

Simon Pryce Arboriculture

Report

Client: South London Swimming Club

Site: Tooting Bec Lido, Tooting Bec Road, London, SW16 1RU

Subject: Constraints report and arboricultural impact assessment

Inspection date: 9 March 2023

Report date: 7 April 2023

Reference: 23/001

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I Introduction

- 1.1 This report has been prepared for South London Swimming Club in connection with building work at Tooting Bec Lido, Tooting Bec Road, London, SW16 1RU
- 1.2 I have been asked to inspect trees growing on and near the site and to prepare a report impact assessment and tree protection plan, as set out in British Standard 5837: 2012, Trees in relation to design, demolition and construction.

Survey method

- 1.3 This report is based on a site visit and inspection of the trees on 9 March 2023. The inspections were visual and made from ground level within the site and adjacent parts of Tooting Bec Common.
- 1.4 Their maturity, health and structural condition were assessed and each was assigned to one of the four retention categories [A,B,C,U] specified by BS5837. The individual descriptions and other relevant information are contained in the attached schedule and they are shown on the attached plans, based on the original supplied by WR-AP architects.
- 1.5 The existing plan shows the current site layout. The plan of the proposed layout shows tree protection measures and is the tree protection plan (TPP) specified by BS5837.

2 Background

- 2.1 The Lido site is aligned almost due north - south with the main entrance on the west side near the northern end. The lido is being extensively refurbished and this report is concerned with trees near that entrance that might be affected by proposed works. The existing entrance has cycle parking each side at the front and a circular changing room each side of the ticket office. The changing room to the south is set into the end of the bank that runs along the west side of the pool.
- 2.2 Wandsworth Council's online maps show that the Lido is not in a conservation area and that none of the trees are subject to tree preservation orders (TPOs).

Proposal

- 2.3 This is shown on the plans produced by WR-AP the aspects concerning the trees are illustrated on the existing and proposed plans in this report. The two existing circular changing rooms each side of the entrance are demolished, and replaced by a rectangular building housing reception, a café and WCs, with the cycle parking moved to the south. A new club house with showers and changing rooms replaces the existing buildings on the hard standing at the northern end of the pool.
- 2.4 The proposal involves removing an ash tree, tree 7 of this report, growing in the existing cycle parking area.

3 Trees

- 3.1 The most significant trees by far are four mature oaks, one growing on the common to the south of the entrance and the other three to the north. One of those is just beyond the palisade fence in a belt of vegetation that continues the line of the bank, so might be on the Common, while the other two are growing in The Meadow an area of grass to the north of the pool.

- 3.2 Most of the other trees surveyed are on the bank to the south of the entrance and include some self-seeded sycamore and willows and a mature ash with significant structural decay. The ash proposed for removal is just inside the security fence, has a large wound on the trunk and is being suppressed due to growing under the large oak on the common.

4 General comments

- 4.1 The two main functions of tree roots are 1) physical support and 2) the supply of water and nutrients from the soil. Roots are opportunist and grow wherever conditions are favourable i.e. there is a suitable supply of air and water. Many are in about the top metre of the soil, but they can and do grow much deeper if conditions are favourable. The small water absorbing roots die each winter, then new ones develop in spring and grow according to the tree's needs. This allows trees to recover from damage to the fine network of small roots, possibly with some short term reduction in vitality. However damage to larger roots close to the trunk can lead to instability, either immediately or in the longer term, if the wounds are colonised by decay fungi.

Root protection

- 4.2 Construction near trees can damage roots directly, by excavation, and indirectly by soil compaction due to heavy machinery and contamination from things like diesel oil and cement. BS5837 recommends measures to avoid or minimise this, the main one being that root protection areas (RPAs) are established round retained trees and fenced to exclude access. No ground work should take place within these without suitable safeguards, such as protecting soft ground against compaction or contamination.
- 4.3 The starting point is that a single trunked tree's RPA has an area equivalent to a circle with a radius 12 times the trunk diameter measured at 1.5m above ground. The 12x figure is not based on research, but it has proven effective in most cases. In fact most root systems spread well beyond that and significantly deeper than 1m.
- 4.4 Under open ground roots spread more or less uniformly from the tree, but they are affected by obstructions and variations in growing conditions, so depth and spread are far less predictable near roads and buildings. RPA shapes should be adjusted from the notional circle where there is evidence that root spread and/or depth are uneven. However this must be based on a sound arboricultural assessment of the extent and shape of the root system and equivalent rooting space should be allowed in other directions.

