

CPCCLSF4001

Licence to Erect, Alter and Dismantle Scaffolding Advanced Level

Learner Guide Instructions

Who is this document for?

The learner.

What is in this document?

- Course information that matches the PowerPoint presentation.
- Review questions.
- Practical assessment instructions for learners.

What do you need to do before you use it for the first time?

1. Rebrand the document.
2. Review the document as part of your validation process.
3. Set the reading and test time limits that are highlighted in pink at the end of the document.

See the 'Read Me First' document for a complete set of instructions on how to use these resources.

LEARNER GUIDE

CPCCLSF4001 Licence to Erect, Alter and Dismantle Scaffolding Advanced Level

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

This Book Contains:

- Course Information.
- Review Questions.
- Practical Assessment overview and Instructions.

Table of Contents

1.1 Introduction	6
1.1.1 When is a High Risk Licence Needed?	6
1.1.2 What Types of Work can you do with a Advanced Scaffolding High Risk Licence?	6
1.1.3 High Risk Work Licence Requirements	7
Review Questions	8
1.2 Types of Scaffolding	8
1.2.1 Basic Level Scaffolds	9
1.2.2 Intermediate Level Scaffolds	10
1.2.3 Advanced Level Scaffolds	11
1.2.4 Scaffold Duty	11
Review Questions	12
1.3 Plan the Job	12
1.3.1 Assess the Task and Gather Site Information	13
1.3.1.1 Identify Forces and Loads	14
1.3.2 Work Health and Safety Requirements	15
1.3.3 Duty of Care	15
1.3.4 Work Method Statements	16
1.3.5 Manufacturer Documentation	17
Review Questions	17
1.4 Risk Management	19
1.4.1 Identifying Hazards	20
1.4.1.1 Consultation and Communicating with Others	21
1.4.2 Working Near Power Lines	21
1.4.2.1 Tiger Tails	23
1.4.3 Risk Assessment	23
1.4.4 Hazard Controls	25
1.4.4.1 Controlling Traffic Hazards	26
1.4.4.2 Controlling Equipment Hazards	27
Review Questions	27
2.1 Prepare for Scaffolding Work	30
2.1.1 Scaffolding Plan	30
Review Questions	31
2.2 Identify, Select and Inspect Equipment	32
2.2.1 Identify, Select and Inspect Associated Equipment	32
2.2.1.1 Scaffold Planks	33
2.2.1.2 Ladders	33
2.2.1.3 Scaffold and Tie Tubes	34
2.2.1.4 Couplers and Fittings	34
2.2.1.5 Fibre Ropes and FSWR	35
2.2.1.6 Chains	37
2.2.1.7 Screening	37
2.2.1.8 Adjustable Props	37
2.2.1.9 Prefabricated Needles/Suspension Rigs & Counterweights	38
2.2.1.10 Beam Clamps	38
2.2.1.11 Trolleys	38
2.2.1.12 Hand Tools	39
2.2.1.13 Materials Hoists	40
2.2.1.14 Swing Stages	40
2.2.2 Identify Safety Equipment	41
2.2.2.1 Safety Harnesses	41
2.2.2.2 Lanyards and Energy Absorbers	42
2.2.2.3 Inertia Reels	43
Review Questions	44

