

02/03/2021 Gruppo A\_Turno 2

**Site conditions**

Altitude: 1270 m.a.s.l.

Forest ecological region: Tuscany

Geology / Bedrock: Sandstone

Soil type: Brown podzolic soil

Natural forest community:

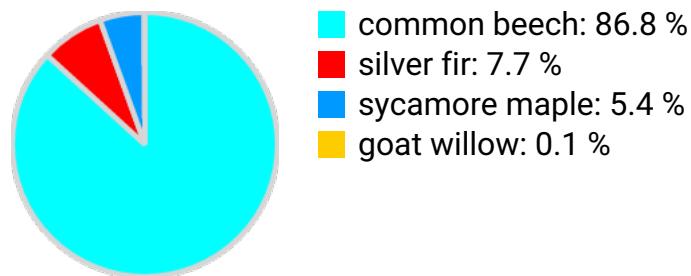
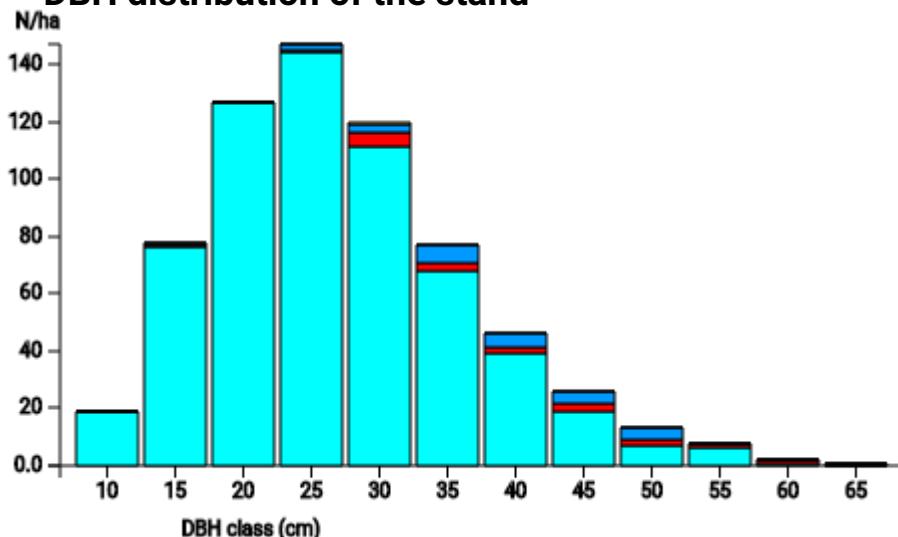
Asperulo-Fagetum

Mean annual temperature: 8.7 C;

Mean annual precipitation: 1642

mm; Ownership: State;

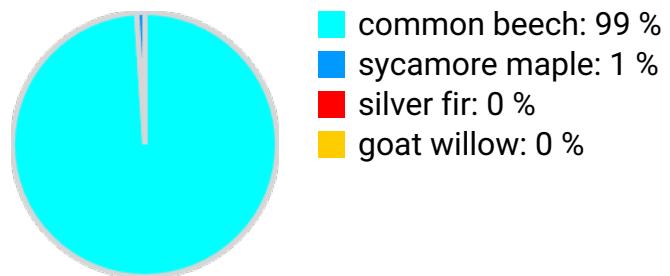
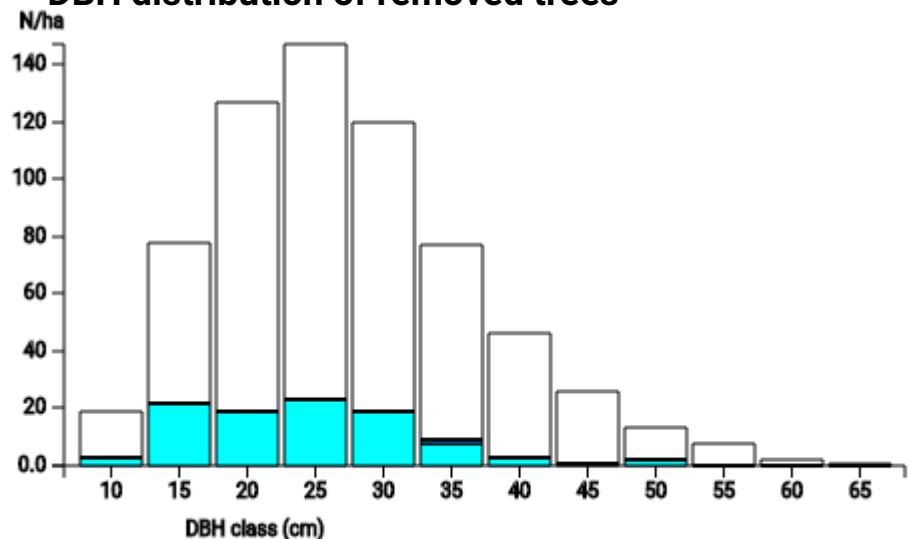
Establishment: 2020

**Tree species distribution by volume (in %)****DBH distribution of the stand****Initial stand (details by tree species)**

