PIABC Level 2 NVQ Diploma in Sawmilling

Qualification Number: 600/5676/9

Qualification Specification

Updated: 21 March 2018

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EXECUTIVE SUMMARY

The PIABC Level 2 NVQ Diploma in Sawmilling is a nationally recognised qualification which primarily acknowledges competence in the workplace and also tests the underpinning knowledge of sawmilling competencies.

The qualification is intended for anyone in a sawmilling job role – either round timber conversion or secondary conversion by sawing or planing. The qualification is intended for both newcomers and experienced personnel within the industry and is designed to provide trade specific knowledge appropriate for the day to day activities in a timber yard or mill. Young people will use the qualification as a syllabus for training and then assessment, whilst experienced staff will use the qualification to satisfy the company and themselves that they have attained a set of nationally recognised standards. The qualification is designed to match job roles and day to day activities in a sawmilling environment. Learners will be familiar with the relevant trade terms and be able to operate machinery.

To achieve the qualification, learners need to successfully gain a minimum of 43 credits made up from mandatory and optional 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 course beyond the basic literacy and numeracy expected from anyone entering the business world.

This qualification was developed under the Qualifications Credit Framework (QCF) and comprises of units from a number of Sector Skills Councils and therefore Assessors should use the associated relevant Assessment Strategies.

AIM

This national qualification is competence based and aims to provide work-based learners with a basic knowledge and set of competencies for sawmilling operations focusing on sawing and/or planning timber and how it is processed. Those achieving the qualification will specialise in either round timber conversion or secondary conversion. Learners will be able to relate job knowledge to their practical competencies and apply competencies to their knowledge.

The PIABC Level 2 NVQ Diploma in Sawmilling is intended for those wishing to pursue a career in the timber or related industries, or for those who are already in the industry and who wish to extend their knowledge and expertise. The qualification can also provide a very useful complementary qualification for apprenticeship programmes, or the preparation to progress to higher levels of study.

OUTCOMES

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

1. Provide and enhance the skills competency, knowledge and job satisfaction of learners - providing them with a means of progression to higher level job roles and qualifications.

2. Provide employers with an open and transparent basis for judging the suitability of learners for employment and promotion.

3. 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 Level 2 qualification is appropriate for those working in timber yards and mills, wanting to gain recognition for the competencies and understanding in round timber conversion or secondary conversion.

Job role	**Type of company**
Moulder/planer/saw operator or machinist	Sawmill, Merchant, Retail, Manufacturing
Sawyer	Sawmill

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

Success in this qualification prepares learners for progression in the timber industry. Learners may have the opportunity to progress into supervisory and management roles taking suitable qualifications. Learners are encouraged to consider 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 was developed under the Qualifications Credit Framework (QCF) and comprises of units from a number of Sector Skills Councils and therefore Assessors should use the associated appropriate Assessment Strategies.

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.

Guided Learning Hours (GLH) is the number of hours of teacher supervised or directed study time required to teach an individual unit or qualification. GLH 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 overall GLH will reduce (i.e. the actual GLH for the entire qualification is unlikely to be a sum total of the individual units taken).

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

Credit values are determined by the total learning hours (teaching + demonstrations + practice + reflection + assessment - including developing competence in the work environment etc) divided by 10. For example 7 credits reflect a total learning time of 70 hours. Learning time is usually much greater than GLH. Credit values have been calculated unit by unit - in isolation of each other - such that the unit is a stand alone 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).

Rules of Combination are used to define the structure of QCF qualifications and specify the minimum credits which must be achieved through a particular combination of units to gain a full qualification.

RULES OF COMBINATION

Specialist Pathways **[Round Timber]**
[Secondary Timber]

Rules of combination summary: To achieve the PIABC Level 2 NVQ Diploma in Sawmilling (QCF) learners must achieve 21 credits in Group A; a min of 15 credits in Group B and a minimum of 17 credits from Group C. Choose further units from Group D totalling 17 credits or more. The total minimum credit value of this qualification is 53 credits.

Group A: Mandatory Units: 11 credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
PI001	F/503/8136	Make sure your own actions reduce health & safety risks within your workplace	6	2	27
PI002	F/503/5995	Contribute to the effectiveness of work in a commercial setting	5	2	30
PI003	D/503/9858	Timber and Panel Products and their uses (A knowledge unit) Assessed by portfolio	10	2	40

Choose pathway B or C: Round Timber or Secondary Conversion

Group B: Mandatory unit for the Round Timber pathway: 15 credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
SM001	R/503/8125	Prepare and convert round timber	15	2	99

Group C: Mandatory unit for the Secondary Conversion pathway: 15 credits required

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
SM002	T/503/8294	Use machinery to produce sawn wood	15	2	90
SM003	A/503/8295	Produce machine finished timber based products	15	2	90

Group D: Choose further units from Group D totalling 17 credits or more

PIABC Unit No.	Ofqual Unit No.	Title	Credit	Level	GLH
SM004	J/503/8123	Identify, sort, stack and package timber based products	10	2	64
SM005	L/503/8124	Process and sort by-products	8	2	51
SM006	R/503/8125	Prepare and convert round timber	15	2	99
SM007	Y/503/8126	Move and handle round timber	6	2	35
SM008	D/503/8127	Drying of timber	8	2	51
SM009	K/503/8132	Sharpen and maintain tooling in the workplace	7	2	43
SM002	T/503/8294	Use machinery to produce sawn wood	15	2	90
SM003	A/503/8295	Produce machine finished timber based products	15	2	90
SM010	D/503/8130	Move and handle sawn, planed or profiled timber	6	2	32
SM011	A/600/8594	Maintaining machinery and equipment in the workplace	16	2	53
SM012	H/600/7519	Preparing timber for treatment, and drying and storing treated timber in the workplace	10	2	33
SM013	L/600/7529	Preparing timber treatment chemicals in the workplace	12	2	40
SM014	H/503/8131	Move and handle treated timber	5	2	28
AW001	F/502/3054	Abrasive wheel operations	2	2	15

QUALIFICATION LEVEL

The PIABC Level 2 NVQ Diploma in Sawmilling is a Level 2 qualification.

Level 2 Descriptor

Summary

Achievement at Level 2 reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.

Knowledge and Understanding

- Use understanding of facts, procedures and ideas to complete well-defined tasks and address straightforward problems.
- Interpret relevant information and ideas.
- Be aware of the types of information that are relevant to the area of study or work

Application and Action

- Complete well-defined, generally routine tasks and address straightforward problems
- Select and use relevant skills and procedures
- Identify, gather and use relevant information to inform actions
- Identify how effective actions have been

Autonomy and Accountability

- Take responsibility for completing tasks and procedures
- Exercise autonomy and judgement subject to overall direction or guidance

Source: Regulatory arrangements for the Qualifications and Credit Framework OFQUAL 2008

PROGRAMME ORGANISATION

Programmes leading to the PIABC Level 2 NVQ Diploma in Sawmilling 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 Learning Outcomes. 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 timber conversion industry- particularly sawing and planning machinery. 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 learning outcomes. It may be useful to have workbooks for use either at home or in the workplace.

