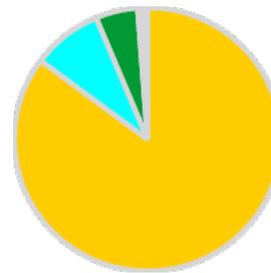


28/05/2021 gruppo C 28 mag

**Site conditions**

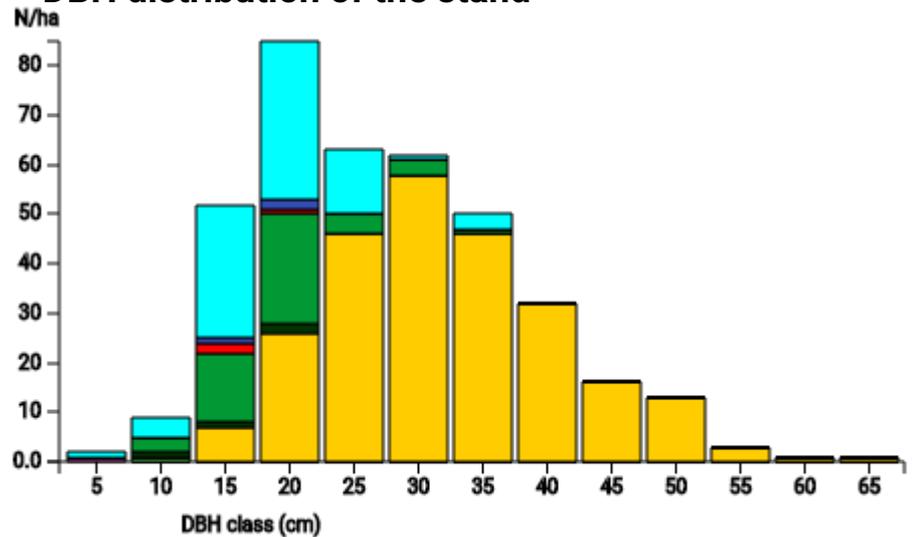
Altitude: 870 m.a.s.l.  
 Geology / Bedrock: Alluvial and mixed beds  
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.  
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum  
 Mean annual temperature: 12.4 C;  
 Mean annual precipitation: 1154 mm; Ownership: State-owned Agency "Sala"; Establishment: 2020

**Tree species distribution by volume (in %)**



- Turkey oak: 85.1 %
- European hop-hornbeam: 8.5 %
- Italian maple: 5.1 %
- manna ash: 0.6 %
- field maple: 0.3 %
- hornbeam: 0.3 %
- common beech: 0 %
- downy oak: 0 %

**DBH distribution of the stand**



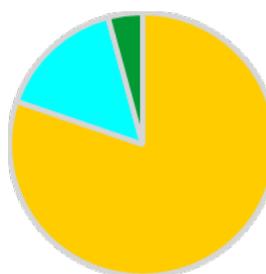
**Initial stand (details by tree species)**

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	81	3	34.6	2647	1669	101
Italian maple	47	1.8	20.8	1588	917	65
Turkey oak	249	24.7	346.4	26500	7807	401
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
<b>Total</b>	<b>389</b>	<b>29.9</b>	<b>407.1</b>	<b>31140</b>	<b>10570</b>	<b>578</b>

### Removed trees

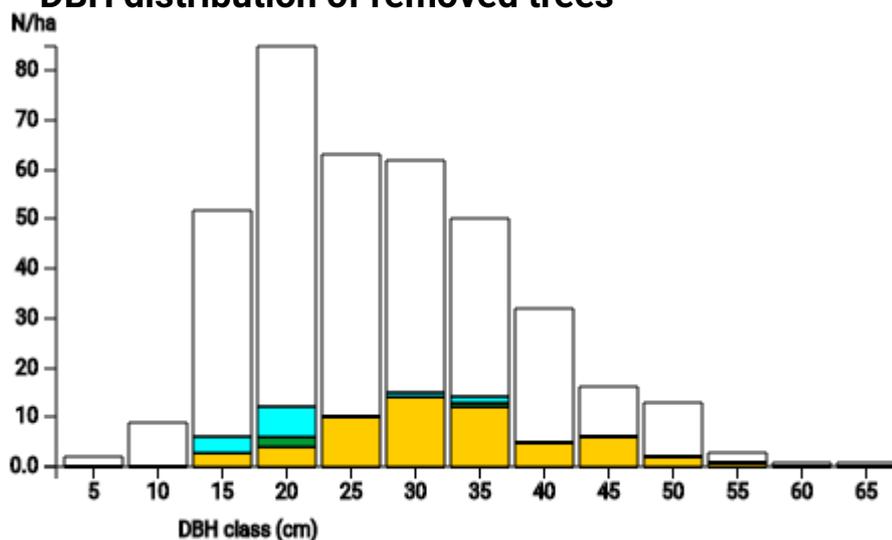
Volume: 86.5 m<sup>3</sup>  
 Basal area: 6.2 m<sup>2</sup>  
 Economic value: 6616 €  
 Habitat value: 1854 pts.

