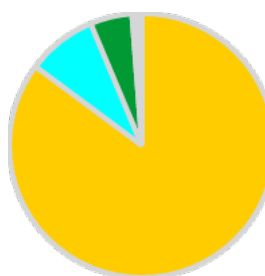


12/05/2021 Sala gruppo C 12 mag

Site conditions

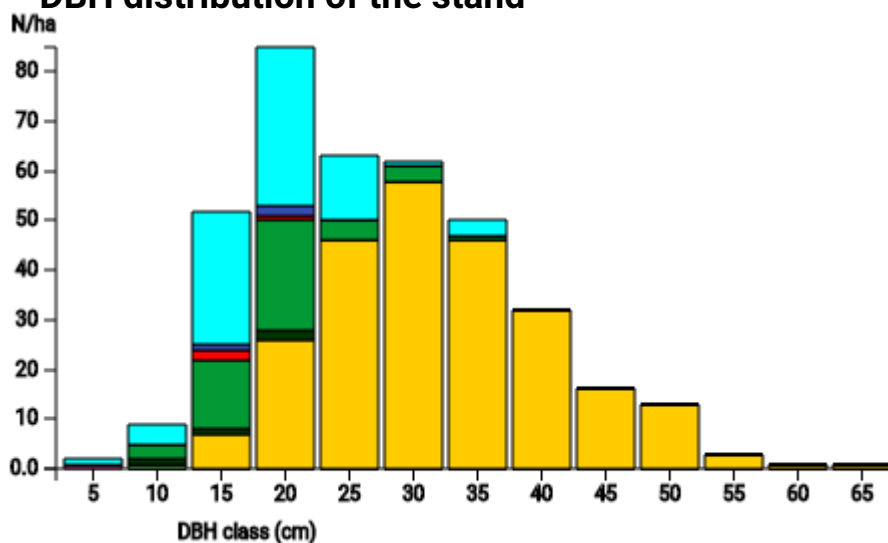
Altitude: 870 m.a.s.l.
 Geology / Bedrock: Alluvial and mixed beds
 Soil type: Cambisol – Leptosol with Luvisol of the Central Appenino Mountains.
 Natural forest community: Aceri obtusati-Quercu cerridis sigmetum
 Mean annual temperature: 12.4 C;
 Mean annual precipitation: 1154 mm; Ownership: State-owned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



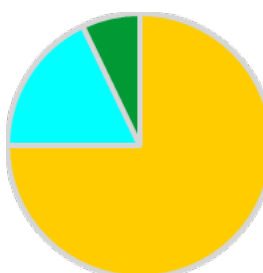
Initial stand (details by tree species)

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

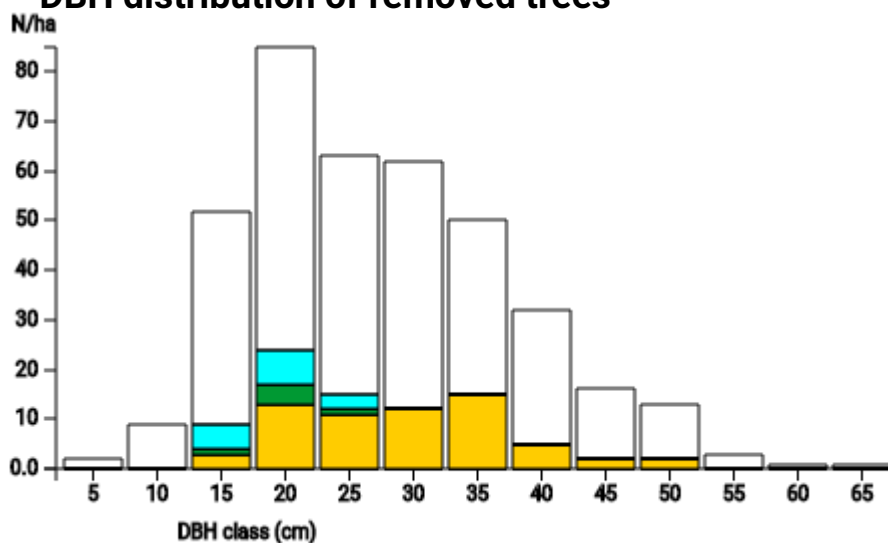
Volume: 80.1 m³
 Basal area: 6 m²
 Economic value: 6127 €
 Habitat value: 2219 pts.

Removed trees (N in %)



- Turkey oak: 75 %
- European hop-hornbeam: 17.9 %
- Italian maple: 7.1 %
- common beech: 0 %
- downy oak: 0 %
- field maple: 0 %
- manna ash: 0 %
- hornbeam: 0 %

