



نظام الشارقة للسلامة والصحة المهنية
Occupational Safety & Health Sharjah

حكومة الشارقة
هيئة الوقاية والسلامة
Government of Sharjah
Prevention And Safety Authority



Guideline

Mobile Elevated Work Platform

OSHJ-GL-02

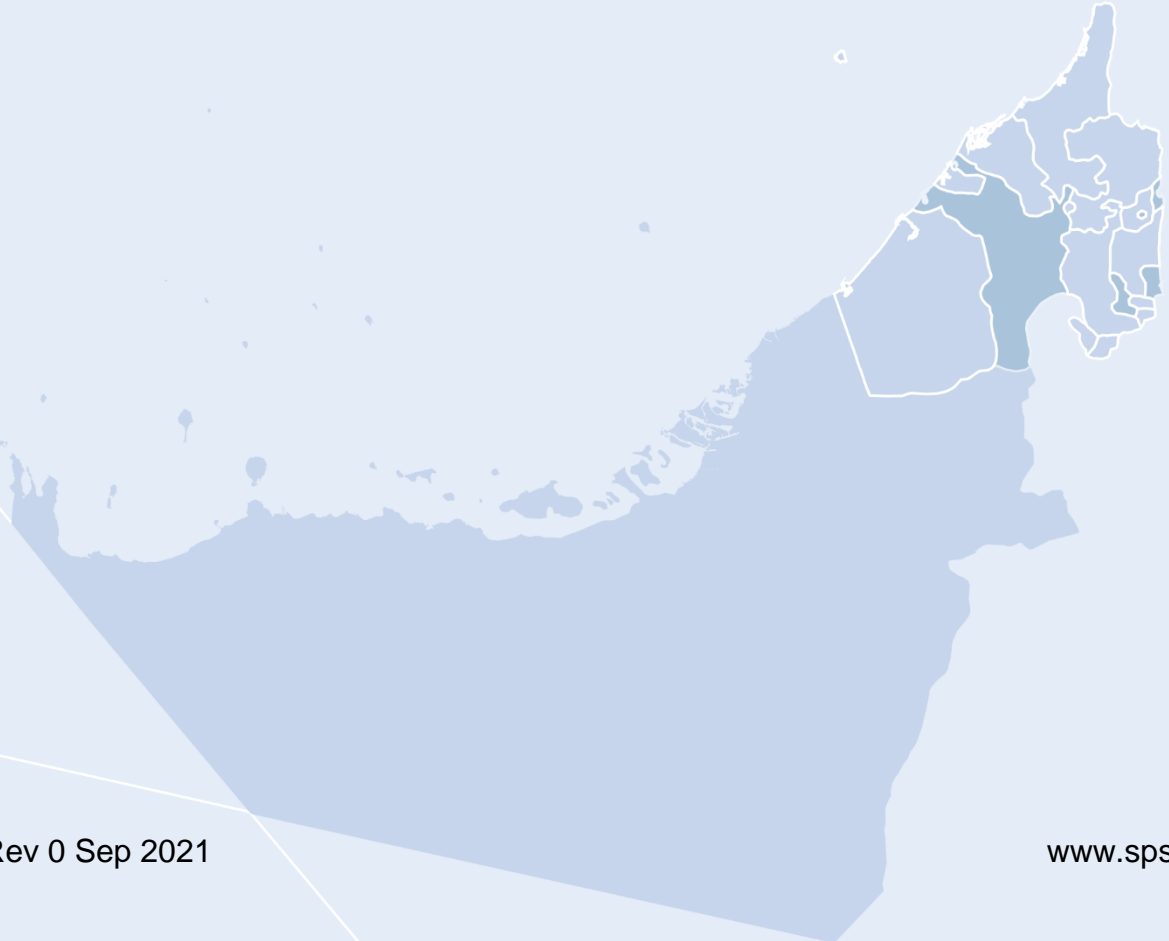


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1 Introduction

A Mobile Elevated Work Platform (MEWP) is a type of mobile plant. It is used to move persons to working positions where they are carrying out work from the work platform, with the intention that persons are getting on and off the work platform only at access positions at ground level or on the chassis. It consists of a work platform with controls, an extending structure and a chassis.