### Removed trees (N in %)



- Turkey oak: 80.3 %
- European hop-hornbeam: 15.5 %
- Italian maple: 4.2 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

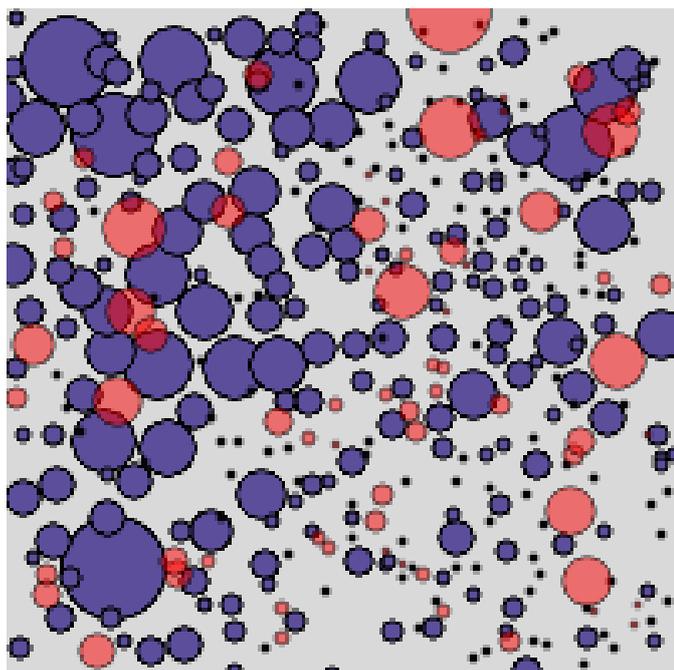
### DBH distribution of removed trees



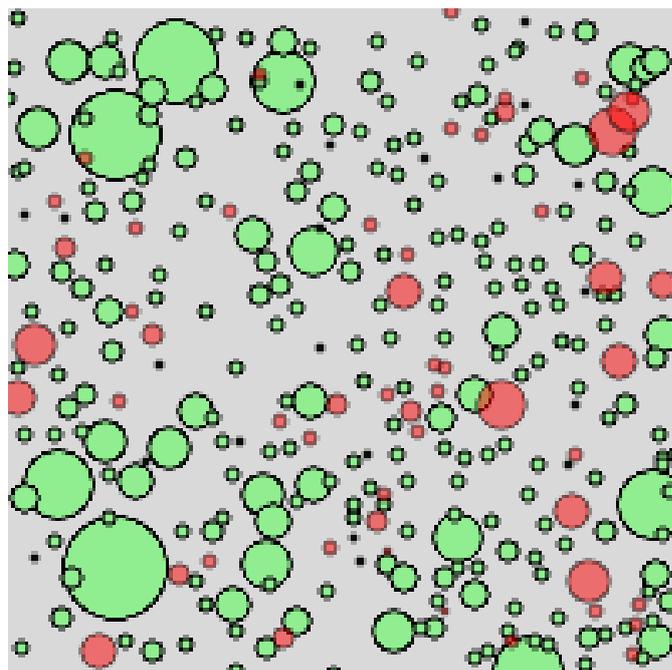
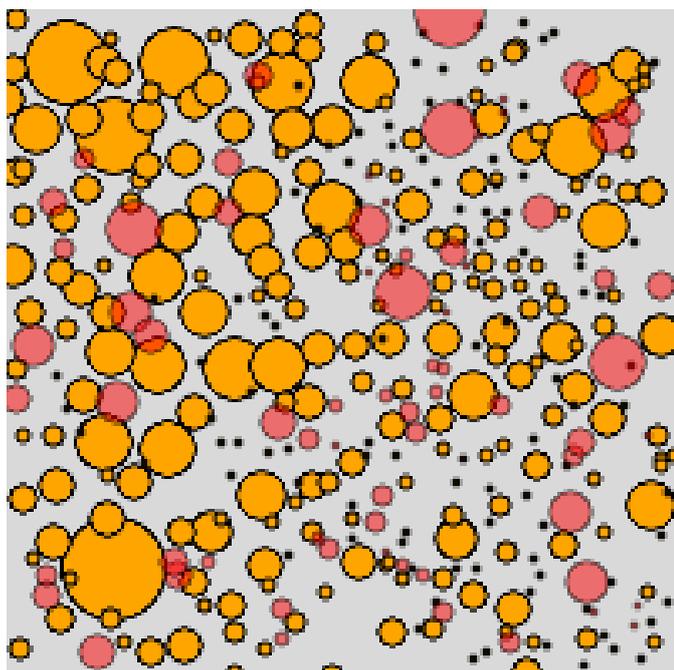
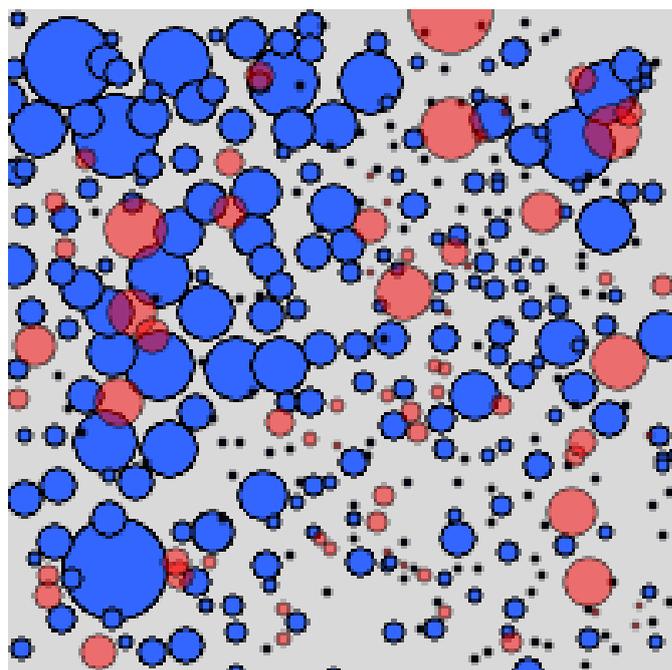
### Removed trees (details by tree species)

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	11	0.4	5.1	387	246	15
Italian maple	3	0.2	2.3	176	112	5
Turkey oak	57	5.5	79.1	6054	1496	72
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
<b>Total</b>	<b>71</b>	<b>6.2</b>	<b>86.5</b>	<b>6616</b>	<b>1854</b>	<b>92</b>

Economic value [EUR]



Habitat value

Basal area [m<sup>2</sup>]Volume [m<sup>3</sup>]**Description:**

Red circles (removed trees); circle size according to numerical values (e.g. large circles mean high values); trees with very low values (e.g. habitat value "0") are not visible.

