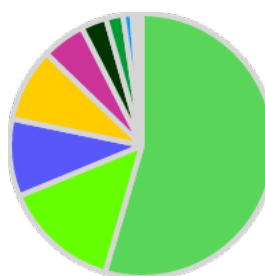


12/10/2021 Pennataro t01 sqC

### Site conditions

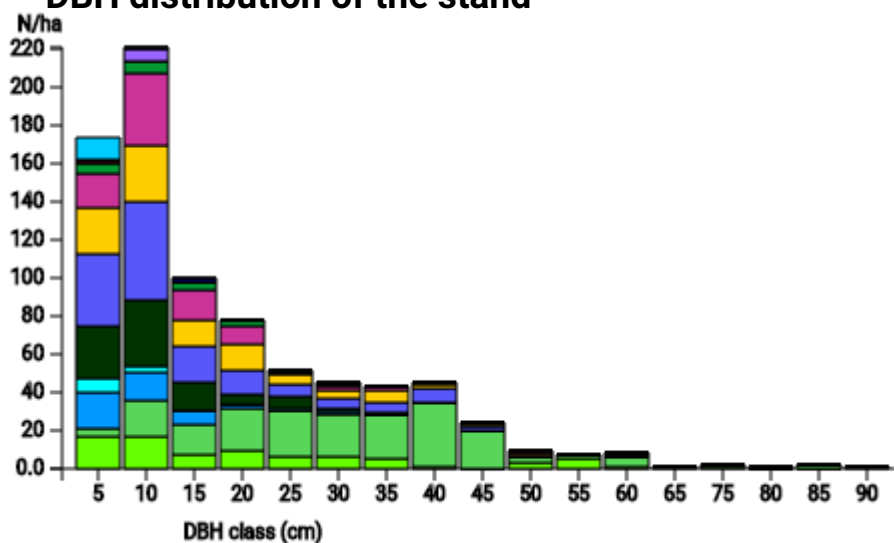
Altitude: 930 m.a.s.l.  
Forest ecological region: Molise  
Regional forest

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



- Turkey oak: 54.6 %
- common beech: 14.3 %
- Italian maple: 9.5 %
- common ash: 9 %
- hornbeam: 5.3 %
- Lobel's maple: 3.1 %
- small-leaved lime: 2.1 %
- sycamore maple: 1.1 %
- field maple: 0.6 %
- European hop-hornbeam: 0.4 %
- wild service tree: 0.1 %
- hazel: 0.1 %
- cornelian cherry: 0 %

### DBH distribution of the stand



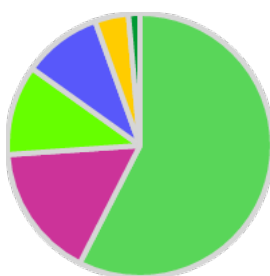
### Initial stand (details by tree species)

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	9	0.2	1.4	41	8	1
Italian maple	148	4.4	36.4	948	2607	143
Lobel's maple	90	1.7	12	312	996	60
Turkey oak	198	19.7	209.6	7019	6072	297
common ash	101	3.9	34.7	930	1606	79
common beech	80	6.1	54.9	1532	1392	77
cornelian cherry	1	0	0	0	24	1
field maple	15	0.3	2.3	60	278	14
hazel	12	0.1	0.2	6	30	1
hornbeam	91	2.2	20.2	601	742	40
small-leaved lime	22	0.9	8.1	195	207	11
sycamore maple	43	0.6	4	105	569	30
wild service tree	3	0.1	0.3	9	0	0
<b>Total</b>	<b>813</b>	<b>40.1</b>	<b>384.3</b>	<b>11760</b>	<b>14531</b>	<b>754</b>

### Removed trees

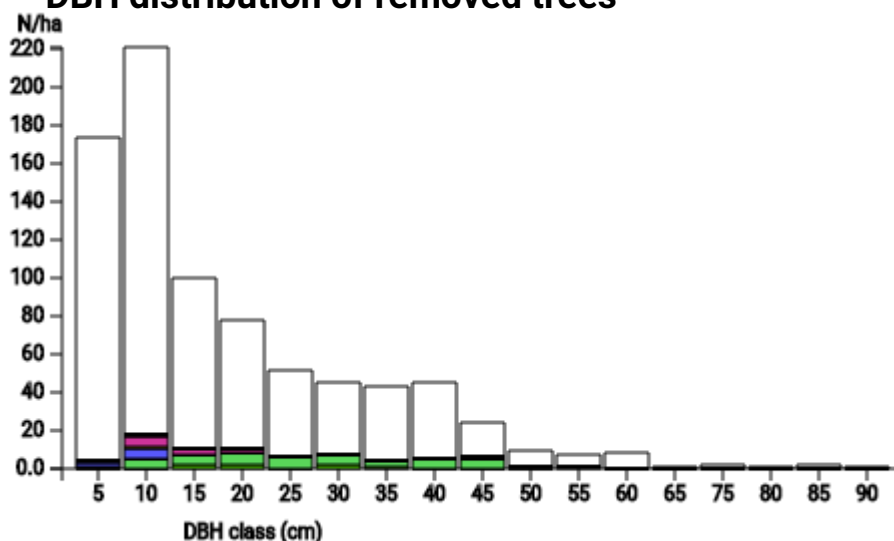
Volume: 48.4 m<sup>3</sup>  
 Basal area: 4.5 m<sup>2</sup>  
 Economic value: 1558 €  
 Habitat value: 915 pts.

