

# SJ Stephens Associates

ARBORICULTURAL, LANDSCAPE & MANAGEMENT CONSULTANTS

Savernake Barn Stokke Common Great Bedwyn Marlborough Wiltshire SN8 3LL Tel: 01672 871 862 www.sjstephens.co.uk e: info@sjstephens.co.uk

# <u>Tree Hazard</u> <u>Assessment / Tree</u> <u>Condition Survey</u>

<u>At:-</u>

252 Kingston Road London TW11 9JQ

#### On behalf of:-Link Estates Itd Jantzen House Ealing Road Middlesex

**TW8 0GF** 

#### Prepared by:

Simon Stephens MA Oxon, Dip Arb(RFS), MArborA, C Env. MICFor Email: <u>simon@sistephens.co.uk</u>

Survey Date: Report Date: Project no: 22<sup>nd</sup> August 2024 5<sup>th</sup> September 2024 2342

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#### 1 BACKGROUND

- **1.1** This report has been prepared by SJ Stephens Associates as per instructions from Donald Shearer on behalf of Link Estates Ltd. It covers all trees enclosed within the grounds ar 252 Kingston Road, as shown on the plan included as Appendix A.
- **1.2** The tree survey was undertaken, and this report has been prepared, by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, MICF, a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- **1.3** At the time of the survey, the weather was fine with no restrictions to visibility. Broadleaf trees were in leaf. There were no limitations to access around the trees.
- **1.4** The London Borough of Richmond website was viewed on 05-09-2024, showing that the site falls within a Conservation Area. Details of Tree Preservation Orders are not shown on the website. However, it is understood that the willow, T23, is protected by a Tree Preservation Order.
- **1.5** A previous survey carried out by John Cromar's Arboricultural Company Ltd was undertaken in 2011 made tree work recommendations, which were approved by the London Borough of Richmond (ref: 11/3885/FUL). Trees now recommended for removal were all approved for removal in 2011, but the work was not undertaken.

#### 2 TREE RISK MANAGEMENT

- **2.1** Trees provide landscape, wildlife, pollution filtering and climate change benefits. Trees are also important as part of our culture, history and are essential for our physical health, mental wellbeing and quality of life.
- **2.2** Compared to other everyday risks, the overall risk of branches falling is extremely low. Our annual risk of being killed or seriously injured is less than 1 in a million. We are at greater risk driving 250 miles than from falling branches or trees over an entire year.
- **2.3** Trees are living structures that sometimes shed branches or fall during severe weather. Since we need the many benefits from trees, we have to accept we cannot remove all of the risk. Leaves, bark, cones, nuts, fruits, and small diameter deadwood regularly fall from trees. This natural debris is an Acceptable or Tolerable risk.
- **2.4** We have a duty of care to manage the risk from trees. The duty also says we should be reasonably proportionate, and reasonably practicable when managing the risk ie. there is a balance between the many benefits trees provide and the risk, and the costs, of managing the risk.
- **2.5** We are all expected to act reasonably and responsibly. We can manage our exposure to the higher risk from tree failure during severe weather by not visiting areas with large trees. If we go out during severe weather, we are choosing to accept some of the risk.
- **2.6** The Tolerability of Risk Framework is a risk management approach used by duty holders where they manage a risk imposed on the public. This defines Broadly Acceptable and Unacceptable levels of risk. Between these levels is a region where the risk is Tolerable if it is 'as low as reasonably practicable', ie. if the costs of the risk reduction are much greater than the value of the risk reduction.
- 2.7 SJ Stephens Associates use the VALID system, which has applied 'ISO 31000 Risk Management' and the 'Tolerability of Risk Framework' to tree risk-benefit management and assessment. In ISO risk terms, our 'objectives' are to grow, maintain, conserve and to manage the risk from tree failure to an acceptable or tolerable level.
- 2.8 We assume the occupier of the site will manage the risk from trees with passive assessment between our visits. Passive assessment is simply picking up any obvious tree risk features one cannot help but notice during normal daily activities. Typical features are shown in appendix E. If anything like these features are seen, the issue should be resolved or either a tree surgeon or ourselves should be contacted.