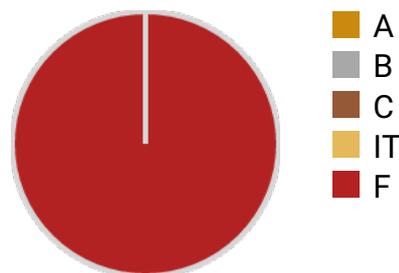
### Economic values

Total value of removed trees: 6616 €  
 Percentage of total stand value: 21.2 %  
 Stand value after harvest: 24523 €

### Economic value by tree species [€]

Tree species	Total	Per m <sup>3</sup>
common beech	0	0
downy oak	0	0
Turkey oak	6054	77
field maple	0	0
Italian maple	176	77
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	387	77
Total	6616	77

### Wood quality distribution (m<sup>3</sup> in %)



Quality class	m <sup>3</sup>	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	86.5	100

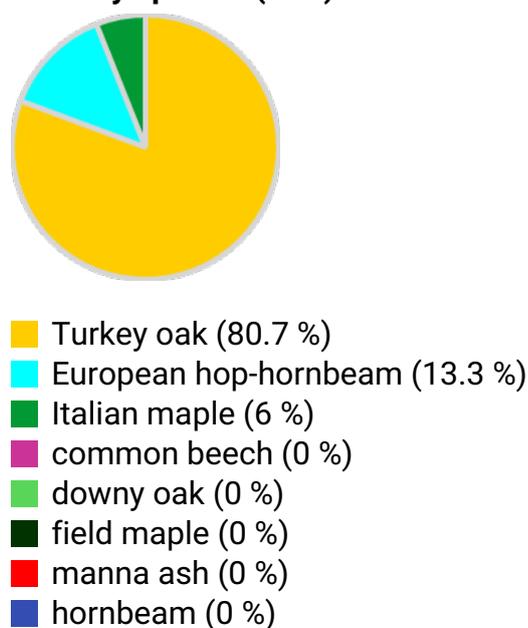
### Habitat values

Total habitat value of removed trees: 1854 pts.  
 Percentage of total stand value: 17.5 %  
 Stand value after harvest: 8716 pts.

### Habitat value by tree species [pts.]

Tree species	Total	Per m <sup>3</sup>	Microhabitats [N]
common beech	0	0	0
downy oak	0	0	0
Turkey oak	1496	18.9	72
field maple	0	0	0
Italian maple	112	48.7	5
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	246	48.7	15
Total	1854	21.4	92

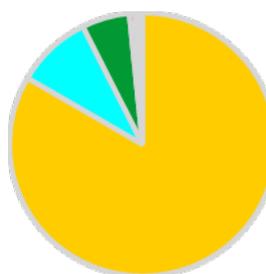
### Habitat value (points) of removed trees by species (in %)



### Remaining stand

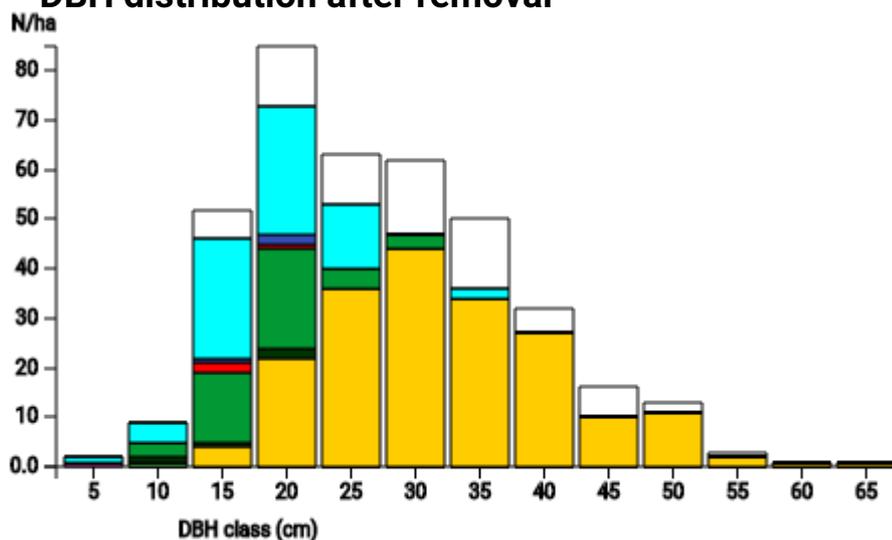
Volume: 320.5 m<sup>3</sup>  
 Basal area: 23.7 m<sup>2</sup>  
 Economic value: 24523 €  
 Habitat value: 8716 pts.

