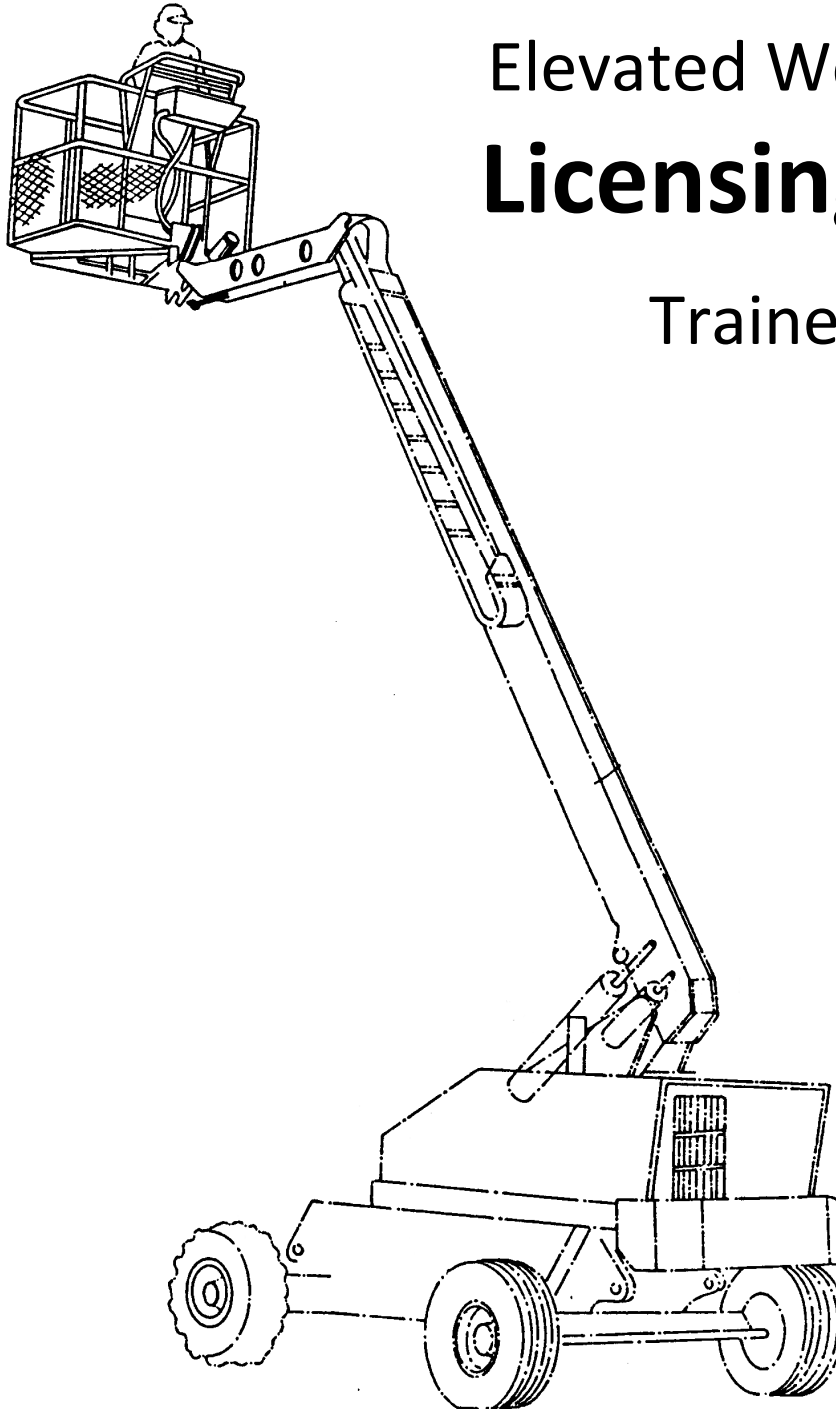


**Participant Name:** \_\_\_\_\_



# Elevated Work Platform **Licensing Course**

## Trainee Workbook

# Trainee Workbook

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## What this Trainee Workbook is about

This trainee workbook is about the skills and knowledge required to operate a boom-type elevating work platform (boom length 11 metres or more) including the planning of work, conducting routine checks, setting up an elevating work platform, shutting down and securing the elevating work platform.

Persons achieving competence in this course will need to fulfil all of the relevant state/territory WHS regulatory requirements concerning the safe operation of boom-type elevating work platforms.

*Successful completion of this course leads to a licence being issued.*

The Elements of Competency from the unit TLILIC2005A Licence to operate a boom-type elevating work platform (boom length 11 metres or more) covered in this trainee Workbook are listed below.

- Plan work
- Conduct routine checks
- Set up elevating work platform
- Operate elevating work platform
- Shut down and secure elevating work platform

This unit of competency is from the Transport and Logistics Training Package (TLI10).

This Trainee Workbook provides general information and advice on the safe operation of a boom-type elevating work platform. Always read the operator's manual to understand the limitations of the equipment you are using.

FINAL TRIM Training recognises the importance of quality training as an underpinning principle in providing skilled workers, and that the most effective form of training is a combination of informal and formal training methods.

Use the instruction and information supplied to you by your trainer to gain and demonstrate a satisfactory\* level of skill and general knowledge. If you wish you may access additional resources for the purposes of further development or studying for the Licensing Assessment. It is your responsibility as the trainee to practice and study as required to ensure that your level of competence in both the theory and practical components is satisfactory prior to any form of testing.

## Workbook Tasks

Throughout this workbook, you will be required to perform certain tasks relating to the area of study and used to re-enforce your learning. These points will be highlighted by the following icons:



### Discussion Points

These tasks will help you to understand the underpinning knowledge and will help you to think for yourself and discuss viewpoints with other trainees as well as your trainer.



