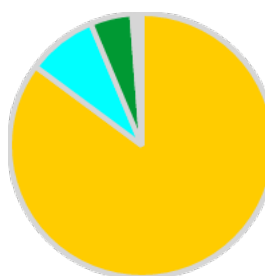


12/05/2021 Sala_prod_gruppoB_12 mag

Site conditions

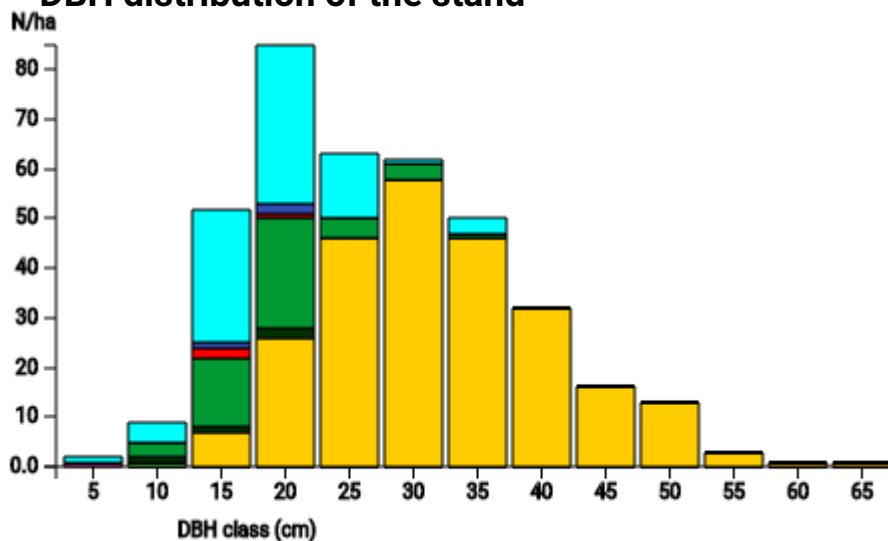
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned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



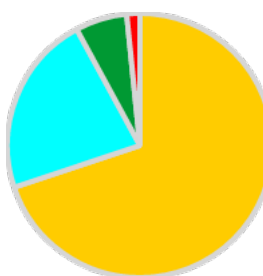
Initial stand (details by tree species)

Tree species	N/ha	Basal area (m 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

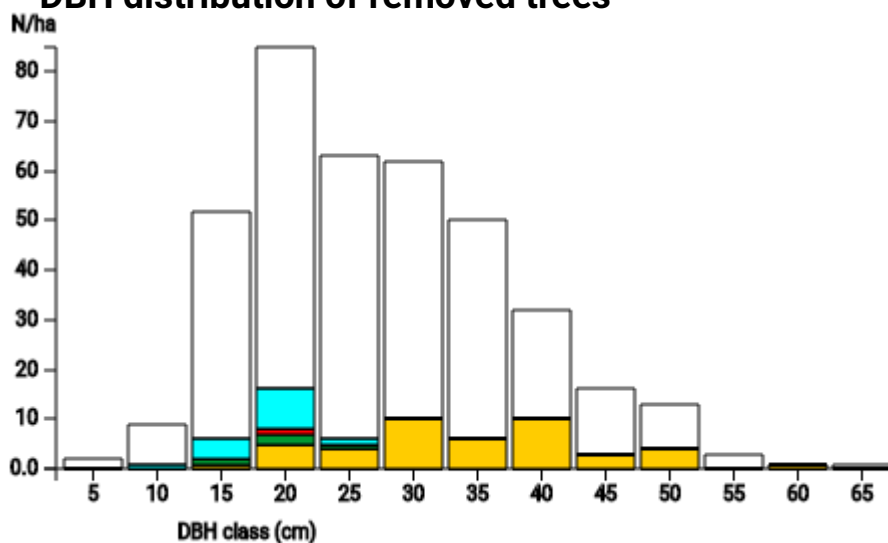
Volume: 78.4 m³
 Basal area: 5.5 m²
 Economic value: 6000 €
 Habitat value: 1810 pts.

Removed trees (N in %)



- Turkey oak: 69.8 %
- European hop-hornbeam: 22.2 %
- Italian maple: 6.3 %
- manna ash: 1.6 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- hornbeam: 0 %

