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Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Preliminary Arboricultural **Method Statement**

For:-

Two New Dwellings replacing the **Existing Dwelling**

At:-

Southernwood Tile Barn Woolton Hill Newbury **RG20 9UZ**

On behalf of:-Mr & Mrs O'Mahoney c/o Philip Wadge Architecture

Prepared by:

Simon Stephens MA Oxon, Dip Arb(RFS), MArborA, C Env. MICFor Email:

Survey Date: **Report Date:** Project no: 2088

4th April 2023 31st January 2024

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1 BACKGROUND

- **1.1** This Arboricultural Impact Assessment has been instructed by Philip Wadge Architecture, on behalf of Mr & Mrs O'Mahoney to specify tree protection measures and assess the arboricultural impact of the proposed demolition of the existing dwelling and replacement with two new dwellings and a garage at Southernwood.
- **1.2** Trees were surveyed, with findings shown in the Tree Schedule in Appendix B and plotted on the Tree Protection Plan in Appendix A. This also shows tree protection measures, which are specified in the Preliminary Arboricultural Method Statement in section 5 below. The arboricultural impact is assessed in section 6, which assumes that these measures are followed.
- **1.3** The Arboricultural Method Statement is only preliminary at this stage. Once planning permission has been granted, a detailed Arboricultural Method Statement will be prepared before work on site starts to include details of drainage, services and contractors facilities.
- **1.4** The tree survey was undertaken, and this report has been prepared, by Simon Stephens MA Oxon, Dip Arb (RFS), MArborA, C Env, MICFor a Registered Consultant with the Arboricultural Association, with over 20 years relevant experience.
- **1.5** This survey and report have been prepared in accordance with the recommendations of BS 5837:2012, Trees in relation to design, demolition and construction Recommendations.
- **1.6** Documentation supplied:
 - Philip Wadge Architecture, Proposed Site Plan: drawing no 22092/PL/15revC

2 SURVEY DETAILS AND SCOPE

- **2.1** The site survey included trees and shrubs within and immediately adjacent to the red line boundary, with a stem diameter over 75mm at 1.5m height, as shown located on the Tree Protection Plan, included as Appendix A.
- **2.2** 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.
- **2.3** Tree diameters were measured using a girthing tape and tree heights were measured using a hypsometer. Where use of a tape was restricted by site factors, diameters were estimated, with the diameter recorded in the tree schedule as eg "est 300".
- **2.4** At the time of the survey, the weather was fine, but with no restrictions to visibility. Broadleaf trees were not in leaf. There were no limitations to access around the trees within the site.
- **2.5** Tree details are shown on the Tree Protection Plan included as Appendix A. Tree locations have been taken from the topographical survey provided. Where not included on the topographical survey, they have been determined by measuring distances from features shown on the plan, using a laser measuring device. 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, prefixed with a "T", which cross references locations shown on the plan with the schedule in Appendix B. Where a number of trees are located close together and are similar in character and management 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**: diameter in millimetres, taken at 1.5m above ground. Where there are a number of stems, stem diameters are recorded in the condition column.
 - **Branch spread**: approximate spread in metres to N,S,E and W of the trunk. The approximate branch spread is drawn on the plan.
 - **Canopy clearance**: approximate height of the canopy above ground. Where a significant, low lateral branch is present, its height and direction of growth is included in the Condition column.
 - Age class: Young, Semi-mature, Early mature, 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.
 - **Management Recommendations:** recommendations to ensure the health and safety of the tree, within the future development.
 - Estimated Remaining Contribution: <10 years, 5-15 years, 10-20 years, 15-30 years, 20-40 years, >40 years.

- **Category grading**: tree classification taken from BS 5837:2012, Trees in relation to design, demolition and construction (see Appendix C for details), as follows:

Category U: Unsuitable for retention, trees with less than 10 years life expectancy, normally recommended for removal (Red) Category A: high quality trees, able to make a substantial contribution for at least 40 years, normally retained unless there is an over-riding reason for removal and appropriate mitigation. (Green)

Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained. (Blue) Category B/C: an intermediate category between categories B and C (not specifically described in BS5837). Trees, which should be retained wherever possible, providing retention does not unreasonably constrain the layout. (Blue)

Category C: low quality, in adequate condition to remain for at least 10 years, or young trees <150mm stem diameter. Trees which can be removed to allow the desired layout or new planting. (Grey)

For category A, B and C trees, a subcategory has been allocated, providing information on the reasons for selection of a specific category, as follows:

- Subcategory 1: mainly arboricultural values.
- Subcategory 2: mainly landscape values.