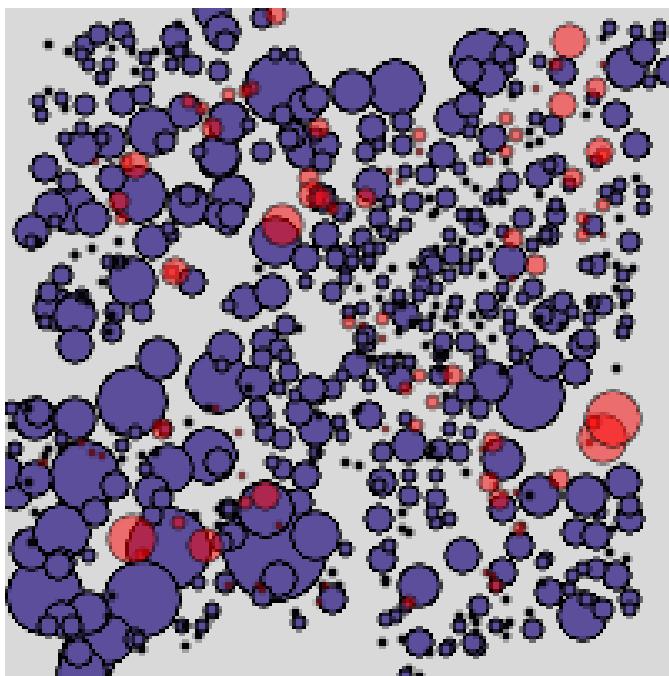
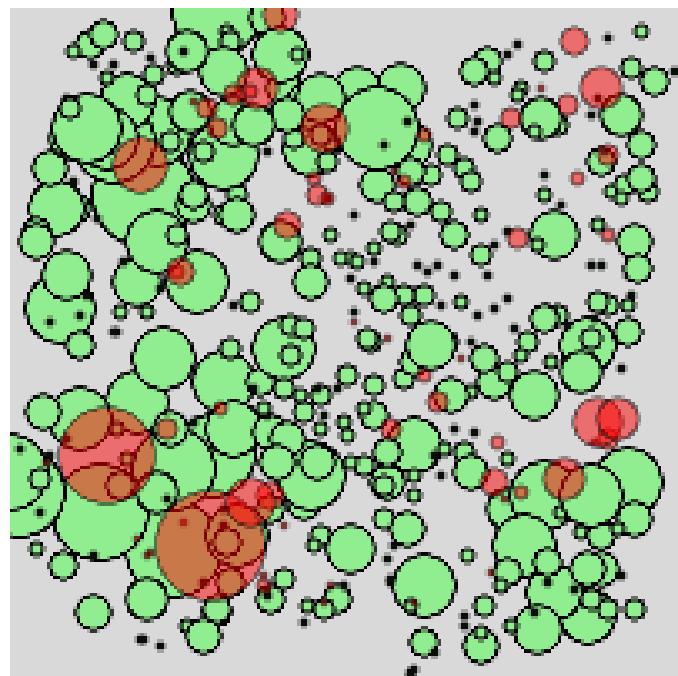
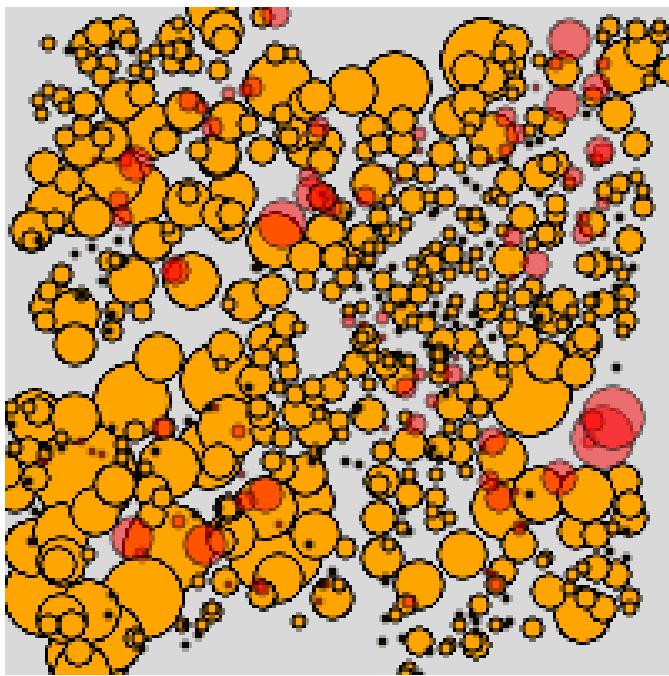
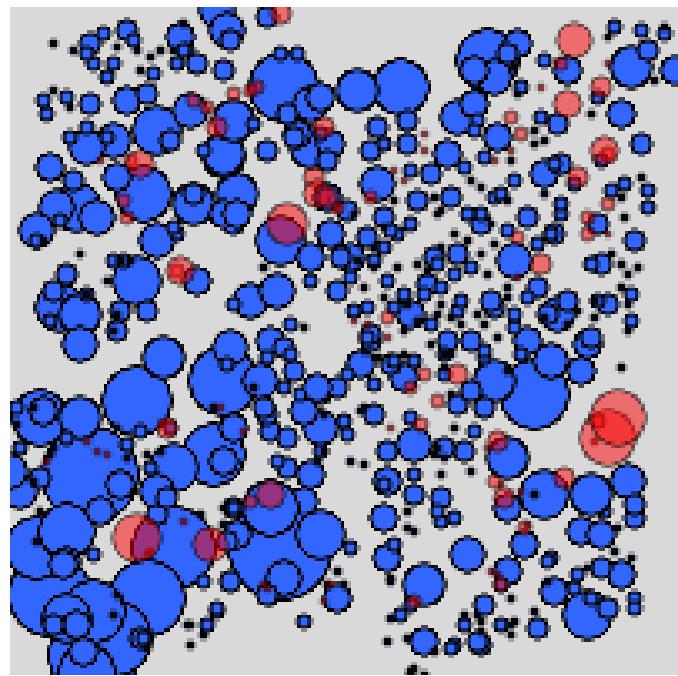
Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
common beech	617	44.3	484	41247	19808	1283
goat willow	1	0.1	0.8	70	24	3
silver fir	21	3.3	43.1	3060	245	25
sycamore maple	25	3.2	29.9	2409	1664	99
Total	664	50.8	557.9	46786	21741	1410

**Removed trees**

Volume: 66.2 m<sup>3</sup>  
 Basal area: 6.1 m<sup>2</sup>  
 Economic value: 5649 €  
 Habitat value: 2882 pts.

**Removed trees (N in %)****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)
common beech	100	6	65.3	5562	2794	183
goat willow	0	0	0	0	0	0
silver fir	0	0	0	0	0	0
sycamore maple	1	0.1	1	87	88	4
Total	101	6.1	66.3	5649	2882	187

**Economic value [EUR]****Habitat value****Basal area [ $\text{m}^2$ ]****Volume [ $\text{m}^3$ ]****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: 5649 €

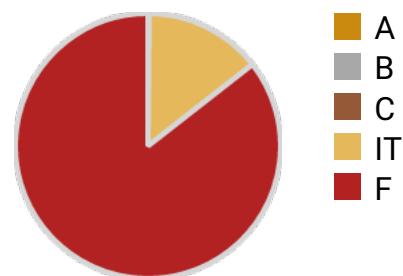
Percentage of total stand value: 12.1 %

Stand value after harvest: 41138 €

### Economic value by tree species [€]

Tree species	Total	Per m³
common beech	5562	85
silver fir	0	0
sycamore maple	87	86
goat willow	0	0
Total	5649	85

Wood quality distribution  
(m³ in %)



### Habitat values

Total habitat value of removed trees: 2882 pts.

