



Quaife Woodlands

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23rd January, 2018

Our Ref: AR/3734L/jq

Mr Tim Davies,
Churchwarden,
St Leonard's Church Streatham,
Tooting Bec Gardens,
London.
SW16 1RB

By e-mail only

timbdavies@hotmail.co.uk

Arboricultural Survey – Health, Condition and Risk Assessment at St Leonard's Church Streatham, Tooting Bec Gardens, London, SW16 1RB

Dear Mr Davies,

I do apologise for the delay in writing up my site visit which I carried out on the 5th October. I have attached a site plan at Appendix A, which is derived from the plan you gave to me and a schedule of the trees at Appendix B. I have also included photographs at Appendix C and the Beaufort Scale table at Appendix D.

The survey was commissioned on the advice of your architect who was principally concerned about the need to produce a management strategy. Whereas the first function of a tree management strategy or policy is to ensure that the risk from trees is maintained at an acceptable level, it must also take a longer term view in terms of planned succession of tree planting to make sure that although replacements should be planted, the choice of species and positions is of immense importance so that the churchyard does not become over-populated.

You have asked that I provide an assessment of all the trees in the churchyard and to provide a schedule of work which may be necessary. Such work would primarily be in respect of risk, but you are also concerned about the more general condition of the trees.

My survey was conducted from ground level which included sounding zones of potential or actual decay at the base and lower bole of a tree. There was no requirement to carry out any invasive investigations, take any tissue or soil samples for laboratory analysis, or to recommend a climbed inspection.

You are particularly concerned about the oak T1 on the north side of the church which may be causing damage to the north porch. I note from the British Geological Survey that the site is on London clay, which is a shrinkable soil, and therefore susceptible to drying from water uptake by trees

You also have concerns about the possible risks presented by the horse chestnut T20 with browning leaves and fungus at the base.

I am not a lawyer and I am not offering legal advice, but merely citing my understanding of the law relating to trees as a consequence of my working familiarity with it. In terms of risk management, in discharging your duty of care under the Occupiers Liability Act 1957 and 1984, you are only required to do what is reasonable and proportionate given that trees in general present a very low risk. This is set out in clear terms in the National Tree Safety Group's publication "*Common sense risk management of trees*" which is a free download from www.ntsrg.org.uk.

The trees which are off site (T5 and T37-41) are not your direct responsibility and I have not recommended that any work to them is necessary. However, should you see any feature that gives you cause for concern you should notify the owners or managers in writing.

The only tree that requires urgent attention is the **horse chestnut T20**. This has advanced basal decay and there was a very distinct hollow-sounding resonance in the zone around the fungal brackets (photograph 2, Appendix C). These are brackets of the fungus *Ganoderma adspersum* which causes decay of the stem and roots. It can co-exist with a host tree for many years, but once the crown exhibits symptoms of stress (photograph 1, Appendix C) the structural integrity of the tree becomes compromised. This stress is likely to have been exacerbated by horse chestnut leaf miner which causes early leaf discolouration. There are fungal mushroom remnants, the species of which I could not identify (photograph 3, Appendix C), growing east of the tree's base which may be associated with the roots, and a surface fungus on the base (photograph 4, Appendix C) which appears to be saprophytic – feeds on dead tissue and not of itself harmful, but indicative of dysfunctional tissue. The tree should be removed and for obvious reasons it is better to do so while it remains sound enough to climb, as the tree will have to be sectionally dismantled because felling is out of the question in the churchyard.

The North Porch has pronounced angled cracking on the south-western elevation (photograph 5, Appendix C) which is characteristic of rotational movement caused by the foundations sinking. The cracks widen in magnitude as they ascend. Interestingly on the north-eastern elevation has no cracks, or possibly the start of a very small crack – although it was not clear to me (photograph 6, Appendix C). This should be inspected by a structural surveyor. If it is found to be subsidence associated with the oak T1, the only way this influence can be removed is by installing a root barrier, or removing the tree. The other method, which is not favoured in the UK as insurers regard it as being unreliable, is to irrigate the soil to negate shrinkage. To discover whether the tree is the cause of the cracks should be monitored over a year to see if the variations of magnitude are seasonal – expanding in the summer and contracting in the winter.

