

BS 8460:2025



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Safe use of mobile elevating work platforms (MEWPs) – Code of practice

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Summary of pages

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Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 November 2025. It was prepared by Subcommittee MHE/12/1, *Lifting platforms – Mobile elevating work platforms*, under the authority of Technical Committee MHE/12, *Lifting platforms*. A list of organizations represented on these committees can be obtained on request to the committee manager.

Supersession

This British Standard supersedes [BS 8460:2017](#), which is withdrawn.

Information about this document

This is a full revision of the document, and introduces the following principal changes:

- new safe use recommendations, taking into account [BS EN 280-1:2022](#) and [BS EN 280-2:2022](#);
- new process map on the safe use of mobile elevating work platforms (MEWPs);
- restructure of the content order in accordance with the process map;
- new or enhanced recommendations for:
 - the risk management process;
 - determining/establish the effect of wind;
 - using a MEWP as part of a fall arrest system;
 - fitting additional devices or equipment for loading and handling;
 - selection of MEWP for integrated load handling appliances;
 - system of work for operation of load handling appliances;
 - training for the use of MEWP handling appliances;
 - machines fitted with zone and motion control capability;
 - minimum attributes of personnel, including occupant of the platform and supervisor;
 - an extra stage in planning;
 - avoiding trapping and/or crushing of person(s) in the work platform;
 - secondary guarding;
 - pedestrian controlling during travelling; and
 - returning a MEWP to service after a period of non-use;
- new definitions for “lifting accessory”, “lifting equipment”, “load lifting appliance”, “load lifting jib”, “nominated ground rescue person”, “pedestrian controlling”, “temporary works”, “temporary works coordinator”;
- clarification of safe use for movement into confined work spaces, use of personal fall protection systems next to or over water, and segregation from pedestrians and other workers;
- new normative annex on hoist lift height limits; and
- new informative annex on wind speed in height.

This British Standard applies to those responsible for the safe use and operation of MEWPs, including:

- premises owners;
- employers;
- managers/supervisors;
- operators; and
- trainers.

This British Standard calls for the use of procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

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As a code of practice, this British Standard takes the form of recommendations and guidance. It is not to be quoted as if it were a specification. Users are expected to ensure that claims of compliance are not misleading.

Users may substitute any of the recommendations in this British Standard with practices of equivalent or better outcome. Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

Presentational conventions

The provisions of this document are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

The word “should” is used to express recommendations of this standard. The word “may” is used in the text to express permissibility, e.g. as an alternative to the primary recommendation of the clause. The word “can” is used to express possibility, e.g. a consequence of an action or an event.

Where words have alternative spellings, the preferred spelling of the *Shorter Oxford English Dictionary* is used (e.g. “organization” rather than “organisation”).

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Compliance with a British Standard cannot confer immunity from legal obligations.

In particular, attention is drawn to the following specific regulations:

- Health and Safety at Work etc. Act 1974 [1];
- Lifting Operations and Lifting Equipment Regulations (LOLER) 1998 [2];
- Provision and Use of Work Equipment Regulations (PUWER) 1998 [3];
- Management of Health and Safety at Work Regulations 1999 [4];
- Supply of Machinery (Safety) Regulations 2008 (as amended) [5];
- Work at Height Regulations 2005 (as amended) [6];
- Construction (Design and Management) Regulations 2015 [7].

Details of LOLER 1998 [2] and PUWER 1998 [3], together with an HSE Approved Code of Practice (ACoP) and HSE guidance, are given in the respective HSE publications, *Safe use of lifting equipment* [8] and *Safe use of work equipment* [9].

Introduction

For design and safe use purposes, mobile elevating work platforms (MEWPs) are categorized into type and group.

A MEWP type refers to the method of travelling, which is defined as either self-propelled or manually-propelled.

The types of MEWP are divided according to their travel characteristics.

- a) Type 1 MEWPs are only allowed to travel with the platform in the stowed position.
- b) Type 2 MEWPs can travel with the platform in an elevated position and are controlled from the chassis area.
- c) Type 3 MEWPs can travel with the platform elevated but are controlled from within the work platform.

A MEWP group is determined by the position of the platform centre in relation to the MEWP's tipping line.

MEWPs are categorized into group A or group B, according to how the working platform elevates.

- 1) Group A lifts can only raise the platform vertically. This category includes scissor lifts and vertical lifts.
- 2) Group B lifts include all other MEWPs.

1 Scope

This British Standard gives recommendations for the safe use of mobile elevating work platforms (MEWPs), including the selection and training of operators and other personnel, together with guidance to assist in the selection of competent person(s) and the selection, hiring, maintenance and thorough examination of MEWPs.

It also gives recommendations for MEWPs of Type 1 Group B, which are designed for use with a load lifting appliance positioned on the extending structure or work platform, and provides additional guidance for the safe handling and positioning of loads.

NOTE This British Standard does not give recommendations for delivering person(s) and materials to fixed landing levels.

This British Standard is not applicable to:

- mast climbing work platforms;
- fire-fighting and fire rescue appliances;
- non-integrated working platforms on forklift trucks of any type;
- lifting tables;
- suspended access equipment;
- building maintenance units;
- construction hoists;
- transport platforms;
- wind turbine and tower crane access lifts;
- belt and chain conveyors;
- capstan winches;
- hoists powered by direct-drive internal combustion engines;
- the use of a MEWP for lifting persons as a suspended load;
- the use of a MEWP for lifting suspended loads while operating from a control position other than the work platform;
- lifting accessories; or
- lifting or lowering of suspended loads for general materials handling as carried out by a crane.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes provisions, or limits the application, of this document¹⁾. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

[BS 7121-1](#), *Code of practice for safe use of cranes – Part 1: General*

[BS 7121-3](#), *Code of practice for safe use of cranes – Part 3: Mobile cranes*

[BS EN 280-1:2022](#), *Mobile elevating work platforms – Part 1: Design calculations – Stability criteria – Construction – Safety – Examinations and tests*

[BS EN 280-2:2022](#), *Mobile elevating work platforms – Part 2: Additional safety requirements for load lifting appliances on the extending lifting structure and work platform*

¹⁾ Documents that are referred to solely in an informative manner are listed in the Bibliography.