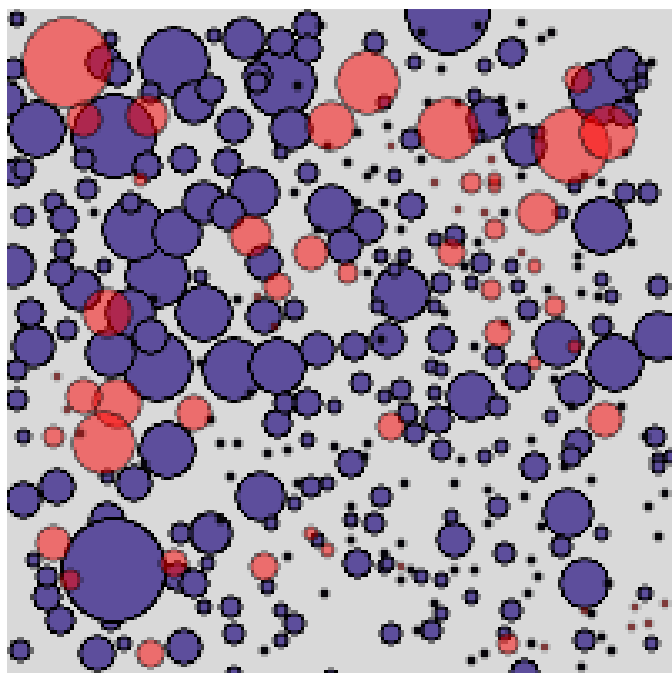
DBH distribution of removed trees



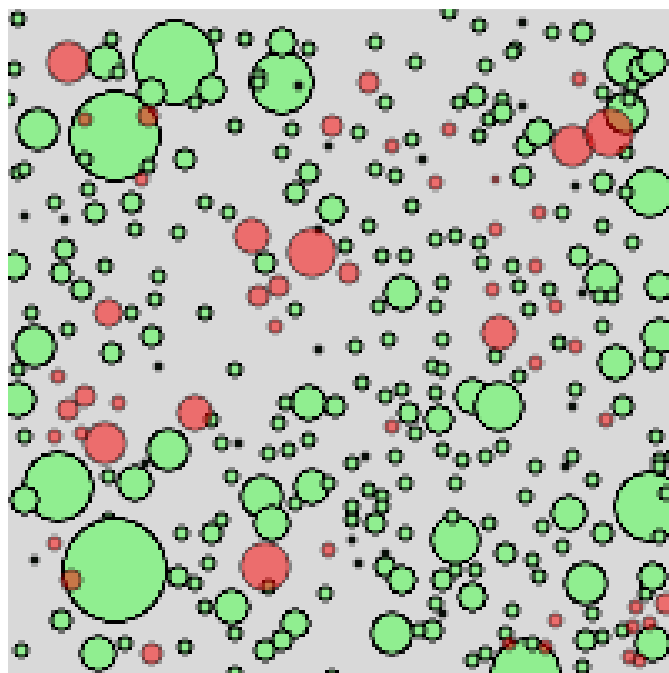
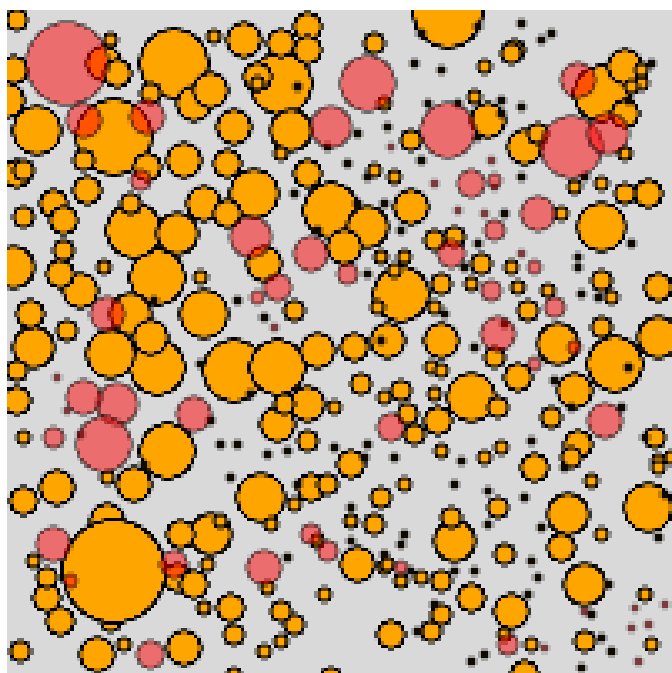
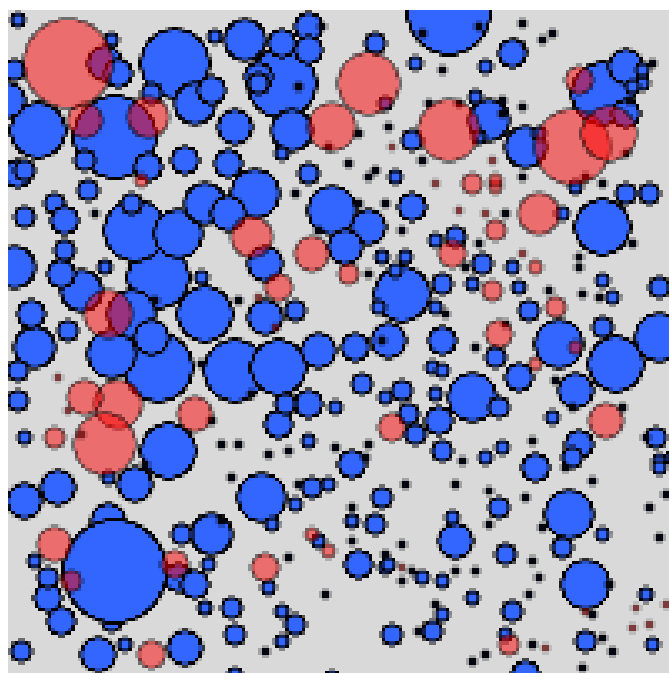
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	14	0.4	4.6	353	288	14
Italian maple	4	0.2	2	151	72	5
Turkey oak	44	4.9	71.4	5462	1446	76
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	1	0	0.4	34	4	1
Total	63	5.5	78.4	6000	1810	96

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.