### Remaining trees by volume (m<sup>3</sup> in %)



- Turkey oak: 83.4 %
- European hop-hornbeam: 9.2 %
- Italian maple: 5.8 %
- manna ash: 0.7 %
- field maple: 0.4 %
- hornbeam: 0.4 %
- common beech: 0.1 %
- downy oak: 0 %

### DBH distribution after removal



### Remaining stand (details by tree species)

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	70	2.5	29.5	2260	1423	86
Italian maple	44	1.7	18.5	1412	805	60
Turkey oak	192	19.2	267.3	20446	6311	329
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	4	0.1	1.4	104	115	6
hornbeam	3	0.1	1.3	101	24	1
manna ash	3	0.1	2.3	174	38	4
<b>Total</b>	<b>318</b>	<b>23.7</b>	<b>320.6</b>	<b>24523</b>	<b>8716</b>	<b>486</b>

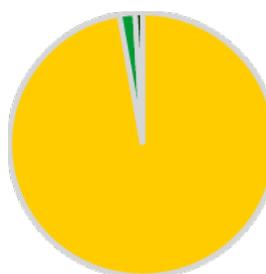
**Retention trees**Volume: 55.8 m<sup>3</sup>

Elite trees: 21

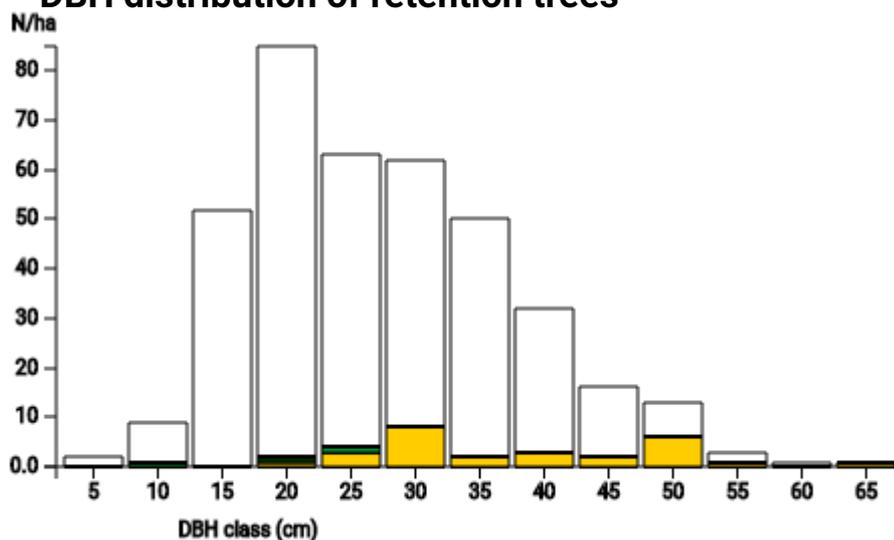
Habitat trees: 5

Economic value: 4266 €

Habitat value: 1156 pts.

**Retention trees by volume (m<sup>3</sup> in %)**

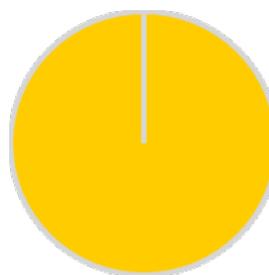
Turkey oak: 97.2 %
Italian maple: 1.9 %
field maple: 0.9 %
common beech: 0 %
downy oak: 0 %
manna ash: 0 %
hornbeam: 0 %
European hop-hornbeam: 0 %

**DBH distribution of retention trees****Retained trees (details by tree species)**

Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	0	0	0	0	0	0
Italian maple	2	0.1	1	80	48	2
Turkey oak	27	3.7	54.2	4148	1084	68
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	1	0	0.5	38	24	1
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
<b>Total</b>	<b>30</b>	<b>3.9</b>	<b>55.8</b>	<b>4266</b>	<b>1156</b>	<b>71</b>

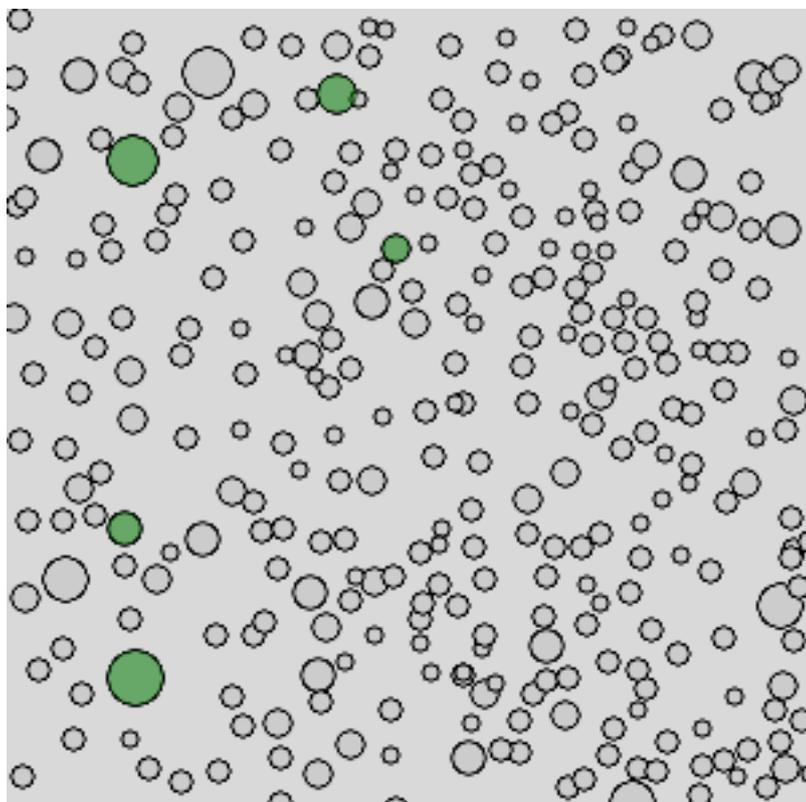
Number of habitat trees	[N]	5
Habitat value	pts.	536
	[% of total]	5.1
Economic value	[€]	1444
	[% of total]	4.6
Number of microhabitats	[N]	42
	[% of total]	7.3