5 Discussion

Direct implications

Removed trees

- 5.1 The ash proposed for removal, tree 7, is shown in photo 2 below and is a poor quality tree with no potential to improve and would need to be removed in the foreseeable future, irrespective of any building work. Tree 3 is in photo 1 and was not listed for removal but has a severe lean over the roof of the existing changing room. It has already damaged the edge of the roof and would hang lower when in leaf, so it also needs to be removed.
- 5.2 Tree 1, an ash, is some distance from the work area so is not directly affected, but has severe decay in the upper crown, shown in photo 3. The fungus found beneath it was *Inonotus hispidus*, which grows on a range of broadleaved trees. In ash it causes severe weakening in the early stages, so trees can fail suddenly. This tree is close to the boundary with the common, so it needs to be removed for safety irrespective of the proposal.

Retained trees

- 5.3 The RPAs of these trees are shown as circles in order to illustrate the areas concerned. These are tabulated below, with comments on the implications of the proposal.

Tree no	RPA area m²	IncurSION m²	%	Comments
2	26	0	0	Small tree, RPA well clear of the work area
4	29	8	27%	High percentage of the RPA circle, but the retained walls are a barrier to root growth under the existing or proposed footprints.
5	4.5	0	0	Assorted saplings, retaining walls prevent any root spread into the site.
6	530	85	16%	Relatively small figure and this area is all under the existing footprint where roots are less likely to be present. Good rooting space in every other direction.
8	347	48	13%	Small percentage, much of it under the existing footprint and tree has ample rooting space in other directions.
9	174	0	0	Both trees clear of footprint but work / access space will be needed. Soft ground near them can be protected during the work.
10	385	0	0	

- 5.4 The proposed footprint is in parts of the RPA circles of trees 4, 6 and 8, but is largely on top of the existing footprint, where there will be little or no root growth. The areas concerned are small and well within what healthy trees will tolerate. The existing walls retaining the northern end of the bank, including part of the wall of the southern changing room, are kept, so trees 2, 4 and group 5 are unaffected. All the trees have good rooting conditions in other directions under the bank, Tooting Bec Common and The Meadow, the grass area at the northern end of the Lido site.

Indirect implications

- 5.5 Access will be needed into rooting areas in order to carry out the work and some of this will be over soft ground within the Lido site near tree 8, 9 and 10. They can be safeguarded during the works by a combination of protective fencing to prevent any close access that is not actually needed and by protection on soft ground where it has to be allowed.
- 5.6 There is ample space for material storage well away from rooting areas on the retained hard surfaces between the north end the pool and The Meadow

Tree protection

- 5.7 These measures are illustrated in the plan showing the proposed layout, which is the tree protection plan (TPP) recommended by BS5827:2012. If required these can be specified in more detail in an arboricultural method statement.

6 Summary and conclusions

- 6.1 The proposal requires the removal of tree 7, a poor quality ash with no potential to improve.
- 6.2 Tree 1, also an ash, is not a constraint, but has severe decay and needs to be removed for safety in any event, as does tree 3, a heavily leaning willow that has damaged the roof.
- 6.3 The RPA circles of trees 4, 6 and 8 are partly under the new footprint, but that largely coincides with the existing footprint where few, if any roots will be present. The areas concerned are small and well within what these trees will tolerate, particularly as they have good rooting conditions in other directions.
- 6.4 Access will be needed onto some of the soft ground in RPAs, but the trees can be safeguarded during the work by a combination of fencing and ground protection as shown on the tree protection plan.

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Photographs



1) Tree 3 showing acute lean and damaged edge of the roof



2) Wound in the trunk of tree 7. View is directly along the fence, showing proximity to it.



3) Large old wound and woodpecker hole in the top of tree I. Not affected by the proposal but needs to go.