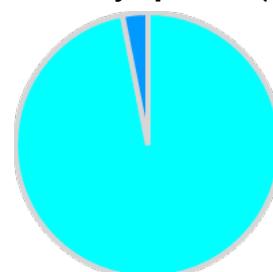
Percentage of total stand value: 13.3 %

Stand value after harvest: 18859 pts.

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

Tree species	Total	Per m³	Microhabitats [N]
common beech	2794	42.8	183
silver fir	0	0	0
sycamore maple	88	87.9	4
goat willow	0	0	0
Total	2882	43.5	187

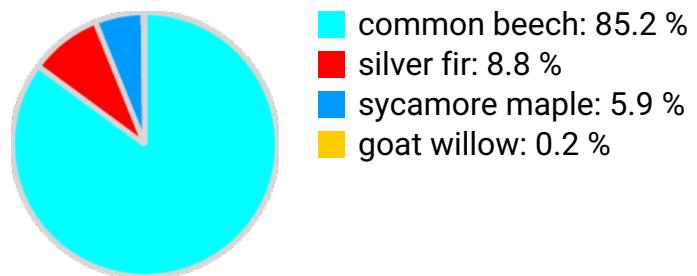
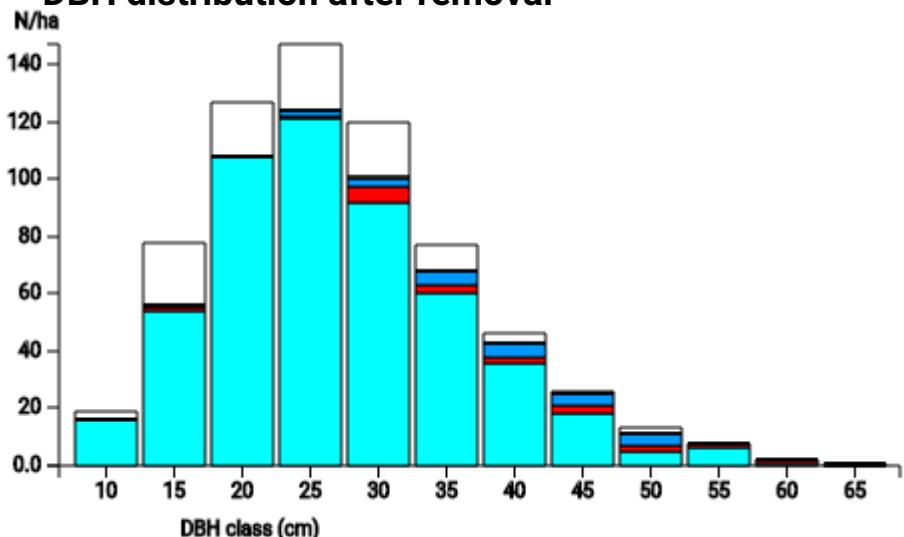
Habitat value (points) of removed trees by species (in %)



common beech	(96.9 %)
sycamore maple	(3.1 %)
silver fir	(0 %)
goat willow	(0 %)

**Remaining stand**

Volume: 491.6 m<sup>3</sup>  
 Basal area: 44.7 m<sup>2</sup>  
 Economic value: 41138 €  
 Habitat value: 18859 pts.

**Remaining trees by volume (m<sup>3</sup> in %)****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)
common beech	517	38.2	418.7	35685	17014	1100
goat willow	1	0.1	0.8	70	24	3
silver fir	21	3.3	43.1	3060	245	25
sycamore maple	24	3.1	28.9	2322	1576	95
Total	563	44.7	491.6	41138	18859	1223

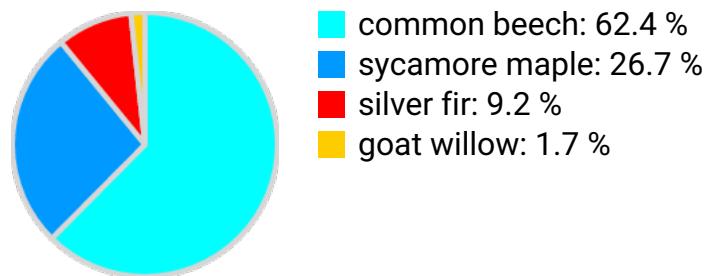
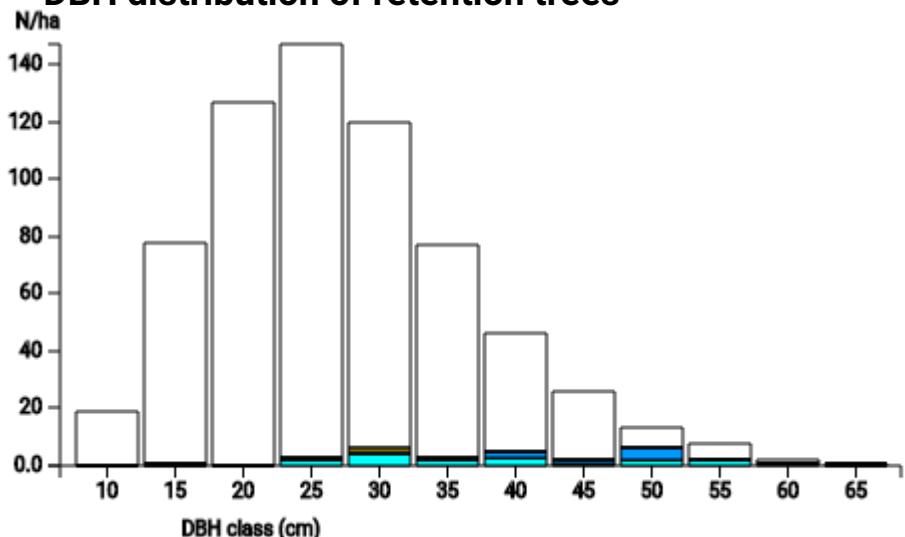
**Retention trees**Volume: 48.1 m<sup>3</sup>

Elite trees: 22

Habitat trees: 5

Economic value: 3881 €

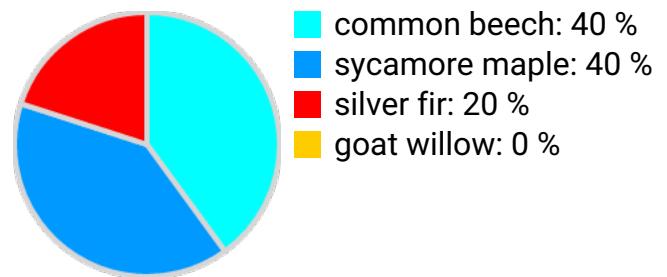
Habitat value: 2092 pts.