2.3 Work Site Communication	49
2.3.1 Communication Methods	49
2.3.2 Select and Inspect Communications Equipment	50
2.3.2.1 Conventional Radio	50
2.3.2.2 Fixed Channel Radio	50
Review Questions	51
2.4 Defective Equipment	51
2.4.1 Isolate Defective Equipment	52
Review Questions	52
2.5 Set Up for the Task	52
2.5.1 Apply Hazard Control Measures	53
2.5.2 Check Structural Load Bearing Capacity	53
2.5.3 Prepare Footings and Foundations	54
2.5.4 Fit Safety Equipment	55
2.5.5 Prepare and Position Scaffolding Equipment	55
Review Questions	56
3.1 Erect Scaffold and Scaffold Equipment	58
3.1.1 Suspended Scaffolds	58
3.1.1.1 Swing Stages	59
3.1.1.2 Safety Considerations of Suspended Scaffolding Cradles	60
3.1.1.3 Calculations for Suspended Scaffolds	64
3.1.2 Hung Scaffolds	67
3.1.2.1 Hung Scaffold Requirements	69
3.1.3 Installing a Materials Hoist	70
3.1.4 General Scaffold Safety Requirements	70
3.1.5 Ties	71
3.1.5.1 Box Tie	71
3.1.5.2 U-tie	72
3.1.5.3 Through Tie	72
3.1.5.4 Double Lip	73
3.1.5.5 Column Tie	73
3.1.6 Work Safely at Heights	74
3.1.6.1 Monitor Work Area and Equipment	74
3.1.7 Communications	75
Review Questions	75
3.2 Recording Scaffold Erection and Modification	81
3.2.1 Inspection and Documenting Scaffolds Erection	81
3.2.2 Modifying or Inspecting a Scaffold	82
3.2.3 Completing a Handover Certificate	83
Review Questions	84
3.3 Dismantle Scaffold and Scaffold Equipment	86
3.3.1 Procedures for Safe Dismantling of Scaffolding	86
Review Questions	86
3.4 Incidents and Emergency Response	87
3.4.1 What is an Incident?	87
3.4.1.1 Responding to an Incident	87
3.4.2 Workplace Emergencies	87
3.4.2.1 General Emergency Response	88
3.4.2.2 General First Aid	88
3.4.3 Incidents Relating to the Use of Fall-Arrest Systems	88
3.4.3.1 Suspension Trauma	88
3.4.3.2 Preventing Suspension Trauma	89
3.4.3.3 First Aid for Suspension Trauma	89
3.4.4 Report All Hazards, Incidents and Injuries	90
Review Questions	90

3.5 Conclude Scaffolding Operations	90
3.5.1 Tidy the Work Area	91
3.5.2 Inspect and Store All Scaffolding Equipment	91
3.5.2.1 Isolate Faulty Equipment and Report Defects.....	91
3.5.2.2 Storing Tools and Equipment.....	92
3.5.3 Remove Hazard Control Measures	92
Review Questions	92
Practical Assessment Instructions	94
Conditions of Assessment	94
Protective Personal Equipment (PPE) Requirements.....	94
Grounds for stopping the assessment	94
Achieving a Satisfactory Outcome.....	94
Practical Assessments	95
Appendix A –Work Method Statement.....	97
Appendix B – Handover Certificate	103

Evaluation Copy Only

1.1 Introduction

These training materials are based on the National High Risk Licence Unit of Competence **CPCCLSF4001 Licence to Erect, Alter and Dismantle Scaffolding Advanced Level.**

You will learn about:

- ◆ Planning out your work.
- ◆ Selecting and inspecting equipment.
- ◆ Setting up for the task.
- ◆ Erecting and dismantling hung and suspended scaffolding.



1.1.1 When is a High Risk Licence Needed?



A high risk work licence allows you to lawfully work with certain high risk equipment and plant such as forklifts, cranes, hoists, elevating work platforms, scaffolding, rigging and pressure equipment. There are 3 levels of scaffolding class under a high risk licence. This course covers the work associated with the Advanced Scaffolding (SA) class of high risk work licence involving erecting, altering or dismantling a temporary structure to support a platform from which a person or object could fall more than four metres.

Competence in this unit does not in itself result in a licence. A licence is obtained after competence is assessed under applicable Commonwealth, state or territory work health and safety (WHS) regulations.

