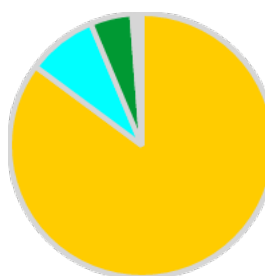


09/04/2021 Gruppo D Lazio t2

Site conditions

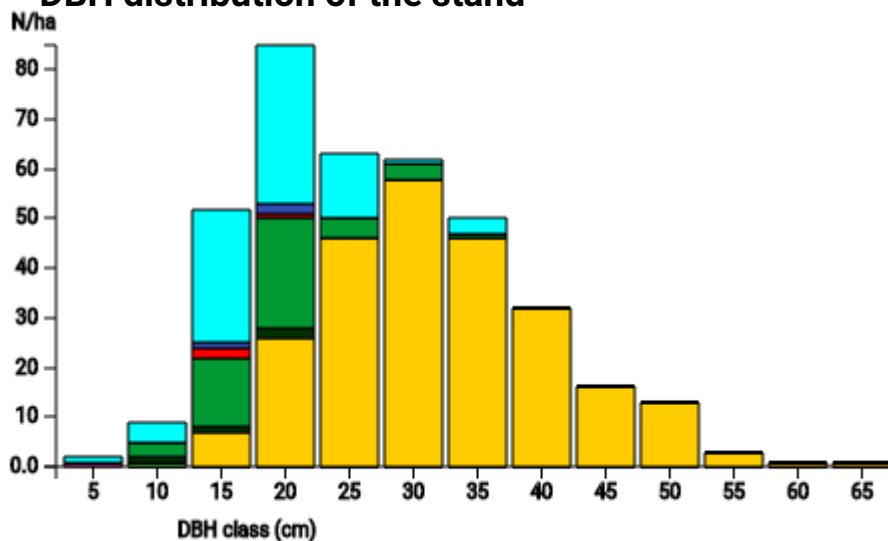
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned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



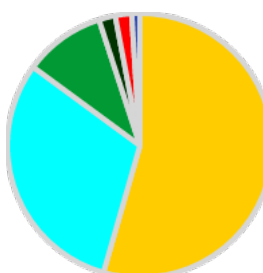
Initial stand (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	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
Total	389	29.9	407.1	31140	10570	578

Removed trees

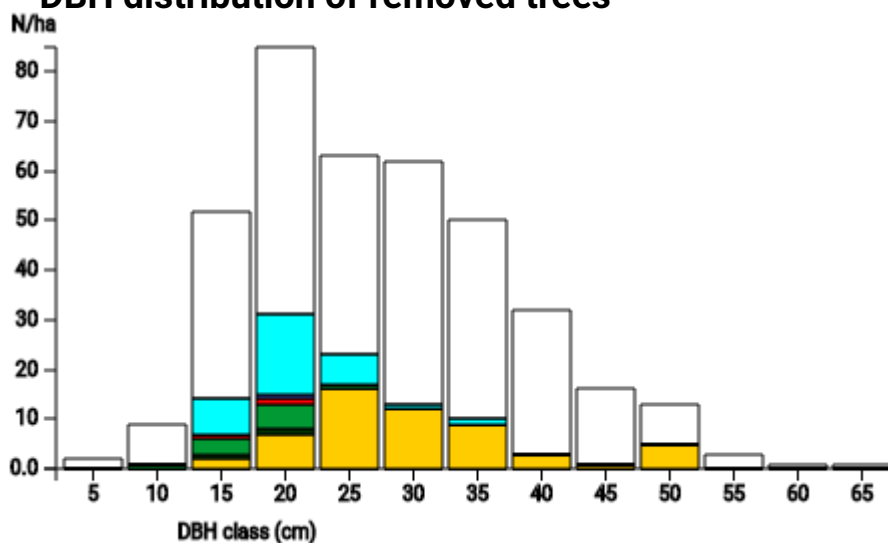
Volume: 86.3 m³
 Basal area: 6.5 m²
 Economic value: 6604 €
 Habitat value: 2391 pts.

Removed trees (N in %)



- Turkey oak: 54.5 %
- European hop-hornbeam: 30.7 %
- Italian maple: 9.9 %
- field maple: 2 %
- manna ash: 2 %
- hornbeam: 1 %
- common beech: 0 %
- downy oak: 0 %