QUALIFICATION OVERVIEW

The PIABC Level 2 NVQ Diploma in Sawmilling follows the QCF principles for designing units and qualifications and contains the features listed as follows:

- Unit QCF reference number, title, level, guided learning hours and credit value.
- Each unit consist of:
    - Learning Outcomes that show what the learners will be able to understand, know or demonstrate.
    - Assessment Criteria that show what the learners can do or produce in order to show that they have met the learning outcome.
    - Some Units also indicate the intended scope of the performance criteria
- To successfully complete a unit, learners must meet all the learning outcomes by showing that they have achieved all the assessment criteria with consideration to the intended scope.

UNIT CONTENT - LEARNING OUTCOMES & ASSESSMENT CRITERIA

The PIABC Level 2 NVQ Diploma in Sawmilling is a nationally recognised qualification which requires the candidate to possess or acquire the competencies and knowledge in one of either: Round timber conversion or secondary conversion using sawing or planning machinery.

MAKE SURE YOUR ACTIONS REDUCE RISKS TO HEALTH AND SAFETY WITHIN YOUR WORKPLACE

PIABC Unit No: PI001 Guided Learning Hours: 27
Qualification Accreditation No: F/503/8136 Unit Credits: 6
Unit Level: 2

Assessment Guidance

This unit is for everyone at work (whether paid, unpaid, full or part-time). It is about having an appreciation of significant risks in your workplace, knowing how to identify and deal with them.

This unit is about the health and safety responsibilities for everyone in your workplace. It describes the competences required to make sure that:

- your own actions do not create any health and safety hazards
- you do not ignore significant risks in your workplace, and
- you take sensible action to put things right, including: reporting situations which pose a danger to people in the workplace and seeking advice

Fundamental to this unit is an understanding of the terms "hazard", "risk" and “control”.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Be able to identify the hazards and evaluate the risks in your workplace:	1.1 Identify which workplace instructions are relevant to your job role
	1.2 Identify those working practices in your job role which could harm you or others
	1.3 Identify those aspects of your workplace which could harm you or others
	1.4 Check which of the potentially harmful working practices and aspects of your workplace present the highest risks to you or to others
	1.5 Deal with hazards in accordance with workplace instructions and legal requirements
	1.6 Correctly name and locate the people responsible for health and safety in your workplace
	1.7 Report to the people responsible for health and safety in your workplace those hazards which present the highest risks
2. Know how to identify the hazards and evaluate the risks in your workplace:	2.1 Define what “hazards” and “risks” are

Learning Outcome – The learner will:	Assessment Criterion - The learner can:	
	2.2	State your responsibilities for health and safety as required by the law covering your job role
	2.3	Describe the hazards which exist in your workplace and the safe working practices which you must follow.
	2.4	Describe the particular health and safety hazards which may be present in your own job role and the precautions you must take
	2.5	Explain the importance of remaining alert to the presence of hazards in the whole workplace
	2.6	Explain the importance of dealing with, or promptly reporting, risks
	2.7	Define the responsibilities for health and safety in your job role/description
	2.8	Describe the safe working practices for your own job role
	2.9	Identify the responsible people you should report health and safety matters to.
	2.10	State where and when to get additional health and safety assistance
3. Be able to reduce the risks to health and safety in your workplace:	3.1	Carry out your work in accordance with your level of competence, workplace instructions, suppliers or manufacturer's instructions and legal requirements
	3.2	Control those health and safety risks within your capability and job responsibilities
	3.3	Pass on suggestions for reducing risks to health and safety to the responsible people
	3.4	Make sure your behaviour does not endanger the health and safety of you or others in your workplace
	3.5	Follow the workplace instructions and suppliers' or manufacturers' instructions for the safe use of equipment, materials and products
	3.6	Report any differences between workplace instructions and suppliers' or manufacturers' instructions
	3.7	Make sure that your personal presentation and behaviour at work: • protects the health and safety of you and others, • meets any legal responsibilities, and • is in accordance with workplace instructions
	3.8	Make sure you follow environmentally-friendly working practices
4. Know how to reduce the risks to health and safety in your workplace:	4.1	Define and describe your scope and responsibility for controlling risks

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	4.2 State the workplace instructions for managing risks which you are unable to deal with
	4.3 Identify the suppliers' and manufacturers' instructions for the safe use of equipment, materials and products which you must follow
	4.4 Explain the importance of personal presentation in maintaining health and safety in your workplace
	4.5 Explain the importance of personal behaviour in maintaining the health and safety of you and others
	4.6 Describe the risks to the environment which may be present in your workplace and/or in your own job role

CONTRIBUTE TO THE EFFECTIVENESS OF WORK IN A COMMERCIAL SETTING

PIABC Unit No: PI002
Qualification Accreditation No: F/503/5995
Unit Level: 2

Guided Learning Hours: 30
Unit Credits: 5

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Plan and organise own work	1.1 Ensure you have the required authority to complete the required activity
	1.2 Comply with current legislation including working safely
	1.3 Check that you understand the particular work activity and your role within it
	1.4 Check that the area is clean, tidy and free from hazards before starting work
	1.5 Check that required resources and equipment are ready before starting work
	1.6 Check the job documentation prior to starting work
	1.7 Compete the activity as planned without any undue delay
	1.8 Complete all documentation accurately and legibly and pass it on to the next stage
2. Know how to plan and organize their work	2.1 Describe your job roles, responsibilities and levels of authority
	2.2 List the current legislation and describe how it applies to your role
	2.3 Describe the work activity and your role in that activity
	2.4 Explain how you would check that the area is clean, tidy and free from hazards including listing the hazards and possible consequences
	2.5 List the resources required for the activity
	2.6 Describe how to check that the equipment is ready for use
	2.7 Identity the documentation and show how it is used
	2.8 Describe the workplace procedures for monitoring the progress of the activity and keeping others informed
	2.9 Show how the documentation is completed and describe the next stage
3. Work effectively with other team members	3.1 Treat others with respect at all times
	3.2 Communicate with others using the appropriate method
	3.3 Give constructive support and feedback to appropriate personnel
	3.4 Receive support and feedback from personnel

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
4. Know how the work effectively with others	4.1 Explain how treating others with respect contributes to workplace efficiency
	4.2 State what methods of communication to use and when to use them
	4.3 Describe how to identify when assistance may be needed and the how this may be given
	4.4 Explain why it is important to receive feedback and support
	4.5 Describe how to give constructive feedback and support
	4.6 Explain why it is important to give constructive feedback and support
5. Contribute to problem solving and improvements	5.1 Respond to any problems that occur during the work activity
	5.2 Report any problems that occur and the actions taken
	5.3 Identify and share opportunities for improving workplace practices and procedures using the appropriate method
6. Know how to contribute to problem solving and improvement	6.1 Describe the most common problems that may occur and how these are solved
	6.2 Describe the reporting procedure for problems
	6.3 Describe how to identify opportunities for improvement
	6.4 Describe how suggestions for improvements should be made and to whom
	6.5 Explain how the identification of improvements can benefit you and the organisation

TIMBER AND PANEL PRODUCTS AND THEIR USES

PIABC Unit No: PI003 Guided Learning Hours: 40
Qualification Accreditation No: D/503/9858 Unit Credits: 10
Unit Level: 2

Assessment Guidance

Assessment by portfolio of evidence.

