

# Skills Proficiency awards in Shuttering

**Skills Proficiency Certificate 3529**

Syllabus

Assessments

Programme guidance notes

**City&  
Guilds**

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# Skills Proficiency awards in Shuttering

## About City & Guilds

We provide assessment and certification services for schools and colleges, business and industry, trade associations and government agencies in nearly 100 countries. We have over 125 years of experience in identifying training needs, developing assessment materials, carrying out assessments and training assessment staff. We award certificates to people who have shown they have mastered skills that are based on world-class standards set by industry. City & Guilds International provides a service to customers around the world who need quality assessments and certification.

## Introduction to this programme

We have designed the Skills Proficiency awards to provide a broad introduction to essential practical skills for those undergoing training or employed in these areas of work.

We do not say the amount of time a candidate would need to carry out the programme. We award certificates and diplomas for gaining and showing skills by whatever mode of study, and not for periods of time spent in study.

## About this booklet

This booklet is designed to be used by:

- Candidates
- Instructors
- Assessors
- Verifiers
- Centre co-ordinators
- Employers

It provides all the information required to understand and take part in the Skills Proficiency awards, and conduct suitable training and assessment in accordance with City & Guilds' regulations, policy and practice.

## How to offer this programme

To offer these awards you must get approval from us.

There are two categories of approval.

### Qualification approval

We give approval to offer a training and assessment course based on this syllabus.

### Examination centre approval

We give approval to enter candidates for practical assessments.

To be approved by us to offer a training and assessment course you must send a completed application to your local City & Guilds office.

To enter candidates for assessment you must be approved by us.

Approved centres must provide suitable facilities for taking practical assessments, secure places to keep assessment materials, and will have an appointed external verifier to review practical work.

After we have received and accepted an application, we will send an approval letter confirming this.

**Please note that in this section we have provided an overview of centre approval procedures. Please refer to the current issue of 'Delivering International Qualifications – Centre Guide' for full details of these procedures.**

City & Guilds reserves the right to suspend an approved centre, or withdraw its approval to conduct City & Guilds programmes, for reasons of debt, malpractice or for any reason that may be detrimental to the maintenance of authentic, reliable and valid qualifications or that may prejudice the name of City & Guilds.

## Numbering system

We use a numbering system to allow entries to be made for our awards.

To carry out what is needed for the Skills Proficiency awards in Basic Shuttering, candidates must be successful in the following assessment:

3529-15-102 Proficiency in Basic Shuttering

We use these numbers throughout this booklet. You must use these numbers correctly if you send forms to us.

## **Making entries for assessments**

Candidates must enter through an assessment centre we have approved to carry out the assessments for Skills Proficiency awards.

There are two ways of entering candidates for assessments.

### **Internal candidates**

Candidates can enter for assessments if they are taking or have already finished a course at a school, college or similar training institution that has directed their preparation, whether by going to a training centre, working with another institution, or by open-learning methods.

### **External candidates**

These are candidates who have not finished a programme as described above. To be eligible for assessment external candidates must be able to provide suitable evidence of previous training or work experience through which the required competencies have been demonstrated on more than one occasion in the past. The assessment centres must receive their application for assessment well before the date of the assessment concerned. This allows them to act on any advice you give about assessment arrangements or any further preparation needed.

External candidates must meet all the requirements for the assessment.

In this publication we use the term 'centre' to mean a school, college, place of work or other institution.

## **Submitting results to City & Guilds**

Successful candidates entering for the Skills Proficiency awards will receive a 'Notification of Candidate Results' giving details of how they performed.

We grade practical assessments as pass (P) or not yet competent (X).

If candidates successfully finish all the requirements for the Skills Proficiency award at a specific level, they will receive the appropriate certificate.

We will send the 'Notification of Candidate Results', and certificates to the assessment centre to be awarded to successful candidates. It is your responsibility to give the candidates the certificates. If candidates have a question about the results and certificates, they must contact you. You may then contact us if necessary.

We will also send you a results list showing how all candidates performed.