**Retention trees by volume (m<sup>3</sup> in %)****DBH distribution of retention trees****Retained trees (details by tree species)**

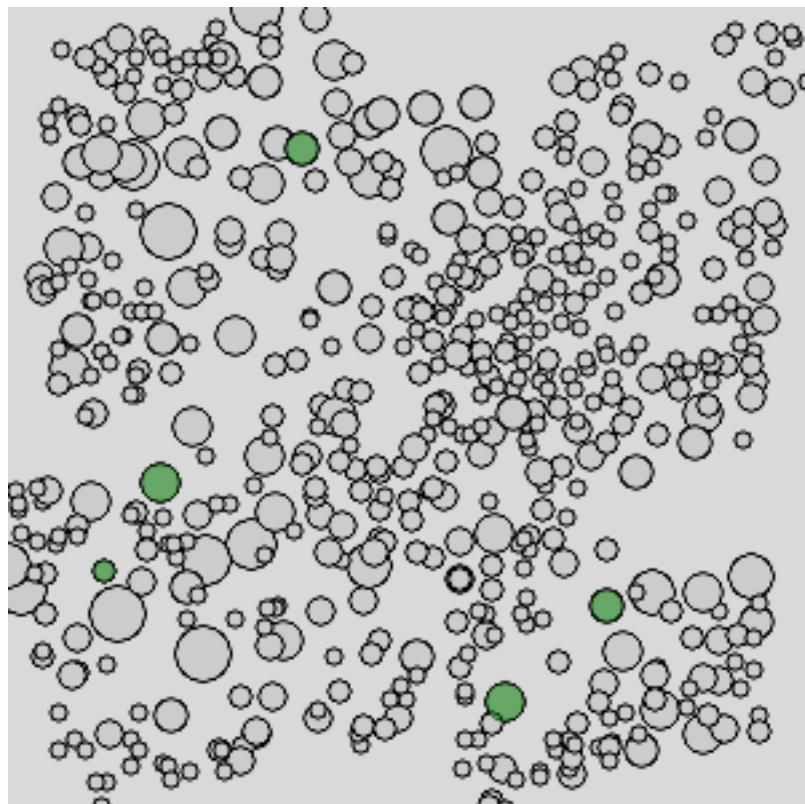
Tree species	N/ha	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
common beech	17	2.5	30	2554	1317	75
goat willow	1	0.1	0.8	70	24	3
silver fir	2	0.4	4.4	288	40	8
sycamore maple	10	1.5	12.8	968	711	42
Total	30	4.4	48.1	3881	2092	128

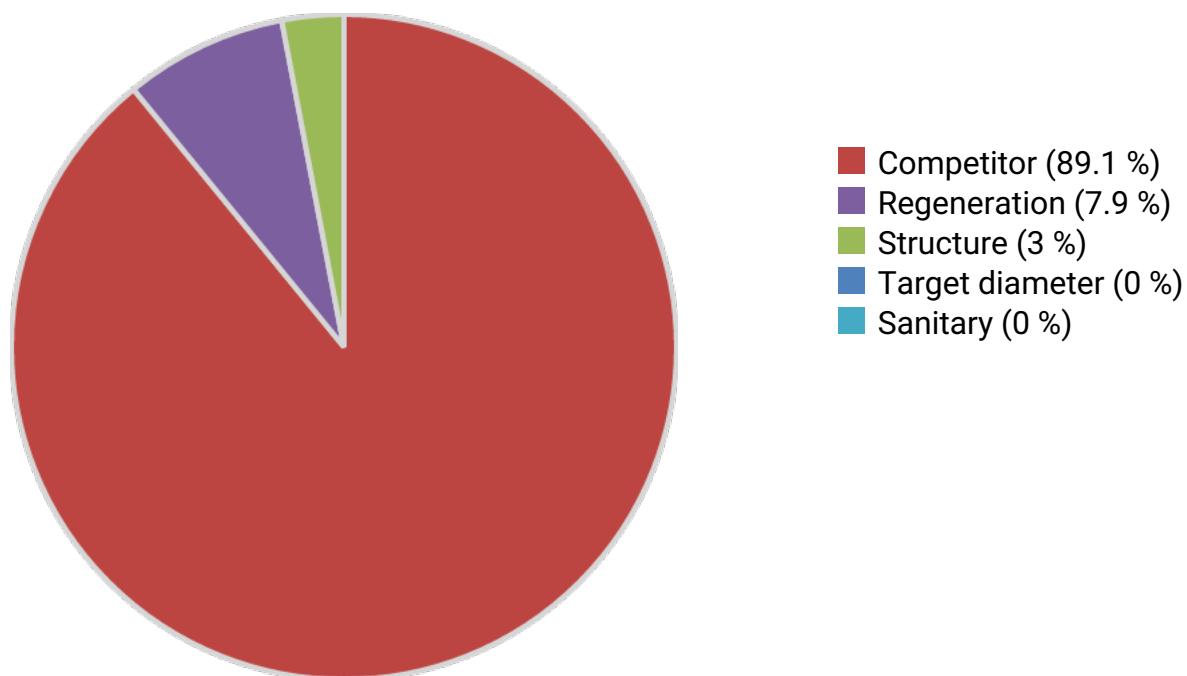
Number of habitat trees	[N]	5
Habitat value	pts.	485
	[% of total]	2.2
Economic value	[€]	904
	[% of total]	1.9
Number of microhabitats	[N]	34
	[% of total]	2.4