1.1.2 What Types of Work can you do with a Advanced Scaffolding High Risk Licence?

A person with an advanced scaffolding licence is legally allowed to carry out the following tasks:

- ◆ All basic scaffolding tasks:
 - ◆ Erection, alteration and dismantling of modular and prefabricated scaffolds.
 - ◆ Erection of cantilevered materials hoists with a maximum working load limit of 500 kilograms.
 - ◆ Use of ropes and gin wheels.
 - ◆ Installation of safety nets.
 - ◆ Use of static lines.
 - ◆ Erection of bracket scaffolds (tank and formwork).
- ◆ All intermediate scaffolding tasks:
 - ◆ Installation of cantilevered crane loading platforms.
 - ◆ Erection and dismantling of cantilevered and spurred scaffolds.
 - ◆ Erection and dismantling of barrow ramps and sloping platforms.
 - ◆ Scaffolds associated with perimeter safety screens and shutters.
 - ◆ Erection and dismantling of mast climbers.
 - ◆ Erection, alteration and dismantling of tube and coupler scaffolds including tube and coupler covered ways and gantries.
- ◆ Erection of hung scaffolds.
- ◆ Erection of suspended scaffolds.



1.1.3 High Risk Work Licence Requirements

Once you pass your assessment you will have 60 days to apply for your licence.



You must renew your licence within 12 months of its expiry otherwise:

- ◆ Your licence can't be renewed.
- ◆ You need to repeat the course and re-apply for your licence.
- ◆ You need to enrol in the course again and be supervised by somebody who has a current licence for the same class.

You can still do high risk work without a licence as long as:

- ◆ You are enrolled in a high risk course for the class, and
- ◆ You are being supervised by somebody who has a licence for the same class.

Any licensed worker must take reasonable steps to make sure the way they work does not impact on the safety of themselves or any other worker. This is their legal duty of care. Failing to work safely can result in the health and safety regulator:

- ◆ Suspending or cancelling your licence.
- ◆ Refusing to renew your licence
- ◆ Ordering that you are reassessed to ensure you are competent.

Your employer might ask you for evidence that you have a high risk licence before you start any high risk work. You can show them:

- ◆ Your licence.
- ◆ Proof from the training company that you have passed your assessment.
- ◆ Proof that you are currently completing a course for high risk work.



Review Questions

1.

List five (5) examples of scaffolding tasks that a person with an advanced level licence may complete.



1.

2.

3.

4.

5.

1.2 Types of Scaffolding

When selecting a scaffold, the specified building's design, shape, and location should be considered.

The scaffold's ability to adapt to the structure's contours should also be taken into account.






In addition, the purpose for which the scaffold will be used should be a factor in making the decision of which type of scaffold should be selected.

You will need to decide what type of scaffold construction is the most appropriate for the tasks you need to perform.





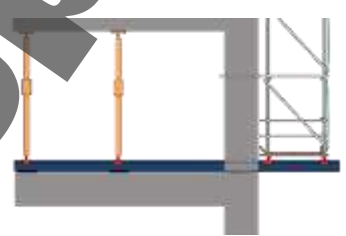
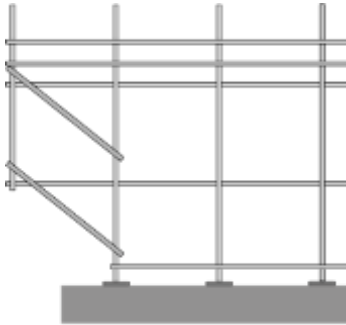
1.2.1 Basic Level Scaffolds

The following table outlines the main types of basic level scaffolds.