2 Purpose and Scope

This Guideline document has been developed to provide information to entities to assist them in complying with the requirements of the Occupational Safety and Health System in Sharjah.

To achieve compliance in the Emirate of Sharjah, all entities are required to demonstrate a standard of compliance which is equal to or higher than the minimum acceptable requirements outlined in this Guideline document.

3 Definitions and Abbreviations

Entities:	Government Entities: Government departments, authorities or establishments and the like in the Emirate. Private Entities: Establishments, companies, enterprises and economic activities operating in the Emirate in general.
Risk:	Is the combination of likelihood of the hazard causing the loss and the severity of that loss (consequences).
Risk Assessment:	The systematic identification of workplace hazards and evaluation of the risks associated. This process takes existing control measures into account and identifies and recommends further control measures where required.
Hazard:	Anything that has the potential to cause harm or loss (injury, disease, ill-health, property damage etc).
Competence:	The combination of training, skills, experience and knowledge that a person has and their ability to apply all of them to perform their work.
Competent Person:	A competent person is someone who has sufficient training and experience or knowledge and other qualities that allow them to provide help properly. The level of competence required will depend on the complexity of the situation and the particular need.
Working Platform:	Any platform used as a place of work or as a means of access or egress from a place of work, including any scaffold, suspended scaffold, cradle, mobile platform, trestle, gangway, gantry and stairway which is so used.
Safe System of Work:	A formal procedure that results from systematic analysing of a task in order to identify all the hazards. It defines safe methods to ensure that hazards are eliminated or risks reduced.
MEWP:	Mobile Elevated Working Platform.

Manufacturer's Manual: The instructions, procedures and recommendations provided by the manufacturer to ensure the safe operation, maintenance and repair of the equipment.

4 Roles and Responsibilities

4.1 Entity Responsibilities

- Undertake risk assessment to identify all significant hazards, assess the risks to employees safety and provide adequate control measures to reduce risk;
- Select the correct equipment for the work at height activity;
- Ensure that precautions are taken to prevent users from falling from working platforms;
- Provide employees who use MEWPs with information, instruction, supervision and training;
- Ensure that MEWP operators are competent;
- Provide employees with appropriate personal protective equipment, where required;
- Ensure that emergency procedures are in place to deal with emergencies.

4.2 Employee Responsibilities

- Not endanger themselves or others;
- Follow precautionary control measures to ensure work activities associated with the use of MEWPs are performed safely and without risk to health;
- Cooperate with the entity and receive safety information, instruction, supervision and training;
- Report any activity or defect relating to the use of MEWP's which they know is likely to endanger the safety of themselves or that of any other person.

5 Guidelines

These guidelines are aimed at those who select, specify, manage and operate MEWPs and what to consider before selecting a MEWP to gain access to work at height and the risks that need to be assessed and managed while the MEWP is in use.

MEWP's come in a variety of different types, for the purposes of this document the following types of MEWP are:

- Static Vertical;
- Static Boom;
- Mobile Vertical;
- Mobile Booms.

This guideline document does not cover safety baskets or man cages and is not a technical guidance document for all types of MEWP operations.

5.1 Risk Assessment

The entity should consider before carrying out any work at height, if the work activities can be carried out at ground level, therefore removing the need to work at height. If this is not possible, then a comprehensive site specific risk assessment should be carried out by a competent person and the decision made on which type of work at height equipment should be selected and used.