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

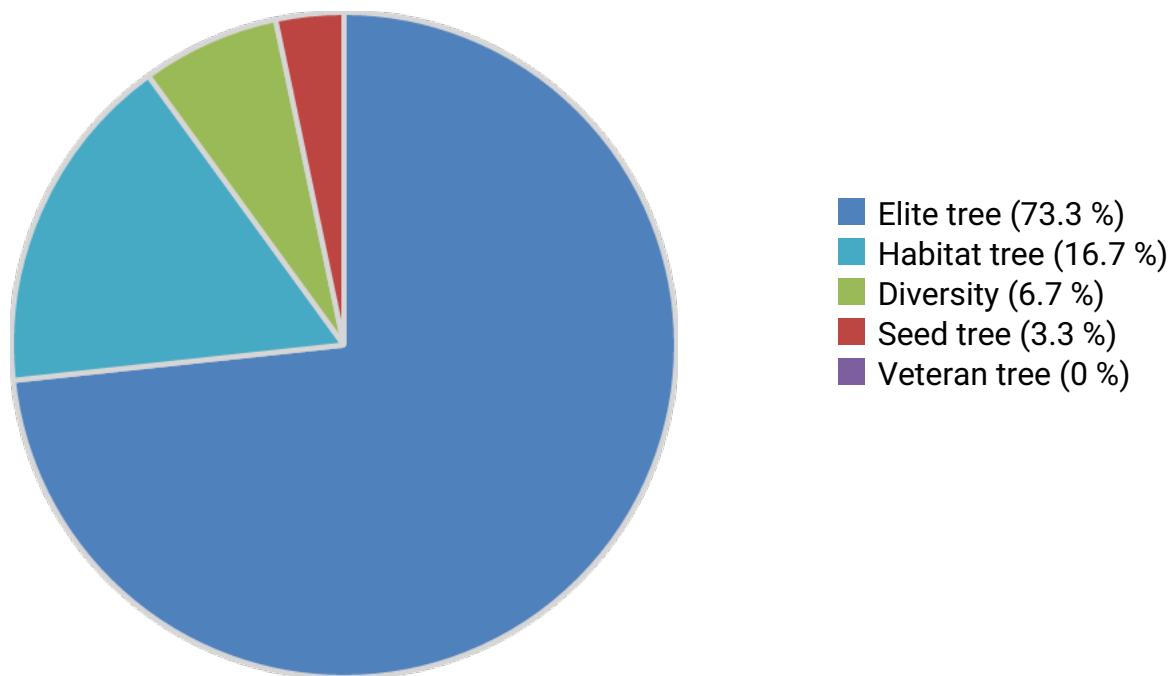


### Spatial distribution of habitat trees

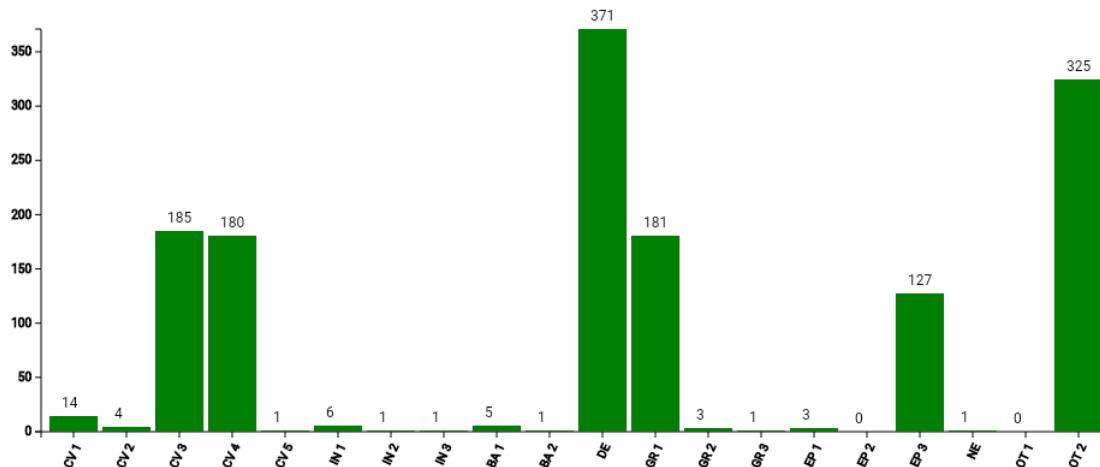
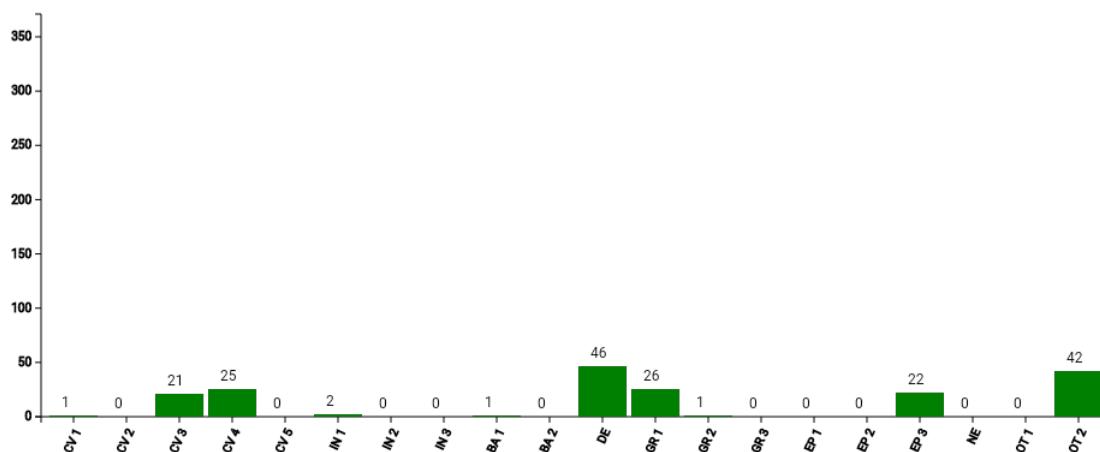
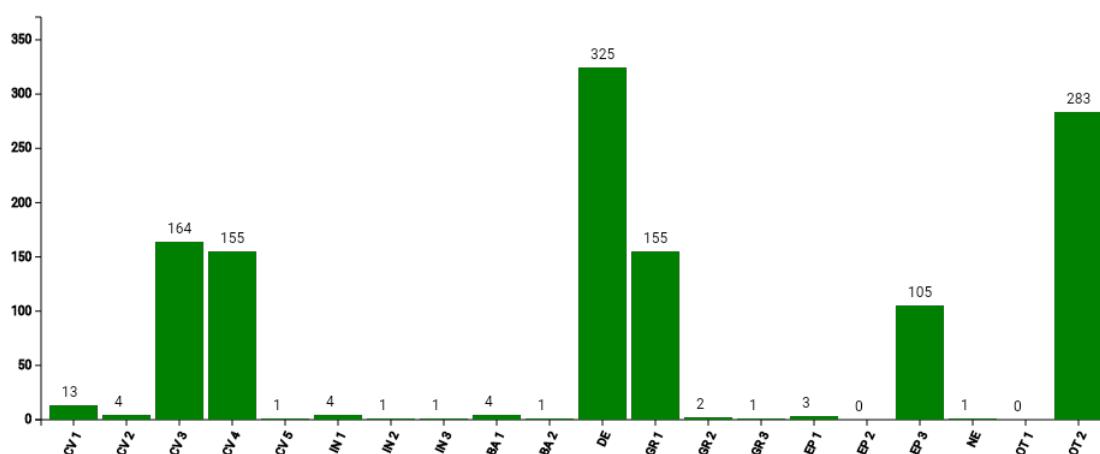