### Removed trees (N in %)



- Turkey oak: 57.5 %
- hornbeam: 16.4 %
- common beech: 11 %
- Italian maple: 9.6 %
- common ash: 4.1 %
- small-leaved lime: 1.4 %
- Lobels maple: 0 %
- field maple: 0 %
- sycamore maple: 0 %
- cornelian cherry: 0 %
- European hop-hornbeam: 0 %
- wild service tree: 0 %
- hazel: 0 %

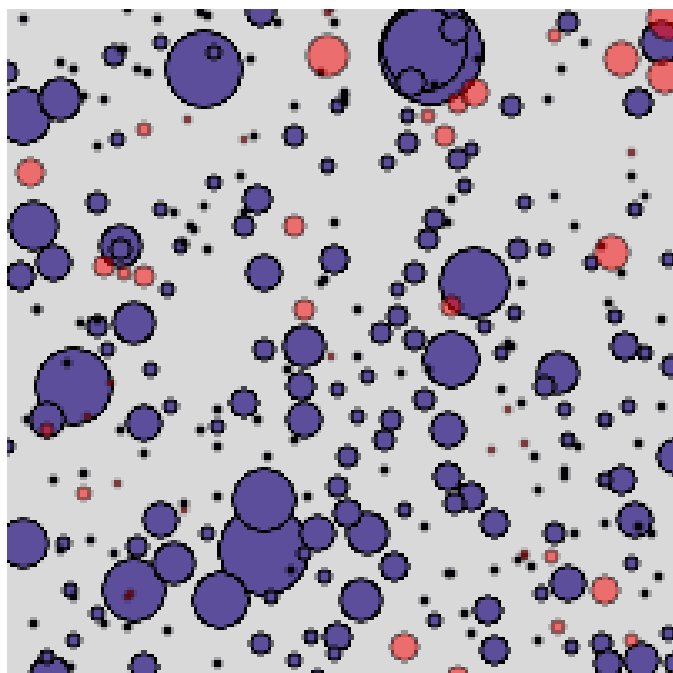
### DBH distribution of removed trees



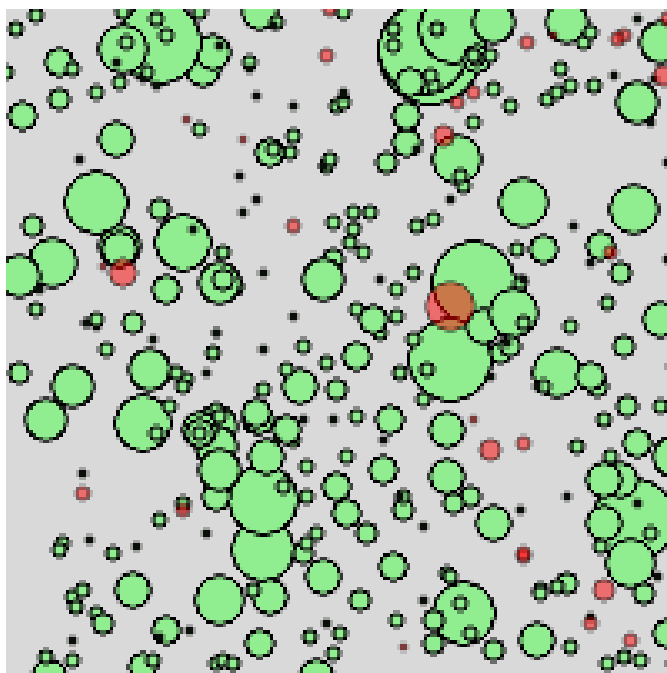
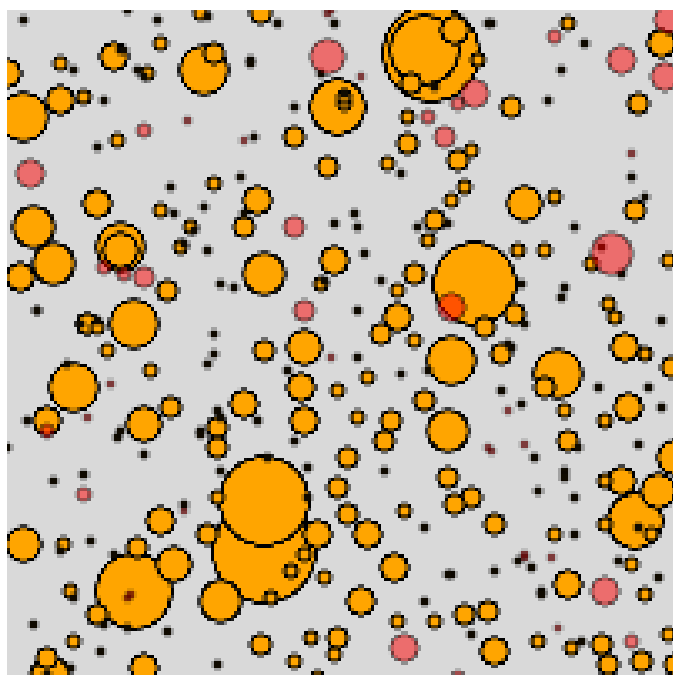
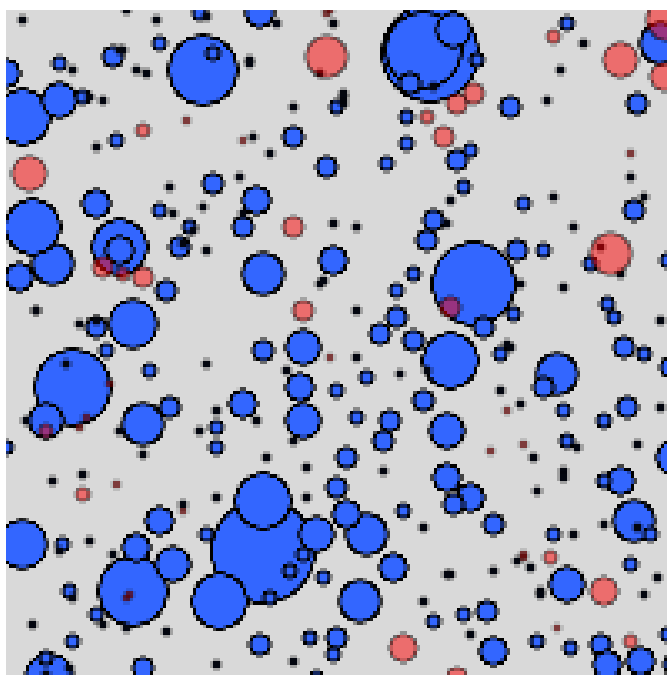
### Removed trees (details by tree species)

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	0	0	0	0	0	0
Italian maple	7	0.1	0.4	11	66	2
Lobels maple	0	0	0	0	0	0
Turkey oak	42	3.3	35.8	1199	702	36
common ash	3	0	0.2	5	27	2
common beech	8	0.7	7.6	211	104	8
cornelian cherry	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hazel	0	0	0	0	0	0
hornbeam	12	0.4	4.4	129	16	2
small-leaved lime	1	0	0.1	2	0	0
sycamore maple	0	0	0	0	0	0
wild service tree	0	0	0	0	0	0
<b>Total</b>	<b>73</b>	<b>4.5</b>	<b>48.4</b>	<b>1558</b>	<b>915</b>	<b>50</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.