- 2.9 We have carried out an active assessment of all trees within the survey area looking for tree risks that might not be acceptable or tolerable. An active assessment has three levels that increase in depth of evaluation Basic > Detailed > Advanced. The assessment of risk is based on three factors:
  - The level of occupancy within striking range ie. the "target"
  - The likelihood of failure
  - The size of the tree/tree part that is at risk of failing
- **2.10** Risk ratings have limitations that depend on the level of assessment. When we carry out an active assessment at a basic level, if there are no obvious tree risk features, the risk is Acceptable. A Detailed or Advanced Assessment is a more thorough evaluation which might find features that were not apparent at a Basic level, and the risk could be higher. However, carrying out a higher level of assessment, with the additional costs, when there is no obvious feature to trigger it is not reasonable, proportionate, or reasonably practicable.
- 2.11 At a Basic level of assessment, we are looking for trees with obvious features where the risk might not be Acceptable or Tolerable or for features that might increase the likelihood of failure. When necessary, we evaluate the significance of these features and appropriate management recommendations are made and are recorded in the tree schedule in appendix B. For more complex situations, VALID's Tree Risk App is used to assess the risk. This level of inspection was not required for this site.
- 2.12 We have four traffic light coloured risk ratings to show how we manage the risk:-
  - Red Not Acceptable risks will be reduced to an Acceptable level.
  - Amber Not Tolerable risks will be reduced to an Acceptable level, but with a lower priority than red Not Acceptable risks.
  - Amber Tolerable risks will not be reduced, but may require an increased frequency of assessment than green Acceptable risks.
  - Green Acceptable risks will not be reduced.
- **2.13** If further information about the likelihood of failure is needed, an Advanced Assessment may be required. Often, this will be for a valuable tree which has extensive basal decay where internal decay analysis is justified, or where an aerial inspection is necessary to look at the upper stem and branches. When a tree needs an Advanced Assessment, we will make recommendations and help decide whether the tree has enough value and future benefits to justify the investment.
- **2.14** If we find emergency work, we raise this with the client as soon as we can.

### **3 SURVEY DETAILS, SCOPE AND LIMITATIONS**

- **3.1** Tree inspection took place from ground level with the use of binoculars, sounding hammer and metal probe using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could increase the risk of structural failure were noted. If climbing plants, undergrowth or basal growth prevented inspection, this has been recorded.
- **3.2** No internal decay devices, or other invasive tools to assess tree condition, were used and no soil excavation or root inspection was carried out.
- **3.3** This survey has not considered the effect that trees or vegetation may have on the structural integrity of buildings through subsidence or heave.
- **3.4** Trees details have been added to plans included as Appendix A. Tree positions are approximate, fixed by reference to the plan provided or by pacing distances on site from features shown on the plan. The following information was recorded for each tree, and is shown in the Tree Schedule included as Appendix B:
  - Number: an identity number for each tree, which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees, normally of the same species, are located close together and are similar in character and requirements, they have been treated as a Group under a single Number, prefixed with a "G".
  - **Species**: common name.
  - **Tree height**: approximate height in metres.
  - **Stem diameter**: approximate diameter in millimetres, taken at 1.5mabove ground. Where there are a number of stems, the diameter has been taken just above the root flare.
  - Crown spread: approximate crown spread to N, S, E and West.
  - Age class: Young, Middle aged, Mature, Over-mature, Veteran.
  - **Condition**: features that affect the safe useful life expectancy and amenity of the tree, including the presence of decay or any physical defect.
  - Risk Rating: Not Acceptable, Not Tolerable, Tolerable, Acceptable see section 2.12 above.
  - **Management Recommendations**: recommendations to ensure the health and safety of the tree.
  - Estimated Remaining Contribution: <10 years, 10-20 years, 20-40 years, >40 years.
  - **Category grading**: amenity tree classification taken from BS 5837:2012, Trees in Relation to Construction (see Appendix C for details), as follows:
    - Category U: trees with less than 10 years life expectancy (Red)
    - Category A: high quality trees, able to make a substantial contribution for at least 40 years. (Green)
    - Category B: moderate quality trees, able to make a significant contribution for at least 20 years. (Blue)
    - Category B-C: an intermediate category between categories B and C.

- Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter.(Grey)
- Safety Risk Rating: Acceptable, Tolerable, Not Tolerable, Not Acceptable
- Priority: whether the works specified at Low, Medium or High priority.
- **Gang hours:** an approximate guide on how long it would take a fully equipped 2man gang of tree surgeons to undertake the work.

#### 4 FINDINGS AND PROPOSALS

#### 4.1 Overview

- 4.1.1 Tree condition comments and tree work recommendations are provided in the tree schedule included as appendix B.
- 4.1.2 The garden of 252 Kingston Road is densely planted with trees including a line of lime along the frontage and a group of Western red cedar in the rear garden.
- 4.1.3 There is also an overmature weeping willow which has partially collapsed onto an outbuilding and a mature eucalyptus.

#### 4.2 Tree Work Proposed

- 4.2.1 The only trees recommended for removal are:-
  - Two low quality birch, T18 and T19, which are competing with the mature lime street tree.
  - A collapsing weeping willow, T23, shown in the photo in Appendix Fi).
  - Two low quality birch, T34 and T35, growing either side of the rear entrance and shown in the photo in Appendix Fi).
- 4.2.2 The only work assessed as High Priority is the removal of the willow, T23, since the building is understood to be dangerous and unusable with the tree resting on the roof. The willow should be removed as soon as possible. The majority of tree work is Medium Priority, for completion within 6 months ie. by the end of March 2025.
- 4.2.3 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1<sup>st</sup> March to 31<sup>st</sup> July, however this can vary depending on species and location. During these months a careful inspection must be made before work commences and works must be postponed if active nests are found.

