

ARBORICULTURAL DEVELOPMENT REPORT

**ON TREES LOCATED
ADJACENT TO SMITHFIELD RUGBY PITCH, STONYHURST COLLEGE
FOR**

The Headmaster and Governors

**Via LEVITT BERNSTEIN, ARCHITECTS
(Jamie Potter)**

October 2020

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CLIENT: The Headmaster and Governors, Stonyhurst College via Levitt Bernstein, Architects (Jamie Potter)

SITE: Land adjacent Smithfield Rugby Pitch, Stonyhurst College.

EXECUTIVE SUMMARY AND CONCLUSIONS

1. The report concentrates on the tree retention/removal/protection issues arising from proposals to construct a timber spectators pavilion to one side and close to the centre line of the pitch and backing onto an existing screen belt of mature and early mature trees.
2. The Report should be read in conjunction with the attached Tree Survey and Constraints Plan which identifies those trees to be removed and retained and how existing trees can be protected. The Tree Survey has been completed in the context of BS 5837 (2012) Trees in Relation to Design, Demolition and Construction.
3. The report identifies where required, the ways that any retained trees can be protected during the construction process and will indicate the method statements required to inform tree protection work prior to and during the build phase. If required these more detailed guides can be prepared later for use by the contractor and as a condition of the Planning Permission.
4. The trees surveyed meet the size requirements for consideration and have been graded 'A, B C and 'U' under the British standard rating referred to in BS 5837 (2012).
5. The Trees have not been covered by a Tree Preservation Order nor are within a Conservation Area. The College is mindful of the value of the silvicultural setting of the pitch and the need to retain the tree cover for amenity and sustainability purposes.
6. The proposals will involve:
 - The removal of dying species such as ash, the planting of sub-canopy screening and the pruning of mature oak to reduce branch failure risk and increase canopy density.
 - The specifying of adequate protection distancing between the build and existing trees.
 - Recommendations on minimising the impact of the build on the trees and the provision of methods statements for contractors during the build phase.
7. The conclusions of the report are that if the agreed recommendations are followed, the adjacent tree cover will not be damaged and will enhance the location of the new Pavilion and provide summer and autumn screening of the building from the central drive.

REPORT REMIT AND SUPPLIED DATA.

The purpose of the survey was to report on the implications for continued existing tree growth bearing in mind the proposed building developments on site and to report on the impact of the proposed development on the treescape.

The Survey and report should be seen within the context of the wider planning process. Other specialisms including an ecological assessment may also inform a final constraints plan.

Subject to the clients and Planning Authorities requirements this may involve the Consulting Arborist beyond the planning permission stage to the build and Tree protection process. The attached appendix. (Fig 1. The Design and Construction process and tree care) shows the likely points of involvement.

THE SURVEYOR

I am Ken Linford, a consulting arborist, trained in Quantified Tree Risk Assessment, application of BS 5837 (2012) and Tree Defect identification. I have experience as a tree care contractor for more than 25 years and have been providing a consulting service for Local Councils, private persons and architects for 15 years. My CPD record is open to inspection if required. I am covered by PI insurance by Trust Insurance to a value of £1,000,000

TREE SURVEY CONDITIONS

The site survey visit was carried in September 2020. Conditions were wet and calm. The trees were in full leaf. The trees were not climbed but the situation was viewed from ground level. Visual Tree Assessment Techniques was used throughout and hammer tests and a fine drill were used where required to determine trunk integrity and the extent of any decay.

THE TREE SURVEY.

1. The attached schedule lists and rates the trees. We are not aware if any further tree protection measures beyond that already known have been enacted by the Local Authority.
2. The significant trees within the influencing area of the build site have been number tagged for purposes of identification. The numbers are cross referenced onto the schedule and the attached constraints plan and final proposed print.

