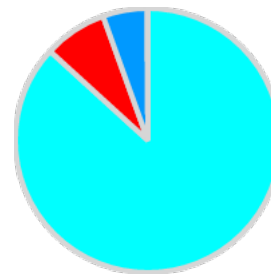


27/07/2021 27lug_Gruppo D

Site conditions

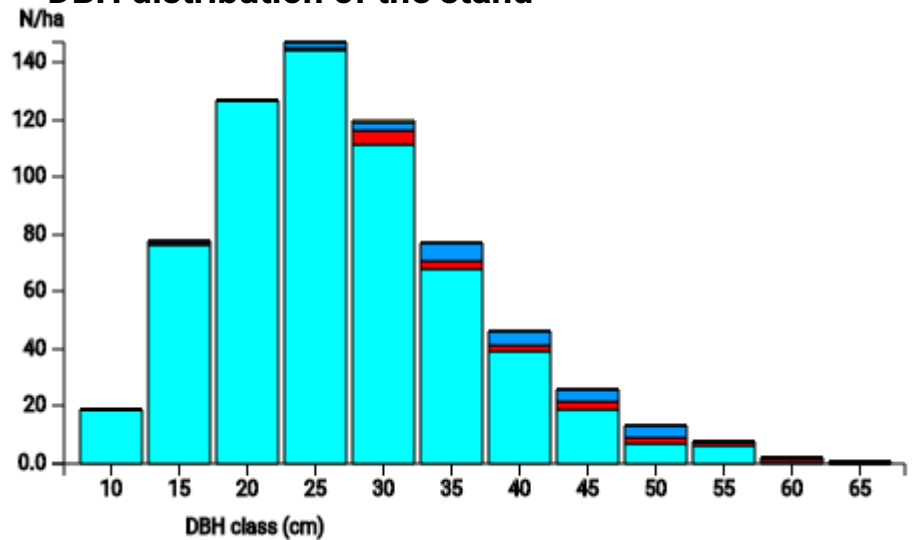
Altitude: 1270 m.a.s.l.
 Forest ecological region: Tuscany
 Geology / Bedrock: Sandstone
 Soil type: Brown podzolic soil
 Natural forest community:
 Asperulo-Fagetum
 Mean annual temperature: 8.7 C;
 Mean annual precipitation: 1642 mm;
 Ownership: State;
 Establishment: 2020

Tree species distribution by volume (in %)



- common beech: 86.8 %
- silver fir: 7.7 %
- sycamore maple: 5.4 %
- goat willow: 0.1 %

DBH distribution of the stand



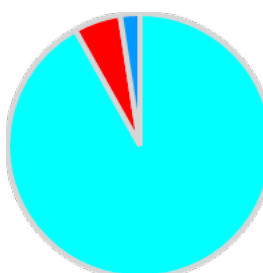
Initial stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	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

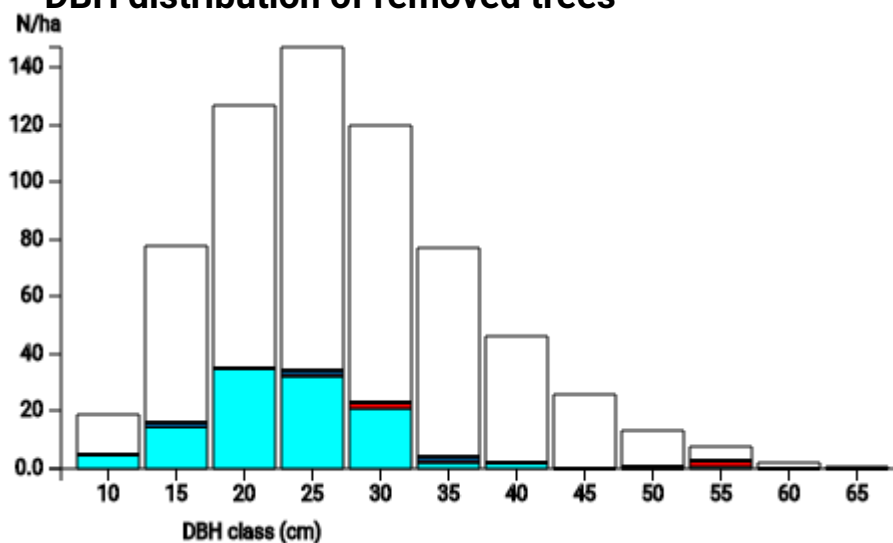
Volume: 82.3 m³
 Basal area: 7.5 m²
 Economic value: 6797 €
 Habitat value: 2631 pts.

Removed trees (N in %)



- common beech: 91.9 %
- silver fir: 5.7 %
- sycamore maple: 2.4 %
- goat willow: 0 %