The other tree which should be removed is the **sycamore T9**. This leans to the north over the adjacent building, and although it is not dangerous it has a very poor potential. It is not an urgent matter, but at its current size it would not be too expensive to remove, particularly if undertaken at the same time as the removal of the chestnut T20. This would be a prudent action.

Consideration should be given to controlling the height of the **lime T14** as it has the appearance of having weaker pollard growth attachment points, but this is not urgent.

The **sycamore T29** has branch tips in contact with the church roof and they should be pruned back to maintain a clearance of at least 2 metres.

The **elder T23** (photograph 7, Appendix C) is dislodging a headstone and it should be removed.

The other maintenance is light incidental pruning to remove basal and epicormic shoots (shoots which grow directly from the main stem or branches), and to maintain pedestrian headroom.

There is **ivy** present on some of the trees. Ivy does not harm a healthy tree as it rarely extends to the crown periphery where most of a tree's foliage is and therefore does not compete for light. The roots do compete with those of the tree, but again this does not seem to adversely affect a healthy tree. Ivy is a problem where it affects a tree in decline, but the main concern is where Ivy prevents any visual inspection of the tree. This is important where a tree has the potential to present a risk. However, the removal of Ivy is not usually necessary for any other reason, and if the tree is in otherwise healthy condition and not deteriorating, there is usually no reason to suspect that there are any hidden defects.

Ivy can provide shelter and roosting for wildlife, but it is not regarded as an especially valuable habitat, even for bats.

Ivy can be physically removed from a tree by a climbing arborist who will take care not to damage the tree itself. Ivy is not protected directly and may be removed even if the tree itself is protected, but care should be taken that there is no infringement of the various Wildlife Protection Laws.

A cheaper and less disruptive method is to cut ivy stems as near as possible to ground level (or above basal shoots where present), and again at least 40 centimetres above so as to leave a clear gap between the cuts. This gap ensures that all ivy stems can be seen to have been cut and subsequent new growth can be rubbed off. The severed ivy will die and fall off in due course and if it does provide wildlife habitats the transition will be gradual.

In conclusion, the only tree which presents a risk which needs attention is the horse chestnut T20. This risk is not imminent, but the tree should be removed without undue delay. None of the other trees presents any abnormal risk. I use term "abnormal risk" in relation to trees where the level of risk is acceptable. No tree is 100% "safe" but where there are no defects or characteristics that render the subject tree more likely to fail than any other, I describe it as presenting no abnormal risk.

The trees should be inspected within 3 years of the date of this report or after any extremes of climate, particularly winds in excess of Force 8 on the Beaufort Scale (Appendix D).

The trees protected by the TPO will need formal consent from Lambeth Council, and the whole churchyard is within the Streatham High Road and Streatham Hill Conservation Area

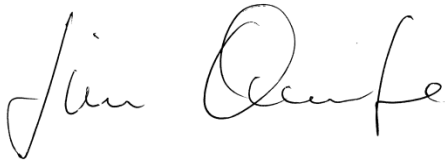
CA54, and so all other work will need to be the subject of a section 211 Notice. The main tree work will need to be done by a contractor, who on being awarded the contract will invariably obtain the necessary consents on your behalf. This report would serve to provide sufficient justification for the tree works and I suggest that you make contact with the Council's Arboricultural Officer to talk the proposed work through with him.

I imagine that you know suitable contractors, but if not I would recommend that you seek quotations from Arboricultural Association Approved Contractors. The credentials are explained on the AA's website and you can locate those nearest to you by clicking on Find a Contactor.

www.trees.org.uk

I trust that this is satisfactory and if you have any queries please contact me.