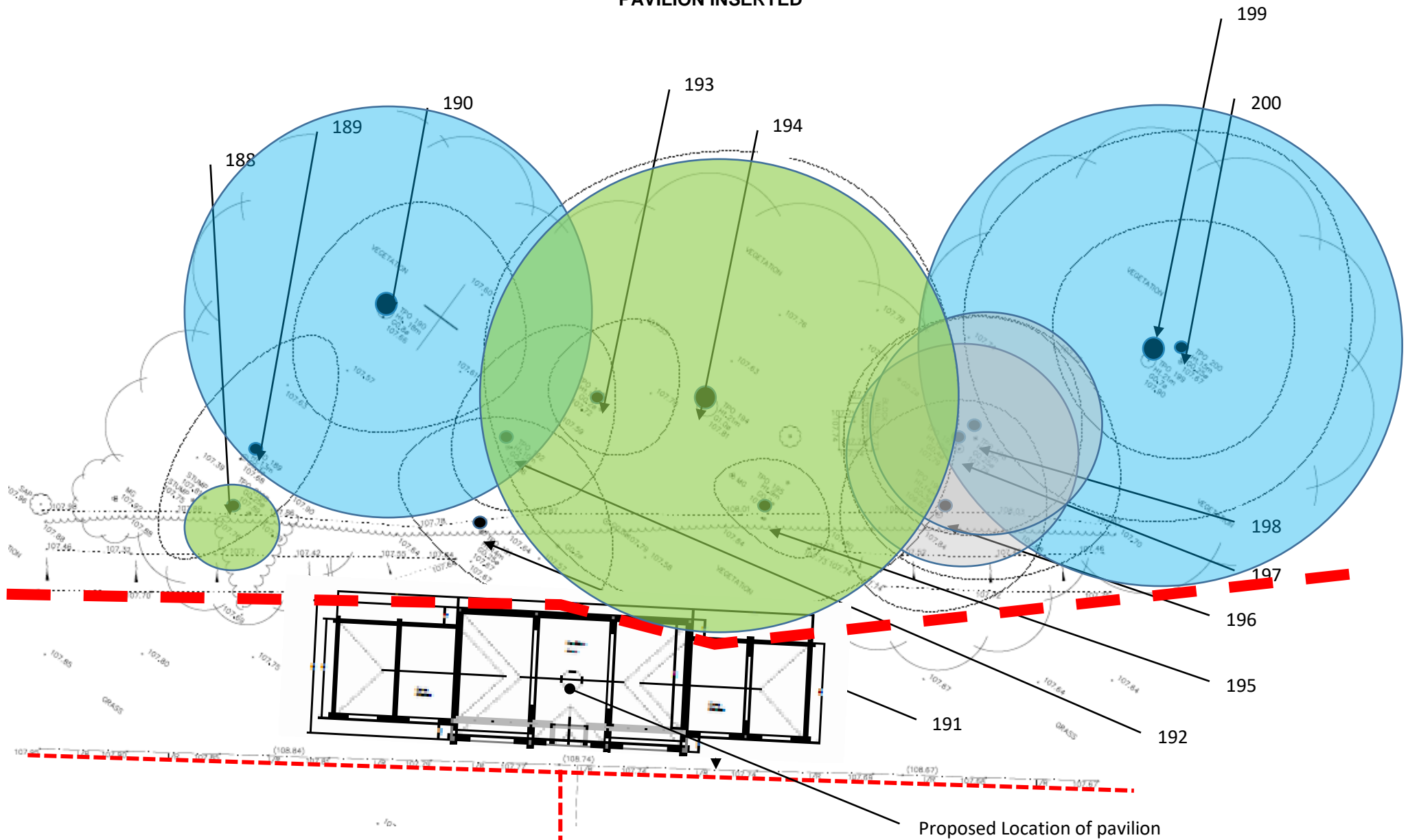
The appendix Table1 shows a Cascade chart used for Tree Quality Assessment.