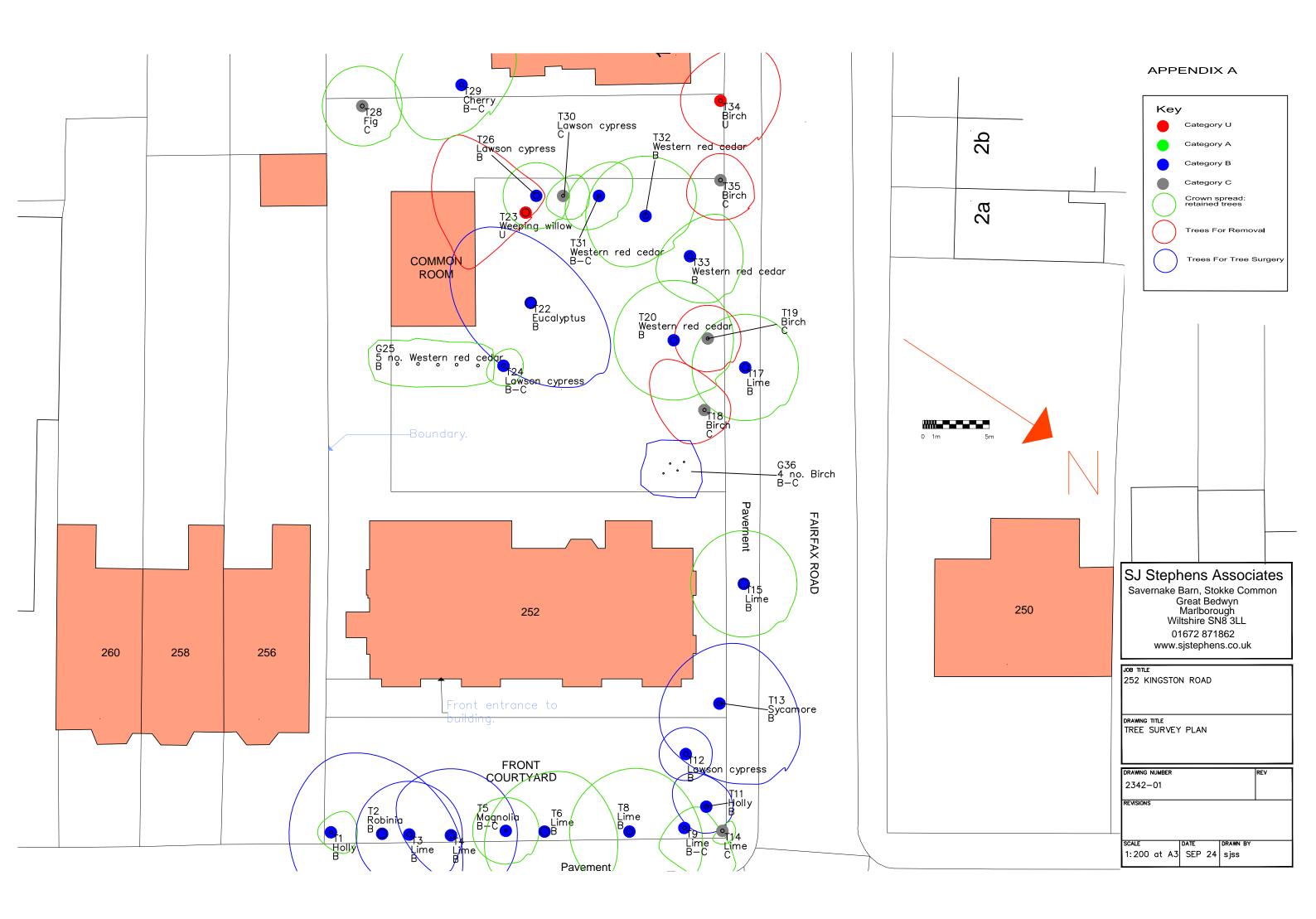
4.2.4 It is also a criminal offence to disturb, damage or destroy any bat roost or hibernation area. Contractors must be reminded of their responsibilities and should contact the relevant authorities if any signs of bats are found.

#### 4.3 Recommendations

- 4.3.1 Tree works are prioritised as of Low, Medium or High priority. It is recommended that works should be completed within the following timescales:-
  - High: within 2 months
  - Medium: within 6 months ie. by end March 2025
  - Low: not essential for safety normally to improve amenity value or reduce risks in the future.
- 4.3.2 Since the site is within a Conservation Area / protected by a Tree Preservation Order, an application must be made to the Local Planning Authority of any intended tree surgery works, A tree work application must be made to the Local Planning Authority. This can be made online without charge.
- 4.3.3 Tree work should be undertaken to the standards set out in BS 3998:2010 British Standard recommendations for Tree Work, if possible, by an Arboricultural Association Approved Contractor (see <u>www.trees.org.uk</u>).
- 4.3.4 The tree schedules and plans attached to this report (appendices A and B) should be used as a base to record relevant information over time to demonstrate a systematic approach to tree hazard assessment.
- 4.3.5 All trees should be re-inspected within 36 months ie. by end August 2027 to:-
  - Review tree works undertaken
  - Re-inspect all trees
  - Provide a report, updating the tree schedule and plan to record works undertaken and provide any further recommendations.

### **5** REFERENCES

- BS5837:2012 Trees in relation to design, demolition and construction Recommendations.
- BS3998:2010 Tree Work. Recommendations.
- BS8545:2014 Trees: from nursery to independence in the landscape. Recommendations.
- Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (<u>www.ntsgroup.org.uk</u>)
- Mattheck & Breloer (1994). HMSO London. Research for Amenity Trees No4: The Body Language of Trees.