Yours sincerely,



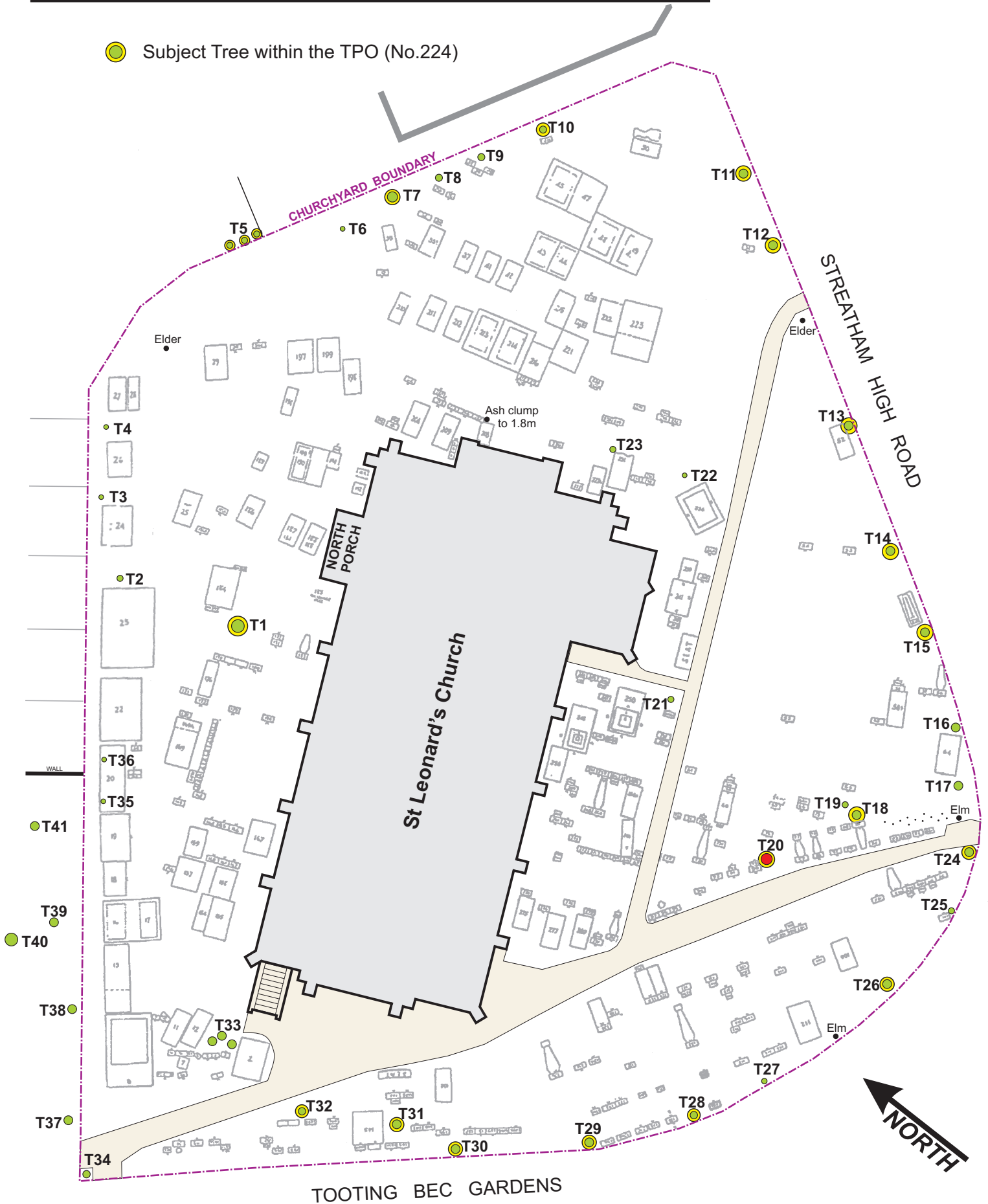
Jim Quaife

Dip Arb (RFS), F Arbor A, CEnv
AA Registered Consultant
Chartered Environmentalist

Attachments:	Appendix A – Site Plan	(one page A4)
	Appendix B – Schedule of Subject Trees	(three pages A4)
	Appendix C – Photographs	(two pages A4)
	Appendix D – Beaufort Scale	(one page A4)

The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Quaife Woodlands cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases after three years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Trees, whichever is the sooner.

● Subject Tree within the TPO (No.224)



Arboricultural Survey AR/3734/jq – St Leonard’s Church, Tooting Bec Gardens, Streatham, SW16 1RB Appendix B

KEY

No Tree reference number.

Ht Tree Height in metres.

Age Age Class **Y** – Young. **E** – Early mature. **M** – Mature. **FM** – Fully Mature **O** – Over-mature. **V** – Veteran.