**Reasons for removal**

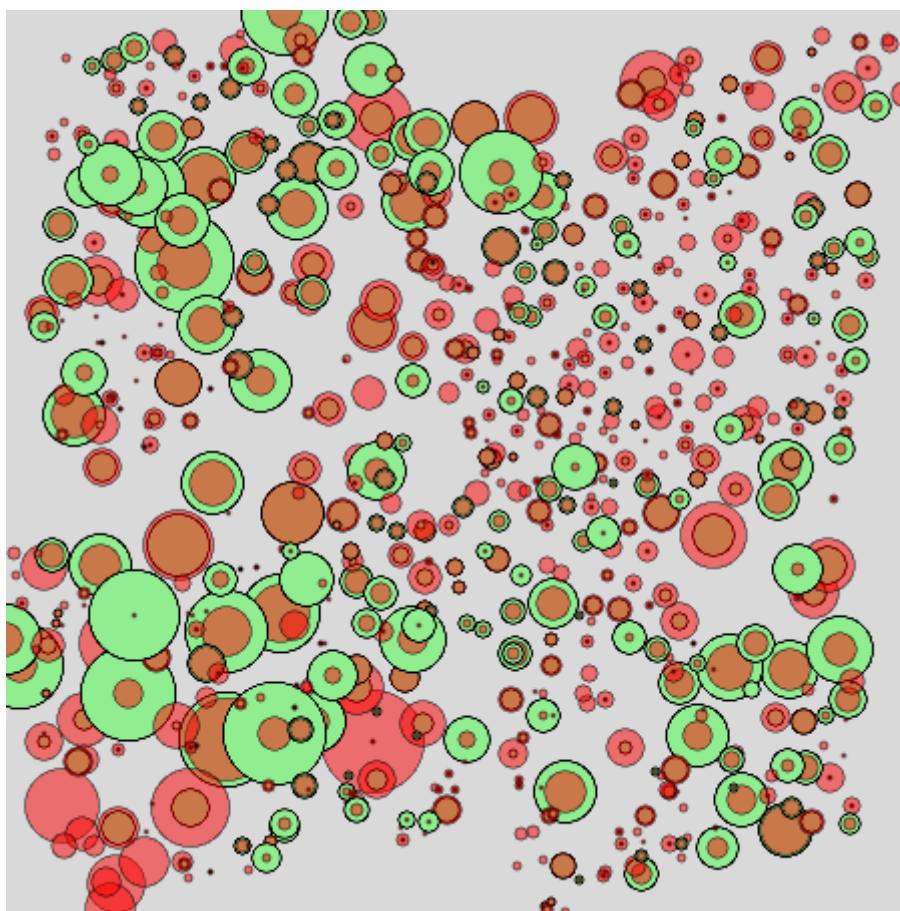
■ Competitor (89.1 %)  
■ Regeneration (7.9 %)  
■ Structure (3 %)  
■ Target diameter (0 %)  
■ Sanitary (0 %)

**Reasons for retention**

■ Elite tree (73.3 %)  
■ Habitat tree (16.7 %)  
■ Diversity (6.7 %)  
■ Seed tree (3.3 %)  
■ Veteran tree (0 %)