Appendix B Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Bran	ich Sj	pread	l (m)	m) Canopy Cleara Age -nce Class (m)		Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Risk Rating	Priority
				Ν	S	Е	W								
T1	Holly	4.5	260	2	1	1	2	1.6	Early mature	Previously topped at 3.5m. Growing from rockery.		20-40	В	Acceptable	
T2	Robinia	18.5	640	7	7	7	5	4.0	Mature	light lean to north. Bifurcates at 1.9m. Attractive tree. anopy within 0.5m of no.256. Possible risk of ranches breaking out. Crown reduction reducing height by 2m and crown spread to south and east by approx 1.5m to reduce risk of breakout and leave canopy 2m clear of building.		20-40	В	Tolerable	Medium
Т3	Lime	16.5	380	4	4	4	4	1.6	Early mature	Main stem bifurcates at 1.6m. Previously pollarded at 3.5m. Possibility of branches breaking out at previous pollard points.	5m. Possibility of branches breaking out at previous		В	Tolerable	Low
T4	Lime	16.5	530	5	5	3	5	1.6	Early mature	win stems from base - 300 and 440mm. Previously ollarded at 3.5m. Basal growth. Basal decay reported of 2011 tree survey.		15-30	В	Not Tolerable	Medium
Т5	Magnolia	9	190	2.5	2.5	2.5	2.5	1.5	Semi mature	Reasonable vigour, despite dense shade.		20-40	B-C	Acceptable	
Т6	Lime	16	620	6	4	5	5	1.9	Mature	Previously pollarded at 4m. Attractive tree. Possibility of branches breaking out at previous pollard points.		20-40	В	Tolerable	
Т8	Lime	13	490	6	4.5	4.5	5	2.2	Mature	Previously pollarded at 4m. Possibility of branches breaking out at previous pollard points.		20-40	В	Tolerable	
Т9	Lime	9	270	5	1	2.5	2	2	Early mature	win stems from 1.6m. Possibility of branches breaking ut at previous pollard points.		15-30	B-C	Tolerable	
T11	Holly	8	320	2	3	2	2	0.9	Early mature	stems - avg 160mm. Reasonable vigour. Remove low branches to provide 2m clearance to path.		20-40	В	Acceptable	Low
T12	Lawson cypress	16	340	2	2	2	2	1.6	Mature	Twin leaders. Good vigour. Surface root lifting to tarmac path, creating trip hazard.			В	Acceptable	Low
T13	Sycamore	13.5	390	7	4	5	5	1.7	Early mature	Reduced to various points in the past. Canopy within 0.5m of building. Dead branch (110mm diameter) to outh. Remove deadwood, together with low branches in front of 1st floor windows.		20-40	В	Tolerable	Medium
T14	Lime	3.5	260	1	0	1	1	0.7	Semi mature	Single shoot from decayed and hollow 1.6m stump.		5-15	С	Acceptable	
T15	Lime	16.5	est 650	4	4	4	4	1.6	Mature	Street tree. Regularly pollarded in past - now with approx 4m fresh growth.		20-40	В	Acceptable	
T17	Lime	16.5	est 550	4	4	4	4	1.8	Mature	Street tree. Previously pollarded.		20-40	В	Acceptable	
T18	Birch	18	240	2	5	3	2	2	Mature	Only moderate vigour. Dense ivy to upper canopy.	Remove	10-20	С	Tolerable	Low
T19	Birch	11	220	2.5	2.5	2.5	2.5	1.8	Mature	Poor structure. Dense ivy. Suppressed by adjacent trees.	Remove to allow surrounding trees to develop.	5-15	С	Tolerable	Low
T20	Western red cedar	14	480	4.5	4.5	4.5	4.5	1.3	Early mature	Twin leaders from 7m. Good vigour.		20-40	В	Acceptable	