If a MEWP is selected as the best equipment, the risk assessment should clearly identify all risks involved when using the MEWP and the measures needed to eliminate or control those risks, including but not limited to:

- The nature of the work activities and whether they will be conducted indoors or outdoors or a combination of both;
- The presence of employees conducting other work activities nearby;
- Work activities conducted in or near public places with pedestrian access, working on, over or adjacent to roads and working on, over or adjacent to water;
- The ground conditions or work surfaces the MEWP will travel and operate on;
- The space available at the workplace to position and operate the MEWP, the height and outreach necessary to conduct work activities;
- Any overhead structures which could lead to trapping or crushing injuries,
- Any overhead services which are in close proximity or could come into contact with the MEWP;
- The safe working load of the MEWP;
- The number of people to be lifted by the MEWP and any tools and equipment that will be used;
- The use of material handling devices.

The risk assessment should identify the type of MEWP required to conduct the work activities safely.

Then entity should adopt a safe system of work based on the risk assessment for employees performing work activities with MEWPs to ensure the safety and health of employees and others. The safe system of work, including the emergency plan, should be communicated effectively to all employees involved and within the vicinity of the work activities.

All managers and supervisors should be familiar with all aspects of the safe system of work. They should also review and revise the system as work progresses and inform and instruct employees accordingly. The emergency plan should be practiced as part of the review process.

Further information on risk assessment can be found in OSHJ-CoP-01: Risk Management and Control.

5.2 Controlling and Managing the Risks

When the most appropriate MEWP for the work has been selected, the entity should manage the risks associated with its use. It is important to follow the manufacturer's manual when using the MEWP.

5.2.1 Transport, Delivery and Collection

The entity should have a traffic management plan in place to ensure the safe transport, delivery and collection of MEWPs, including but not limited to:

- The transport of the MEWP to and from the depot;
- Loading and unloading the MEWP at the depot and/or the workplace onto the delivery vehicle;
- Ensure only competent personnel carry out specific tasks;
- Other hazards such as; weather conditions, traffic, overhead lines, lack of manoeuvrability and members of the public should be taken into consideration;
- The delivery vehicle and associated equipment are suitable for the MEWP being transported;
- A pre delivery inspection is conducted and documented, and ensure a competent person inspects the condition of the MEWP when it has been delivered to the site;
- The delivery driver is familiar with the particular MEWP being transported;
- Where familiarisation is required upon delivery ensure that the familiarisation is conducted to relevant trained site operators accordingly;
- The relevant maintenance and service records of the MEWP are up to date and available upon request from the entity hiring out the MEWP, if hired;
- A written pre-operational checklist for the MEWP is provided. This can usually be found in the manufacturer's manual. Ensure that all pre-operational checks are undertaken and recorded. Any defects or faults must be reported immediately to the supervisor and the MEWP should not be used. It should be tagged "out of service" and the keys removed until the defects have been corrected.
- The delivery documentation and familiarisation documents, where required, are signed by the relevant personnel and dated at the time of delivery and familiarisation.

5.2.2 Hiring a MEWP

The majority of MEWPs are hired, the following is good practice for entities and contractors prior to selecting the most appropriate MEWP for the specific work task.

5.2.2.1 Good Practice for MEWP Hire Entities

The following areas highlight good practice for MEWP hire entities, including but not limited to:

- Establishing what tasks the MEWP will be used for by the customer and will it be for one specific task or a range of tasks;

- It could be beneficial to offer an on-site assessment to select the right MEWP;
- Establishing how the MEWP will be transported from the MEWP hire entity premises to the required location;
- Pre-planning is essential, responsible persons should be appointed and a plan of action should be in place to ensure it is delivered by competent personnel;
- Checking if familiarisation is required, a familiarisation process should be agreed where necessary. It is the responsibility of the entity to ensure that the employees operating the MEWP are trained and familiar with the characteristics and safe operating procedures of the MEWP prior to using it;
- Ensuring that a site safety briefing is provided to operators at the workplace on the safe use of the MEWP when it is being delivered. It is also important to demonstrate and discuss good work practice for the site specific tasks;
- Ensuring that procedures and agreements are in place for the maintenance and inspection of the MEWP during the hire period;
- Ensuring that everyone is familiar with the safety and rescue features of the MEWP and understands the procedure to be followed in the event of an emergency.