Subcategory 3: mainly cultural values, including conservation.

- Trees have been classified irrespective of the possible proximity to future construction. The BS 5837 category is colour coded, as indicated above, on the plan included as Appendix A.
- **Protection Distance:** the protection distance in metres required to provide the Root Protection Area recommended in BS 5837, assuming a circular area centred on the tree.
- Root Protection Area (RPA): the area in m², as recommended in BS 5837, to provide sufficient rooting area to ensure tree survival and which, in most situations, should be fenced off to prevent root damage from construction activities.

3 SURVEY LIMITATIONS

- **3.1** No internal decay devices, or other invasive tools to assess tree condition, were used.
- **3.2** 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 future building through subsidence or heave.

3.4 The tree survey has been undertaken for planning purposes. Although any obvious structural defects have been noted, a Tree Hazard Assessment has not been carried out. Mature trees close to highly populated areas or public highways should normally be checked for safety annually, by a suitably qualified person.

4 LEGAL PROTECTION OF TREES

- **4.1** The Basingstoke and Deane District Council website was viewed on 19-04-2023, showing that the site does not fall within a Conservation Area, however Tree Preservation Orders protect the trees highlighted on the Tree Protection Plan. The northern corner of the site is protected by a Group Order. A copy of the Order is required to establish exactly which trees are protected.
- **4.2** The presence of Planning Conditions currently attached to the site, was not checked.
- **4.3** Since the site is covered by a Conservation Area, six weeks notification must be given to the Local Planning Authority of any intended tree surgery works, to allow them the option of placing a Tree Preservation Order.
- **4.4** Once planning permission has been granted, provided the application clearly shows any trees to be removed or pruned, this overrides protection provided by Tree Preservation Orders or Conservation Areas, provided the work is necessary to implement the approved development. If not essential, a separate tree work application will need to be submitted for trees protected by a Tree Preservation Order.

5 PRELIMINARY ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for the demolition of the existing dwelling and replacement with two new dwellings and a garage. The proposed site plan is included as Appendix E and details have been added to the survey drawing, along with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 There are some fine mature oak and beech around the perimeter of the site, together with a small area of woodland in the northern corner containing a mixture of broadleaves including yew, beech and sycamore.

5.2 Tree Work

5.2.1 Details of proposed tree works are included in the Tree Schedule included as Appendix B.

- 5.2.2 A section of boundary hedgerow is proposed for removal, as detailed in section 6.1 below.
- 5.2.3 All tree work must be undertaken to the standards set out in BS 3998:2010 Tree work Recommendations.

5.3 Root Protection Areas

5.3.1 Root Protection Areas are shown for all trees in the tree schedule included as Appendix B. They are also shown for all retained trees, as circular areas centred on the trunk, on the Tree Protection Plan included as Appendix A. Where there are physical obstructions to root growth the Root Protection Area should be shown as an equivalent area that is more likely to reflect actual root growth. The Root Protection Area shows the area around a tree in which all construction activity must normally be excluded, unless appropriate protection measures are implemented.

5.4 Tree Protection Fencing

5.4.1 Tree Protection Fencing must be erected where shown on the Tree Protection Plan, included as Appendix A. This will provide full protection of the Root Protection Areas of all retained trees within the site, other than for:

areas hatched in blue on the Tree Protection Plan, where No-Dig Construction must be used, as described in section 5.5 below, to protect underlying roots.

areas hatched/shaded cyan on the Tree Protection Plan, indicating Ground Protection Areas, where roots must be protected, as described in section 5.6 below.

areas cross hatched red on the Tree Protection Plan, where there will be excavation at the edge of Root Protection Areas, but where hand excavation must be used, as described in section 5.7, to minimise potential root damage.

- 5.4.2 Tree works can be completed before Tree Protection Fencing is erected, however no contractors plant or vehicles must be allowed to track within the Root Protection Areas unless ground protection panels are laid.
- 5.4.3 Tree Protection Fencing must be from weldmesh panels, at least 2m high, securely fixed, with wire or scaffold clamps, to a rigid framework. This framework must be constructed from scaffold tubes with vertical tubes, at a maximum interval of 3m and driven into the ground at least 0.6m. The structure must be well braced to resist impacts, constructed as per Figure 2 of BS5837:2012, which is reproduced in Appendix D.