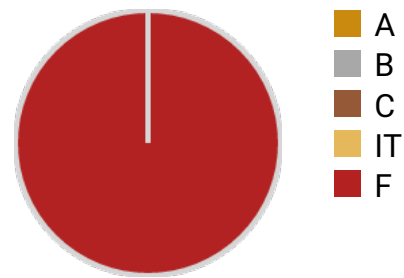
**Economic values**

Total value of removed trees: 1558 €  
 Percentage of total stand value: 13.2 %  
 Stand value after harvest: 10203 €

**Economic value by tree species [€]**

Tree species	Total	Per m <sup>3</sup>
common beech	211	28
Turkey oak	1199	33
sycamore maple	0	0
field maple	0	0
Lobels maple	0	0
Italian maple	11	26
common ash	5	27
hornbeam	129	30
small-leaved lime	2	24
cornelian cherry	0	0
European hop-hornbeam	0	0
wild service tree	0	0
hazel	0	0
Total	1558	32

**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	48.4	100

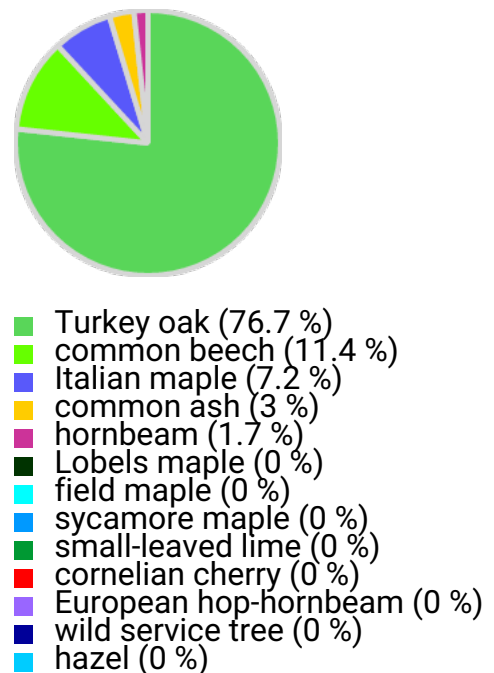
**Habitat values**

Total habitat value of removed trees: 915 pts.  
 Percentage of total stand value: 6.3 %  
 Stand value after harvest: 13616 pts.

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

Tree species	Total	Per m <sup>3</sup>	Microhabitats [N]
common beech	104	13.7	8
Turkey oak	702	19.6	36
sycamore maple	0	0	0
field maple	0	0	0
Lobels maple	0	0	0
Italian maple	66	15.4	2
common ash	27	156.1	2
hornbeam	16	3.7	2
small-leaved lime	0	0	0
cornelian cherry	0	0	0
European hop-hornbeam	0	0	0
wild service tree	0	0	0
hazel	0	0	0
Total	915	18.9	50

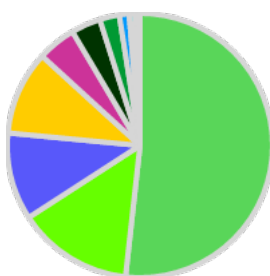
**Habitat value (points) of removed trees by species (in %)**



### Remaining stand

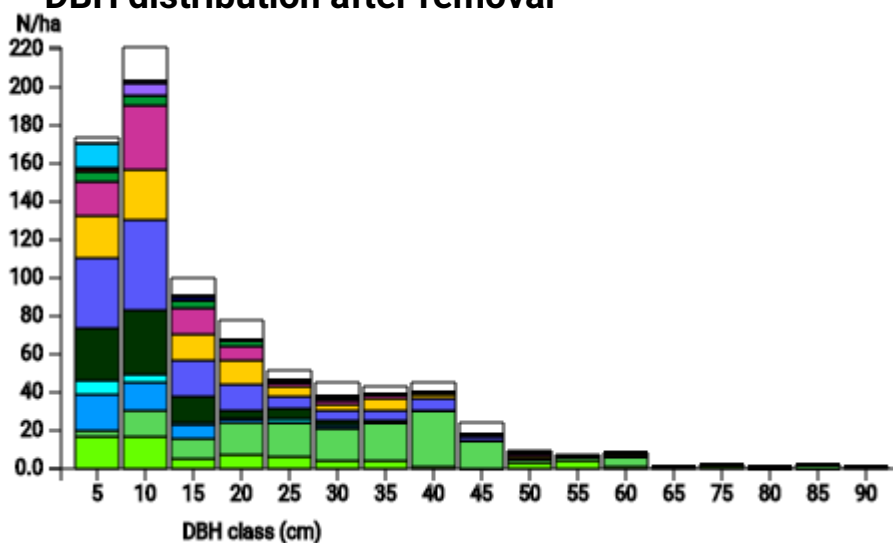
Volume: 336.3 m<sup>3</sup>  
 Basal area: 36.4 m<sup>2</sup>  
 Economic value: 10203 €  
 Habitat value: 13616 pts.