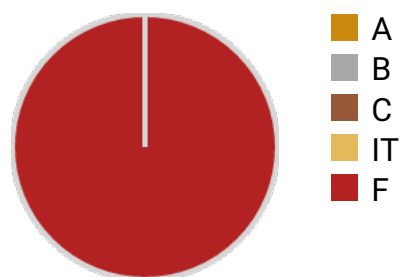
Economic values

Total value of removed trees: 6000 €
 Percentage of total stand value: 19.3 %
 Stand value after harvest: 25140 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	5462	77
field maple	0	0
Italian maple	151	77
manna ash	34	77
hornbeam	0	0
European hop-hornbeam	353	77
Total	6000	77

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	78.4	100

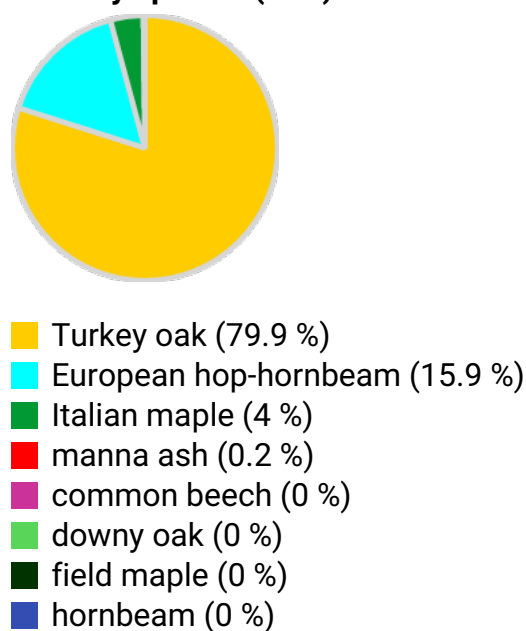
Habitat values

Total habitat value of removed trees: 1810 pts.
 Percentage of total stand value: 17.1 %
 Stand value after harvest: 8760 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	1446	20.3	76
field maple	0	0	0
Italian maple	72	36.5	5
manna ash	4	9.1	1
hornbeam	0	0	0
European hop-hornbeam	288	62.4	14
Total	1810	23.1	96

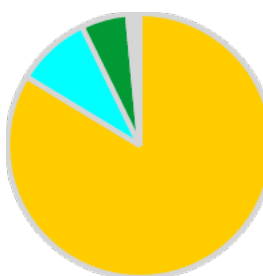
Habitat value (points) of removed trees by species (in %)



Remaining stand

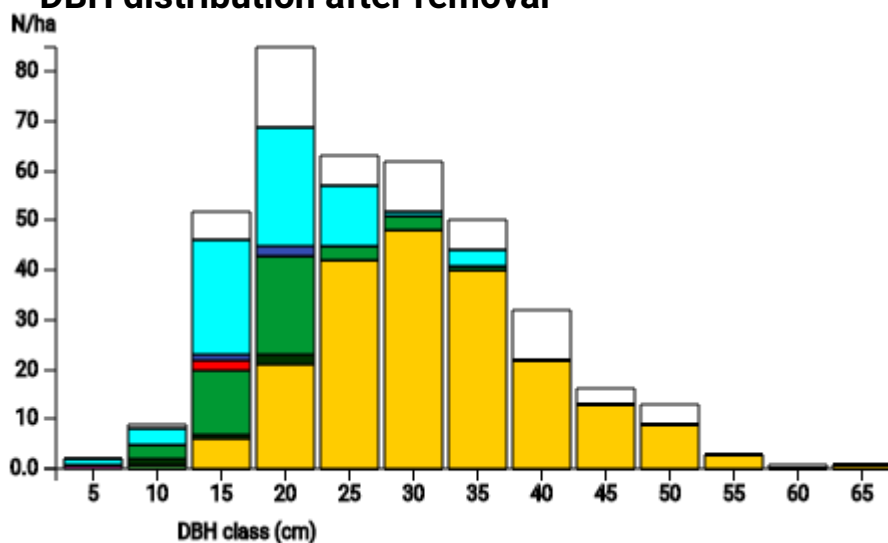
Volume: 328.8 m³
 Basal area: 24.6 m²
 Economic value: 25140 €
 Habitat value: 8760 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 83.7 %
- European hop-hornbeam: 9.1 %
- Italian maple: 5.7 %
- manna ash: 0.6 %
- 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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	67	2.6	30	2294	1381	87
Italian maple	43	1.7	18.8	1437	845	60
Turkey oak	205	19.8	275	21037	6361	325
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	2	0	1.8	141	34	3
Total	326	24.3	328.6	25140	8760	482