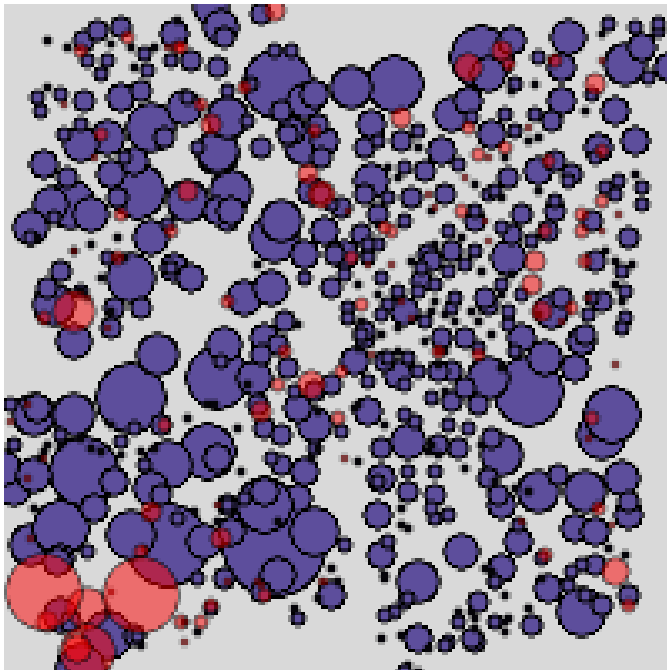
DBH distribution of removed trees



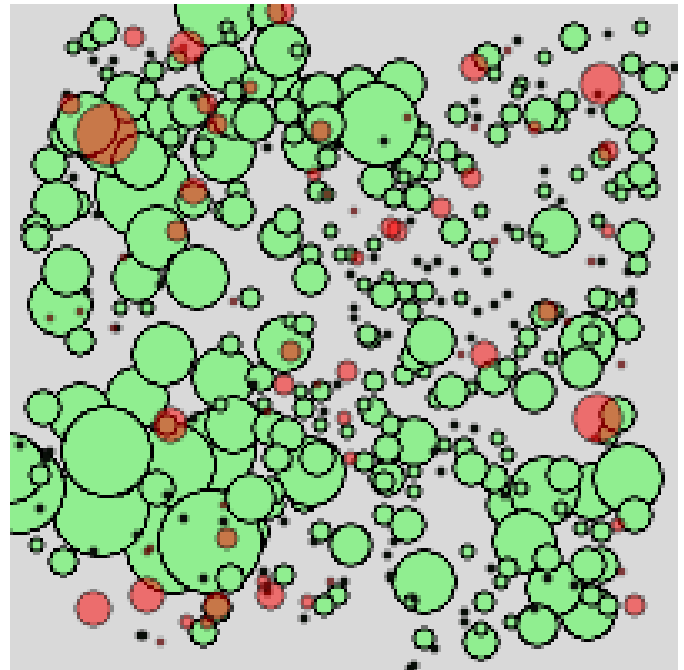
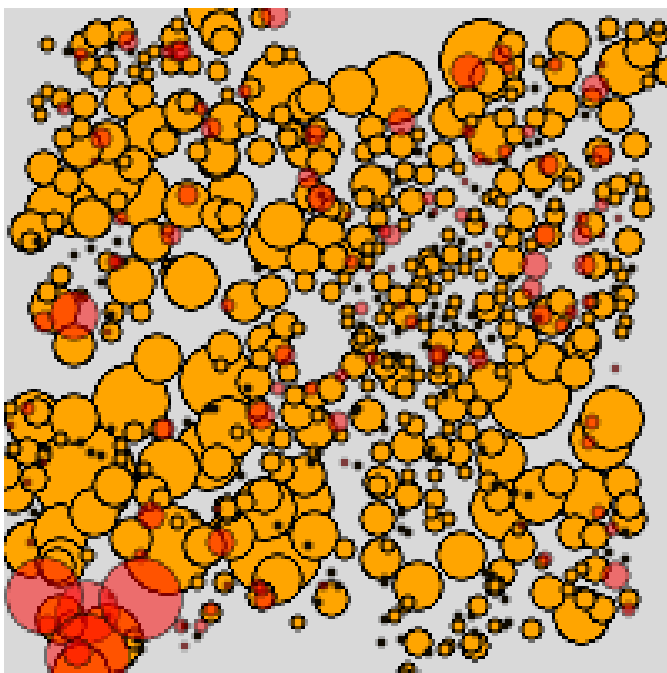
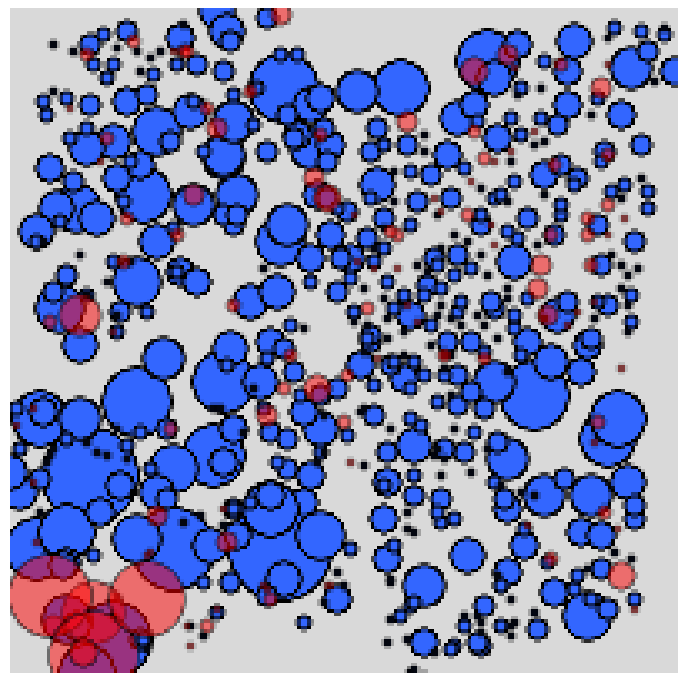
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
common beech	113	6.2	65.1	5559	2410	177
goat willow	0	0	0	0	0	0
silver fir	7	1.1	14.6	1021	112	7
sycamore maple	3	0.2	2.6	217	109	7
Total	123	7.5	82.3	6797	2631	191

Economic value [EUR]



Habitat value

Basal area [m²]Volume [m³]**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.

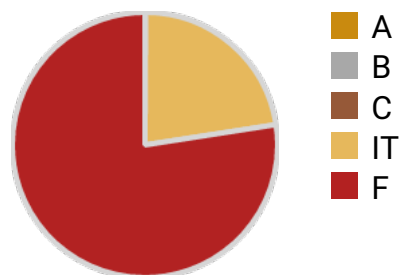
Economic values

Total value of removed trees: 6797 €
 Percentage of total stand value: 14.5 %
 Stand value after harvest: 39989 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	5559	85
silver fir	1021	70
sycamore maple	217	85
goat willow	0	0
Total	6797	83

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0.1	0.1
Industrial Timber	18.4	22.5
Fuelwood	63.5	77.5

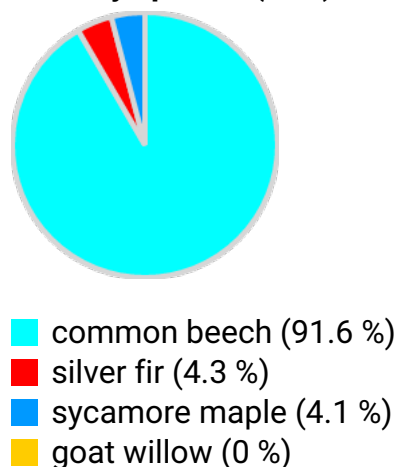
Habitat values

Total habitat value of removed trees: 2631 pts.
 Percentage of total stand value: 12.1 %
 Stand value after harvest: 19110 pts.