### Activities

At the end of each element, you will be able to review the content by completing these tasks. The activities help to determine if you understand the information covered and can be completed by yourself or as a group.

\* a level of skill/knowledge that would be satisfactory to pass a WorkCover Licensing Assessment.

## Introduction to high risk work licensing

The new national system is based on the '**National Standard for Licensing Persons Performing High Risk Work**'. The National Standard requires training and assessment to be undertaken by a Registered Training Organisation (RTO) under the Australian Quality Training Framework (AQTF).

### Objectives and Principles

The objectives of this National Standard are:

- to ensure that persons have the skills and knowledge to perform high risk work in a safe manner; and
- to facilitate the operation of a nationally uniform and efficient licensing system for persons engaged in high risk work.

Licenses issued in accordance with this National Standard will be recognised in Australian States and Territories to promote the portability of skills and the free movement of labour across State and Territory borders.

This National Standard provides a national policy approach for authorising the performance of high risk work and promoting safety standards relating to high risk work.

### Training and Assessment Requirements

Training and assessment for this course must be delivered under the supervision of, or in partnership with, an RTO in accordance with the AQTF. Training and assessment must show evidence of:

- structured training
- practical training experience, and
- an assessment of the trainee's\* competency

Before being booked into a WorkCover Licensing Assessment, trainees must demonstrate to the RTO Trainer/Assessor that they have achieved the required competencies to have their skills and knowledge assessed against the relevant unit(s) of competency.

Recognition of a trainee's prior learning may exempt a person from undertaking all or part of the training but must demonstrate that the person's equivalent qualifications and prior learning are relevant to the competency.

Part of a person's learning may include on the job training and experience. This should be demonstrated through the completion of a Training Logbook which is used to keep track of workplace training.

A person is not allowed to perform HRW if they are not competent to do so (whether you hold a HRW license or not). If a person does not have a HRW license however, they must have been formally assessed by an RTO and operate under the direct supervision by a qualified license holder, for training purposes only.

Once the course has been successfully completed, the RTO Trainer/Assessor will complete a 'Trainee Evidence Workbook' which is used to demonstrate engagement in a recognised course of training to a WorkCover Assessor.

*\* Under WHS Regulations, a 'trainee' is a person who is receiving formal training and informal learning in a class of HRW.*

## WHS and High Risk Work Licensing

Under Workplace Health and Safety law, **an employer must provide** a workplace that is safe and without risk to health. Information about workplace safety can be found in: (Q6)

- **Your workplace Safety Officer**
- **S.W.M.S or J.A.S - Safe work & job procedures**
- Machinery Operators manual or the Manufacturer's information guide
- Management plans
- Legislation and regulations
- Australian standards
- Etc.

The employer must provide instruction, training and supervision for their employees to work safely and must do so in a way that is easy for employees to understand.

The employer must: (Q1)

- **Provide and maintain safe plant** (machinery and equipment).
- **Provide and maintain safe systems of work** - for example, controlling entry to high-risk areas and providing systems to prevent falls from heights.
- **Ensure the safe use, handling, storage or transport of plant or substances.**
- **Keep workplaces in a safe condition, free of risks to health** (for example, ensure fire exits aren't blocked, and the worksite is generally tidy).
- **Provide suitable facilities for welfare at any workplace.**
- **Give employees the necessary information, instruction, training or supervision to enable them to do their work in a way that is safe and without risks to health.**

As the **employee you also have a duty of care:** (Q7)

You must take reasonable care of the **health and safety** of yourself and of others who may be affected **by** what you do or do not do.

You must cooperate with the employer on **health and safety** matters.

You must not misuse any equipment that is provided **for safety purposes** (eg fire extinguishers or **safety** goggles)

An employer must never allow a person to perform HRW if they know that person is not competent to do so. Otherwise, they will also be responsible for putting others at risk and can be severely penalised. **The employer must provide instruction, training and supervision for employees operating HRW equipment.** (Q9)

## Application Requirements

A person must not operate a forklift truck unless the person holds a LF Class HRW licence, unless:

- 1) A person operates the forklift after Enrolling in a formal training course under a Registered Training Organisation (RTO); or (Q2)
- 2) After receiving formal training, under the supervision of a person who is licensed to carry out the high risk work (informal training),

In order to obtain an LF Class forklift licence, an individual needs to enrol in a formal course of study with a Registered Training Organisation (RTO). Once enrolled in a formal course of training and whilst undergoing either formal or informal learning, the individual is considered a **'trainee'** under WHS law.

All course participants MUST:

1. Be able to speak and/or understand the English language; and
2. Accept the requirements of the course and assessment process.

## Training Requirements

Persons wishing to apply for a LF Class HRW licence must be assessed by an accredited WHSQ assessor in affiliation with a Registered Training Organisation (RTO). Before the licence assessment can take place applicants MUST:

1. Be at least 18 years old;
2. Be a resident of Queensland;
3. Provide at least 100 points of identification;
4. Not currently hold an equivalent licence;
5. Provide evidence of engagement in a recognised course of training; and
6. Provide evidence that they have achieved the required competencies.

An assessment for an HRW licence involves both a knowledge and practical assessment and an assignment (or calculations assessment) conducted by the accredited WHSQ assessor.

## Workplace Health and Safety Queensland (WHSQ) Licensing Assessment

This assessment requires applicant to undertake a theory exam, a calculations exam, demonstrate an equipment/site inspection and carry out practical tasks as requested by the Workplace Health and Safety Queensland assessor.

If an applicant has yet to achieve competency in all assessment areas and/or does not complete the full assessment on the day, they are able to apply for re-assessment after **48 hours**.

The re-assessment will only consist of the areas where the applicant was assessed as not yet competent or failed to complete in full.