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



- Turkey oak: 51.8 %
- common beech: 14.1 %
- Italian maple: 10.7 %
- common ash: 10.3 %
- hornbeam: 4.7 %
- Lobels maple: 3.6 %
- small-leaved lime: 2.4 %
- sycamore maple: 1.2 %
- field maple: 0.7 %
- European hop-hornbeam: 0.4 %
- wild service tree: 0.1 %
- hazel: 0.1 %
- cornelian cherry: 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	9	0.2	1.4	41	8	1
Italian maple	141	4.3	36	937	2541	141
Lobels maple	90	1.7	12	312	996	60
Turkey oak	156	16.4	173.8	5820	5370	261
common ash	98	3.9	34.5	925	1579	77
common beech	72	5.4	47.3	1321	1288	69
cornelian cherry	1	0	0	0	24	1
field maple	15	0.3	2.3	60	278	14
hazel	12	0.1	0.2	6	30	1
hornbeam	79	1.8	15.8	472	726	38
small-leaved lime	21	0.9	8	193	207	11
sycamore maple	43	0.6	4	105	569	30
wild service tree	3	0.1	0.3	9	0	0
<b>Total</b>	<b>740</b>	<b>35.6</b>	<b>335.9</b>	<b>10202</b>	<b>13616</b>	<b>704</b>

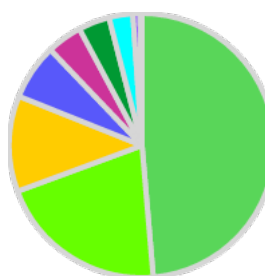
**Retention trees**Volume: 46.4 m<sup>3</sup>

Elite trees: 0

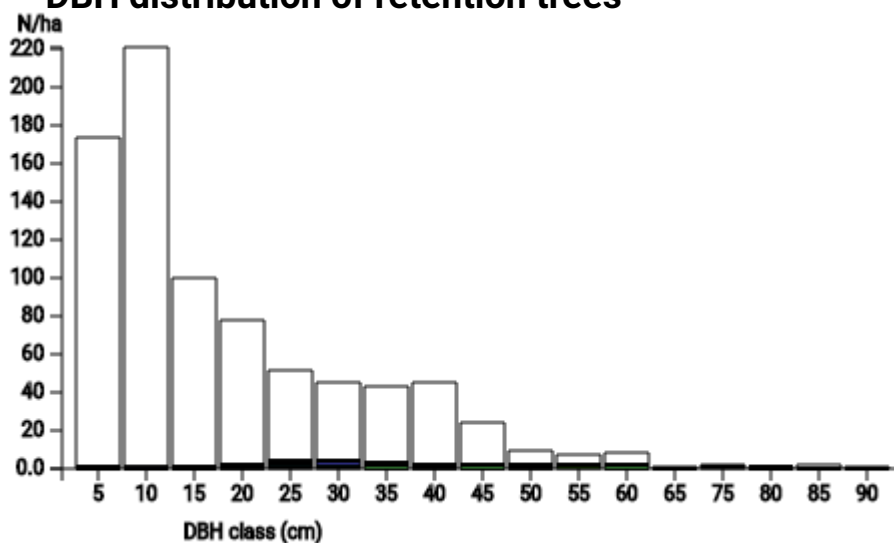
Habitat trees: 16

Economic value: 1402 €

Habitat value: 1436 pts.

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

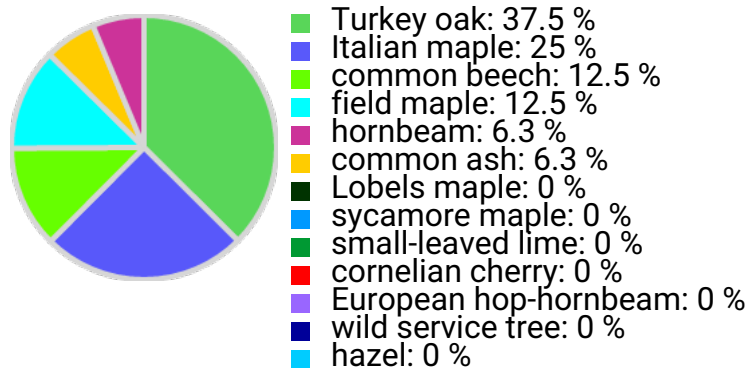
Turkey oak: 48.6 %
common beech: 20.7 %
common ash: 11.7 %
Italian maple: 6.8 %
hornbeam: 4.3 %
small-leaved lime: 3.8 %
field maple: 2.9 %
European hop-hornbeam: 0.9 %
wild service tree: 0.2 %
Lobels maple: 0 %
sycamore maple: 0 %
cornelian cherry: 0 %
hazel: 0 %

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

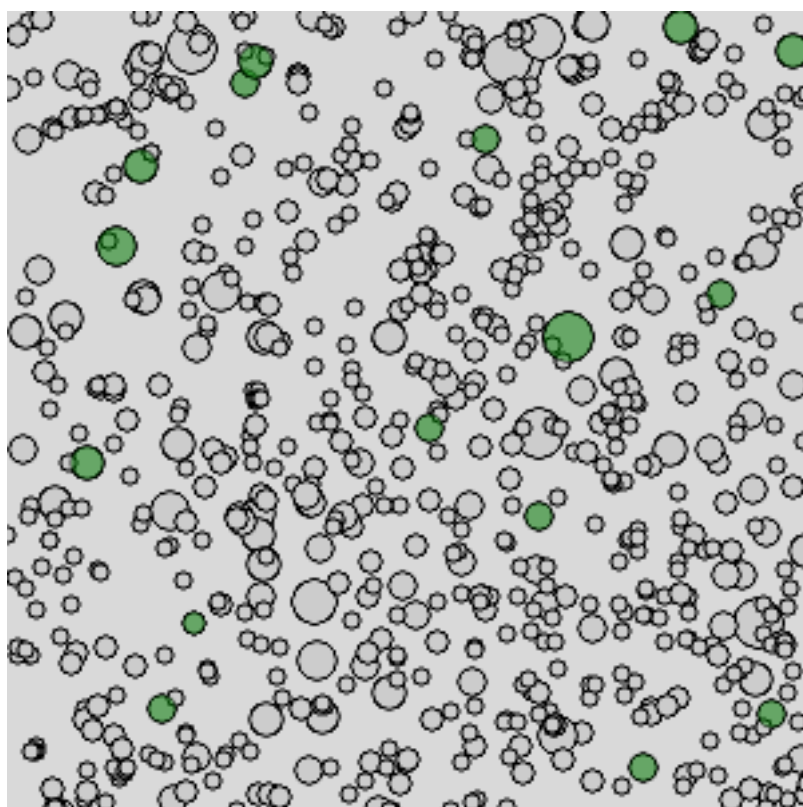
Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	1	0	0.4	12	0	0
Italian maple	4	0.3	3.1	82	260	15
Lobels maple	0	0	0	0	0	0
Turkey oak	10	1.8	22.6	755	484	23
common ash	2	0.5	5.4	145	178	8
common beech	4	0.9	9.6	268	185	13
cornelian cherry	0	0	0	0	0	0
field maple	2	0.1	1.4	36	132	6
hazel	0	0	0	0	0	0
hornbeam	2	0.2	2	59	129	6
small-leaved lime	2	0.2	1.8	42	68	3
sycamore maple	0	0	0	0	0	0
wild service tree	1	0	0.1	2	0	0
Total	28	4.1	46.4	1402	1436	74