3 Terms and definitions

For the purposes of this British Standard, the following terms and definitions apply.

3.1 accessory

device attached to a work platform to assist with tasks being carried out from the work platform

NOTE 1 Accessories might include cladding carriers, camera pods, sign carriers, glazing carriers, lighting frames and pipe racks.

NOTE 2 For a definition of “lifting accessory”, see [3.18](#).

3.2 anchorage point

designated element secured to, or part of, a work platform to which a fall protection system (work restraint system and/or fall arrest system) can be attached

3.3 articulated boom

extending structure of a boom MEWP which moves by articulation of one or more booms

NOTE See [Annex A](#) for symbols for MEWPs.

3.4 collective protection

assembly of components or equipment which provides fall protection for all people working at height in the MEWP, without requiring any action on their part to be effective

3.5 competent person

person having sufficient professional or technical training, skill, knowledge, actual practical experience and authority to enable them to:

- carry out their assigned duties at the level of responsibility allocated to them;
- understand any potential hazards related to the work (or equipment); and
- carry out a thorough examination to detect any technical defects or omissions in that work (or equipment), recognize any implications for health and safety caused by those defects or omissions, and specify a remedial action to mitigate those implications

NOTE The attributes for competence which this implies are detailed in [Clause 5](#).

3.6 counterweight

substantial mass incorporated into a MEWP to counteract the maximum overturning moment created by the work platform in use

3.7 deck-riding

practice of placing a MEWP on a previously erected structure above the ground prior to structural completion, either by using a static “sled” fixed to the base of the MEWP or by placing the MEWP on a temporary MEWP support frame

3.8 demonstrator

person having such practical and theoretical knowledge and experience of MEWPs as is necessary to familiarize operators with their responsibilities and demonstrate pre-operational and safe operational procedure and the limitations of MEWPs

3.9 extending axle

axle(s) of a MEWP which extends to increase the width of the MEWP, allowing the upper structure to raise to the full working position

3.10 fall arrest system

personal fall protection system which minimizes the distance of a fall and the impact on the person

3.11 fall protection

means, either collective or personal, to prevent a person(s) falling or to mitigate the consequences of a fall

3.12 familiarization

provision of machine-specific information by a competent person to a trained operator, identifying the manufacturer's instructions and warnings, control functions and operating characteristics, safety devices and emergency recovery and rescue procedures

NOTE See also 3.35 for a definition of "self-familiarization".

3.13 ground-bearing pressure

pressure exerted on the supporting surface by the stabilizers, outriggers, wheels or tracks of the MEWP

3.14 hirer

organization, company, firm, person, corporation or public authority taking the owner's equipment on hire

3.15 insulated aerial device

MEWP manufactured with specially insulated sections and inserts of boom or scissor pack for the purpose of electrical insulation

3.16 jib

small boom between the end of the main boom and the work platform which can be capable of articulation in the vertical and/or horizontal planes

NOTE Figure A.1, Figure A.2 and Figure A.3 in Annex A give diagrams for different MEWP positions.

3.17 knuckle

articulating junction of two booms

3.18 lifting accessory

component or equipment not attached to the lifting machinery, allowing the load to be held, which is placed between the machinery and the load or on the load itself, or which is intended to constitute an integral part of the load

[SOURCE: BS EN 280-2:2022, 3.3]

NOTE Slings and their components are also regarded as lifting accessories.

3.19 lifting equipment

hoist with or without load lifting jibs, with or without hoist mediums and load holding device, which is permanently mounted or removable

[SOURCE: BS EN 280-2:2022, 3.2]

NOTE For details on hoist mediums, see Annex B.

3.20 load lifting appliance

structure attached to the jib/platform of the MEWP

3.21 load lifting jib

part of the lifting equipment which provides the necessary radius and/or height of the load holding device

[SOURCE: BS EN 280-2:2022, 3.4]

3.22 manual force

reaction forces applied to a MEWP by persons in the work platform when carrying out work

3.23 mobile elevating work platform (MEWP)

machine which consists as a minimum of a work platform with controls, an extending structure and a chassis, intended for work at height

NOTE A more detailed definition of a MEWP for the purposes of design standards is given in BS EN 280-1:2022.

3.24 nominated ground rescue person

person familiarized to operate the ground and emergency/auxiliary controls of specified MEWPs to enable the recovery and rescue of person(s) in the work platform in the event of a malfunction or emergency as part of a rescue plan

3.25 operator

person directly using the MEWP controls from the work platform or the ground

3.26 oscillating axle

3.26.1 active oscillating axle

axle on the chassis of a self-propelled MEWP which moves in a controlled manner so that, within the limits of oscillation, all wheels remain in contact with the ground

NOTE With controlled oscillation, the MEWP remains stable during travel with the elevating structure raised from the transport position.

3.26.2 passive oscillating axle

axle on the chassis of a self-propelled MEWP which moves freely during travel with the MEWP's elevating structure in a limited and defined configuration so that, within the limits of oscillation, all wheels remain in contact with the ground

NOTE Once the MEWP elevating structure moves out of the defined configuration, the axle is locked and remains at that angle of oscillation until the elevating structure returns to the defined configuration.

3.27 outreach

horizontal distance between the point at which the centre of rotation meets the ground and the vertical centre line passing through a point 0.5 m outside the rail of the work platform furthestmost from the centre of rotation

3.28 owner

organization, company, firm or person owning the MEWP, including those hiring it out to a user

3.29 pedestrian controlling

operating the MEWP travel controls from a walking position at the ground adjacent to the MEWP with the controller outside of the platform

3.30 personal fall protection system

assembly of components for protection against falls from a height, including at least a full body harness and lanyard connected to a designated anchorage point

NOTE Personal fall protection systems can be work restraint systems or fall arrest systems.