TREE SCHEDULE AT SMITHFIELD RUGBY PITCH, STONYHURST COLLEGE

Tag/ No (Tpo No.)	SPECIES	HG T	DBH (mm)	CANOPY SPREAD n s e w	CANOPY CLEARANCE	AGE CLASS	GENERAL CONDITION	VIGOUR G/F/P	WORK RECC FOR MANAGEMENT	SULE Yrs	RPA Radius (m ²)	BS 5837 RATING
188	Oak	9	210	4	3	EM	Good	G	Monitor	40	2.5 (20m ²)	A1
189	Ash	12	260	4	6	EM	Poor. ADB	P	Monitor and fell	5		U
190	Oak	19	700	5	4	M	Good, fastigiated form Died back and damaged leader	G	Remove deadwood and Stubs	30	8.4 (222m ²)	B2
191	Ash	11	250	4	4	EM	Poor. ADB	F	Monitor and fell	5		U
192	Ash	9	270	4	3	EM	Poor. ADB	P	Monitor and fell	5		U
193	Ash	9	175	2	5	EM	Poor. ADB Suppressed under 194	P	Monitor and fell	5		U
194	Oak	21	780	12	6	M	Good, Burr epicormics, High canopy 14m stem	G	Reduce side canopy to SE by 3m	40	9.3 (272m ²)	A1
195	Birch	7	100	2	-	EM	Poor, Dead leader	P	Monitor and fell	5		U
196	Birch	12	250	2	4	EM	Good, Secondary leader	F	Monitor	15	3.00 (28m ²)	C2
197	Birch	10	350+200	6	3	M	Good, twin stem	G	Monitor	15	6.0 (113m ²)	C2
198	Beech	8	200+200+ 100	6	-	M	Good, conjoined with 197	G	Monitor	15	6.0 (113m ²)	C2
199	Oak	20	700	8	10	M	Good, thin upper canopy. Deadwood	F	Remove deadwood and reduce canopy spread to SE by 3m	35	8.4 (222m ²)	B2
200	Beech	6	200	4	3	EM	Good Suppressed	G	Monitor	15	2.4 (18m ²)	C2

SULE: safe useful Life expectancy. Canopy spread shown as to the SE. Age Class: Young, early mature, mature, late mature. ADB: Ash Die Back disease

TREE LOCATION AND TREE CONSTRAINTS PLAN AT SMITHFIELD RUGBY PITCH, STONYHURST COLLEGE SHOWING ROOT PROTECTION AREAS WITH PAVILION INSERTED



ISSUES ARISING FROM TREE LOCATIONS AND CONDITIONS

The dominant and most important trees in the plantation are the original oaks 190, 194,199. The more recent planting was mixed species with a significant proportion of ash which are now failing to Ash Die Back disease. The birch ash and hazel have not been thinned in the past and many of the trees are suppressed. The ground is wet and waterlogged at times. The drain line along the edge of the woodland is blocked but will be taken up by the root zones of many of the trees. For this reason drain reconstruction is not recommended although if the ditch was piped at its present level and then soiled and seeded this would be acceptable and might help reduce the waterlogging..

Ash Die Back Disease

Most of the ash trees in the plantation will die in the next 3-7 years. There is no cure and where gaps occur in open glade areas, infill planting of Hazel, holly, yew and laurel may increase the density of the cover in the future

Tree screen Density.