### Habitat tree distribution by species (N in %)

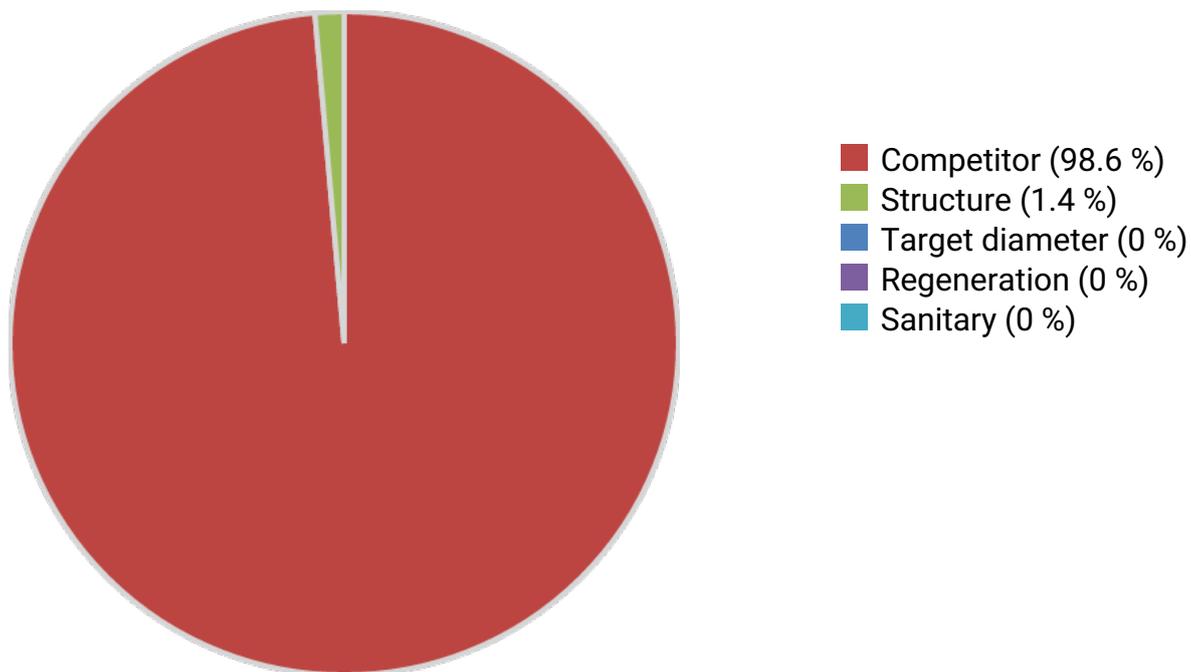


■ Turkey oak: 100 %
■ common beech: 0 %
■ downy oak: 0 %
■ field maple: 0 %
■ Italian maple: 0 %
■ manna ash: 0 %
■ hornbeam: 0 %
■ European hop-hornbeam: 0 %

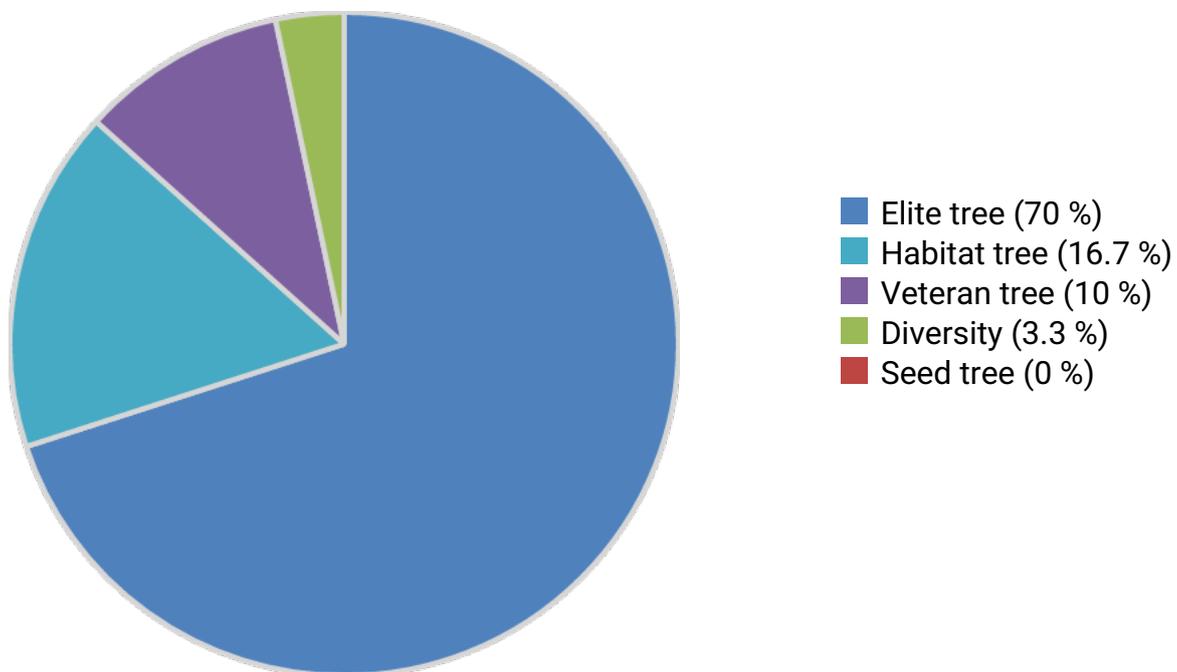
### Spatial distribution of habitat trees