## **Roles and responsibilities**

This section gives details of the requirements and responsibilities of each role involved in the assessment, verification and examinations processes. Centres should identify members of staff to fulfil these roles.

Please refer to 'Delivering International Qualifications – Centre Guide' for more information.

### **Programme coordinator**

The person in the training centre responsible for ensuring that:

- printouts sent by City & Guilds are correct
- results are sent to City & Guilds in accordance with specified procedures
- all interested parties are notified of assessment dates well in advance
- candidates and centre staff fully understand their role and responsibilities
- facilities and equipment are available so that assessments can be conducted in accordance with City & Guilds requirements
- documents received from City & Guilds are securely stored
- results and/or certificates are properly issued to candidates at the centre
- monitoring the work of assessors.

### **Assessor**

The primary role of an assessor is to assess candidates' performance and related knowledge in a range of tasks and to ensure that the competence/knowledge demonstrated meets the requirements of the programme. Assessors will therefore need to have occupational experience in the vocational area to be assessed.

They will also need to be familiar with the candidates whom they are assessing; so assessors are likely to be the candidates' own instructors, who are best able to decide when individuals are able to perform competently, and therefore are ready to be formally assessed for the award.

Assessors are responsible for:

- agreeing an assessment plan with each candidate
- briefing candidates on the assessment process
- following assessment guidance provided
- observing candidates' performance and/or conducting other forms of assessment
- recording all questions used and answers given for the purposes of meeting the evidence requirements
- justifying the evidence and making assessment decisions against the standards
- providing candidates with prompt, accurate and constructive feedback
- maintaining records of candidates' achievement
- confirming that candidates have demonstrated competence/knowledge and completing the required documentation
- keeping themselves up to date with City & Guilds publications relating to quality assurance
- agreeing new assessment plans with candidates where further evidence is required
- making themselves available for discussion with the external verifier.

**Candidate**

Candidates are those individuals who are working towards a qualification at a centre approved by City & Guilds.

Candidates are responsible for:

- confirming to assessors that they understand the requirements of the programme
- confirming to assessors that they understand the relationship between the requirements and the tasks they need to perform to demonstrate competence and/or related knowledge
- discussing and agreeing assessment plans with their assessors
- identifying possible sources of evidence
- maintaining and presenting evidence in a well organised way
- ensuring that the evidence is adequate to present for assessment
- making themselves available for assessment and to discuss their evidence.

**External verifier**

External verifiers are appointed by City & Guilds for specific programmes to ensure that all assessments undertaken within City & Guilds centres are fair, valid, consistent and meet the requirements of the programme.

External verifiers are responsible for:

- making approval visits/recommendations (where necessary) to confirm that organisations can satisfy the approval criteria
- helping centres to develop internal assessment and evidence evaluation systems that are fair, reliable, accessible and non-discriminatory
- monitoring internal quality assurance systems and sampling, including by direct observation, assessment activities, methods and records
- checking claims for certification to ensure they are authentic, valid and supported by auditable records
- acting as a source of advice and support, including help with the interpretation of standards
- promoting best practice
- providing prompt, accurate and constructive feedback to all relevant parties on the operation of centres' assessment systems
- confirming that centres have implemented any corrective actions required
- reporting back to City & Guilds
- maintaining records of centre visits and making these available for auditing purposes.

### **Quality inspector/auditor**

Quality inspectors or auditors are appointed by City & Guilds to ensure that centres comply with our centre approval criteria. Their responsibilities relate to systems and quality assurance rather than specific assessment requirements.

Quality inspectors or auditors are responsible for:

- conducting inspection or audit trails to ensure centres comply with City & Guilds centre approval criteria
- making approval visits/recommendations (where appropriate) to confirm that potential centres satisfy/will be able to satisfy the centre approval criteria
- providing prompt, accurate and constructive feedback to all relevant parties
- providing advice to centres on internal quality arrangements
- reporting back to City & Guilds
- maintaining records of centre visits and making these available for auditing purposes.