5.2.2.2 Good Practice for Contractors

The following areas highlight good practice for contractors hiring a MEWP, including, but not limited to:

- Ensuring those involved in managing and supervising the use of MEWPs are competent to do so;
- Giving sufficient notice to the MEWP hire entity to enable them to source the most appropriate MEWP for the particular work activities intended;
- Carrying out site and ground assessments when ordering a MEWP to ensure the MEWP selected is appropriate for the working environment;
- Where material handling attachments and other appliances such as secondary guarding are required, consider these at the pre-planning stage;
- Selecting trained competent operators.

5.2.2.3 At Delivery Stage and During the Hire Period

The following is good practice for entities and contractors, including but not limited to:

- Checking and reviewing the site assessment, nature of task, ground conditions and environmental factors;
- Ensuring all competent personnel are available and where familiarisation is necessary, ensure it is provided prior to commencement of the work activity;
- Ensuring tool box talks on MEWPs are site specific and a safe system of work is in place to report any defects or unsafe work practices;
- Ensuring an open communication policy is in place with both MEWP operators and other site personnel and that there is adequate supervision of operations at all times;

- Discussing safe operating procedures for MEWPs at site meetings and as work progresses;
- Strictly managing other equipment which is in close proximity, including other MEWPs, cranes, teleporters, and ensuring it is under supervision by competent persons;
- Ensuring maintenance records are kept up to date and documented and safe operating inspection programmes are in place at all times for the assessment of MEWPs in use;
- Reporting any defects immediately and deal with them in a safe and efficient manner. If in doubt stop the work, isolate, tag and report the MEWP until it is safe to continue.

5.2.3 Storage or Recharging

When MEWPs are not in use, being recharged or refuelled the entity should ensure, including but not limited to:

- MEWPs should be stored in a secure area with the keys removed. The brakes should be fully operational and in use and the working platform lowered into the parked position;
- Where a MEWP is parked on a gradient, the wheels should be chocked;
- Where recharging of electrically powered MEWPs is necessary, ensure this is carried out in a safe manner and is protected from environmental factors. Refuelling/charging should be carried out in a well-ventilated area;
- The keys to operate the MEWP should be issued to authorised personnel only. A safe system of work needs to be in operation at all times.

5.2.4 Positioning of a MEWP

The entity should ensure ground conditions on which a MEWP will be positioned should be examined prior to operating it, including but not limited to:

- MEWPs should be operated on level ground surfaces which are stable and will not compress under the weight of the MEWP. This may require a visual inspection and/or a full geotechnical survey of the ground. A risk assessment, carried out by a competent person, should establish whether both are required or if a visual inspection is sufficient;
- Weather conditions should be assessed, checking if there has been heavy rain or, flooding of the ground prior to or during the MEWP's use. Reassessment checks may need to be carried out to avoid the MEWP sinking due to the unstable ground conditions;
- Some MEWPs require the use of outriggers or jacks while others operate on wheels. Suitable spreader pads or plates are necessary to ensure the stability of the MEWP where outriggers are in use. When spreader pads are required, good practice should be followed at all times and ensure the outrigger foot is correctly centred on the spreader pad;
- Unstable ground conditions may require the use of timber mats, proprietary mats, steel grillages or concrete pads to improve the foundations prior to the MEWP

outriggers being used. If timbers are used they must be of adequate strength, thickness and in good condition;

- Ensure MEWPs are not located within close proximity to trenches, excavations, additional soil or excavated material. An engineering assessment should be carried out by a competent person if a MEWP is required to work near to trenches or an excavation;
- Structural stability of floors, cellars and basements should be assessed prior to using a MEWP;
- When working on footpaths, roads or car parks, underground services such as sewers, drains, gas and water mains can lead to a MEWP becoming unstable;
- The risks from underground and overhead services should be reviewed for the operating area of the MEWP.