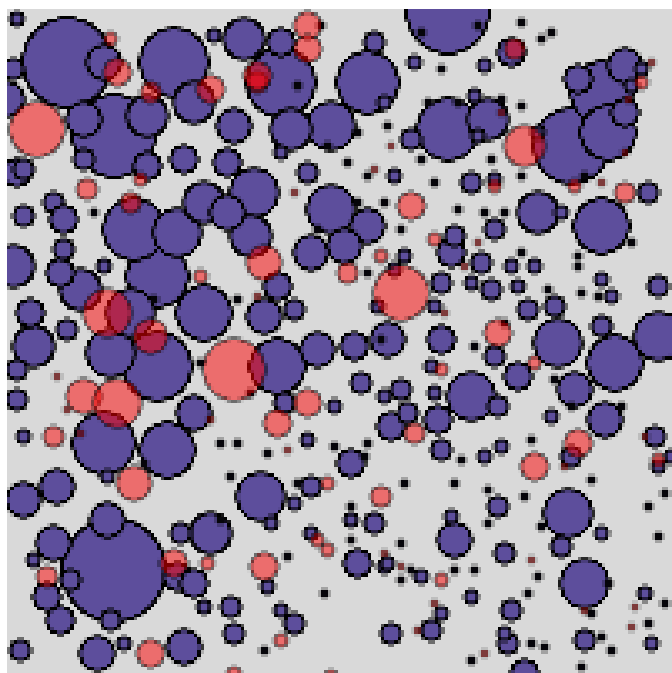
DBH distribution of removed trees



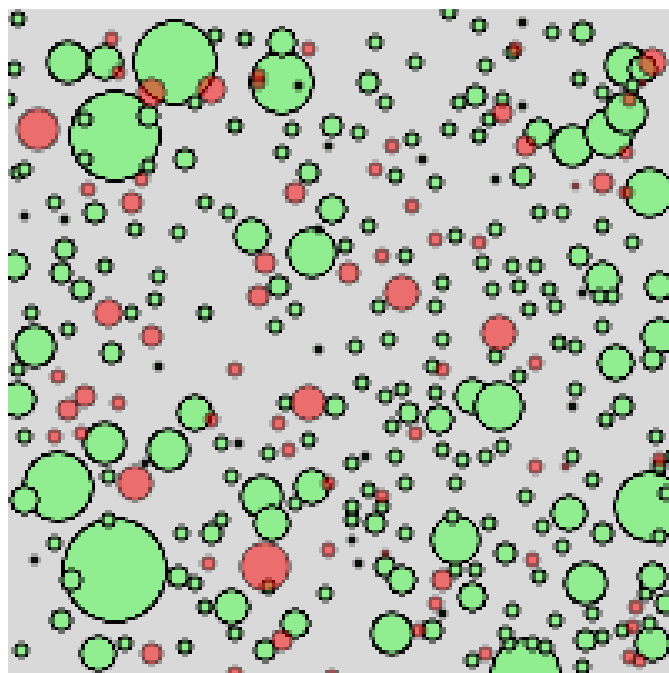
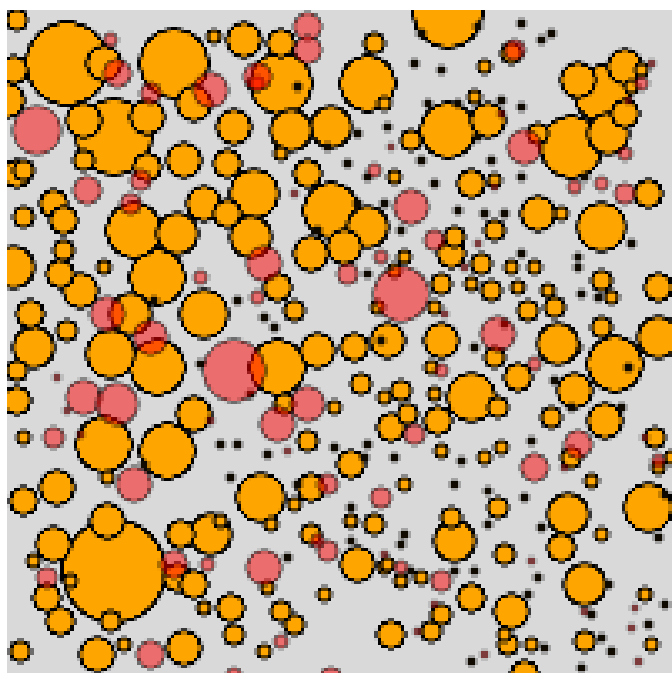
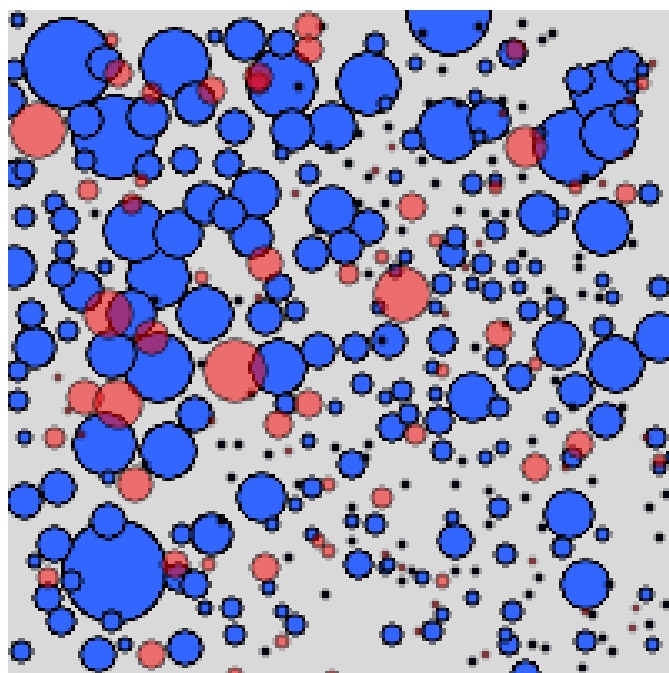
Removed trees (details by tree species)

Tree species	N/ha	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Microhabitats (N)
European hop-hornbeam	15	0.5	6.2	477	355	19
Italian maple	6	0.3	3.2	248	144	10
Turkey oak	63	5.2	70.6	5403	1720	87
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	84	6	80.1	6127	2219	116

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.