3.31 rated load

load for which the MEWP has been designed for normal operation and which is composed of persons, tools and material acting vertically on the work platform

[SOURCE: BS EN 280-1:2022, 3.16]

NOTE Also known as “safe working load (SWL)” or “working load limit”.

3.32 rescue system

system by which a person can carry out a rescue, including self-rescue, or be rescued from a height or depth by pulling, lifting or lowering

3.33 scissor lift

self-propelled X/scissor action and sigma (I) type vertical lifting platform

NOTE A scissor lift can have limited outreach by use of one or more deck extensions.

3.34 secondary guarding

device fitted to a MEWP in addition to the primary guarding systems, to further reduce the risk of entrapment and/or provide an alert that an entrapment situation has occurred

NOTE 1 Shrouds placed over the controls are not secondary guarding.

NOTE 2 Primary guarding is the function-enable device which requires activation prior to any movement control being activated, such as a foot pedal, a recessed hold-to-run button or trigger.

3.35 self-familiarization

process by which an authorized operator familiarizes themselves with the MEWP they are to operate

NOTE Information for self-familiarization can be obtained from the manufacturer’s operator manual, online familiarization videos, etc. See also 3.12 for a definition of “familiarization”.

3.36 service engineer/technician

person who has the practical and theoretical knowledge of the design of the MEWP to carry out maintenance or any proposed modification or adaptation

3.37 self-propelled MEWP

MEWP where the travelling controls are located at the work platform

[SOURCE: BS EN 280-1:2022, 3.15]

NOTE A self-propelled MEWP can have outriggers or stabilizers.

3.38 site

place where work is being carried out or to which workers have access

3.39 site assessment

assessment carried out by a competent person(s) to identify and recommend a suitable MEWP for the intended task

NOTE 1 The site assessment follows the identification that a MEWP is a suitable machine for carrying out the task(s).

NOTE 2 Previously known in the industry as a “site survey”.

3.40 spreader pad

supporting pad used to increase the area under a stabilizer, outrigger, wheel or track of a MEWP in order to reduce the ground-bearing pressure to an acceptable value

3.41 stabilizer

devices and systems used to stabilize a MEWP by supporting and/or levelling the complete MEWP or the extending structure

[SOURCE: BS EN 280-1:2022, 3.5, modified – examples and note removed]

NOTE 1 Examples of stabilizers are jacks, suspension locking devices and extending axles.

NOTE 2 Sometimes referred to as “outriggers”.

3.42 suspension trauma

orthostatic shock caused by vertical suspension for a period of time interfering with the human body's blood circulatory system, which can lead to faintness, shock and, ultimately, death

3.43 telescopic boom

extending structure of a boom MEWP which moves by the extension or retraction of one or more booms

3.44 temporary works

parts of the works that allow or enable construction of, and provide protection, support or access to, the permanent works and which might or might not remain in place at the completion of the works

NOTE Examples of temporary works are structures, supports, back-propping, earthworks and accesses.

[SOURCE: BS 7981:2025, 3.36]

3.45 temporary works coordinator

person appointed to verify that all elements of the proposed scheme of work, which includes the use of the MEWP, are not compromised for strength and stability, and that all design assumptions are checked

3.46 user

individual or organization that has control of the planning and management of the MEWP on site and is responsible for the MEWP being maintained in a safe working condition

NOTE This can include the person responsible for the site, principal contractor, subcontractor or a self-employed MEWP operator.

3.47 vehicle-mounted MEWP

MEWP where the chassis is a vehicle and where travelling controls are located within the cab of the vehicle

[SOURCE: BS EN 280-1:2022, 3.13]

3.48 vertical lift

MEWP with a telescopic extending structure moving in the vertical plane

NOTE This can include the telescopic mast type.

3.49 work platform

fenced platform or a cage which can be moved under load to the required working position and from which erection, repair, inspection or similar work can be carried out

[SOURCE: BS EN 280-1:2022, 3.2]

NOTE Also known as a “cage”, “bucket”, “basket” or “carrier”.

3.50 work restraint system

personal protective system which uses a full body harness and lanyard connected to a designated anchorage point by a restraint lanyard to prevent a person from reaching zones where the risk of a fall exists

3.51 working height

vertical distance from the ground to a point generally 2 m above the floor of the work platform

NOTE The working height is different from the platform height, which is the vertical distance from the ground to the floor of the work platform.

4 Management

4.1 Organizational arrangements

COMMENTARY ON 4.1

MEWPs are used in many industries and work situations for a wide variety of tasks. The provision of MEWPs generally fall into two categories:

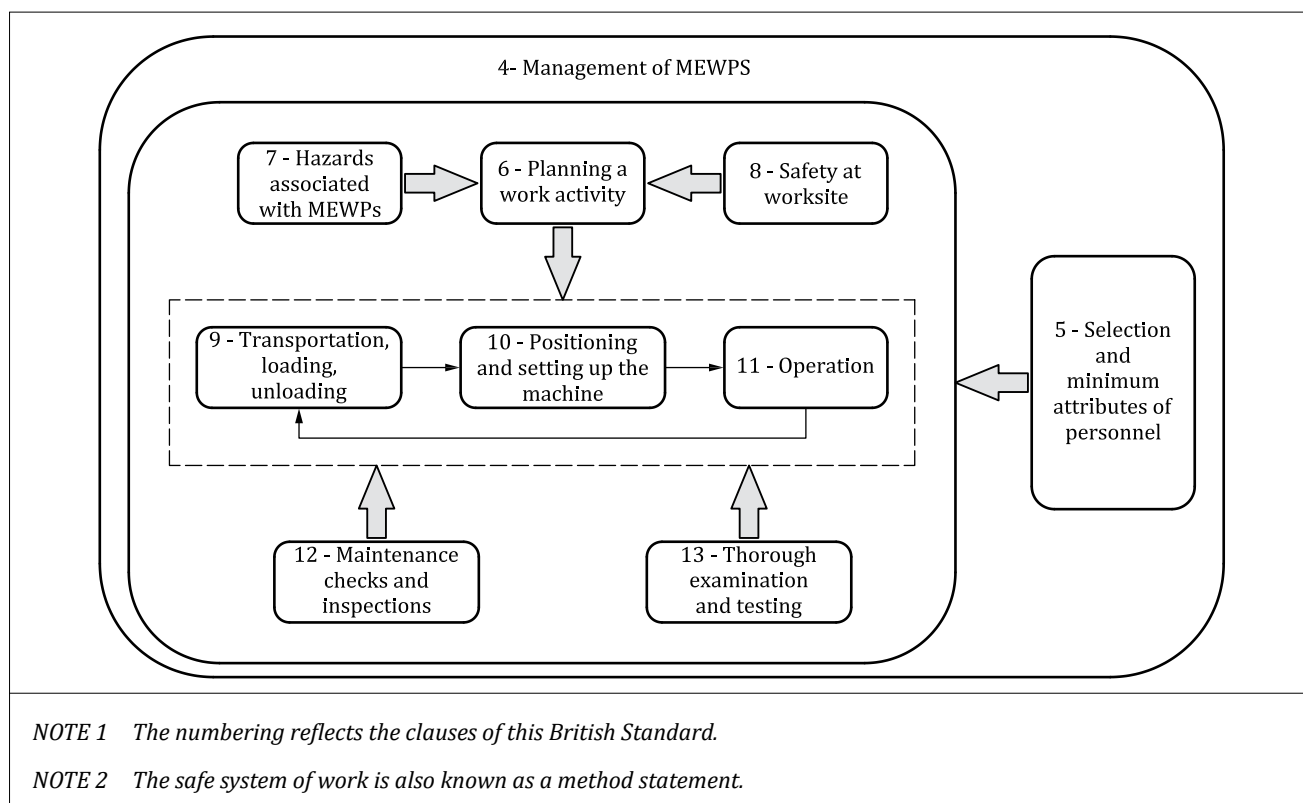
- a) MEWPs hired by the user from a hire company; and*
- b) MEWPs owned by the user.*

In both cases, the major responsibility for the management of the use of the MEWP lies with the user.

To manage the safe and efficient use of a MEWP, the user should demonstrate they have taken into account all the aspects of MEWP management, as shown in Figure 1 (with the relevant clauses).

A safe system of work should be developed by a competent person and be site and task specific. It should explain how the work tasks are to be undertaken, including the application of the risk controls to maintain the safe use of the MEWP at all times.

Figure 1 — Process map for the safe use of MEWPs



NOTE 1 For the definition of “user”, see 3.46.

NOTE 2 Attention is drawn to Work at Height Regulations 2005 (as amended) [6].

4.2 Conditions for MEWP hire with an operator

When a MEWP is supplied with an operator, the hirer, as the user, should, after consultation with the MEWP provider, be responsible for planning the work activity (see [Clause 6](#)).

NOTE The operator remains the servant of the hirer during the hire.

5 Selection and minimum attributes of personnel

COMMENTARY ON CLAUSE 5

The minimum attributes recommended in this clause are not comprehensive indicators of competence; they provide basic information on core elements on which competence can be judged.

5.1 Selection of personnel

COMMENTARY ON 5.1

The following personnel are associated with the safe operation of MEWPs: user, operator, passengers working from the MEWP, supervisor, rescue personnel, delivery personnel, service engineer/technician, competent person(s) carrying out thorough examinations, the competent person for MEWP selection and the demonstrator.

Personnel operating MEWPs should:

- a) have been selected, trained, familiarized and authorized to do so; or
- b) be undergoing formal training under supervision by a competent person.

NOTE 1 BS ISO 18878 specifies requirements for the training of MEWP operators.

Records of training and experience should be consulted to assist in selection of suitable personnel.

All personnel should be made aware of their duties.

NOTE 2 Attention is drawn to the Management of Health and Safety at Work Regulations 1999 [4] for the duties of the personnel.

5.2 Minimum attributes of personnel involved with MEWP use and maintenance

5.2.1 General

All personnel should be:

- a) competent to perform the tasks required of them;
- b) demonstrate understanding of their duties under the relevant health and safety regulations;
- c) trained for the category of MEWP they are to operate and successfully assessed in their role(s);
- d) able to communicate effectively to understand and/or provide instructions;
- e) able to use personal protective equipment (PPE) in accordance with the manufacturer's instructions;
- f) able to understand the need for and correct use and maintenance of PPE;
- g) able to present a record of training and assessment;
- h) physically able to undertake the appointed tasks;
- i) able to demonstrate understanding of the safe operating, planning and managing procedures relevant to their role;
- j) able to demonstrate understanding of any recovery and rescue plan in place for the activity and their part/role in it; and
- k) able to identify and avoid foreseeable hazards, and recognize unsafe practices/developing situations.

NOTE Guidance on the assessment of competence is given in the Strategic Forum for Construction, Plant Safety Group's Good practice guide – Competence to operate construction plant [10].

5.2.2 User of the MEWP

In addition to the recommendations in 5.2.1, the user of the MEWP should:

- a) understand how to work safely at height;
- b) understand the need for and correct use and maintenance of PPE and personal fall protection equipment (PFPE);
- c) understand the need to establish effective means of communication with all persons involved in the safe systems of work;
- d) possess the competence to plan and supervise MEWP operations; and
- e) recognize unsafe practices.

5.2.3 Person undertaking MEWP selection

In addition to the recommendations in 5.2.1, the person who undertakes the MEWP selection should:

- a) demonstrate, based on the information provided, that they can:
 - 1) understand the task to be carried out;
 - 2) select an appropriate MEWP and any additional appliances, attachments, devices and equipment for the task to be carried out; and
 - 3) provide justification for the MEWP selection; and
- b) be able to keep adequate records of their site assessments for their own and others' future use.

5.2.4 Operator

In addition to the recommendations in 5.2.1, the MEWP operator should:

- a) be able to demonstrate that they can work safely at height;
- b) be able to demonstrate understanding of the need for and correct use and maintenance of PPE;
- c) be familiar with the MEWP to be used;
- d) operate the MEWP in accordance with the manufacturer's instructions;
- e) record MEWP use in the physical or digital logbook;
- f) be able to identify and avoid foreseeable hazards, and recognize unsafe practices/developing situations;
- g) be able to communicate with the occupant(s) and provide clear instructions;
- h) report hazards and unsafe conditions to the person in charge of the worksite; and
- i) carry out pre-use inspections and keep a record on paper or digitally.