Special note: This unit is also available as a stand alone qualification which is assessed by examination only.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Understand the characteristics and nature of wood	1.1 Describe the difference between softwoods and hardwoods
	1.2 List the major commercial species and their countries of origin for softwoods and hardwoods
	1.3 Explain how a knot is formed
	1.4 Illustrate the difference between a live knot and a dead knot
	1.5 Explain what is meant by natural durability in timber
2. Understand the factors affecting the marketing and utilisation of timber	2.1 List the main trade sizes for sawn square-edged timber
	2.2 Explain the factors that influence the pricing of timber
	2.3 Calculate prices for timber purchases and sales
	2.4 Summarise the differences between the principal systems for grading sawn timber
	2.5 Describe the end use applications for strength graded timber and appearance graded timber
3. Understand the processes that improve the properties of wood	3.1 Explain the reasons for drying timber
	3.2 State the recommended moisture content for end uses of timber
	3.3 List the methods used to improve the durability of timber
	3.4 Describe one type of timber preservation
4. Understand the types of wood-based panel products	4.1 Describe the manufacturing processes and construction of the main types of wood-based panels
	4.2 Explain the categories of adhesive used
	4.3 Explain how the grading systems for wood-based panels relate to their properties and application
5. Understand the functions and applications of solid timber and wood-based panels in buildings and related uses	5.1 Explain the differences between carcassing and joinery timber
	5.2 Name the main load bearing timbers and their functions in a domestic dwelling
	5.3 List and describe strength reducing characteristics in timber

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	5.4 Describe visual strength grading
	5.5 Describe the principals involved in machine strength grading
	5.6 Recognise the key differences between a strength grade and a strength class
	5.7 Describe a manufactured joinery product used in a domestic dwelling
	5.8 Draw and name typical profiles for moulded joinery
6. Understand the importance of care, storage and handling of wood products	6.1 Explain the reasons why it is important to ensure that wood products are handled and stored correctly

IDENTIFY, SORT, STACK AND PACKAGE TIMBER BASED PRODUCTS

PIABC Unit No: SM004
Qualification Accreditation No: J/503/8123
Unit Level: 2

Guided Learning Hours: 64
Unit Credits: 10

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Be able to sort timber based products	1.1 Identify the end use of **timber based products**
	1.2 Sorting of products by size and quality meets current **specification** requirements
	1.3 Products are moved to agreed storage location
	1.4 Immediate area is maintained in a clear and safe condition
	1.5 Safety **equipment** is used in accordance with manufacturers and organisational guidance
2. Know how to sort timber based products	2.1 Describe different species of timber and their uses
	2.2 Explain the purpose of grading timber
	2.3 Describe **specification**, relating to quality, grade, length, width, thickness, customer requirements
	2.4 List forms of **safety equipment** used in the process
3. Be able build packs of timber based products	3.1 Ensure that the packs meet the **specification**
	3.2 Ensure that packs are marked using organisational procedures
	3.3 Maintain work area in a clear and safe manner
	3.4 Ensure records are completed following company procedures
4. Know how to build timber based products	4.1 Describe methods of safe handling of products
	4.2 Explain the reasons for safe **building** of packs
	4.3 Describe how to build safe packs
	4.4 Describe the methods and reasons for the marking of packs
	4.5 Describe how to complete the necessary documentation and how this is passed on
5. Be able to package timber based products	5.1 Make sure that packaging meets the specification
	5.2 Ensure that packaging allows safe handling of materials
	5.3 Check that labelling of packages meets customer and organisational requirements

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	5.4 Ensure that marking of finished packs meets customer and company requirements
	5.5 Carry out the process using safety equipment following company requirements
	5.6 Follow company procedures/ guidance to ensure that the timber is legal and sustainable
6. Know how to package timber based products	6.1 Describe how to package materials to allow for safe movement, keep materials together and protect materials
	6.2 Explain safe working practices and use of safety **equipment**
	6.3 Describe the pack labels that are needed and say why these are used
	6.4 Explain the processes for checking that the packs meet the customer needs
	6.5 Describe how the company ensures that the purchased timber is legal and sustainable and why this is important

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Appropriate Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Appropriate PPE
- Safe systems of work

Specification

- Schedules, specifications, records

Equipment

- Equipment for loading, moving and unloading materials

Timber based products

- Sawn
- Planed
- Profiled
- Natural and Manufactured Materials

PROCESS AND SORT BY-PRODUCTS

PIABC Unit No: SM005
Qualification Accreditation No: L/503/8124
Unit Level: 2

Guided Learning Hours: 51
Unit Credits: 8

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Be able to process timber-based materials into by products	1.1 Make sure set up **equipment** meets legal and organisational requirements
	1.2 Monitor equipment to maintain safe and efficient operation
	1.3 Ensure by-products meet the **specification** and are fit for purpose
	1.4 Safety equipment is used in accordance with manufacturers and organisational guidance
	1.5 Follow Company procedures/ guidance to ensure that the timber is legal and sustainable
2. Know how to process timber-based materials into by-products	2.1 Describe how to process timber-based materials to add value
	2.2 Explain safe setting and use of **equipment**
	2.3 List uses and types of products and by-products
	2.4 Describe the process for monitoring **equipment** and who does this
	2.5 State the reasons for monitoring **equipment**
	2.6 Describe how the company ensures that the purchased timber is legal and sustainable and why this is important
	2.7 Describe what action can be taken during breakdown and blockage of **machinery**
3. Be able sort and store timber-based by-products	3.1 Sort and store by-products meeting legal and organisational requirements
	3.2 Store products to prevent **contamination** of other products
	3.3 Store products to prevent **contamination** of immediate and surrounding areas
	3.4 Make sure storage mediums are fit for purpose and safe for use
	3.5 Ensure areas are maintained in a clear and safe condition

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
4. Know how to sort and store timber-based by-products	4.1 Describe methods of safe handling of products and the reason for using the method 4.2 Explain the reasons for safe methods of storage 4.3 Describe the methods and reasons for the marking of by-products 4.4 Describe why by-products have to be separated and contained 4.5 Explain the **safety** equipment, requirements when sorting and storing by-products 4.6 Describe how to avoid **contamination** 4.7 List forms of **contamination** 4.8 Describe what factors can adversely affect the product such that it fails to meet the **specification**

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Appropriate Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Appropriate PPE
- Safe systems of work

Specification

- Schedules, specifications, records

Equipment

- Equipment for processing saw millproducts

By- products

- Sawdust
- Bark
- Chips
- Off cuts
- Shavings

Contamination

- Mixing one saw mill product with another
- Presence of foreign materials
- Damage / degrade due to adverse conditions
- Other land, water sources etc