List of TPO Trees from the London Borough of Lambeth Website – no plan available TPO No. 224 TPO tree numbers

T12 Streatham High Road 224 T11 Lime (*Tilia* Spp)
St Leonards Church (frontage of Streatham High Road)

T13 Streatham High Road 224 T12 Lime (*Tilia* Spp)
St Leonards Church (frontage of Streatham High Road)

T14 Streatham High Road 224 T13 Lime (*Tilia* Spp)
St Leonards Church (frontage of Streatham High Road)

T15 Streatham High Road 224 T14 Lime (*Tilia* Spp)
St Leonards Church (frontage of Streatham High Road)

T5 Streatham High Road 224 T15 Sycamore (*Acer pseudoplatanus*)

St Leonards Church (Beside the Bank, 266/268)

T10 Streatham High Road 224 T16 Hornbeam (*Carpinus betulus*)

St Leonards Church (Beside the Bank, 266/268)

T7 Streatham High Road 224 T17 Cedar (*Cedrus* spp)
St Leonards Church (Beside the Bank, 266/268)

T33 Streatham High Road 224 T1 Yew (*Taxus baccata*)
St Leonards Church (frontage Tooting Bec gardens)

T31 Streatham High Road 224 T2 Walnut
St Leonards Church (frontage Tooting Bec gardens)

T30 Streatham High Road 224 T3 Yew (*Taxus baccata*)
St Leonards Church (frontage Tooting Bec gardens)

T29 Streatham High Road 224 T4 Sycamore (*Acer pseudoplatanus*)
St Leonards Church (frontage Tooting Bec gardens)

T28 Streatham High Road 224 T5 Yew (*Taxus baccata*)
St Leonards Church (frontage Tooting Bec gardens)

T26 Streatham High Road 224 T6 Yew (*Taxus baccata*)
St Leonards Church (frontage Tooting Bec gardens)

T24 Streatham High Road 224 T7 Yew (*Taxus baccata*)
St Leonards Church (frontage Tooting Bec gardens)

T1 Streatham High Road 224 T18 Turkey Oak
St Leonards Church (north of church)

T20 Streatham High Road 224 T8 Horse Chestnut (*Aesculus hippocastanum*)
St Leonards Church (south of church)

T18 Streatham High Road 224 T9 Cedar (*Cedrus* spp)
St Leonards Church (south of church)

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No	Species	TPO No	Ht m	Age	Observations	Action	Priority
T1	Turkey Oak	T18	21	FM	Good condition, previously pollarded at 6m, wide spreading crown, branches toward church previously pruned, minor dead and dying wood – no more than would expect of a tree of this age and size. 6.8m from projection from western elevation of the church, which has cracking – see Appendix C, photographs 5 and 6		
T2	Lime		6	Y*	* age of coppice shoots - stump is older		
T3	Lime		5	E	Single stem		
T4	Yew		5.5	E	Multi-stemmed, previous crown reduction		
T5	Sycamores	T15	17	M	OFF SITE. Three separate trees in close proximity crowns overhang boundary		
T6	Apple		5	M			
T7	Atlantic Cedar	T17	19	FM	Crown starts at 10m, forked x 2 at 4.75m, several large pruning points, no visible defects, but it has an asymmetric shape		
T8	Yew		11	E			
T9	Ash		15	E	Lean to north, ivy 30%, poor potential as will progressively compromise the neighbouring building	Suggest that it is removed before it becomes much larger	At next maintenance operation, but ideally when T20 is removed
T10	Hornbeam	T16	16	M	Lean to south, ivy 80%,	Remove ivy, maintain headroom	Minor work
T11	Lime	T10	11	M	Pollarded at 7m, basal and epicormic shoots	Keep shoots pruned off	Minor work
T12	Lime	T11	13	M	Pollarded at 5.5m, basal and epicormic shoots, has a fallen branch	Keep shoots pruned off, remove fallen branch	Minor work
T13	Lime	T12	20	M	Pollarded at 6m, basal and epicormic shoots, lean to north	Keep shoots pruned off	Minor work