On successful completion of the assessment, the Workplace Health and Safety Queensland (WHSQ) Assessor will issue you with a Assessment Summary (AS1).

Application **MUST** be completed within 60 days of receiving your AS1 Certificate.

You can apply for a high risk work (HRW) licence or add a new licence class on an existing HRW licence, at [worksafe.qld.gov.au](http://worksafe.qld.gov.au) using the 'Online services' drop down menu.

You must submit your application within **60 days** from the date of assessment. (Q3)

If you fail to do so, the Notice of Satisfactory Assessment (AS1) issued by the assessor will expire and you will be required to complete the entire assessment again. (Q4)

If you submitted your application within the 60 day period and do not received your photo license in time, you are still licensed. You will receive your licence; however, this can take some time on holiday shutdowns and how many applications are being processed by WH&SQ.

Your copy of the Notice of Satisfactory Assessment (AS1), is valid as proof of qualification until you receive your photo licence card.

You will need to renew your HRW licence every **five (5) years**. (Q5)

## Responsibilities

It is the responsibility of a HRW licence holder to follow safe operating procedures at all times (**Duty of care**) and to ensure the safety of others in the workplace (**look after yourself and others**). (Q6)

Failure to do so can result in the persons HRW licence being **cancelled, suspended** or being refused to have it renewed (**not being renewed**). (Q7)

If a HRW licence holder is no longer competent to do the work they hold the licence for (e.g. have not performed work for a number of years and have forgotten), then they and their employer are responsible for ensuring that they do not perform that work and **seek further training**. (Q8+9)



## Element 1

# Plan work

## Section outline

Areas covered in this section are:

- Identify potential workplace hazards
- Identifying hazard control measures
- Selecting an appropriate elevating work platform
- Identifying appropriate communication methods



Performance Criteria 1.1

## Identify workplace hazards

A hazard is anything that can hurt you or others while you work. You need to know (identify) workplace hazards before you start work. Look for hazards. Look above you, look around you, and check the ground below you.

## Identify potential workplace hazards

### What is required for elevating work platform safety?

The most important aspect of elevating work platform operation is safety. As a elevating work platform operator you must be aware that there are always people working around you and if there was an accident they may be injured. It would be a terrible burden to have on your conscience that your workmate was injured by an accident that you could have prevented.

Elevating work platform safety has a very high profile in Australia. These accidents can be prevented only if companies and individuals realise the implications of these accidents and take steps to prevent them from happening.

**Each workplace has its own specific workplace hazards.** It is important to be aware of these hazards and what workplace policies and/or site specific procedures have been implemented to control them. The best way for an individual to be made aware of these hazards is to consult with appropriate personnel. (Q10)

### How can you identify workplace hazards?

The first and most important step in reducing the likelihood of an accident is hazard identification. This means identifying all workplace situations or events that could cause injury or illness. There are many methods which are useful for identifying hazards, including consultation with the following:

- Supervisors
- Safety officer (Q10)
- Managers
- Workmates
- OHS Committee members
- Health and Safety Representatives

## What is a “Hazard”? (Q5)

### Hazard

A hazard is anything that can harm you or others while you work.



### Risk

A risk is the chance of being injured by exposure to a hazard.



### Control

A control is what you can do to stop the hazard from hurting or killing you

The following are some of the most common hazards in relation to operating forklifts: (Q21)

#### Plant and equipment

Other forklifts, pallet jacks, vehicles etc. may be operating in the area.

#### Obstructions

Loose stock, bollards, building supports, rubbish or anything that's in the way.

#### Dangerous materials

Flammable, explosive, poisonous or corrosive materials stored, used or present in the area.

#### Pedestrians and personnel

May include other personnel (employees) or the public or both.

#### Overhead service lines

Lights, fire sprinkler systems, air conduits, gas pipes, water pipes, sewerage pipes, cable trays, etc.

#### Rear End Swing

The rapid sideways movement at the rear of the forklift truck creates a (Q15) hazard for pedestrians and other workers.

#### Railway lines

These are not uncommon in work areas.

#### Surrounding Structures and Buildings

Site sheds, separate warehouses or other businesses operating in the area.

#### Electrical Power lines

May include domestic or transmission lines.

#### Bridges

Low overhead clearance may become an issue.

#### Wind, bad weather conditions (Q55)

Hazardous weather may include rain, strong winds, lightning storms, extreme heat or cold etc.

#### Constant/loud noise

Often due to other machinery being used in the area.

#### Lighting /illumination

When working at night or in darkened areas, you MUST have adequate site lighting (Q14) across the entire working area so that the forklift can safely conduct its operations.

#### Confined Space/Restricted Area

Confined spaces (or restricted areas) often have poor ventilation. People in confined spaces can be overcome by dangerous gases.

Performance Criteria 1.2 and 3.4

## Hazard Control Measures

Hazard control measures are actions you take to control or prevent a danger that can injure (hurt) you or others. Set up hazard controls before you start a task. The hierarchy of controls tells you the steps to take in order to reduce the danger from hazards. A risk is the chance of a hazard injuring a person.

## Identifying hazard control measures

The correct course of action once a hazard is identified is to use control measures. These generally fall into three categories. You can

- eliminate the hazard
- minimise the risk
- use 'back-up' controls when all other options in the previous categories have been exhausted

The best way to control a hazard is to eliminate it. The elimination of a hazard is the first choice in a system called the 'hierarchy of controls'.

## The Hierarchy of Hazard Control

Once a hazard has been identified a driver must use the appropriate control measures to eliminate or reduce the risk of the hazard. The Hierarchy of Hazard Control (below) outlines the different types of control measures that may be used.

