

UK Contractors Group Mobile Elevating Work Platforms Good Practice Toolkit



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Foreword

There are over 60,000 Mobile Elevated Work Platforms (MEWPs) in the UK market.

They are commonly used across all industrial sectors by a wide variety of trades as a safe temporary method of working at height.

Their popularity and range of applications has grown with their size, complexity, controls and functionality varying depending on the category, manufacturer, model and size of machine.

The purpose of this document is to provide guidance on how UK Construction Group [UKCG] Members will manage and permit the use of Mobile Elevating Work Platforms [MEWP] on their sites.

Although this document will cover legal compliance, procedure, statutory regulations and HSE guidance, it is likely that in addition to these elements individual UKCG Members may have additional or higher requirements, therefore, this document should be seen as a minimum standard for specifying, managing and operating MEWPs on site.

Reference Material

In addition to providing this Toolkit UKCG Members, their Supply Chain and MEWP Operators should make themselves familiar with the MEWP guidance, in particular that published by the Health and Safety Executive [HSE], International Powered Access Federation [IPAF] and Strategic Forum for Construction Plant Safety Group [SFPSG] for example:



- <http://www.cpa.uk.net/sfpsgpublications/#MEWPs>
- <http://www.cpa.uk.net/sfpsgpublications/#MedicalFitness>
- <http://www.hse.gov.uk/pubns/geis6.pdf>
- http://www.ipaf.org/fileadmin/user_upload/documents/en/Guidance_on_Secondary_Guarding_Devices.pdf
- <http://www.hse.gov.uk/safetybulletins/workplatforms.htm>
- http://www.ipaf.org/fileadmin/user_upload/documents/en/MEWPIInspectionChecklist.pdf
- <http://www.ipaf.org/en/publications/risk-assessment/>



Initial Considerations

The decision to specify the use of a MEWP should not be adopted simply for convenience but should be the result of a thorough planning and selection process considering typically:

- Has the plan of work considered an alternative to working at height?
- Can working at height be designed out?
- Can working at height be reduced in scope?
- Can the programme of works wait for permanent or easier access?
- Is there an alternative method of access that reduces the overall risk?
- Have the alternatives been considered, risks assessed and residual risks compared?

Where a MEWP is used it must be ensured, so far as is reasonably practicable, that MEWP operations are appropriately assessed and the risks including their level are identified with controls and constraints clearly communicated to any user of the MEWP. The UKCG Member will ensure, so far as is reasonably practicable, that site teams properly understand the risks and essential controls required to plan and coordinate MEWP Operations, and will where appropriate provide their staff with appropriate and relevant training, such as MEWP for Manager (IPAF) or equivalent.

If the use of a MEWP remains the considered preference, the following UKCG Minimum Standards should be complied with.

Planning and Preparation for MEWP Activities

On every site where a MEWP is used by a UKCG Member or their supply chain the UKCG Member should provide a named person, 'The MEWP Manager', with sufficient authority, for planning, preparation and coordination.

The MEWP Manager should be available to the site team when MEWPs are in operation but are not required to be resident on site. A 'MEWP for Manager' training course (e.g. IPAF or equivalent) is available for people who manage work activities.



UKCG Members shall normally require their supply chain companies who are specifying or using MEWPs to appoint a named person/s who is involved with the selection and management of MEWPs. A 'MEWP for Manager' training course (e.g. IPAF or equivalent) is available for people who manage work activities.

Note: this person is to be involved in the process but are not required to be resident on site.

MEWP Selection

In seeking the right MEWP for any task, the following factors need to be considered:

- The nature and complexity of the work to be carried out
- Any access restrictions in the work area including any overhead obstructions during delivery, use and collection
- The terrain and ground conditions, including slopes, constrictions and how the MEWP will manoeuvre safely
- Work area conditions including maximum load bearing capacity of the ground / location and maximum force exerted by MEWP tyres/tracks/outriggers
- Number of people, equipment and the load to be lifted - taking into consideration any Material Handling Attachments
- Height and outreach required
- Potential wind effects including operating internally or in partly clad / open structures
- Fuel type / emissions and the environment in which the MEWP will be operating
- The availability of suitably trained and experienced operators for the selected machines
- Emergency / rescue arrangements.