5.2.5 Occupant(s) in the platform

In addition to the recommendations in 5.2.1, the occupant(s) should:

- a) be able to demonstrate that they can work safely at height;
- b) be able to demonstrate understanding of the need for and correct use and maintenance of PPE;
- c) be able to demonstrate understanding of the recovery and rescue plan;
- d) be able to comply with the operator's instructions; and
- e) report hazards and unsafe conditions to the person in charge of the worksite.

5.2.6 Supervisor

In addition to the recommendations in [5.2.1](#), the supervisor should:

- a) understand the safe systems of work they are required to control;
- b) understand the application of risk assessments and control measures to the work under their control;
- c) understand how to work safely at height;
- d) establish effective communication with the occupants of the MEWP(s);
- e) understand the requirements for supervisor competence; and
- f) identify and eliminate unsafe practices within the team.

5.2.7 Service engineer/technician

In addition to the recommendations in [5.2.1](#) [except for [5.2.1c](#)], the service engineer/technician should:

- a) be able to demonstrate that they can work safely at height;
- b) be able to identify equipment, tools, calibration; and
- c) be able to demonstrate:
 - 1) they can operate the MEWP and equipment safely;
 - 2) an understanding of and ability to apply company procedures;
 - 3) an understanding and knowledge of how to carry out inspections (other than thorough examinations) and to make recommendations for the continued use of equipment;
 - 4) an understanding of and ability to apply the manufacturer's service/maintenance information;
 - 5) familiarity with the MEWP to be used, and any appliances, attachments, devices and equipment fitted;
 - 6) the required knowledge and experience of the MEWP(s) to be serviced and maintained;
 - 7) they can determine if the MEWP is operating as it is intended for all functions;
 - 8) they can diagnose, rectify and record faults;
 - 9) they can carry out functional checks and setting procedures;
 - 10) knowledge of how to record all maintenance work carried out; and
 - 11) they have undertaken continuing professional development.

5.2.8 Competent person for inspection

COMMENTARY ON 5.2.8

Attention is drawn to PUWER 1998 [3] for more details on inspections.

In addition to the recommendations in [5.2.1](#), the competent person carrying out inspections in accordance with [Clause 12](#) should:

- a) be able to demonstrate that they can work safely at height;
- b) be familiar with the inspection process (see [Clause 12](#));
- c) be capable of detecting defects and deterioration in the MEWP for the purpose of the inspection;
- d) be familiar with the MEWP to be used;
- e) have technical knowledge of the MEWP to be examined or inspected;

- f) have sufficient knowledge, skill and practical experience to assess the condition of the relevant parts of the MEWP, evaluate the adequacy of planned maintenance and identify the actions to be taken to rectify identified faults; in particular, they should be able to:
- 1) verify that the relevant parts of the MEWP are operating as intended when lifting and travelling;
 - 2) confirm that maintenance issues identified in previous inspections have been rectified in accordance with the specified actions within the specified time period;
 - 3) identify defects or deterioration which could compromise the safe use of the MEWP;
 - 4) specify the appropriate timescales within which identified defects are to be rectified;
 - 5) specify adjustments to planned maintenance to address deterioration so that the MEWP remains in good working condition;
 - 6) assess the correct function of all safety devices [see 5.2.9f)5)];
- NOTE Attention is drawn to LOLER 1998 [2] for details on thorough examination.*
- 7) check that warning notices are correctly fixed and legible, and, where necessary, specify any limitations on the use of the MEWP;
 - 8) carry out any testing required as part of the inspection; and
 - 9) record and report on the findings of inspection; and
- g) demonstrate that they have undertaken continuing professional development.

5.2.9 Competent person for thorough examination

COMMENTARY ON 5.2.9

Attention is drawn to LOLER 1998 [2] for details on thorough examination.

In addition to the recommendations in 5.2.1, the competent person carrying out thorough examinations in accordance with Clause 13 should:

- a) be able to demonstrate that they can work safely at height;
- b) be familiar with the requirements for thorough examination;
- c) be capable of detecting defects or weaknesses in the MEWP for the purpose of the thorough examination;
- d) be aware of any limitations in their own abilities and recognize the need to engage a third party where necessary to provide specialist support or services, e.g. recognize metal fatigue, non-destructive testing, setting up and operating a particular MEWP;
- e) be familiar with the MEWP to be used;
- f) have sufficient knowledge, practical experience and skill to assess the importance of defects or weaknesses in the MEWP and identify the actions to be taken to rectify them; in particular, they should be able to:
 - 1) verify that the MEWP is operating as it is intended to when lifting;
 - 2) identify defects or weaknesses which could compromise the safe use of the MEWP;
 - 3) specify the appropriate timescales within which identified defects or weaknesses are to be rectified;
 - 4) establish that defects identified in the previous report of thorough examination have been rectified;

- 5) assess the correct function of all safety devices;
- 6) check that warning notices are correctly fixed and legible, and where necessary specify any limitations on the use of the MEWP;
- 7) carry out any testing required as part of thorough examination; and
- 8) report on the findings of the thorough examination; and
- g) demonstrate that they have undertaken continuing professional development.

5.2.10 Demonstrator

In addition to the recommendations in [5.2.1](#) and [5.2.4](#), the demonstrator should be able to demonstrate they:

- a) can work safely at height;
- b) can impart information to other personnel in a structured, respectful and authoritative manner;
- c) have sufficient knowledge and experience of the MEWP(s) to be demonstrated;
- d) have an understanding of accident prevention and control;
- e) have an understanding of the need for and correct use and maintenance of PPE; and
- f) can familiarize operators with the MEWP they intend to operate, inform them of their responsibilities, and demonstrate pre-operational and safe operating procedures and the limitations of MEWP.