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No	Species		Ht m	Age	Observations	Action	Priority
T14	Lime	T13	16	M	Pollarded at 7m, basal and epicormic shoots	Keep shoots pruned off	Minor work
						Control future height	No urgency, as and when budget allows
T15	Lime	T14	16	M	Pollarded at 6m, basal and epicormic shoots, ivy 10%	Keep shoots pruned off	Minor work
T16	Apple		4	M	Lean over pavement, growing outside perimeter fence, ivy 100%	Remove ivy, prune off overhang	Minor work
T17	Lilac		3.5	E	Ivy 100%	Remove ivy	Minor work
T18	Atlantic Cedar	T9	18	M	Crown asymmetric to south-east, major lateral branch to south at 5m, very odd shape		
T19	Holm Oak		5.5	E	Growing at base of T18, asymmetric to east		
T20	Horse Chestnut (probably red flowering)	T8	17	M	Infected with heart rot and root decay fungus (<i>Ganoderma adspersum</i>), stem sounded hollow (to nylon-tipped mallet) around zone of fungal brackets, lean to north, swollen nodules on branches, live buds throughout crown, but some tip dieback – the fungus does not necessarily interfere with physiological condition of foliage until advanced. See Appendix C, photographs 1 - 4	Tree has no potential and will become structurally compromised by the decay. It should be removed	AS SOON AS budget allows
T21	Variegated Holly		4	E			
T22	Holly		7.5	E	Forked into 2 at 0.3m, small Elms underneath		
T23	Elder		6.5	M	In contact with headstones – see Appendix C, photograph 7	Suggest removal	At next maintenance operation Minor work
T24	Yew	T7	9	E	Multi-stemmed, lean to east, ivy 15%		
T25	Elm		11	E	Suckers at base,		
T26	Yew	T6	11	E	Multi-stemmed at 5m		
T27	Yew		12	E	Forked x 2 at ground level, lean to south		

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No	Species		Ht m	Age	Observations	Action	Priority
T28	Yew	T5	12	E			
T29	Sycamore	T4	18	M	Wide crown, pollarded at 7-8m, branch tips in contact with church roof	Prune branches to provide at least 2m perpendicular clearance to roof	As soon as budget allows
T30	Yew	T3	6.5	E	Epicormic shoots		
T31	Walnut	T2	13	M			
T32	Tree cotoneaster		8.5	M			
T33	Yew	T1	12	E	Main stem and 1 forked x 2 at ground level		
T34	Yew		10.5	M	I		
T35	Yew		4	E	Growing through grave railings	Should be removed	At next maintenance operation Minor work
T36	Holly		5.5	E	Growing through grave railings	Should be removed	At next maintenance operation Minor work
T37	Sycamore		16	M	OFF SITE. The Glebe Ivy 60%		
T38	Holly		9	E	OFF SITE. The Glebe		
T39	Lime		16	M	OFF SITE. The Glebe		
T40	Lime		21	M	OFF SITE. The Glebe Ivy 70%, overhangs churchyard, minor dead wood		
T41	Goat willow		7	E	OFF SITE. The Glebe Ivy 90%		

Photographs taken on 5th October, 2017



Photograph 1.
View of horse chestnut T20 showing the reduced shoot extension and that it was pollarded at about 4½ metres 15-20 years ago



Photograph 2.
Ganoderma fungal brackets at the base of T20



Photograph 3.
Unidentified fungal remnants east of the base of T20, possibly associated with the roots



Photograph 4.
Surface fungus on the base of T20, but probably saprophytic

Photographs taken on 5th October, 2017



Photograph 5.
View of the south-western elevation of the North Porch showing the cracking angled upwards to the west



Photograph 6.
View of the north-eastern elevation of the North Porch with what could be a small crack (arrowed)



Photograph 7.
View of elder T23 displacing a headstone

BEAUFORT SCALE

Specifications and equivalent speeds for use on land

FORCE	EQUIVALENT SPEED 10 m above ground		DESCRIPTION	SPECIFICATIONS FOR USE ON LAND
	miles/hour	knots		
0	0-1	0-1	Calm	Calm; smoke rises vertically.
1	1-3	1-3	Light air	Direction of wind shown by smoke drift, but not by wind vanes.
2	4-7	4-6	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
3	8-12	7-10	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.
4	13-18	11-16	Moderate Breeze	Raises dust and loose paper; small branches are moved.
5	19-24	17-21	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	25-31	22-27	Strong Breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.
7	32-38	28-33	Near Gale	Whole trees in motion; inconvenience felt when walking against the wind.
8	39-46	34-40	Gale	Breaks twigs off trees; generally impedes progress.
9	47-54	41-47	Severe Gale	Slight structural damage occurs (chimney-pots and slates removed).
10	55-63	48-55	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.
11	64-72	56-63	Violent Storm	Very rarely experienced; accompanied by wide-spread damage.
12	73-83	64-71	Hurricane	—