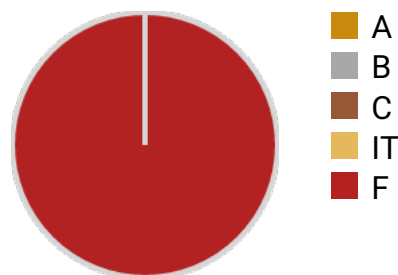
Economic values

Total value of removed trees: 6127 €
 Percentage of total stand value: 19.7 %
 Stand value after harvest: 25013 €

Economic value by tree species [€]

Tree species	Total	Per m ³
common beech	0	0
downy oak	0	0
Turkey oak	5403	76
field maple	0	0
Italian maple	248	77
manna ash	0	0
hornbeam	0	0
European hop-hornbeam	477	77
Total	6127	76

Wood quality distribution (m³ in %)



Quality class	m ³	%
A	0	0
B	0	0
C	0	0
Industrial Timber	0	0
Fuelwood	80.1	100

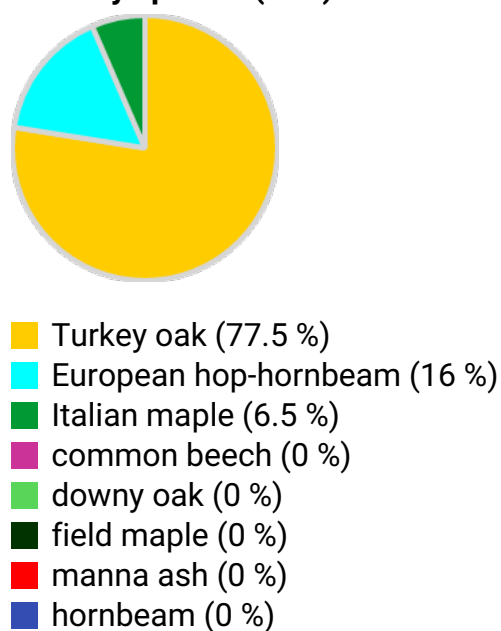
Habitat values

Total habitat value of removed trees: 2219 pts.
 Percentage of total stand value: 21 %
 Stand value after harvest: 8351 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	1720	24.4	87
field maple	0	0	0
Italian maple	144	44.5	10
manna ash	0	0	0
hornbeam	0	0	0
European hop-hornbeam	355	57	19
Total	2219	27.7	116

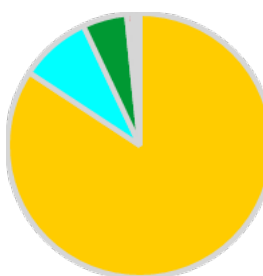
Habitat value (points) of removed trees by species (in %)



Remaining stand

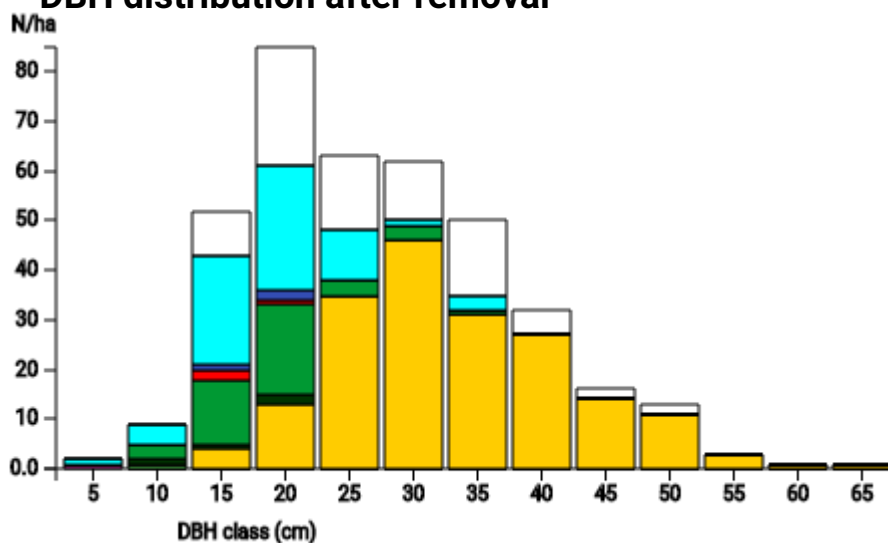
Volume: 326.9 m³
 Basal area: 23.8 m²
 Economic value: 25013 €
 Habitat value: 8351 pts.

Remaining trees by volume (m³ in %)



- Turkey oak: 84.3 %
- European hop-hornbeam: 8.7 %
- Italian maple: 5.4 %
- manna ash: 0.7 %
- 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	66	2.5	28.4	2170	1314	82
Italian maple	41	1.6	17.5	1340	773	55
Turkey oak	186	19.5	275.8	21097	6087	314
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	305	23.8	327	25013	8351	462

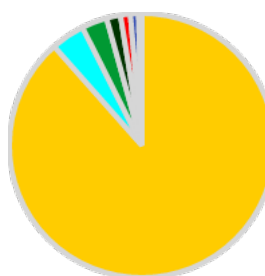
Retention treesVolume: 51.6 m³

Elite trees: 14

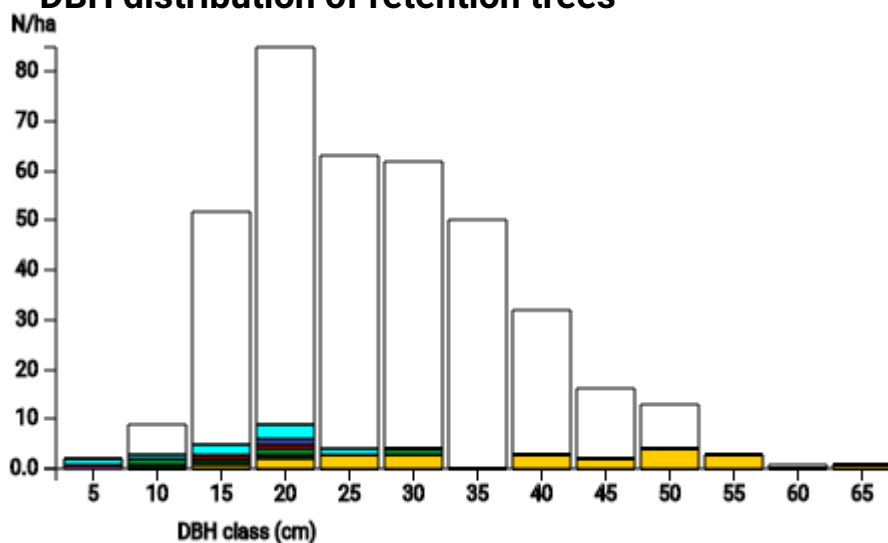
Habitat trees: 12

Economic value: 3949 €

Habitat value: 1573 pts.