### **Designing courses of study**

Candidates for the Skills Proficiency awards will have come from different backgrounds and will have different employment and training experiences.

We recommend the following:

- carry out an assessment of the candidates' achievements so you can see what learning they already have; and
- consider what learning methods and places will best suit them.

When you assess a candidate's needs, you should design training programmes that consider:

- has the candidate completed any previous education, training or qualifications?
- does the candidate have any previous practical experience which is relevant to the aims of the programme and from which they may have learned the relevant skills and knowledge?

As long as the candidates meet the aims of this learning programme the structure of the course of training is up to you. So, it is possible to include extra topics that meet local needs.

Practical work must be carefully planned both to illustrate the application of theory and to provide exercises of skill. The maximum opportunity must be provided for workshop practice and demonstrations. As far as possible, candidates must be able to apply their theoretical knowledge to practical work within a realistic work environment. Candidates should keep records of the practical work they do so they can refer to it at a later date.

## Resources

If you want to use these qualifications as the basis for a course, you must read this booklet and make sure that you have the staff and equipment to meet all the requirements. If there are no facilities for realistic practical work, we strongly recommend that you develop links with local industry to provide opportunities for hands-on experience.

## Presentation format of syllabus

### Practical competences

Each unit starts with a section on practical competences which shows the practical skills candidates must have.

At times we give more detail about important words in each 'competence statement'.

For example:

1.2 Apply good housekeeping practices at all times.

**Practices:** clean/tidy work areas, removal/disposal of waste products, protect surfaces

In the above statement the word 'practices' is given as a range which the candidate should be familiar with. If a range starts with the abbreviation 'eg' the candidates only need to cover some of the ranged areas or you can use suitable alternatives.

The end of each unit contains practical assessments which deal with the practical competences. Candidates must carry out the practical assessments either in a real or a simulated work environment.

## Carry out assessments

The practical assessments for these awards may be carried out during the learning programme, but they may also take place during a special assessment period once training has been completed.

We describe these assessments as 'free date' because they are carried out at a college or other training establishment on a date or over a period which the college chooses.

Assessments must be carried out in accordance with the requirements described in 'Delivering International Qualifications – Centre Guide'. Assessors/instructors should familiarise themselves with the **Guide to the assessment of practical skills** contained in this booklet.

### **Practical assessments**

The practical assessments for the Skills Proficiency awards are derived from the practical competences.

The **competence checklist** (tick boxes) serves as the marking criteria for these assessments and should be used by the assessor/instructor to record the outcome of each candidate's performance.

The competence checklist is a list of activities or performance outcomes that a candidate must be seen to be able to do in order to be considered competent in the tasks being assessed for these awards. The checklists are written in the same way, so that for each competence statement it is possible to say either:

**'Yes, the candidate successfully carried out this activity'** or

**'No, the candidate has not yet achieved this standard.'**

The use of local legislation, tools, equipment and practices is allowed within the specifications of the 'range' supporting each practical competence statement. The results of the assessment must be documented and available for audit by the external verifier.

**All** assessments must be successfully completed.

**All** assessments must be completed in the context of one specific job role in which the candidate is working, or for which the candidate is being trained. The context must be stated on each candidate's assessment record.

The competence checklists in this publication must be photocopied and must be completed for every candidate.

The practical assessments for these awards are not suitable for entirely classroom-based teaching. Candidates must demonstrate competence in a **realistic work environment**.

This may be:

- the workplace in which the candidate is undertaking training
- a simulated work environment.

A simulated work environment is an area such as a training room specifically designed to replicate the work place as closely as possible. A classroom is unsuitable as a simulated work environment.

A candidate transferring from a realistic work environment to a real workplace should perceive no difference.

Candidates may demonstrate competence in a combination of real and simulated situations.

Candidates must be able to show that they can perform the required tasks to the standards that would be expected if they were actually working in industry. This will include factors such as the time taken to complete the tasks and the quality of any products produced. In addition to demonstrating practical skills, candidates will have to show that they can cope with psychological and environmental conditions of real work, eg pressures and consequences of producing products for customers, working with other people, planning and organising work, following procedures, and dealing with variations and problems that may occur in performing the specified tasks.