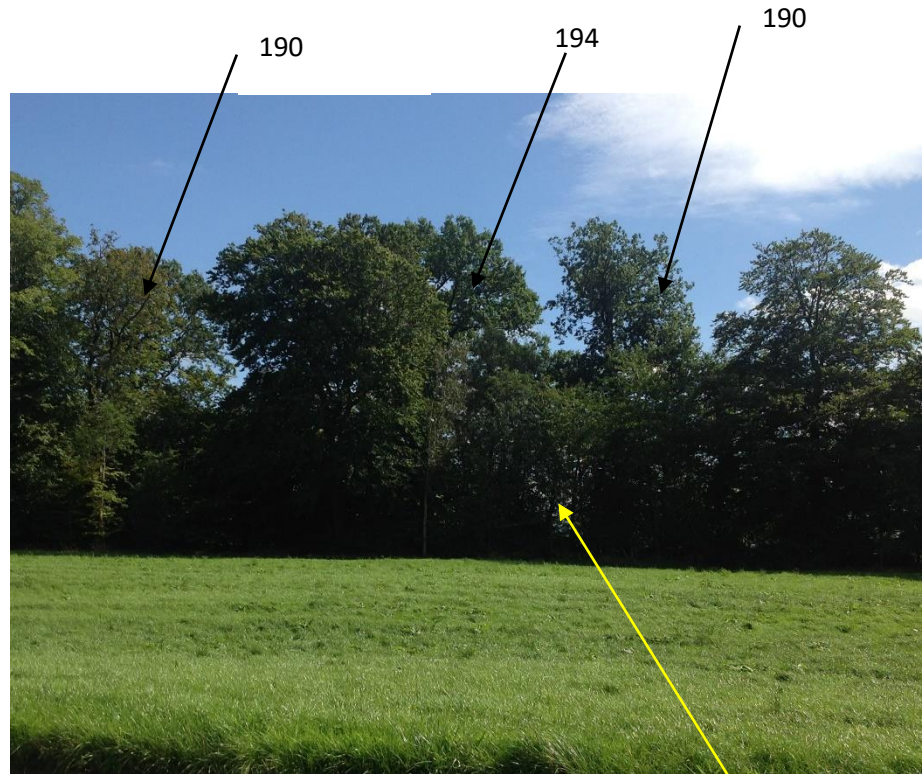
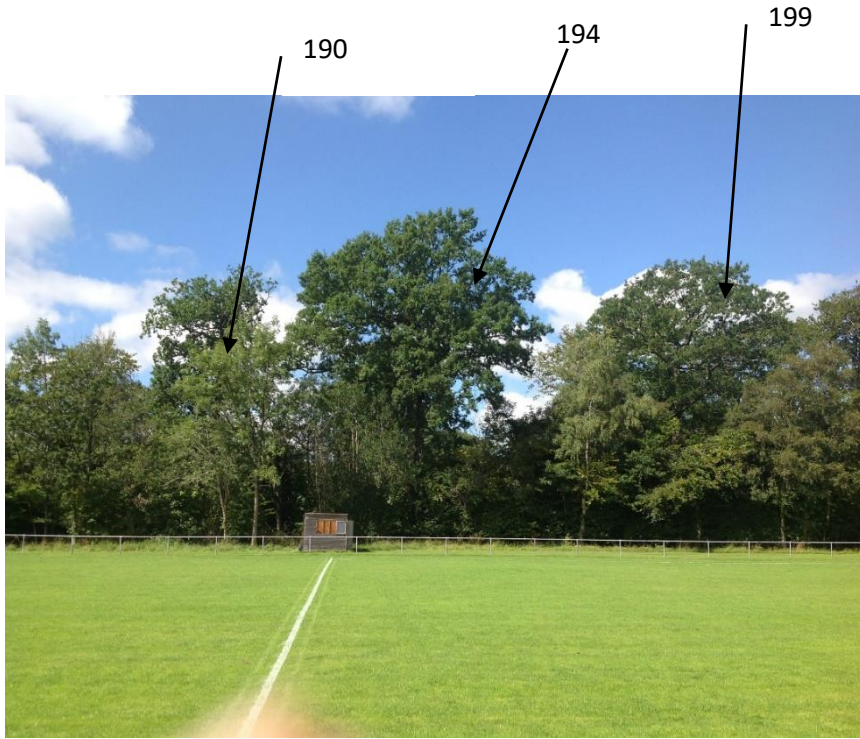
The photos shown below are the summer and early autumn screening offered by the trees. This screen will be somewhat lost in winter when the trees lose their leaves. The woodland has few evergreen species. The pavilion profile will be visible from the main drive between October and May.

Oak Tree Pruning

The canopy spread of the principle oak trees can be reduced by selective pruning to avoid contact with the pavilion roof. This is set out in the schedule. This pruning and removal of deadwood will also encourage a denser canopy cover in the future.

Adjustment of Pavilion Location.