Retention trees by volume (m³ in %)

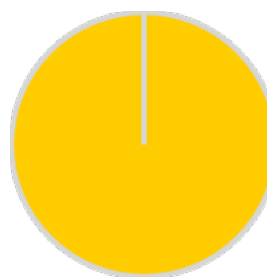
- Turkey oak: 88.4 %
- European hop-hornbeam: 4.1 %
- Italian maple: 3.1 %
- field maple: 1.7 %
- manna ash: 1.2 %
- hornbeam: 1 %
- common beech: 0.4 %
- downy oak: 0 %

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	8	0.2	2.1	163	183	13
Italian maple	3	0.1	1.6	123	68	4
Turkey oak	22	3.2	45.6	3491	1197	71
common beech	1	0	0.2	16	0	0
downy oak	0	0	0	0	0	0
field maple	3	0.1	0.9	66	91	5
hornbeam	1	0	0.5	41	0	0
manna ash	2	0.1	0.6	49	34	3
Total	40	3.8	51.6	3949	1573	96

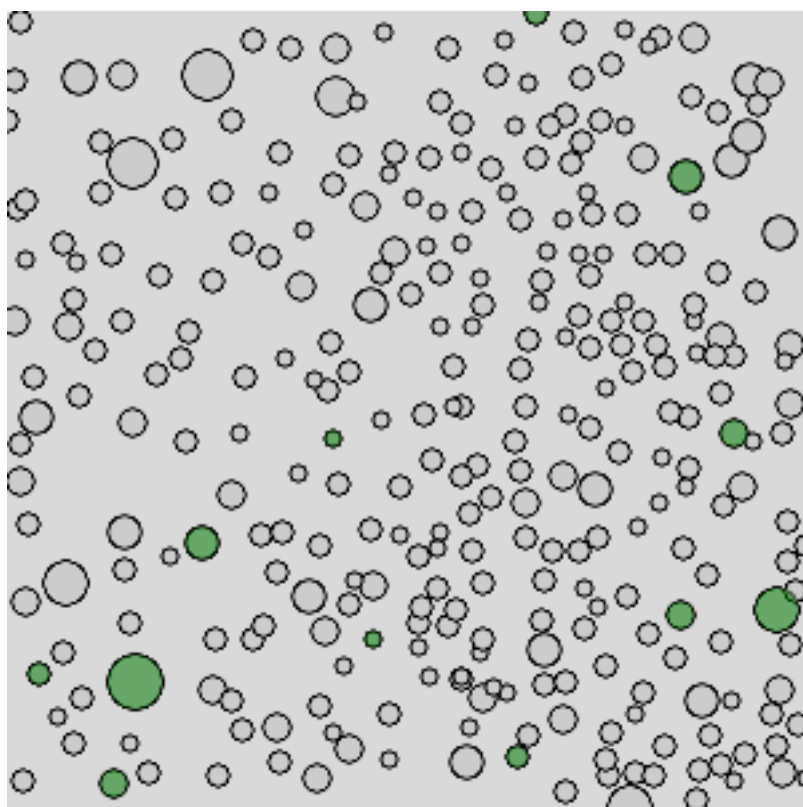
Number of habitat trees	[N]	12
Habitat value	pts.	671
	[% of total]	6.3
Economic value	[€]	2261
	[% of total]	7.3
Number of microhabitats	[N]	37
	[% of total]	6.4

Habitat tree distribution by species (N in %)

