

To include in all translations:

This is a translation of the original English version of the EFESC handbook and its appendices.

This translated version is subordinate to the original English version.

EUROPEAN CHAINSAW STANDARDS: 2018

ECS 2: Basic Tree Felling Techniques (Small Trees)

What the chainsaw operator must be able to do: Safely felling trees under effective guide bar length on felling height, removing branches and top and taking down a hung-up tree

ECS2-1	TAKE CARE OF YOURSELF (PPE) AND OTHERS AROUND YOU AT WORK - Chainsaw operator to wear appropriate PPE
1:01	Chainsaw safety trousers
1:02	Chainsaw safety boots
1:03	Safety helmet
1:04	Eye & ear protection
1:05	Gloves appropriate to task
1:06	Non-snag outer clothing
1:07	Personal /Squad First Aid Kit – on work site
1:08	Whistle/Mobile/Radio
ECS2-2	PLANNING THE WORK INCLUDING WHAT TO DO IN AN EMERGENCY - Chainsaw operator must be able to identify hazards relevant to the site & trees to be worked on:
2:01	Risk Assessment – walk site, look and discuss
2:02	Method statement - verbal
2:03	Emergency planning - check information
ECS2-3	OPERATIONAL SAFETY CHECKS- Chainsaw operator must be able to check chainsaw for condition/sharpness etc and pre-use safety:
3:01	Cold/Warm start method (ground/'leg lock')
3:02	Safe start distance from fuel (min.1m or greater according to national guidance, no spillage, gases released)
3:03	Function of chain brake tested, left hand guard and throttle lock
3:04	Saw checked for oiling (e.g. oil throw test or oil present on drive links)
3:05	Chain not moving when throttle released (no chain creep)
3:06	On/off switch is working (pull choke to stop if not, then label not to be used)

3:07	Chain tension 'warm' re-checked
ECS2-4	MEET LEGAL & SITE ENVIRONMENTAL REQUIREMENTS IN ACCORDANCE WITH NATIONAL STANDARDS - Chainsaw operator must be able to check specifications:
4:01	Protection of fauna, flora, wildlife, waterways, site specifications etc, regards pollution/damage:
4:02	Use bio-oils whenever possible
4:03	Prevent waste or dispose of it without causing further damage, in accordance with the regulations, especially according to the standard for recyclable waste
ECS2-5	PREPARE THE TREE FOR FELLING BY SAFE BRASHING - Chainsaw operator must be able to remove low branches considering:
5:01	Correct "break-in"
5:02	Position of the saw in relation to the operator, bar on opposite side of stem or out of line of head/neck and body
5:03	Saw body not above shoulder height
5:04	Operating technique
5:05	Brashing close to the stem
ECS2-6	FELLING TREES IN A SAFE & ERGONOMIC WAY - Chainsaw operator must be able to fell safely the following types of tree: upright; backward weighted; forward weighted.
6A:1	Trees Inspected for signs of rot or decay, loose branches & accurate evaluation of weight distribution
6A:2	Choice of felling direction made
6A:3	Escape routes selected and prepared
	Chainsaw operator must be able to cut a sink to determine felling direction on upright, forward or backward weighted trees, using:
6B:1	Safe stance
6B:2	Top sink cut normally between 45-60°
6B:3	Bottom sink cut as close to ground as practicable (unless site criteria is different)
6B:4	Cuts 20-30% into stem unless tree condition dictates otherwise
6B:5	Sink cuts to meet accurately (not undercut)
6B:6	Sink facing in the chosen direction of fall
6B:7	Applied chain brake if reaching across bar and when negotiating obstacles
	Chainsaw operator must be able to make the main felling cut/s on upright, forward or backward weighted trees using a safe and effective felling method (e.g. a standard cut; a 'split-level' cut; a "boring cut" technique leaving rear hold; "Danish" / 'saved corner' cut; or any other cut) appropriate to the aspect of the tree.
6C:1	Correct felling method chosen for the particular aspect of the tree
6C:2	Safe stance
6C:3	"Ears" cut to avoid tearing, where appropriate