PREPARE AND CONVERT ROUND TIMBER

PIABC Unit No: SM006 Guided Learning Hours: 99
Qualification Accreditation No: R/503/8125 Unit Credits: 15
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Be able to prepare round timber for conversion	1.1 Ensure safety **equipment** is used in accordance with manufacturers and organisational guidance
	1.2 Make sure that the work area is clear and free from hazards
	1.3 Check that the round timber is clear of surface matter and bark
	1.4 Assess the round timber against the specification to determine suitability
	1.5 Round timber not meeting the requirements of **specification** is assessed for alternative use or stock
	1.6 Report or record significant defects following company procedures
	1.7 Move round timber to position for conversion
	1.8 Dispose of by-products from the cleaning process following company procedures
	1.9 Follow company procedures/ guidance to ensure that the timber is legal and sustainable
2. Know how to prepare round timber for conversion	2.1 Describe the basic **properties** of timber in use within the wood industry
	2.2 List at least 6 different common species of timber used in the wood industry
	2.3 Describe reasons for cleaning round timber before conversion
	2.4 List **safety** requirements that applies to the preparation process
	2.5 List types of personal protective equipment suitable for use when converting round timber
	2.6 State sources of **specification** and **guidance**
	2.7 Describe **defects** found in round timber
	2.8 Explain the importance of disposing by-products safely

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	2.9 State methods of moving/handling round timber
	2.10 Explain the company reporting process for defects and actions that may be taken
	2.11 Describe how the company ensures that the purchased timber is legal and sustainable and why this is important
3. Be able to convert round timber	3.1 Set up conversion **equipment**, meeting legal requirements, guidelines and procedures
	3.2 Check that quality of round timber meets requirements and **specification**
	3.3 Position round timber on the conversion **equipment**
	3.4 Safely operate conversion **equipment** to cut round timber, meeting specifications and legal requirements
	3.5 Monitor **equipment** for optimal flow of work
	3.6 Maintain work area in a safe and clear condition
	3.7 Stack processed materials safely, avoiding damage to the product and surrounding area
	3.8 Use personal protective equipment and Local Exhaust Ventilation (LEV) meeting legal requirements
	3.9 Complete all records and documentation accurately and legibly according to company procedures
4. Know how to operate conversion equipment	4.1 Describe **equipment** used in conversion of round timber
	4.2 Describe importance of measuring dimensions and tallying quantities
	4.3 State how quality can be effected by poor tooling
	4.4 Explain importance of maintaining good health & **safety** when using conversion **equipment** and in working area
	4.5 List the **safety** equipment, including personal protective equipment used during the operation of the equipment
	4.6 List sources of **specification**
	4.7 Describe cutting speeds for different timbers, dimensions and conditions of round timber
	4.8 State importance of identifying **defects** in the conversion process
	4.9 Explain the importance of stacking materials safely

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Correct PPE
- Safety devices, guards, safe systems of work

Specification

- Cutting list, schedules, specifications, job cards, records

Equipment

- Cleaning surface of round timber
- Moving / handling of round timber to equipment
- Conversion of round timber
- LEV systems

Defects

- Rot, stain, foreign bodies, splits, shakes; knots, insect attack, mechanical damage

Properties

- Strength, colour, growth rings, heartwood, sapwood, moisture content

MOVE AND HANDLE ROUND TIMBER

PIABC Unit No: SM007
Qualification Accreditation No: Y/503/8126
Unit Level: 2

Guided Learning Hours: 35
Unit Credits: 10

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Be able to load and move round timber	1.1 Confirm that valid handling certificate(s) are held
	1.2 Make sure that the work area is clear and free from hazards
	1.3 Use safety **equipment** in accordance with manufacturers guidance and organisational procedures
	1.4 Ensure stacked timber is stable, safe and ready for handling
	1.5 Position handling **equipment** to load round timber
	1.6 Ensure that the surrounding property and structures are prevented from getting damage
	1.7 Load round timber using handling **equipment**
	1.8 Move round timber using handling **equipment** to location, following safe operating procedures
	1.9 Maintain health and safety during the loading and moving process
	1.10 Complete documentation in accordance with organizational procedure
	1.11 Follow company procedures/ guidance to ensure that the timber is legal and sustainable
2. Know how to load and move round timber	2.1 Explain why valid operator certificates are required
	2.2 Describe procedures for loading and moving round timber
	2.3 Describe the factors affecting load stability
	2.4 Describe the limitations of **equipment** that you use
	2.5 Describe how the surrounding area is protected
	2.6 List types of **safety** equipment used to carry out operations
	2.7 Describe risks and hazards in loading and moving round timber

Learning Outcome – The learner will:	Assessment Criterion - The learner can:	
3. Be able to unload round timber	3.1	Ensure timber is stable and safe in readiness for unloading
	3.2	Position handling **equipment** and load in position to unload round timber
	3.3	Unload round timber with handling **equipment**
	3.4	Maintain health and safety during the unloading process
	3.5	Ensure that the surrounding property and structures are prevented from getting damage
4. Know how to unload round timber	4.1	Describe procedures for unloading round timber
	4.2	List types of **safety** equipment used to carry out operations
	4.3	Describe some common faults that occur with handling equipment
	4.4	Describe risks and hazards in unloading round timber
	4.5	Explain how to stack timber so that it is safe and stable
	4.6	Describe how the company ensures that the purchased timber is legal and sustainable and why this is important

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Personal Protective Equipment PPE
- Safe systems of work
- Lifting capacity of equipment, maneuvering capacity of lifting equipment

Specification

- Schedules, specifications, records, job cards

Equipment

- Equipment for loading, moving and unloading round timber

DRYING OF TIMBER

PIABC Unit No: SM008
Qualification Accreditation No: D/503/8127
Unit Level: 2

Guided Learning Hours: 51

Unit Credits: 8

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Be able to dry timber	1.1 Use safety **equipment** in accordance with manufacturers guidance and organisational procedures
	1.2 Stack and load timber in readiness for drying process
	1.3 Measure moisture content of timber following company procedures
	1.4 Carry out the drying process using **equipment**
	1.5 Monitor moisture content during the drying process
	1.6 Take action to prevent **drying defects**
	1.7 Complete records accurately and legibly
	1.8 Follow company procedures/ guidance to ensure that the timber is legal and sustainable
2. Know how to dry timber	2.1 Describe methods of **stacking and loading** timber for drying
	2.2 Explain how the moisture content is monitored during the drying process
	2.3 Describe the methods of air drying used at your company
	2.4 Describe the methods of kiln drying used at your company
	2.5 Explain the term moisture content
	2.6 Explain the causes of **drying defects**
	2.7 Explain why the moisture content has to be matched to the end uses of timber
	2.8 Describe the safe working practices used when drying timber
	2.9 Describe how the company ensures that the purchased timber is legal and sustainable and why this is important

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Appropriate PPE
- Safe systems of work

Stacking and Loading

- Waney edge timber
- Square edge timber

Specification

- Schedules, specifications, records, job cards

Equipment

- Air drying
- Kiln drying – kiln, oven, weighing balance, fans, heats and humidity sources, probes
- Moisture meters

Drying defects

- Shrinkage resulting in warping, cupping, bowing, twisting, crooking, spring and diamonding.
- Case-hardening
- Surface, internal and end checks
- Collapse
- Distortions
- Discolouration caused by drying

