

**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 4: Windblown & Damaged Tree Techniques**

**What the chainsaw operator must be able to do: safely restraining tree root plates with a winch or other appropriate machinery, severing tree root plates and felling damaged trees.**

<b>ECS4-1</b>	<b>TAKE CARE OF YOURSELF (PPE) AND OTHERS AROUND YOU AT WORK - Chainsaw operator to wear appropriate PPE, sign RA &amp; show ID:</b>
<b>1:01</b>	Chainsaw safety trousers
<b>1:02</b>	Chainsaw safety boots
<b>1:03</b>	Safety helmet
<b>1:04</b>	Eye & ear protection
<b>1:05</b>	Gloves appropriate to task
<b>1:06</b>	Non-snag outer clothing
<b>1:07</b>	Personal /Squad First Aid Kit - on work site
<b>1:08</b>	Whistle/Mobile/Radio
<b>ECS4-2</b>	<b>PLANNING THE WORK INCLUDING WHAT TO DO IN AN EMERGENCY - Chainsaw operator must be able to identify hazards relevant to the site &amp; trees to be worked on:</b>
<b>2:01</b>	Risk Assessment – walk site
<b>2:02</b>	Method statement - verbal
<b>2:03</b>	Emergency planning
<b>ECS4-3</b>	<b>OPERATIONAL SAFETY CHECKS- Chainsaw operator must be able to check chainsaw for condition/sharpness etc and pre-use safety:</b>
<b>3:01</b>	Cold/Warm start method (ground/'leg lock')
<b>3:02</b>	Safe start distance from fuel (min.1m or greater according to national guidance)
<b>3:03</b>	<b>Function of chain brake tested, left hand guard and throttle lock</b>
<b>3:04</b>	Saw checked for oiling (e.g. oil throw test or oil present on drive links)
<b>3:05</b>	Chain not moving when throttle released (no chain creep)
<b>3:06</b>	On/off switch is working (pull choke to stop if not, then label not to be used)
<b>3:07</b>	Chain tension 'warm' re-checked

<b>ECS4-4</b>	<b>MEET LEGAL &amp; SITE ENVIRONMENTAL REQUIREMENTS IN ACCORDANCE WITH NATIONAL STANDARDS - Chainsaw operator must be able to check specifications:</b>
<b>4:01</b>	<b>Protection of fauna, flora, wildlife, waterways, site specifications etc, regards pollution/damage:</b>
<b>4:02</b>	Use bio-oils whenever possible
<b>4:05</b>	Prevent waste or dispose of it without causing further damage, in accordance with the regulations, especially according to the standard for recyclable waste
<b>ECS4-5</b>	<b>SEVERING TREE ROOT-PLATES BOTH UNDER &amp; OVER GUIDE BAR DIAMETER USING APPROPRIATE CUTS - Chainsaw operator must be able to use reducing cuts and compression and tension cuts as appropriate, to sever root-plates: Chainsaw operator must be able to restrain, backward or forward weighted, root-plates with a winch or other appropriate machinery using safe techniques:</b>
<b>5:01</b>	<b>Check risk to the operator from the root-plates rolling or falling or the stems springing (including sideways), escape routes to be selected, prepared and used</b>
<b>5:02</b>	<b>Identify tension and compression in stems and select severing methods</b>
<b>5:03</b>	<b>Sever root-plate safely from stem under guide-bar length in diameter</b>
<b>5:04</b>	<b>Sever root-plate safely from stem over guide-bar length in diameter</b>
<b>5:05</b>	<b>Sever root-plate safely to retain a saw-log of appropriate length</b>
<b>5:06</b>	<b>Ensure trees and root-plates are left in a safe and appropriate position and condition to enable subsequent operations</b>
<b>5:07</b>	<b>Restrain a root plate with a winch using safe anchor point(s) and compatible winching components &amp; ancillary equipment, or restrained with other appropriate suitable, stabilised machinery</b>
<b>5:08</b>	<b>A plan of operations is agreed with winch or machine operator and full communication maintained</b>
<b>5:09</b>	<b>Sever restrained root-plate safely using appropriate cuts (may be achieved as part of 3, 4 or 5 above)</b>
<b>5:10</b>	<b>Ensure tree and root-plate are left safe, in appropriate position &amp; condition</b>
<b>5:11</b>	<b>Site left tidy &amp; safe</b>
<b>ECS4-6</b>	<b>PREPARE THE SITE &amp; FELLING DAMAGED TREES - Chainsaw operator must be able to fell partially uprooted ('half-blown') trees , trees with a broken top (top attached) or trees with broken top (not attached) safely</b>
<b>6:A1</b>	<b>Trees Inspected for signs of decay, splitting, loose top / branches etc. &amp; accurate evaluation of weight distribution</b>
<b>6:A2</b>	Remove debris, branches, climbing vegetation, scrub and other obstructions
<b>6:A3</b>	Choice of felling direction made
<b>6:A4</b>	<b>Escape routes prepared and selected</b>
<b>6:A5</b>	<b>A plan of operations is agreed to maintain safe working distances where machinery or winch is to be used</b>
	Chainsaw operator must be able to fell trees safely using appropriate techniques, for example, 1.forward leaning tree cut with boring technique 2. Overlapping step cut, 3. "Double-V" cut, 4. "Split level" or 'Saved corner' cut 5. Progressive sink cut or other recognized safe technique
<b>6B:1</b>	<b>Safe stance &amp; position of operator</b>
<b>6B:2</b>	Cutting technique chosen is appropriate to condition and aspect of tree

