

17 CROSS ROAD TADWORTH SURREY KT20 5ST

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Tree Survey Schedule

Mereway Sluice, Twickenham

Tree Survey Schedule: Explanatory Notes

Mereway Sluice, Twickenham

This schedule is based on a tree inspection undertaken by Finn Cullerne of SJAtrees (the trading name of Simon Jones Associates Ltd.), on Thursday the 28th March 2019. Weather conditions at the time were clear, dry and bright. Deciduous trees were not in leaf. An updated survey was undertaken by Finn Cullerne on Monday the 8th of July 2019. Weather conditions were clear, dry and birght. Deciduous trees were in full leaf.

The information contained in this schedule covers only those trees that were examined, and reflects the condition of these specimens at the time of inspection. We did not have access to the trees from any adjacent properties; observations are thus confined to what was visible from within the site and from surrounding public areas.

The trees were inspected from the ground only and were not climbed, and no samples of wood, roots or fungi were taken. A full hazard or risk assessment of the trees was not undertaken, and therefore no guarantee, either expressed or implied, of their safety or stability can be given.

Trees are dynamic organisms and are subject to continual growth and change; therefore the dimensions and assessments presented in this schedule should not be relied upon in relation to any development of the site for more than twelve months from the survey date.

1. Tree no.

Given in sequential order, commencing at "1". Numbers

2. Species.

'Common names' are given, taken from MITCHELL, A. (1978) A Field Guide to the Trees of Britain and Northern Europe.

3. Height.

Estimated with the aid of a hypsometer, given in metres.

4. Trunk diameter.

Trunk diameter measured at approx. 1.5m above ground level; or where the trunk forks into separate stems between ground level and 1.5m, measured at the narrowest point beneath the fork. Given in millimetres.

5. Radial crown spread.

The linear extent of branches from the base of the trunk to the main cardinal points, rounded up to the closest half metre, unless shown otherwise. For small trees with reasonably symmetrical crowns, a single averaged figure is quoted.

6. Crown break.

Height above ground and direction of growth of first significant live branch.

7. Crown clearance.

Distance from adjacent ground level to lowest part of lowest branch, in metres.

8. Age class.

Young: Seedling, sapling or recently planted tree; not yet producing flowers or seeds; strong apical dominance. Semi-mature: Trunk often still smooth-barked; producing flowers and/or seeds; strong apical dominance, not yet achieved ultimate height.

Mature: Apical dominance lost, tree close to ultimate height. Over-mature: Mature, but in decline, no crown re-trenchment Veteran: Mature, with a large trunk diameter for species; but showing signs of veteranisation, irrespective of actual age, with decay or hollowing, and a crown showing retrenchment and a structure characteristic of the latter stages of life.

Ancient: Beyond the typical age range and with a very large trunk diameter for species; with extensive decay or hollowing; and a crown that has undergone retrenchment and has a structure characteristic of the latter stages of life.

9. Physiology.

Health, condition and function of the tree, in comparison to a normal specimen of its species and age.

10. Structure.

Structural condition of the tree – based on both the structure of its roots, trunk and major stems and branches, and on the presence of any structural defects or decay.

Very good: No significant physiological or structural defects, an upright and reasonably symmetrical structure; a particularly good example of its species.

Good: No significant physiological or structural defects, and an upright and reasonably symmetrical structure.

Moderate: No significant pathological defects, but a slightly impaired physiological structure; however, not to the extent that the tree is at immediate or early risk of collapse.

Indifferent: Significant physiological or pathological defects; but these are either remediable or do not put the tree at immediate or early risk of collabse.

Poor: Significant and irremediable physiological or pathological defects, such that there may be a risk of collapse. Hazardous: Significant and irremediable physiological or pathological defects, with a risk of imminent collapse.

11. Comments.

Where appropriate comments have been made relating to:

- -Health and condition
- -Safety, particularly close to areas of public access -Structure and form

12. Category.

Based on the British Standard "Trees in relation to design, demolition and construction - Recommendations", BS 5837: 2012, Table 1, adjusted to give a greater weighting to trees that contribute to the character and appearance of the local landscape, to amenity, or to biodiversity.

Category U: Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category 'U' trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning).
- Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.
- Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality.

Category A: Trees of high quality with an estimated remaining life expectancy of at least 40 years.

- (1) Trees that are particularly good examples of their species, especially if rare or unusual.
- (2) Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- (3) Trees, groups or woodlands of significant conservation, historical, commemorative or other value.