Habitat value by tree species [pts.]

Tree species	Total	Per m ³	Microhabitats [N]
common beech	2410	37	177
silver fir	112	7.7	7
sycamore maple	109	42.6	7
goat willow	0	0	0
Total	2631	32	191

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



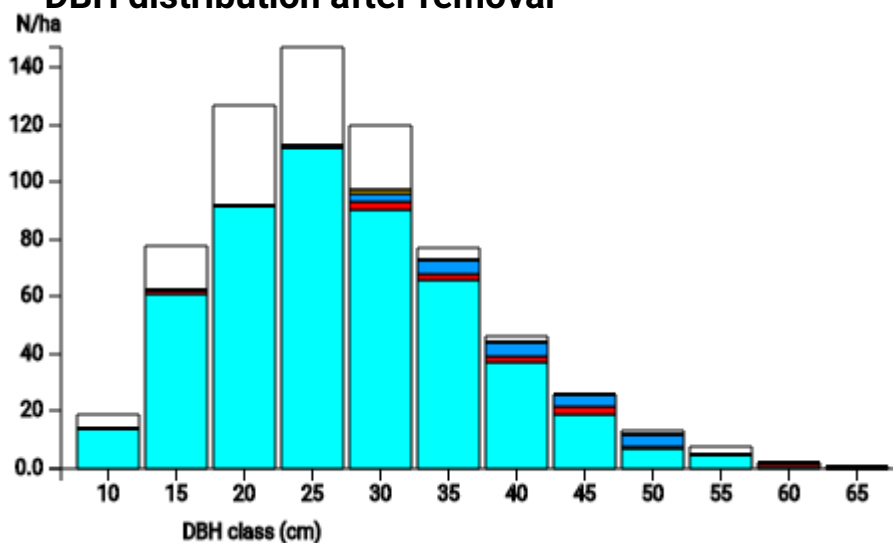
Remaining stand

Volume: 475.5 m³
 Basal area: 43.4 m²
 Economic value: 39989 €
 Habitat value: 19110 pts.

Remaining trees by volume (m³ in %)



DBH distribution after removal



Remaining stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
common beech	504	38.1	418.9	35688	17398	1106
goat willow	1	0.1	0.8	70	24	3
silver fir	14	2.2	28.5	2039	133	18
sycamore maple	22	3	27.4	2191	1555	92
Total	541	43.4	475.5	39989	19110	1219

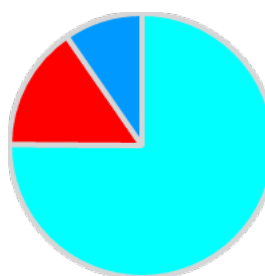
Retention treesVolume: 70.9 m³

Elite trees: 30

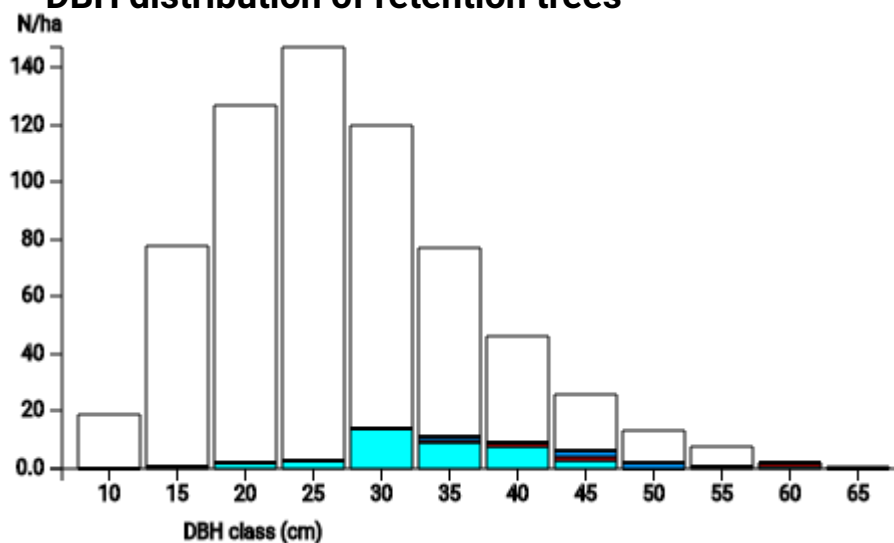
Habitat trees: 11

Economic value: 5786 €

Habitat value: 2630 pts.

Retention trees by volume (m³ in %)

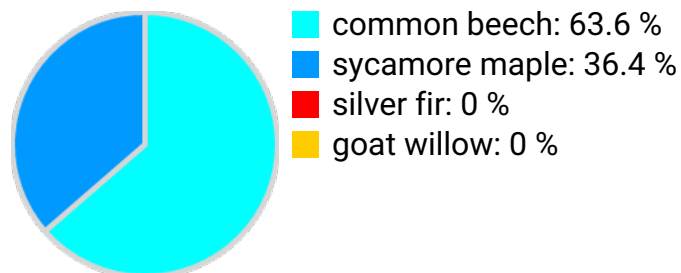
- common beech: 75.2 %
- silver fir: 15.3 %
- sycamore maple: 9.6 %
- goat willow: 0 %