The proposed location of the pavilion has been brought away from the tree screen by a metre. The RPA of 194 (Oak) intersects with the foundation line of the Pavilion as shown on the plan. Given that the ditch will provide an attraction to the tree roots a hand dug investigation on the foundation line to 500mm depth should identify if the root zone of the oak is present. If this is the case a pile or screw pile supported foundation could be considered. This could be conditioned by the planning authority



View to existing hut from drive side

The heavy red dashed line on the constraints plan is the limit of the joint root protection area leaving a distance of 7.5m from the RPA line to the steel balustrade to the pitch.

This would make available an access strip in front of the pavilion of 1.8m.

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TREE PROTECTION DURING THE DEMOLITION AND BUILD

The builder will adhere to the following code of practice and a **Method Statement for Tree Protection** which can be prepared and expanded for use by the contractor if required.

1. The red dashed line on the plan indicates the extent of the Root protection area and the location of protection in Hares fencing mounted on **fixed posts or scaffold** to ensure that the protection area is not breached or used for material storage.
2. The fencing shall be erected on the south side of the ditch from the trees as shown on the plan
3. Full tree root zone protection should be implemented after any initial tree removal and pruning works and **before** any ground work and foundation work commence.
4. Methods should be devised to avoid concrete ground contamination of the ditch and root zone during the pouring of the foundations for the pavilion.
5. The scaffolding/fence will conform to that outlined in BS 5837 (2012) and will ensure that ground contamination and compaction is avoided.
6. The tree protection fencing will remain in place until the construction work has been completed.

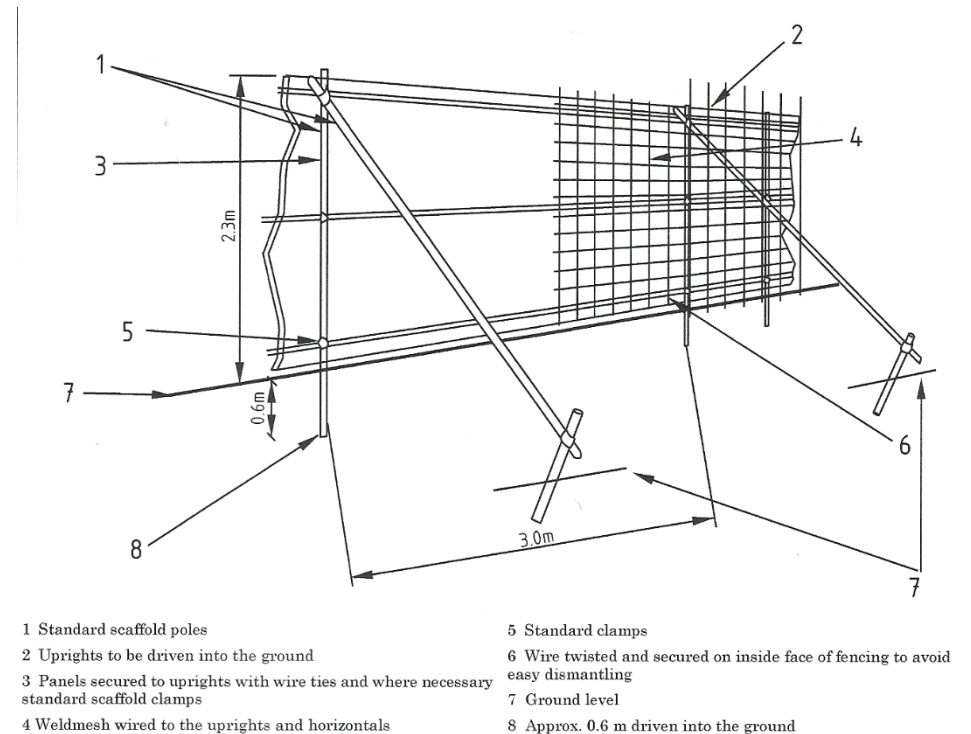


Table 1 Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U 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, 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 <p><i>NOTE</i> Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>			See Table 2
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
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 conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	See Table 2
Category B Trees of moderate quality with an estimated remaining life expectancy of 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 value	See Table 2
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 value	See Table 2