The list of control measures is in order of preference e.g. **1 Elimination** is always the safest option but may not always be practical, while **6 PPE** is seen as "a last line of defence" if other measures fail. A driver must use the safest and most practical control measure or combination of control measures possible. (Q15)

Hazard Control	Description	Example
1 <b>Elimination</b>	Completely remove the hazard from the area or workplace.	Move loose stock, empty pallets or rubbish from the operating area.
2 <b>Substitution</b>	Replace the hazardous material or process with something less hazardous.	Choosing a safer route to travel along.
3 <b>Isolation</b>	Using some form of barrier to separate the hazard from personnel.	Fencing along a walkway to separate elevating work platform and pedestrians.
4 <b>Engineering control measures</b>	Installing or using extra components or machinery.	Modifying an elevating work platform to make it "flame proof" (installing scrubber tank etc.)
5 <b>Administrative practices</b>	Generally includes measures that improve the knowledge/awareness of hazards to reduce risk.	Training of staff, posting signage, site inductions, using work permits.
6 <b>Personal Protective Equipment (PPE)</b>	Generally used in combination with other measures as an added precaution. A last line of defense should other measures fail.	High visibility clothing, "steel cap" boots, safety glasses, dust masks, overalls, hard hats, ear plugs, etc.

When a potential hazard is identified, there may already be control measures in place. If this is the case the operator must ensure the control measures that are in place are appropriate for the hazard identified.

## Control measures

There are dangers and risk of injury to any individual in the vicinity of an operating elevating work platform, including pedestrians or site personnel. Control measures should be applied before commencing any task and as soon as a hazard has been identified. (Q16)

A elevating work platform operator must ensure that nearby personnel are made aware of these hazards and appropriate control measures implemented prior to conducting any work. Otherwise those people can be seriously injured or crushed. (Q16)

These may include, but are not limited to the following:

- **Exclusion Zone (Warning signs and barricades)**  
These relate to the use of any warning signs which alert pedestrians and site personnel of hazards associated with the use of an elevating work platform and physical barriers which are used to segregate pedestrians and site personnel from the working area.
- **Flag person**  
This is an individual who is responsible guiding the flow of traffic to minimise the risk of elevating work platforms colliding with other equipment, pedestrians and other vehicles.
- **Flashing hazard lights**  
These are usually visual warning devices on the elevating work platform which alert pedestrians and site personnel of potential of danger that the elevating work platform presents.
- **Scaffolding (or Hoarding)**  
This relates to temporary structures used to support people and materials.
- **Traffic control measures**  
This relates to directing the flow of traffic and assigning designated areas and the segregation of pedestrians and site personnel from the working area.

The above list of control measures can also be applied to the use of vehicles and mobile plant or when working in a public area where an elevating work platform is being operated. (Q16)

## Personal Protective Equipment

Personal Protective Equipment (PPE) is designed to provide protection and limit damage for individual workers. It is important that you are aware that PPE is not designed to prevent injury, it simply helps to avoid damage.

PPE must be supplied by your employer and you must be trained to fit and use it correctly.

The types of PPE required will be determined during the **planning** stage of the task. (Q17)

All PPE must be inspected for serviceability prior to use. (Q17)

Performance Criteria 1.3

## Select the right elevating work platform

There are many different types of elevating work platforms. Depending on the job and the work area you may need to use a certain type of equipment. It is very important to use the correct type of equipment.

## Selecting an appropriate elevating work platform

There are many different types of elevating work platforms. Depending on the job and the work area you may need to use a certain type of equipment. It is very important to use the correct type of equipment ensuring that the platform is rated for the operator(s), tools and equipment required for the task.

## Rated Platform Capacity and Working Load Limit (WLL)

In order to determine the Rated Platform Capacity or the safe working load limit (WLL) of an elevated work platform you will need to refer either to the machine itself (**on the data plate**) or the information will be contained within the **manufacturer's information**. (Q18+19)

The Rated Platform Capacity includes the combined weight of the **operator(s)** and the weight of the **equipment**. In other words, the combined weight of the operator(s) and the weight of the equipment **MUST NOT** exceed the Rated Platform Capacity. (Q20)

The following various forces and loads may be part of considerations and planning when conducting EWP operations:

**Dead Load -** Is the **weight of the EWP itself** (unloaded) (Q21)

**Live Load -** Is the **combined weight of persons and/or materials** (including tools and equipment) that the EWP is supporting

**Wind Load -** Wind loadings resulting from wind speeds up to the maximum permitted, taking into account the degree of the exposure of the site (**The maximum wind an EWP can withstand as per Australian Standards**)

Performance Criteria 1.4 and 2.11

## Communication methods

It is important to communicate with your workmates when you are on a worksite. There are many methods of communication. You may need to read things like Material Safety Data Sheets (MSDS), Job Safety Analysis worksheets, work permits and written instructions.

## Identifying appropriate communication methods

Communication is a major factor in creating and maintaining a safe and efficient workplace. Different forms of communication are used throughout various work places e.g. verbal, written instructions, listening, signage, hand signals, appropriate work permits, etc... (Q22)

Communication is an important factor in the event of an emergency within the workplace, such as a fire for example. When the emergency has been identified, it is important to **warn others** of the danger (this may be done verbally or commonly through the use of an emergency alarm system. Personnel should have the nature of the emergency explained to them (i.e. **explain what it is and where**). There should be at least one individual who is responsible for **advice to emergency services**. (Q23)

## Communications Equipment

There are various types of equipment that can be used for each task. For example, when an elevating work platform is operating in an environment where it is hard to hear someone from the ground then the use of radio communication equipment may be suitable. Alternatively the use of hand signals for simple instructions may be sufficient. The types of communications equipment required will be determined during the **planning** stage of the task. (Q24)

It is important to ensure that the communication equipment to be used is in correct working condition. All communications equipment must be inspected for serviceability **prior to use**.

