non-routine products such as:

1. panels
2. stairs
3. pallets
4. flooring systems
5. frames
6. fire doors
7. windows
8. external doors
9. internal doors (non-fire doors)
10. architectural woodworking products
11. kitchens

This involves:

1. selecting the required quantity and quality of materials, machinery and tools for the methods of work to manufacture complex components
2. complying with the given information to manufacture components to the required specification.

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with relevant health and safety regulations
- P2 interpret and extract information from drawings, specifications, schedules, cutting lists, risk assessments and manufacturers' information
- P3 comply with information and/or instructions derived from risk assessments and method statements
- P4 select resources in relation to materials, components, tools, tooling and equipment and dimensional control aids following company procedures
- P5 protect the work, equipment and its surrounding area from damage in accordance following company procedures
- P6 demonstrate the following work skills when manufacturing complex or non-routine components
1. measuring
 2. marking out
 3. adjusting
 4. fitting
 5. finishing
 6. positioning and securing
- P7 prepare, set up, operate and maintain machines, as appropriate, to manufacture complex or non-routine components to given working instructions following company procedures and manufacturers' instructions
- P8 set up and change tooling to meet requirements following company procedures and manufacturers' instructions

- P9 safely use and store hand tools and ancillary equipment following company procedures and manufacturers' instructions
- P10 clear waste from work area and premises in accordance with legislation

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 relevant health and safety procedures that need to be followed
- K3 the relevant regulations in relation to the products that you are manufacturing
- K4 how to interpret drawings, specifications, schedules, cutting lists, risk assessments and company information and procedures related to the work to be carried out
- K5 how to handle resources associated with own work following company procedures
- K6 the procedures for checking timber for suitability for use in production
- K7 how to prepare timber for use including measuring, marking out, adjusting, fitting, fittings, finishing, position and securing
- K8 how to prepare and set up the machine following manufacturers' instructions and company procedures
- K9 how to operate machinery and monitor the machinery and quality of the finished product following company procedures and manufacturers' instructions
- K10 how to set up appropriate tooling to meet requirements following manufacturers' instructions and company procedures
- K11 how to maintain machinery and handle ancillary equipment following company procedures and manufacturers' instructions and the limits of your responsibility
- K12 the geometry in relation to the products you produce
- K13 the sequence and method of manufacturing complex and non-routine components
- K14 ancillary products and components
- K15 adhesives used
- K16 difficulties that can occur with the process and how to correct them
- K17 who to report difficulties to for problems outside your control
- K18 what information systems should be used
- K19 why it is important to use the information systems
- K20 the basic properties of timber that is in use within the wood industry
- K21 the different species of commonly used timber
- K22 how the company ensures that the timber is legal and sustainable and why this is important
- K23 the main geographical sources of supply of timber and timber based materials

ASSEMBLE COMPLEX/NON-ROUTINE COMPONENTS

Unit No: PROWPM10

Unit Level: 6

Unit Credits: 11

Overview

This unit covers the skills and knowledge required to assemble complex/ non-routine components to manufacture wood products. This involves:

1. using appropriate methods and techniques
2. checking the completed assembly
3. working in ways which maintain your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with relevant health and safety procedures when assembling complex/non-routine components
- P2 ensure that you have the required work specification and that everything you need to achieve it is available
- P3 follow instructions, assembly drawings and other relevant specifications
- P4 ensure that the specified components are available and that they are in a suitable condition
- P5 use the appropriate methods and techniques to assemble the complex/non-routine components in their correct positions
- P6 secure the components using the specified connectors and securing devices
- P7 assemble complex/non-routine components in sequence and using the appropriate methods
- P8 check the completed complex/non-routine assembly to ensure that all operations have been completed and the finished assembly meets the required specification
- P9 deal promptly and effectively with problems within your control and report those that cannot be solved

Knowledge and understanding

You need to know and understand:

- K1 health and safety legislation, regulations, safe working practices and procedures
- K2 assembly drawings and related specifications
- K3 complex/non-routine assembly methods and techniques
- K4 the sequence of assembling complex/non-routine components
- K1 ancillary products and components used
- K5 quality control procedures and recognition of assembly defects
- K6 handling equipment and procedures
- K7 preparation methods and techniques
- K8 tool and equipment care and control procedures
- K9 reporting lines and procedures