Number of habitat trees	[N]	16
Habitat value	pts.	1281
	[% of total]	8.8
Economic value	[€]	1049
	[% of total]	8.9
Number of microhabitats	[N]	66
	[% of total]	8.8

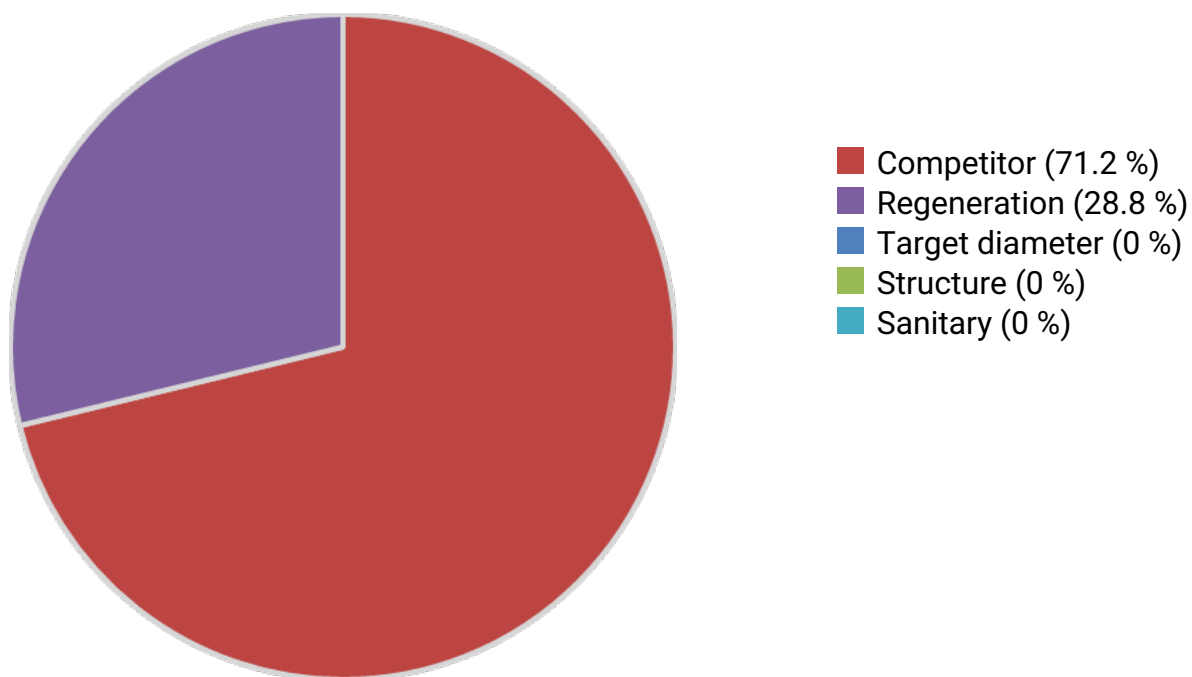
### Habitat tree distribution by species (N in %)