Site: **Tooting Bec Lido**
 Inspection date: **9 March by Simon Pryce**

Tree no.	Species	Age / vitality	Ht. m	Spread				Dia. mm	RPA rad m	RPA area m ²	Crwn ht. m	Comments and recommendations	Cat
				N	S	E	W						
The trees are described in sequence as shown on the site plan, starting to the south of the entrance and going north. Offsite trees are indicated with an asterisk next to the number; these are all on the Common.													
1	Ash	MA/N	13	5	7	5	5	600	7.2	164	3	Has been crown reduced and regrowth is quite vigorous. Heavy ivy prevented a detailed inspection but a bracket of <i>Inonotus hispidus</i> (shaggy bracket) was found on the ground beneath it. This grows on a range of trees and is a common cause of failure in old ashes. This tree also has some old wounds and woodpecker holes indicating extensive decay in the upper trunk <ul style="list-style-type: none"> • <i>Not a constraint on the project but should be removed for safety.</i> 	U
2	Sycamore	Y/L	11	3	3	2.5	4	240	2.9	26	4	Twig growth is sparse, there is dead wood and ivy growing in the trunk is getting heavy.	C
3	Crack willow	MA/N	12	11	0	3	3	220	2.7	22	3	Exceptionally heavy lean over the building due partly to shade from other trees but stability is suspect. <ul style="list-style-type: none"> • <i>Fell - stump could be left to sprout but would need frequent recutting and would be better removed or treated to prevent regrowth.</i> 	U
4	Goat willow	MA/N	12	4	5	5	4	250	3.0	29	3	Drawn up due to growing among the other trees, otherwise sound and healthy.	C
5	Various	Y/N	5 - 7	1 - 3				30 - 100	1.2	4.5	1 - 2	Group of self-seeded ash and sycamore saplings and sucker shoots growing from the roots of the willows. Generally healthy and will grow on to compensate for the removal of the others.	C
6 *	Oak	M/N	23	12	13	12	12	1080	13	530	5	Very large tree, twig growth is slightly sparse, but it is sound and healthy looking.	A
7	Ash	MA/L	16	7	5	5	7	320 120	4.1	52	6	One sided and leans due to growing under the oak, has a large wound on the trunk that is occluding, but also has signs of die back in the top. <ul style="list-style-type: none"> • <i>No urgent work needed, but not suitable for long term retention.</i> 	U
8 *	Oak	M/L	19	5	8	6	10	870	10.5	347	6	Just beyond the security fence and appears to be on Tooting Bec Common. Has sparse twig growth and heavy ivy but looks reasonably healthy otherwise.	B
9	Oak	M/L	17	5	10	8	9	620	7.4	174	5	Lean due to growing near no.10. Foliage slightly sparse and there is some dead wood in the crown. Has a long scar on the trunk but that is occluding and the decay is not extensive.	B

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				N	S	E	W						
10	Oak	M/N	20	12	8	13	8	920	11	385	5	Slightly one sided but is a large healthy dominant tree. It has some minor dead wood and signs of old storm damage, but no more than normal for a tree of this age.	A

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Notes

Observations are made from ground level unless stated otherwise.

Trunk diameters are measured in millimetres at 1.5m above ground or at the narrowest point between the root buttresses and branch flare in multiple trunked trees; in such cases this is indicated by [c].

Crown spreads are taken from the trunk centre to the end of the longest live branches in the directions indicated [usually the four cardinal compass points]

Crown height is the clearance under the lowest significant branches.

Tree ages are estimated as below, based on the normal life expectancy of a tree of the species concerned on the site:

Immature.	[IM]	Newly planted or self-set tree.
Young	[Y]	Young tree that is established but has not yet attained the size or form of a fully developed example of its type.
Middle aged	[MA]	Between one third and two thirds of its estimated lifespan.
Mature	[M]	Over two thirds of its estimated life span.
Veteran	[V]	Old tree with characteristic features including hollow trunk, old wounds etc. that give high landscape, ecological and cultural value.
Ancient	[A]	Exceptionally old tree, typically has short, wide hollow trunk and low squat shape due to the crown retrenching over many years.
Dying/Dead	[D]	Dead/dying or so badly decayed that it should be removed without delay if a potential threat.

Vitality is assessed on the basis of what is normal for the species concerned as:

High	[H]
Normal	[N]
Low	[L]
Dead / dying	[D]

Root protection areas [RPAs] - BS5837:2012

For single trunked trees these are calculated as an area equivalent to a circle with a radius 12 times the trunk diameter at 1.5m. For multiple trunked trees it is based on the diameter of a single trunk that would have the same cross sectional area at 1.5m.

Any deviation from a circular plot should take into account the following factors whilst still providing adequate protection for the roots.

- The shape and disposition of the root system when known to be influenced by past or existing site conditions, such as the presence of roads, structures and underground services.
- Topography and drainage.
- The soil type and structure.
- The likely tolerance of the tree to root disturbance based on factors such as species, age and past management.

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Tree categories – based on BS5837: 2012, Trees in relation to design, demolition and construction - Recommendations

Trees for removal				
Category and definition				Colour code
Category U				Red
Those 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	<ul style="list-style-type: none"> Trees that have a serious, irremediable structural defect, such that their early loss is expected due to collapse in the foreseeable future, including any that will become unviable after the removal of other U category trees. (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning.) Trees that are dead or showing signs of significant immediate and irreversible decline. Trees infected with pathogens significant to the health and/or safety of other trees nearby, or very low quality trees suppressing better ones nearby. <p><i>NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve.</i></p>			
Trees for retention				
Category and definition	Criteria – sub categories			Colour code
	1 – mainly arboricultural values	2 – mainly landscape values	3 – mainly cultural / conservation values	
Category A				
Trees of high quality with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant historical, commemorative or conservation value. (e.g. veteran trees or wood -pasture)	Green
Category B				
Trees of moderate quality with an estimated remaining life expectancy at least 20 years.	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 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.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural benefits.	Blue
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 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	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/transient landscape benefits	Trees with no material conservation or other cultural benefit.	Grey