Use of MEWPs in Arboriculture

Guidance to the technical author:

- ***Please do not comment on items that are greyed out in this document as the context of this text will be supplied by the Arboricultural Association.***
- *Throughout the guide there will be sections or boxes that will directly relate to the ICoP - please take note of these in your response.*
- *The tone of the document should reflect the intended audience, e.g. the climbing arborist and should also reflect the relationship between this guide and the content of the ICoP.*
- *The document is also intended to provide reference for supervisors / team leaders; this will appear as summary 'check list' information in each section, generally reflecting the main items from the relevant AFAG Safety Guide.*
- *Comments in green are provided to identify the expected information to be included within the technical guide.*
- *Please indicate where illustrations or photos should be included - you do not need to supply these but should either provide a rough sketch, or describe the important elements of any image.*
- ***When typing your response for each section, please use the TECH AUTHOR style.***

Front cover

Verso page

Contents

1 Introductory material:

Foreword by the Association and Acknowledgements - This would be a non-exhaustive list of those individuals who have provided significant contribution to the project.

1.1 Introduction:

Why the technical guide came about, development history and intended use.

1.2 Structure:

Clearly defining how the technical guide is framed into several parts and how these parts relate to each other.

1.3 Scope and limitations:

Who the technical guide is aimed at and who is excluded from it. Who the technical guide does not apply to, such as, tree climbing for the purposes of sport or recreation.

2.0 Technical Guidance

2.1 General

competence, training, pre-planning, job packs, statement/ diagram of pre-planning (b-f from 2.2.2 ICOP)

2.2 Planning and Management

2.2.1 Risk control systems and emergency planning

This section should include information to enable the practical arborist to understand the purpose of the risk assessment process and their role within it. We anticipate an illustration is used here depicting a common work scenario relating to the guide title, identifying 15-20 hazards, accompanied by brief guidance on application of generic and site specific risk assessments.

2.2.1.1 Emergency procedures

Please include knowledge of emergency lowering/ ground control operations. The need for trained/experienced personnel on the ground.

2.2.1.2 Method statements

2.2.1.3 Briefing of all parties

To include working parties from other industries, e.g. traffic management.

2.2.1.4 Other work site considerations

These should include comments on areas such as access/egress, timing of works, wildlife, utilities (overhead and underground), TPO's, biosecurity, traffic and pedestrian management, sloped ground, unstable ground, etc.

2.2.1.5 Resources

These should be specific to the work operation, e.g. equipment in good working order and compliant with PUWER and LOLER, suitable for the job, present on site, equipment for rescue, first aid kit etc.

2.3 Roles and Responsibilities

2.3.1 General

Please refer to ICOP 2.3.1 page 10 "proficient operator"; we suggest providing suitable examples of the points raised with the proficient operator box in this section.

2.3.2 Communication

2.3.2.1 Purpose and benefit of communication

This should be specific to the guide title. Noise of the machine, changes in background noise above the roof height.

2.3.2.2 Knowing who to speak to and raising concerns

2.3.2.3 Types of communication systems

Please list examples, pros and cons of those examples, and any issues surrounding interpretation and confirmation of messages.

2.3.3 Supervision

See ICOP page 10, "competent person" box.

2.3.4 Operator Proficiency

This should be a brief statement which encompasses ensuring the operators have undertaken appropriate training and read manufacturer's instructions' the equipment in use. refer to IPAF & NPTC (see AA A Guide to use of MEWPS chapter 5)

2.4 Work Site Assessment

2.4.1 General

This should cover areas such as safe zones, danger zones, layout and positioning of equipment relevant to the guide title; you should consider aerial rescue methods, site access and egress (any illustrations are to include a power-line example).

2.4.2 Tree work specification

For template purposes, only - include this section if appropriate for the guide title. talk about benefits/ limitations of MEWPs

2.4.3 Tree condition assessment

This should include an illustration and checklist highlighting key points of a visual tree assessment. (please cover with relevance to MEWP where MEWP is set under the tree and becomes a target to unstable tree structure e.g. storm damage tops) Discuss hazard trees that are not safe to access by other means and the efficiency of using MEWPs for working on healthy trees (e.g. roadside crown lifting).

2.5 Work Methods

2.5.1 Machine Selection

Use a 'decision tree' showing the process of selecting an appropriate MEWP, (including the decision to not climb where appropriate ref. ICoP p. 24). This should also include information on selecting an access method and planning sitting or movement around the site and tree relating to the task. (see AA A Guide to use of MEWPS chapter 4). Include machine types.

2.5.2 Machine set up

Please cover the pros and cons of each of the following (to include space need for outriggers, slopes, limited space. We envisage the use of pictorial guides, so please sketch out or describe image sequences).

Information relating to wind speed, how this can be determined and applicable safe wind speeds for machine operation.

Specific detail covering correct spreader plate use, types and methods of assessing ground load bearing capacity.

2.5.3 Arboricultural work methods from a MEWP

[To include examples of correct techniques (illustrations) as is relevant to the title, pruning, free fall dismantle, Rigging. Please cover risks of two operators in the MEWP at the authors discretion discuss equipment selection, (See AA A Guide to use of MEWPS chapter 7).