Further information of underground and overhead services can be found in OSHJ-CoP-09: Overhead and Underground Services.

5.2.5 Safe Traffic Management Plan

A safe traffic management plan should be in place with designated routes to segregate MEWP activities from employees, pedestrians and vehicles activities. The traffic management plan should contain an appropriate risk assessment particular to the specific tasks involved. It may be necessary to have a competent person to supervise the movement of a MEWP, where there is limited or poor visibility, where an operator's blind spot exists or where there are pedestrians present. In such circumstances, the safe system of work should, include but not limited to:

- A safe plan to segregate traffic routes so far as is practicable from other activities;
- Supervision by an adequately trained and competent person;
- Two-way effective communication between the banksman and operator;
- The MEWP operates in a configuration that minimises the operator blind spot;
- A minimum approach distance for the banksman to the MEWP;
- The MEWP can be brought to an immediate stop if the operator loses sight of the banksman;
- Environmental factors such as weather conditions, time of day and seasonal changes all need to be taken into account to ensure adequate lighting is in place to perform the tasks safely.

5.2.6 Hazards

The hazards associated with using a MEWP, include but not limited to:

- Falling from a height;
- Overturning and ejection of occupants from working platform;
- Collisions;

- Objects falling from a height;
- Entanglement;
- Trapping and crushing;
- Electrocution;
- Structural/mechanical failure and becoming stranded;
- Suspension trauma;
- Incorrect operation;
- Lack of familiarisation and improper training.

5.2.6.1 Prior to Conducting Work at Height Activities

The entity should ensure before commencing work activities the following:

- The safe working load allowance in the MEWP basket is clearly displayed and is never exceeded. Consideration should be given to MEWPs that specify a very low safe working load, always check the total weight of the employees, tools, equipment and materials and any material handling devices being used do not exceed the safe working load;
- A pre inspection of the MEWP is conducted and documented to ensure all functions are operating correctly, it is in safe working order and not damaged;
- The travel path of the MEWP to the work area is safe and avoid sloping ground where possible;
- Good, stable, level ground conditions are in place for supporting the MEWP;
- Use appropriate supports including spreader plates where necessary under outriggers or wheels;
- Put in place a safe traffic management plan to segregate MEWP activity and other activities. Exclusion zones should also be in place;
- The MEWP operator is wearing appropriate personal protective equipment to carry out the activity;
- The MEWP operator is competent and trained.

5.2.6.2 Overhead Electrical Lines

Pre-planning and proper management of work at height activities are essential to avoid electrocutions. A risk assessment must be carried out in order to address the risks of the overhead electricity lines present and the safe operating procedures necessary to avoid electrocution. There may be a requirement to liaise with the appropriate service provider.

Electrocution can occur as a result of the following, including but not limited to:

- Lack of awareness of the proximity of overhead electricity lines present and the voltage running through them;

- The operator or boom coming within close proximity or touching the overhead electricity lines;
- Errors occurring when operating controls and moving the boom in the wrong direction when close to the overhead electricity lines;
- Poor operation of the boom or boom malfunction resulting in the boom not stopping when and where expected.

Training, experience and familiarisation with the equipment is important. Supervision, particularly of high risk activities and less experienced staff, is of particular importance to minimise the incidents related to overhead electrical lines.

5.2.6.3 Movement of a MEWP

The entity should ensure that while moving a MEWP to or from the work area the trained operator actions the following:

- Adjust the platform position to ensure adequate clearance when passing under overhead obstructions. Safe operating procedures should be in place when in close proximity to overhead electricity lines;
- Travel forward at an appropriate speed for the ground conditions, and if reversing is required, ensure it is performed safely and at a low speed;
- Where identified as a result of risk assessment, supervision by a competent person should be used to assist with the safe movement and operation of a MEWP.