Appendix B Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Bran	ich Sj		l (m)	Canopy Cleara -nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Risk Rating	Priority
				Ν	S	Е	W								
T22	Eucalyptus	20.5	790	7.5	7	5	4	4.5	Mature	Low dead branches. Heavy wisteria growth - now almost entirely dead. Upper canopy showing good vigour. Possible risk of branch breakout.	Remove dead branches and wisteria. Reduce over extended branches to north. Remove low branch to east growing through T24 to reduce risk of breakout. As per photos in Apx Fii).	15-30	В	Not Tolerable	Medium
T23	Weeping willow	12.5	570	0.5	8	6	2	0	Mature	Leaning to south east, with major limbs growing into roof of out building. Main stem completely hollow. Weight supported by roof. Building understood to be dangerous. See photos in Apx Fi)	Remove.	<10	U	Not Acceptable	High
T24	Lawson cypress	13.5	280	1.5	1	1.5	1.5	2	Early mature			15-30	B-C	Acceptable	
G25	5 no. Western red cedar	10 - 13	200 - 440	0	0	0	0	1.6	Early mature	Previously topped at 3.5m, but now grown out. Low branches removed. Good vigour.		20-40	В	Acceptable	
T26	Lawson cypress	15.5	490	2.5	2.5	2.5	2.5	2.5	Mature	Twin stems from 1m - 310 and 380mm. Topped at 4.5m in past, but new canopy grown out. Good vigour.		15-30	В	Acceptable	
T28	Fig	6	290	3	3	3	3	0.6		3 stems at 1.5m - avg 170mm - all with extenisve bark and heartwood damage.		5-15	С	Acceptable	
T29	Cherry	4	est 300	3	5	5	5	1.8	Mature	Growing in adjacent property - base not inspected. Omamental variety.		10-20	B-C	Acceptable	
Т30	Lawson cypress	14.5	230	2	1	1.5	2	1.7	Early mature	Drawn up.		10-20	С	Acceptable	
T31	Western red cedar	14	260	2	2	3	3	1.6	Early mature	Partially suppressed.		15-30	B-C	Acceptable	
T32	Western red cedar	14	430	3	4.5	4.5	4.5	1.3	Early mature	Low branches removed. Good vigour.		20-40	В	Acceptable	
Т33	Western red cedar	14.5	430	4	2	3	4	1.5	Early mature	Low branches removed. Good vigour.		20-40	В	Acceptable	
T34	Birch	9	280	4	3	3	5	1.6	Mature	Repeatedly pollarded in past - with decay in pollard points. Declining vigour. Canopy against adjacent property and growing through utility lines. Stems likely to breakout.		<10	U	Tolerable	Medium
T35	Birch	7	280	3	2	3	2	2	Mature	Moderate vigour. Sections have broken out in past - further sections likely to follow.	Remove.	5-15	С	Tolerable	Medium
G36	4 no. Birch	13 - 17.5	100 - 200	0	0	0	0	0.7	Early mature	Foliage within 1m of building. Two smaller trees are multistem.	Remove self sown sycamore (3.5m) from group.	15-30	B-C	Acceptable	Low

## BS 5837:2012, Table 1 Cascade chart for tree quality assessment

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Category and definition	Criteria (including subcategories where a	ppropriate)		Identification on plan						
Trees unsuitable for retention	(see Note)									
<b>Category U</b> Those in such a condition that they cannot realistically	including those that will become un reason, the loss of companion shelte	ave a serious, irremediable, structural defect, such that their early loss is expected due to collapse, ose that will become unviable after removal of other category U trees (e.g. where, for whatever loss of companion shelter cannot be mitigated by pruning)								
be retained as living trees in the context of the current land use for longer than 10 years	<ul> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>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</li> </ul>									
	NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.									
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	-						
Trees to be considered for rete	ention									
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						