### Spatial distribution of habitat trees



### Reasons for removal

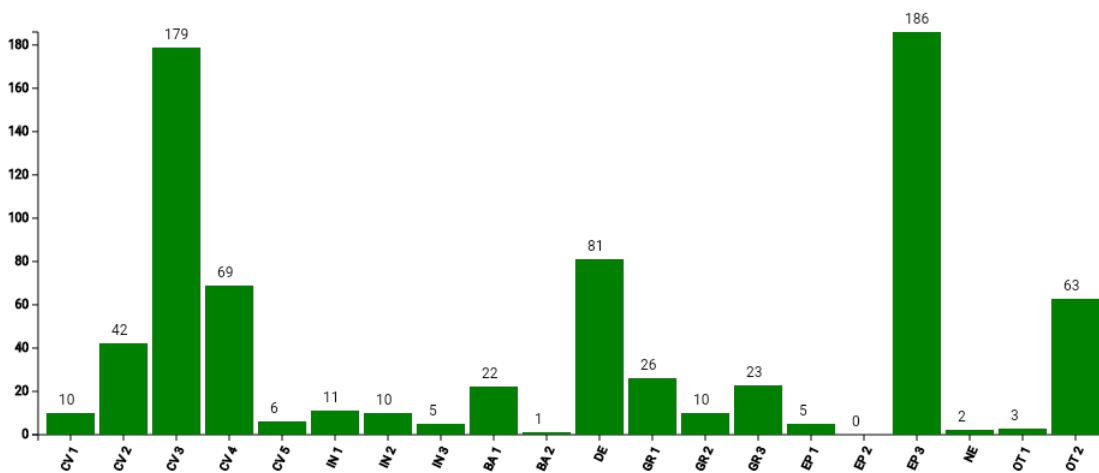


### Reasons for retention

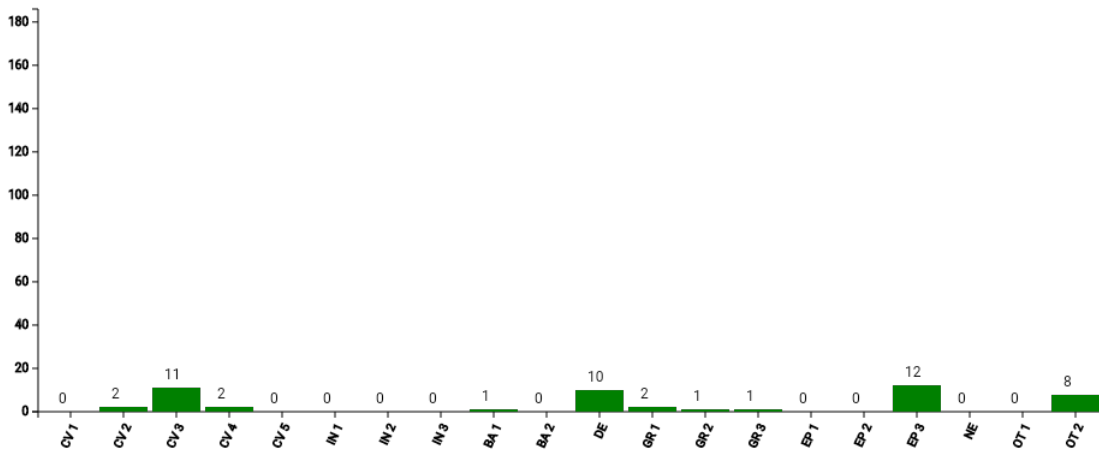




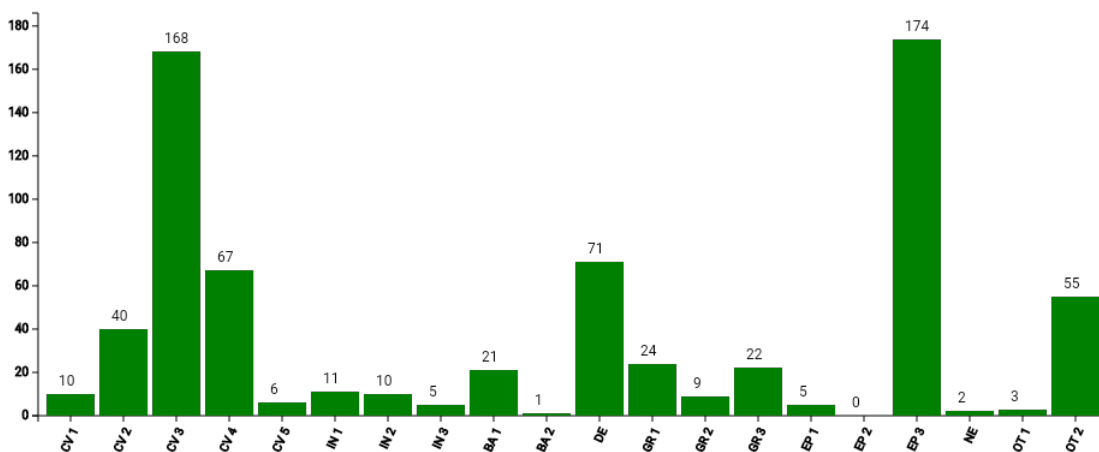
### Distribution of tree microhabitats by code (N total)



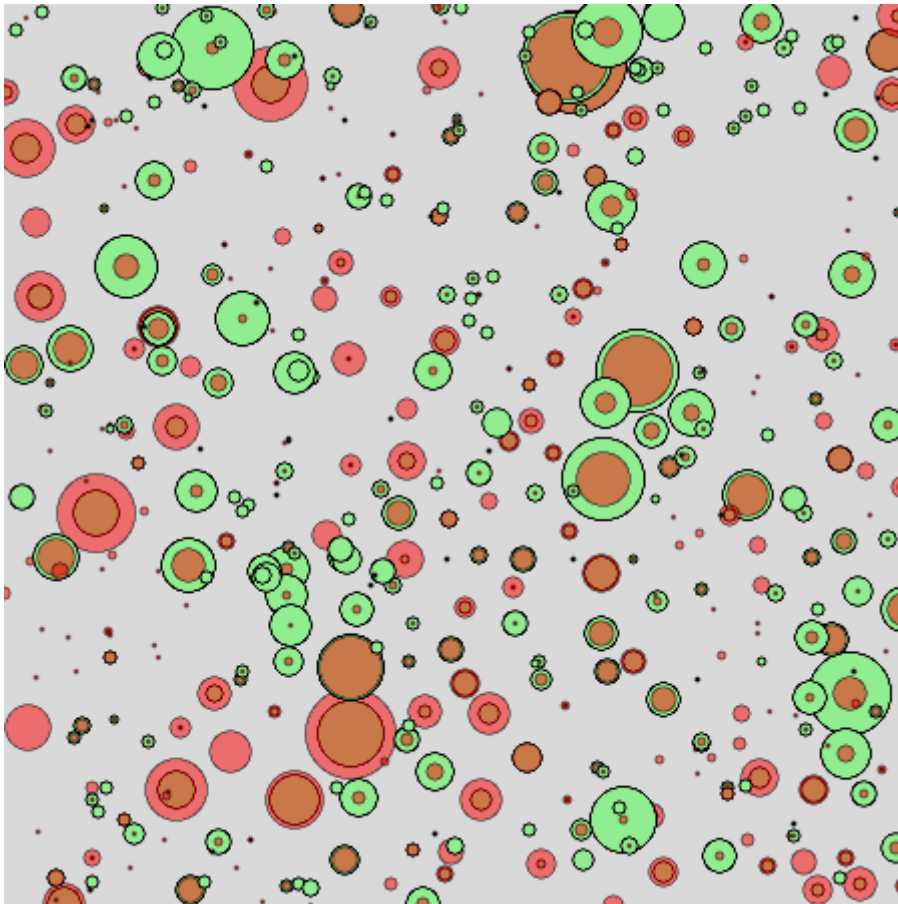
### Removed tree microhabitats by code (N removed)