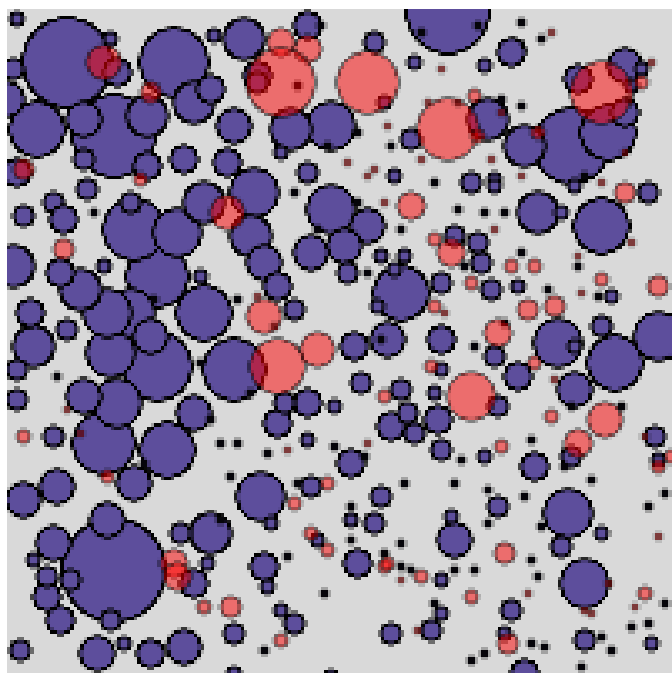
DBH distribution of removed trees



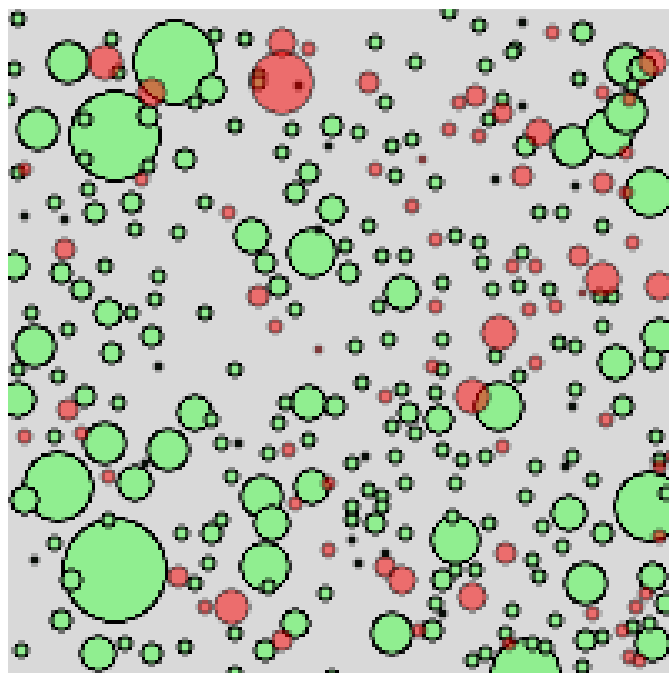
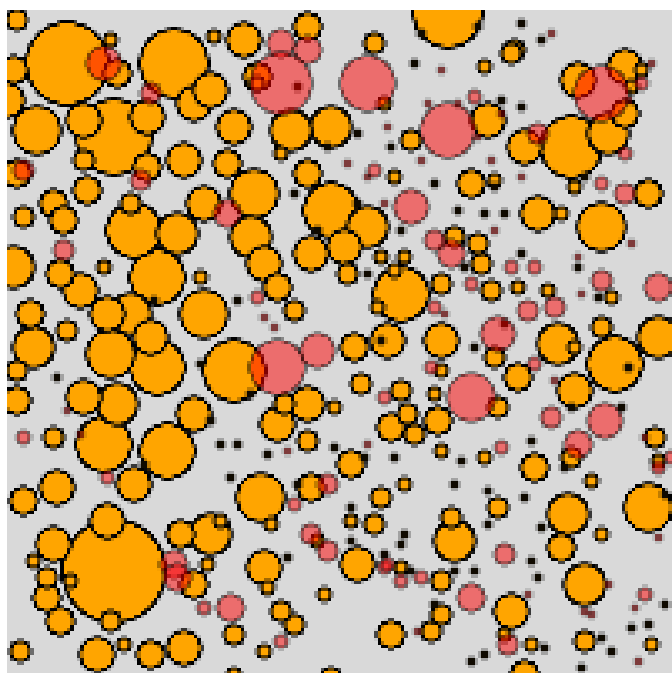
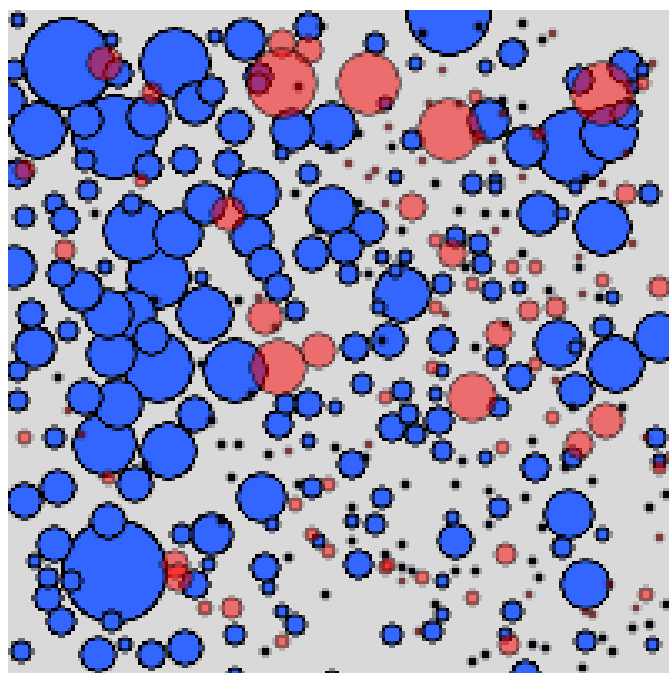
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	31	1.3	14.7	1127	657	42
Italian maple	10	0.4	4.2	322	175	13
Turkey oak	55	4.7	64.1	4905	1476	74
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	2	0.1	0.7	56	51	3
hornbeam	1	0	0.5	35	24	1
manna ash	2	0.1	2.1	159	8	2
Total	101	6.5	86.3	6604	2391	135

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.