5.2.6.4 During Work Activities

During work activities the trained operator should ensure that they follow the instructions provided to them during training and as a minimum:

- Perform regular checks to ensure ground conditions are stable for the MEWP;
- Use a fall restraint system;
- Be aware of the surroundings and avoid making contact with obstacles using continual observation when raising and lowering the boom;
- The working platform is free of obstacles such as trailing leads and loose material;
- Follow the safe system of work;
- Use the MEWP correctly as per the manufacturer's manual for safe operation;
- Smooth and careful operation of controls;
- The safe working load is not exceeded by the total load and maximum number of persons allowed;
- The wind speed does not exceed the manufacturer's manual recommended wind speed;
- They are not distracted by using communication devices or equivalent at the same time as operating a MEWP. Communication devices can be used during emergency situations and for the movement of large/difficult MEWP manoeuvres;

- Remove the key when the MEWP is not in use.

5.2.6.5 After Work Activities

The entity should ensure that after completing the work activities the trained operator actions the following:

- Conduct a visual inspection of the MEWP to ensure it is damage free and report any defects immediately to the entity. Isolate and tag 'out of service' to prevent further use;
- Leave the MEWP in a safe and secure manner with all controls isolated and keys removed. Therefore ensuring it is operated only by authorised personnel;
- The MEWP is clear of dust and debris.

5.2.6.6 Operator Awareness

The work environment and surroundings of a MEWP operator are likely to change during the duration of the work task. It is important that the entity ensure the operator is continuously aware of their work situation and the associated hazards in order that the necessary control measures are implemented.

5.2.6.7 Incorrect Operation

The following factors can cause a MEWP to be operated incorrectly, including but not limited to:

- Lack of knowledge and training of the operator;
- Lack of familiarisation with a particular model of MEWP and its control operation;
- Familiarity with site access routes for other activities but failing to check ground conditions when using the MEWP equipment;
- Lack of focus when using the MEWP's controls as a result of attention on other aspects of the job;
- Leaning over the control panel to perform a task or checking the ground conditions. This can result in the controls being operated accidentally and moving the MEWP which can result in entrapment between the guard rail and an overhead structure;
- Lack of supervision of new operators or where required by competent experienced supervisors;
- Lack of communication of operator's activities with other activities taking place.

5.2.6.8 Entrapment in a MEWP Platform

Employees involved in the management and operation of MEWPs should be aware of the risks of becoming trapped in a platform and should have an emergency plan including how to rescue employees in place. The entity should ensure that the operator of the MEWP, and any other users, can be rescued safely in the event of entrapment occurring between the platform of the MEWP and an obstruction.

MEWP operators, managers and supervisors should be aware of the location of the manufacturer's manual and have sufficient knowledge and familiarity through performing drills on how to operate the ground controls should an incident occur.

Work activities should always be supervised by a competent person at ground level who is able to take action in the event of a trapping incident occurring. MEWP operators often work in the platform alone. Therefore it is important that that entity ensure that there is a ground based person who is aware of and briefed properly in how to use the ground controls on the MEWP, or the emergency descent controls. Selecting the right MEWP for the work and taking account of the manufacturer's manual can greatly reduce the risk of entrapment.

Further information on rescue plans can be found in OSHJ-CoP-18: Emergency Preparedness and Response.

5.3 Maintenance

The entity should ensure MEWPs are regularly maintained, in accordance with the manufacturer's manual, and pre-use checks carried out to ensure the MEWP controls are functioning correctly. A process should be in place to ensure there are regular inspections in place to ensure that MEWPs are always in good working order.

A documented record of pre-use inspection checks which include visual checks and function checks, regular inspections and service records should be in place.

Operators should isolate, tag and report any defects or problems with the MEWP, and these should be dealt with. The MEWP should be taken out of service immediately if the problem or defect is critical.

The entity shall record and retain maintenance records.

5.4 Inspection

The entity should ensure MEWPs and any material handling device used must be thoroughly examined at least every 6 months by a competent third party or more frequently if required.