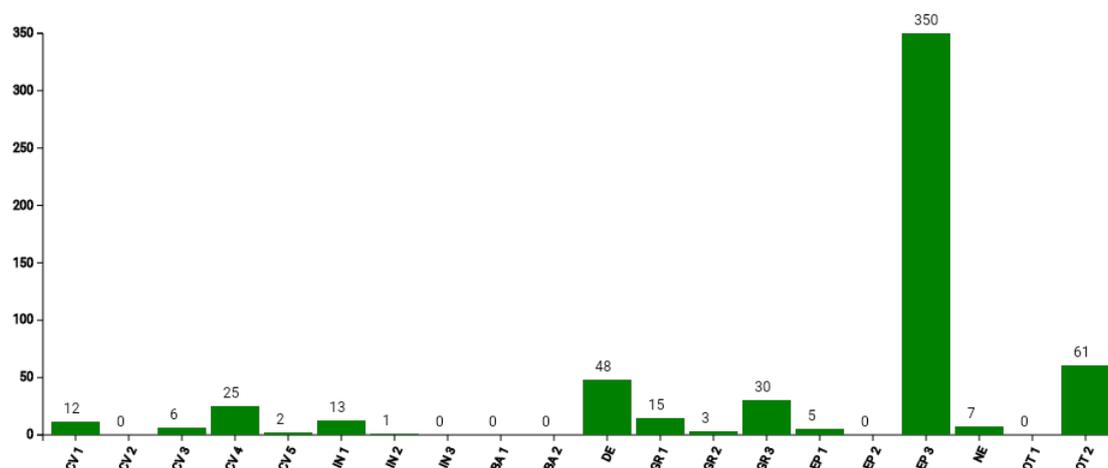
### Reasons for removal



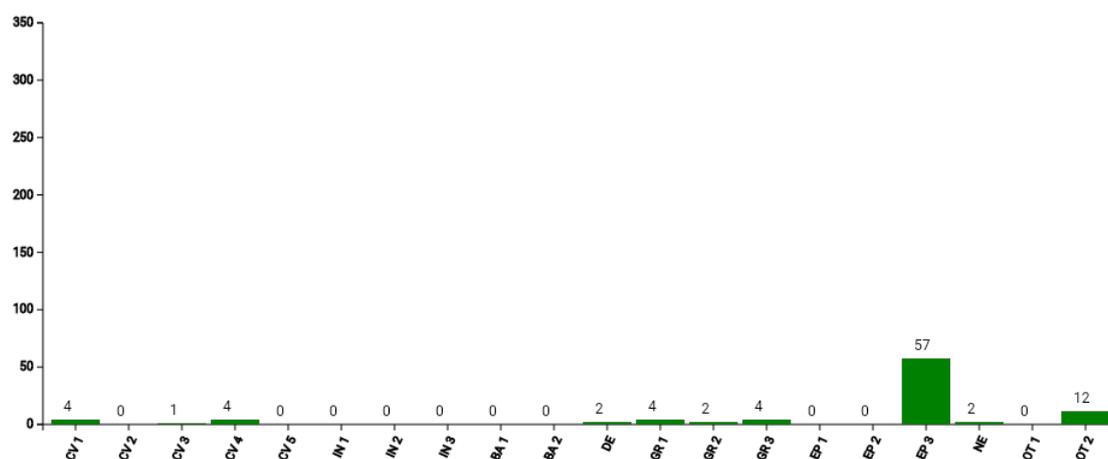
### Reasons for retention



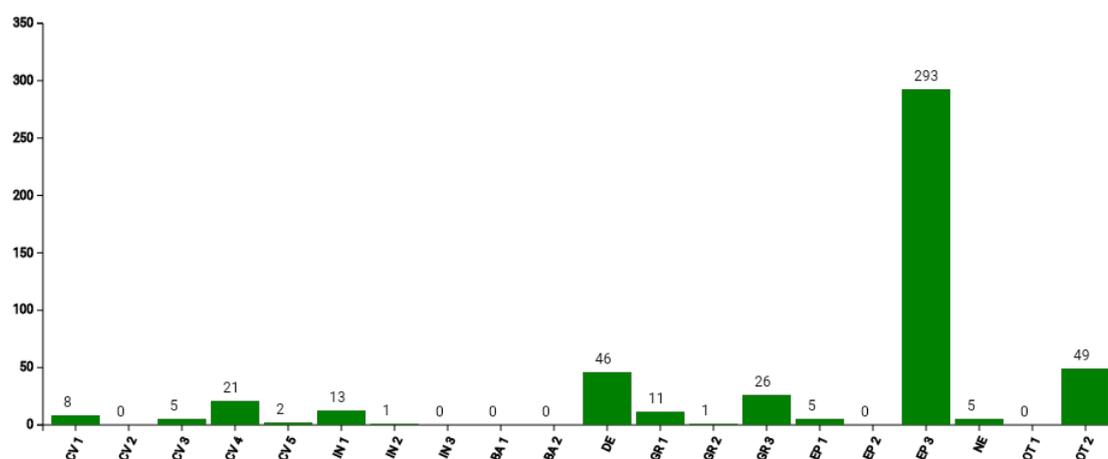
## Distribution of tree microhabitats by code (N total)