- 5.4.4 After erection of Tree Protection Fencing and installation of ground protection, 2 days notice must be given to the Local Planning Authority before demolition or construction, including any ground work, starts on site.
- 5.4.5 Tree Protection Fencing must be maintained and retained for the duration of the works, or until such time as agreed in writing with the Local Planning Authority.
- 5.4.6 Weatherproof notices must be fixed to the Tree Protection Fencing, and maintained, stating:-

TREE PROTECTION AREA KEEP OUT

TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND TREE PRESERVATION ORDERS CONTRAVENTION MAY LEAD TO CRIMINAL PROSECUTION THE FOLLOWING MUST BE OBSERVED BY ALL PERSONS: The Protection Fence must not be moved No person or machine must enter the area No materials or spoil must be deposited No excavation must be permitted ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

5.5 No-Dig Construction Areas

- **5.5.1** The No-Dig areas, shown hatched blue on the Tree Protection Plan included as Appendix A, must be constructed without excavation apart from the removal of turf/organic matter, which must be carried out by hand. Excavators, dumpers and other site traffic must not be allowed to track on the No-Dig areas until roots are protected by the No-Dig surfacing or ground protection.
- 5.5.2 Engineering details must avoid localised compaction, using both a two dimensional geogrid, and a three dimensional cellular confinement system as integral components of the subbase. A typical section is shown on the Tree Protection Plan included as Appendix A. As well as being fit for purpose, the design and methodology must protect tree roots, by ensuring the following:-
 - topsoil/turf can be removed carefully by hand to a maximum of 75mm, but less if roots are found nearer the surface.
 - following leveling with soil or sand, a permeable, non-woven geotextile membrane, must be laid.
 - a suitable two dimensional geogrid, such the TriAx Geogrid supplied by Tensar International (www.tensar.co.uk), or the Biaxial Geogrid supplied by Geosynthetics Ltd (www.geosyn.co.uk), must be laid over the entire area and underneath the edging.
 - pressure treated timber edging boards, supported by driven stakes must be used.
 - a suitable cellular confinement system must then be laid to manufacturers instructions on top of the geogrid. Products that might be considered include Geoweb, supplied by

Greenfix (www.greenfix.co.uk) or Cellweb, supplied by Geosynthetics Ltd (www.geosyn.co.uk). The depth of the system must be adequate to take the maximum axle weight, as per manufacturers guidance.

- the cellular confinement system must be filled with clean (no fines), washed angular, 20/40mm, stone to provide load support, while allowing air and moisture to permeate to the root zone.
- a further permeable, non-woven geotextile membrane, such as TreetexT300, or an alternative approved product which has similar oil trapping qualities, must be laid over the cellular confinement system.
- a porous, surfacing material, free from contaminants, must then be laid. Either sand bedding and block paving, gravel or permeable tarmac would be suitable.
- removed turf/topsoil can be used to grade surrounding ground levels.
- 5.5.3 Site traffic, including pedestrians, must not be allowed on the No-Dig areas unless roots are protected by existing hard surfacing, new No-Dig surfacing or unless suitable ground protection panels are laid. Either Trakmats (supplied by the Marwood Group, <u>www.marwoodgroup.co.uk</u>), Groundtrax panels (see <u>www.groundtrax.com</u>), Ground-Guards, as supplied by Greentek (<u>www.greentek.org.uk</u>), or a similar approved product, must be used, laid on top of a compressible layer of sand or woodchips, laid onto a geotextile. If access is only required for pedestrians, 25mm plywood or side butting scaffold boards can be laid, on top of a compressible layer of sand or woodchips, laid onto a geotextile.
- 5.5.4 No-Dig construction will result in an increase in levels. This must be fully taken account of in all other aspects of the design.

5.6 Ground Protection Areas

- 5.6.1 The Ground Protection Areas, which are hatched cyan on the Tree Protection Plan, contain hard surfacing which is protecting any underlying roots and which must stay in place during the construction period unless further protection measures are implemented. An excavator must only be used for the removal of the existing hard surfacing within this area, if it can work only from areas of hard standing, or from outside the Root Protection Area. A banksman must be present during this operation and excavation must go no deeper than the existing base course and must cease immediately if roots are found. Once hard surfacing has been removed, the area must immediately be topsoiled using good quality topsoil supplied to BS3882:2015 and protected.
- 5.6.2 The Ground Protection Areas, which are shaded cyan on the Tree Protection Plan, contain soft areas where ground protection must be laid to protect any underlying roots. Trakmats, as supplied by either the Marwood Group, (<u>www.marwoodgroup.co.uk</u>) or Ground-Guards, (www.ground-guards.co.uk) or a similar approved product, must be used, laid on a compressible layer of sand or woodchips, laid onto a geotextile, with adjacent panels held together with connectors.