Candidates undertaking practical activities for the purposes of assessment must, at all times, be under the supervision of a competent and qualified supervisor.

### **Preparation, supervision and marking**

It is essential that the instructor ensures all necessary preparations are carried out.

This will involve ensuring:

- the candidate is ready to demonstrate his or her practical skills
- every candidate understands what is involved
- any necessary materials, tools or equipment are available for the assessment.

Assessment of the practical performance is determined on outcomes as defined by the practical competences. The candidate must be successful in all competences included in the checklist before it can be 'signed off' and its results transferred to the summative record.

All practical assessments should be supervised and instructors should make sure that the results reflect the candidate's own performance. Separate records must be kept of the dates of all attempts by each candidate.

The candidate should be informed of the result as soon as possible. If he/she does not meet the standard of 'competent' in any of the practical requirements, the decision of either immediate resit or further practice must be taken.

### **Assessment of underpinning knowledge**

The knowledge requirements in this programme are tested by asking questions at the end of the practical assessment to verify that the candidate understands the reasons why a particular activity has been performed.

The programme coordinator must arrange in advance with their local City & Guilds office to obtain the underpinning knowledge questions and candidate record sheets required for conducting the oral assessment. He/she is responsible for ensuring that all oral questioning materials are kept securely and the assessments conducted in accordance with City & Guilds requirements.

Oral questioning must not be conducted during an activity. The person carrying out the assessment of practical competences is responsible for asking questions about underpinning knowledge and recording the candidate's responses on the relevant form. The candidate response record forms must be available for review by the external verifier.

The underpinning knowledge questions may be asked in any language that is understood by both candidate and assessor. The centre must ensure that the external verifier is provided with translations of questions asked, as well as candidate responses, if he/she does not speak the language in which questioning was conducted.

Please refer to the section **Oral questioning** in the **Guide to the assessment of practical skills** contained in this booklet.

## **Records, results and certification**

When all the required assessments have been achieved, the result must be entered onto **Form S** which must be countersigned by the external verifier and sent to City & Guilds.

You must keep all assessment documentation and material in a file for each candidate until the results have been agreed by the external verifier and until confirmation of the result has been received from City & Guilds. You must hold all the evidence for a minimum of six months and candidate records for a minimum of three years.

After results have been confirmed, copies of assessment documentation other than Form S may be returned to candidates.

The operation of this programme requires the appointment of an external verifier. The external verifier must countersign the results of the practical assessments on Form S. **The external verifier should also be able to inspect records and candidates' work to verify the results before submission.**

## **Health and safety**

All work must be carried out in a safe and efficient manner, and safety must be inherent in the candidate's approach to the practical assessments.

Centres must ensure that due attention is paid to safety and safe working practices during **all** practical assessments.

It is expected that the assessor will intervene if a candidate is acting in a dangerous manner, explaining to the candidate the reason for stopping the assessment.

Candidates should not be allowed to continue with the test if acting in an unsafe manner.

## **Equal opportunities**

We are committed to giving everyone who wants to gain one of our awards an equal opportunity of achieving it. We support equal opportunities in education, training and employment, and will take positive action to:

- promote practice and procedures in our centres that give equal opportunities to everybody, regardless of their culture, sex, ability, disability, age, ethnic background, nationality, religion, sexual orientation (sexuality), marital status, employment status or social class
- work towards removing all practice and procedures that discriminate unfairly (directly or indirectly)
- widen access to our awards to include people who are under-represented
- set the awards standards according to equal opportunities best practice.

We will make sure that our centres use an equal opportunities policy that works together with ours, and that they maintain an effective appeals procedure.

We will expect centres to tell candidates how to find and use their own equal opportunities policy and appeals procedure.

## **Progression routes and recognition**

We have a range of related qualifications for onward progression. These include relevant International Vocational Qualifications listed in the City & Guilds International Handbook.