## Element 2

# Conduct routine checks

## Section outline

Areas covered in this section are:

- Check elevating work platform for any damage or defects
- Inspect and fit safety equipment
- Carrying out safety checks



Performance Criteria 2.1, 2.2, 2.3 and 2.12

## Visual checks

You should always do a visual check of a elevating work platform before using it to ensure there are not any problems. Faulty equipment can cause injury to yourself and others if you have an accident.

## Visually checking the EWP for any damage or defects

### Why are pre-start operational safety checks completed?

Before using any elevated work platform it is essential that you conduct a pre-operation safety check. This check is to ensure all equipment is safe to use and is the responsibility of the operator to carry out. You must always check the full extent of the EWPs capabilities to ensure that it is functioning correctly and is safe to use. (Q25-27)

Any safety check on the EWP is to ensure that there are no faults, damage or obvious signs of visual defects to the EWP which make it unsafe to operate. If the EWP is unsafe, the work should be stopped, it should be tagged out of service, reported to an appropriate person (such as your supervisor) and recorded within the EWP Logbook. (Q28)

When conducting a visual inspection of an EWP, it is important to ensure that all signage, labels and load charts are in place and readable so that you can refer to these to determine the EWP capacity and capabilities. (Q29)

### EWP Logbooks and EWP Service Logbooks

An EWP Logbook is for recording the important information relating to the operations of a particular EWP. This information includes, but is not limited to the following:

1. EWP operations
2. Daily safety checks carried out, and
3. reporting defects and corresponding rectification of defects (Q30)

When you are checking an EWP logbook as part of a pre-start check, you should always ensure that the **EWP logbook is applicable to the EWP** you are checking and ensure that there are **no outstanding defects** (i.e. any defects reported have been rectified). (Q31)

An EWP Service Logbook is where all **service records** are recorded as well as **repairs** and any **defect rectifications**. (Q32)

Any defects of an EWP should be recorded within the **EWP logbook** and **service logbook**. (Q33)

Elevated Work Platforms must be tested in accordance with the relevant Australian Standards (AS 2550.10 - 2006). You should never operate an EWP that has not been properly tested. If the Service Logbook of an EWP shows that it has not been properly tested or it has safety defects that have not yet been repaired, the work should be stopped, it should be tagged out of service and reported to an appropriate person. (Q34+35)

An operator is never allowed to remove a danger tag/out of service tag unless they are the person who placed it or they are authorised to do so by their employer. (Q36)

## Pre-Start Checks

You should always do a visual check of a elevating work platform before using it to ensure there are not any problems. Faulty equipment can cause injury to yourself and others if you have an accident. Look carefully at the EWP. You may be able to visually see some problems. A list of items you should pay particular attention to is listed below:

1. **EWP Logbook and Service Logbook**

It is important to check the EWP logbook and Service Logbook to ensure that there are no outstanding defects recorded against the EWP and that it is the correct logbook for the EWP you are checking.

2. **Ensure there are no safety tags on the plant**

Check that there are no safety tags on the EWP. REMEMBER: the only person who can remove a safety tag, once placed, is the person who placed it or by an authorised person such as a mechanic.

3. **Inspect all fluid levels**

Check all oil, water and fluid levels. Ensure that they are at the correct levels and that there are no leaks.

4. **Ensure signage is present and legible i.e. WLL and the manufacturer's data plate**

You will need to determine the Rated Platform Capacity or the safe working load limit (WLL) of the elevated work platform from either to the machine itself (on the data plate) or the information contained within the manufacturer's information.

5. **Inspect for any structural damage to the boom/jib (Q37)**

The following are visual indicators that the boom or superstructure of an EWP is defected:

- a) **Cracks** in the boom, superstructure or welds
- b) **Bends and/or twists** in the boom or superstructure
- c) **Visual rust from welds or joints**
- d) **Flaking paint**
- e) **Loose bolts**

6. **Inspect outriggers and packing**

7. **Inspect for any obvious signs of damage to the EWP**

8. **Tyre condition** (safe and legal) (Q38)

REMEMBER: If you identify any defects to the EWP during your visual inspection that it not only needs to be recorded within the **EWP logbook** and **service logbook** but reported to an appropriate staff member, such as your **supervisor or manager**. (Q39)

Performance Criteria 2.4, 2.5, 2.6 and 2.9

## Inspecting and fitting safety equipment

Safety equipment is very important for preventing accidents. You should always make sure that you are using the correct gear and that it is checked prior to use.

The most important safety device for an EWP operator is the use of a harness and lanyard. Other safety devices include visual warning devices on the elevating work platform which alert pedestrians and site personnel of potential of danger.

## Safety Devices

Safety equipment and safety devices should always be inspected prior to use to ensure that they are in correct operating condition. The types of safety equipment and devices will be determined during the planning stage of the task (when you are working out what needs to be done and what is required for the task). (Q40)

You must wear a **safety harness** and **fittings**. If you fall out of the basket, the safety harness could save your life. Make sure you are wearing the relevant PPE. For example, non-slip boots and a high-visibility vest. (Q41)

## Safety Harness and Fittings

The primary safety device that all EWP operators must use is a suitable safety harness and fittings (i.e. lanyards and anchor points). Before using this equipment you should check that:

1. The safety harness is in good condition
2. The lanyard is in good condition and the energy absorber is there
3. The equipment is less than ten (10) years old
4. The anchor points in the basket are in good condition (Q42)

## Dead Man and Ground Controls

The 'dead man' control is a safety feature. You can only use the EWP when the 'dead man' control is on. For example, if you slip over and let go of the 'dead man' control, the EWP will stop working.