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

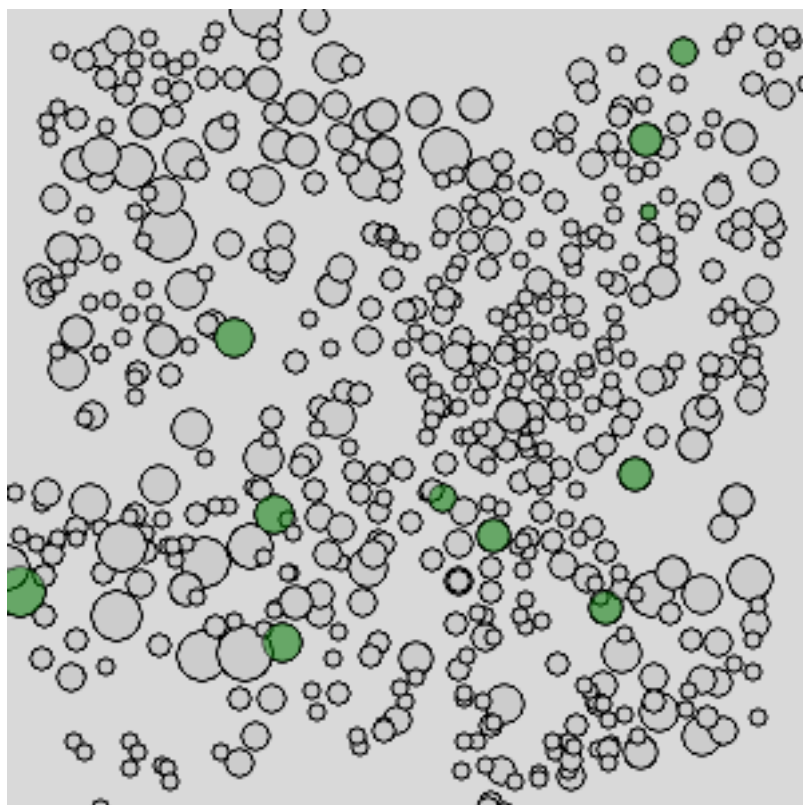
Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
common beech	42	4.6	53.3	4545	2121	156
goat willow	0	0	0	0	0	0
silver fir	4	0.8	10.8	789	13	3
sycamore maple	5	0.9	6.8	453	496	30
Total	51	6.3	70.9	5786	2630	189

Number of habitat trees	[N]	11
Habitat value	pts.	1090
	[% of total]	5
Economic value	[€]	1291
	[% of total]	2.8
Number of microhabitats	[N]	68
	[% of total]	4.8

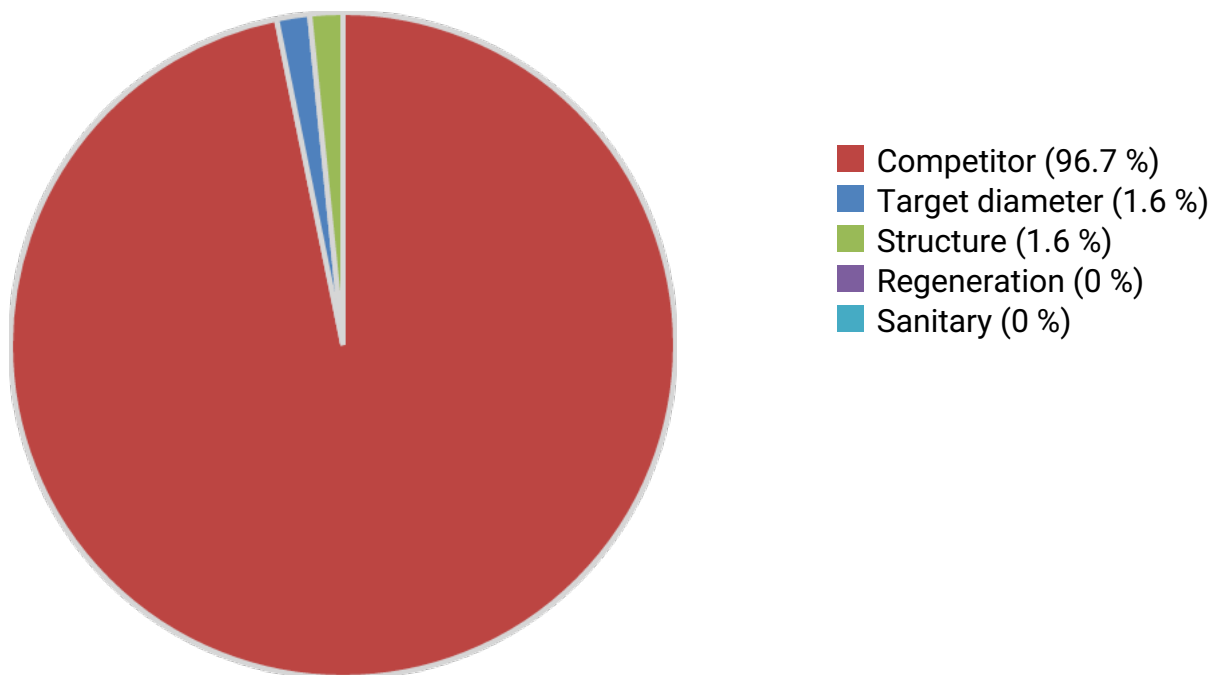
Habitat tree distribution by species (N in %)