### 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
common beech (681) [REPLACE_DEAD]Fagus sylvatica	58	0.26	2.6	74	30	Competitor
Turkey oak (234) [REPLACE_DEAD]Quercus cerris	54	0.23	2.7	90	32	Competitor
Turkey oak (763) [REPLACE_DEAD]Quercus cerris	47	0.17	2	67	42	Competitor
Turkey oak (716) [REPLACE_DEAD]Quercus cerris	47	0.17	2.6	86	30	Competitor
Turkey oak (492) [REPLACE_DEAD]Quercus cerris	46	0.17	1.9	64	51	Competitor
hornbeam (116) [REPLACE_DEAD]Carpinus betulus	46	0.17	2.1	62	0	Regeneration
Turkey oak (757) [REPLACE_DEAD]Quercus cerris	46	0.17	2.2	74	0	Competitor
Turkey oak (621) [REPLACE_DEAD]Quercus cerris	45.5	0.16	1.4	45	106	Competitor
Turkey oak (729) [REPLACE_DEAD]Quercus cerris	44.5	0.16	1.6	52	24	Competitor
Turkey oak (477) [REPLACE_DEAD]Quercus cerris	44	0.15	1.7	58	14	Competitor
Turkey oak (788) [REPLACE_DEAD]Quercus cerris	42	0.14	1.4	47	43	Competitor
Turkey oak (228) [REPLACE_DEAD]Quercus cerris	40.5	0.13	1.2	40	28	Regeneration
Turkey oak (298) [REPLACE_DEAD]Quercus cerris	40	0.13	1.2	40	0	Regeneration
Turkey oak (158) [REPLACE_DEAD]Quercus cerris	38.5	0.12	1.4	46	0	Competitor
Turkey oak (471) [REPLACE_DEAD]Quercus cerris	37	0.11	1.3	42	0	Regeneration
common beech (156) [REPLACE_DEAD]Fagus sylvatica	36	0.1	1.4	39	8	Competitor
Turkey oak (802) [REPLACE_DEAD]Quercus cerris	36	0.1	1.2	39	28	Competitor
Turkey oak (489) [REPLACE_DEAD]Quercus cerris	34.5	0.09	0.9	32	27	Competitor
Turkey oak (743) [REPLACE_DEAD]Quercus cerris	34	0.09	0.9	32	8	Competitor
common beech (157) [REPLACE_DEAD]Fagus sylvatica	33.5	0.09	1	29	66	Competitor
Turkey oak (58)	33	0.09	1.1	35	0	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
[REPLACE_DEAD]Quercus cerris						
common beech (147) [REPLACE_DEAD]Fagus sylvatica	32	0.08	1	27	0	Regeneration
Turkey oak (796) [REPLACE_DEAD]Quercus cerris	31	0.08	0.8	28	0	Competitor
Turkey oak (73) [REPLACE_DEAD]Quercus cerris	30	0.07	0.8	27	24	Regeneration
Turkey oak (493) [REPLACE_DEAD]Quercus cerris	28	0.06	0.7	23	0	Competitor
Turkey oak (386) [REPLACE_DEAD]Quercus cerris	27.5	0.06	0.6	22	24	Competitor
Turkey oak (562) [REPLACE_DEAD]Quercus cerris	27	0.06	0.5	17	24	Competitor
Turkey oak (468) [REPLACE_DEAD]Quercus cerris	27	0.06	0.7	22	0	Competitor
Turkey oak (560) [REPLACE_DEAD]Quercus cerris	27	0.06	0.6	18	0	Competitor
Turkey oak (231) [REPLACE_DEAD]Quercus cerris	26	0.05	0.6	21	36	Competitor
common beech (46) [REPLACE_DEAD]Fagus sylvatica	24	0.05	0.5	14	0	Competitor
Turkey oak (499) [REPLACE_DEAD]Quercus cerris	24	0.05	0.5	16	36	Competitor
common beech (90) [REPLACE_DEAD]Fagus sylvatica	24	0.05	0.5	14	0	Competitor
Turkey oak (526) [REPLACE_DEAD]Quercus cerris	24	0.05	0.4	14	43	Competitor
Turkey oak (230) [REPLACE_DEAD]Quercus cerris	24	0.05	0.5	17	0	Competitor
hornbeam (208) [REPLACE_DEAD]Carpinus betulus	23.5	0.04	0.5	14	8	Competitor
Turkey oak (289) [REPLACE_DEAD]Quercus cerris	23	0.04	0.3	9	0	Competitor
hornbeam (222) [REPLACE_DEAD]Carpinus betulus	22	0.04	0.3	9	8	Competitor
Turkey oak (69) [REPLACE_DEAD]Quercus cerris	22	0.04	0.4	14	0	Regeneration
Turkey oak (498) [REPLACE_DEAD]Quercus cerris	21.5	0.04	0.5	15	36	Competitor
hornbeam (691) [REPLACE_DEAD]Carpinus betulus	20	0.03	0.3	10	0	Regeneration