5.6.3 Ground protection must be laid before any construction starts on site and must be maintained in good condition until all construction operations have been completed. Ground protection must be fit for purpose and be replaced with an alternative product if panels start to move or any sign of ground compaction is seen.

5.7 Hand Dig Areas

- 5.7.1 The Hand Dig trench, shown cross-hatched red on the Tree Protection Plan, must be dug to formation level /a depth of 1m by hand, neatly severing any roots found, using secateurs or a hand saw. Any further excavation required, either to a greater depth or further from the trees, can be carried out with an excavator, since it is unlikely that further significant live roots will be found.
- 5.7.2 Heavy-duty polythene must be used to line the side of the trench adjacent to the trees, before concrete is poured, to avoid the toxic effects of cement on tree roots.
- 5.7.3 On no account must use of an excavator be used in the top 1m of the Hand Dig area, which would rip roots and cause unnecessary damage.

5.8 General measures

- 5.8.1 No construction activity whatsoever, including routing of underground services, storage of materials or on-site parking, must be allowed within Root Protection Areas, other than that specifically described above.
- 5.8.2 No mixing or storage of cement, concrete, oil, fuel, bitumen or other chemicals must be permitted within 10m of the trunk of any retained trees, nor in any position where the slope of the ground could lead to contamination of the Root Protection Area.
- 5.8.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.8.4 Landscape works carried out within Root Protection Areas must be undertaken with great care so as not to damage shallow roots. Tractor mounted rotovators or other heavy mechanical cultivation must not be used within the Root Protection Areas.
- 5.8.5 If any tree shown for retention is removed, uprooted or destroyed, another tree must be planted in the same location, at a size and species to be agreed in writing with the Local Planning Authority.
- 5.8.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

5.9 Bat roosts

5.9.1 The current legislation makes it 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.

5.10 Birds

5.10.1 The current legislation makes it a criminal offence to disturb nesting birds. The nesting season is generally assumed to be from 1st March to 31st 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.

5.11 Arboricultural Supervision

- 5.11.1 A qualified Arboricultural Consultant must be retained during the period of construction to carry out the following:
 - to prepare a detailed Arboricultural Method Statement, to include details of drainage, services, contractors facilities and a cross section through the No-Dig areas showing existing and proposed levels. The Arboricultural Method Statement must also include a separate Tree Protection Plan for the demolition phase and must be approved by the Local Planning Authority, prior to demolition starting on site.
 - to inspect Tree Protection Fencing and ground protection, prior to construction or demolition starting on site.
 - as necessary, to advise on any issues at the request of the local planning authority, the developer, architect or contractor.

The details of each site visit must be recorded using a site visit proforma, with copies circulated to the contractor, developer and the local authority Tree Officer within 3 working days of the visit.

6 ARBORICULTURAL IMPACT ASSESSMENT

6.1 The following trees / tree groups, categorized as per BS 5837 (see Appendix C for details), are proposed for removal:

Category B/C -between categories B and C:

• G36 –a section of hedgerow containing mostly laurel and rhododendron to be removed for the new access.

- **6.2** No trees are proposed for removal and new building has been kept back from trees to provide adequate separation distances to ensure their future sustainability.
- **6.3** Protection measures have been specified to protect the Root Protection Area of all retained trees, other than for:-

T1, where there will be excavation within 5.4m2, or 1% of the Root Protection Area This minimal incursion is most unlikely to have any effect on the health of the tree. Hand digging has been specified as a precautionary measure to minimise any possible root damage.

6.4 No Dig construction has been specified, within the Root Protection Areas of:-

T1, where new surfacing/garage will cover 51m2, or 14% of unsurfaced part of the Root Protection

T7, where new surfacing/garage will cover 11m2, or 5% of the Root Protection T35, where new surfacing/garage will cover 21m2, or 12% of the Root Protection

In all cases, this is less than the 20% maximum recommended in BS5837.