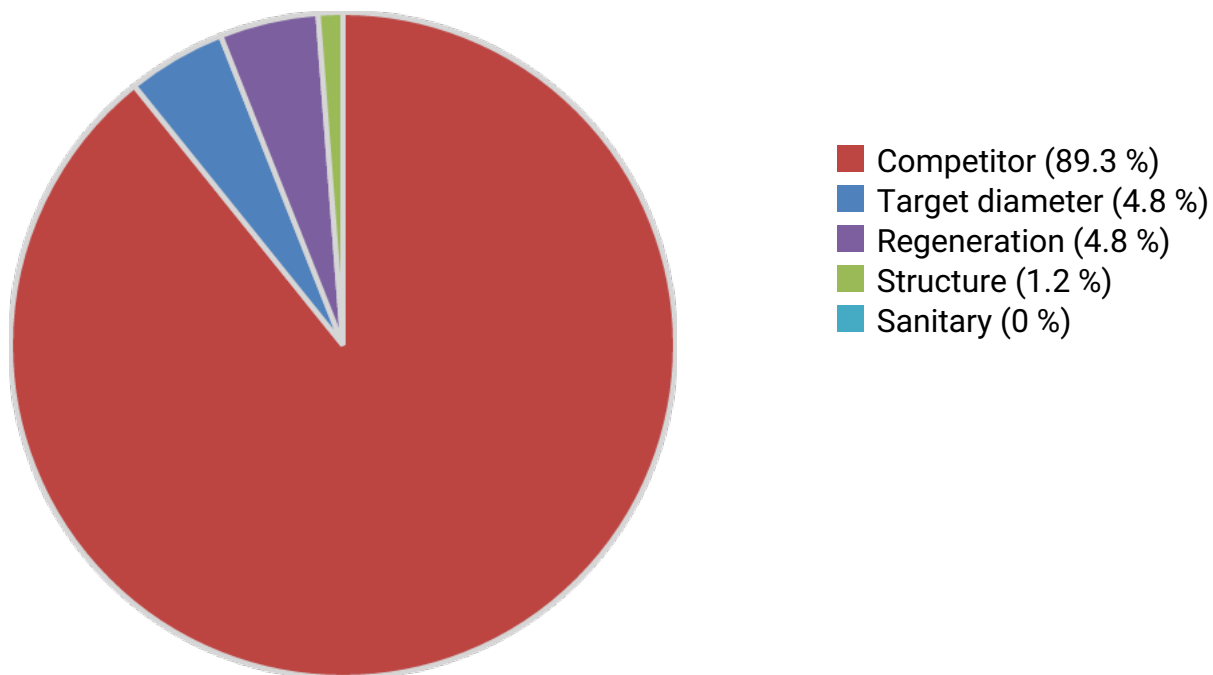


■ Turkey oak: 100 %
■ common beech: 0 %
■ downy oak: 0 %
■ field maple: 0 %
■ Italian maple: 0 %
■ manna ash: 0 %
■ hornbeam: 0 %
■ European hop-hornbeam: 0 %