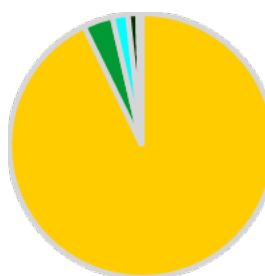
Retention treesVolume: 44.2 m³

Elite trees: 19

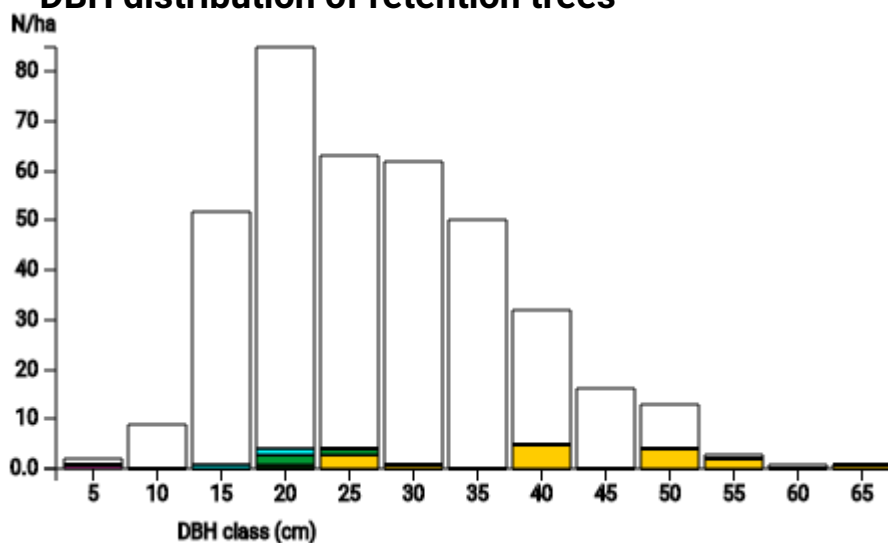
Habitat trees: 4

Economic value: 3382 €

Habitat value: 924 pts.

Retention trees by volume (m³ in %)

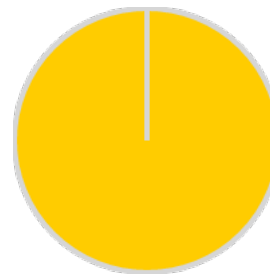
- Turkey oak: 92.8 %
- Italian maple: 3.6 %
- European hop-hornbeam: 1.9 %
- field maple: 1.2 %
- common beech: 0.5 %
- downy oak: 0 %
- manna ash: 0 %
- hornbeam: 0 %

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	2	0.1	0.8	64	28	2
Italian maple	3	0.1	1.6	123	88	4
Turkey oak	16	2.7	41	3137	784	48
common beech	1	0	0.2	16	0	0
downy oak	0	0	0	0	0	0
field maple	1	0	0.6	42	24	1
hornbeam	0	0	0	0	0	0
manna ash	0	0	0	0	0	0
Total	23	2.9	44.2	3382	924	55

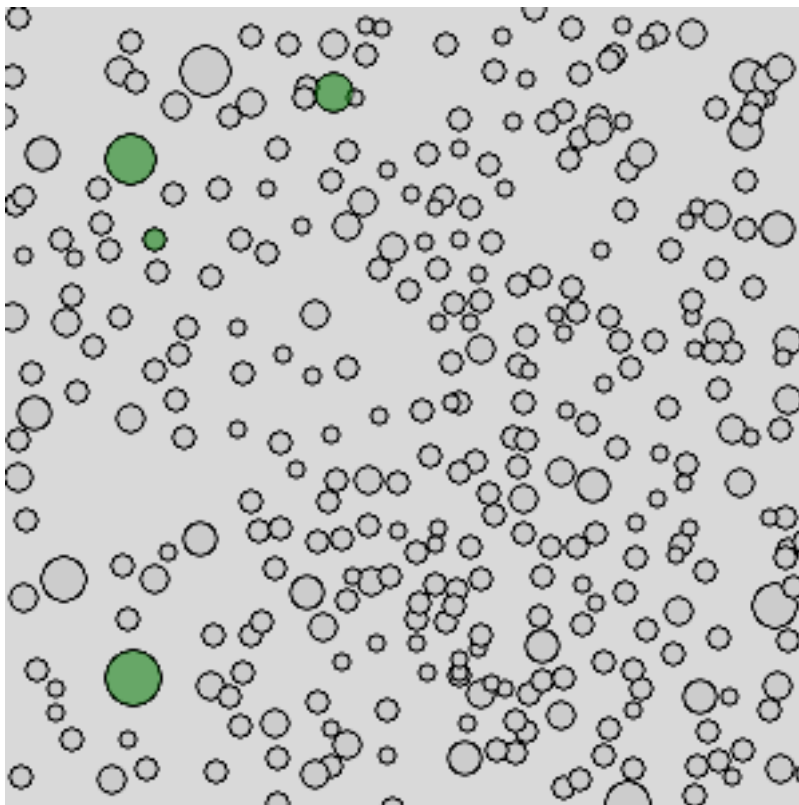
Number of habitat trees	[N]	4
Habitat value	pts.	460
	[% of total]	4.4
Economic value	[€]	1081
	[% of total]	3.5
Number of microhabitats	[N]	36
	[% of total]	6.2

Habitat tree distribution by species (N in %)