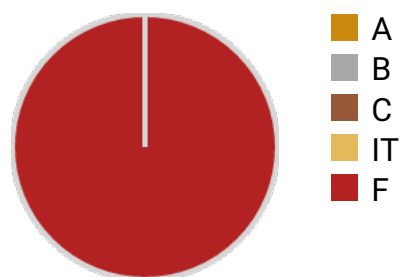
Economic values

Total value of removed trees: 6604 €
 Percentage of total stand value: 21.2 %
 Stand value after harvest: 24535 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	4905	76
field maple	56	77
Italian maple	322	77
manna ash	159	77
hornbeam	35	77
European hop-hornbeam	1127	76
Total	6604	76

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	86.3	100

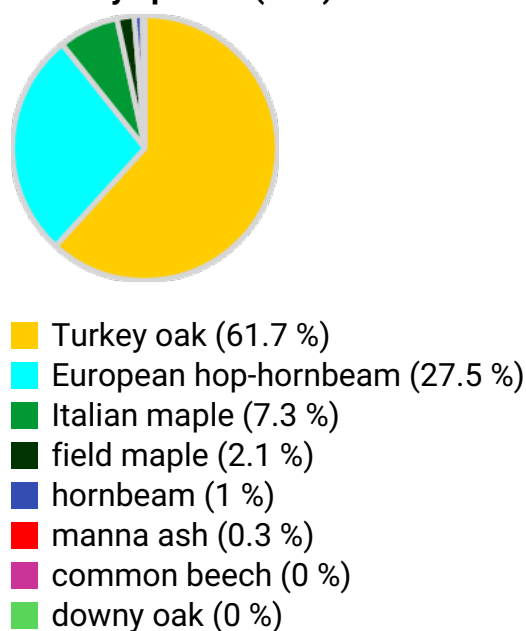
Habitat values

Total habitat value of removed trees: 2391 pts.
 Percentage of total stand value: 22.6 %
 Stand value after harvest: 8179 pts.

Habitat value by tree species [pts.]

Tree species	Total	Per m ³	Microhabitats [N]
common beech	0	0	0
downy oak	0	0	0
Turkey oak	1476	23	74
field maple	51	69.2	3
Italian maple	175	41.6	13
manna ash	8	3.9	2
hornbeam	24	51.8	1
European hop-hornbeam	657	44.6	42
Total	2391	27.7	135

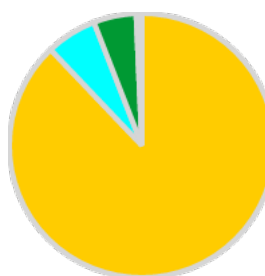
Habitat value (points) of removed trees by species (in %)



Remaining stand

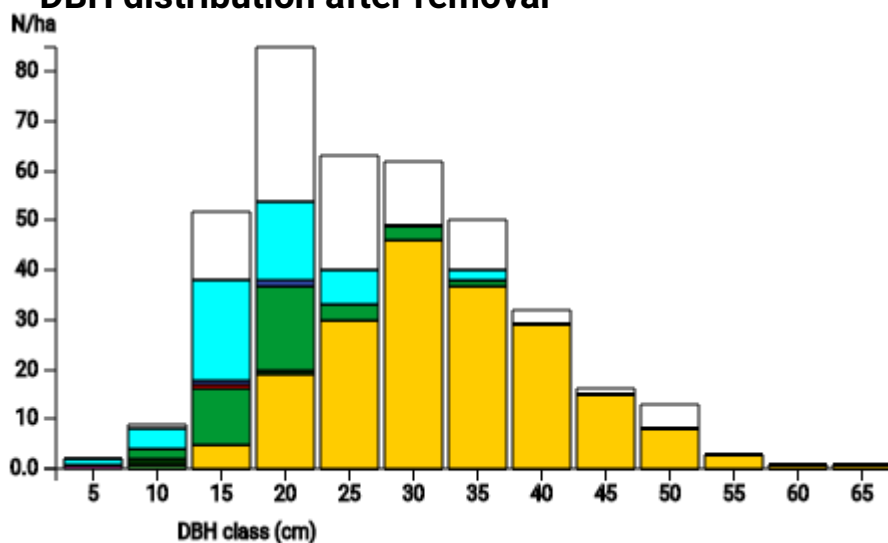
Volume: 320.7 m³
 Basal area: 23.3 m²
 Economic value: 24535 €
 Habitat value: 8179 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 88 %
- European hop-hornbeam: 6.2 %
- Italian maple: 5.2 %
- hornbeam: 0.3 %
- field maple: 0.2 %
- common beech: 0.1 %
- manna ash: 0.1 %
- downy oak: 0 %

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)
European hop-hornbeam	50	1.7	19.9	1520	1012	59
Italian maple	37	1.5	16.6	1266	742	52
Turkey oak	194	20	282.3	21595	6331	327
common beech	1	0	0.2	16	0	0
downy oak	1	0	0.1	10	0	0
field maple	2	0.1	0.6	47	64	3
hornbeam	2	0.1	0.9	66	0	0
manna ash	1	0	0.2	16	30	2
Total	288	23.3	320.7	24535	8179	443