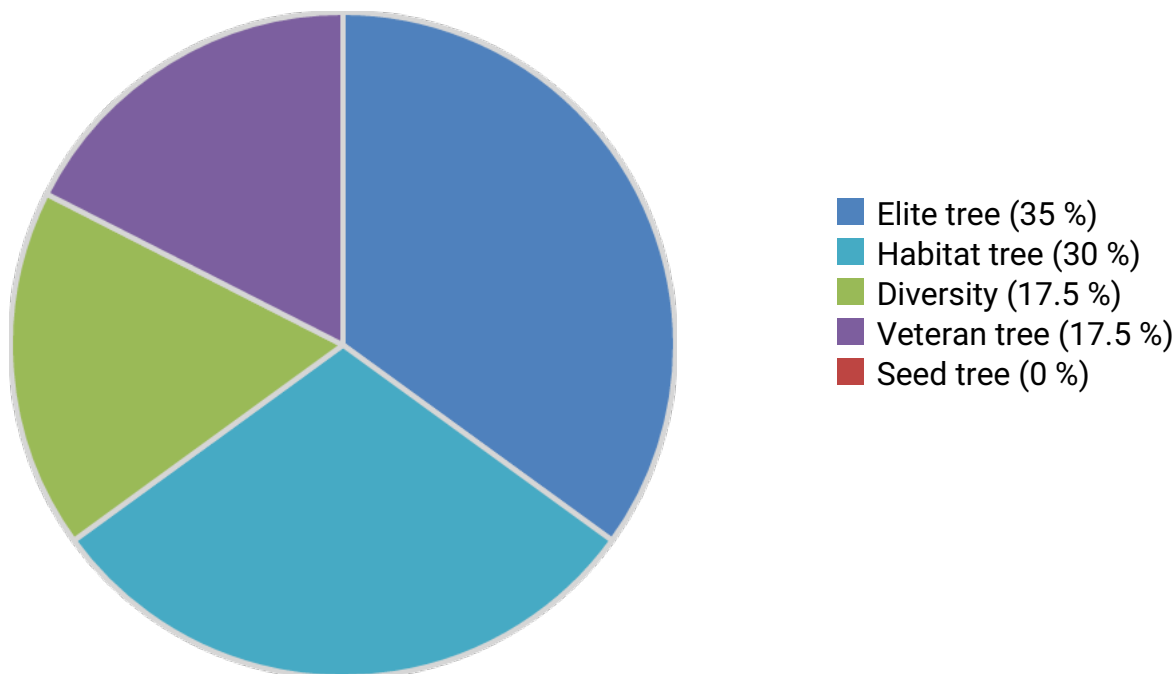
Spatial distribution of habitat trees



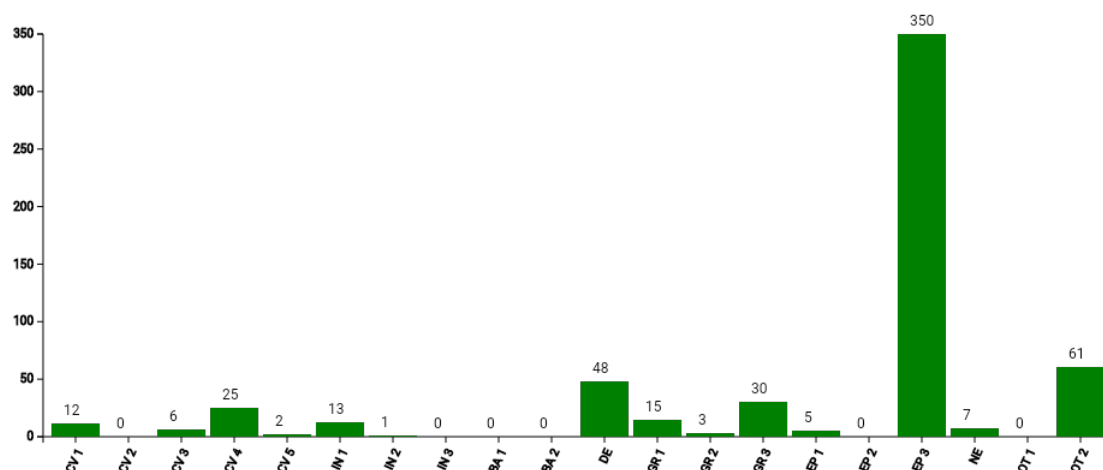
Reasons for removal



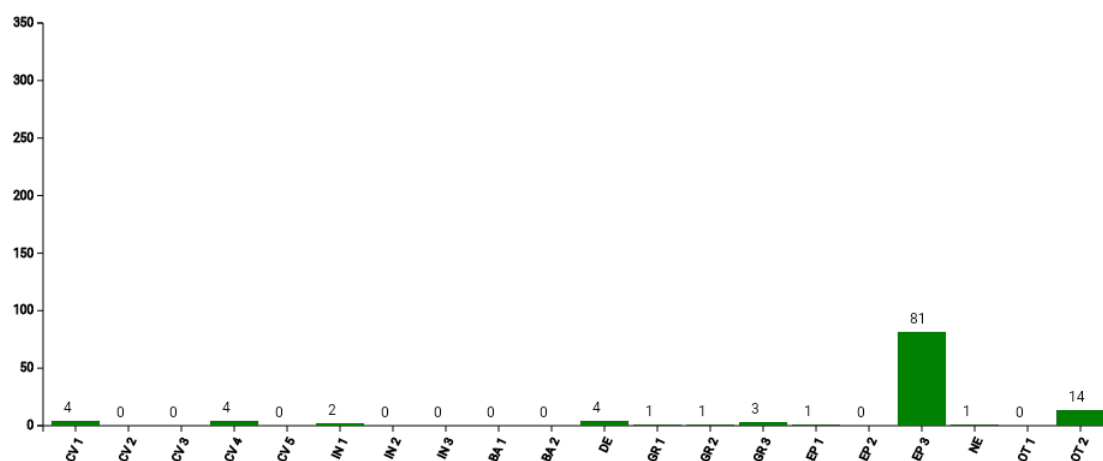
Reasons for retention



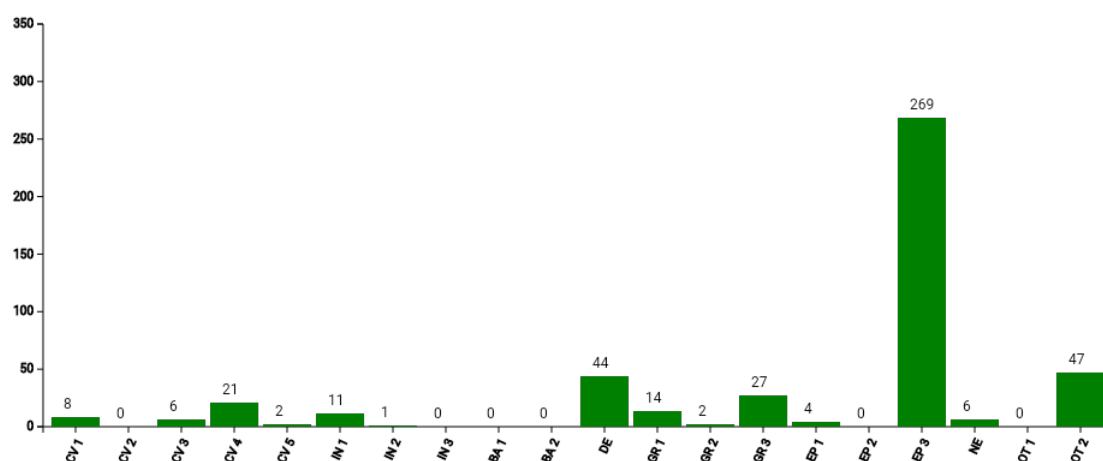
Distribution of tree microhabitats by code (N total)



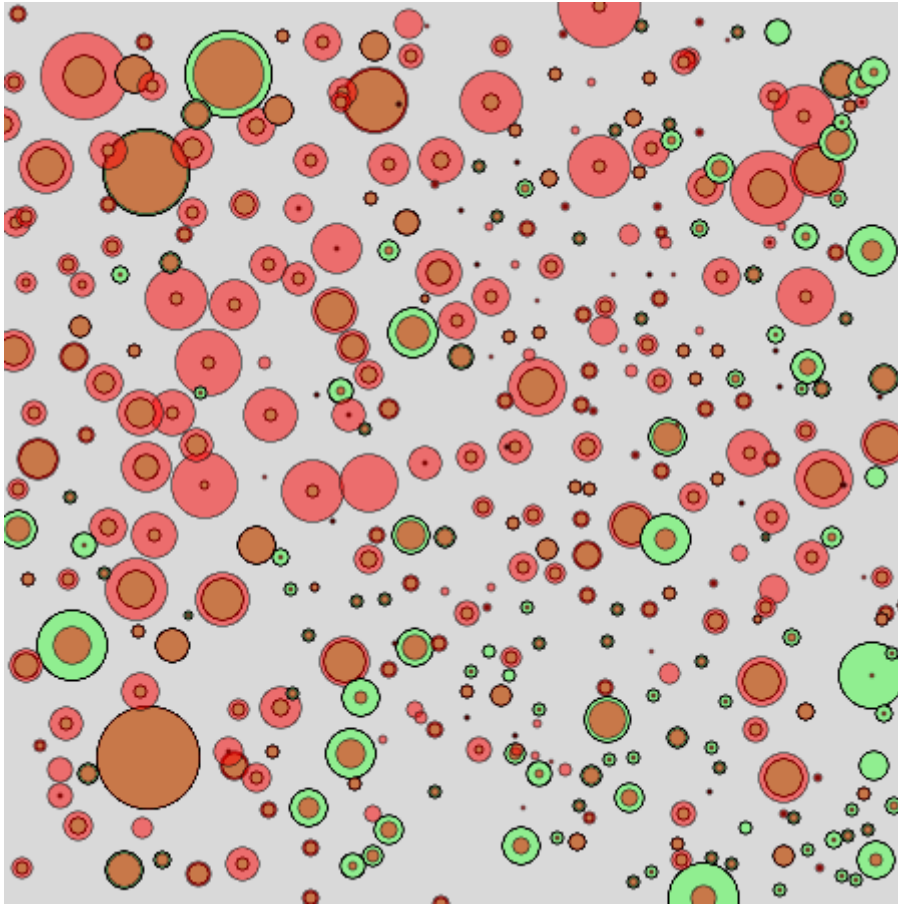
Removed tree microhabitats by code (N removed)