'Unsuitable ground conditions for selected MEWP'

Ground Conditions, Temporary Works and Supporting Structures

It is the Principal Contractor's responsibility (who may / may not be a UKCG Member) to ensure that the ground conditions including supporting structures and traffic routes are suitable for the loads to be imposed by the MEWP and associated equipment, attachments, materials, personnel etc.

Prior to work commencing on site the UKCG Member will ensure, so far as is reasonable practicable, that the contractor selecting the MEWP is provided with relevant details of ground bearing capacity and load bearing capability of supporting structures including the location of any service ducts, chambers, restrictions etc.

The Contractor shall provide details of the intended imposed loads etc to the UKCG Member who will satisfy themselves that these are within the capacity of the ground / supporting structure including any temporary works. During the MEWP operation the Contractor shall cooperate to ensure that the imposed loads do not exceed those capacities.

The UKCG Member in cooperation with the Contractor shall monitor the ground conditions etc. as appropriate to identify any deviation from the planned loadings or any ground movement, deflection of the temporary works / supporting structure.

The Contractor's MEWP Operators / Supervisor will ensure that wherever they identify poor ground conditions or where conditions change (weather / wind speeds) etc. they do not operate the MEWP, and report their findings to the UKCG MEWP Manager.



'Example of unsuitable ground conditions'

- <http://www.ipaf.org/en/resources/spreader-plates-campaign/ready-reckoner/>
- <http://www.cpa.uk.net/sfpsgpublications/#Groundconditions>

Where necessary for the type of MEWP selected, the Contractor shall provide appropriate equipment to accommodate the loads where necessary e.g. spreader plates and their Operators must ensure that these are deployed.

IPAF
INTERNATIONAL POWERED ACCESS FEDERATION

**SPREAD THE LOAD
SPREADER PLATE READY RECKONER**

Check maximum permissible jack leg force. This can be found in the specific machine operator manual.

Gross vehicle weight (Tonnes)	kN	daN	tonnes (t)	lbs (t)	kg (t)	dyn
<input type="text" value="0"/>	0	0	0.00	0	0	0

If maximum jack leg force as shown in manual is higher than above, select a larger machine size with a maximum jack load equivalent or greater to that in the manual. Load bearing force is calculated at 80% of gross vehicle weight but some vehicles may be greater. Please check the specific machine operator manual.

Identify your ground conditions and then follow the colour coded boxes to identify the minimum recommended spreader plate size required for the selected vehicle.

For a general description of ground conditions please [CLICK HERE](#).

High Grade More than 400kN/m ²	Medium Grade 250-400kN/m ²	Low Grade 100-250kN/m ²	Too Soft Less than 100kN/m ²
0 m ²	0 m ²	0 m ²	0

BELOW ARE THE MINIMUM RECOMMENDED SPREADER PLATE SIZES IN MILLIMETRES (mm)
Spreader plates should be of suitable strength and appropriate material to prevent distortion and spread the load evenly.

High Grade	Medium Grade	Low Grade	Too Soft
0 dia	0 dia	0 dia	0 dia
0	0	0	0

'Example of load spreading equipment selection tool'

- <http://www.ipaf.org/tools/ready-reckoner/>

Planning for Specific Risks - Secondary Guarding Devices

In all circumstances the MEWP selected should be the most appropriate for the tasks to be undertaken. (See MEWP Selection)

All mobile boom type MEWPs (EN280 classified 3b) operated on UKCG sites should normally be fitted with a CE marked 'Secondary Guarding' Device / System. The Contractor will select the most appropriate Device / System for the risks associated with the tasks to be undertaken supported by a suitable risk assessment.

If a 'Secondary Guarding' Device / System is not fitted a suitable risk assessment must be approved by the UKCG MEWP Manager, which shows that the risks associated with entrapment are most appropriately controlled by means other than a Secondary Guarding Devices / Systems, or the risk of entrapment is minimal.

Any arrangements for using a '3b' MEWP without a Device / System fitted must be recorded in the risk assessment for the work.



'Examples of some of the devices / systems'



Note : When selecting a CE marked 'secondary guarding' Device / System the Contractor should refer to the "Strategic Forum for Construction : Avoiding Trapping / Crushing Injuries to People in the Platform, Section 6 – Best Practice Guidance for MEWPs document.