5.3 Training of personnel

Training should be provided for the following tasks associated with the use of MEWPs:

- a) planning;
- b) management and supervision;
- c) operation, including loading and unloading, recovery and rescue;
- d) demonstration;
- e) maintenance;
- f) testing and examination; and
- g) site assessments.

Employers should evaluate the existing competence of each employee to carry out the tasks allotted to them and then train each employee to make up any shortfall between their competence and that required to carry out these tasks.

Training should encompass the core elements and training needs given in [Table 1](#).

NOTE 1 [BS ISO 18878](#) specifies requirements for the training of MEWP operators.

NOTE 2 The training given can be in accordance with one of a number of nationally recognized training schemes for MEWP operating, demonstrating and maintenance personnel.

Confirmation of the training given, including its scope and any attainments or competencies achieved, should be given by the training provider to the trainee, and to their employer, in writing.

5.4 Familiarization

COMMENTARY ON 5.4

MEWPs come in a variety of shapes and sizes with significant differences in operating controls and characteristics.

All operators, supervisors and nominated ground rescue person(s) should be given familiarization on a type or model of MEWP on which they have not already been trained before beginning operations, in accordance with [Table 1](#). Operators should be familiarized with the specific version of the model they are required to operate.

NOTE 1 The employer of the operator is responsible for verifying that familiarization is undertaken.

NOTE 2 A particular model of MEWP can be in production for many years, during which time the design might change to reflect amendments to standards and changes in state of the art.

Familiarization should be carried out by:

- a) a competent person employed by the MEWP owner; or
- b) a representative of the MEWP or attachment manufacturer or supplier; or
- c) any other competent and authorized person.

The person delivering familiarization should have specific knowledge of the MEWP and have been assessed and authorized by their employer to verify they are competent to do so.

All familiarizations, including self-familiarization, should be recorded by the familiarization provider and/or the employer of the operator.

Familiarization for the operator of MEWPs should include the following:

- 1) location and contents of the MEWP operator's manual;
- 2) layout and use of controls;
- 3) machine-specific safe working procedures, including safety precautions, limitations and instructions;
- 4) machine-specific visual inspections of the MEWP;
- 5) machine-specific pre-use inspections as recommended by the manufacturer;
- 6) ground and platform function checks; and
- 7) emergency lowering systems including auxiliary and bleed down systems.

NOTE 3 It is possible for operators who have been trained on a specific category of equipment to familiarize themselves on a different make or model of MEWP within that category.

The nominated rescue personnel should be familiarized with the ground controls and emergency lowering controls.

Self-familiarization should proceed in accordance with [Annex C](#) and involve fully understanding the operating manual provided with the MEWP and any other information deemed necessary by the employer.

Table 1 — Core elements with training needs and familiarization for the use of MEWPs

Job title	Core elements	Training needs and familiarization
Generic	Understand relevant health and safety regulations Understand accident prevention and control Understand the potential limitations and risks for working at height, and implement and maintain a system for working safely at height Understand the need for and correct use and maintenance of PPE Recognize unsafe practices	Attend appropriate safety awareness course Attend PPE training course, as necessary
Supervisor	Understand the principles of MEWP operation Understand what a MEWP can and cannot be used for Understand the hazards associated with MEWP operation Understand workload management for team members and protect them from undue pressures Harbour, promote and reinforce good practices, and call out poor practices Knowledge of pre-use inspections Knowledge of the action to take in the event of an emergency or mechanical breakdown Understand what can happen if the MEWP is poorly maintained Carry out an effective observation and know what to look for Communicate effectively with operators and line managers Recognize bad practice and unsafe behaviour Develop good working relationships Enforce health and safety standards Raise and address issues confidently and not be afraid of conflict Be able to recognize the correct personal fall protection equipment	Attend supervisor and management courses, as necessary
Operator	Drive the MEWP safely and manoeuvre the MEWP, as required, to correctly position and carry out the required tasks in a correct and proper manner, inside and outside a building Identify and avoid foreseeable hazards Carry out pre-use inspections Understand how to operate any appliances, attachments, devices and equipment fitted to the MEWP to be employed in their work activity	Attend recognized operator training course Attend further operating training courses in case of high-risk activities, e.g. loading and unloading of transport vehicles, and/or complex environments Final assessment of competence in the work situation Receive training to be able to use appliances, attachments, devices and equipment fitted to the MEWP in a safe manner during employment in their work activity Receive familiarization on all models of MEWP they are required to operate <i>NOTE Operating more complex machines might require further familiarization and/or training</i>

Table 1 — *Core elements with training needs and familiarization for the use of MEWPs (continued)*

Job title	Core elements	Training needs and familiarization
Occupant	Understand relevant health and safety regulations Understand accident prevention and control Understand the potential limitations and risks for working at height, and implement and maintain a system for working safely at height Understand the need for and correct use and maintenance of PPE Recognize unsafe practices	Attend appropriate safety awareness course Attend appropriate PPE training course
Service engineer/ technician	Identify equipment Understand and apply manufacturer's service/maintenance information Diagnose, rectify and record faults Carry out inspections (other than thorough examinations) and make recommendations for the continued use of equipment Understand and apply company procedures Operate the equipment safely Carry out functional checks and setting procedures in line with manufacturer's instructions Record all maintenance work carried out Have required knowledge and experience of MEWPs to be serviced and maintained	Attend relevant MEWP manufacturer or equivalent service training courses Attend recognized operator training course Receive familiarization on all models of MEWP they are required to operate Attend in-house training courses on company procedures
Competent person (thorough examination)	Sufficiently independent and impartial, with necessary authority to allow objective decisions to be made and to make recommendations without fear or favour Verify that the MEWP is operating as intended when lifting and travelling Identify defects or weaknesses which could compromise the safe use of the MEWP Specify the appropriate timescales within which identified defects or weaknesses need to be rectified Establish that defects identified in the previous report of thorough examination have received attention Assess the correct function of all safety devices Check that warning notices are correctly fixed and legible, and, where necessary, specify any limitations on the use of the MEWP Carry out any testing required as part of thorough examination Report on the findings of the thorough examination	Attend relevant courses on the role of the competent person, thorough examination procedures and practices, and recording and reporting the results of thorough examination Attend recognized operator training course Attend relevant MEWP manufacturer's product familiarization courses
Competent person (MEWP selection)	Communicate with site management Select an appropriate MEWP for the task to be carried out Provide justification for MEWP selection	Attend appropriate training course covering selection of MEWPs Gain and maintain knowledge of capabilities of MEWPs