<b>6B:3</b>	Appropriate aid tools or machinery used as required to assist felling
<b>6B:4</b>	<b>Checks site for specific safety conditions (including third parties) before the main felling cut started &amp; shout verbal warning: no unauthorized persons within two tree lengths or directly below on steep slopes</b>
<b>6B:5</b>	Cutting technique used is appropriate to method chosen
<b>6B:6</b>	<b>Tree felled safely</b>
<b>6B:7</b>	<b>The operator fully uses a prepared escape route as soon as the tree begins to fall</b>
<b>What the chainsaw operator must know and understand: ECS4:</b>	
<b>1</b>	Demonstrate knowledge of safety considerations and legal requirements when dealing with individually uprooted windblown trees
<b>2</b>	Demonstrate knowledge of safety regarding overhead and underground services when severing root-plates/timber under heavy tension
<b>3</b>	Describe the features of tension and compression in the timber to be considered when severing root-plates /timber under heavy tension
<b>4</b>	Demonstrate knowledge of when it is appropriate to use aid tools when severing root plates/timber under heavy tension
<b>5</b>	Demonstrate knowledge of situations where winches may be used when severing root plates/timber under heavy tension
<b>6</b>	Demonstrate knowledge of additional safety considerations that may be needed when severing root-plates/timber under heavy tension
<b>7</b>	Demonstrate knowledge of other types of uprooted or damaged trees that will require specialist methods
<b>8</b>	Demonstrate knowledge of selecting and inspecting winch and ancillary equipment for condition and compatibility
<b>9</b>	Demonstrate knowledge of inspection of an uprooted tree, site and winch anchor point(s) and system to be set up
<b>10</b>	Demonstrate knowledge of selecting a winch anchor point and suitability of attachments & winch
<b>11</b>	Demonstrate knowledge of when offset winching should be used and additional precautions required
<b>12</b>	Demonstrate knowledge of alternative methods of restraining a root-plate
<b>13</b>	Demonstrate knowledge of how to sever multiple windblown trees, both under and over guidebar length in diameter
<b>14</b>	Demonstrate knowledge of methods of dealing with a trees with side tension
<b>15</b>	Demonstrate knowledge of how to fell leaning, half blown trees
<b>16</b>	Demonstrate knowledge of safety factors to consider when felling broken trees leaning, half blown trees and hung sections
<b>17</b>	Demonstrate knowledge of methods of dealing with a broken tree section lodged in or on a standing tree
<b>18</b>	Demonstrate knowledge of severing multiple windblown stems working on slopes
<b>19</b>	Demonstrate knowledge of severing multiple windblown stems working with a range of different species, hazardous and/or damaged timber
<b>20</b>	Demonstrate knowledge of identifying safety points when using machinery to restrain rootplates or timber under heavy tension
<b>21</b>	Demonstrate knowledge of a plan of operations where machinery is to be used to extract timber as windblown clearance progresses