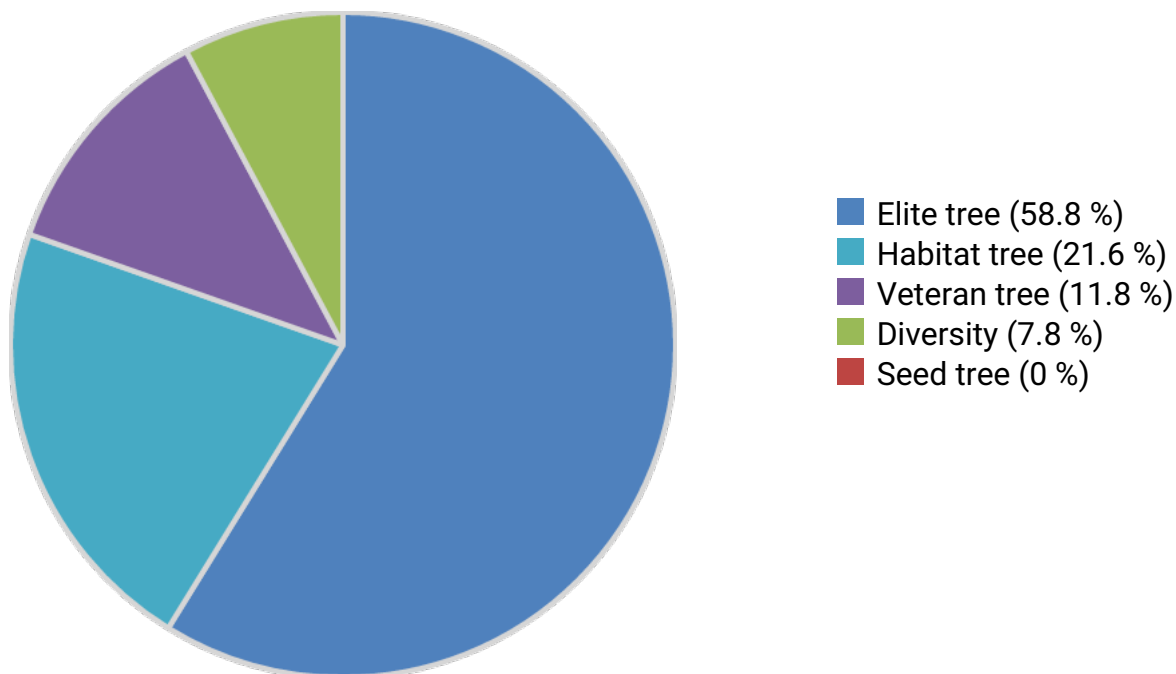
Spatial distribution of habitat trees



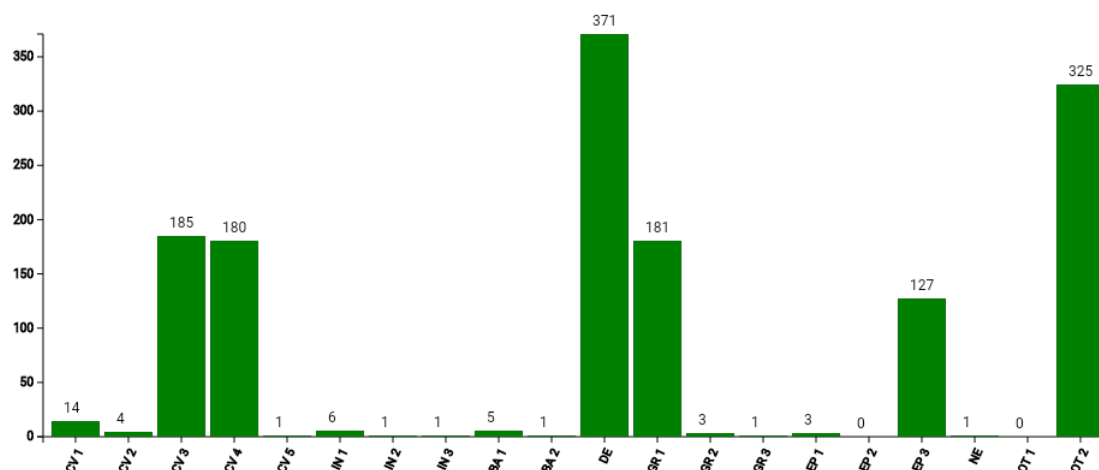
Reasons for removal



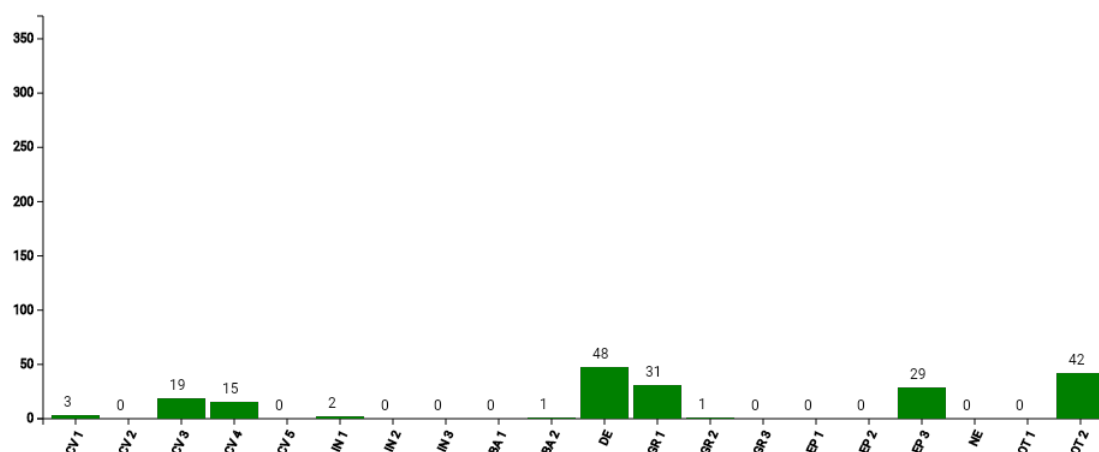
Reasons for retention



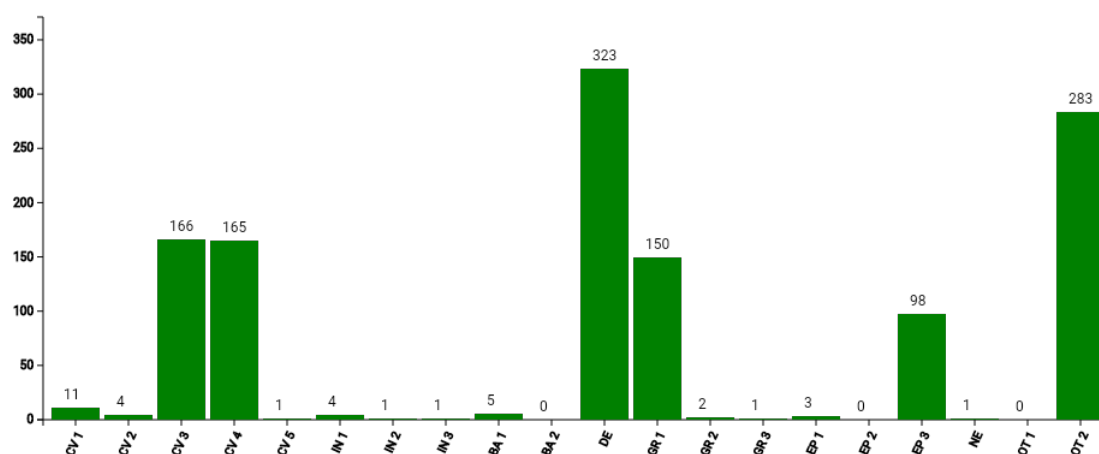
Distribution of tree microhabitats by code (N total)



