

Safety Guide 3: *Rigging and Dismantling*

1.0 Introduction

1.1 This leaflet provides an overview of safety guidance for anyone who is required to carry out rigging and dismantling as part of tree work operations. The guidance is summarised from the Technical Guide on the subject (TG3): *Rigging and Dismantling*.

It contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

When applying the principles and guidance laid out here, a decision must be made as to whether it is necessary to climb the tree, or whether work may be carried out from the ground or from a Mobile Elevating Work Platform (MEWP). Many of the techniques described can be carried out when accessing the tree either by MEWP or by climbing.

For guidance on making that decision, reference should be made to the *Industry Code of Practice for Arboriculture: Tree Work at Height* (ICoP). Climbing should only be undertaken when it is not reasonably practicable to do the work from ground level or from a platform, in that order.

- 1.2 Everyone carrying rigging and dismantling tree work operations can use this leaflet as outline safety guidance to check that operators are following industry guidance.
- 1.3 This leaflet is not a substitute for adequate training.
- 1.4 This leaflet is not a substitute for the full Technical Guide.
- 1.5 In accordance with the ICoP, the key principles of tree work at height must be adopted when using this leaflet.

It is essential that:

- a. all work at height is properly planned, organised, supervised and managed;
 - b. lifting systems are properly designed, including the compatibility and correct configuration of components within each system;
 - c. any equipment used is suitable for the task and subject to periodic inspection and examination;
 - d. maintenance of equipment is carried out to ensure all equipment remains safe for use; and
 - e. everyone engaged in a tree work operation has the appropriate training and experience to be proficient in tasks they are required to undertake.
- 1.6 For further guidance you should consult Technical Guide 3: *Rigging and Dismantling* and undertake appropriate training.

3.0 Planning Rigging Operations

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 3.a | Are the proficient operators on site aware of who the competent person is? | | | |
| 3.b | Is there a suitable and sufficient site-specific risk assessment? | | | |
| 3.c | Has the risk assessment been communicated and agreed by all parties? | | | |
| 3.d | Do operators have clearly defined roles and responsibilities, and do they understand them | | | |
| 3.e | Has an aerial rescue plan been agreed? | | | |
| 3.f | Do the operators have the necessary level of proficiency to carry out their allocated tasks? | | | |
| 3.g | Are operators aware of the actions to be taken if they have concerns about unsafe work practices? | | | |
| 3.h | Have appropriate drop, work and exclusion zones been identified and are all operators aware of them? | | | |
| 3.i | Has an adequate tree condition assessment been carried out? | | | |

4.0 Rigging Techniques

| Ref. | Checklist | Yes | No | N/A |
|------|---|-----|----|-----|
| 4.a | Is the selected technique going to achieve the intended objective safely and efficiently? | | | |
| 4.b | Is there enough suitable equipment to undertake the selected technique? | | | |
| 4.c | Are there enough competent operators to undertake the selected rigging technique, both aerial and ground based? | | | |
| 4.d | Is there sufficient suitable equipment to preload lines or generate mechanical advantage where required? | | | |

5.0 Anchor Forces

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 5.a | Has the system been configured to minimise potential anchor forces? | | | |
| 5.b | Have appropriate measures been taken to manage friction within the system? | | | |
| 5.c | Are redirects used to reduce potential anchor force where appropriate? | | | |

6.0 Operator Positioning

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 6.a | Is the operator positioned so as to avoid being struck by the cut section? | | | |
| 6.b | Has the operator achieved the best position to make accurate cuts? | | | |
| 6.c | Is the operator’s personal fall protection system positioned so as to avoid being cut? | | | |
| 6.d | Are the operator’s primary and backup systems positioned so as to avoid being struck by the rigging rope or cut section? | | | |

7.0 System Components

| Ref. | Checklist | Yes | No | N/A |
|------|---|-----|----|-----|
| 7.a | Are components suitable for the chosen application? | | | |
| 7.b | Are components being used in accordance with manufacturers’ guidance? | | | |
| 7.c | Are the components compatible with their neighbouring components? | | | |
| 7.d | Have components been configured to prevent overloading of individual elements and/or the entire system? | | | |
| 7.e | When assembled as a system, are the components within it correctly configured? | | | |