- http://www.ipaf.org/fileadmin/user_upload/documents/en/Guidance%20on%20Selection%20of%20Anti-Entrapment%20Devices%20for%20MEWPs.pdf
- <http://www.cpa.uk.net/sfpsgpublications/#MEWPs>

Planning for Specific Risks - Lifting and Handling Materials



Where materials are lifted to height, a specific risk assessment is required to identify how such equipment will be raised / lowered safely.

Where material / equipment is carried that extends beyond the confines of the MEWP basket / platform the material / equipment should be secured using a CE marked and compatible material handling device.

Where the material has a large surface area the maximum rated operational wind speed of the MEWP should be reduced to compensate for the increased wind resistance “sail effect” the material may impose.

The Contractors named competent person should review such selected devices to ensure they are suitable for the MEWP / task.

The effect of imposed loads on the MEWP, ground, supporting structure and temporary works shall also be considered.



Note: When selecting a CE marked ‘material handling’ Device / System the Contractor should refer to the “Strategic Forum for Construction : Avoiding Trapping / Crushing Injuries to People in the Platform, Section 6 – Best Practice Guidance for MEWPs document.

- http://www.ipaf.org/fileadmin/user_upload/documents/en/Guidance%20on%20Selection%20of%20Anti-Entrapment%20Devices%20for%20MEWPs.pdf

Planning for Specific Risks – Exiting the MEWP at Height

MEWPs are specifically designed to lift people to a position where they can work at height safely within the platform.

MEWPs are not designed to transfer people from one level to another, or for people to exit the platform at height. People should only enter or exit the MEWP at access positions at ground level or on the MEWP chassis.

There are exceptional cases where MEWPs may be used to gain access to or from a work area at height. Exiting the platform at height may be permitted if:

- the Contractors MEWP Manager can clearly demonstrate that it is the safest and most effective means of accessing a particular location
- a formal emergency rescue plan

In exceptional circumstances it may be necessary to exit the MEWP platform at height. In all cases a site-specific risk assessment should be undertaken to ensure that all associated hazards and risks have been considered, and relevant control measures have been implemented.

Contractors should ensure that exiting the platform at height to access a particular location is addressed their company safety procedures and training programme, before the procedure is undertaken.

Consider the need for:

- fall prevention methods to be maintained at all times during the transfer
- an operator to remain in the raised MEWP platform at all times
- action to minimise dynamic loads from being exerted on the platform
- action to prevent unexpected or inadvertent movement of the platform
- the use of designated MEWP exit points and not allowing exit or entry of the platform by climbing over the guardrails
- supervision by a responsible body to ensure that the identified safe method is adhered to by all personnel involved
- possible rescue from any associated structure

Operator and Users - Competence

Operators of Mobile Elevating Work Platforms will hold an IPAF PAL or CPCS qualification for the appropriate category of MEWP.

The UKCG recommends that all IPAF PAL qualified operators should obtain the PAL+ qualification within the first 2 years of obtaining their PAL qualification in order to demonstrate a higher level of experience and competence.

It is likely that some UKCG members will have additional requirements, for example where there are high risk work activities or where a challenging project means they only permit IPAF PAL+ qualified or CPCS Experienced Worker (blue card) operators to work on site.

Members are reminded that the UKCG implemented a requirement on 31 October 2013 that Safety Net Riggers, Steel Erectors and their associated trades working on UKCG members' projects hold a PAL+ qualification or a relevant CPCS Experienced Worker card.

Where inexperienced workers or trainees need to gain experience prior to obtaining the PAL+ qualification, the worker may operate a MEWP only when supervised [in the basket] by a PAL+ qualified or CPCS Experienced Worker operator.



- http://www.ipaf.org/fileadmin/user_upload/documents/us/AWP_BPG_2010.pdf
- <http://www.citb.co.uk/training-courses/plant-operations/mobile-elevating-work-platforms-mewps-ipaf/>
- <http://www.ipaf.org/en/training/palplus/>
- <http://www.cpa.uk.net/sfpsgpublications/#Competence>
- [http://www.ipaf.org/fileadmin/user_upload/documents/en/Management_of_MEWPs - Good Practice Guide for UK Hire Companies and Contractors.pdf](http://www.ipaf.org/fileadmin/user_upload/documents/en/Management_of_MEWPs_-_Good_Practice_Guide_for_UK_Hire_Companies_and_Contractors.pdf)

Operator and Users – ‘Fitness to Work’



It is the responsibility of the employer of the MEWP operator to satisfy themselves of the medical fitness of the Operator for the environment and potential work position.