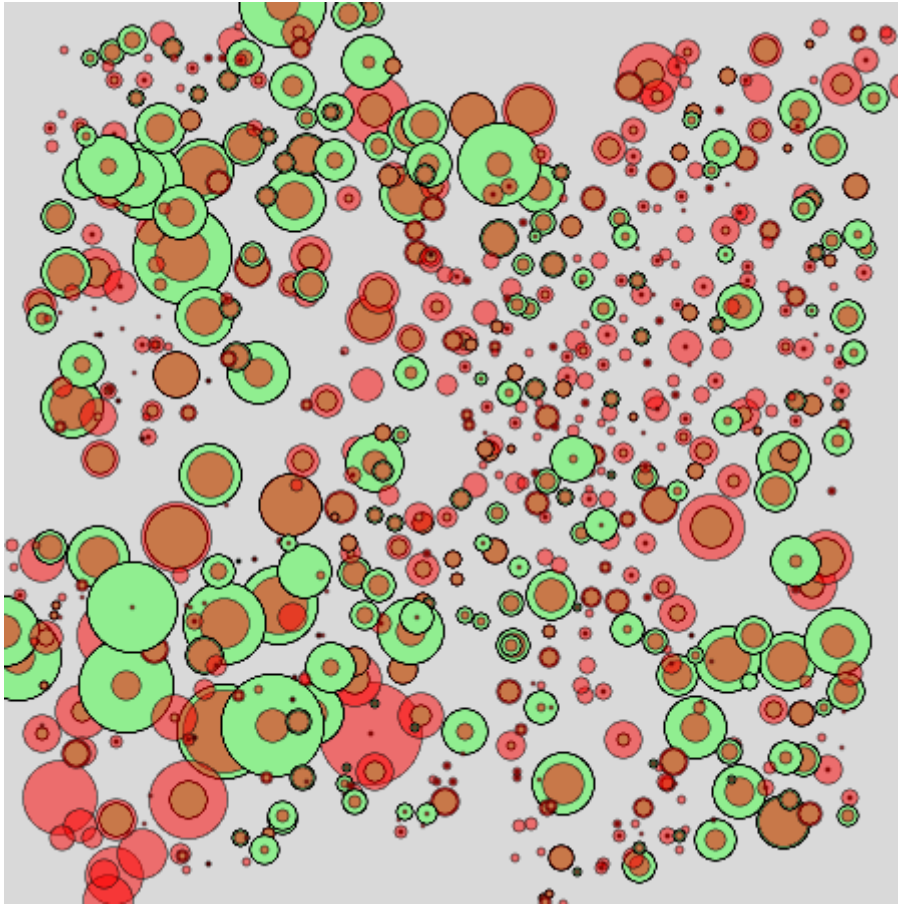
Removed tree microhabitats by code (N removed)