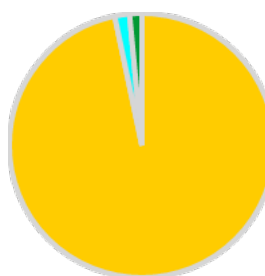
Retention treesVolume: 44.1 m³

Elite trees: 31

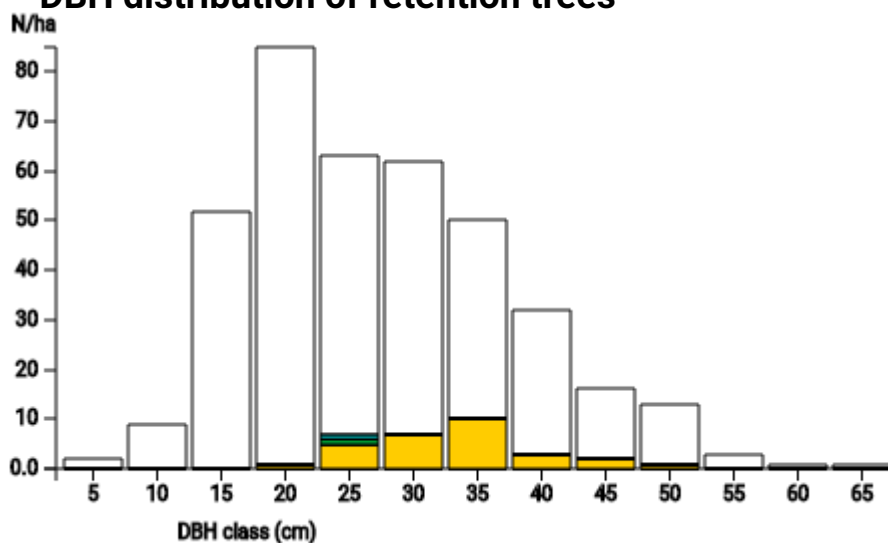
Habitat trees: 0

Economic value: 3376 €

Habitat value: 790 pts.

Retention trees by volume (m³ in %)









- Turkey oak: 96.7 %
- European hop-hornbeam: 1.8 %
- Italian maple: 1.5 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

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

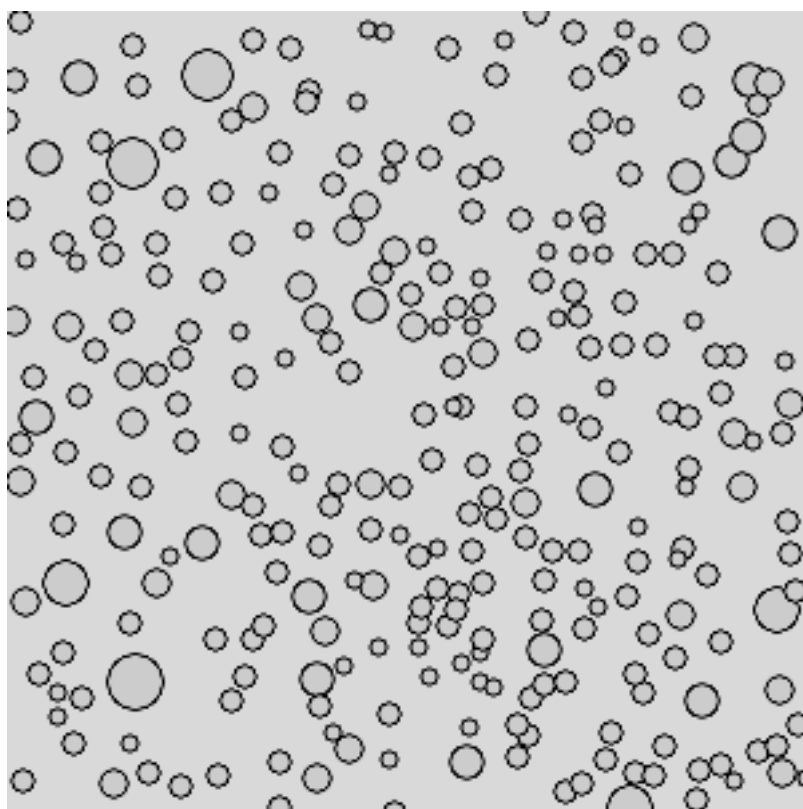
Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	1	0.1	0.8	61	24	1
Italian maple	1	0.1	0.7	52	60	2
Turkey oak	29	2.9	42.7	3263	706	32
common beech	0	0	0	0	0	0
downy oak	0	0	0	0	0	0
field maple	0	0	0	0	0	0
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
Total	31	3.1	44.1	3376	790	35

Number of habitat trees	[N]	0
Habitat value	pts.	0
	[% of total]	0
Economic value	[€]	0
	[% of total]	0
Number of microhabitats	[N]	0
	[% of total]	0

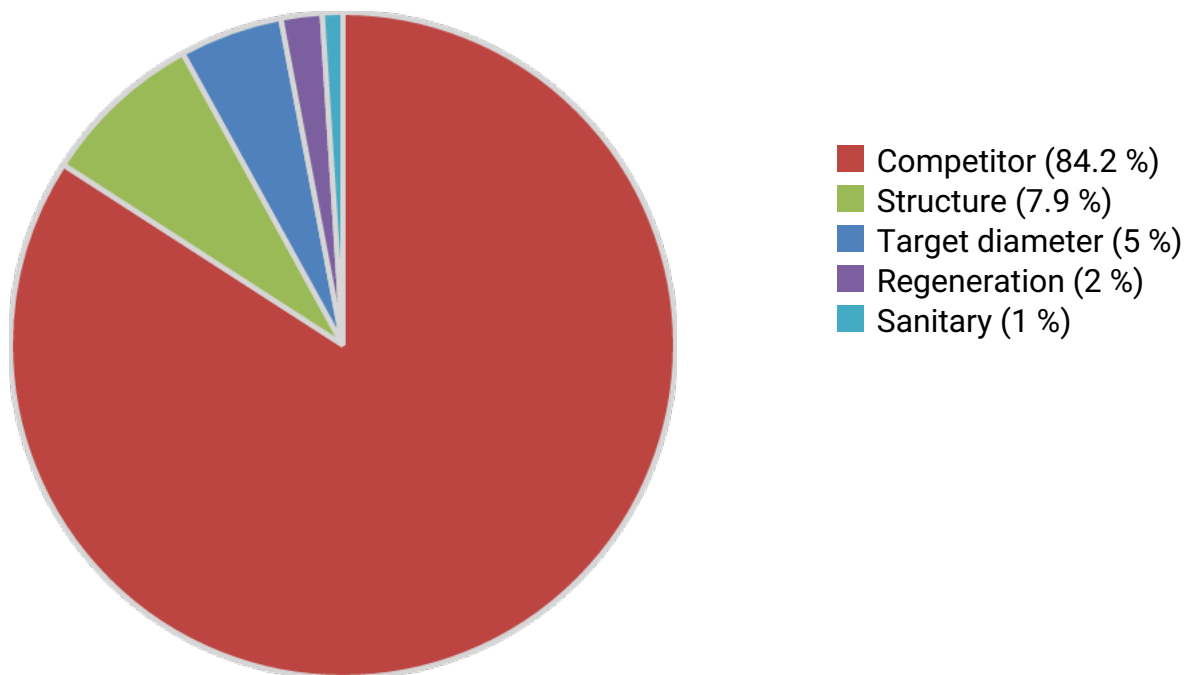
Habitat tree distribution by species (N in %)