Guidance on Operator Fitness to Work is available from the SFPSG.

- <http://www.cpa.uk.net/sfpsg/#MedicalFitness>

Operator and Users – Familiarisation

All MEWP operators should maintain a Log Book or similar record that can be used by the Operator to record / demonstrate experience of the particular machine to be used.

If the Operator cannot demonstrate previous experience with a particular MEWP then that person must undergo a familiarisation procedure before commencing work.



Familiarisation should be a planned event with sufficient time allowed for it to be effective. It must take place in a safe environment and should be conducted by a competent and authorised person from:

- the hire company, or
- site management, or
- contractors supervisor

Note: In certain circumstances (i.e. the requirement highlighted in Annex E – self familiarisation) a competent operator can self-familiarise using the operator manual.

Prior to commencing work the UKCG Member will, so far as is reasonable practicable, ensure that appropriate familiarisation has taken place. An entry should be made into the Operators 'Log Book' recording such familiarisation.

- http://www.ipaf.org/fileadmin/user_upload/documents/en/F10807.pdf
- <http://www.cpa.uk.net/sfpsgpublications/#Competence>

Emergency Arrangements

The UKCG MEWP Manager shall ensure that an appropriate rescue plan is incorporated in the emergency arrangements and that rescue practice / rehearsals are carried out periodically as appropriate and recorded.

It is important that Emergency Rescue briefings are undertaken by the Contractor with the users of the specific MEWP and any nominated rescue person(s).



- http://www.ipaf.org/fileadmin/user_upload/documents/en/RescuePlan.pdf

Taking Delivery of MEWPS

Delivering / collection, loading / offloading of MEWPS will be in accordance with the Project Traffic Management arrangements including the requirements for marshalling.

The same precautions are required whether un/loading on the highway / off-site or on the construction site.

MEWP movement to and from work areas must be undertaken in a controlled manner.

The delivery company shall provide evidence of competence to operate / off-load the machine and suitable procedures including how the delivery driver will be protected from falls when working at height. NB: IPAF PAL+ requirement is not applicable for Delivery Drivers.



Any MEWP arriving at site shall have:

- valid report of thorough examination (this could be held on a web portal etc. but must be accessible to the UKCG MEWP Manager)
- an operating manual for the MEWP

Inspections

Prior to using a MEWP the Operator shall ensure that a pre-use inspection and function check of the MEWP is carried out and recorded.