**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 (514) <i>Fagus sylvatica</i>	50.2	0.2	2.4	205	51	Regeneration
common beech (515) <i>Fagus sylvatica</i>	50.1	0.2	2.5	215	84	Regeneration
common beech (225) <i>Fagus sylvatica</i>	45.6	0.16	2	168	65	Regeneration
common beech (456) <i>Fagus sylvatica</i>	43.4	0.15	2.1	180	22	Competitor
common beech (424) <i>Fagus sylvatica</i>	42.3	0.14	1.6	134	231	Competitor
common beech (46) <i>Fagus sylvatica</i>	41.4	0.14	1.5	126	54	Competitor
common beech (376) <i>Fagus sylvatica</i>	39.8	0.12	1.3	108	64	Competitor
common beech (280) <i>Fagus sylvatica</i>	38.5	0.12	1.3	113	120	Competitor
common beech (48) <i>Fagus sylvatica</i>	37.8	0.11	1.2	100	40	Competitor
common beech (213) <i>Fagus sylvatica</i>	37.8	0.11	1.2	102	48	Competitor
common beech (530) <i>Fagus sylvatica</i>	37.2	0.11	1.1	92	83	Regeneration
common beech (565) <i>Fagus sylvatica</i>	35.8	0.1	1.1	95	27	Regeneration
sycamore maple (43) <i>Acer pseudoplatanus</i>	35.2	0.1	1	87	88	Competitor
common beech (574) <i>Fagus sylvatica</i>	35	0.1	1.1	90	8	Competitor
common beech (275) <i>Fagus sylvatica</i>	35	0.1	1.2	101	62	Competitor
common beech (23) <i>Fagus sylvatica</i>	34.2	0.09	1.1	98	12	Competitor
common beech (178) <i>Fagus sylvatica</i>	33.8	0.09	1	89	26	Competitor
common beech (58) <i>Fagus sylvatica</i>	33.6	0.09	1	89	0	Competitor
common beech (220) <i>Fagus sylvatica</i>	33.5	0.09	0.9	75	68	Competitor
common beech (174) <i>Fagus sylvatica</i>	33	0.09	0.9	77	99	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common beech (40) <i>Fagus sylvatica</i>	32.8	0.08	1	83	36	Competitor
common beech (169) <i>Fagus sylvatica</i>	31.3	0.08	0.8	70	0	Structure
common beech (214) <i>Fagus sylvatica</i>	31	0.08	0.9	75	36	Competitor
common beech (70) <i>Fagus sylvatica</i>	31	0.08	0.8	71	38	Competitor
common beech (228) <i>Fagus sylvatica</i>	30.9	0.08	0.8	68	84	Competitor
common beech (572) <i>Fagus sylvatica</i>	30.7	0.07	0.8	70	60	Competitor
common beech (429) <i>Fagus sylvatica</i>	30.7	0.07	0.9	73	40	Competitor
common beech (621) <i>Fagus sylvatica</i>	30.5	0.07	0.8	66	3	Competitor
common beech (245) <i>Fagus sylvatica</i>	30.4	0.07	0.9	73	42	Competitor
common beech (591) <i>Fagus sylvatica</i>	30.2	0.07	0.8	72	0	Competitor
common beech (82) <i>Fagus sylvatica</i>	30.2	0.07	0.8	65	0	Competitor
common beech (619) <i>Fagus sylvatica</i>	30.1	0.07	0.6	54	6	Competitor
common beech (400) <i>Fagus sylvatica</i>	30.1	0.07	0.7	59	108	Competitor
common beech (24) <i>Fagus sylvatica</i>	30	0.07	0.7	64	48	Competitor
common beech (35) <i>Fagus sylvatica</i>	29.6	0.07	0.6	54	6	Competitor
common beech (208) <i>Fagus sylvatica</i>	29.4	0.07	0.7	62	3	Competitor
common beech (247) <i>Fagus sylvatica</i>	29.3	0.07	0.7	63	12	Competitor
common beech (83) <i>Fagus sylvatica</i>	29.2	0.07	0.8	67	39	Competitor
common beech (293) <i>Fagus sylvatica</i>	29	0.07	0.8	69	0	Competitor
common beech (294) <i>Fagus sylvatica</i>	28.5	0.06	0.7	57	0	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common beech (276) <i>Fagus sylvatica</i>	28.5	0.06	0.7	59	32	Competitor
common beech (520) <i>Fagus sylvatica</i>	28.5	0.06	0.6	46	110	Regeneration
common beech (616) <i>Fagus sylvatica</i>	28.4	0.06	0.6	46	36	Competitor
common beech (246) <i>Fagus sylvatica</i>	28	0.06	0.7	56	39	Competitor
common beech (581) <i>Fagus sylvatica</i>	28	0.06	0.8	66	0	Competitor
common beech (614) <i>Fagus sylvatica</i>	27.6	0.06	0.6	49	42	Competitor
common beech (27) <i>Fagus sylvatica</i>	27.6	0.06	0.6	54	6	Competitor
common beech (229) <i>Fagus sylvatica</i>	26.8	0.06	0.6	51	36	Competitor
common beech (64) <i>Fagus sylvatica</i>	26.6	0.06	0.6	54	6	Competitor
common beech (281) <i>Fagus sylvatica</i>	26.2	0.05	0.6	54	0	Competitor
common beech (36) <i>Fagus sylvatica</i>	26.1	0.05	0.6	48	0	Competitor
common beech (189) <i>Fagus sylvatica</i>	26	0.05	0.5	46	6	Competitor
common beech (560) <i>Fagus sylvatica</i>	25.7	0.05	0.6	47	0	Competitor
common beech (81) <i>Fagus sylvatica</i>	25.2	0.05	0.5	44	6	Competitor
common beech (521) <i>Fagus sylvatica</i>	25.1	0.05	0.5	40	12	Regeneration
common beech (234) <i>Fagus sylvatica</i>	25	0.05	0.5	45	42	Competitor
common beech (203) <i>Fagus sylvatica</i>	25	0.05	0.5	42	14	Competitor
common beech (634) <i>Fagus sylvatica</i>	24.8	0.05	0.6	50	14	Competitor
common beech (126) <i>Fagus sylvatica</i>	24.5	0.05	0.5	43	36	Competitor
common beech (437) <i>Fagus sylvatica</i>	24.1	0.05	0.5	44	18	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common beech (387) <i>Fagus sylvatica</i>	24	0.05	0.4	37	0	Competitor
common beech (458) <i>Fagus sylvatica</i>	23.8	0.04	0.5	43	12	Competitor
common beech (397) <i>Fagus sylvatica</i>	23.3	0.04	0.4	32	36	Competitor
common beech (398) <i>Fagus sylvatica</i>	23.3	0.04	0.5	39	12	Competitor
common beech (44) <i>Fagus sylvatica</i>	23.2	0.04	0.4	38	0	Competitor
common beech (153) <i>Fagus sylvatica</i>	22.8	0.04	0.4	32	8	Competitor
common beech (374) <i>Fagus sylvatica</i>	22.6	0.04	0.4	33	12	Competitor
common beech (310) <i>Fagus sylvatica</i>	22.4	0.04	0.4	31	0	Competitor
common beech (127) <i>Fagus sylvatica</i>	21.8	0.04	0.4	33	0	Competitor
common beech (452) <i>Fagus sylvatica</i>	21.6	0.04	0.4	30	0	Competitor
common beech (474) <i>Fagus sylvatica</i>	21	0.04	0.4	31	18	Structure
common beech (571) <i>Fagus sylvatica</i>	21	0.04	0.4	32	6	Regeneration
common beech (90) <i>Fagus sylvatica</i>	21	0.04	0.3	26	0	Competitor
common beech (562) <i>Fagus sylvatica</i>	20.8	0.03	0.3	27	36	Competitor
common beech (197) <i>Fagus sylvatica</i>	20.8	0.03	0.3	30	15	Competitor
common beech (66) <i>Fagus sylvatica</i>	20	0.03	0.3	29	9	Competitor
common beech (573) <i>Fagus sylvatica</i>	19.8	0.03	0.3	28	0	Competitor
common beech (370) <i>Fagus sylvatica</i>	19.8	0.03	0.3	28	12	Competitor
common beech (29) <i>Fagus sylvatica</i>	19.5	0.03	0.3	22	30	Competitor
common beech (453) <i>Fagus sylvatica</i>	19.4	0.03	0.3	29	0	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common beech (404) <i>Fagus sylvatica</i>	19.2	0.03	0.3	25	36	Competitor
common beech (642) <i>Fagus sylvatica</i>	19.1	0.03	0.3	23	50	Competitor
common beech (582) <i>Fagus sylvatica</i>	19	0.03	0.3	26	0	Competitor
common beech (146) <i>Fagus sylvatica</i>	18.5	0.03	0.2	19	24	Competitor
common beech (196) <i>Fagus sylvatica</i>	18.1	0.03	0.3	22	0	Competitor
common beech (375) <i>Fagus sylvatica</i>	17.6	0.02	0.2	16	14	Competitor
common beech (561) <i>Fagus sylvatica</i>	17.2	0.02	0.2	21	3	Competitor
common beech (72) <i>Fagus sylvatica</i>	17	0.02	0.2	19	0	Competitor
common beech (475) <i>Fagus sylvatica</i>	17	0.02	0.2	16	3	Structure
common beech (402) <i>Fagus sylvatica</i>	16.9	0.02	0.2	18	0	Competitor
common beech (454) <i>Fagus sylvatica</i>	16.8	0.02	0.2	20	202	Competitor
common beech (583) <i>Fagus sylvatica</i>	16.6	0.02	0.2	18	14	Competitor
common beech (420) <i>Fagus sylvatica</i>	16.3	0.02	0.2	15	0	Competitor
common beech (587) <i>Fagus sylvatica</i>	16.1	0.02	0.2	13	22	Competitor
common beech (457) <i>Fagus sylvatica</i>	15.9	0.02	0.2	20	12	Competitor
common beech (636) <i>Fagus sylvatica</i>	15.8	0.02	0.2	13	0	Competitor
common beech (563) <i>Fagus sylvatica</i>	15.8	0.02	0.2	13	6	Competitor
common beech (373) <i>Fagus sylvatica</i>	15.5	0.02	0.2	13	0	Competitor
common beech (399) <i>Fagus sylvatica</i>	14.4	0.02	0.1	11	16	Competitor
common beech (401) <i>Fagus sylvatica</i>	14.4	0.02	0.1	10	6	Competitor