The main purpose of the 'dead man' control is to **prevent accidental control** of the EWP and is used as a **safety device**. (Q43)

The 'dead man' control should only be used as a means to stop the EWP in the event of an emergency. (Q44)

Likewise, the **ground controls** on an EWP are for use **in the event of an emergency** (such as an operator being stuck in the basket above ground) or **for testing purposes**, when you are inspecting the EWP. (Q45)

Performance Criteria 2.7, 2.8 and 2.10

## Carrying out safety checks

This section relates to the following Performance Criteria:

### 2.7 Controls

Ground controls are used for testing the equipment and for use in an emergency (e.g. emergency descent), while the platform controls are used for general operation.

### 2.8 Starting the EWP correctly

You should also read the owner's manual and make sure the EWP is safe to start. Listen for strange noises and check for unusual shaking after you start the EWP.

### 2.9 Safety devices

The most important safety device for an EWP operator is the use of a harness and lanyard. Other safety devices include visual warning devices on the elevating work platform which alert pedestrians and site personnel of potential of danger.

### 2.10 Post-start operational checks

You should always do post-start checks after you start the EWP to ensure the EWP is still safe to use.

## Accessing the EWP Safely

You must get into or out of the basket when it is fully lowered or when there is a landing area. When you are climbing into the basket, three (3) body parts should be touching. This is known as the **3 points of contact rule**. You can use two feet and one hand, or two hands and one foot. (Q46)

Ensure that your harness is locked into an appropriate anchor point as soon as you are within the basket.

## Controls

The EWP has two sets of controls. Ground Level Controls and Basket Controls. The Ground Level Controls move the boom and basket. If the operator is in the basket, ground level controls are for emergencies only. The Basket controls are for moving the boom and basket and for driving the EWP.

## Starting the EWP Correctly

There are different kinds of EWPs. Make sure you look at the operator's manual before using the EWP. The most common procedure for starting an EWP is:

1. Put the **key in the ignition and turn on;**
2. Look at the **gauges and make sure they are working; and**
3. Conduct the post-start (**after start**) checks. (Q47)

Before moving the boom, make sure that the area is **clear of personnel** and that there is sufficient room for the boom to move around (i.e. **safe slewing radius**).

## Post Start Operational Checks

Once a pre-start operational check is complete and the elevating work platform is started according to procedures, an operator should conduct a post-start operational check to ensure that the plant is safe to use. (Q48)

Make sure the **pathway to move the EWP is free of obstructions/hazards** and that you check the following;

- **Controls**
- **Warning devices**
- **Throttle control**
- **Travel brakes**
- **'Dean Man' switch**
- **Horn/lights/drive indicator**
- **Gauges**
- **The full range of EWP capabilities** (Q49)

If at any time while conducting pre start and post start inspections on an EWP, the EWP is found to be defective and/or unsafe the operator should remove the keys, place a warning notice on the EWP indicating the EWP must not be used and then report the fault to an authorised person and record in the logbook. (Q50)



### Discussion Points

What are the controls of an EWP?



### Discussion Points

How do you carry out checks?

## Element 3

# Set up elevating work platform

## Section outline

Areas covered in this section are:

- Inspecting and checking the suitability of the ground
- Positioning the elevating work platform
- Securing work gear

Performance Criteria 3.1

## Checking the work area and ground suitability

You should always observe the work area before starting a job and plan the path that you will take. This will lower the chance of injury and damage to equipment and property.

## Inspecting the work area

Elevating work platform operators must make judgment calls from the beginning to the end of each job. Some things which must be considered include the capacity and stability of the equipment, the height at which the operator must be lifted, and obstacles both in the path and overhead where the equipment is to be operated (**All hazards and Controls**).

Before you commence the operation of an elevating work platform, the operator should consider all hazards and controls (Refer to page 9, 'What is a "Hazard"?'). (Q51)

When you are planning the operation of an elevating work platform and **setting up** for the task, there are also certain things, other than site hazards, that you should consider. These things include:

### Access and egress

Is the route or means of entry or exit to a work place. It includes footpaths, corridors, doorways, gates, steps etc.

### Capacity of the EWP

The weight of the load must be within the capacity of the EWP being used.

### Communications (safe and adequate)

Appropriate methods that can be used to communicate with other site personnel

### Specifics of task (What the Job is)

Does the task require specific tools? Are you qualified to carry out the task?

### Location of task (Where the job is)

Where is the task to take place? Are there people working in the area? Is there sufficient space? Is it safe to operate there?

### Permits required for the task (Permits and Licenses)

Sometimes only personnel that are issued with a valid work permit may carry out certain work or tasks.

### Personal Protective Equipment (PPE)

Generally used in combination with other measures as an added precaution.

### Equipment required for the task

Is the type of equipment to be used suitable for the task? Is there any special training required before it can be used?

### Availability of equipment

Is permission needed before the equipment can be used? Does someone else need to use the equipment or will they need it before the task is completed?

(Q52)

## Working in public areas

Before setting up an EWP on busy streets you should first check the following with local authorities to ensure the safety of others:

1. If permits are required for traffic control
2. If there are any conditions for operating the EWP at that location
3. Any exclusion zones (Q53)



## What is work near overhead power lines?

Work 'near' overhead power lines means a situation where there is a reasonable possibility of a person, either directly or through any conducting medium, coming closer than the approach distances specified in NSW WorkCover Code of Conduct for Working Near Overhead Powerlines.

Overhead power line contact is one of the largest single causes of fatalities associated with mobile plant and equipment. Contact with live overhead power lines is a serious risk because any voltage that causes sufficient current to pass through the heart is potentially injurious or even fatal.

You don't have to have a direct contact with a high voltage overhead power line to receive a fatal electric shock. Simply being too close can kill.