- **6.5** Although preservation of Root Protection Areas is deemed to protect tree roots, in some cases buildings may need to be set further back to ensure the future sustainability of trees. If buildings are too close to trees, future occupiers may be likely to seek the reduction, or removal of trees, if they are cutting out excessive sunlight or providing a claustrophobic or threatening environment.
- **6.6** Section 5.2.2 of BS 5837:2012 states that "an indication of potential direct obstruction of sunlight can be illustrated by plotting a segment with a radius from the centre of the stem equal to the height of the tree, drawn from due North West to due East, indicating the shadow pattern through the main part of the day." Shading patterns for key trees have been shown on the plan. This shows that part of both dwellings will be shaded for part of the day. However, since the new dwellings are largely within the footprint of the existing dwelling and have generously sized gardens, the proposals should make little difference to the sustainability of the trees.
- **6.7** Provided the recommendations in this report are followed, the arboricultural impact of this development on existing trees is considered acceptable. A detailed Arboricultural Method Statement will be prepared for approval before work on site begins. This will provide details of services and drainage and further proposals for arboricultural supervision.

7 REFERENCES

BS5837:2012 Trees in relation to design, demolition and construction - Recommendations.

BS3998:2010 Tree Work. Recommendations.

Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (<u>www.ntsgroup.org.uk</u>)

The use of Cellular Confinement systems near Trees: a guide to good practice Arboricultural Association Guidance Note 12.



Southernwood

Appendix B BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Bran	ich Sj	pread	: (m)	Canopy Cleara -nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect -ion Distnce (m)	Root Protect. Area (m2)
				Ν	S	Е	W								
T1	Oak	24	1100	9	12	7	12	4.5	Mature	Fine tree. Vehicle damage to buttress. Minor deadwood.		>40	A2	13.2	547
T2	Leyland cypress	8.5	200	2.5	2.5	2.5	2.5	0.0	Early mature	Previously topped at 2m. Good vigour. Poor structure.		20-40	B-C2	2.4	18
Т3	Holly	9.5	220	3	2	2	2.5	0.3	Early mature	Leaning to north. Good vigour.		20-40	B2	2.6	22
T4	Cherry	8	150	3.5	1.5	2	2	0.5	Semi mature	Topped. Leaning to north.		10-20	C2	1.8	10
T5	Laurel	2 - 4	50-125	0	0	0	0	0	Early mature	Including some Holly. Providing screening.		15-30	C2	1.5	7
Т6	Magnolia	3	200	5	4	4	3.5	0.5	Early mature	Good vigour.		20-40	B-C2	2.4	18
T7	Oak	19.5	est 680	8	8	7.5	9.5	3.5	Mature	Growing in adjacent site - base not inspected. Section at apex broken out, but good vigour.		>40	A2	8.2	209
Т8	Birch	13	180	2.5	2.5	2.5	2.5	2.5	Early mature	Slight lean to west.		>40	B2	2.2	15
Т9	Fir	17.5	490	4	5	4	4	3.5	Early mature	Good vigour but growing through canopy of T10.		20-40	B2	5.9	109
T10	Oak	24	est 900	8	8	8	6.5	2.5	Mature	Growing in adjacent site - base not inspected. Low branches removed. Minor deadwood.		>40	A2	10.8	366
T11	Oak	22	500	4	7	4.5	7	3.5	Early mature	Drawn up, but good vigour.		>40	A2	6.0	113
T12	Ash	22	800	9	9	2	8	8.5	Mature	Major limb to south from 10m. Basal shoots show the ash dieback disease but canopy shows resonable vigour at present. Occasional dead and broken branches.		10-20	B2	9.6	289
T13	Beech	23	530	4	6	7	1	6	Early mature	Drawn up. Leaning to east.		20-40	B2	6.4	127
T14	Yew	9	260	1.5	6.5	5	5	1.5	Early mature	3 stems - 100, 160 and 180mm.		>40	B2	3.1	31
T15	Sycamore	21	640	7	7	6	6	7	Mature	Good crown shape and vigour.		>40	A2	7.7	185
T16	Sycamore	19	360	8	0	3	5	7	Early mature	Leaning to north.		15-30	B2	4.3	59
T17	Beech	19	750	9	2	8	5	2	Mature	Leaning to north over boundary. Visibility of canopy obscured.		>40	B2	9.0	254