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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
silver fir (481) Abies alba	59.6	0.28	4	226	4	Competitor
common beech (459) Fagus sylvatica	57.7	0.26	3.6	306	82	Competitor
silver fir (497) Abies alba	57.6	0.26	3.8	302	0	Competitor
silver fir (479) Abies alba	51.3	0.21	2.8	163	76	Competitor
common beech (329) Fagus sylvatica	44.3	0.15	1.8	152	15	Competitor
common beech (108) Fagus sylvatica	40	0.13	1.4	118	56	Competitor
common beech (211) Fagus sylvatica	36.8	0.11	1.2	103	12	Competitor
common beech (511) Fagus sylvatica	36.7	0.11	1.3	109	9	Competitor
silver fir (499) Abies alba	36.1	0.1	1.3	112	4	Competitor
sycamore maple (43) Acer pseudoplatanus	35.2	0.1	1	87	88	Competitor
common beech (418) Fagus sylvatica	34.9	0.1	1.1	90	52	Competitor
common beech (149) Fagus sylvatica	34.8	0.1	1	85	21	Competitor
common beech (379) Fagus sylvatica	34.8	0.1	0.9	79	20	Competitor
silver fir (444) Abies alba	33.6	0.09	1.1	79	0	Competitor
common beech (58) Fagus sylvatica	33.6	0.09	1	89	0	Competitor
common beech (220) Fagus sylvatica	33.5	0.09	0.9	75	68	Competitor
common beech (535) Fagus sylvatica	33	0.09	0.9	80	44	Competitor
common beech (87) Fagus sylvatica	32.6	0.08	0.9	79	8	Competitor
common beech (34) Fagus sylvatica	32.1	0.08	0.8	68	14	Competitor
common beech (57) Fagus sylvatica	32	0.08	0.9	73	6	Competitor
common beech (262)	31.6	0.08	0.8	72	55	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Fagus sylvatica						
common beech (346) Fagus sylvatica	31.5	0.08	0.7	60	48	Competitor
common beech (214) Fagus sylvatica	31	0.08	0.9	75	36	Competitor
common beech (249) Fagus sylvatica	31	0.08	0.8	65	84	Competitor
silver fir (498) Abies alba	31	0.08	1	91	4	Competitor
common beech (265) Fagus sylvatica	31	0.08	0.8	65	42	Competitor
common beech (291) Fagus sylvatica	30.8	0.08	0.8	67	132	Competitor
common beech (50) Fagus sylvatica	30.5	0.07	0.8	66	6	Competitor
common beech (245) Fagus sylvatica	30.4	0.07	0.9	73	42	Competitor
common beech (175) Fagus sylvatica	30.3	0.07	0.8	65	43	Competitor
common beech (428) Fagus sylvatica	30.2	0.07	0.8	65	76	Competitor
common beech (24) Fagus sylvatica	30	0.07	0.7	64	48	Competitor
common beech (274) Fagus sylvatica	30	0.07	0.8	65	42	Competitor
common beech (55) Fagus sylvatica	29.9	0.07	0.7	63	0	Competitor
common beech (569) Fagus sylvatica	29.7	0.07	0.8	66	54	Competitor
common beech (35) Fagus sylvatica	29.6	0.07	0.6	54	6	Competitor
common beech (157) Fagus sylvatica	29.5	0.07	0.7	57	44	Competitor
common beech (590) Fagus sylvatica	29	0.07	0.6	47	6	Competitor
common beech (395) Fagus sylvatica	28.9	0.07	0.7	57	60	Competitor
common beech (343) Fagus sylvatica	28.7	0.07	0.6	53	20	Competitor
common beech (250) Fagus sylvatica	28.7	0.07	0.6	52	9	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
common beech (650) Fagus sylvatica	28.7	0.07	0.7	58	36	Target diameter
sycamore maple (347) Acer pseudoplatanus	28.5	0.06	1.3	108	21	Competitor
common beech (294) Fagus sylvatica	28.5	0.06	0.7	57	0	Competitor
common beech (102) Fagus sylvatica	28.5	0.06	0.6	52	6	Competitor
common beech (520) Fagus sylvatica	28.5	0.06	0.6	46	110	Competitor
common beech (156) Fagus sylvatica	28.1	0.06	0.6	53	42	Competitor
common beech (246) Fagus sylvatica	28	0.06	0.7	56	39	Competitor
common beech (103) Fagus sylvatica	28	0.06	0.6	52	12	Competitor
common beech (288) Fagus sylvatica	27.9	0.06	0.6	49	0	Competitor
common beech (648) Fagus sylvatica	27.7	0.06	0.7	58	48	Competitor
common beech (27) Fagus sylvatica	27.6	0.06	0.6	54	6	Structure
common beech (296) Fagus sylvatica	27.4	0.06	0.7	62	14	Competitor
common beech (544) Fagus sylvatica	26.9	0.06	0.7	61	0	Competitor
silver fir (438) Abies alba	26.9	0.06	0.6	47	24	Competitor
common beech (229) Fagus sylvatica	26.8	0.06	0.6	51	36	Competitor
common beech (112) Fagus sylvatica	26.8	0.06	0.6	48	6	Competitor
common beech (64) Fagus sylvatica	26.6	0.06	0.6	54	6	Competitor
common beech (195) Fagus sylvatica	26.6	0.06	0.6	52	6	Competitor
common beech (510) Fagus sylvatica	26.4	0.06	0.5	44	42	Competitor
common beech (36) Fagus sylvatica	26.1	0.05	0.6	48	0	Competitor
common beech (365)	26	0.05	0.5	45	39	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Fagus sylvatica						
common beech (259) Fagus sylvatica	25.8	0.05	0.6	53	18	Competitor
common beech (317) Fagus sylvatica	25.7	0.05	0.5	39	42	Competitor
common beech (422) Fagus sylvatica	25.5	0.05	0.5	44	65	Competitor
common beech (81) Fagus sylvatica	25.2	0.05	0.5	44	6	Competitor
common beech (521) Fagus sylvatica	25.1	0.05	0.5	40	12	Competitor
common beech (33) Fagus sylvatica	24.7	0.05	0.5	40	0	Competitor
common beech (88) Fagus sylvatica	24.5	0.05	0.5	43	0	Competitor
common beech (441) Fagus sylvatica	24.2	0.05	0.5	43	33	Competitor
common beech (198) Fagus sylvatica	24.2	0.05	0.4	38	0	Competitor
common beech (297) Fagus sylvatica	23.9	0.05	0.5	38	0	Competitor
common beech (161) Fagus sylvatica	23.8	0.04	0.5	39	6	Competitor
common beech (471) Fagus sylvatica	23.8	0.04	0.5	40	0	Competitor
common beech (458) Fagus sylvatica	23.8	0.04	0.5	43	12	Competitor
common beech (37) Fagus sylvatica	23.7	0.04	0.5	41	0	Competitor
common beech (523) Fagus sylvatica	23.6	0.04	0.6	50	0	Competitor
common beech (129) Fagus sylvatica	23.5	0.04	0.5	40	0	Competitor
common beech (513) Fagus sylvatica	23.4	0.04	0.5	38	36	Competitor
common beech (533) Fagus sylvatica	23.4	0.04	0.5	39	20	Competitor
common beech (397) Fagus sylvatica	23.3	0.04	0.4	32	36	Competitor
common beech (191) Fagus sylvatica	23.3	0.04	0.5	41	30	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
common beech (68) Fagus sylvatica	23.3	0.04	0.4	35	36	Competitor
common beech (253) Fagus sylvatica	23.3	0.04	0.4	35	6	Competitor
common beech (398) Fagus sylvatica	23.3	0.04	0.5	39	12	Competitor
common beech (44) Fagus sylvatica	23.2	0.04	0.4	38	0	Competitor
common beech (516) Fagus sylvatica	23.1	0.04	0.4	35	8	Competitor
common beech (180) Fagus sylvatica	23	0.04	0.5	40	12	Competitor
common beech (487) Fagus sylvatica	22.6	0.04	0.5	38	0	Competitor
common beech (492) Fagus sylvatica	22.5	0.04	0.3	28	0	Competitor
common beech (310) Fagus sylvatica	22.4	0.04	0.4	31	0	Competitor
common beech (111) Fagus sylvatica	22.3	0.04	0.3	28	51	Competitor
common beech (14) Fagus sylvatica	22	0.04	0.4	32	0	Competitor
common beech (184) Fagus sylvatica	21.8	0.04	0.4	32	3	Competitor
common beech (440) Fagus sylvatica	21.7	0.04	0.4	32	0	Competitor
common beech (94) Fagus sylvatica	21.6	0.04	0.4	31	8	Competitor
common beech (652) Fagus sylvatica	21.6	0.04	0.4	32	33	Target diameter
common beech (130) Fagus sylvatica	21.3	0.04	0.3	30	42	Competitor
common beech (159) Fagus sylvatica	21.2	0.04	0.3	28	3	Structure
common beech (369) Fagus sylvatica	21	0.04	0.4	30	0	Competitor
common beech (90) Fagus sylvatica	21	0.04	0.3	26	0	Competitor
common beech (413) Fagus sylvatica	20.3	0.03	0.3	23	12	Competitor
common beech (370)	19.8	0.03	0.3	28	12	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Fagus sylvatica						
common beech (158) Fagus sylvatica	19.6	0.03	0.3	26	0	Competitor
common beech (29) Fagus sylvatica	19.5	0.03	0.3	22	30	Competitor
sycamore maple (485) Acer pseudoplatanus	18.7	0.03	0.3	23	0	Competitor
common beech (93) Fagus sylvatica	18.4	0.03	0.3	24	0	Competitor
common beech (466) Fagus sylvatica	17.6	0.02	0.3	24	3	Competitor
common beech (302) Fagus sylvatica	17.5	0.02	0.3	21	12	Competitor
common beech (561) Fagus sylvatica	17.2	0.02	0.2	21	3	Competitor
common beech (475) Fagus sylvatica	17	0.02	0.2	16	3	Competitor
common beech (420) Fagus sylvatica	16.3	0.02	0.2	15	0	Competitor
common beech (238) Fagus sylvatica	16.2	0.02	0.1	11	3	Competitor
common beech (587) Fagus sylvatica	16.1	0.02	0.2	13	22	Competitor
common beech (457) Fagus sylvatica	15.9	0.02	0.2	20	12	Competitor
common beech (373) Fagus sylvatica	15.5	0.02	0.2	13	0	Competitor
common beech (326) Fagus sylvatica	15	0.02	0.2	15	6	Competitor
common beech (323) Fagus sylvatica	15	0.02	0.2	14	6	Competitor
common beech (461) Fagus sylvatica	14.7	0.02	0.1	10	12	Competitor
common beech (392) Fagus sylvatica	14.5	0.02	0.2	13	36	Competitor
common beech (321) Fagus sylvatica	14.2	0.02	0.2	13	0	Competitor
common beech (493) Fagus sylvatica	13.1	0.01	0.1	8	0	Competitor
common beech (306) Fagus sylvatica	10.8	0.01	0.1	5	0	Competitor