ATTACH FITTINGS TO COMPLEX PRODUCTS

Unit No: PROWPM22

Unit Level: 6

Unit Credits: 11

Overview

This unit covers the skills and knowledge required to attach fittings to complex and non-routine production wood products. This involves:

1. checking and preparing fittings against specifications
2. attach the fitting to match specifications
3. working in ways which maintain your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with relevant health and safety legislation
- P2 check that you have the required tools, equipment and fittings to achieve the work specification
- P3 check that the fittings to be used conform to the specification
- P4 replace and discard any fittings which are of unacceptable quality
- P5 position the fittings for correctness of fit within the required tolerances
- P6 ensure that surfaces to which the fittings are to be attached are in a suitable condition
- P7 securely attach the fittings using the required method
- P8 follow safe working procedures when setting up and operating powered equipment
- P9 follow regulations and procedures when handling adhesives
- P10 complete the preparations within the required time

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 relevant health and safety procedures that need to be followed
- K3 the relevant regulations in relation to the products that you are manufacturing
- K4 the meaning of terms used in technical specifications
- K5 the different types of fittings used and their purpose
- K6 the quality checks to be made before fittings are used and the consequences of not doing these
- K7 the consequences of incorrect positioning of fittings
- K8 the consequences of not securing fittings correctly
- K9 the different methods for attaching fittings to complex and non-routine products
- K10 the functions and uses of the different types of equipment used in assembly
- K11 how to handle powered tools safely in ways that protect yourself and others from risk
- K12 the implications for your work of the relevant regulations, including where to find out about relevant risk assessment and control measures that have been set by your organisation
- K13 how to dispose of waste in accordance with current legislation
- K14 the basic properties of timber that is in use within the wood industry
- K15 the different species of commonly used timber
- K16 how the company ensures that the timber is legal and sustainable and why this is important
- K17 the main geographical sources of supply of timber and timber based materials and products

PREPARE PRODUCTS FOR STORAGE AND DELIVERY

Unit No: PROGEN11

Unit Level: 4

Unit Credits: 6

Overview

This unit covers the preparation of products for storage and delivery. The products need to be packed, and protected from damage. They also have to be marked with the correct instructions. This could involve the use of labels, stencils or tags.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 use packing materials and equipment that are suitable to the products and the type of transportation or storage
- P3 obtain suitable packing materials that are undamaged and sufficient to meet requirements
- P4 ensure the products and packing materials are handled in a way that prevents damage to them
- P5 assemble the correct packing materials and prepare them according to standard operating procedures
- P6 ensure products are packed in a way that prevents damage to them and other contents
- P7 use appropriate marking methods for the products and packing
- P8 ensure products are marked clearly with the correct instructions
- P9 ensure the products are undamaged by the markings
- P10 identify any problems and deal with them according to standard operating procedures
- P11 record information in the appropriate information systems

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 the relevant health and safety procedures that need to be followed
- K3 which packing materials and equipment should be used for different requirements
- K4 where to obtain suitable packing materials
- K5 how products and packing materials should be handled in a way that prevents damage to them
- K6 how different types of packing materials are assembled
- K7 how products are packed in a way that prevents damage to them and other contents
- K8 what authority or licences are necessary to use the packing equipment
- K9 the marking methods for different types of product or packaging
- K10 how to ensure the correct instructions are attached
- K11 how to check that the products have not been damaged by the marking method
- K12 types of problems that can occur and the standard operating procedures for dealing with them
- K13 what information systems should be used
- K14 why it is important to use the information systems

PREPARE AND PROGRAMME CNC MACHINERY

Unit No: PROWPM14

Unit Level: 6

Unit Credits: 15

Overview

This unit covers the skills and knowledge required to prepare and programme CNC (Computer Numerically Controlled) machinery. This involves:

1. interpreting information
2. planning, organising and adopting safe working practices
3. preparing and setting up CNC machinery to a specification