## ECC4 assessment: EFESC prescriptions of tasks and criteria

To obtain a European Chainsaw Certificate level 4, 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 4.  
 If national standards or assessment procedures are more stringent and ECS4 is covered, an ECC4 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 ECC4 assessment: ECC3

### ECC4 assessment tasks:

**Theoretical test:**

- Written or oral

**Practical Test: assesement on a real windblown site & with realistic tension forces**

- Recommended time allowed 2hr – 2hr 30min
- 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 use reducing cuts and compression and tension cuts as appropriate, to sever **a minimum of 3 root-plates**:  
 The candidate must restrain **minimum one rootplate** with a winch or other appropriate machinery (backward or forward weighted) using safe techniques:
- Candidate must fell **a minimum of one of the three options**: either 1. A partially uprooted ('half-blown') tree;  
 2. Tree with a broken top (top attached); or 3. Tree with broken top (not attached) as chosen by the assessor

	- Candidate to fell a tree using appropriate technique, for example, 1. forward leaning tree cut with boring technique 2. Overlapping step cut, 3. "Double-V" cut, 4. "Split level" or 'Saved corner' cut 5. Progressive sink cut or other recognized safe technique
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<b>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.</b>	
<b>ECC4 critical assessment criteria:</b>	
<b>Theoretical test:</b>	
	- If multiple choice: recommended minimum score to succeed: 70% (depending on the national scoring system)
<b>Practical Test:</b>	
<b>CRITICAL (C): IF ONE OF THE FOLLOWING critical POINTS IS NOT FULFILLED, THE CANDIDATE CAN NOT PASS ECC level 4:</b>	
<b>none</b>	- the candidate wears appropriate PPE for tree felling
<b>none</b>	- the candidate checks risks from the root-plates rolling or falling or the stems springing (including sideways), escape routes to be selected, prepared and used
<b>none</b>	- 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
<b>none</b>	- the candidate fully uses a prepared escape route as soon as the tree begins to fall
<b>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 4:</b>	
<b>6</b>	- the candidate has a personal /Squad First Aid Kit – on work site
	- the candidate makes a Risk Assessment
	- the candidate checks function of chain brake, left hand guard and throttle lock
	- the candidate checks protection of fauna, flora, wildlife, waterways, site specifications etc, regards pollution/damage
	- the candidate identifies tension and compression in stems and selects severing methods
	- the candidate severs root-plate safely from stem under guide-bar length in diameter
	- the candidate severs root-plate safely from stem over guide-bar length in diameter
	- the candidate severs root-plate safely to retain a saw-log of appropriate length
	- the candidate ensures trees and root-plates are left in a safe and appropriate position and condition to enable subsequent operations
	- the candidate restrains a root plate with a winch using safe anchor point(s) and compatible winching components & ancillary equipment, or restrained with other appropriate suitable, stabilised machinery
<b>Max. number</b>	

<b>of errors allowed</b>	- the candidate agrees a plan of operations with winch or machine operator and full communication and safe working distances are maintained
	- the candidate severs restrained root-plate safely using appropriate cuts
	- the candidate ensures tree and root-plate are left safe, in appropriate position & condition
	- the candidate inspects trees for signs of decay, splitting, loose top / branches etc. & accurate evaluation of weight distribution
	- the candidate has a safe stance & position of operator
	- the candidate fells tree safely