Retention trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
silver fir (390) Abies alba	63.2	0.31	4.7	411	6	Elite tree
common beech (443) Fagus sylvatica	60.7	0.29	3.8	326	212	Elite tree
common beech (546) Fagus sylvatica	58	0.26	3.1	264	96	Habitat tree
sycamore maple (403) Acer pseudoplatanus	52.2	0.21	1.4	0	120	Habitat tree
sycamore maple (575) Acer pseudoplatanus	52	0.21	1.4	120	88	Habitat tree
silver fir (472) Abies alba	49.1	0.19	2.6	176	3	Elite tree
sycamore maple (260) Acer pseudoplatanus	47.6	0.18	1.4	122	134	Habitat tree
common beech (407) Fagus sylvatica	46.7	0.17	2.1	173	136	Elite tree
common beech (342) Fagus sylvatica	46.5	0.17	2.1	178	142	Elite tree
common beech (172) Fagus sylvatica	46.5	0.17	2	176	98	Elite tree
sycamore maple (417) Acer pseudoplatanus	46	0.17	1.4	120	136	Habitat tree
silver fir (483) Abies alba	44	0.15	2.2	127	0	Elite tree
common beech (496) Fagus sylvatica	43.1	0.15	1.7	139	195	Habitat tree
common beech (215) Fagus sylvatica	42.9	0.15	2	167	125	Elite tree
common beech (534) Fagus sylvatica	42.2	0.14	1.5	130	38	Elite tree
common beech (309) Fagus sylvatica	42.1	0.14	1.5	129	12	Elite tree
common beech (46) Fagus sylvatica	41.4	0.14	1.5	126	54	Habitat tree
common beech (235) Fagus sylvatica	41.1	0.13	1.8	152	96	Elite tree
common beech (311) Fagus sylvatica	40.7	0.13	1.6	135	54	Elite tree
common beech (71) Fagus sylvatica	40.5	0.13	1.5	128	6	Elite tree
common beech (62)	39	0.12	1.3	112	15	Habitat tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Fagus sylvatica						
common beech (47) Fagus sylvatica	38.7	0.12	1.4	119	0	Elite tree
common beech (643) Fagus sylvatica	38.7	0.12	1.1	96	55	Habitat tree
sycamore maple (240) Acer pseudoplatanus	38.6	0.12	1.1	91	18	Veteran tree
common beech (48) Fagus sylvatica	37.8	0.11	1.2	100	40	Veteran tree
common beech (622) Fagus sylvatica	37.7	0.11	1.5	125	113	Habitat tree
common beech (559) Fagus sylvatica	37.4	0.11	1.3	112	137	Diversity
common beech (251) Fagus sylvatica	37	0.11	1.2	107	0	Elite tree
common beech (86) Fagus sylvatica	37	0.11	1.2	101	14	Elite tree
silver fir (482) Abies alba	36.6	0.11	1.3	76	4	Diversity
common beech (264) Fagus sylvatica	36.3	0.1	1.1	92	0	Elite tree
common beech (38) Fagus sylvatica	34.2	0.09	1	84	0	Elite tree
common beech (28) Fagus sylvatica	34.1	0.09	1	83	36	Elite tree
common beech (649) Fagus sylvatica	34	0.09	1	88	17	Elite tree
common beech (419) Fagus sylvatica	33.1	0.09	1	89	54	Elite tree
common beech (216) Fagus sylvatica	33	0.09	0.9	80	48	Veteran tree
common beech (363) Fagus sylvatica	33	0.09	1	85	3	Elite tree
common beech (460) Fagus sylvatica	32.7	0.08	1	83	9	Elite tree
common beech (304) Fagus sylvatica	32.6	0.08	0.9	79	27	Veteran tree
common beech (201) Fagus sylvatica	32.5	0.08	1	83	3	Elite tree
common beech (124) Fagus sylvatica	32.2	0.08	0.8	73	3	Elite tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
common beech (70) Fagus sylvatica	31	0.08	0.8	71	38	Diversity
common beech (429) Fagus sylvatica	30.7	0.07	0.9	73	40	Elite tree
common beech (67) Fagus sylvatica	30.6	0.07	0.8	67	84	Habitat tree
common beech (509) Fagus sylvatica	30	0.07	0.8	70	6	Elite tree
common beech (362) Fagus sylvatica	28.7	0.07	0.7	56	36	Diversity
common beech (167) Fagus sylvatica	26	0.05	0.5	47	6	Elite tree
common beech (560) Fagus sylvatica	25.7	0.05	0.6	47	0	Elite tree
common beech (494) Fagus sylvatica	24.8	0.05	0.6	47	0	Elite tree
common beech (345) Fagus sylvatica	23.5	0.04	0.3	29	40	Veteran tree
common beech (61) Fagus sylvatica	19.3	0.03	0.3	24	33	Veteran tree