Notes

Further reading

Using petrol-driven chainsaws	AFAG301
Basic chainsaw felling and manual takedown	AFAG302
Chainsaw snedding	AFAG303
Chainsaw cross-cutting and manual stacking	AFAG304
Chainsaw clearance of windblow	AFAG306
Top-handled chainsaws	AFAG308
Use of winches in directional felling and takedown	AFAG310
Emergency planning	AFAG802
Electricity at work: Forestry and arboriculture	AFAG804
First aid at work: Your questions answered	INDG214
Managing health and safety in forestry	INDG294
Chainsaws at work	INDG317
Protect your hearing or lose it!	INDG363

These publications are available from HSE Books - see 'Further information'.

Notes

Name:

Checklist verified by:

Date:

Further information

HSE priced and free publications are available by mail order from HSE Books, PO Box 1999, Sudbury, Suffolk CO10 2WA
Tel: 01787 881165 Fax: 01787 313995 Website: www.hsebooks.co.uk
(HSE priced publications are also available from bookshops and free leaflets can be downloaded from HSE's website: www.hse.gov.uk.)

For information about health and safety ring HSE's Infoline
Tel: 08701 545500 Fax: 02920 859260
e-mail: hseinformationservices@natbrit.com or write to HSE Information Services, Caerphilly Business Park, Caerphilly CF83 3GG.

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

This leaflet is available in priced packs of 15 from HSE Books, ISBN 0 7176 2640 7. Single free copies are also available from HSE Books.

© *Crown copyright* This publication may be freely reproduced, except for advertising, endorsement or commercial purposes. First published 04/03. Please acknowledge the source as HSE.

AFAG307 04/03 C150

Printed and published by the Health and Safety Executive

HSE

Chainsaw felling of large trees

AFAG

Arboriculture and Forestry Advisory Group

Introduction

This leaflet covers the felling and crown breakdown of large trees in plantations or of single large trees. It does not cover exceptional situations where the risk assessment shows advanced or alternative felling techniques, beyond those normally applied to large trees, are required. In such circumstances, seek specialist advice and agree safe methods of working.

You can use this leaflet, along with the chainsaw manufacturer's handbook, as part of the risk assessment process to help identify the controls to put in place when felling large trees.

You must also assess the effect of the site and the weather as well as following this guidance.

All operators must have had appropriate training in how to operate the machine and how to carry out the tasks required (see HSE leaflet INDG317 *Chainsaws at work*).

For guidance on personal protective equipment (PPE), the machine, preparing to work, maintenance, fuelling and starting procedures see AFAG leaflet 301 *Using petrol-driven chainsaws*. The basic felling principles identified in AFAG leaflet 302 *Basic felling by chainsaw and manual takedown* must be read and applied in conjunction with this leaflet. However, the crown spread, depth, branching habit, size and surroundings of large trees create particular risks that need knowledge and techniques beyond that for basic felling, snedding and cross-cutting.

Tools required

❑ **1** The following aid tools should be available:

- a sledgehammer;
- wedges;
- an appropriately rated winch.

Felling

❑ **2** Ensure that no other person is within a distance equal to twice the height of the tree to be felled and never directly below on steep slopes.

❑ **3** Be aware that wood from the crown can travel a considerable distance when the tree hits the ground. Arisk zone must be established.

❑ **4** Where branch wood is used to cushion the impact of the falling tree, only use light material which is as long as possible.

❑ **5** The felling cuts should be proportional to the tree's diameter, size, species and the potential for decay.

Crown breakdown

❑ **6** Crown breakdown can be very dangerous and the operator must always be prepared for the tree rolling or for springback when cutting branches.

❑ **7** Ensure that the tree is kept in a stable condition during crown breakdown, if necessary by securing it with a properly anchored winch.

❑ **8** Plan the sequence of work so that an escape route is clear and available at all times.

❑ **9** Maintain a risk zone to ensure that bystanders are kept at a safe distance during the crown breakdown and until all parts of the tree are stable.

❑ **10** Never work underneath any part of the felled tree.

❑ **11** It is important to continually assess the tension in the branches, especially those supporting the main stem.

❑ **12** Cut away all the smaller branch wood to shoulder height, retaining the main supporting branches and the stem (see Figure 1).

❑ **13** Before cutting the heavier branches, clear the work area of debris so that you can stand securely. Assess any potential movement of the tree.