Category B: Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

- (1) Trees that might be included in category 'A', but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and minor storm damage) such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category 'A' designation.
- (2) Trees present in numbers, usually growing as groups or woodlands, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals; or trees present in numbers but situated so as to make little visual contribution to the wider locality.
- (3) Trees with material conservation or other cultural value.

Category C: Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.

- (1) Unremarkable trees of very limited merit or of such impaired condition that they do not qualify in higher categories.
- (2) Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary landscape benefits.
- (3) Trees with no material limited conservation or other cultural value.



TREE SURVEY SCHEDULE

Mereway Sluice, Twickenham

No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
1	Sycamore	8m	2 stems @ 250mm est	N 5m E 5m S 4m W 3.5m	0.5m	3m	Semi- mature	Average	Indifferent	Growing out of river wall; twin-stemmed from ground level and becomes co-dominant at 1.5m; dense ivy-cover from ground level into upper canopy; readily visible from public access road and from properties to S; impact limited by small size and adjacent specimens screening it in long views.	C (2)
2	Sycamore	10m	3 stems @ 100mm 250mm 230mm 200mm	NE 5m SE 6m SW 5m NW 4m	0.5m	0m	Semi- mature	Average	Indifferent	Multi-stemmed from base, tight compression forks, obscured by dense ivy; heavily ivy-covered; low quality but readily visible from public right of way; significant component of group in which it stands.	C (12)
3	Ash	14m	450mm	N 6.8m E 8.4m S 7.9m W 6.4m	2m	1.5m	Mature	Average	Indifferent	Off-site tree; 1.5m from manhole cover (drainage); no defects at base or in rooting area; rooting area restricted by adjacent road; becomes codominant at 2.5m with a tight compression fork and evidence of included bark unions, some compensatory growth present; no further defects visible in remainder of crown; readily visible from properties to S and from public access roads; significant component in local landscape.	B (2)
4	Single- leaved ash	12m	400mm	N 6.5m E 7.4m S 8m W 4.9m NW 6.6m	2m	2m	Semi- mature	Average	Moderate	Structural roots with wounding from mowers; prominent basal flare and buttress roots when struck with an acoustic hammer there is no variance in tone; main unions are tensile; dead wood typical of age and species; epicormic growth within inner canopy; readily visible from access road and Mereway Road; removal wound not have a detrimental effect on landscape as it is either screened in long views by adjacent trees, or other specimens provide a backdrop.	B (2)
5	Single- leaved ash	14m	430mm	N 3.1m NE 4m E 4m S 5.4m W 7.5m	2.5m	3m	Semi- mature	Average	Moderate	No significant defects in rooting area; large basal flare with no variance in tone when struck with acoustic hammer; trunk leans slightly to E and the corrects towards S at 3m; heavily reduced on E historically, resulting in asymmetric canopy; significant component of group in which it stands; readily visible from Mereway Close and contributes to landscape character.	B (2)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
6	Single- leaved ash	13.5m	490mm	N 3.5m E 7.3m S 5m W 9m	2m	E 6m W 2.5m	Mature	Below average	Moderate	Substantial mounding towards base as a result of basal flare and structural root reaction wood; small girdling root visible; extensive structural roots visible in all orientations from trunk up to 3m, most notably to E and have large wounds probably caused by mowers from 100-200mm in width; main bifurcations appear tensile; significant and above average dead wood within canopy; lower E canopy heavily lifted to 6m leaving 1-2m long stubs; to W a long lateral rests upon telephone wires; readily visible from Mereway Road and from access path to nature reserve; significant component of group in which it stands.	B (2)
7	Single- leaved ash	13.5m	440mm	N 3.5m E 5.9m S 3m W 7.6m	2.5m	2.5m	Mature	Below average	Moderate	Structural roots visible from 1m from trunk in all orientations; potential slight ground compaction 0.5m to S from desire-line path; main bifurcations appear tensile; poor woundwood response to pruning wounds; epicormic reaction from internal crown; pruning wounds consistent with lifting works up to 5m in canopy; above average dead wood; readily visible from Mereway Road; significant component of group in which it stands; visible from park opposite confluence of rivers.	B (2)
8	Hawthorn	5m	200mm ivy est	4m	2m	1m	Semi- mature	Average	Moderate	Heavily ivy-covered; of moderate quality, but currently of low value due to small size.	C (13)
9-13	Sycamore	13m	#T9 310mm #T10 245mm #T11 280mm 240mm #T12 2 stems @ 250mm 320mm ivy #T13 2 stems @ 220mm	4.8m	2m	3m	Semi- mature	Average	Indifferent	Semi-mature specimens grown up together to form a single visual and aerodynamic group; no significant structural defects, however multiple multi-stemmed trunks with tight compression forks with no evidence of branch-bark inclusion; some rubbing branches within canopies; no further defects; readily visible from access road to nature reserve and partially visible from Mereway Road; screen sluice gates and protective fencing from public footpaths; whilst they add to character of area, their removal would not have an adverse impact on landscape, as there are multiple specimens in all orientations that screen or provide a backdrop.	B (2)