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 plan the CNC machining activities before you start them
- P3 load/input the program to the machine controller and check the program for errors using the approved procedures
- P4 mount and set the required work holding devices, workpiece and cutting tools
- P5 check that all safety mechanisms are in place, and that the equipment is set correctly for the required operations
- P6 run the operating program, check and adjust the machine tool speeds, feeds and operating parameters to achieve the component specification
- P7 measure and check that all dimensional and geometrical aspects of the component are to the specification
- P8 deal promptly and effectively with problems within your control, and seek help and guidance from the relevant people if you have problems that you cannot resolve
- P9 shut down the equipment to a safe condition on completion of the machining activities

Knowledge and understanding

You need to know and understand:

- K1 the safe working practices and procedures to be followed when preparing and using CNC machines
- K2 the hazards associated with the using CNC machines and how they can be minimised
- K3 the personal protective equipment (PPE) to be worn for the CNC activities
- K4 the safety mechanisms on the machine and the procedure for checking that they function correctly
- K5 the correct operation of the various hand and automatic modes of machine control
- K6 how to stop the machine in both normal and emergency situations, and the procedure for restarting after an emergency
- K7 how to use and extract information from specifications in relation to work undertaken
- K8 the computer coding language used in CNC programs
- K9 how to set the machine controller in the program and editing mode, and how to enter or download the prepared program
- K10 how to deal with error messages and faults on the program or equipment
- K11 the range of work holding methods and devices that are used on CNC machines
- K12 the methods of setting the workholding devices, and the tools and equipment that can be used
- K13 how to place the machine into the correct operating mode, and how to access the program edit facility in order to enter tooling data

- K14 how to conduct trial runs using single block run, dry run, and feed and speed override controls
- K15 the items that you need to check before allowing the machine to operate in full program run mode
- K16 factors that affect the feeds and speeds that can be used, and why these may need to be adjusted from the program setting
- K17 how to save the completed programs in the appropriate format, and the importance of storing programs and storage devices safely and correctly, away from contaminants and possible corruption
- K18 typical problems that can occur with the CNC machine activities, and what to do if they occur
- K19 when to act on your own initiative and when to seek help and advice from others
- K20 the importance of leaving the work area and machine in a safe condition on completion of the activities

PREPARE LOCATION FOR ASSEMBLY AND PLACEMENT OF WOOD PRODUCTS

Unit No: PROWPM06

Unit Level: 4

Unit Credits: 6

Overview

This unit addresses the competences required to prepare for the assembly of fitted wood products in the final location. This involves:

1. interpreting information
2. making the assembly and placement area ready for work
3. preparing the wood components for assembly
4. ensuring all resources are ready for use
5. working in ways that ensure your own and other's safety

The unit is aimed at operatives installing manufactured wood products.

Performance criteria

You must be able to:

- P1 confirm the location, schedule and sequence of the assembly work with the relevant people
- P2 obtain agreement to proceed before starting work
- P3 isolate the work area as much as possible from the rest of the location, protecting areas exposed to debris
- P4 ask the customer to remove vulnerable items from the work area, and access routes to it
- P5 prepare the work area to install wood products
- P6 establish safe and secure storage areas for resources and components
- P7 follow safe and effective working practices at all times
- P8 identify any problems relating to the installation and deal with them in line with standard operating procedures
- P9 maintain effective communication with the customer in line with customer care procedures
- P10 confirm that the specifications/resources and components are available
- P11 make sure that the correct quality and quantity of components and resources are taken to the location
- P12 confirm that all the specified resources, tools and items of equipment are present and are in a safe working order
- P13 accurately identify any problems with resources and components and deal with them in line with standard operating procedures
- P14 carry out any specified preparatory work on components and materials correctly
- P15 lay out resources and components in a logical order for effective working
- P16 ensure that resources and components which are not for immediate use are stored safely

Knowledge and understanding

You need to know and understand:

- K1 how to interpret work specifications including drawings
- K2 who to confirm work requirements with and why it is important to have all the required agreements before you begin
- K3 which areas of the location should be isolated and what are suitable protective coverings
- K4 what types of vulnerable object should be moved by the customer
- K5 why it is important to prepare the work area so that it is safe to work in for yourself and others
- K6 your personal responsibilities with regard to health and safety issues whilst in location
- K7 when it would be necessary to set up storage areas and the safety and security issues to consider