## How close can I go to overhead power lines?

Without appropriate technical knowledge and experience of electricity distribution networks and associated electrical apparatus, untrained personnel working or operating cranes or plant near overhead power lines will not be able to identify the operating voltage concerned, and will therefore not be able to recognise and avoid the inherent dangers of live overhead power lines.

For safety reasons, minimum safe distances from powerlines, including clearances for EWP, are prescribed by the Code of Practice. These prescribed distances apply from the closest part of the machinery, including its load, to the closest conductor of the powerlines, at all times.

Voltage (volts)	Approach distance (m)
Up to 132,000 volts	3 metres
Between 132,000 and 330,000 volts	6 metres
Above 330,000 volts	8 metres

(Q54)

It is advised to refer to your local power authority to determine the specific voltage of overhead power lines. (Q55)

## Working within the minimum safe distance

The clearance distances prescribed are absolute clearances that must NOT be breached at any time. Any breach of the prescribed clearances puts you, and all those on your site in immediate danger of electric shock. If you are required to work closer than the minimum distances you must ensure the safety of all those on your site by:

1. Shutting off the power, or
2. Insulating the power lines, or
3. Seeking an exemption from the relevant authority (Q56)

Site specific practices must also be considered and adhered to.



#### Discussion Point

Overhead powerlines.

## Warning Devices

When working near overhead powerlines it is recommended that you have 'Tiger Tails' installed on the low voltage powerlines. These '**Tiger Tails**' are a **warning device only** and do not reduce the prescribed safe working clearances. (Q57)

Performance Criteria 3.2 and 3.3

## Positioning the elevating work platform

You should always position the elevating work platform in a way that allows the EWP to operate safely and keep stable.

## Positioning the EWP

When positioning an EWP before it is levelled and packed, you should always check the **safe slewing radius, access and egress** and the position of the EWP in relation to the work to be undertaken and ensure that there is adequate clearances from obstructions and/or hazards (**Clear of obstructions**). (Q58)

If there is ever a concern that the wheels (or outriggers) of an EWP will sink you should always use **steel plates or hardwood packing** (pigstyling or cribbing) in order to stabilise the EWP. (Q59)

## PigStyling and Cribbing

The force exerted by an outrigger/stabilizer leg can cause damage to any underground service and/or ground collapse which can cause an EWP to overturn. The EWP, if possible, should be relocated or set up on steel plates, sleeper mats or extensive pig styling packing.

Pig sty packing utilises planks of wood. You should put the first (top) layer of packing in line with the outrigger. **The second layer of pigstyling should always be 90 degrees to the first layer.** (Q60)

## Making sure the EWP is level

To make sure that the EWP is sitting flat and level, you can use either a **spirit level or bubble level indicator**. This will ensure stability of the EWP when operating. (Q61)

## Setting up an EWP

As a general rule of thumb, whenever setting up an EWP, you should consider the items listed on page 21 of this workbook, 'Inspecting the work area'. These are the important items to check when planning the operation of an EWP and setting up for the task (other than hazards).

More specific items that should be considered are listed below.

## Setting up near recent excavations or trenches

Setting up an EWP near recent excavations and trenches (holes) is potentially very dangerous. A general rule is however deep the trench is, be at least that far away (this is for hard stable ground only). If the ground is not hard or stable, the EWP should be set up even further away.

For example, if the trench is one metre deep, the EWP should be one meter or more away from the trench. Set up further away if the ground is soft or recently backfilled.

**Depending on soil condition, if the recent excavation or trench is one metre deep then the EWP should be set up at least one metre away.** (Q62)

## Setting up on concrete

A concrete slab must be able to support the weight of an EWP and its load. Only a qualified engineer is capable of making an assessment on this.

Before setting up on concrete you must ensure that an engineer's report is available indicating that the slab of concrete is capable of supporting the EWP and the load. (Q63)

## Setting up close to buildings

When setting up an EWP close to buildings, you should consider the following: (Q64)

1. Access and Egress
2. Appropriate position for operating machine
3. The boom should be set up to slew away from the building if possible
4. Protection may be required for the building
5. Screens may be required for windows and other fragile/easily damaged areas of the building

## Setting up in a confined area

Before setting up an EWP in a confined area you should consider the following:

1. Access - will the EWP fit?
2. Is the area clear of obstructions and personnel?
3. Is there a need to use a guide?
4. Can the boom be slewed safely?. (Q65)

## Ensure the safety of others

Ensure that you do not raise or lower a load near or over other personnel because this puts the people under the boom at risk of serious injury or death, and is therefore unsafe. (Q66)

Performance Criteria 3.5

## Securing work gear

Tools and equipment can be a danger to the operator and other when not secured properly. It is important to secure any work gear to prevent any accidents.

## Securing work gear

### Why must work gear be secured?

Tools and equipment can be a danger to the operator and other when not secured properly. It is important to secure any work gear to prevent any accidents. You should always keep tools and equipment stored safely in a box/basket on the EWP platform in order to ensure the following:

1. Stop tools jamming and getting stuck in the 'dead man' foot control
2. Stop tools from falling off the platform
3. Stop tools getting in the way of getting on and off the work platform (tools can be trip hazards)
4. Keep the work platform clean and free of mess (Q67)

## **Element 4**

# **Operate elevating work platform**

## **Section outline**

Areas covered in this section are:

- Operating the elevating work platform
- Monitoring elevated work platform operations
- Responding to unplanned or unsafe situations

Performance Criteria 4.1 4.2 and 4.3

## Operating and monitoring an elevating work platform

Dangerous and unexpected events can still occur even though you have carried out all of the required checks.

You must always keep alert when operating an EWP and watch out for things that can go wrong.