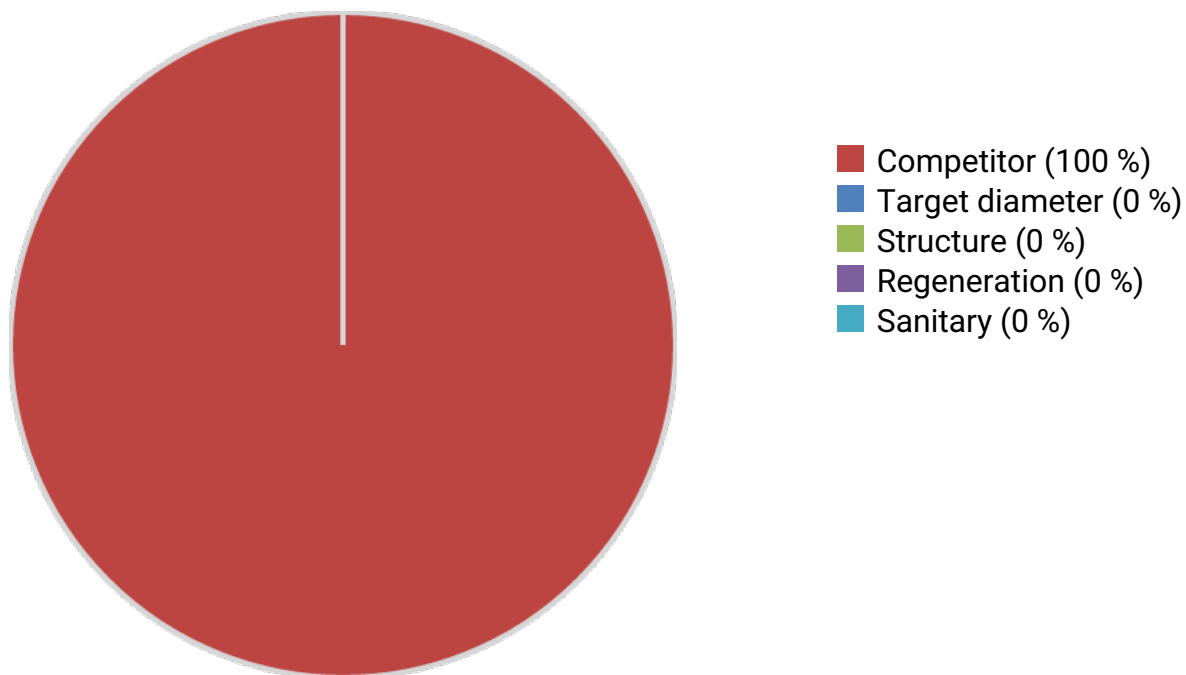


■ Turkey oak: 100 %
■ common beech: 0 %
■ downy oak: 0 %
■ field maple: 0 %
■ Italian maple: 0 %
■ manna ash: 0 %
■ hornbeam: 0 %
■ European hop-hornbeam: 0 %