- K8 what sort of problems can occur on location and how you should deal with them
- K9 how to provide information clearly to a customer, the type of information customers require, and why it could be important to them
- K10 how to dispose of waste in accordance with current legislation
- K11 the different components to be assembled in location and forms of preparation that may be needed at the location
- K12 tools and equipment used
- K13 problems that can occur and how these should be dealt with
- K14 your personal responsibilities towards health and safety when at location
- K15 why it is good practice to ensure that resources and components are laid out in a logical order and that items that are not needed immediately are safely stored until use

FINISH WOOD PRODUCTS BY HAND

Unit No: PROWPM32

Unit Level: 5

Unit Credits: 7

Overview

This unit covers the skills and knowledge required to apply hand-finishing polishes, waxes, oils, varnishes and lacquers to wood products. This involves:

1. preparing finishes for use
2. applying finishes to surfaces
3. working in ways which maintain your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with relevant health and safety legislation
- P2 organise the materials, tools and equipment you will need so that you can work effectively and keep your work area tidy
- P3 make sure that you have the required work specification and that everything you need to achieve it is available
- P4 make sure that the work environment is clean and free from debris and dust
- P5 mix the finish to the required volume, colour, consistency and viscosity
- P6 work in ways that prevent contamination of the finish
- P7 make sure that the finish is adequately filtered to remove any contamination and irregularities
- P8 use the appropriate standards to confirm that you have produced the correct colour and shade of finish
- P9 store and maintain the finish in a suitable condition for use
- P10 carry out the appropriate tests to confirm that the working characteristics and results produced by the finish meet the specification
- P11 make sure that unused finishes are accurately labelled and returned to the designated storage areas
- P12 dispose of wastes safely using designated procedures and disposal areas
- P13 make sure that the surfaces are free of dust and grease ready to accept the finish
- P14 apply the finish so that an even coverage is achieved
- P15 use an effective technique for the kind of finish
- P16 allow sufficient drying times between multiple coats
- P17 clear surfaces of excess finish at each stage of the process
- P18 de-nib, remove blemishes and flat back finish between successive coats
- P19 handle and protect the wood products from damage during finishing
- P20 deal promptly and safely with spillages and splashes
- P21 deal promptly and effectively with application faults

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 relevant health and safety procedures that need to be followed
- K3 the meaning of terms used in technical and manufacturers' specifications and data sheets on finishes
- K4 checks carried out on wood products which are being prepared for finishing
- K5 what sorts of problems can occur in preparing finishes of different sorts, and how to recognise and deal with them

- K6 the shelf-life of different finishes
- K7 how to handle different finishes to produce the required specification
- K8 why it is important to turn finishes regularly so that they are brought into the required suspension
- K9 the implications for your work of the relevant regulations and acts and where to find out about relevant risk assessment details and control measures that have been set by your organisation
- K10 where and how finishes should be stored and the implications of not doing this
- K11 why it is important to label unused materials correctly
- K12 the different types of abrasive materials used on finishes
- K13 the different types of finishes used, what each is for and when it is used
- K14 the drying and working times of different finishes
- K15 the effects of moisture content on the finish
- K16 the implications of poor technique
- K17 what kinds of application faults can arise and what to do to resolve them
- K18 what personal protective equipment should be worn when handling stains and why
- K19 why the working environment needs to be at suitable levels of humidity, temperature and lighting as well as dust-free and adequately ventilated
- K20 why it is important to deal promptly, safely and correctly with splashes and spillages
- K21 the storage requirements for different types of finish and the implications of not storing them correctly
- K22 the basic properties of timber that is in use within the wood industry
- K23 the different species of commonly used timber
- K24 how the company ensures that the timber is legal and sustainable and why this is important
- K25 the main geographical sources of supply of timber and timber based materials and products

FINISH WOOD PRODUCTS BY SPRAYING

Unit No: PROWPM33

Unit Level: 5

Unit Credits: 4

Overview

This unit covers the skills and knowledge required to apply finishing processing to wood products. This involves:

1. preparing wood products for finishing
2. correct and safe use of spray equipment
3. working in ways which maintain your own and others' safety

The unit is aimed at operatives manufacturing wood products.