Name	Description	Example
Mobile Scaffold	<p>A Mobile Scaffold is an independent, free-standing, movable scaffold mounted on castors. It is useful for maintenance where multiple points must be accessed.</p>	
Birdcage Scaffold	<p>A Birdcage Scaffold consists of more than two rows of standards, connected by ledgers and transoms. It is intended for use on one level only, and is commonly used for working on a ceiling.</p>	
Modular or Frame Scaffolding	<p>A Modular or Frame Scaffolding (steel, fibreglass or aluminium) is assembled from prefabricated frames, braces and accessories.</p>	
Bracket Scaffold	<p>A Bracket Scaffold is a scaffold that has a platform carried on frames attached to or supported by a permanent or temporary construction.</p> <p>Bracket scaffolds are often used for maintenance work.</p>	
Tower Scaffold	<p>A Tower Scaffold can be a mobile, modular, or tube and coupler variety. Tower scaffolds are generally fitted with a single work platform with ladder access and have only 2 rows of standards. Tower scaffolds are popular where there is a limited amount of space to erect a scaffold.</p>	



1.2.2 Intermediate Level Scaffolds

The following table outlines the main types of intermediate level scaffolds.

Name	Description	Example
Tube and Coupler Scaffold	<p>A Tube and Coupler Scaffold is erected using scaffold tubes connected with couplers.</p> <p>These are useful where the scaffold must be erected in a specific shape to match a structure, or prefabricated scaffolds will not meet the requirements of the task.</p>	
Single Pole Scaffold	<p>A Single Pole Scaffold contains a single row of standards, and is completely dependent on the structure it is placed against for support.</p> <p>A single pole scaffold is often used for bricklaying or other masonry work.</p>	
Cantilever Scaffold	<p>A Cantilever Scaffold is a scaffold that is supported by cantilevered load-bearing members.</p> <p>It is commonly used where surface conditions are unacceptable, or the required height of the work platform makes conventional scaffolds unsuitable.</p>	
Spurred Scaffold	<p>A Spurred Scaffold is partially supported by inclined load-bearing members called 'spurs'.</p> <p>They are used where there is insufficient load bearing capability for standards, or where the scaffold must be configured in a way that does not have all standards resting on the ground/supporting structure. An example of this is a scaffold that is built around and above an entryway.</p>	

1.2.3 Advanced Level Scaffolds

The following table outlines the main types of advanced level scaffolds.

Name	Description	Example
Suspended or Swing Stage Scaffold	<p>A Suspended or Swing Stage Scaffold can be either raised or lowered, as it has a suspended platform.</p> <p>These types of scaffolds are commonly associated with window washers.</p>	
Hung Scaffold	<p>Hung Scaffolds are temporary structures suspended by tubes, wire ropes or chains from a permanent structure and are used to access areas that would otherwise be difficult or unsafe to access by other means.</p> <p>They are usually made from steel, aluminium or timber components.</p> <p>Hung scaffolds CANNOT be raised or lowered when in use. Some can, however, travel horizontally with the aid of girder trolleys or mobile suspension rigs.</p>	

1.2.4 Scaffold Duty

Scaffolds have different rated capacities according to their duty:

Duty	Minimum Working Platform Width	Maximum Load Allowance on Platform
Light Duty	<p>450mm</p> <p>This is the minimum clear access required for a non-working or access only platform.</p>	<p>225kg per bay</p>
Medium Duty	<p>675mm</p>	<p>450kg per bay</p>
Heavy Duty	<p>900mm</p>	<p>675kg per bay</p>

The configuration and the parts that make it up generally determine the duty of a scaffold.

You need to make sure the scaffold you intend to erect will be the correct duty depending on the requirements of the job, and the types of loads that will be resting on the scaffold while it is erected.

You should check the manufacturer or supplier specifications for the exact rated capacity of the working platforms of a scaffold. Do this during the planning stage, this will make sure the scaffold can support the weight of any workers, tools, equipment and materials required for the job.

Review Questions

2.

List the two (2) main types of advanced level scaffolds and describe how or when they could be used?



1.

2.

3.

What is it that usually determines the duty of the scaffold?



1.3 Plan the Job

Careful planning is the first step in completing a task safely.

Make sure you are aware of all of the requirements of the job, and the steps required to carry it out properly you can help to keep the work site and workers as safe as possible.