14	Sycamore	14m	300mm 250mm 300mm 370mm	7m	0m	2m	Mature	Average	Moderate	Multi-stemmed from ground level; dominant trunk becomes codominant at 0.5m, unions are tight compression forks with no evidence of branch-bark inclusion; structural roots visible on edge of river; main unions appear tensile; no further defects visible; prominent in local area; readily visible from Mereway Road and the bridge adjoining Mereway Road to the public open space.	B (2)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear- ance	Age class	Physio - logy	Structure	Comments	
15	Sycamore	9m	175mm	2m	2m	2.5m	Young	Average	Indifferent	Unremarkable tree of very limited merit; squirrel damage in crown.	C (1)
17- 18	Sycamore	12m	#T17 300mm ivy est #T18 320mm #T18 260mm	5m	2m	2.5m	Semi- mature	Average	Moderate	Of moderate quality, but currently of low value due to small size; drawn-up and mutually suppressed; t18 is twin-stemmed from ground level, tight compression fork.	
19	Sycamore	13m	405mm 380mm	NE 7m SE 6.3m SW 4m NW 7m	1m	2.5m	Mature	Average	Moderate	Twin-stemmed from 0.5m with a tight compression fork, evidence of reaction wood growth and snub-nosed growth indicating stabilised union; main unions are tensile; e canopy has been lifted to 2.5m historically and 4m over bridge to S; readily visible from river path, bridge and park area to the north-west; of moderate quality and value; of long-term potential.	
20	English oak	15m	810mm	10m	4m	2.5m	Mature	Average	Moderate	Off-site tree abutting edge of river on opposite side to fish pass; mature specimen with	
21	Whitebeam	4m	50mm	1.5m	1m	1m	Young	Average	Moderate	Young tree with stem diameter below 150mm.	
22- 23	Sycamore	#T22 11m #T23 10m	#T22 220mm 70mm #T23 170mm	3m	3m	1m	Semi- mature	Average	Indifferent	Unremarkable trees of very limited merit; small with squirrel damage; readily replaceable.	C (1)
24	Hawthorn	7m	110mm 80mm	2.5m	0.5m	0m	Semi- mature	Average	Indifferent	Twin-stemmed from base; unremarkable tree of very limited merit.	C (3)
25	Whitebeam	4m	60mm	2m	1m	1m	Young	Average	Moderate	Young tree with stem diameter below 150mm.	C (1)
26	English oak	8m	270mm ivy	3m	2.5m	0.5m	Semi- mature	Average	Moderate	Heavily ivy-covered; of moderate quality, but currently of low value due to small size.	C (12)
Mere way Sluic e, Twic kenh am	Whitebeam	9m	210mm ivy 200mm ivy 120mm ivy 240mm ivy	NE 4m SE 2m SW 4m NW 4m	0m	2m		Average	Indifferent	Heavily ivy-covered; multi-stemmed from base; inessential component of group in which it stands.	C (12)
28	Elder	6m	4 stems @ 120mm	3.5m	0.5m	0m	Semi- mature	Average	Indifferent	Unremarkable tree of very limited merit.	C (12)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
29	English oak	8m	305mm	N 4m E 4m S 4m W 2m	2.5m	2.5m	Semi- mature	Average	Moderate	Of moderate quality, but currently of low value due to small size; significant component of group in which it stands; no significant defects observed.	C (12)
30	Sycamore	8m	330mm ivy	N 4m E 2m S 4m W 4m	2.5m	2.5m	Semi- mature	Average	Indifferent	Heavily ivy-covered; squirrel damage in crown; inessential component of group in which it stands.	C (12)
31	Wild cherry	12m	300mm ivy	N 5.3m E 4m S 3m W 3m	2.5m	1.5m	Semi- mature	Average	Indifferent	Heavily ivy-covered; many tight branch union points; above average risk of failure if companion support removed; inessential component of group in which it stands; not readily visible.	C (12)
32	Wild cherry	11m	370mm	N E 7m E 6m SE 2m SW 1m NW 5m	0.5m	0.5m	Semi- mature	Average		Ivy-covered; many tight branch union points; above average risk of failure; evidence of branch bark inclusions; significant component of group in which it stands but limited visibility from public right of way due to dense scrub land.	C (12)
33	Hawthorn	4m	4 stems @ 40mm	1m	0m	1m	Young	Average	Indifferent	Young tree with stem diameter below 150mm.	C (1)
34	English oak	8m	370mm	NE 2m SE 4m SW 4m NW 4m	2m	1m	Semi- mature	Below average	Poor	Vandalised trunk, wound 2m tall and covers 60% of trunk circumference; poor unions and crown dieback.	U
35	English oak	8m	335mm	NE 3m SE 3m SW 2m NW 3m	2m	1.5m	Semi- mature	Average	Indifferent	Vandal wound at 0.5m, 350mm in diameter, good woundwood response; small canopied tree with limited impact on wider landscape.	C (12)
36	Sycamore	12m	450mm	NE 6m SE 5m SW 4.5m NW 6m	1m	0.5m	Semi- mature	Average	Indifferent	Diameter measured at 0.5m; vandalised with spray paint and direct contact damage which has fully girdled three of the stems and wounded almost all of them; excavation within rooting area; becomes multi-stemmed at 1.5m with stems up to 250mm diameter with tight compression forks present; stems will fail due to poor unions and wounds; significant component of group in which it stands; visibility limited by dense scrub growth but top of canopy visible from public right of way.	. C (2)
37	Sycamore	10m	180mm	NE 1m SE 0m SW 1m NW 3m	2.5m	1.5m	Young	Average	Indifferent	Small suppressed specimen; unremarkable tree of very limited merit.	C (1)