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
common beech (577) <i>Fagus sylvatica</i>	13.5	0.01	0.1	10	0	Competitor

**Retention trees**

Tree	DBH (cm)	Basal area (m <sup>2</sup> )	Volume (m <sup>3</sup> )	Economic value (€)	Habitat value (pts.)	Reason
silver fir (469) <i>Abies alba</i>	65.5	0.34	4.3	277	34	Habitat tree
common beech (443) <i>Fagus sylvatica</i>	60.7	0.29	3.8	326	212	Elite tree
common beech (430) <i>Fagus sylvatica</i>	57.1	0.26	3.2	272	134	Habitat tree
common beech (218) <i>Fagus sylvatica</i>	55	0.24	3.2	271	76	Elite tree
sycamore maple (358) <i>Acer pseudoplatanus</i>	53	0.22	1.4	120	68	Elite tree
sycamore maple (403) <i>Acer pseudoplatanus</i>	52.2	0.21	1.4	0	120	Elite tree
sycamore maple (575) <i>Acer pseudoplatanus</i>	52	0.21	1.4	120	88	Habitat tree
common beech (279) <i>Fagus sylvatica</i>	50.5	0.2	2.5	216	221	Elite tree
common beech (389) <i>Fagus sylvatica</i>	50.2	0.2	2.5	210	66	Elite tree
sycamore maple (292) <i>Acer pseudoplatanus</i>	50	0.2	1.4	121	0	Elite tree
sycamore maple (260) <i>Acer pseudoplatanus</i>	47.6	0.18	1.4	122	134	Elite tree
common beech (629) <i>Fagus sylvatica</i>	46.8	0.17	2	166	136	Habitat tree
sycamore maple (89) <i>Acer pseudoplatanus</i>	44	0.15	1.4	122	52	Elite tree
common beech (255) <i>Fagus sylvatica</i>	42.6	0.14	1.6	135	90	Elite tree
common beech (235) <i>Fagus sylvatica</i>	41.1	0.13	1.8	152	96	Elite tree
sycamore maple (371) <i>Acer pseudoplatanus</i>	40.6	0.13	1.4	120	52	Elite tree
common beech (71) <i>Fagus sylvatica</i>	40.5	0.13	1.5	128	6	Elite tree
common beech (47) <i>Fagus sylvatica</i>	38.7	0.12	1.4	119	0	Elite tree
common beech (148) <i>Fagus sylvatica</i>	36.8	0.11	1.1	90	108	Elite tree
sycamore maple (576) <i>Acer pseudoplatanus</i>	36.8	0.11	1.4	120	52	Diversity

Tree	DBH (cm)	Basal area (m²)	Volume (m³)	Economic value (€)	Habitat value (pts.)	Reason
common beech (28) <i>Fagus sylvatica</i>	34.1	0.09	1	83	36	Elite tree
common beech (419) <i>Fagus sylvatica</i>	33.1	0.09	1	89	54	Elite tree
common beech (200) <i>Fagus sylvatica</i>	32.9	0.09	1	89	6	Elite tree
common beech (221) <i>Fagus sylvatica</i>	32.7	0.08	0.9	76	70	Elite tree
goat willow (300) <i>Salix caprea</i>	32	0.08	0.8	70	24	Diversity
sycamore maple (227) <i>Acer pseudoplatanus</i>	30.4	0.07	0.8	68	93	Habitat tree
common beech (615) <i>Fagus sylvatica</i>	29.7	0.07	0.8	69	6	Elite tree
sycamore maple (25) <i>Acer pseudoplatanus</i>	27.9	0.06	0.6	55	52	Elite tree
common beech (620) <i>Fagus sylvatica</i>	27.9	0.06	0.7	61	0	Elite tree
silver fir (212) <i>Abies alba</i>	18.3	0.03	0.1	11	6	Seed tree