Table 1 — Core elements with training needs and familiarization for the use of MEWPs (continued)

Job title	Core elements	Training needs and familiarization
Demonstrator	Drive the MEWP safely and manoeuvre the MEWP, as required, to correctly position and carry out the required tasks in a correct and proper manner; inside and outside a building Carry out pre-use inspections Familiarize operators with the MEWP they are to operate, inform them of their responsibilities, and demonstrate pre-operational and safe operating procedures, and the limitations of MEWPs	Attend recognized operator training course Attend additional recognized demonstrator training course Receive familiarization on all models of MEWP they are required to demonstrate (ongoing requirement)
Ground person or rescuer	Able to remain calm in an emergency Know the actions to take in the event of an emergency or mechanical breakdown Assess the correct functions and demonstrate use and functionality of all ground controls	Receive familiarization on all models of MEWP they are required to operate (ongoing requirement)

5.5 Fitness to work

COMMENTARY ON 5.5

Guidance on medical fitness assessment, which can be applied to all industries, is given in the Strategic Forum for Construction, Plant Safety Group's Good practice guide – Competence to operate construction plant [10].

Employers should obtain evidence from personnel that they are medically fit for work and are not under the influence of alcohol, drugs or other impairments to efficiency.

NOTE Those operating and maintaining MEWPs can undergo a suitable fitness and wellbeing assessment before employment and subsequently at periodic intervals.

An employee's medical fitness should also be assessed after sickness or an accident to identify any possible effect of the illness or injury and treatment on the individual's current and future ability to operate the MEWP safely. Employers should have a system in place requiring employees to report any medical condition, treatment or medication that could affect safety when operating a MEWP.

Each person's fitness for operating or performing maintenance should be judged individually. Some disabled workers have developed skills which compensate for any health conditions or impairments, but their competence in an emergency situation should also be assessed and recorded in the emergency arrangements.

6 Planning a work activity involving a MEWP

6.1 General

Before commencing an operation, the user should verify that the risks involved have been evaluated and that sufficient planning has been carried out for the activity.

Planning should be carried out by a competent person(s) with adequate training, experience and knowledge to undertake the task effectively.

6.2 The stages of planning

COMMENTARY ON 6.2

The planning process for MEWP activities comprises 10 stages.

6.2.1 Stage 1: Identify the task to be undertaken

As the first stage in the planning process, the nature of the work activity should be clearly identified, together with the location and timing, taking into account the number of personnel, tools and equipment to be elevated to the workplace.

6.2.2 Stage 2: Select an appropriate MEWP based on an assessment of the task

COMMENTARY ON 6.2.2

There are many different designs and models of MEWPs with various rated loads, working heights and outreaches.

The correct MEWP should be selected for the task to be undertaken, taking into account any constraints such as working environment, ground conditions, site access and proximity to the public.

Where the user is unsure of the most suitable MEWP to use or the working environment of the activity, a site assessment should be carried out.

NOTE 1 A site assessment can include visiting the location where the task is to be carried out, preferably with site personnel or their representatives who can identify hazards associated with the area and ground on which the MEWP is to operate, so that both the task and any hazards involved can be identified. For simple tasks, the remainder of the planning process can be completed at the same time, while for more complicated tasks it might be more appropriate for the competent person to complete the process off site.

NOTE 2 The risk assessment (see 6.2.5) can prompt a change from the initial selection. For example, if there is a significant risk of entrapment/crushing of operators due to the nature of work being undertaken, a MEWP is specified with secondary guarding, in accordance with the risk assessment.

NOTE 3 The outreach dimension is measured from the centre of rotation to the place of work, which is available in the manufacturer's specification sheet.

6.2.3 Stage 3: Identify the hazards associated with the task

The hazards associated with all aspects of the task, including transport, delivery, collection, positioning, use, maintenance and the provisions for rescue, should be identified.

NOTE See Clause 7 for guidance on typical hazards associated with the use of MEWPs. These might be associated with the location where the work is to be carried out, the type of the MEWP or the personnel and equipment to be carried.

6.2.4 Stage 4: Assess the risks

Having identified the hazards associated with the task, an assessment of the risks associated with those hazards should be carried out to identify who and what is at risk, the likelihood of harm or damage and the resulting consequences.

NOTE 1 As it is a lifting activity that is being planned, the use of dynamic risk assessment techniques is unlikely to be appropriate for MEWP operations.

If the risk assessment identifies that the initial MEWP selection needs to be re-specified, the assessment of risk should be amended accordingly (see 6.2.3).

Risk assessments should be developed by a competent person.

The risk assessment should be relevant and accurate in relation to the activity at hand, relate to the environment in which the task is being performed, and address all significant issues.

Risk assessments should be regularly reviewed to maintain their suitability and sufficiency.

NOTE 2 Where simple, routine tasks involving repetitive and consistent actions and environments exist, the re-use of the same risk assessment developed for this task might be acceptable.

6.2.5 Stage 5: Evaluate control measures

Once the risk assessment has highlighted the risks involved in the task, the existing procedures and measures to be used to control them should be identified and their effectiveness evaluated, taking into account the principles of prevention. Where existing control measures fail to reduce risks to levels that are as low as reasonably practicable, the task should be re-designed to eliminate the risk or further control measures should be applied.

NOTE 1 Attention is drawn to the Management of Health and Safety at Work Regulations 1999 [4] in relation to the requirement to record the significant findings of risk assessments where an organization has five or more employees.

NOTE 2 Guidance on workplace risk assessment can be found on the HSE website <https://www.hse.gov.uk/comah/index.htm>.