SHARPEN AND MAINTAIN TOOLING IN THE WORKPLACE

PIABC Unit No: SM009 Guided Learning Hours: 43
Qualification Accreditation No: K/503/8132 Unit Credits: 7
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Be able to remove tooling	1.1 Make sure that the work area is clear and free from hazards
	1.2 Ensure that safety **equipment** is used in accordance with manufacturers guidance and organisational procedures
	1.3 Ensure that tooling is removed safely from **equipment** following company procedures
	1.4 Demonstrate safe manual handling techniques
	1.5 Ensure that tooling is cleaned with equipment and materials following company procedures
	1.6 Assess tools and identify **defects and damage**
	1.7 Protect tooling when transferring from work area to sharpening area following company procedures
2. Know how to remove tooling	2.1 Describe the procedures used for removing tooling from equipment
	2.2 Describe the **defects and damage** that are found in tooling
	2.3 Outline the reasons for cleaning tooling
	2.4 List the **safety** equipment used when removing and cleaning tooling
	2.5 Describe the safe manual handling techniques used when handling tooling
3. Be able to sharpen and maintain tooling	3.1 Make sure that the work area is clear and free from hazards
	3.2 Ensure that safety **equipment** is used in accordance with manufacturers guidance and organisational procedures
	3.3 Carry out sharpening and maintain tooling to specification
	3.4 Identify when an abrasive wheel requires changing
	3.5 Safely dispose of waste from sharpening processes

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	3.6 Recognise machine equipment faults and correct them or report to the appointed person
	3.7 Follow company procedures to refit tooling to **equipment**
	3.8 Complete all records and documentation accurately and legibly
4. Know how to sharpen and maintain tooling	4.1 Explain the reasons for sharpening tooling
	4.2 Describe the procedures used for sharpening tooling
	4.3 List the **safety** equipment used when sharpening tooling
	4.4 Explain the remedy for each of the **defects** and types of **damage** found in tooling
	4.5 Describe the safe manual handling techniques used when handling tooling

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Correct Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Correct PPE
- Safe systems of work

Information

- Schedules, specifications, records

Equipment

- Sawing, planning, moulding, jointing machinery
- Straight knife grinding
- Profile grinding
- Saw sharpening and maintenance

Defects and Damage

- Cracks, damaged and missing teeth, distortions, broken blades

USE MACHINERY TO PRODUCE SAWN WOOD

PIABC Unit No: SM002
Qualification Accreditation No: T/503/8294
Unit Level: 2

Guided Learning Hours: 90
Unit Credits: 15

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1 Prepare to produce sawn timber using at least 2 different sawing machines	1.1 Follow company procedures/ guidance to check that the timber is legal and sustainable 1.2 Use **specification** to prepare to produce sawn wood 1.3 Check that quality of timber meets requirements and **specification** 1.4 Prepare resources and work area to operate sawing machinery with regard to **safety** and specification 1.5 Set up sawing machinery, guarding and tooling using the following operations: • Measure • Mark • Adjust • Fit • Position • Secure
2 Know how to prepare to produce sawn timber	2.1 List at least 6 species of timber and their common uses 2.2 Describe timber characteristics and the effect on the saw blade 2.3 Describe the factors affecting the final quality of sawn product 2.4 State the methods of moving and handling timber that you use 2.5 Describe the operators responsibilities regarding **safety** 2.6 Describe the hazards that may be present in the work area and how these may be minimised 2.7 Describe the **safety** legislation with specific reference to guarding the machine 2.8 List examples of dimensional control aids and explain their use 2.9 Explain the company reporting process for nonconforming resources/ defects and actions that may be taken

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	2.10 Describe how the company ensures that the purchased timber is legal and sustainable and why this is important
	2.11 Use resources in relation to: • Machinery • Materials • Components • Tools • Tooling and equipment • Dimensional control aids
3 Be able to produce sawn products using at least 2 different sawing machines	3.1 Select the machine for the work to be carried out
	3.2 Operate sawing machinery to **specification** and **legislation**
	3.3 Remove waste in accordance with legislation
	3.4 Lubricate the machine in accordance with manufacturers and company procedures
	3.5 Monitor the optimal flow of work
	3.6 Maintain work area in a safe and clear condition
	3.7 Stack processed materials in a safe manner
	3.8 Use personal protective equipment and Local Exhaust Ventilation (LEV) in order to legal **safety** requirements
	3.9 Complete all records and documentation in accordance with organizational requirements
4 Know how produce sawn products	4.1 Outline potential hazards associated with the resources and method of work
	4.2 Describe the methods of safe handling of timber
	4.3 Describe the scope and limitations of the machines that you use at your company
	4.4 Describe the problems associated with sawing timber in relation to: • sawing machinery • timber • lubricants • hand tools and associated equipment
	4.5 State how quality can be effected by poor tooling
	4.6 State how problems are reported and how the organisational procedures are used.
	4.7 Explain why the removal of waste should be carried out according to **safety** legislation and company procedures
	4.8 Describe how to calculate: • Quantity • Length • Area • wastage

Range (referenced to the **bold text** in the assessment criteria)

Use 2 machines from

- band resaw
- narrow band saw
- parallel band saw
- band mill
- twin line resaw
- hand fed circular rip saw
- dimension/tilting arbour circular saw
- sliding table panel saw
- vertical wall panel saw
- pullover cross cut saw
- radial arm cross cut saw
- straight line edger
- multi-rip saw
- beam saw
- snip saw.

Safety

- Appropriate Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Appropriate PPE
- Safe systems of work

Specification

- Schedules, specifications, cutting lists, records, legislation, job cards

PRODUCE MACHINE FINISHED TIMBER BASED PRODUCTS

PIABC Unit No: SM003 Guided Learning Hours: 90
Qualification Accreditation No: A/503/8295 Unit Credits: 15
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1. Prepare to produce machine finished timber based products	1.1 Follow company procedures and guidance to check that the timber is legal and sustainable 1.2 Check that quality of timber meets the **specification** 1.3 Prepare to produce the finished profile section using the specification 1.4 Prepare resources and work area to operate machinery with regard to **safety** and **specification** 1.5 Set up machinery and tooling using the following operations: • Measure • Mark • Adjust • Fit • Position • Secure
2. Know how to prepare to produce machine finished timber based products	2.1 List at least 6 species of timber and their common uses 2.2 Describe timber characteristics and the effect on the blade 2.3 Describe the factors affecting the final quality of the product 2.4 State the methods of moving and handling timber that you use 2.5 Describe the uses of different types of **specification** 2.6 Describe the operators responsibilities regarding **safety** 2.7 Describe the hazards that may be present in the work area and how these may be minimized 2.8 Describe the **safety** legislation with specific reference to guarding the machine 2.9 List examples of dimensional control aids and explain their use 2.10 Explain the company reporting process for