## Operating and Monitoring an EWP

When operating an EWP you must always continually monitor boom and platform movement to ensure that all aspects of the operation are conducted in a safe and efficient manner. (Q68)

### Moving an Elevating Work Platform

When moving an EWP, it should always be travelling at a creeping or extremely slow speed, or as per the manufacturer's specifications. (Q69)

When travelling with a self-propelled EWP up a hill, the boom and platform should be facing up hill (as a rule of thumb). Otherwise it should be done according to the manufacturer's specifications. (Q70)

You should only ever travel with an EWP across the slope/side of a hill according to the manufacturers specifications. (Q71)

Before travelling with an EWP, you should always consider the following:

1. Path must be clear of objects (e.g. bricks, drums etc);
2. Lower and retract the basket so you can see where you are going;
3. Watch out for people on the ground;
4. Turntable lock must be engaged;
5. Axle lockouts must be activated (if the EWP has them);
6. Make sure the warning devices are working; and
7. Tyres must be pumped to the right pressure. (Q72)

### Raising an Elevating Work Platform

Before raising an Elevating Work Platform (EWP) you should always consider the following:

1. Weights and sizes of the load;
2. Access and egress;
3. Obstructions and hazards;
4. Boom deflection; and
5. Safe working radius. (Q73)



Performance Criteria 4.4

## Responding to unplanned or unsafe situations

You should always do everything you can to reduce damage or injury in the event of an emergency. There are certain procedures you will need to follow in an emergency.

## Unplanned Situations and Emergency Procedures

### Unsafe Incidents

If an unsafe incident occurs when you are operating an EWP (such as a pedestrian or vehicle entering the exclusion zone), you should always STOP operations and resolve the issue, seek advice or assistance (if required) and report the incident according to site rules and regulations. (Q74)

However, if an unsafe incident occurs which involves a defect with the equipment (such as hearing a loud noise, feeling the platform drop slightly, warning devices, cut-outs, alarms or feeling unsafe vibrations coming from the boom section), you should always follow these steps:

1. Cease work immediately;
2. Notify persons in the immediate area;
3. Lower the EWP (if applicable);
4. Tag machine out of service;
5. Remove the keys (to prevent use by other persons);
6. Report the incident to appropriate personnel;
7. Log the incident within the EWPs logbook; and
8. Have an inspection carried out to identify whether damage has occurred. (Q75)

### Getting stuck in the air?

If you are working at heights and the motor cuts out, you can should do either of the following:

1. For older (truck mounted) EWP use the **hydraulic accumulator**;
2. For newer EWP use the electro-hydraulic (**battery backup**) emergency lowering device; or
3. If nothing else works, use the hydraulic **bleed valves**. (Q76)

### Sinking wheels or outriggers

If one or more of the wheels or outriggers start to sink once you have started operating the EWP you should immediately stop operations, return the EWP to the ground, relocate the EWP to safer ground and rectify the sinking, if possible. If you are unable to rectify the sinking, you should relocate the EWP to an area where stability can be obtained. (Q77)

## Contacting power lines

If the elevating work platform comes into contact with the lines take the most appropriate actions listed below:

1. Move the boom away from the power lines if you can. Be careful. The controls may have electricity flowing through them;
2. If you can, break away from the power lines, stay in the basket if it is safe. Don't touch any metal parts. Call for help;
3. If you can't stay in the EWP (e.g. it's on fire), check for any water or objects on the ground;
4. **If it is safe**, jump out of the EWP. Don't touch any metal parts;
5. When you get to the ground, move away from the EWP by hopping or shuffling with both feet together. Don't run or walk because the ground might be electrified. Get at least eight (8) meters way;
6. When you get clear of the EWP, warn everyone else to stay at least eight (8) meters away from it;
7. Do all the incident reporting that you should. Do any first aid you need to do; and
8. Don't use the EWP until it has been checked out. **(Q78)**

## Element 5

# Shut down and secure EWP

## Section outline

Areas covered in this section are:

- Stopping and parking the elevating work platform
- Securing the elevated work platform

Performance Criteria 5.1 - 5.9

## Shutting down and securing the elevating work platform

This section relates to Element 5 of the Unit of Competency (Shut down and secure elevating work platform).

- Always shut the EWP down properly whether it is an older (trailer mounted EWP or a newer stand alone EWP. You must be aware of the correct shut down procedures (read the owner's manual).
- You should conduct a final check after using an EWP. This is to ensure the equipment is ready for the next operator and that any defects are recorded and actioned.
- You should always record and report any faults or problems with an elevating work platform after you have used it.

## Shutting down an EWP

### Stand alone Elevating Work Platform

When you have finished all of the jobs for the day, you should always take the following actions when closing down operations:

1. Do a final check then write about any faults and the job in the logbook
2. Raise up the work platform to a safe height (some instructions differ on the height boom lifts should be left at)
3. Shut down and park the EWP safely
4. Take the keys out
5. Make sure the tools and harness are secure
6. Make sure the EWP is safe and secure
7. Put fuel in or recharge the battery

**REMEMBER:** After conducting a final check and you notice a defect you **MUST** remove the keys, place a warning notice on the EWP indicating the EWP must not be used and then report the fault to an authorised person and record in the logbook. **(Q79)**

### Trailer-Mounted Elevating Work Platform

You should always take the following actions when closing down a trailer-mounted EWP:

1. Check that there is nothing in the way;
2. Line the boom up with the chassis;
3. Lower the bottom of the boom arm into the cradle;
4. Lower the top of the top boom onto the bottom arm;
5. Turn off the engine (mounted EWP) or the power take off (PTO);
6. Put the boom locking pin in;
7. Take off your safety harness and secure it; and
8. Get out of the basket and put your tools away. **(Q80)**