Candidates achieving this Skills Proficiency award at Skills Proficiency Certificate level will be eligible to apply for assessment in relevant units within 6161 IVQ in Construction Industry at Certificate level.

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# **Syllabus**

## Skills Proficiency awards in Shuttering

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# Skills Proficiency Certificate

## Introduction

The aim of this module is to enable the candidate to:

- a. maintain safe working conditions.
- b. adopt safe procedures for themselves and others.
- c. maintain and sharpen tools.
- d. select and use tools in a correct and safe manner.
- e. cut joints and form components to make products out of solid wood and composite materials
- f. Interpret construction drawings of form work
- g. develop basic formwork construction, erection and dismantling techniques

It is intended that the competences will be demonstrated by working on a range of timber components and products as appropriate as well as guides of all aspects of erection, alternation or dismantling and inspection of form work structures

The use of national/local regulations and working practices must be included in all practical competences.

## Practical competences

### Learning Outcome 1: The candidate will be able to follow safe working practices and conditions

The candidate must be able to do the following:

1.1 Carry out safe working practices to prevent **hazards** and to ensure the safety of working personnel and members of the public

**Hazards:** Wood dust, preservatives, obstructions, sharp tools, absence of warning notices,

form work hazards: Excavations, wet concrete, live power lines, machinery with moving parts, falling objects from cranes, falling from height, slips and trips, collapse of formwork due to instability

1.2 Carry out safe working practices using **equipment/materials** to protect surrounding work areas from infringement or contamination

**Equipment/materials:** coping saw, ratchet brace, gimlet, chisel, screwdriver, hammer, mallet, straight back saw, plier, dust extraction, vibrators, ventilation, dust sheets, masking tapes/paper, shields (boards), different types of materials used in form work such as plywood, chipboard, softwood boarding or steel, lifting equipment: block and tackle, pull lifts, jacks, lifting clamps

1.3 Inspect for **faults, set up** and safely use steps and ladders

**Faults:** ladder type, metal components (corrosion), timber components (deterioration, splits, cracks), bent or twisted chains, bent bolts, damaged eyebolt, broken rungs, damaged rails and footings

**Set up:** firm/level base, clip/lash down

1.4 Set up safety **barriers** around obstructions to protect working personnel and members of the public

**Barriers:** security tape, barrier material (timber, metal, plastic), safety/warning (signs, lights)

1.5 Select and use protective **clothing** and safety **equipment** for specific **tasks**

**Equipment/clothing:** overalls, gloves, eye protection, face mask, ear defenders/plugs, safety shoes, safety helmet (hard hat), machine guards, residual current device, safety belt/harness, reflective or high visibility clothing, high intensity torch, insulated rubber mats, insulated tools, caution boards

**Tasks:** Assembly, erection and dismantling of formwork, working with dangerous substances

**Learning Outcome 2: The candidate will be able to identify, select and store materials**

The candidate must be able to do the following:

2.1 **Identify and select** common **softwoods** from given specifications

**Identify/select:** Visual appearance, dimensions

**Softwoods:** Pine, redwood, white wood, plywood

2.2 **Identify and select** common **hardwoods** from given specifications

**Identify/select:** visual appearance, dimensions

**Hardwoods:** Mahogany, oak, teak

2.3 **Identify and select** manufactured **boards** and **sheet** materials from given specifications

**Identify/select:** visual appearance, dimensions

**Board/sheet:** chipboard, hardboard, medium density fiberboard (MDF), plywood

2.4 **Identify and select screws** and **nails** from given specifications

**Identify/select:** visual appearance, dimensions

**Screws:** counter sunk, raised counter sunk, roundhead, dome-head, twin fast, Philips, posidrive, slotted, brass, bronze, chromium, sheradised, japanned, steel, alloy, cups, caps, double headed nails, round wire nails, wood screws