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
38	Hawthorn	6m	4 stems @ 100mm	2m	0.5m	0.5m	Young	Average	Indifferent	Young tree with stem diameter below 150mm.	C (1)
39- 40	English oak	8m	#T39 250mm #T40 225mm	3.8m	2m	1.5m	Semi- mature	Below average	Indifferent	Vandal wounds on lower trunks, 150mm diameter; sparsely foliated; above average dead wood in crowns; #40 OPM nest present, empty.	C (2)
41	Sycamore	12m	390mm	4.5m	1.5m	1.5m	Semi- mature	Average	Indifferent	Slightly leaning trunk; multi-stemmed from 1.7m, tight compression forks; extensive squirrel damage in crown; significant component of group in which it stands.	C (12)
42- 43	Myrobalan plum	6m	#T42 230mm 190mm #T43 170mm	4.5m	0.5m	0m	Semi- mature	Average	Poor	Heavily leaning trunks; #42 very heavy lean; twin-stemmed from 0.5m; unremarkable trees of very limited merit; inessential component of group in which it stands.	C (3)
44	Purple sycamore	10m	265mm	3.5m	2m	1.5m	Semi- mature	Average	Indifferent	Heavily leaning trunk; many tight branch union points; above average risk of failure if released from shelter; hazard beam kink in trunk with adaptive wood response; significant component of group in which it stands; limited visibility from main paths due to adjacent trees screening.	C (12)
45	English oak	13m	380mm	4.5m	2.5m	1.5m	Semi- mature	Below average	Indifferent	Many tight branch union points; extensive squirrel damage in canopy; above average dead wood in crown; significant component of group in which it stands.	C (2)
46	English oak	10m	240mm	N 2m E 0.5m S 2m W 4m	3m	2.5m	Semi- mature	Average	Indifferent	Slightly leaning trunk; asymmetrical crown as suppressed by adjacent specimens; inessential component of group in which it stands; squirrel damage in crown.	C (2)
47	Elder	5m	2 stems @ 80mm 2 stems @ 40mm 120mm	2.5m	0.5m	1m	Semi- mature	Average	Indifferent	Multi-stemmed from base; unremarkable tree of very limited merit.	C (3)
G1	Hazel, myrobalan plum and goat willow	7m	Min 20mm Max 160mm Avg 115mm	3.2m	2m	2.5m	Various	Average	Indifferent	Located within Environment Agency compound, between the River Crane and access ramp; group comprises hazel, plum, dense ground ivy; heavily ivy-covered; species of varying ages, young hazel coppice regrowth and semi-mature plum and goat willow; all specimens are small and have limited impact on landscape; group forms a row running along river which screens residential properties beyond road; readily replicable.	