Learning Outcome – The learner will:	Assessment Criterion - The learner can:	
		nonconforming resources/ defects and actions that may be taken
	2.11	Describe how the company ensures that the purchased timber is legal and sustainable and why this is important
3. Produce machine finished timber based products	3.1	Select the machine for the work to be carried out
	3.2	Use resources in relation to: • Machinery • Materials • Components • Tools • Tooling and equipment • Dimensional control aids
	3.3	Operate machinery to **specification** and legislation
	3.4	Ensure that you remove waste in accordance with legislation
	3.5	Make sure that you use lubricants in accordance with manufacturers guidance and company procedures
	3.6	Monitor the optimal flow of work
	3.7	Maintain work area in a safe and clear condition
	3.8	Ensure that processed materials are stacked in a safe condition
	3.9	Make sure that personal protective equipment and Local Exhaust Ventilation (LEV) is used meeting legal **safety** requirements
	3.10	Check that records and documentation are completed following company procedures
4. Know how produce machine finished timber based products	4.1	Outline potential hazards associated with the resources and method of work
	4.2	Describe the methods of safe handling of timber used at your company
	4.3	Describe the scope and limitations of the machines that you use
	4.4	Describe the problems associated with producing machine finished products in relation to: • machinery • timber • lubricants • hand tools and associated equipment
	4.5	State how quality can be effected by poor tooling
	4.6	State how problems are reported and how the organisational procedures are used
	4.7	Explain why the removal of waste should be carried out according to **safety** legislation and company procedures

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	4.8 Describe how to calculate: • Quantity • Length • Area • Wastage

Range (referenced to the **bold text** in the assessment criteria)

Use One machine from

- Surfacer/planer
- Vertical spindle moulder (straight work)
- Four sided planer and moulder
- High-speed router
- Double-end tenoner
- Wood turning lathe
- Copying lathe
- Linear shaper
- Rotary shaper
- CNC/NC machines

Safety

- Appropriate Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Appropriate PPE
- Safe systems of work

Specification

- Schedules
- Specifications
- Cutting lists
- Records
- Legislation
- Job cards

MOVE AND HANDLE SAWN, PLANED OR PROFILED TIMBER

PIABC Unit No: SM010 Guided Learning Hours: 32
Qualification Accreditation No: D/503/8130 Unit Credits: 6
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	**Assessment Criterion - The learner can:**
1 Load and move sawn, planed or profiled timber	1.1 Ensure that the work area is clear and free from hazards
	1.2 Make sure that safety equipment is used in accordance with manufacturers guidance and company procedure
	1.3 Ensure that stacked timber is stable and safe
	1.4 Position handling **equipment** to load sawn, planed or profiled timber
	1.5 Ensure that surrounding property and structures are prevented from damage
	1.6 Load timber with handling **equipment**
	1.7 Move timber using handling **equipment** to location, following safe operating procedures
	1.8 Make sure that health and **safety** is maintained during loading and moving process
	1.9 Complete documentation accurately and legibly
2 Know how to load and move sawn, planed or profiled timber	2.1 Describe the procedures for loading and moving timber
	2.2 List types of **safety** equipment to carry out operations
	2.3 Explain faults that can occur with handling equipment
	2.4 Describe risks and hazards in loading and moving timber and how these could be minimised
	2.5 Describe how moisture content is maintained during the moving and handling process
	2.6 Describe how the timber is protected from damage during the moving and handling process
3 Unload sawn, planed or profiled timber	3.1 Ensure that the work area is clear and free from hazards
	3.2 Make sure that safety equipment is used in accordance with manufacturers guidance and company procedure
	3.3 Ensure that the timber is stable and safe in readiness for unloading
	3.4 Position handling **equipment** to unload timber following company procedures

	3.5 Ensure that surrounding property and structures are prevented from damage
	3.6 Unload timber with handling **equipment** following company procedures
	3.7 Make sure that health and **safety** is maintained during the unloading and moving process
	3.8 Complete documentation accurately and legibly
4 Know how to unload sawn, planed or profiled timber	4.1 Describe the procedures followed for unloading timber
	4.2 List the types of **safety** equipment used to carry out operations
	4.3 Describe the risks and hazards that can occur when unloading timber

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments
- Personal Protective Equipment
- Safe systems of work
- Lifting capacity of equipment, manoeuvring capacity of lifting equipment

Equipment

- Equipment for loading, moving and unloading sawn and planed timber

Position

- Site personnel, members of public, soft ground, uneven ground, power lines, other vehicles, structures

MAINTAINING MACHINERY AND EQUIPMENT IN THE WORKPLACE

PIABC Unit No: SM011 Guided Learning Hours: 53
Qualification Accreditation No: A/600/8594 Unit Credits: 16
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.
- Assessors for this unit must use a combination of the following assessment methods:
- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of maintaining machinery and equipment to be effective and reliable when confirming a learner's competence.

Note: Learning Outcome 7 – contract information can relate to drawings, specifications, schedules, cuttings lists, manufacturer's information and oral instruction.

Workplace evidence of skills cannot be simulated.

This unit must be assessed against three of the following endorsements:

- Sawing machinery
- Planing machinery
- Profiling machinery
- Jointing machinery
- Sanding machinery
- Boring machinery
- CNC/NC machinery

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Interpret the given information relating to the work and resources when maintaining machinery and equipment.	1.1 Interpret and extract information from drawings, specifications, schedules, risk assessments and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statement. 1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: – drawings, specifications, schedules, risk assessments, manufacturers' information and legislation governing wood machining.
2. Know how to comply with relevant legislation and official guidance when maintaining machinery and equipment.	2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, with tools, tooling and equipment, with materials and substances, movement of materials and manual and mechanical lifting. 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative. 2.3 State what the accident reporting procedures are and who is responsible for making reports.
3. Maintain safe working practices when maintaining machinery and equipment.	3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with all current statutory legislation and approved Codes of Practice when maintaining machinery and equipment. 3.2 Explain why and when personal protective equipment (PPE) should be used, relating to maintaining machinery and equipment, and the types, purpose and limitations of each type. 3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries, accidents and other task-related hazards.
4. Select the required quantity and quality of resources for the methods of work to maintain machinery and equipment.	4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: – lubricants – hand and/or powered tools and equipment. 4.2 Select resources associated with own work in relation to materials, components, tools, tooling and equipment and dimensional control aids as appropriate. 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	4.4 Outline potential hazards associated with the resources and method of work.
	4.5 Describe how to calculate quantity associated with the method/procedure to maintain machinery and equipment.
5. Minimise the risk of damage to the work and surrounding area when maintaining machinery and equipment.	5.1 Protect the work, equipment and its surrounding area from damage in accordance with organisational procedures.
	5.2 Minimise damage and maintain a clean work space.
	5.3 Describe how to protect work and equipment from damage and the purpose of protection in relation to general workplace activities and other occupations.
	5.4 Remove waste in accordance with legislation.
	5.5 State why the removal of waste should be carried out in relation to the work.
6. Complete the work within the allocated time when maintaining machinery and equipment.	6.1 Demonstrate completion of the work within the allocated time.
	6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to: – types of progress charts, estimated times and deadlines – organisational procedures for reporting circumstances which will affect the work programme.
7. Comply with the given contract information to maintain machinery and equipment to the required specification.	7.1 Demonstrate the following work skills when maintaining machinery and equipment: – checking, cleaning, adjusting, lubricating, recording, repairing, replacing and testing.
	7.2 Prepare and maintain wood machinery and equipment in accordance with organisational/manufacturers routine service requirements for at least three of the following: – sawing machinery – planing machinery – profiling machinery – jointing machinery – sanding machinery – boring machinery – CNC/NC machinery.
	7.3 Set up and change appropriate tooling to meet the requirements.
	7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: – prepare and maintain wood machinery – identify documentation and processing requirements – use and maintain maintenance logs as appropriate – identify machine principal parts and their functions – identify safe working limits of machines – identify defects and discrepancies – identify requirements of maintenance programmes – use and maintain hydraulics and pneumatics correctly – identify influencing factors and their implications – identify correct lubricants to meet the maintenance

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	requirements – identify the techniques of risk assessment – use hand tools, power tools and equipment.
	7.5 Safely use and store hand tools, portable power tools and ancillary equipment.
	7.6 State the needs of other occupations and how to communicate within a team when maintaining machinery and equipment.
	7.7 Describe how to maintain the tools and equipment used when maintaining machinery and equipment.