6.2.6 Stage 6: Develop the method to be used

Having identified the hazards, evaluated the risks, determined the control measures and emergency rescue procedures required to carry out the task safely, these components should be developed into a planned safe system of work.

A safe system of work should address as a minimum the key elements of the planning of the activity, including:

- a) identification of tasks;
 - b) selection, provision and use of a suitable MEWP and work equipment associated with it, including secondary guarding if appropriate (see 8.23);
 - c) emergency procedures, including recovery of a person(s) and/or the MEWP in the event of an emergency (see 8.11);
 - d) any necessary preparation of a site for the positioning of the MEWP;
 - e) pre-use inspections, inspections, maintenance and thorough examination requirements (see Clause 12 and Clause 13);
 - f) the provision of properly trained and competent personnel who have been made aware of their relevant responsibilities;
- NOTE Attention is drawn to the responsibilities under the Health and Safety at Work etc. Act [1].*
- g) familiarization of the MEWP operator and rescue personnel with the specific MEWP they are to operate, local site rules, and information on any hazards to be aware of in the areas where the MEWP is required to work and travel;
 - h) adequate supervision of the operation by competent personnel with the necessary authority, who should be provided by the user or, as long as this has been agreed by all parties and made known to the person(s) carrying out the work, the person in control of the site;
 - i) availability of all relevant documentation, including current report of thorough examination and operating manual;
 - j) prevention of unauthorized movement or use at all times; and
 - k) the safety of person(s) not involved in the operation.

6.2.7 Stage 7: Record the planning in a method statement

Once the plan has been developed, it should be recorded in a method statement.

NOTE The length and detail of the method statement depends on the complexity of the task to be undertaken and the risks involved. A brief generic method statement might be appropriate for a simple low-risk task such as routine maintenance work in a factory, while a more detailed task-specific method statement and permits to work are appropriate for a more complex and high-risk task such as replacement of a valve in a high-level pipeline in a petrochemical plant.

6.2.8 Stage 8: Communicate the method statement to all people involved

The contents of the method statement should be communicated effectively to and between all parties involved, taking account of any language differences. Any changes to the method statement should be communicated to all parties.

The rescue plan should be communicated to and understood by all parties, particularly any information developed in connection with work at height and their part in it (see 8.11).

The user should verify that there is a safe system of work, which should be provided to the operator to follow.

NOTE In the case of a hired MEWP (with or without operator), the user might be assisted in this task by a competent person employed by the MEWP owner, who has sufficient knowledge and experience to give specialist advice in the selection and use of the MEWP for the specific application. Such assistance does not relieve the user of their overall responsibility for the safe management of the operation.

6.2.9 Stage 9: Review and revise the risk assessment and plan before the task starts and incorporate any changing circumstances

Immediately before a task starts, the risk assessment and method statement should be reviewed.

NOTE The purpose of the review is to check if any aspects of the task have changed and the effect that such changes might have on the safety of the operation.

If any modifications to the plan are required, these should be communicated to all those involved.

6.2.10 Stage 10: Keep the plan under review during the task and amend as necessary

If there are any intended or unintended deviations from the original plan, the task should be stopped, and the plan and method statement reviewed, amended and communicated as necessary.

NOTE Deviations might include task, environmental, machine or personnel changes, etc.

7 Hazards associated with the use of MEWPs

When undertaking risk assessments of the transport, delivery, positioning, use and maintenance of MEWPs, the hazards should be assessed.

NOTE Table 2 gives typical hazards associated with these activities. Table 3 gives additional typical hazards associated with the use of Type 1 Group B MEWPs with load lifting appliances. These are not comprehensive lists, and each situation is to be assessed on its own merits. The relevant clauses correspond to the clauses in this British Standard.

Table 2 — Typical hazards associated with the use of MEWPs

Stage	Activity	Hazard	Cause	Relevant clause(s)
Transport and delivery	Lifting of MEWP	Crushing, trapping, overturning of lifting equipment, impact	Unsafe lifting operation	8.16.1, 8.23
	Loading, unloading and securing of load	Overturning/crushing	MEWP slipping off truck deck and ramps	6.2.4, 6.2.5, 8.12
			Crushing between MEWP and truck headboard and adjacent MEWPs on truck bed	6.2.4, 8.23, 11.3
			Unsuitable vehicle	9
			Site conditions (public highway, ground conditions, gradients, cranes, services, environment, traffic, pedestrians)	8.12, 8.13, 8.14
			Inappropriate ramps	6.2
			Attempting to drive down one ramp	6.2, 10
			Overhead objects	6.2, 11.1, 11.2
			Travelling the MEWP with the operator not on the platform	11.3, 11.4
		Musculoskeletal injuries	Lifting, carrying, pulling, pushing	5.2
		Winching, crushing	Snapping cable, slipping, run away	6.2.4, 6.2.5, 8.23
		Slip, trip and falls	Fall hazard (tripping over chains)	6.2.4, 6.2.5
			Slipping	6.2.4, 6.2.5
			Tripping	6.2.4, 6.2.5
			Fall from vehicle deck	6.2.4, 6.2.5, 11.1.2k)
			Environmental conditions (wind, rain, ice, snow and poor visibility)	8.2, 8.12.7
			Unsuitable vehicle/access to vehicle	10
		Lack of assistance in event of injury	Lone working	8.21
	Transport on the highway	Impact with traffic and bystanders	Insecure load (MEWPs, components and items left on the work platform)	8.8, 9, 10.2.2
		Impact	Overhead structures (striking with high MEWPs)	8.3, 6.2.4, 6.2.5
			Incorrectly stowed or secured MEWP	9.3
		Collision	Stationary and moving vehicles and traffic	9
			Pedestrians (including the interface with public)	8.8, 8.14
			Adjacent structures and objects	8.8, 8.13, 10.7
			Overhead objects	8.3
		Environment	Wind, rain, ice, snow and poor visibility, lighting levels, noise levels	8.2, 8.12.7
		Electrocution	Overhead power lines, lightning	8.3, 8.22