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

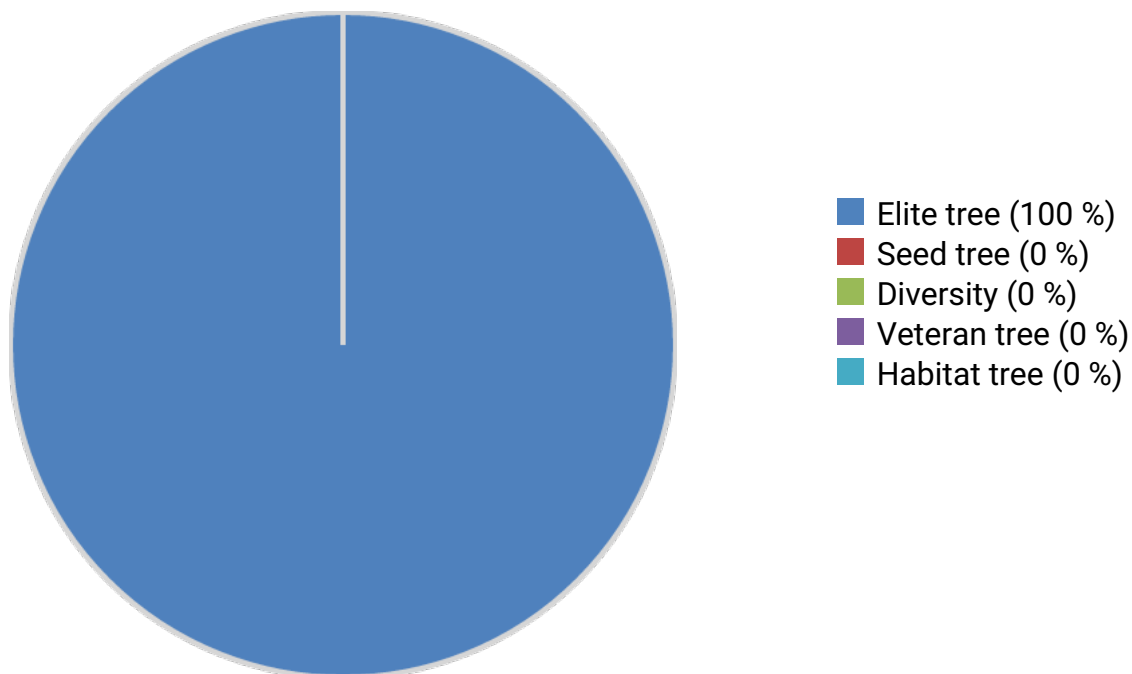
Spatial distribution of habitat trees



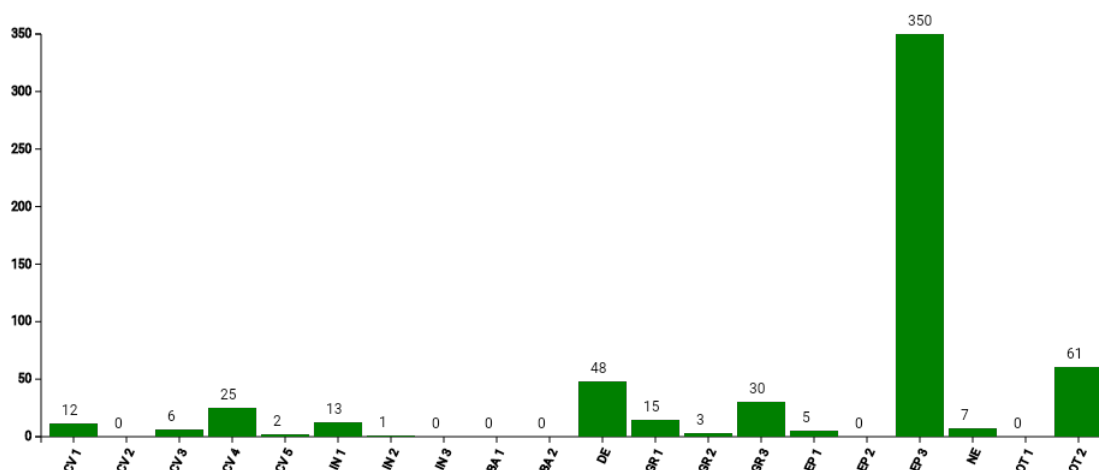
Reasons for removal



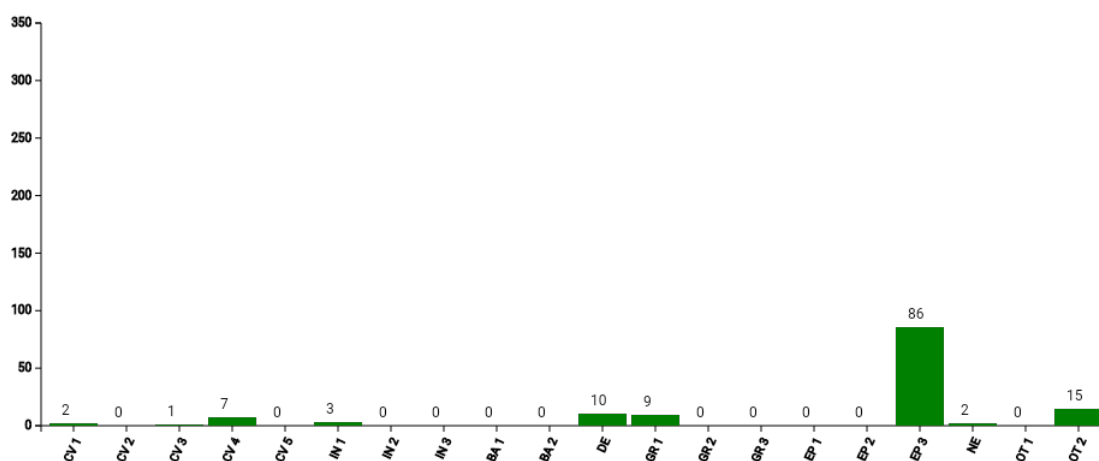