PREPARING TIMBER FOR TREATMENT, AND DRYING AND STORING TREATED TIMBER IN THE WORKPLACE

PIABC Unit No: SM012
Qualification Accreditation No: H/600/7519
Unit Level: 2

Guided Learning Hours: 33
Unit Credits: 10

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.
- Assessors for this unit must use a combination of the following assessment methods:
- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of preparing timber for treatment, and drying and storing treated timber to be effective and reliable when confirming a learner's competence.

Workplace evidence of skills cannot be simulated except for assessment criteria 3.4.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Interpret the given information relating to the work and resources when preparing timber for treatment, and drying and storing treated timber.	1.1 Interpret and extract information from specifications, schedules and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statement. 1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: – specifications, schedules and manufacturers' information.
2. Know how to comply with relevant legislation and official guidance when preparing timber for treatment, and drying and	2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
storing treated timber.	2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative. 2.3 State what the accident reporting procedures are and who is responsible for making reports. 2.4 State the types of fire extinguishers available when preparing timber for treatment, and drying and storing treated timber and describe how and when they are used.
3. Maintain safe working practices when preparing timber for treatment, and drying and storing treated timber.	3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with legislation and organisational requirements when preparing timber for treatment, and drying and storing treated timber. 3.2 Explain why and when personal protective equipment (PPE) should be used, relating to preparing timber for treatment, and drying and storing treated timber, and the types, purpose and limitations of each type. 3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards. 3.4 Demonstrate the safe use of a fire extinguisher relevant to a typical fire associated with preparing timber for treatment, and drying and storing treated timber as relevant to the operations.
4. Select the required quantity and quality of resources for the methods of work to prepare timber for treatment, and dry and store treated timber.	4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: – pre- and post-treated timber – hand tools and/or ancillary equipment. 4.2 Select resources associated with own work in relation to materials, components, fixings, tools and equipment. 4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used. 4.4 Outline potential hazards associated with the resources and method of work. 4.5 Describe how to calculate volume associated with the method/procedure to prepare timber for treatment, and dry and store treated timber.
5. Minimise the risk of damage to the work and surrounding area when preparing timber for treatment, and drying and storing treated timber.	5.1 Protect the work and its surrounding area from damage. 5.2 Minimise damage and maintain a clean work space. 5.3 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities. 5.4 Dispose of waste in accordance with legislation. 5.5 State why the disposal of waste should be carried out in relation to the work.

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
6. Complete the work within the allocated time when preparing timber for treatment, and drying and storing treated timber.	6.1 Demonstrate completion of the work within the allocated time. 6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to: – work programmes and timetables – organisational procedures for reporting circumstances which will affect the work programme.
7. Comply with the given contract information to prepare timber for treatment, and dry and store treated timber to the required specification.	7.1 Demonstrate the following work skills when preparing timber for treatment, and drying and storing treated timber: – marking, recording, checking, transporting, positioning, stacking, loading and unloading. 7.2 Prepare, move and store timber for preservative treatment to given working instructions, relating to: – labels – records of movement – moisture content – stacking and drying – storage of treated timber. 7.3 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: – mark materials to identify, trace and record – check moisture content of timber – load and unload timbers into and out of pressure vessel – move and stack treated timber in designated areas – prepare timber for despatch – use hand tools and ancillary equipment. 7.4 Safely use and store hand tools and lifting equipment. 7.5 State the needs of other occupations and how to communicate within a team when preparing timber for treatment, and drying, storing treated timber. 7.6 Describe how to maintain the tools and equipment used when preparing timber for treatment, and drying and storing treated timber.

PREPARING TIMBER TREATMENT CHEMICALS IN THE WORKPLACE

PIABC Unit No: SM013
Qualification Accreditation No: L/600/7529
Unit Level: 2

Guided Learning Hours: 40

Unit Credits: 12

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment – Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs.
- Assessors for this unit must use a combination of the following assessment methods:
- observation of normal work activities within the workplace that clearly confirms the required skills
- questioning the learner on knowledge criteria that clearly confirms the required understanding
- review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of preparing timber treatment chemicals to be effective and reliable when confirming a learner's competence.

Workplace evidence of skills cannot be simulated except for assessment criteria 3.4.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Interpret the given information relating to the work and resources when preparing timber treatment chemicals.	1.1 Interpret and extract information from specifications, schedules and manufacturers' information. 1.2 Comply with information and/or instructions derived from risk assessments and method statement. 1.3 State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented. 1.4 Describe different types of information, their source and how they are interpreted in relation to: – specifications, schedules and manufacturers' information.
2. Know how to comply with relevant legislation and official guidance when preparing timber treatment chemicals.	2.1 Describe their responsibilities under current legislation and official guidance whilst working: – in the workplace, with tools and equipment, with chemical substances, with movement/storage of chemicals and by manual handling and mechanical lifting. 2.2 Describe the organisational security procedures for tools, equipment and personal belongings in relation to workplace, company and operative.

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	2.3 State what the accident reporting procedures are and who is responsible for making reports.
	2.4 State the types of fire extinguishers available when preparing timber treatment chemicals and describe how and when they are used.
3. Maintain safe working practices when preparing timber treatment chemicals.	3.1 Use personal protective equipment (PPE) safely to carry out the activity in accordance with legislation and organisational requirements when preparing timber treatment chemicals.
	3.2 Explain why and when personal protective equipment (PPE) should be used, relating to preparing timber treatment chemicals, and the types, purpose and limitations of each type.
	3.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
	3.4 Demonstrate the safe use of a fire extinguisher relevant to a typical fire associated with preparing timber treatment chemicals as relevant to the operations.
4. Select the required quantity and quality of resources for the methods of work to prepare timber treatment chemicals.	4.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources in relation to: – timber treatment chemicals – water – hand tools and lifting/transferring equipment.
	4.2 Select resources associated with own work in relation to materials, components, fixings, tools and equipment.
	4.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used.
	4.4 Outline potential hazards associated with the resources and method of work.
	4.5 Describe how to calculate quantity, volume and ratio associated with the method/procedure to prepare timber treatment chemicals.
5. Minimise the risk of damage to the work and surrounding area when preparing timber treatment chemicals.	5.1 Protect the work and its surrounding area from damage.
	5.2 Minimise damage and maintain a clean work space.
	5.3 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities and adverse weather conditions.
	5.4 Dispose of waste in accordance with legislation.
	5.5 State why the disposal of waste should be carried out in relation to the work.
6. Complete the work within the allocated time when preparing timber treatment chemicals.	6.1 Demonstrate completion of the work within the allocated time.
	6.2 State the purpose of the work programme and explain why deadlines should be kept in relation to:

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	– work programmes and timetables – organisational procedures for reporting circumstances which will affect the work programme.
7. Comply with the given contract information to prepare timber treatment chemicals to the required specification.	7.1 Demonstrate the following work skills when preparing timber treatment chemicals: – checking, transferring, storing and recording.
	7.2 Prepare chemicals for use and load treatment plant to given working instructions, relating to: – receipt and check that chemicals are correct product, type, quantity and concentration – storage of chemicals – records of usage.
	7.3 Demonstrate the emergency procedures for spillages.
	7.4 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: – receive, check and record chemicals – isolate damaged products – soften water in hard water areas – transfer chemicals – deal with spillages – use hand tools and lifting/transferring equipment.
	7.5 Safely use and store hand tools and lifting and transferring equipment.
	7.6 State the needs of other occupations and how to communicate within a team when preparing timber treatment chemicals.
	7.7 Describe how to maintain the tools and equipment used when preparing timber treatment chemicals.