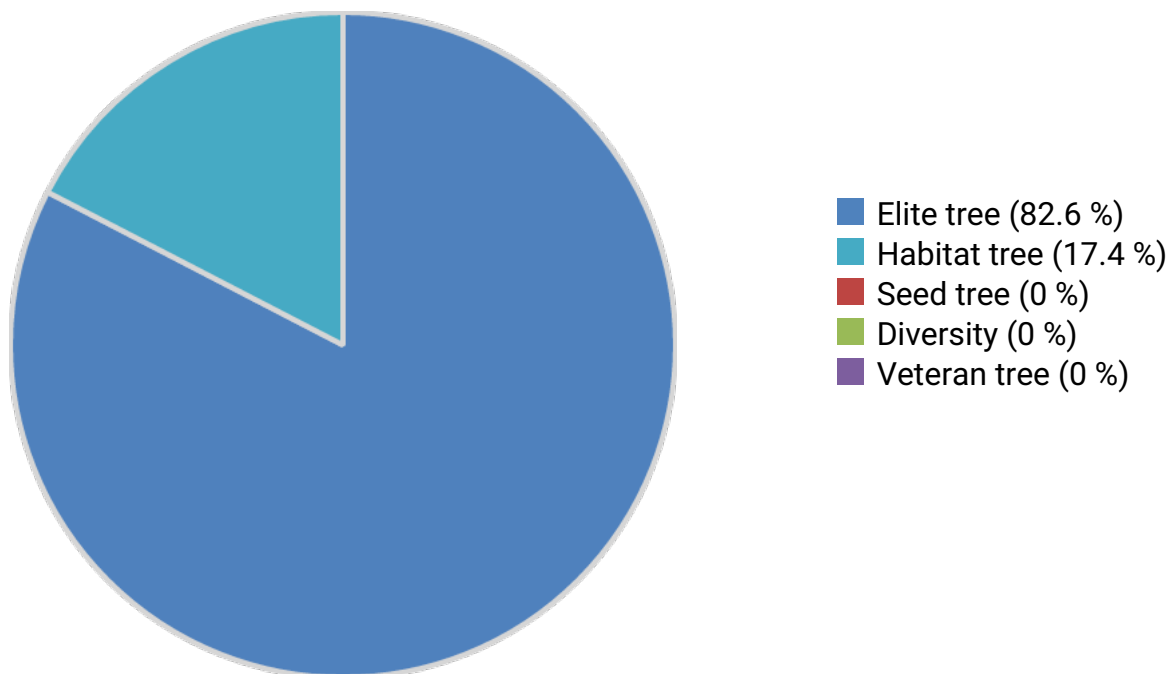
Spatial distribution of habitat trees



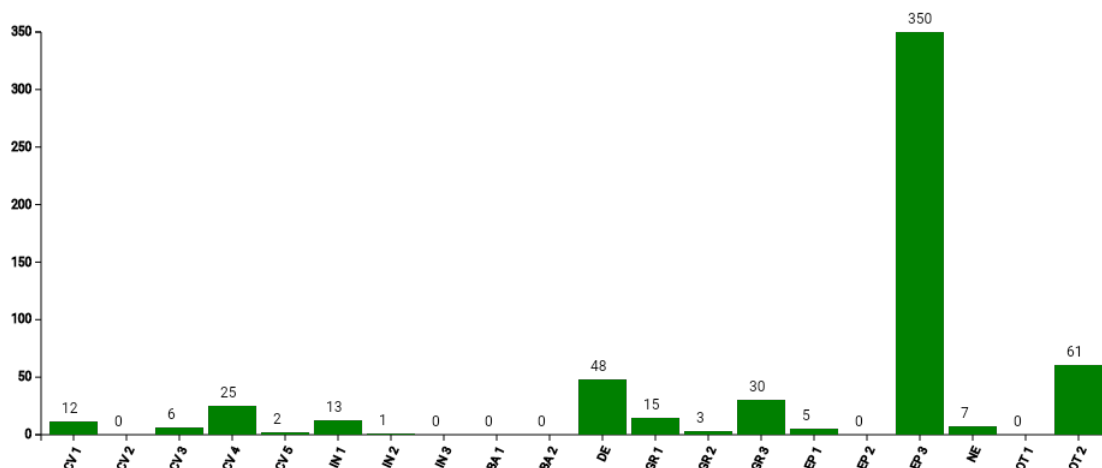
Reasons for removal



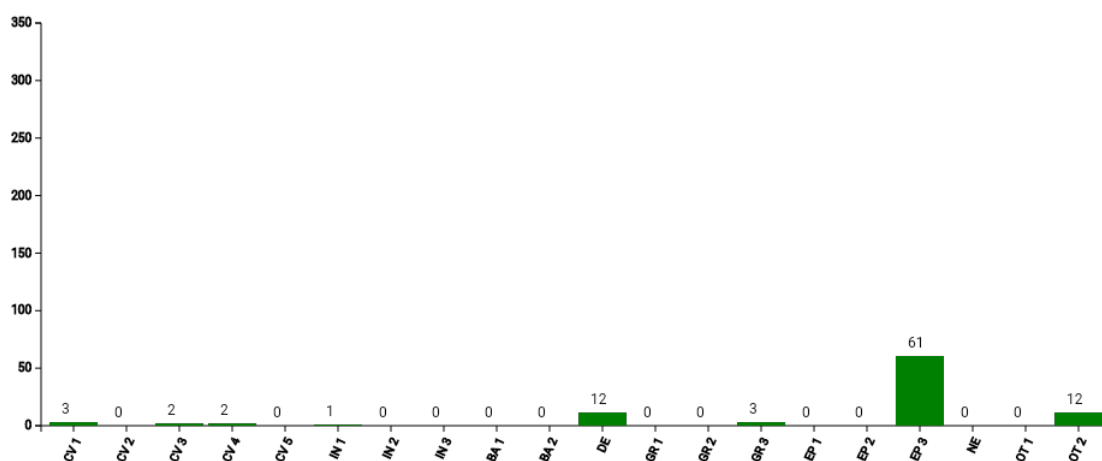
Reasons for retention



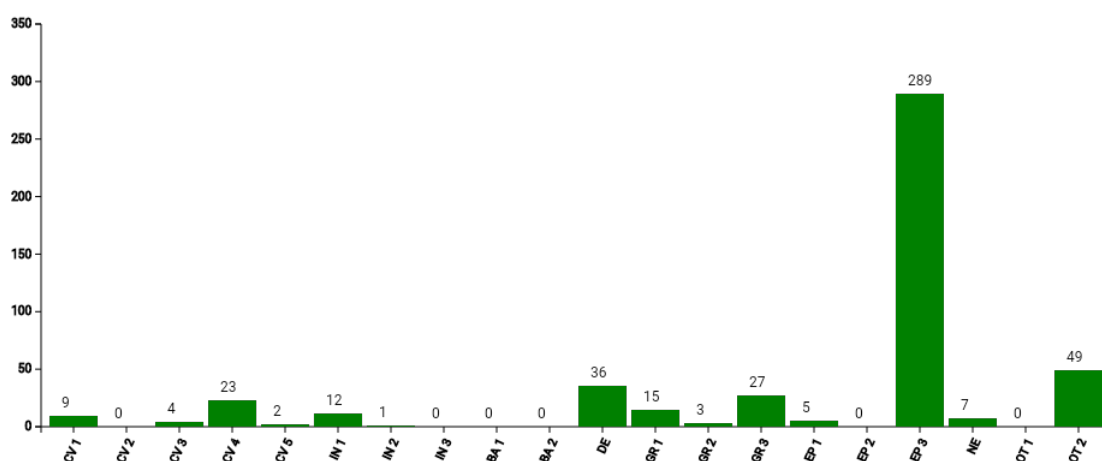
Distribution of tree microhabitats by code (N total)