Reasons for retention



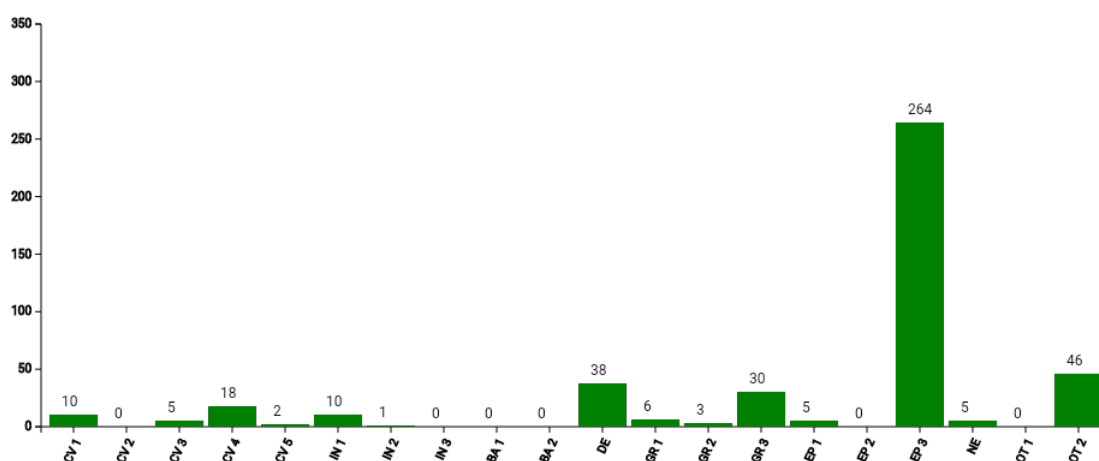
Distribution of tree microhabitats by code (N total)



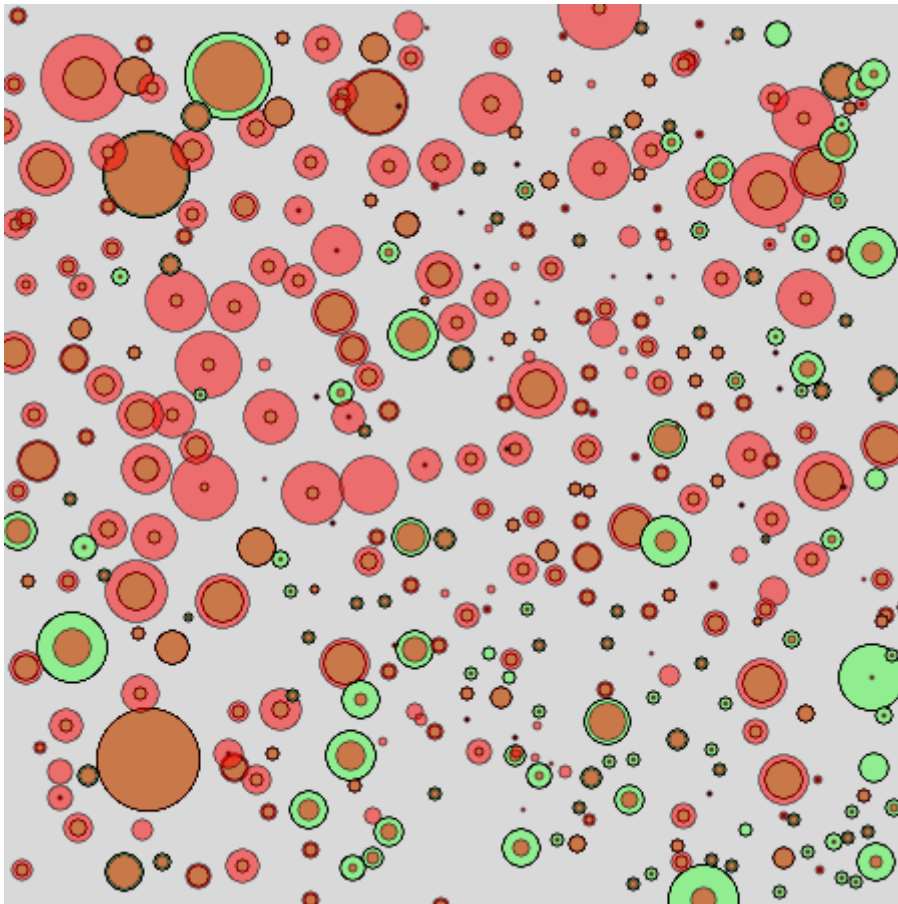
Removed tree microhabitats by code (N removed)