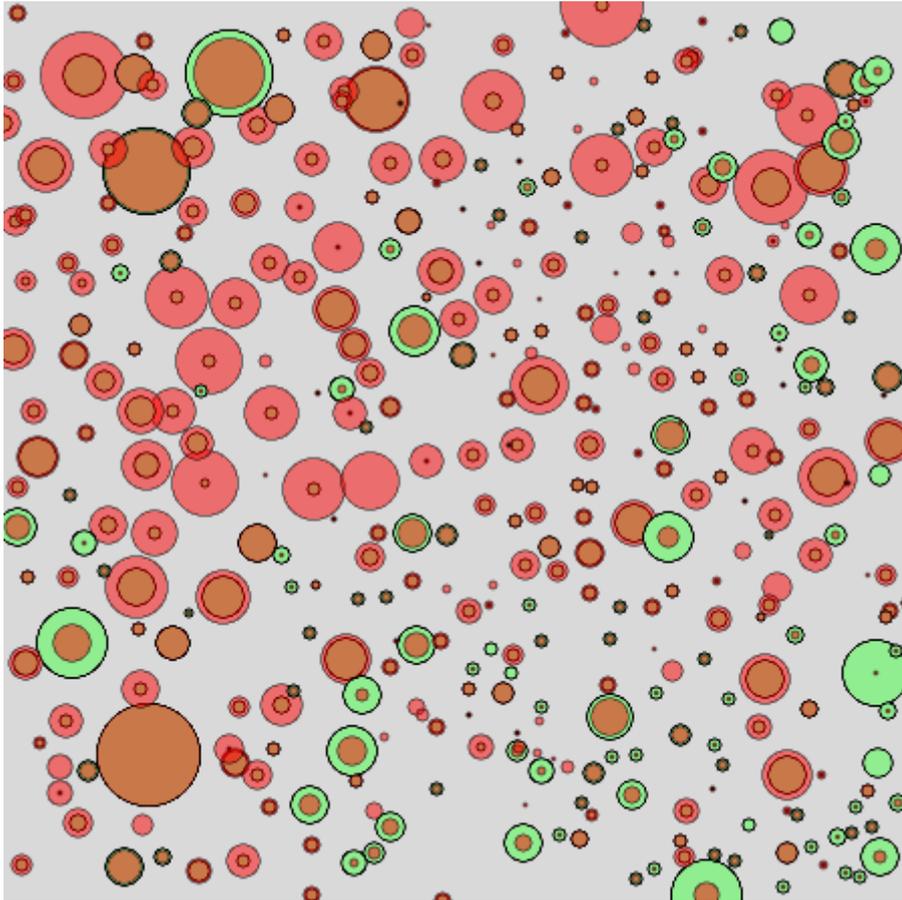
## Removed tree microhabitats by code (N removed)



## Remaining tree microhabitats by code (N after harvest)



For more details on codes consult the field guide "Catalogue of tree microhabitats" or the tree microhabitat app.

**Conflict trees (stand data)****Description:**

Overlay of economic and habitat value: red circles (economic value), green circles (habitat value); circle size according to numerical values (e.g. large circles mean high values); trees with very low values are not visible. Trees where both values overlap considerably represent so called "conflict trees".

## Removed trees

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (287) Quercus cerris	57	0.26	4.3	330	24	Competitor
Turkey oak (384) Quercus cerris	51	0.2	3	229	60	Competitor
Turkey oak (317) Quercus cerris	51	0.2	3.2	249	24	Competitor
Turkey oak (176) Quercus cerris	49	0.19	3	232	60	Competitor
Turkey oak (52) Quercus cerris	49	0.19	3.2	244	24	Competitor
Turkey oak (86) Quercus cerris	45	0.16	2.4	183	24	Competitor
Turkey oak (232) Quercus cerris	45	0.16	2.5	192	64	Competitor
Turkey oak (327) Quercus cerris	45	0.16	2.7	208	76	Competitor
Turkey oak (82) Quercus cerris	45	0.16	2.2	169	64	Competitor
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Competitor
Turkey oak (69) Quercus cerris	43	0.15	2.4	184	24	Competitor
Turkey oak (360) Quercus cerris	43	0.15	1.9	149	24	Competitor
Turkey oak (349) Quercus cerris	40.5	0.13	2	154	24	Competitor
Turkey oak (150) Quercus cerris	40	0.13	1.8	139	60	Competitor
Turkey oak (75) Quercus cerris	39.5	0.12	1.7	131	36	Competitor
Turkey oak (90) Quercus cerris	39	0.12	1.6	121	28	Competitor
Turkey oak (305) Quercus cerris	38	0.11	1.6	123	24	Competitor
Turkey oak (131) Quercus cerris	37	0.11	1.5	116	40	Competitor
Turkey oak (46) Quercus cerris	36.5	0.11	1.7	132	24	Competitor
Turkey oak (104) Quercus cerris	36.5	0.11	1.2	94	60	Competitor
Turkey oak (33)	36	0.1	1.6	122	4	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (367) Quercus cerris	36	0.1	1.5	113	0	Competitor
Turkey oak (132) Quercus cerris	36	0.1	1.5	111	4	Competitor
Turkey oak (11) Quercus cerris	35	0.1	1.5	116	18	Competitor
European hop-hornbeam (374) Ostrya carpinifolia	35	0.1	1.2	94	51	Competitor
Turkey oak (39) Quercus cerris	35	0.1	1	78	18	Competitor
Turkey oak (195) Quercus cerris	35	0.1	1.4	109	0	Competitor
Italian maple (313) Acer opalus	35	0.1	1.3	101	64	Competitor
Turkey oak (136) Quercus cerris	34	0.09	1.3	103	4	Competitor
Turkey oak (182) Quercus cerris	33.5	0.09	1.2	90	81	Competitor
Turkey oak (134) Quercus cerris	33	0.09	1.2	94	0	Competitor
Turkey oak (53) Quercus cerris	32.5	0.08	1.1	81	36	Competitor
Turkey oak (281) Quercus cerris	32.5	0.08	1	75	24	Competitor
Turkey oak (223) Quercus cerris	32	0.08	1	79	24	Competitor
European hop-hornbeam (373) Ostrya carpinifolia	32	0.08	0.9	66	58	Competitor
Turkey oak (189) Quercus cerris	31.5	0.08	1.1	81	36	Competitor
Turkey oak (240) Quercus cerris	31.5	0.08	1	78	36	Competitor
Turkey oak (126) Quercus cerris	30.5	0.07	0.8	60	24	Competitor
Turkey oak (274) Quercus cerris	30	0.07	0.7	55	16	Competitor
Turkey oak (194) Quercus cerris	30	0.07	1.1	82	24	Competitor
Turkey oak (145) Quercus cerris	30	0.07	0.9	66	0	Structure