**Nails:** lost head, oval, round wire, hardboard pins, panel pins, annular ring shank, masonry

2.5 **Use** and store **materials** in a safe manner

**Use:** manufacturers' instructions, maintain material safety data sheet (MSDS), toxic effect, loading, unloading

**Materials:** Timber, plywood, steel, fiberglass, aluminum, concrete, rubber, fabric, system formwork components, release agents, nails, wood screw, pipe, couplers, preservatives, adhesives, lubricants

**Learning Outcome 3: The candidate will be able to maintain tools**

The candidate must be able to do the following:

3.1 Sharpen, set and top hand saws

3.2 Sharpen and hone chisels and plane blades

3.3 Assemble hand **planes** ready for use

**Planes:** e.g. rebate, plough, block, bull nose

**Learning Outcome 4: The candidate will be able to select, use, clean and store tools**

## **and equipment for assembling formwork**

The candidate must be able to do the following:

### 4.1 Select, use, clean and store setting out and **marking out tools** and **equipment**

**Marking out Tools:** Try square, mitre square, combination square, sliding bevel, marking

gauge, marking knife, mortise gauge, compasses, dividing compasses, box square, miter template, dovetail template, tape measure, rule

**Equipment:** Portable power planer, power saw, drilling machine

### 4.2 Select, use, clean and store **hand tools** to produce **joints**

**Hand Tools:** Saws, plane, chisels (bevel edge, firmer, mortise), hammer (Warrington, claw), screw drivers (slotted, cross head), brace and bit

**Joints:** Half lap, tee halving, bridle, dovetail half lap, cross halving, mitering, housings, mortise and tenon, haunched mortise and tenon, mortise and tenon on rebated section (square and off set shoulder), mortise and tenon on grooved and molded section (masons miter, pocket scribing) through dovetails, lapped dovetails, adjustable kickers, pointed H pegs

### 4.3 Select, use, clean and store **hand tools** to set out and construct **frames** and **products**

**Hand tools:** jack plane, spirit level, compass, foot rule, axe, rebate plane, read plane, ratchet

brace, cramp, gimlet, mallet, plier, chisel, hammer, adze, pincer, auger

**Frames/products:** Tool box with dovetailed joints, gate with mortised and tenoned joints and palings, scaled external door (framed, ledged, braced, battened), opening window, half

lab joints, form plys, form boards, pointed pegs

### 4.4 Select, use, clean and store portable **power tools**

**Power tools:** sander, saw, drill, air stapler, angle grinder, portable power planer, power saw, drilling machine

## **Learning Outcome 5: The candidate will be able to erect and dismantle conventional and system formwork**

The candidate must be able to do the following;

### 5.1 Interpret **information** provided in the formwork drawings

**Information:** views, scales, specifications and abbreviations, types and components

### 5.2 Safely **assemble formwork** components for conventional and system formworks

**Formwork** foundation, column, straight wall, tie beams, beams and slabs

**Assemble:** Select materials, tools and equipment to produce shutters (beam shutters, straight shutters, column shutters, beam bottom shutters); measure, mark out, cut panels; assemble panels; apply coating

### 5.3 Safely **erect** conventional and system formwork

**Erect:** Select tools and equipment; check the measurements of the formwork; mark out the area of formwork; erect the formwork, its components and secure fixings; check the position, level, stability and height of formwork

#### 5.4 Safely **dismantle** conventional and system formwork

**Dismantle:** Select tools and equipment required to dismantle formwork; remove panels and components carefully without damaging concrete or formwork; clean and store panels, components and fixtures of formwork for future use.

#### 5.5 Repair **damaged formwork**

**Damaged formwork:** distorted, wrong size/measurement, not leveled, deterioration due to usage and time

## Knowledge requirements

Oral questioning should be used to provide evidence of the candidate's knowledge

### Learning Outcome 6: The candidate will understand safe working practices in the workplace

The candidate must be able to do the following:

#### 6.1 Describe **methods** of hazard prevention

**Methods:** warning notices, barriers, regular inspection of formwork

#### 6.2 State **methods** used to protect surrounding work areas from infringement or contamination

**Methods:** dust extraction, ventilation, dust sheets, masking tapes/paper, shields (boards)

#### 6.3 Describe **faults hazards** and **dangerous practices** when using ladders and steps

**Faults:** metal components (corrosion), timber components (deterioration, splits, cracks)

**Hazards:** base fixing/stabilizing, clip/lash at platform level, clear space around base

**Dangerous practices:** inappropriate ladder type, uneven/loose ground

#### 6.4 Describe the **purpose** of **barriers** and warning signs/lights to protect working personnel and members of the public

**Purpose:** Segregation of different work activities, segregation of work from members of the public

**Barriers:** Security tape, barrier material (timber, metal, plastic), safety/warning (signs, lights)

#### 6.5 Describe the **purpose** of protective **clothing** and safety **equipment** for a range of **applications**

**Purpose:** Handling corrosive/heavy materials, cutting/preparing timber products, using power tools, protecting feet from heavy objects, working below other workers or machines protection of self and others, legal obligation, protection from chemicals

**Equipment/clothing:** Overalls, gloves, eye protection, face mask, ear defenders/plugs, safety shoes, safety helmet (hard hat), machine guards, residual current device, safety belt/harness, reflective or high visibility clothing, high intensity torch, insulated rubber mats, insulated tools, caution boards

**Applications:** producing joints and components to form products, cleaning, using dangerous substances (preservatives, adhesives, lubricants)

6.6 List the toxic **effects** of **materials** used in wood trades

**Effect:** Burning of eyes, skin infections, rashes, allergy, breathing difficulties.

**Materials:** wood dust, preservatives, adhesives, lubricants, mould oils and emulsions.

6.7 Describe the **preventative** and **remedial actions** to be taken in the case of **exposure** to toxic **materials**

**Preventative action:** Practicing good housekeeping, ventilation, masks, protective clothing/equipment

**Remedial action:** immediate first aid, report to supervisor

**Exposure:** ingested, contact with skin, inhaled

**Materials:** wood dust, preservatives, adhesives, lubricants, insulating materials, Polyurethane strip, self-adhesive tape

6.8 Describe the **procedures** for safe storage of **materials**

**Procedures:** Safe loading-unloading practices, stacking, racking, interlocking, blocking, labeling

**Materials:** Wood dust, preservatives, adhesives, lubricants

### **Learning Outcome 7: The candidate will understand different types of tools, equipment and maintenance procedures**

The candidate must be able to do the following:

7.1 Describe the use of setting pliers, files and gauges for saw maintenance

7.2 Identify different **types and grades** of honing stone

**Types:** Oil, wet, slip

**Grades:** Fine, medium, course

7.3 Identify **hand tools** for setting out and marking.

**Hand tools:** Try square, mitre square, combination square, sliding bevel, marking gauge, marking knife, mortice gauge, compasses, dividing compasses, box square, mitre template, dovetail template, tape measure, rule

7.4 State how to **maintain/care** for setting out and marking hand tools

**Maintain/care:** wipe clean/dry, secure storage

7.5 Describe different types of **hand saws**.

**Hand saws:** Rip, cross cut, tenon, dovetail, coping, bow, key hole/pad, compass

7.6 Describe different types of **hand planes**

**Hand planes:** jack, try, smoothing, rebate, side rebate/side filister, plough, shoulder, bull nose, spoke shave, routing

7.7 Describe different types of **chisels** and **axes**

**Chisels:** bevel edge, firmer, mortice, paring, internal/external curve gouges

**Axes:** Hand, carpenters, adze

7.8 Describe different types of **boring tools**

**Boring tools:** ordinary brace, wheel brace, cordless/battery drills, Jennings bit, centre bit, expanding bit, flat bit, twist drill bits, counter sink bit

7.9 Describe different types of **hand tools**

**Hand tools:** screwdrivers (ratchet, pump), punches, plugging/seaming chisel, cold chisel, bolster, pincers, pliers, G-cramps, sash cramps, bench holdfast, mitre box, spirit levels, plumb lines, winding strips, squaring rod