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (239) [REPLACE_DEAD]Quercus cerris	19	0.03	0.2	7	0	Competitor
Turkey oak (527) [REPLACE_DEAD]Quercus cerris	19	0.03	0.2	7	0	Competitor
common beech (47) [REPLACE_DEAD]Fagus sylvatica	19	0.03	0.3	8	0	Competitor
hornbeam (75) [REPLACE_DEAD]Carpinus betulus	18	0.03	0.3	8	0	Regeneration
hornbeam (76) [REPLACE_DEAD]Carpinus betulus	17	0.02	0.2	7	0	Regeneration
Turkey oak (460) [REPLACE_DEAD]Quercus cerris	16.5	0.02	0.2	6	28	Competitor
common beech (70) [REPLACE_DEAD]Fagus sylvatica	16.5	0.02	0.3	7	0	Regeneration
hornbeam (212) [REPLACE_DEAD]Carpinus betulus	16	0.02	0.2	6	0	Competitor
Turkey oak (532) [REPLACE_DEAD]Quercus cerris	15	0.02	0.1	5	18	Competitor
Turkey oak (461) [REPLACE_DEAD]Quercus cerris	15	0.02	0.1	5	0	Competitor
Turkey oak (495) [REPLACE_DEAD]Quercus cerris	14	0.02	0.1	4	0	Competitor
Italian maple (529) [REPLACE_DEAD]Acer opalus	14	0.02	0.1	3	0	Competitor
Italian maple (759) [REPLACE_DEAD]Acer opalus	14	0.02	0.1	3	36	Regeneration
Turkey oak (497) [REPLACE_DEAD]Quercus cerris	13.5	0.01	0.1	3	0	Competitor
hornbeam (408) [REPLACE_DEAD]Carpinus betulus	13	0.01	0.1	3	0	Competitor
Turkey oak (467) [REPLACE_DEAD]Quercus cerris	13	0.01	0.1	3	0	Competitor
Turkey oak (494) [REPLACE_DEAD]Quercus cerris	13	0.01	0.1	3	0	Competitor
hornbeam (77) [REPLACE_DEAD]Carpinus betulus	13	0.01	0.1	3	0	Regeneration
hornbeam (66) [REPLACE_DEAD]Carpinus betulus	12	0.01	0.1	3	0	Regeneration
Italian maple (530) [REPLACE_DEAD]Acer opalus	12	0.01	0.1	2	0	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
[REPLACE_DEAD]Tilia cordata						
hornbeam (210) [REPLACE_DEAD]Carpinus betulus	11.5	0.01	0.1	2	0	Competitor
hornbeam (74) [REPLACE_DEAD]Carpinus betulus	11	0.01	0.1	3	0	Regeneration
common ash (741) [REPLACE_DEAD]Fraxinus excelsior	10.5	0.01	0.1	2	3	Regeneration
common ash (695) [REPLACE_DEAD]Fraxinus excelsior	10	0.01	0.1	2	0	Regeneration
Turkey oak (561) [REPLACE_DEAD]Quercus cerris	10	0.01	0	1	0	Competitor
Italian maple (761) [REPLACE_DEAD]Acer opalus	10	0.01	0.1	1	0	Regeneration
Italian maple (740) [REPLACE_DEAD]Acer opalus	10	0.01	0	1	0	Regeneration
common ash (742) [REPLACE_DEAD]Fraxinus excelsior	9.5	0.01	0	1	24	Regeneration
Turkey oak (619) [REPLACE_DEAD]Quercus cerris	9	0.01	0	1	0	Competitor
Italian maple (528) [REPLACE_DEAD]Acer opalus	8	0.01	0	1	0	Competitor
Italian maple (760) Acer opalus	8	0.01	0	1	30	Regeneration

## Retention trees

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common ash (706) [REPLACE_DEAD]Fraxinus excelsior	80	0.5	5.4	144	178	Habitat tree
common beech (48) [REPLACE_DEAD]Fagus sylvatica	77	0.47	4.6	129	76	Habitat tree
Turkey oak (68) [REPLACE_DEAD]Quercus cerris	63	0.31	4.8	161	94	Habitat tree
Turkey oak (197) [REPLACE_DEAD]Quercus cerris	63	0.31	4.8	159	79	Habitat tree
common beech (115) [REPLACE_DEAD]Fagus sylvatica	57.5	0.26	3.6	100	51	Seed tree
Turkey oak (534) [REPLACE_DEAD]Quercus cerris	55	0.24	2.4	79	67	Habitat tree
small-leaved lime (154) [REPLACE_DEAD]Tilia cordata	51	0.2	1.6	40	68	Seed tree
Turkey oak (301) [REPLACE_DEAD]Quercus cerris	50.5	0.2	2.4	82	36	Seed tree
Turkey oak (762) [REPLACE_DEAD]Quercus cerris	49	0.19	2.5	84	87	Habitat tree
Turkey oak (387) [REPLACE_DEAD]Quercus cerris	46	0.17	2	66	35	Habitat tree
hornbeam (144) [REPLACE_DEAD]Carpinus betulus	44	0.15	1.7	50	129	Habitat tree
Turkey oak (178) [REPLACE_DEAD]Quercus cerris	41	0.13	1.5	50	0	Seed tree
Italian maple (195) [REPLACE_DEAD]Acer opalus	38	0.11	1.1	30	80	Habitat tree
Turkey oak (744) [REPLACE_DEAD]Quercus cerris	37	0.11	1.1	36	86	Habitat tree
Turkey oak (496) [REPLACE_DEAD]Quercus cerris	36.5	0.11	1.1	38	0	Seed tree
Italian maple (469) [REPLACE_DEAD]Acer opalus	34	0.09	0.8	21	72	Habitat tree
common beech (797) [REPLACE_DEAD]Fagus sylvatica	34	0.09	0.9	24	58	Habitat tree
field maple (139) [REPLACE_DEAD]Acer campestre	33	0.09	1	27	80	Habitat tree
Italian maple (633) [REPLACE_DEAD]Acer opalus	30	0.07	0.6	17	51	Habitat tree
Italian maple (699) [REPLACE_DEAD]Acer opalus	28	0.06	0.6	15	57	Habitat tree
field maple (288) [REPLACE_DEAD]Acer campestre	27.5	0.06	0.3	9	52	Habitat tree

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
[REPLACE_DEAD]Acer campestre						
common beech (235) [REPLACE_DEAD]Fagus sylvatica	26	0.05	0.5	14	0	Seed tree
European hop-hornbeam (223) [REPLACE_DEAD]Ostrya carpinifolia	25	0.05	0.4	12	0	Seed tree
Turkey oak (462) Quercus cerris	22	0.04	0	1	0	Seed tree
hornbeam (233) [REPLACE_DEAD]Carpinus betulus	21	0.04	0.3	10	0	Seed tree
small-leaved lime (531) [REPLACE_DEAD]Tilia cordata	16	0.02	0.1	3	0	Seed tree
wild service tree (410) [REPLACE_DEAD]Sorbus torminalis	14.5	0.02	0.1	2	0	Seed tree
common ash (789) [REPLACE_DEAD]Fraxinus excelsior	9	0.01	0	1	0	Seed tree