Southernwood

Appendix B BS 5837: 2012 Tree Schedule

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	t Branch Spread (m)		Canopy Cleara -nce (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect -ion Distnce (m)	Root Protect. Area (m2)		
				Ν	S	Ε	W								
T18	Beech	19	390	5	0	6	2	2	Early mature	Leaning to north over boundary. Visibility of canopy obscured.		20-40	B2	4.7	69
T19	Sycamore	22	640	8	6	4	6	7	Mature	Growing just outside of boundary. Asymmetric canopy.		20-40	B2	7.7	185
T20	Undergrowth	2-3.5	75-125					0	Early mature	Majority Laurel, with some Holly and Yew.		!5-30	B-C2	1.5	7
T21	Yew	12.5	300	4.5	4.5	4.5	4.5	1.8	Early mature	Good vigour.		>40	B2	3.6	41
T22	Holly	13	330	3	3	5.5	3	1.6	Mature	Twin stems - 160 and 290mm, growing in adjacent site.		20-40	B2	4.0	49
T23	Lawson cypress	4	200	1	2	1	2	0.6	Early mature	Good vigour. Low amenity value.		20-40	B-C2	2.4	18
T24	Beech	19	est 960	7	6	7	8	0.5	Mature	Growing in adjacent site - base not inspected.		>40	A2	11.5	417
T25	Fir	10	250	1	3	2	3	1.6	Semi mature			>40	B-C2	3.0	28
T27	Oak	13	520	3	3	3	3	6	Early mature	Pollarded - now with up to 2.5m fresh growth.		>40	B2	6.2	122
T28	Oak	10.5	220	2	2	6	0	1.8	Semi mature	Leaning to east.		15-30	C2	2.6	22
T29	Scots pine	23	850	3	4	3	5	9.5	Mature	Fluting to main stem. Good vigour.		20-40	B2	10.2	327
T30	Scots pine	19.5	750	6	5	4	3	7.5	Mature	Good vigour.		20-40	B2	9.0	254
T31	Sweet chestnut	17.5	540	4	5	4	4	3.5	Early mature	Good vigour.		>40	B2	6.5	132
T32	Holly	12	490	3	3	3	4	0.8	Mature	6 stems from 0.2m - avg 200mm. Good vigour.		20-40	B2	5.9	109
Т33	Beech	19.5	520	5	5	2.5	4.5	8	Early mature	Drawn up.		20-40	B2	6.2	122
T34	Oak	19.5	490	0	8	0	5	2	Early mature	Drawn up. Leaning to south. Deadwood up to 120mm diameter.		20-40	B2	5.9	109
T35	Beech	23	630	8	6	8	6	1.7	Mature			>40	A2	7.6	179
G36	Laurel	2 - 4.5	75 - 200					0	Mature	Dense screen including mostly Laurel with some Rhododendron, Holly and Yew - providing good screening.	Remove section for new access.	!5-30	B-C2	2.4	18
G37	Shrubbery	1.6 - 3	50-125					0	Mature	A range of mature shrubs including Rhododendron, Holly and Azalea.		10-20	C2	1.5	7

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

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Identification on plan		opropriate)	Criteria (including subcategories where a	Category and definition
			see Note)	Trees unsuitable for retention
se, See Table 2	is expected due to collapse,	e, structural defect, such that their early loss i	• Trees that have a serious, irremediab	Category U
af .	(e.g. where, for whatever	Those in such a condition that they cannot realistically		
	overall decline	be retained as living trees in		
2	trees nearby, or very low	the context of the current land use for longer than		
ve;	ht be desirable to preserve;	To years		
i,	3 Mainly cultural values, including conservation	2 Mainly landscape qualities	1 Mainly arboricultural qualities	
			ntion	Trees to be considered for rete
ands See Table 2	Trees, groups or woodlands	Trees, groups or woodlands of particular	Trees that are particularly good	Category A
on, ive or n	of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	visual importance as arboricultural and/or landscape features	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 of high quality with an estimated remaining life expectancy of at least 40 years
See Table 2	Trees with material	Trees present in numbers, usually growing	Trees that might be included in	Category B
	conservation or other cultural value	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	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 of moderate quality with an estimated remaining life expectancy of at least 20 years
See Table 2	Trees with no material	Trees present in groups or woodlands, but	Unremarkable trees of very limited	Category C
	conservation or other cultural value	without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	merit or such impaired condition that they do not qualify in higher categories	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
	Trees with material conservation or other cultural value Trees with no material conservation or other cultural value	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 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	formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue) 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 Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	expectancy of at least 40 years Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years 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

British Standard BS 5837:2012 Default specification for protective barrier

Figure 2

- Key
- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised tube and welded mesh infi ll panels
- Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6 m)
- 6 Standard scaffold clamps



Examples of above-ground stabilising systems

Figure 3a

Stabiliser strut with base plate secured with ground pins





Figure 3b Stabiliser strut mounted on block tray



SJ Stephens Associates Ltd



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