❑ **14** Where possible reduce the length of heavy branches gradually, rather than cutting them off at the stem.

❑ **15** Where branches are above shoulder height, roll the trunk under the control of the winch to bring in the remaining branches to a safe cutting height.

❑ **16** De-limbing flush to the trunk should be done once all branches have been removed and all the timber is in a stable position on the ground.

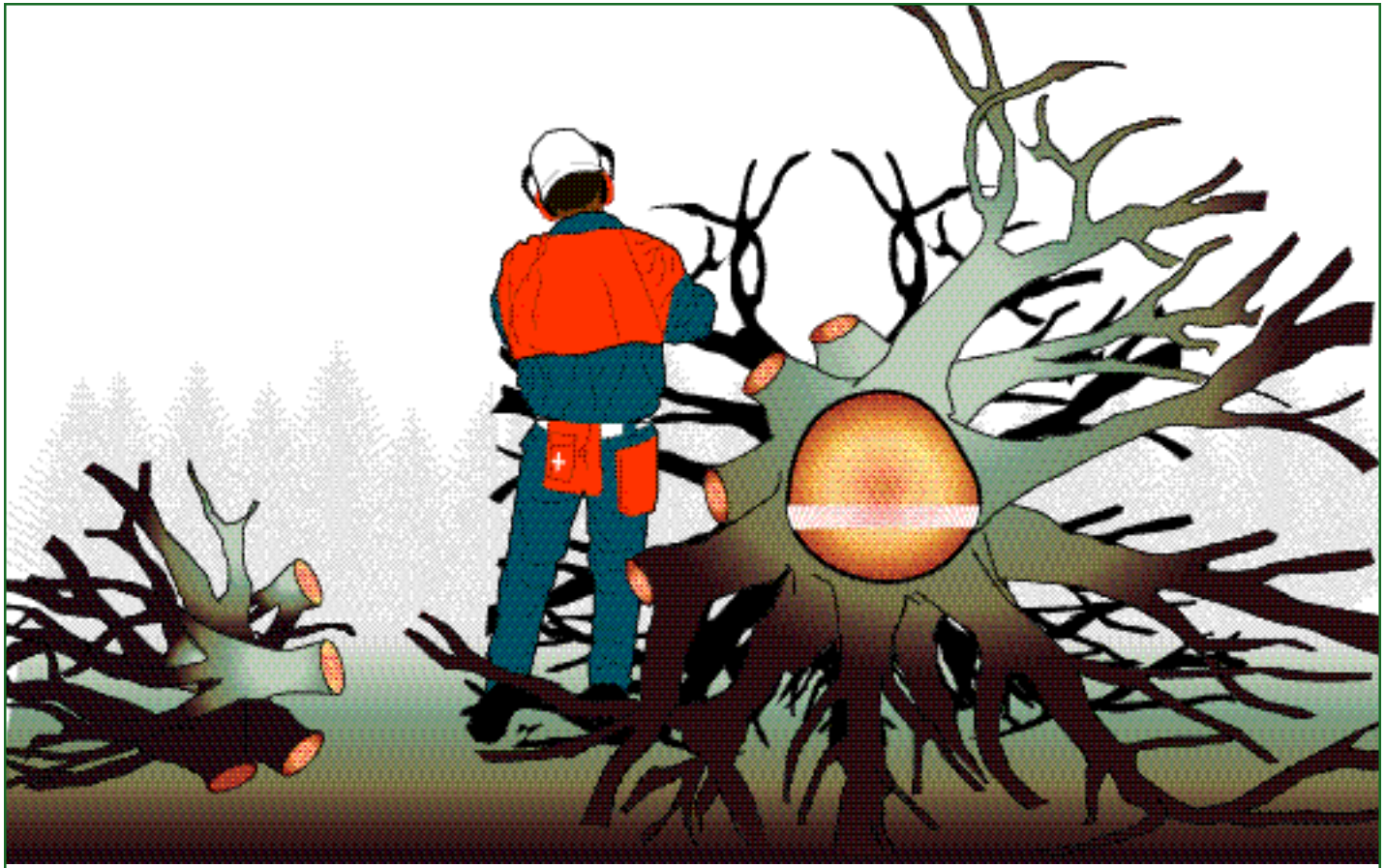

Figure 1 Retention of supporting branches