6C:4	Checks site for specific safety conditions (including third parties) before the main felling cut started & shout verbal warning: no unauthorized persons within two tree lengths or directly below on steep slopes
6C:5	Main felling cut no more than 10% of tree diameter above level of sink
6C:6	Felling cuts made with “pushing chain” or “pulling” chain as appropriate
6C:7	Safe withdrawal of the saw and chain brake used as appropriate
6C:8	A hinge retained appropriate to the tree diameter, aspect and condition
6C:9	Appropriate aid tools as required to fell tree
6C:10	The operator fully uses a prepared escape route as soon as the tree begins to fall
6C:11	Look up and check for loose branches, tops etc.
ECS2-7	REMOVE BRANCHES IN A SAFE & ERGONOMIC WAY - Safe working practice will include:
7A:1	Correct stance and support of the saw on tree and/or right leg
7A:2	Left thumb around the front handle
7A:3	Neither handle released while the chain is moving
7A:4	Apply chain brake if reaching across bar and when negotiating obstacles
	Chainsaw operator must be able to avoid:
7A:5	Walking when saw is on same side of tree as operator without applied chain brake without applied chain brake
7A:6	Reaching too far round with saw on far side of tree
7A:7	Cutting towards legs or body
7A:8	Using kick-back zone on tip of guide bar
7A:9	Overreaching with chainsaw
7A:10	Straddling the stem
7A:11	Working on lower side of tree on side slopes
	Chainsaw operator must be able to demonstrate:
7B:1	Systematic sequence of cuts and position of the saw to remove branches as appropriate for the branching habit
7B:2	All branches removed flush with the stem
	Chainsaw operator must be able to remove the top of the tree in accordance with site specifications:
7C:1	Cut top at appropriate diameter
7C:2	Remove top with a safe method of cutting
7C:3	Dispose of top according to Job Specification
	Chainsaw operator must be able to turn tree and remove remaining branches:
7D:1	The stem turned using appropriate techniques &/or aid tools
7D:2	Using the stem for protection when removing remaining branches
7D:3	Using a safe and effective method to sever remaining branches

7D:4	All branches removed flush with the stem
ECS2-8	TAKE DOWN A HUNG-UP TREE IN A SAFE & ERGONOMIC WAY (without a winch): Safe working practice will include:
	Chainsaw operator must be able to partially sever the hinge of hung-up tree with the chainsaw using:
8A:1	Correct stance
8A:2	Safe position to side of tree
8A:3	Safe cutting technique for removal of the hinge, leaving part(s) of hinge attached as appropriate to take down method utilised
	Chainsaw operator must be able to take down the tree using hand tools:
8B:1	Aid tool positioned and attached safely & effectively
8B:2	Straight back
8B:3	Correct pushing/pulling technique as appropriate
8B:4	Correct grip
8B:5	Repositioning aid tool as appropriate
8B:6	Method applied avoids working in danger areas and/or with indiscriminate techniques
8B:7	Release of aid tool as tree falls
8B:8	Use escape route(s) as appropriate
8B:9	If tree does not fall through the canopy when rolled, sever last part of the hinge from a safe position & 'walk down' e.g. wooden pole, using correct lifting technique
8B:10	Tree in a stable condition on the ground, mechanical (e.g. winch) takedown arranged, or tree clearly taped off as a hazard if necessary
8B:11	Site left safe & tidy
What the chainsaw operator must know and understand: ECS2	
1	Demonstrate knowledge of how to identify hazards and comply with the control procedures of risk assessments
2	Demonstrate knowledge of emergency planning and procedures for the site using the actual emergency plan for that site
3	Demonstrate knowledge of electrical emergency planning and procedures
4	Describe the implications of terrain, ground conditions, season, weather and species
5	Demonstrate knowledge of the legal requirements for felling trees in different circumstances
6	Demonstrate knowledge of the causes of, and how to prevent, potential pollution, environmental damage
7	Demonstrate knowledge of how and why to initiate and maintain effective communication
8	Demonstrate knowledge of your own role in company working practices and industry good practice
19	Demonstrate knowledge of how to apply ergonomic working methods and the implications of manual handling regulations
10	Demonstrate knowledge of how to move or roll timber by hand and with mechanical assistance
11	Demonstrate knowledge of how to recognise signs of disease and decay in trees and the effects of these on safety
12	Demonstrate knowledge of how to take down hung up trees safely and in line with industry guidelines including recognition of bad practice
13	Demonstrate knowledge of safe techniques of delimiting

14	Demonstrate knowledge of safeguarding and maintaining your own health and safety and communication with those likely to be affected by your work
15	Demonstrate knowledge of the dangers of using a pushing chain

ECC2 assessment: EFESC prescriptions of tasks and criteria

To obtain a European Chainsaw Certificate level 2, you must pass an assessment in which your skills and knowledge, both theoretical and practical, are tested. With this certificate you can prove your competence to work according to the European minimum Chainsaw Standards level 2.