Performance criteria

You must be able to:

- P1 comply with relevant health and safety legislation
- P2 organise the materials, tools and equipment you will need so that you can work effectively and keep your work area tidy
- P3 make sure that you have the required work specification and that everything you need to achieve it is available
- P4 check the wood product and accurately identify any faults that are present
- P5 apply the appropriate remedial treatment to any faults that are present
- P6 select appropriate materials/fillers for the type of surface
- P7 make sure that surfaces are clean and free of dust and debris
- P8 make sure that any adhesives left on surfaces are completely removed
- P9 make sure that filled surfaces are made level with the surrounding areas
- P10 make sure areas of raised grain are re-textured so they blend with the surrounds when the finish is applied
- P11 follow safe working procedures when:
 1. lifting and moving heavy items;
 2. handling cleaning agents and abrasives
- P12 handle and store the wood product in ways which protect it from damage
- P13 ensure that ventilation levels are safe before working with solvent based materials
- P14 accurately mask off any surfaces that are not to be sprayed
- P15 make sure that surfaces are clean and ready to receive the material
- P16 select a nozzle which is suited to the material and finish required
- P17 check and confirm that the spray gun is free from contamination before charging it with the required materials
- P18 apply the spray from a suitable distance from the wood product
- P19 adjust your spraying technique as necessary to achieve the required finish
- P20 apply the finish uniformly to the required build and depth of colour
- P21 deal promptly with faults which occur during the spraying process
- P22 deal promptly and safely with spillages and splashes
- P23 allow specified drying times between multiple coats
- P24 make sure that surfaces are clean and free of excess materials and surface irregularities between multiple coats, and on completion
- P25 follow safe working procedures when handling materials and using powered equipment
- P26 make sure that unused materials are accurately labelled and return them to the designated storage areas
- P27 dispose of wastes safely using designated procedures and disposal areas
- P28 transfer the finished wood product to the designated storage location
- P29 complete the process within the required time

P30 complete production records accurately and clearly

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 relevant health and safety procedures that need to be followed
- K3 the meaning of terms used in technical specifications
- K4 what checks are carried out on wood products which are being prepared for finishing
- K5 the sorts of faults that can occur and how to recognise them
- K6 the remedial action to take to deal with different types of faults
- K7 different preparations that are appropriate for surfaces that are made of solid wood and for those that are veneered, including where appropriate traditional finishes
- K8 tools and equipment to use to remedy different sorts of faults
- K9 the types and purpose of fillers and stoppers
- K10 how to recognise different grades of abrasives and what each is used for
- K11 the implications for your work of the relevant regulations, including where to find out about relevant risk assessment details and risk control strategies that have been set by your organisation
- K12 where wood products should be stored
- K13 how to protect wood products during handling and storage
- K14 how to dispose of waste in accordance with current legislation
- K15 the different types of materials used, what each is for and when it is used
- K16 what the drying times are of different materials and why it is important to allow these to lapse before applying additional coats
- K17 how and why variations in spraying techniques influence the results produced
- K18 what kinds of faults can occur in the application of coatings and what steps can be taken to deal with them
- K19 why it is important to deal promptly, safely and correctly with splashes and spillages of materials
- K20 why it is important that waste materials, including rags, are disposed of safely
- K21 what information is recorded on production records and why it is important that these are kept up to date and accurate
- K22 the basic properties of timber that is in use within the wood industry
- K23 the different species of timber
- K24 how the company ensures that the timber is legal and sustainable and why this is important
- K25 the main geographical sources of supply of timber and timber based materials and products