Appendix C

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Bran	ch Sj	pread	d (m)	Canopy Cleara -nce (m)	Age Class	Observations	Management Recommendations	
				Ν	s	Е	w					
T2	Robinia	18.5	640	7	7	7	5	4.0	Mature	Slight lean to north. Bifurcates at 1.9m. Attractive tree. Canopy within 0.5m of no.256. Possible risk of branches breaking out.	Crown reduction reducing height by 2m and crown spread to south and east by approx 1.5m to reduce risk of breakout and leave canopy 2m clear of building.	
Т3	Lime	16.5	380	4	4	4	4	1.6	Early mature	Main stem bifurcates at 1.6m. Previously pollarded at 3.5m. Possibility of branches breaking out at previous pollard points.	Remove low hanging branches to provide clearance over lawn.	
T4	Lime	16.5	530	5	5	3	5	1.6	Early mature	Twin stems from base - 300 and 440mm. Previously pollarded at 3.5m. Basal growth. Basal decay reported in 2011 tree survey.	Remove basal growth. Repollard to 4m.	
T11	Holly	8	320	2	3	2	2	0.9	Early mature	4 stems - avg 160mm. Reasonable vigour.	Remove low branches to provide 2m clearance to path.	
T12	Lawson cypress	16	340	2	2	2	2	1.6	Mature	Twin leaders. Good vigour. Surface root lifting to tarmac path, creating trip hazard.	Remove low branches to provide 2m clearance over path.	
T13	Sycamore	13.5	390	7	4	5	5	1.7	Early mature	Reduced to various points in the past. Canopy within 0.5m of building. Dead branch (110mm diameter) to south.	Remove deadwood, together with low branches in front of 1st floor windows.	
T18	Birch	18	240	2	5	3	2	2	Mature	Only moderate vigour. Dense ivy to upper canopy.	Remove	
T19	Birch	11	220	2.5	2.5	2.5	2.5	1.8	Mature	Poor structure. Dense ivy. Suppressed by adjacent trees.	Remove to allow surrounding trees to develop.	
T22	Eucalyptus	20.5	790	7.5	7	5	4	4.5	Mature	Low dead branches. Heavy wisteria growth - now almost entirely dead. Upper canopy showing good vigour. Possible risk of branch breakout.	Remove dead branches and wisteria. Reduce over extended branches to north. Remove low branch to east growing through T24 to reduce risk of breakout. As per photos in Apx Fii).	
T23	Weeping willow	12.5	570	0.5	8	6	2	0	Mature	Leaning to south east, with major limbs growing into roof of out building. Main stem completely hollow. Weight supported by roof. See photos in Apx Fi)	Remove.	
T34	Birch	9	280	4	3	3	5	1.6	Mature	Repeatedly pollarded in past - with decay in pollard points. Declining vigour. Canopy against adjacent property and growing through utility lines. Stems likely to breakout.	Remove.	
T35	Birch	7	280	3	2	3	2	2	Mature	Moderate vigour. Sections have broken out in past - further sections likely to follow.	Remove.	
G36	4 no. Birch	13 - 17.5	100 - 200	0	0	0	0	0.7	Early mature	Foliage within 1m of building. Two smaller trees are multistem.	Remove self sown sycamore (3.5m) from group.	

#### **Passive Assessment – Tree Risk Features**

#### **Appendix E**

#### 2.1 Root failure

9

10

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13

Storms can break tree roots without blowing them over

Signs to look out for are

Change in angle of the trunk Large cracks in the soil Hump in the ground on one side



#### 2.2 Hanging branches

Don't forget to look up

Branches can break during storms and still hang on

> Sometimes they can get stuck up there for quite a while



2.3 A crack or split into the wood, beyond the bark



2.4 Decline & death



2.5 Decay fungi fruiting bodies



Photographs

Jake Miesbauer, Michael Richardson, Roy Finch, Mark Hartley, Rick Milson, Andrew Benson, David Abrahams Felicity Cloake & Wilf, David Humphries, Jack Prynn, Moreton Arboretum, Josh Behounek, Jan Allen

When trees bend and twist in storms the wood can split and crack

> Vertical cracks in the bark are just the tree growing well there's no need to worry

To stay healthy and strong trees 12 need 'solar panel' leaves to make food

When trees suffer they often have much less leaf cover and many dead branches

Standing dead trees have great habitat benefits but need checking

To decay fungi these 'fruits' are like apples to an apple tree

Decay fungi and trees mostly live happily together creating essential habitat for wildlife

Fungi can sometimes 'eat' too much wood and weaken the tree

## Appendix Fi)



## Appendix Fii)