8.0 Working Loads

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 8.a | What is the safe working load (SWL) of the equipment to be used? | | | |
| 8.b | Is the SWL adequate for the intended load or could the SWL be exceeded? | | | |
| 8.c | What safety factor is being used to calculate the SWL and does it allow for age/wear and tear? | | | |

9.0 Compatibility and Configuration

| Ref. | Checklist | Yes | No | N/A |
|------|---|-----|----|-----|
| 9.a | Is each component intended for use compatible with its neighbouring components? | | | |
| 9.b | When configured within the system, will the component function as intended by the manufacturer? | | | |
| 9.c | When in use, will textile components be subject to movement causing a bend and, if so, will that bend create a significant strength loss? | | | |

10.0 Using Knots and Slings

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 10.a | Are appropriate knots being used to ensure the security of the load? | | | |
| 10.b | Have the knots been tied, dressed and set correctly? | | | |
| 10.c | Are the knots and slings being used appropriately given the application? | | | |
| 10.d | Are slings configured to minimise strength loss and ensure the security of the load? | | | |

11.0 Strength Loss in Rigging Components

| Ref. | Checklist | Yes | No | N/A |
|------|---|-----|----|-----|
| 11.a | Have the system and its components been configured to minimise strength losses? | | | |
| 11.b | Has the most appropriate method of strength loss calculation been used? | | | |

12.0 Weight of Sections

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 12.a | Has the weight of the section been estimated? | | | |
| 12.b | Has due consideration been given to the variables of the section being removed? <i>(mass/dimensions/foliage/taper/decay/moisture)</i> | | | |
| 12.c | Does the operator’s estimate of weight seem accurate? | | | |

13.0 Anchor Selection

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 13.a | Has the operator correctly identified the species of tree being worked on? | | | |
| 13.b | Is the species of the tree capable of supporting the potential load? | | | |
| 13.c | Is the selected anchor point(s) strong enough? | | | |
| 13.d | Has consideration been given to the consequences of anchor failure? | | | |
| 13.e | Has appropriate equipment been selected for the type of anchor(s) being used, e.g. natural crotch rigging? | | | |
| 13.f | Are components correctly secured to anchors? | | | |
| 13.g | Are PPE and rigging anchors suitably independent? | | | |
| 13.h | Are redirects being used appropriately to avoid causing adverse loading to anchors? | | | |

14.0 Peak Loads

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 14.a | Has the potential for a high peak load been considered? | | | |
| 14.b | Has the potential peak load been calculated? | | | |
| 14.c | Have measures been taken to reduce potential peak loads? | | | |
| 14.d | Has the system been configured appropriately to contend with the potential peak loads? | | | |

15.0 Inspection and Maintenance

| Ref. | Checklist | Yes | No | N/A |
|------|--|-----|----|-----|
| 15.a | Has all equipment been subject to pre-use checks? | | | |
| 15.b | Is the equipment on site in a serviceable condition? | | | |
| 15.c | Has relevant equipment been subject to thorough examination? | | | |
| 15.d | Are thorough examination records available? | | | |
| 15.e | Has equipment been stored, transported and maintained correctly? | | | |
| 15.f | When equipment has been found to be defective, have operators removed it from service? | | | |

Notes

| | | | |
|-------------------------|--|------------|--|
| Date of observations: | | | |
| Location: | | | |
| Observer's name: | | Signature: | |
| Who is being observed? | | | |
| Comments: | | | |
| Actions: | | | |
| Reference: | | | |
| Actions completed date: | | | |
| Confirmed by: | | Signature: | |

Further information

This safety guide is one of a series produced by the **Arboricultural Association (AA)**. There is also a wide range of additional safety and technical information in relation to arboriculture on the AA website: www.trees.org.uk

For safety information in relation to forestry visit the **Forest Industry Safety Accord (FISA)** website: www.ukfisa.com

For more general information about health and safety related to tree work, visit the **Health and Safety Executive** website: www.hse.gov.uk/treework/index.htm

Further reading

Industry Code of Practice for Arboriculture – Tree work at height (second edition, May 2020)

Technical Guide 1: *Tree Climbing and Aerial Rescue*

Technical Guide 2: *Use of Tools in the Tree*

Technical Guide 3: *Rigging and Dismantling*

Technical Guide 4: *Use of Mobile Cranes in Tree Work*

Technical Guide 5: *Use of Mobile Elevating Work Platforms in Tree Work*

FISA 802: *Emergency Planning*

FISA 805: *Training and Certification*