FABRICATE COMPLEX GLASS FRAMING SYSTEMS

Unit No: PROPGSF17

Unit Level: 6

Unit Credits: 9

Overview

This unit covers the fabrication of complex glass framing systems e.g. non-square frames. The complexity could be because the products have special requirements relating to their production, have features that are difficult to achieve, or require a mixture of materials and processes that are particularly unusual. The fabrication involves preparing the materials for the fabrication, and ensuring the correct type and quality are available. The candidate then uses the appropriate equipment and processes to fabricate the materials in a way that meets the specification. The candidate also has to identify any problems with the process and take the appropriate action.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 identify and confirm the specification for the preparation of the materials
- P3 identify the complex requirements of the fabrication
- P4 ensure the materials are available for fabrication
- P5 select the correct type, quantity, and quality of materials to be used during the fabrication
- P6 prepare the materials correctly according to schedule and standard operating procedures
- P7 identify any problems relating to the materials and deal with them according to standard operating procedures
- P8 store the prepared materials in an appropriate place
- P9 identify suitable methods for fabricating complex glass framing systems
- P10 position the materials correctly for fabrication
- P11 fabricate the materials correctly according to specifications
- P12 clean the finished glass framing systems and remove all excess materials
- P13 store the finished glass framing systems correctly and label them according to standard operating procedures
- P14 identify any problems relating to the fabrication and deal with them according to standard operating procedures
- P15 record information on the fabrication of complex glass framing systems in the appropriate information systems

Knowledge and understanding

You need to know and understand:

Health and safety

- K1 what are the relevant health and safety responsibilities and obligations
- K2 what are the relevant health and safety procedures that need to be followed

You need to know and understand:

Complex requirements

- K3 what type of complex requirements could arise
- K4 what special methods and equipment might be necessary to deal with complex requirements

You need to know and understand:

Fabrication

- K5 what type of fabrication is undertaken
- K6 what preparation equipment should be used
- K7 what are the preparation processes that should be applied to different materials

- K8 what is the correct type, quantity, and quality of materials that are to be used in different fabrication processes
- K9 what are the appropriate storage areas for materials before and after fabrication
- K10 what are the methods for fabricating different types of complex glass framing system
- K11 how to position materials correctly
- K12 how to clean different types of fabrication, and where to dispose of excess materials
- K13 what type of problems can occur during fabrication, and what are the standard operating procedures for dealing with them

You need to know and understand:

Information systems

- K14 what information systems should be used
- K15 why it is important to use the information systems

PRODUCE MACHINE FINISHED COMPLEX OR NON-ROUTINE TIMBER BASED PRODUCTS

Unit No: PROAWO11

Unit Level: 6

Unit Credits: 12

Overview

This unit covers the skills and knowledge required to produce machine finished complex or non-routine timber based products. This includes setting up and operating the machinery to finish the product,

The unit is relevant to operatives working in sawmill on secondary conversion.

Performance criteria

You must be able to:

- P1 follow company procedures/ guidance to check that the timber is legal and sustainable
- P2 comply with health and safety requirements and procedures at all times
- P3 check that quality of timber meets requirements and specification
- P4 prepare resources and work area to operate machinery with regard to safety and specification
- P5 set up machinery and tooling using the following operations:
 - 1. measure
 - 2. mark
 - 3. adjust
 - 4. fit
 - 5. position
 - 6. secure
- P6 select the machine for the work to be carried out
- P7 operate machinery to specification and legislation
- P8 finish complex or non-routine timber based products to specification following company procedures
- P9 remove waste in accordance with legislation
- P10 lubricate the machine in accordance with manufacturers and company procedures
- P11 monitor the optimal flow of work
- P12 stack processed materials in a safe manner

Knowledge and understanding

You need to know and understand:

- K1 species of timber and their common uses
- K2 the relevant health and safety responsibilities and obligations
- K3 relevant health and safety procedures that need to be followed
- K4 timber characteristics and the effect on the blade
- K5 the factors affecting the final quality of the product
- K6 the methods of moving and handling timber that you use
- K7 the operators responsibilities regarding safety
- K8 the hazards that may be present in the work area and how these may be minimised
- K9 the safety legislation with specific reference to guarding the machine
- K10 the different types of specification
- K11 dimensional control aids and their use
- K12 the company reporting process for nonconforming resources/defects and actions that may be taken
- K13 how the company ensures that the purchased timber is legal and sustainable and why this is important