If national standards or assessment procedures are more stringent and ECS2 is covered, an ECC2 label can be added to the current certificate by a certified assessment center.

During the assessment, the following minimum tasks and criteria must be checked objectively according the standards by a certified assessor. Training and assessing must be separated: the assessor may not be familiar with the candidate.

Pre-requisite to ECC2 assessment: ECC1

ECC2 assessment tasks:

Theoretical test:

- Written or oral

Practical Test:

- Recommended guide bar size 30-38cm. Diameter of trees at felling height must be under effective guide bar length. Maximum time allowed 1hour.
- Candidate has to sign RA, shows ID and wears appropriate PPE for tree felling.
- Candidate has to identify hazards relevant to the site & trees to be worked on; makes a Risk Assessment (RA), work- and emergency-planning
- Candidate has to check chainsaw for condition/sharpness etc and pre-use safety.
- Candidate has to check the legal & site environmental requirements in accordance with national standards.
- Candidate has to remove low branches.
- Candidate has to **fell two** different types of tree: either upright or backward weighted or forward weighted. (Randomly chosen for the candidate from pre-marked trees). One tree should be hung-up. (this can be an additional tree)
- Candidate has to cut a sink to determine felling direction on upright, forward or backward weighted trees.
- Candidate has to make the main felling cut/s on upright, forward or backward weighted trees using a safe and effective felling method (e.g. a standard cut; a 'split-level' cut; a "boring cut" technique leaving rear hold; "Danish" / 'saved corner' cut; or any other cut) appropriate to the aspect of the tree.
- Candidate has to remove all branches in a safe & ergonomic way.
- Candidate has to remove the top of the tree in accordance with site specifications.

	- Candidate has to turn tree and remove remaining branches.
	- Candidate has to take down a hung-up tree in a safe & ergonomic way (without a winch).
	- Candidate has to partially sever the hinge of hung-up tree with the chainsaw.
	- Candidate has to take down the hung-up tree using hand tools.
	- Candidate has to demonstrate an ergonomic use of appropriate aids to handle / move timber.

**Critical faults or a combination of relevant faults against the good practice of these standards will lead to not passing the assessment.
The assessor has the right and duty to stop the assessment if direct safety is compromised.**

ECC2 critical assessment criteria:

Theoretical test:

- If multiple choice: recommended minimum score to succeed: 70% (depending on the national scoring system)

Practical Test:

CRITICAL (C): IF ONE OF THE FOLLOWING critical POINTS IS NOT FULFILLED, THE CANDIDATE CAN NOT PASS ECC level 2:

- | | |
|-------------|---|
| none | - the candidate wears appropriate PPE for tree felling |
| none | - the candidate has the guide bar on opposite side of stem or out of line of head/neck and body when removing low branches |
| none | - the candidate has the saw body not above shoulder height |
| none | - the candidate checks site for specific safety conditions (including third parties) before the main felling cut started & shout verbal warning:
no unauthorized persons within two tree lengths or directly below on steep slopes |
| none | - the candidate retains a hinge appropriate to the tree diameter, aspect and condition |
| none | - the candidate fully uses a prepared escape route as soon as the tree begins to fall |

RELEVANT (R): IF, AFTER ONE WARNING, MORE THAN THE MAXIMUM NUMBER OF RELEVANT ERRORS ON THE TOPICS BELOW ARE MADE, THEN THE CANDIDATE CAN NOT PASS ECC level 2:

5 Max. number of errors allowed	- the candidate has a personal /Squad First Aid Kit – on work site
	- the candidate makes a Risk Assessment
	- the candidate checks function of chainbrake, left hand guard and throttle lock
	- the candidate checks protection of fauna, flora, wildlife, waterways, site specifications etc, regards pollution/damage
	- the candidate inspects the trees for signs of rot or decay, loose branches & accurate evaluation of weight distribution
	- the candidate selects and prepares escape routes
	- the candidate makes the sink cuts meet accurately (not undercut). Sink facing in the chosen direction of fall
	- the candidate chooses a correct felling method appropriate to the particular aspect of the tree
	- the candidate applies chain brake if reaching across bar and when negotiating obstacles
	- the candidate avoids cutting towards legs or body
	- the candidate avoids using the kick-back zone on tip of guide bar
	- the candidate is on safe position to side of hung-up tree
	- the candidate avoids working in danger areas when taking down a hung-up tree and/or with indiscriminate techniques