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
Turkey oak (10) Quercus cerris	54	0.23	3.5	269	106	Competitor
Turkey oak (317) Quercus cerris	51	0.2	3.2	249	24	Competitor
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Competitor
Turkey oak (77) Quercus cerris	50	0.2	3	232	0	Competitor
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Competitor
Turkey oak (183) Quercus cerris	46	0.17	2.3	179	60	Competitor
Turkey oak (179) Quercus cerris	41.5	0.14	1.7	131	24	Competitor
Turkey oak (15) Quercus cerris	41.5	0.14	1.9	142	60	Competitor
Turkey oak (76) Quercus cerris	40	0.13	1.8	134	6	Regeneration
Turkey oak (161) Quercus cerris	38	0.11	1.4	109	60	Target diameter
Turkey oak (345) Quercus cerris	38	0.11	1.3	101	24	Competitor
Turkey oak (131) Quercus cerris	37	0.11	1.5	116	40	Target diameter
Turkey oak (46) Quercus cerris	36.5	0.11	1.7	132	24	Competitor
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 (8) Quercus cerris	35.5	0.1	1.3	98	24	Competitor
Turkey oak (5) Quercus cerris	35.5	0.1	1.5	118	52	Competitor
European hop-hornbeam (374) Ostrya carpinifolia	35	0.1	1.2	94	51	Competitor
Turkey oak (195) Quercus cerris	35	0.1	1.4	109	0	Competitor
Turkey oak (262) Quercus cerris	34	0.09	0.9	68	48	Competitor
Turkey oak (142)	34	0.09	1.2	90	60	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (19) Quercus cerris	33	0.09	1.2	93	50	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 (29) Quercus cerris	32	0.08	1	79	24	Competitor
Turkey oak (235) Quercus cerris	32	0.08	1	74	36	Competitor
European hop-hornbeam (373) Ostrya carpinifolia	32	0.08	0.9	66	58	Competitor
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Competitor
Turkey oak (181) Quercus cerris	31	0.08	0.9	68	0	Competitor
Turkey oak (126) Quercus cerris	30.5	0.07	0.8	60	24	Competitor
Turkey oak (358) Quercus cerris	30.5	0.07	0.8	63	24	Competitor
Turkey oak (388) Quercus cerris	30	0.07	0.9	73	24	Competitor
Turkey oak (111) Quercus cerris	29.5	0.07	0.8	63	24	Competitor
Turkey oak (387) Quercus cerris	29.5	0.07	0.9	72	24	Competitor
Italian maple (330) Acer opalus	29.5	0.07	1	73	24	Competitor
European hop-hornbeam (325) Ostrya carpinifolia	29	0.07	0.8	61	48	Competitor
Turkey oak (37) Quercus cerris	29	0.07	0.9	65	24	Competitor
Turkey oak (114) Quercus cerris	28	0.06	0.9	66	19	Competitor
Turkey oak (385) Quercus cerris	28	0.06	0.8	62	24	Structure
European hop-hornbeam (302) Ostrya carpinifolia	27.5	0.06	0.8	59	30	Competitor
Turkey oak (371) Quercus cerris	27	0.06	0.7	56	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (141) Quercus cerris	27	0.06	0.8	59	24	Competitor
Turkey oak (154) Quercus cerris	27	0.06	0.6	49	36	Structure
Turkey oak (105) Quercus cerris	27	0.06	0.7	53	24	Competitor
Turkey oak (258) Quercus cerris	27	0.06	0.6	48	36	Competitor
Turkey oak (254) Quercus cerris	26.5	0.06	0.6	47	0	Competitor
Turkey oak (381) Quercus cerris	26	0.05	0.7	55	0	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	Target diameter
European hop-hornbeam (229) Ostrya carpinifolia	25.5	0.05	0.7	55	24	Competitor
European hop-hornbeam (310) Ostrya carpinifolia	25.5	0.05	0.6	50	7	Competitor
Turkey oak (186) Quercus cerris	25	0.05	0.6	46	24	Competitor
European hop-hornbeam (192) Ostrya carpinifolia	25	0.05	0.6	44	24	Competitor
Turkey oak (107) Quercus cerris	25	0.05	0.6	47	24	Regeneration
European hop-hornbeam (198) Ostrya carpinifolia	25	0.05	0.7	51	24	Competitor
Italian maple (63) Acer opalus	24.5	0.05	0.5	38	40	Competitor
Italian maple (331) Acer opalus	24	0.05	0.5	39	40	Competitor
Turkey oak (173) Quercus cerris	24	0.05	0.6	44	24	Target diameter
Turkey oak (370) Quercus cerris	24	0.05	0.6	42	24	Target diameter
Turkey oak (260) Quercus cerris	24	0.05	0.5	41	44	Competitor
European hop-hornbeam (200) Ostrya carpinifolia	24	0.05	0.7	51	24	Competitor
European hop-hornbeam (328) Ostrya carpinifolia	24	0.05	0.5	40	28	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Ostrya carpinifolia						
European hop-hornbeam (340) Ostrya carpinifolia	23.5	0.04	0.5	38	24	Competitor
Italian maple (316) Acer opalus	23	0.04	0.6	45	24	Competitor
Turkey oak (96) Quercus cerris	23	0.04	0.5	39	24	Competitor
European hop-hornbeam (207) Ostrya carpinifolia	23	0.04	0.4	33	3	Competitor
Turkey oak (102) Quercus cerris	23	0.04	0.5	38	24	Competitor
Italian maple (263) Acer opalus	23	0.04	0.4	31	4	Structure
European hop-hornbeam (344) Ostrya carpinifolia	22.5	0.04	0.4	33	0	Competitor
European hop-hornbeam (354) Ostrya carpinifolia	22.5	0.04	0.4	29	0	Structure
European hop-hornbeam (334) Ostrya carpinifolia	22	0.04	0.4	34	30	Competitor
European hop-hornbeam (322) Ostrya carpinifolia	22	0.04	0.5	38	6	Competitor
hornbeam (291) Carpinus betulus	21.5	0.04	0.5	35	24	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
field maple (352) Acer campestre	21	0.04	0.5	38	24	Competitor
Turkey oak (277) Quercus cerris	21	0.04	0.3	21	24	Competitor
European hop-hornbeam (308) Ostrya carpinifolia	21	0.04	0.4	33	48	Competitor
European hop-hornbeam (301) Ostrya carpinifolia	20.5	0.03	0.4	28	24	Competitor
European hop-hornbeam (231) Ostrya carpinifolia	20.5	0.03	0.3	26	4	Competitor
European hop-hornbeam (314) Ostrya carpinifolia	20.5	0.03	0.3	26	38	Competitor
manna ash (323) Fraxinus ornus	20.5	0.03	0.4	34	4	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
European hop-hornbeam (341) Ostrya carpinifolia	20	0.03	0.3	27	3	Competitor
Italian maple (377) Acer opalus	20	0.03	0.3	25	7	Structure
European hop-hornbeam (300) Ostrya carpinifolia	20	0.03	0.3	26	0	Competitor
European hop-hornbeam (72) Ostrya carpinifolia	20	0.03	0.4	27	24	Competitor
Italian maple (296) Acer opalus	19	0.03	0.3	26	0	Structure
European hop-hornbeam (245) Ostrya carpinifolia	18.5	0.03	0.3	19	4	Structure
Turkey oak (103) Quercus cerris	18	0.03	0.3	22	40	Sanitary
European hop-hornbeam (319) Ostrya carpinifolia	18	0.03	0.3	25	4	Competitor
Turkey oak (312) Quercus cerris	18	0.03	0.2	19	28	Competitor
Italian maple (174) Acer opalus	17.5	0.02	0.2	19	4	Competitor
field maple (215) Acer campestre	17.5	0.02	0.2	19	27	Competitor
European hop-hornbeam (196) Ostrya carpinifolia	17	0.02	0.3	20	0	Competitor
European hop-hornbeam (269) Ostrya carpinifolia	17	0.02	0.2	14	24	Competitor
mannan ash (71) Fraxinus ornus	17	0.02	1.6	125	4	Competitor
Italian maple (342) Acer opalus	17	0.02	0.2	17	4	Competitor
European hop-hornbeam (353) Ostrya carpinifolia	16.5	0.02	0.2	15	31	Structure
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
Italian maple (249) Acer opalus	13.5	0.01	0.1	9	28	Competitor