MEWP PRE-USE INSPECTION CHECKLIST		MACHINE: _____		WEEK COMMENCING: _____													
		MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY									
All checks should be conducted in accordance with the manufacturer's manual																	
VISUAL CHECKS	Documentation	1	Current thorough examination certificate (within last six months)														
		2	Manufacturer's operator manual														
		3	Rescue plan														
	Wheels/tyres		4	Wheel security (nuts, retainers: loose, damaged, missing)													
			5	Tyre pressure (pneumatic, foam filled or solid)													
			6	Cuts, splits, exposed braiding, damaged rims													
	Engine/power source		7	Fluid levels (engine oil, coolant, fuel)													
			8	Fluid leakage on ground and around engine													
			9	Battery (electrolyte, security and charging plug condition)													
	Hydraulics		10	Hydraulic fluid level													
			11	Leaks (hoses, pipe connections, rams, cylinders)													
	Hoses and cables		12	Security and condition (cuts, chaffing, bulges)													
			13	Power track cable trays (free from damage and debris)													
	Outriggers, stabilisers		14	General condition, pins/retainers, footplate													
			15	Spreaders plates (present, condition, secure for travel)													
			16	Interlocks (functioning, engaged)													
	Chassis, boom and scissor pack		17	General condition (damage, misalignment, corrosion)													
			18	Cracks in weld													
			19	Pins, retainers and chains (security, signs of wear)													
			20	Canopies, guards, engine covers (security and condition)													
	Platform or cage		21	Steps for access/egress (secure, undamaged, clear)													
			22	Entrance gate, guard rails and retaining pins													
			23	Harness anchor points													
			24	Clear of rubbish, debris and obstructions													
	Decals and signage		25	ID plate, safety, warning and information decals (legible)													
			26	Controls (identification decals, directional arrows)													
			27	Platform loads (SWL, max. wind speed, max. number of persons)													
FUNCTION CHECKS		28	Security device (power isolator, keypad, smart card)	G	P	G	P	G	P	G	P	G	P	G	P		
		29	Function enable (ignition key, foot switch, hold to run device)														
		30	Emergency stops and emergency lowering system														
		31	All switches, function controls (move freely, do not stick)														
	Using Ground (G) and Platform(P) controls		32	Lifting functions (raise, lower, slew, tele-out, tele-in)													
			33	Travel functions (forward, reverse, steer, brakes)													
			34	Elevated drive speed (reduced or prevented)													
			35	Lights, beacons, warning devices													
			36	Alarms (tilt, descent and travel)													
			37	Limit switches (e.g. descent, load, outreach, rotation)													
			38	Pothole protection device (fully deploys and retracts)													
			39	Oscillating axle locks, extending axles													
			40	Accessories, power to platform, extending decks													
			41	Jacks-legs, stabilisers, outriggers, levelling devices													
	ALL FAULTS AND DEFECTS TO BE REPORTED IMMEDIATELY TO YOUR SUPERVISOR <small>Only persons who are trained and authorised by their employer should operate this equipment.</small>				Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	Initialled:	
OPERATOR NAME(S) AND PAL CARD NUMBER(S):																	

'Example of an inspection checklist'

- http://www.ipaf.org/fileadmin/user_upload/documents/en/MEWPInspectionChecklist.pdf

The Operator should refer to the Operators User Manual or Hirers Guidance to determine the content of the pre use inspection / daily / weekly and statutory thorough examination (maximum 6 monthly).

The use of positive 'tagging' and / or key card controls should be considered and used as appropriate.



Correct Type of Safety Harnesses

When working within a boom type MEWP those within the MEWP Basket shall wear a work restraint system that should normally consist of a full body harness (BS EN 361) connected to a lanyard (BS EN 354) which is connected to an anchor point on the MEWP basket.

From the anchor point, the lanyard length should be short enough to prevent a person reaching a position where they could fall.

The lanyard may contain an energy-absorbing device (BS EN 355), but should still only be used as part of a work restraint system.

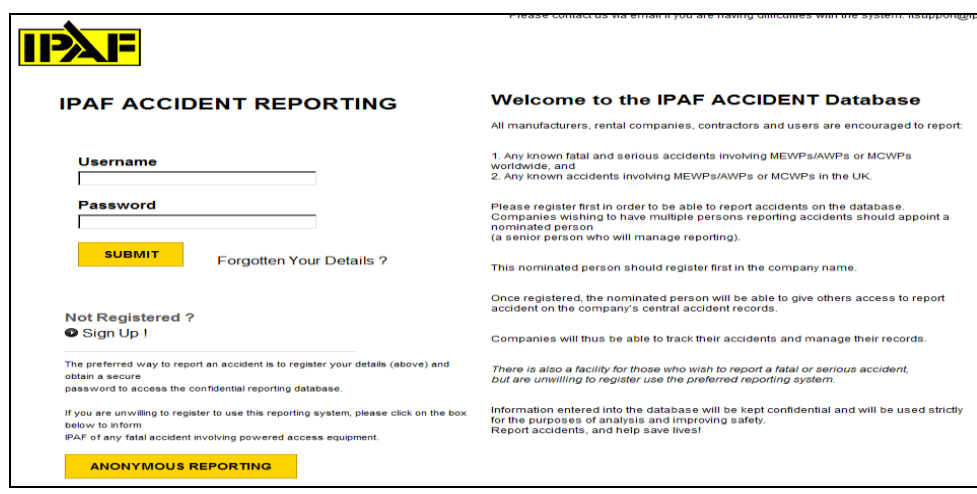


Note: Working next to, or over water must be assessed to identify whether the greatest risk of injury to the operator is from falling from the MEWP basket or drowning, if the MEWP falls into the water. The decision can then be made as to whether it is most appropriate to wear a harness to address the fall risk or whether a harness should not be worn due to the risk of drowning. Life jackets, not harnesses should be worn where there is a risk of drowning.