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (190) Quercus cerris	30	0.07	1	78	24	Competitor
Turkey oak (30) Quercus cerris	30	0.07	0.9	69	24	Competitor
Turkey oak (95) Quercus cerris	29	0.07	0.9	68	24	Competitor
Turkey oak (184) Quercus cerris	28	0.06	0.8	64	24	Competitor
Turkey oak (93) Quercus cerris	27	0.06	0.8	60	36	Competitor
Turkey oak (129) Quercus cerris	27	0.06	0.7	52	24	Competitor
Turkey oak (154) Quercus cerris	27	0.06	0.6	49	36	Competitor
Turkey oak (261) Quercus cerris	26	0.05	0.6	43	0	Competitor
Turkey oak (170) Quercus cerris	26	0.05	0.6	47	21	Competitor
Turkey oak (125) Quercus cerris	26	0.05	0.7	53	0	Competitor
Turkey oak (171) Quercus cerris	25.5	0.05	0.6	48	24	Competitor
Turkey oak (186) Quercus cerris	25	0.05	0.6	46	24	Competitor
Turkey oak (366) Quercus cerris	24	0.05	0.6	46	24	Competitor
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Competitor
Italian maple (316) Acer opalus	23	0.04	0.6	45	24	Competitor
European hop-hornbeam (344) Ostrya carpinifolia	22.5	0.04	0.4	33	0	Competitor
Turkey oak (368) Quercus cerris	22	0.04	0.4	34	0	Competitor
European hop-hornbeam (246) Ostrya carpinifolia	21.5	0.04	0.5	35	24	Competitor
Turkey oak (386) Quercus cerris	21	0.04	0.4	29	4	Competitor
European hop-hornbeam (248) Ostrya carpinifolia	21	0.04	0.4	29	24	Competitor
Italian maple (303)	21	0.04	0.4	31	24	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Acer opalus						
European hop-hornbeam (314) Ostrya carpinifolia	20.5	0.03	0.3	26	38	Competitor
European hop-hornbeam (94) Ostrya carpinifolia	20.5	0.03	0.3	26	0	Competitor
European hop-hornbeam (341) Ostrya carpinifolia	20	0.03	0.3	27	3	Competitor
Turkey oak (255) Quercus cerris	19.5	0.03	0.3	20	6	Competitor
Turkey oak (363) Quercus cerris	18.5	0.03	0.3	25	0	Competitor
Turkey oak (312) Quercus cerris	18	0.03	0.2	19	28	Competitor
European hop-hornbeam (196) Ostrya carpinifolia	17	0.02	0.3	20	0	Competitor
European hop-hornbeam (230) Ostrya carpinifolia	16	0.02	0.3	19	24	Competitor
European hop-hornbeam (270) Ostrya carpinifolia	15	0.02	0.1	10	24	Competitor

## Retention trees

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (133) Quercus cerris	68	0.36	5.4	409	174	Habitat tree
Turkey oak (26) Quercus cerris	57.5	0.26	4.3	329	148	Habitat tree
Turkey oak (10) Quercus cerris	54	0.23	3.5	269	106	Habitat tree
Turkey oak (80) Quercus cerris	51.5	0.21	3.5	266	16	Elite tree
Turkey oak (101) Quercus cerris	51	0.2	3.3	253	66	Habitat tree
Turkey oak (49) Quercus cerris	51	0.2	2.4	183	42	Habitat tree
Turkey oak (57) Quercus cerris	51	0.2	3.4	258	24	Elite tree
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Elite tree
Turkey oak (47) Quercus cerris	48.5	0.19	2.5	189	4	Elite tree
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Elite tree
Turkey oak (179) Quercus cerris	41.5	0.14	1.7	131	24	Elite tree
Turkey oak (315) Quercus cerris	41	0.13	2	152	24	Elite tree
Turkey oak (92) Quercus cerris	41	0.13	1.6	122	60	Elite tree
Turkey oak (130) Quercus cerris	37	0.11	1.6	119	24	Elite tree
Turkey oak (137) Quercus cerris	35.5	0.1	1.4	111	30	Elite tree
Turkey oak (188) Quercus cerris	34.5	0.09	1.4	109	24	Elite tree
Turkey oak (226) Quercus cerris	34.5	0.09	1.2	94	24	Elite tree
Turkey oak (42) Quercus cerris	34	0.09	1.3	98	12	Elite tree
Turkey oak (146) Quercus cerris	33.5	0.09	0.9	72	48	Elite tree
Turkey oak (294) Quercus cerris	33	0.09	1.3	101	24	Diversity
Turkey oak (278) Quercus cerris	33	0.09	0.9	70	30	Elite tree

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (83) Quercus cerris	32	0.08	1.1	87	24	Elite tree
Turkey oak (185) Quercus cerris	31	0.08	1	75	24	Elite tree
Turkey oak (369) Quercus cerris	29.5	0.07	1	79	24	Veteran tree
Italian maple (330) Acer opalus	29.5	0.07	1	73	24	Veteran tree
Turkey oak (254) Quercus cerris	26.5	0.06	0.6	47	0	Elite tree
Turkey oak (364) Quercus cerris	25	0.05	0.7	54	24	Elite tree
Turkey oak (365) Quercus cerris	24.5	0.05	0.6	46	0	Veteran tree
field maple (352) Acer campestre	21	0.04	0.5	38	24	Elite tree
Italian maple (237) Acer opalus	12.5	0.01	0.1	7	24	Elite tree