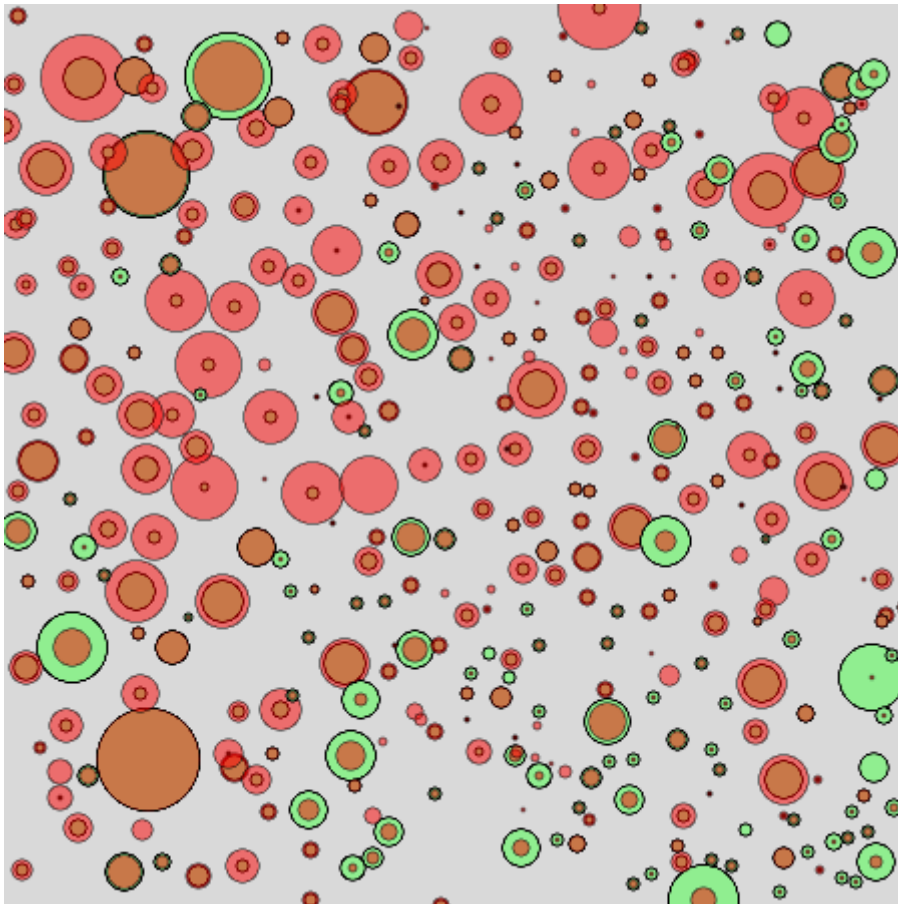
Removed tree microhabitats by code (N removed)