- http://www.ipaf.org/fileadmin/user_upload/documents/en/CatapultLeaflet.pdf

IPAF Incident Database

It is the responsibility of the UKCG / MEWP Manager will ensure MEWP related accidents, incidents and near miss situations are uploaded onto the IPAF Accident / Incident Reporting Database.



- <http://www.ipaf.org/en/resources/accident-database>



Glossary of Terms

UKCG / UKCG Member Company: The UK Contractors Group (UKCG) is the primary association for contractors operating in the UK. UKCG represents over 30 leading contractors operating in the UK on construction specific issues.

HSE: The Health & Safety Executive is the national independent watchdog for work-related health, safety and illness. HSE are an independent regulator and act in the public interest to reduce work-related death and serious injury across Great Britain's workplaces

IPAF: The International Powered Access Federation is a not-for-profit organisation owned by its members and promotes the safe and effective use of powered access equipment worldwide. Providing technical advice and information, through influencing and interpreting legislation and standards, through its safety initiatives and training programmes.

SFPSG: The Strategic Forum Plant Safety Group is an cross-industry group organised by the CPA (Construction Plant-hire Association). Its aim is to bring about a continuous reduction in the rate of injuries and ill-health caused through the operation and installation of plant in the construction industry.

Principal Contractor: means the person / business appointed as the principal contractor under the Construction Design & Management Regulations.

Contractor: is any person / business (including a client, principal contractor or other person referred to in the Construction Design & Management Regulations) who, in the course or furtherance of a business, carries out or manages construction work.

MEWP: Any vehicle-mounted or self-propelled device, telescoping extendable or articulating, or both, which is primarily designed to position personnel.

MEWP Operator: The person responsible for operating the MEWP carrying out construction work.

CPCS: Construction Plant Competence Scheme provides a registration card scheme acknowledged by industry for those involved in plant operations by recognising skills, knowledge and understanding, competence and qualifications.

CPCS Experience / Competent Operators Card: The CPCS Experience / Competent Operators Card is issued by CITB to platform operators who successfully demonstrated a level of health and safety awareness, underpinning knowledge, operating ability and operating competence on the type of plant.

PAL Card: The Powered Access Licence Card is recognised worldwide across industries as proof of platform operator training. It is issued by IPAF to platform operators who successfully complete a training course at an IPAF-approved training centre.

PAL+ Card: PAL+ is an additional of category-specific instruction providing further training and assessment of operator competence. NB: This additional training is not a requirement for delivery drivers, MEWP maintenance / fitters or a person carrying out a thorough examination. These occupations must still need to demonstrate their Competence i.e. basic IPAF PAL / CPCS or Load-Unload certification.

Classification of MEWP's: MEWP's are classified into the following categories; 1a, 1b, 2a, 2b, 3a, 3b, insulated aerial device and 'specials'.

Scissor



IPAF
- Mobile Vertical (3a)
ConstructionSkills
- Scissor

Vertical



IPAF
- Static Vertical (1a)
ConstructionSkills
- Scissor

(NOTE : MEWP travels under power)

Telescopic Boom



IPAF
- Mobile boom (3b)
ConstructionSkills
- Boom

Articulated Boom



IPAF
- Mobile boom (3b)
ConstructionSkills
- Boom

Lorry mounted boom



IPAF
- Static boom (1b)
ConstructionSkills
- Boom

Van mounted boom



IPAF
- Static Boom (1b)
ConstructionSkills
- Boom

Pedestrian controlled tracked boom



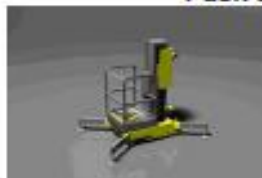
IPAF
- Static boom (1b)
ConstructionSkills
- Boom

Trailer mounted boom



IPAF
- Static Vertical (1b)
ConstructionSkills
- Boom

Push around vertical



IPAF
- Static Vertical (PAV)
ConstructionSkills
- Scissor

(NOTE : MEWP is pedestrian powered while travelling)