Proof of a current thorough examination or copy of it should be kept on the MEWP and also in the case of a construction site on file in the site office to demonstrate that the MEWP is in good working order and safe to use.

The entity shall record and retain records of inspection.

5.5 Personal Protective Equipment

The entity should ensure that where appropriate and following a comprehensive risk assessment, personal protective equipment should be worn by MEWP operators. The following personal protective equipment should be considered, including but not limited to:

- A safety helmet;
- Suitable safety footwear;
- Suitable high visibility vest or jacket;
- Hearing protection;
- Eye protection;

- Hand protection;
- Full body harness with a short restraint type lanyard which can be connected to designated anchor points in the basket to prevent a fall from the working platform where applicable.

The entity should ensure a risk assessment is conducted by a competent person, taking account of the manufacturer's manual, to determine what type of fall arrest or fall restraint is required to be used while operating a MEWP.

Generally, for boom type MEWPs, a full body harness with a short restraint type lanyard will be required to protect the employee from being catapulted out of the MEWP in the event of a boom swing, jolt or tilt. The lanyard must be anchored on a designated anchor point within the MEWP. Vertical lift or scissor lift type MEWPs are unlikely to be affected by the same type of swings and jolt movements of the boom type MEWPs.

Further information on personal protective equipment can be found in OSHJ-GL-07: Personal Protective Equipment.

6 Training

The entity should provide information and training on MEWPs in languages and in a format that employees understand and ensure that those who manage, conduct risk assessments, and select MEWPs, have received adequate training.

It is recommended that managers and supervisors of MEWP operations must be trained to an Internationally recognised standard or equivalent. It is recommended that operators of MEWPs must be trained to an Internationally recognised standard or equivalent.

The manufacturer's manual should be supplied with all MEWP's and available to operators. Operators should be familiar with the manufacturer's manual, the particular safety features and control functions of the specific model of MEWP being used and have knowledge of the operation of safety devices and emergency lowering procedures.

Periodic refresher training should be conducted to ensure employees competency is maintained, including but not limited to:

- Where training certification has expired;
- Where identified as part of a training needs analysis;
- Where risk assessment findings identify training as a measure to control risks;
- Where there is a change in legal requirements;
- Where incident investigation findings recommend refresher training.

The entity must record and maintain accurate training records of OSH training for employees.

Further information on training can be found in OSHJ-GL-26: Training and Competence.

7 Emergency Preparedness and Response

The entity should be prepared for emergency situations that may occur during work activities involving MEWPs and working at height. Due to increased risks from working at height, the entity needs to have a plan on what to do when an emergency occurs on how to respond to that emergency.

Considerations to include in the emergency plan, include but not limited to:

- Providing a rapid response in the event of;
 - A MEWP overturning;
 - Coming into contact with overhead electrical lines;
 - Rescuing a MEWP operator who has been ejected from the working platform;
 - Rescuing trapped or crushed employees from a MEWP work platform;
 - Structural or mechanical failure with employees becoming stranded;
- Appointing emergency response personnel who can take charge and make decisions on behalf of the entity during an emergency and liaise with emergency services;
- Employees are trained in emergency response, including information of first aid arrangements and where first-aiders, first aid equipment and facilities are located.

Further information on first aid can be found in OSHJ-CoP-16: First Aid at Work.

Further information on developing emergency plans can be found in OSHJ-CoP-18: Emergency Preparedness and Response.

8 References

OSHJ-CoP-01: Risk Management and Control

OSHJ-CoP-09: Overhead and Underground Services

OSHJ-CoP-16: First Aid at Work

OSHJ-CoP-18: Emergency Preparedness and Response

OSHJ-GL-07: Personal Protective Equipment

OSHJ-GL-26: Training and Competence

9 Document Amendment Record

TITLE	Mobile Elevated Work Platform		
DOCUMENT AMENDMENT RECORD			
Version	Revision Date	Amendment Details	Pages Affected
1	15 SEP 2021	New Document	N/A