Discussion relating to exiting the MEWP at height, use as an access tool only.

2.5.4 Work site Considerations

Please cover, Highway work inc. Chapter 8 street works, Overhead power lines, and utility line pruning work, working over water. Emergence tree work, (see AA A Guide to use of MEWPS), loading/unloading of machines.

2.5.5 Personal Fall Protection Systems

[This section should provide a general overview of personal fall protection systems as relevant to the guide title.] (see AA A Guide to use of MEWPS chapter 7)

2.5.5.1 Work restraint

Emphasis to be paid to when EN358 attachment is appropriate and EN813 used when there is a significant fall factor. Relate these EN's to harness attachment points (give examples).

2.5.5.2 Fall arrest

2.6 Equipment Selection

Please work with Author/s of the Climbing and rescue guide, to insure constancy of information.

[To include examples of correct installation (illustrations) as is relevant to the title. At the authors discretion discuss equipment selection, compatibility and configuration for the equipment and techniques highlighted in the ICoP section 2.11 and listed below.]

2.6.1 General

2.6.2 Selection

Incorrect selection, usually a machine with too little height and/or outreach leads to incidents, e.g. branches/timber falling onto MEWP. Insert image here of an example of a MEWP working envelope illustration.

2.6.3 Certification and conformity

2.6.4 Compatibility

2.6.5 Equipment configuration

2.6.6 Loading parameters

2.6.7 Manufacturers/supplier Information

2.6.8 User knowledge

2.6.9 MEWP fall protection equipment and rescue equipment

2.6.9.1 Adjustable devices

2.6.9.2 Back-up devices

2.6.9.3 Connectors

2.6.9.4 Energy absorbers/deceleration devices

Please discus pros and cons, limitations for rescue, space needed bellow to deploy safely. [As appropriate for the guide title.]

2.6.9.5 Rope and friction cord

[As appropriate for the guide title.]

2.6.9.6 Harnesses

To include types and specification of use dependent upon conformity/certification.

2.6.9.7 Lanyards

To include fixed length, adjustable, constructed of rope or webbing and applicable EN standards.

2.6.9.8 Slings and strops

[As appropriate for the guide title.]

2.7 Equipment Inspection, Care, Storage and Maintenance

2.7.1 General procedures

Make the reader aware that they must read the manufacturers literature concerning storage, cleaning / maintenance and lifespan. This will need to cover both the MEWP and the works PPE harness lanyard etc.

2.7.2 Textile and hardware components

Include any 'rule-of-thumb' information on storage and general care instructions such as keeping components away from harmful chemicals or UV degradation.

2.7.3 Equipment lifespan

Refer to manufacturer's instructions.

2.7.4 De rigging, storage and transport

Include any 'rule-of-thumb' / good practice information.

2.7.5 Marking and traceability

Mention LOLER and any good practice methods of marking - give practical examples wherever possible, photo of commonly use inspection notices on machines.

2.7.6 Records

Mention LOLER, and highlight the need to keep the paperwork that comes with new equipment when bought.

2.7.7 Equipment withdrawal, equipment modification and alterations

Give practical examples of when equipment should be withdrawn from service, perhaps using a decision tree to help guide the reader through to making a decision regarding their equipment.

2.8 Aerial Rescue

2.8.1 General

Advantages & disadvantages of (a) engine powered, ground based, rescue controls, (b) battery powered, ground based, rescue controls, manually powered, ground based, rescue controls (d) use of a second MEWP

2.8.2 Principal considerations

Consider safety aspects and potential hazards to consider; also, the availability of equipment to be used for a rescue and how the operator trapped at height could be accessed.

2.8.3 Rescue plans

State the basic plan of action to take when carrying out an aerial rescue.

2.8.4 Safety issues and considerations

Include a warning about the use of MEWP by untrained operators under pressure in an emergency If the ground crew is using the ground controls, the ground crew must know how to lower the MEWP and casualty using an appropriate method; consider methods for engine/motor running and not running, MEWP locked out due to loading cut outs and equipment complexity.

2.8.5 Carrying out a rescue

[Section 2.8.5.x should make extensive use of imagery (sketches or photographs), so please describe the important points of the images or provide a rough sketch that highlights these areas.] (see AA A Guide to use of MEWPS chapters 12 & 13)

2.8.5.1 Self rescue

This should cover the use of personal first aid equipment and planned descent to ensure the MEWP does not get stuck in the tree crown, or contact obstacles.

2.8.5.2 Ground control rescue

2.8.5.3 MEWP 2 MEWP rescue

Describe how the casualty's weight may affect the system.

2.8.5.4 Climber rescue using a MEWP

How to use a MEWP to rescue a casualty, working in a tree canopy.

Appendix

Please see AA A Guide to use of MEWPS Appendix and review / update in line with ICOP Tree Work at Height, to check relevance to target audience.

BIOSECURITY

Basic run through the precautions to be taken by climbers pre- and post-work.

3.0 Index