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 ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (16) Quercus cerris	60	0.28	4.6	351	72	Competitor
Turkey oak (326) Quercus cerris	53	0.22	3.9	299	66	Competitor
Turkey oak (101) Quercus cerris	51	0.2	3.3	253	66	Competitor
Turkey oak (317) Quercus cerris	51	0.2	3.2	249	24	Competitor
Turkey oak (298) Quercus cerris	50	0.2	3.3	252	30	Competitor
Turkey oak (86) Quercus cerris	45	0.16	2.4	183	24	Competitor
Turkey oak (59) Quercus cerris	45	0.16	2.3	174	60	Competitor
Turkey oak (327) Quercus cerris	45	0.16	2.7	208	76	Competitor
Turkey oak (21) Quercus cerris	43	0.15	2.3	179	30	Competitor
Turkey oak (179) Quercus cerris	41.5	0.14	1.7	131	24	Competitor
Turkey oak (25) Quercus cerris	41.5	0.14	2.1	157	36	Competitor
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Competitor
Turkey oak (87) Quercus cerris	41	0.13	1.8	142	60	Competitor
Turkey oak (68) Quercus cerris	40.5	0.13	2.3	178	52	Competitor
Turkey oak (349) Quercus cerris	40.5	0.13	2	154	24	Competitor
Turkey oak (119) Quercus cerris	40	0.13	1.6	126	24	Competitor
Turkey oak (27) Quercus cerris	40	0.13	1.9	145	24	Competitor
Turkey oak (85) Quercus cerris	40	0.13	1.8	141	30	Competitor
Turkey oak (61) Quercus cerris	39.5	0.12	1.6	125	85	Competitor
Turkey oak (161) Quercus cerris	38	0.11	1.4	109	60	Competitor
Turkey oak (305)	38	0.11	1.6	123	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (62) Quercus cerris	37.5	0.11	1.6	119	30	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 (188) Quercus cerris	34.5	0.09	1.4	109	24	Competitor
Turkey oak (149) Quercus cerris	34	0.09	1.4	106	36	Competitor
Turkey oak (337) Quercus cerris	34	0.09	1.1	87	0	Competitor
Turkey oak (362) Quercus cerris	33.5	0.09	1.1	87	40	Competitor
Turkey oak (281) Quercus cerris	32.5	0.08	1	75	24	Competitor
Turkey oak (106) Quercus cerris	32	0.08	1.1	81	24	Competitor
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Competitor
Turkey oak (380) Quercus cerris	31	0.08	1.2	92	24	Competitor
Turkey oak (126) Quercus cerris	30.5	0.07	0.8	60	24	Competitor
Turkey oak (388) Quercus cerris	30	0.07	0.9	73	24	Competitor
Turkey oak (355) Quercus cerris	29.5	0.07	0.9	72	24	Competitor
Turkey oak (37) Quercus cerris	29	0.07	0.9	65	24	Competitor
Turkey oak (140) Quercus cerris	28.5	0.06	1	74	35	Competitor
Italian maple (166) Acer opalus	28	0.06	0.8	60	24	Competitor
Turkey oak (371) Quercus cerris	27	0.06	0.7	56	24	Competitor
European hop-hornbeam (336) Ostrya carpinifolia	26.5	0.06	0.6	47	14	Competitor
Italian maple (63) Acer opalus	24.5	0.05	0.5	38	40	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (173) Quercus cerris	24	0.05	0.6	44	24	Competitor
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Competitor
Turkey oak (84) Quercus cerris	23	0.04	0.5	36	24	Competitor
Turkey oak (335) Quercus cerris	23	0.04	0.6	44	0	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	Competitor
European hop-hornbeam (354) Ostrya carpinifolia	22.5	0.04	0.4	29	0	Competitor
European hop-hornbeam (321) Ostrya carpinifolia	22	0.04	0.4	34	28	Competitor
European hop-hornbeam (338) Ostrya carpinifolia	22	0.04	0.4	32	24	Competitor
European hop-hornbeam (272) Ostrya carpinifolia	21	0.04	0.4	30	24	Competitor
European hop-hornbeam (248) Ostrya carpinifolia	21	0.04	0.4	29	24	Competitor
mannia ash (323) Fraxinus ornus	20.5	0.03	0.4	34	4	Competitor
European hop-hornbeam (247) Ostrya carpinifolia	20	0.03	0.3	26	24	Competitor
European hop-hornbeam (72) Ostrya carpinifolia	20	0.03	0.4	27	24	Competitor
European hop-hornbeam (228) Ostrya carpinifolia	20	0.03	0.4	32	30	Competitor
Italian maple (347) Acer opalus	18.5	0.03	0.3	22	4	Competitor
Turkey oak (103) Quercus cerris	18	0.03	0.3	22	40	Competitor
European hop-hornbeam (346) Ostrya carpinifolia	17	0.02	0.2	17	0	Competitor
European hop-hornbeam (269) Ostrya carpinifolia	17	0.02	0.2	14	24	Competitor
European hop-hornbeam (230) Ostrya carpinifolia	16	0.02	0.3	19	24	Competitor
European hop-hornbeam (270)	15	0.02	0.1	10	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Ostrya carpinifolia						
European hop-hornbeam (250) Ostrya carpinifolia	12	0.01	0.1	6	24	Competitor

Retention trees

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	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 (287) Quercus cerris	57	0.26	4.3	330	24	Elite tree
Turkey oak (10) Quercus cerris	54	0.23	3.5	269	106	Habitat tree
Turkey oak (78) Quercus cerris	52	0.21	3.1	238	24	Elite tree
Turkey oak (384) Quercus cerris	51	0.2	3	229	60	Elite tree
Turkey oak (306) Quercus cerris	50	0.2	3.2	246	24	Elite tree
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Elite tree
Turkey oak (167) Quercus cerris	43.5	0.15	2.4	181	24	Elite tree
Turkey oak (22) Quercus cerris	42	0.14	2.1	163	24	Elite tree
Turkey oak (315) Quercus cerris	41	0.13	2	152	24	Elite tree
Turkey oak (361) Quercus cerris	40	0.13	1.9	147	24	Elite tree
Turkey oak (189) Quercus cerris	31.5	0.08	1.1	81	36	Elite tree
Turkey oak (44) Quercus cerris	29	0.07	0.9	73	32	Habitat tree
Italian maple (267) Acer opalus	28	0.06	0.7	52	60	Elite tree
Turkey oak (254) Quercus cerris	26.5	0.06	0.6	47	0	Elite tree
Turkey oak (125) Quercus cerris	26	0.05	0.7	53	0	Elite tree
European hop-hornbeam (378) Ostrya carpinifolia	24	0.05	0.5	41	28	Elite tree
Italian maple (273) Acer opalus	23.5	0.04	0.5	36	24	Elite tree
field maple (297) Acer campestre	22.5	0.04	0.6	42	24	Elite tree
Italian maple (286)	22	0.04	0.5	35	4	Elite tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Acer opalus						
European hop-hornbeam (348) Ostrya carpinifolia	19	0.03	0.3	23	0	Elite tree
common beech (7) Fagus sylvatica	9	0.01	0.2	16	0	Elite tree