MOVE AND HANDLE TREATED TIMBER

PIABC Unit No: SM014 Guided Learning Hours: 28
Qualification Accreditation No: H/503/8131 Unit Credits: 5
Unit Level: 2

Assessment Guidance

This unit must be assessed in a work environment and in accordance with:

- the Additional Requirements for Qualifications using the title NVQ in QCF
- the Proskills QCF Assessment Strategy

Workplace evidence of skills cannot be simulated.

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Load and move treated timber	1.1 Ensure that the work area is clear and free from hazards
	1.2 Identify the treated timber to be loaded and moved
	1.3 Make sure that safety equipment is used in accordance with manufacturers guidance and company procedure
	1.4 Ensure that stacked timber is stable and safe
	1.5 Position handling **equipment** to load treated timber
	1.6 Make sure that the surrounding property and structures are prevented from damage
	1.7 Load treated timber using handling **equipment** following company procedures
	1.8 Move timber using handling **equipment** to location, following safe operating procedures
	1.9 Ensure that health and **safety** is maintained during loading and moving process
	1.10 Complete documentation accurately and legibly
2. Know how to load and move treated timber	2.1 Differentiate between treated timber and untreated timber
	2.2 List the different types of timber treatments
	2.3 State the typical uses for treated timber
	2.4 Describe the procedures for loading and moving treated timber that you use
	2.5 List the types of **safety** equipment used to carry out operations
	2.6 Outline the faults that can occur with handling equipment
	2.7 Describe the risks and hazards in loading and moving treated timber and how these could be minimised
	2.8 Describe how the timber can be protected from damage during the moving and handling process
3. Be able to unload treated timber	3.1 Ensure that the work area is clear and free from hazards
	3.2 Make sure that safety equipment is used in accordance with manufacturers guidance and company procedure

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	3.3 Ensure that timber is stable and safe in readiness for unloading
	3.4 Position handling **equipment** to unload timber
	3.5 Make sure that the surrounding property and structures are prevented from damage
	3.6 Unload timber using handling **equipment** following company procedures
	3.7 Ensure that health and **safety** is maintained during loading and moving process
	3.8 Complete documentation accurately and legibly
4. Know how to unload treated timber	4.1 Describe procedures for unloading treated timber
	4.2 List the types of **safety** equipment used to carry out operations
	4.3 Describe the risks and hazards associated with unloading treated timber

Range (referenced to the **bold text** in the assessment criteria)

Safety

- Health & Safety Legislation, ACoP's, Guidance
- Organisational procedures, health & safety requirements, risk assessments PPE
- Safe systems of work
- Lifting capacity of equipment, maneuvering capacity of lifting equipment

Equipment

- Equipment for loading, moving and unloading treated timber

Position

- Site personnel, members of public, soft ground, uneven ground, power lines, other vehicles, structures

ABRASIVE WHEEL OPERATIONS

PIABC Unit No: AW001
Qualification Accreditation No: F/502/3054
Unit Level: 2

Guided Learning Hours: 15
Unit Credits: 2

Learning Outcomes and Assessment Criteria

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
1. Know how to carry out a risk assessment.	1.1 Carry out a risk assessment relevant to the operation to identify: • Significant hazards. • Those at risk. • Control measures. • Emergency procedures.
2. Know the health and safety legislation that underpins the operation of abrasive wheels.	2.1 Describe the relevant health and safety legislation in relation to the operation of abrasive wheels. 2.2 Identify the hazards that may arise from the use of abrasive wheels. 2.3 Discuss how to avoid the hazards identified.
3. Know how to define abrasive wheels and purpose of abrasive wheels.	3.1 Explain what an abrasive wheel is. 3.2 Describe how an abrasive wheel works.
4. Know how to interpret the marking system of abrasive wheels.	4.1 Describe the marking systems of different abrasive wheels. 4.2 Explain the characteristics of different marking systems. 4.3 Demonstrate how to use the marking system of an abrasive wheel.
5. Understand the relationship between speed and wheel selection.	5.1 Identify the appropriate wheel spin for best efficiency. 5.2 Explain the relationship between wheel spin and wheel burst. 5.3 Define: Peripheral speed R/min or rpm The nature of the spindle and its measurement of speed.
6. Know the appropriate Personal Protective Equipment (PPE) for operating an abrasive wheel.	6.1 Select the appropriate PPE for operating an abrasive wheel.
7. Know the health and safety features of the equipment being used.	7.1 Identify the health and safety features of the equipment being used. 7.2 Identify the procedures for handling; storing and transporting an abrasive wheel
8. Know the key components of an abrasive wheel.	8.1 Identify the key components of an abrasive wheel and describe their functions.
9. Know how to maintain an abrasive wheel.	9.1 Describe the procedures for maintaining an abrasive wheel.

Learning Outcome – The learner will:	Assessment Criterion - The learner can:
	9.2 Discuss the faults that may occur with abrasive wheels.
	9.3 Carry out checks and adjustments in accordance with the manufacturer's guidance.
10. Know how to mount an abrasive wheel.	10.1 Mount an abrasive wheel.
11. Know how to adjust work rests.	11.1 Adjust work rests correctly.
12. Know the difference being truing and dressing a wheel.	12.1 Identify the significance of truing and dressing.
	12.2 Identify the significance of wheel balance.
	12.3 Dress a wheel according to instructions.
13. Know how to use abrasive wheels safely and correctly.	13.1 Use an abrasive wheel safely, correctly and in accordance with manufacturer's guidance.

ASSESSMENT

Assessment principles should follow recognised good practice. The qualification is made up of units from different standard setting bodies and their Assessment Strategies should be used.

All learning outcomes and assessment criteria should be met.

Simulation is not permitted

QUALIFICATION CERTIFICATION

All learning outcomes and assessment 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.

GLOSSARY

Term	**Definition**
Learning Outcome	This describes what a candidate needs to know, understand or do as a result of the process of learning.
Assessment Criteria	These are the requirements learners are expected to meet to demonstrate that a learning outcome has been achieved.
Centre	The organisation that is approved by PIABC for the purposes of preparing learners for assessment.

SUGGESTED SOURCE MATERIAL

A comprehensive list of source materials and references that may be used to support learning for qualification is available from the PIABC web site (www.piabc.org.uk).