7.10 Describe different types of **portable power tools**

**Portable power tools:** sander, saw, drill

### **Learning Outcome 8: The candidate will understand different types and properties of materials**

The candidate must be able to do the following:

8.1 State the **reasons** for seasoning timber

**Reasons:** Removal of moisture, stability, workability

8.2 Describe the types of **defects** in timber and the **reasons** for their presence

**Defects:** Ring shake, star shake, heart shake, knots in growth/converted timber

**Reasons:** Seasoning defect, branches

8.3 Describe the basic properties of common softwoods

**Properties:** Structure, density, texture, strength, workability

**Softwood:** Pine, redwood, white wood

8.4 Describe the basic **properties** of common **hardwoods**

**Properties:** structure, density, texture, strength, workability

**Hardwood:** mahogany, oak, teak

8.5 Identify the various types of manufactured **board**

**Boards:** plywood (3 ply, multiply, block board, laminboard, batten board), fibre board (medium density fibre board /MDF, hardboard), particle board (chipboard, wafer board), veneered board (melamine, Formica, cloth, real wood)

8.6 Identify different types of **formwork Linings**

**Formwork linings:** Oil-tempered hardboard, molded rubber, molded PVC, glass fiber, reinforced polyester

8.7 Describe different **types of Formwork**

**Types of Formwork** Foundation formwork, Column formwork, Beam form work, Fabrication formwork (system formwork), Slab form work, suspended form work, slip forms, jump forms

# Candidate assessment record sheets

## Instructions

One complete set of competence achievement records must be provided for each candidate being assessed. The following section contains competence achievement records for both the Skills Foundation Certificate and the Skills Proficiency Certificate programmes.

The assessor should confirm achievement of each requirement with a tick in the appropriate box and note the date of achievement. The candidate should also initial and date each requirement to confirm the successful completion of the assessment.

Unsuccessful attempts should not be recorded on these sheets but recorded separately.

Upon completion of all requirements for the award the competence assessment record must be dated and signed by the candidate, assessor and external verifier before results can be submitted and certification requested.

# Skills Proficiency Certificate in Basic Form Work (Shuttering)

## Competence achievement record

Candidate name (please print)

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Practical competences		Standard achieved			
Health and Safety	(✓)	Date	Assessor initial	Date	Candidate initial
1.1 Carry out safe working practices to prevent hazards and to ensure the safety of working personnel and members of the public					
1.2 Carry out safe working practices using equipment/materials to protect surrounding work areas from infringement or contamination					
1.3 Inspect for faults, set up and safely use steps and ladders					
1.4 Set up safety barriers around scaffold platforms to protect working personnel and members of the public					
1.5 Select and use protective clothing and safety equipment for specific tasks					

Materials	(✓)				
2.1 Identify and select common softwoods from given specifications					
2.2 Identify and select common hardwoods from given specifications					
2.3 Identify and select manufactured boards and sheet materials from given specifications					
2.4 Identify and select screws and nails from given specifications					
2.5 Use and store materials in a safe manner					

<b>Tool Maintenance</b>	(✓)
3.1 Sharpen, set and top hand saws	
3.2 Sharpen and hone chisels and plane blades	
3.3 Assemble hand planes ready for use	


<b>Tool Skills</b>	(✓)
4.1 Select, use, clean and store setting out and marking out tools and equipment	
4.2 Select, use, clean and store hand tools to produce joints	
4.3 Select, use, clean and store hand tools to set out and construct frames and products	
4.4 Select, use, clean and store portable power tools	


<b>Erect and Dismantle Formwork</b>	(✓)
5.1 Interpret information provided in the formwork drawings	
5.2 Safely assemble formwork components for conventional and system formworks	
5.3 Safely erect conventional and system formwork	
5.4 Safely dismantle conventional and system formwork	
5.5 Repair damaged formwork	


**Context:**

**Comments:**

**This is to confirm that the candidate has successfully completed the required tasks:**

Candidate name (please print) and signature

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Assessor name (please print) and signature

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Verifier name (please print) and signature

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Completion date

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