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 (78) Quercus cerris	52	0.21	3.1	238	24	Competitor
Turkey oak (384) Quercus cerris	51	0.2	3	229	60	Target diameter
Turkey oak (28) Quercus cerris	46.5	0.17	2.7	205	66	Competitor
Turkey oak (86) Quercus cerris	45	0.16	2.4	183	24	Regeneration
Turkey oak (128) Quercus cerris	41	0.13	1.5	115	82	Competitor
Turkey oak (92) Quercus cerris	41	0.13	1.6	122	60	Competitor
Turkey oak (68) Quercus cerris	40.5	0.13	2.3	178	52	Competitor
Turkey oak (324) Quercus cerris	40	0.13	2	151	36	Competitor
Turkey oak (85) Quercus cerris	40	0.13	1.8	141	30	Regeneration
Turkey oak (108) Quercus cerris	39.5	0.12	1.8	134	54	Competitor
Turkey oak (75) Quercus cerris	39.5	0.12	1.7	131	36	Competitor
Turkey oak (90) Quercus cerris	39	0.12	1.6	121	28	Competitor
Turkey oak (60) Quercus cerris	38.5	0.12	1.6	126	40	Competitor
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	Target diameter
Turkey oak (20) Quercus cerris	38	0.11	1.6	123	50	Competitor
Turkey oak (38) Quercus cerris	36	0.1	1.1	81	24	Competitor
Turkey oak (6) Quercus cerris	36	0.1	1.4	111	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 (14)	35.5	0.1	1.6	122	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Turkey oak (203) Quercus cerris	35.5	0.1	1.4	105	28	Target diameter
Turkey oak (11) Quercus cerris	35	0.1	1.5	116	18	Competitor
Turkey oak (195) Quercus cerris	35	0.1	1.4	109	0	Competitor
Turkey oak (149) Quercus cerris	34	0.09	1.4	106	36	Competitor
Turkey oak (362) Quercus cerris	33.5	0.09	1.1	87	40	Competitor
Turkey oak (293) Quercus cerris	33.5	0.09	1.2	89	24	Competitor
Turkey oak (134) Quercus cerris	33	0.09	1.2	94	0	Competitor
Turkey oak (19) Quercus cerris	33	0.09	1.2	93	50	Competitor
Turkey oak (106) Quercus cerris	32	0.08	1.1	81	24	Regeneration
Turkey oak (252) Quercus cerris	32	0.08	0.9	66	36	Competitor
Turkey oak (223) Quercus cerris	32	0.08	1	79	24	Competitor
Turkey oak (156) Quercus cerris	31.5	0.08	0.8	61	24	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 (190) Quercus cerris	30	0.07	1	78	24	Competitor
Turkey oak (111) Quercus cerris	29.5	0.07	0.8	63	24	Competitor
Italian maple (330) Acer opalus	29.5	0.07	1	73	24	Competitor
Turkey oak (44) Quercus cerris	29	0.07	0.9	73	32	Competitor
Turkey oak (37) Quercus cerris	29	0.07	0.9	65	24	Competitor
Turkey oak (152) Quercus cerris	28	0.06	0.9	68	24	Competitor

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Turkey oak (2) Quercus cerris	27.5	0.06	0.8	64	24	Competitor
Turkey oak (12) Quercus cerris	27.5	0.06	1	80	24	Competitor
Turkey oak (129) Quercus cerris	27	0.06	0.7	52	24	Competitor
Turkey oak (154) Quercus cerris	27	0.06	0.6	49	36	Competitor
European hop-hornbeam (199) Ostrya carpinifolia	26.5	0.06	0.8	61	24	Competitor
European hop-hornbeam (58) Ostrya carpinifolia	26	0.05	0.6	45	0	Competitor
Turkey oak (125) Quercus cerris	26	0.05	0.7	53	0	Competitor
Turkey oak (171) Quercus cerris	25.5	0.05	0.6	48	24	Competitor
European hop-hornbeam (310) Ostrya carpinifolia	25.5	0.05	0.6	50	7	Competitor
Turkey oak (364) Quercus cerris	25	0.05	0.7	54	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	Competitor
European hop-hornbeam (328) Ostrya carpinifolia	24	0.05	0.5	40	28	Competitor
Turkey oak (259) Quercus cerris	23.5	0.04	0.5	40	0	Competitor
European hop-hornbeam (340) Ostrya carpinifolia	23.5	0.04	0.5	38	24	Competitor
Italian maple (333) Acer opalus	23.5	0.04	0.6	42	8	Competitor
Turkey oak (96) Quercus cerris	23	0.04	0.5	39	24	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