Retention trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (78) Quercus cerris	52	0.21	3.1	238	24	Elite tree
Turkey oak (351) Quercus cerris	47	0.17	2.9	224	24	Elite tree
Turkey oak (232) Quercus cerris	45	0.16	2.5	192	64	Elite tree
Turkey oak (167) Quercus cerris	43.5	0.15	2.4	181	24	Elite tree
Turkey oak (315) Quercus cerris	41	0.13	2	152	24	Elite tree
Turkey oak (324) Quercus cerris	40	0.13	2	151	36	Elite tree
Turkey oak (45) Quercus cerris	39	0.12	2	151	24	Elite tree
Turkey oak (175) Quercus cerris	38.5	0.12	1.7	127	24	Elite tree
Turkey oak (251) Quercus cerris	38	0.11	1.2	93	24	Elite tree
Turkey oak (305) Quercus cerris	38	0.11	1.6	123	24	Elite tree
Turkey oak (62) Quercus cerris	37.5	0.11	1.6	119	30	Elite tree
Turkey oak (130) Quercus cerris	37	0.11	1.6	119	24	Elite tree
Turkey oak (6) Quercus cerris	36	0.1	1.4	111	0	Elite tree
Turkey oak (31) Quercus cerris	36	0.1	1.5	115	24	Elite tree
Turkey oak (14) Quercus cerris	35.5	0.1	1.6	122	24	Elite tree
Turkey oak (40) Quercus cerris	35	0.1	1.5	114	24	Elite tree
Turkey oak (112) Quercus cerris	34.5	0.09	1.2	95	60	Elite tree
Turkey oak (42) Quercus cerris	34	0.09	1.3	98	12	Elite tree
Turkey oak (106) Quercus cerris	32	0.08	1.1	81	24	Elite tree
Turkey oak (197) Quercus cerris	32	0.08	1.2	90	24	Elite tree
Turkey oak (156)	31.5	0.08	0.8	61	24	Elite tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (285) Quercus cerris	31	0.08	1.2	89	24	Elite tree
Turkey oak (382) Quercus cerris	30	0.07	0.9	70	24	Elite tree
Turkey oak (95) Quercus cerris	29	0.07	0.9	68	24	Elite tree
Turkey oak (339) Quercus cerris	28	0.06	0.8	60	24	Elite tree
Italian maple (267) Acer opalus	28	0.06	0.7	52	60	Elite tree
Turkey oak (12) Quercus cerris	27.5	0.06	1	80	24	Elite tree
European hop-hornbeam (199) Ostrya carpinifolia	26.5	0.06	0.8	61	24	Elite tree
Turkey oak (125) Quercus cerris	26	0.05	0.7	53	0	Elite tree
Turkey oak (379) Quercus cerris	25.5	0.05	0.6	45	24	Elite tree
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Elite tree