No.	Species	Height	Trunk diameter	Radial crown spread	Crown break	Crown clear-ance	Age class	Physio - logy	Structure	Comments	Cate gory
G2	Hazel and myrobalan plum	11m	Min 60mm Max 365mm Avg 160mm	5m	2m	3m	Semi- mature	Average	Indifferent	Comprises plum, sycamore, wild cherry, alder, birch; runs around periphery of Environment Agency compound to NE, N and NW where it adjoins river; dense understory of holly and hawthorn with ground ivy below. Ivy-covered from ground level into upper canopies; tall, drawn-up specimens with multiple structural defects; mature wild cherry within group; screens compound building from public views; in keeping with local character; due to lack of quality, could be removed subject to replacement planting.	C (23)
G3	Sycamore, English oak, whitebeam, hawthorn, elder and hazel	5m	Avg 250mm	3m	1m	1m	Semi- mature	Average	Indifferent	Comprised of standards of oak, sycamore and whitebeam and an understory of hawthorn and hazel with bramble and ivy ground cover; readily visible from surrounding public areas; contributes towards semi-wooded/scrubland of Mereway Nature Reserve; individually of poor quality but sum is greater than individuals and retention may be desirable in part; all are relatively young, even the semi-mature ones and therefore removal could be justified subject to replacement planting.	C (12)
G4	Blackthorn and sycamore	7m	Avg 80mm	2m	0.5m	0m	Young	Average	Indifferent	Young trees with stem diameter below 150mm; of limited quality and value.	C (12)
G5	Sycamore and English oak	12m	Avg 250mm	3m	2m	1m	Semi- mature	Average	Indifferent	Small woodland copse comprised of sycamore and oak standards and understory of hawthorn, blackthorn, plum, elder and ground cover of ivy and bramble; all young to semi-mature of limited individual quality, most have significant squirrel damage; group contributes to Mereway Nature Reserve; readily visible from public footpaths; should not be a constraint on any works as of poor quality and readily replaceable.	C (12)



Root Protection Areas (RPAs)

Root Protection Areas have been calculated in accordance with paragraph 4.6.1 of the British Standard 'Trees in relation to design, demolition and construction – Recommendations', BS 5837:2012. This is the minimum area which should be left undisturbed around each retained tree. RPAs are portrayed initially as a circle of a fixed radius from the centre of the trunk; but where there appear to be restrictions to root growth the circle is modified to reflect more accurately the likely distribution of roots.

Tree No.	Species	RPA	RPA Radius
1	Sycamore	56.5m²	4.2m
2	Sycamore	72.4m²	4.8m
3	Ash	91.6m²	5.4m
4	Single-leaved ash	72.4m²	4.8m
5	Single-leaved ash	83.6m²	5.2m
6	Single-leaved ash	108.6m²	5.9m
7	Single-leaved ash	87.6m²	5.3m
8	Hawthorn	18.1m²	2.4m
		43.5m²	3.7m
		27.2m²	2.9m
9-13	Sycamore	61.5m²	4.4m
		102.9m²	5.7m
		43.8m²	3.7m
14	Sycamore	171.6m ²	7.4m
15	Sycamore	13.9m²	2.1m
17-18	Sycamore	40.7m²	3.6m
17-10	Sycamore	76.9m²	4.9m
19	Sycamore	139.5m²	6.7m
20	English oak	296.8m ²	9.7m
21	Whitebeam	2.5m²	0.9m
22.22	Cycomore	24.1m²	2.8m
22-23	Sycamore	13.1m²	2.0m
24	Hawthorn	8.4m²	1.6m
25	Whitebeam	2.5m ²	0.9m
26	English oak	33.0m²	3.2m
Mereway Sluice, Twickenha m	Whitebeam	70.6m²	4.7m
28	Elder	26.1m²	2.9m
29	English oak	42.1m²	3.7m
30	Sycamore	49.3m²	4.0m
31	Wild cherry	40.7m²	3.6m
32	Wild cherry	61.9m²	4.4m
33	Hawthorn	2.9m²	1.0m
34	English oak	61.9m²	4.4m
35	English oak	50.8m²	4.0m
36	Sycamore	91.6m²	5.4m
37	Sycamore	14.7m²	2.2m
38	Hawthorn	18.1m²	2.4m
39-40	English oak	28.3m²	3.0m
	ŭ .	22.9m²	2.7m
41	Sycamore	40.0.0	4.7m
42-43	Myrobalan plum	40.3m² 13.1m²	3.6m 2.0m



44	Purple sycamore	31.8m ²	3.2m
45	English oak	65.3m ²	4.6m
46	English oak	26.1m ²	2.9m
47	Elder	13.8m²	2.1m
G1	Hazel, myrobalan plum and goat willow	11.6m²	1.9m
G2	Hazel and myrobalan plum	60.3m ²	4.4m
G3	Sycamore, English oak, whitebeam, hawthorn, elder and hazel	28.3m²	3.0m
G4	Blackthorn and sycamore	2.9m²	1.0m
G5	Sycamore and English oak	28.3m ²	3.0m