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
Quercus cerris						
Italian maple (263) Acer opalus	23	0.04	0.4	31	4	Competitor
Turkey oak (356) Quercus cerris	22.5	0.04	0.5	40	24	Competitor
Turkey oak (202) Quercus cerris	22.5	0.04	0.5	41	12	Competitor
European hop-hornbeam (48) Ostrya carpinifolia	22	0.04	0.5	35	38	Competitor
European hop-hornbeam (321) Ostrya carpinifolia	22	0.04	0.4	34	28	Competitor
Turkey oak (275) Quercus cerris	22	0.04	0.4	27	24	Competitor
Turkey oak (368) Quercus cerris	22	0.04	0.4	34	0	Competitor
Turkey oak (386) Quercus cerris	21	0.04	0.4	29	4	Competitor
Turkey oak (277) Quercus cerris	21	0.04	0.3	21	24	Competitor
European hop-hornbeam (248) Ostrya carpinifolia	21	0.04	0.4	29	24	Competitor
European hop-hornbeam (308) Ostrya carpinifolia	21	0.04	0.4	33	48	Competitor
European hop-hornbeam (314) Ostrya carpinifolia	20.5	0.03	0.3	26	38	Competitor
Turkey oak (280) Quercus cerris	20.5	0.03	0.3	24	24	Competitor
Turkey oak (255) Quercus cerris	19.5	0.03	0.3	20	6	Competitor
Italian maple (88) Acer opalus	19	0.03	0.3	24	28	Structure
European hop-hornbeam (234) Ostrya carpinifolia	19	0.03	0.3	23	24	Competitor
Turkey oak (103) Quercus cerris	18	0.03	0.3	22	40	Regeneration
Turkey oak (312) Quercus cerris	18	0.03	0.2	19	28	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

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
European hop-hornbeam (230) <i>Ostrya carpinifolia</i>	16	0.02	0.3	19	24	Competitor
European hop-hornbeam (270) <i>Ostrya carpinifolia</i>	15	0.02	0.1	10	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	Elite tree
Turkey oak (287) Quercus cerris	57	0.26	4.3	330	24	Habitat tree
Turkey oak (13) Quercus cerris	56.5	0.25	3.7	281	144	Elite tree
Turkey oak (326) Quercus cerris	53	0.22	3.9	299	66	Habitat tree
Turkey oak (49) Quercus cerris	51	0.2	2.4	183	42	Veteran tree
Turkey oak (77) Quercus cerris	50	0.2	3	232	0	Habitat tree
Turkey oak (100) Quercus cerris	50	0.2	2.9	219	69	Habitat tree
Turkey oak (176) Quercus cerris	49	0.19	3	232	60	Habitat tree
Turkey oak (213) [REPLACE_DEAD]Quercus cerris	47.5	0.18	0.3	22	114	Habitat tree
Turkey oak (212) Quercus cerris	44	0.15	2.5	189	60	Habitat tree
Turkey oak (167) Quercus cerris	43.5	0.15	2.4	181	24	Elite tree
Turkey oak (150) Quercus cerris	40	0.13	1.8	139	60	Habitat tree
Italian maple (36) Acer opalus	34.5	0.09	1.2	93	40	Elite tree
Turkey oak (278) Quercus cerris	33	0.09	0.9	70	30	Habitat tree
Turkey oak (124) Quercus cerris	31.5	0.08	0.9	65	0	Habitat tree
Turkey oak (147) Quercus cerris	30	0.07	0.9	71	24	Elite tree
European hop-hornbeam (56) Ostrya carpinifolia	28	0.06	0.7	56	24	Elite tree
Turkey oak (93) Quercus cerris	27	0.06	0.8	60	36	Elite tree
Turkey oak (135) Quercus cerris	26	0.05	0.7	53	14	Habitat tree
Turkey oak (153)	25.5	0.05	0.4	29	40	Veteran tree

Tree	DBH (cm)	Basal area (m ²)	Volume (m ³)	Economic value (€)	Habitat value (pts.)	Reason
[REPLACE_DEAD]Quercus cerris						
Turkey oak (260) Quercus cerris	24	0.05	0.5	41	44	Veteran tree
hornbeam (332) Carpinus betulus	23	0.04	0.5	41	0	Diversity
Turkey oak (127) Quercus cerris	23	0.04	0.5	37	0	Elite tree
European hop-hornbeam (354) Ostrya carpinifolia	22.5	0.04	0.4	29	0	Diversity
field maple (297) Acer campestre	22.5	0.04	0.6	42	24	Diversity
Italian maple (89) Acer opalus	22	0.04	0.3	23	4	Elite tree
European hop-hornbeam (94) Ostrya carpinifolia	20.5	0.03	0.3	26	0	Elite tree
mannan ash (323) Fraxinus ornus	20.5	0.03	0.4	34	4	Diversity
European hop-hornbeam (225) Ostrya carpinifolia	20	0.03	0.3	24	24	Elite tree
Turkey oak (238) Quercus cerris	19	0.03	0.2	18	24	Diversity
field maple (215) Acer campestre	17.5	0.02	0.2	19	27	Diversity
European hop-hornbeam (353) Ostrya carpinifolia	16.5	0.02	0.2	15	31	Veteran tree
mannan ash (43) Fraxinus ornus	15	0.02	0.2	16	30	Elite tree
European hop-hornbeam (227) [REPLACE_DEAD]Ostrya carpinifolia	15	0.02	0	4	48	Veteran tree
European hop-hornbeam (222) Ostrya carpinifolia	13	0.01	0.1	7	24	Diversity
field maple (290) [REPLACE_DEAD]Acer campestre	13	0.01	0.1	5	40	Veteran tree
Italian maple (237) Acer opalus	12.5	0.01	0.1	7	24	Elite tree
European hop-hornbeam (177) [REPLACE_DEAD]Ostrya carpinifolia	9	0.01	0	1	32	Veteran tree
common beech (7) Fagus sylvatica	9	0.01	0.2	16	0	Elite tree