1.3.1 Assess the Task and Gather Site Information



The first thing to do when planning a task is to work out exactly what it is you need to do. Simply put, you will need to assess the task.

To do this, you will need to collect all the information you require about the tasks, personnel, local site conditions and equipment.

Site information may include:

- ◆ Structure condition and suitability.
- ◆ Hazards that exist on site or that are associated with the completion of the task.
- ◆ Access and egress (entry and exit) to the work area.
- ◆ Equipment that is being used on site.

You can find work instructions and site information in documentation such as:

- ◆ Work Method Statements (WMS).
- ◆ Site-specific Job Safety Analyses (JSA).
- ◆ Task plans.
- ◆ Manufacturer's specifications.

Make sure you can accurately interpret and understand any structural charts and plans related to the scaffolding work. They will help you:

- ◆ Decide which scaffolding equipment and tools you will need.
- ◆ Confirm what methods and procedures you will use throughout the task.
- ◆ Identify evacuation routes no-go zones or high-risk areas on site.



When you are planning out the scaffolding task and the use of scaffolding equipment it is very important to consult with other people involved in the job. You may need to talk to supervisors, colleagues, managers responsible for workplace/operations, and other scaffolders/site workers.



1.3.1.1 Identify Forces and Loads

A 'load' is any type of force exerted on an object.

It is important to understand the relevant forces and loads that are associated with the scaffolding work you will be doing.



Forces and loads apply to scaffolds and the structures they are attached to.

When constructing a scaffold there are a range of forces and loads you may need to consider:

- ◆ **Dead Loads** – The weight of a scaffold or hoist and its components before it is loaded.
- ◆ **Live Loads** – The weight of the equipment and personnel on the scaffold (in each bay).
- ◆ **Static Load** – A load that is not moving (consistent load).
- ◆ **Dynamic Load** – Force made by a moving load on a resisting structure or component.
- ◆ **Wind Load** – The force made by wind on a structure or its components.
- ◆ **Environmental Load** – The weight of environmental factors such as water, dust and debris that may be on the scaffold.

Each standard is designed to hold at least 1/3 of the duty live load per bay.

For example, a medium duty scaffold that can hold 450kg per bay requires each standard to hold at least 150kg.

It is important to know the weight of any material you place on a scaffold. If you place too much weight on a scaffold it may collapse.

Some loads may have the weight marked on them or they may come with a consignment note or weighbridge certificate.

You may have to calculate the weight of a load using appropriate mathematical procedures and formulas. Remember to add the weight of pallets, boxes and drums when lifting loads.



The weights of some common materials can be found in the table below.

Material	Weight
Cubic metre of concrete	2.4 metric tonnes
Cubic metre of water	1 metric tonne
Cubic metre of earth or clay	1.9 metric tonnes
Cubic metre of steel	7.84 metric tonnes
1000 common bricks	4 metric tonnes

There may be other factors that you need to consider when planning out the task including:



- ◆ Plant and equipment required for the task.
- ◆ Task plans.
- ◆ Weights or any other relevant information that will allow you to plan out the job.
- ◆ Load the scaffold needs to support.
- ◆ Height and width of the scaffold.
- ◆ Availability of equipment.
- ◆ Induction and training.
- ◆ Work method statements.
- ◆ Risk assessments.

1.3.2 Work Health and Safety Requirements

Work Health & Safety (WHS) is defined as laws and guidelines to help keep your workplace safe.

These can be broken down into four main types:

Law	Explanation
Acts	Laws to protect the health, safety and welfare of people at work.
Regulations	Gives more details or information on particular parts of the Act.
Codes of Practice	Are practical instructions on how to meet the terms of the Law.
Australian Standards	Give you the minimum levels of performance or quality for a hazard, work process or product such as AS/NZS 1576. Note: other valid Australian Standards may also apply.

1.3.3 Duty of Care

All personnel have a legal responsibility under duty of care to do everything reasonably practicable to protect others from harm by working safely and following instructions.