- K14 potential hazards associated with the resources and method of work
- K15 the methods of safe handling of timber
- K16 the scope and limitations of the machines that you use at your company
- K17 the problems associated with sawing timber in relation to:
 - K13.1 machinery
 - K13.2 timber
 - K13.3 lubricants
 - K13.4 hand tools and associated equipment
- K18 how quality can be effected by poor tooling
- K19 why the removal of waste should be carried out according to safety legislation and company procedures
- K20 types of problems that can occur and how to deal with these
- K21 how to calculate:
 - K16.1 quantity
 - K16.2 length
 - K16.3 area
 - K16.4 wastage

USE MACHINERY TO PRODUCE COMPLEX OR NON-ROUTINE SAWN WOOD

Unit No: PROAWO10

Unit Level: 6

Unit Credits: 12

Overview

This unit covers the skills and knowledge required to use machinery to produce complex or non-routine sawn wood. This includes setting up and operating the relevant machinery and producing complex or non-routine sawn products to standards.

The unit is relevant to operatives working in sawmill on secondary conversion.

Performance criteria

You must be able to:

- P1 comply with health and safety requirements and procedures at all times
- P2 follow company procedures/ guidance to check that the timber is legal and sustainable
- P3 use specifications to prepare to produce complex or non-routine sawn wood
- P4 check that quality of timber meets requirements and specification
- P5 prepare resources and work area to operate sawing machinery with regard to safety and specification
- P6 set up sawing machinery, guarding and tooling using the following operations:
 - P5.1 measure
 - P5.2 mark
 - P5.3 adjust
 - P5.4 fit
 - P5.5 position
 - P5.6 secure
- P7 select the machine for the work to be carried out
- P8 operate sawing machinery to specification and legislation
- P9 produce complex or non-routine sawn wood products to specification following company procedures
- P10 remove waste in accordance with legislation
- P11 lubricate the machine in accordance with manufacturers and company procedures
- P12 monitor the optimal flow of work
- P13 stack processed materials in a safe manner

Knowledge and understanding

You need to know and understand:

- K1 the relevant health and safety responsibilities and obligations
- K2 relevant health and safety procedures that need to be followed
- K3 species of timber and their common uses
- K4 timber characteristics and the effect on the saw blade
- K5 the factors affecting the final quality of sawn product
- K6 the methods of moving and handling timber that you use
- K7 the operators responsibilities regarding safety
- K8 the hazards that may be present in the work area and how these may be minimised
- K9 the safety legislation with specific reference to guarding the machine
- K10 dimensional control aids and their use
- K11 how the company ensures that the purchased timber is legal and sustainable and why this is important
- K12 potential hazards associated with the resources and method of work
- K13 the methods of safe handling of timber

- K14 the scope and limitations of the machines that you use at your company
- K15 the problems associated with sawing timber in relation to:
 - K13.1 sawing machinery
 - K13.2 timber
 - K13.3 lubricants
 - K13.4 hand tools and associated equipment
- K16 how quality can be affected by poor tooling
- K17 why the removal of waste should be carried out according to safety legislation and company procedures
- K18 how to calculate:
 - K16.1 quantity
 - K16.2 length
 - K16.3 area
 - K16.4 wastage

ASSESSMENT

Assessment principles should follow recognised good practice.

All performance and knowledge criteria should be met

Simulation is not permitted

QUALIFICATION CERTIFICATION

All performance and knowledge criteria are to be achieved. Whilst there is no grading to this qualification (pass, credit, etc.), the training delivery and feedback should promote the notion of continued improvement and craftsmanship.

REGULATORY INFORMATION

Date Accredited From:	12/11/2014
Accreditation End Date:	31/07/2026
Certificate End Date:	31/07/2028

GLOSSARY

TERM	DEFINITION
Performance Criteria	This describes what a learner needs to be able to do as a result of the process of learning.
Knowledge and understanding	These are the things learners are expected to know and understand as a result of the process of learning.
Centre	The organisation that is approved by PIABC for the purposes of preparing learners for assessment.

FURTHER INFORMATION

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