

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

Arboricultural Impact Assessment

- Tree Survey
- Tree Protection Plan
- Arboricultural Method Statement

For:-

An Extension

At:-

5 Moor Park Road
Northwood
HA6 2DL

On behalf of:-

Mr Kandiah Kandeepan
61 Torbay Road
Harrow
HA2 9QQ

Prepared by:

Simon Stephens MA Oxon, Dip
Arb(RFS), MArborA, C Env. MICFor
Email: simon@sjstephens.co.uk

Survey Date: 4th May 2023
Report Date: 5th May 2023
Project no: 2103

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1 BACKGROUND

- 1.1** This Arboricultural Impact Assessment has been instructed by Mr Kandiah Kandeepan to specify tree protection measures and assess the arboricultural impact of the proposed construction of an extension at 5 Moor Park Road.
- 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 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 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.
- 1.4** 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.
- 1.5** Documentation supplied:
 - AB Engineers, Proposed Ground Floor Plan: drawing no PL-PR-001

2 SURVEY DETAILS AND SCOPE

- 2.1 The site survey included trees and shrubs, within and immediately adjacent to the site, 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 with no restrictions to visibility. Broadleaf trees were 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 Hillingdon Council website was viewed on 05-05-2023, showing that the entire site falls within a Tree Preservation Order Area.
- 4.2 The presence of Planning Conditions currently attached to the site, was not checked.
- 4.3 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 ARBORICULTURAL METHOD STATEMENT

5.1 Site Overview

- 5.1.1 The proposal is for the construction of a rear extension. The proposed ground floor plan is included as Appendix E and the footprint has been added to the survey drawing, along with tree details, to create the Tree Protection Plan attached as Appendix A.
- 5.1.2 There is a fine mature oak tree (T1) growing in the south west corner of the garden which is of high landscape and environmental importance. Other trees, including a hornbeam a sycamore and a eucalyptus, are of less significance.

5.2 Tree Work

- 5.2.1 No tree work is proposed.

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.
- 5.4.2 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.
- 5.4.3 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.
- 5.4.4 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.
- 5.4.5 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 A TREE PRESERVATION ORDER
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 General measures

- 5.5.1 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.

- 5.5.2 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.
- 5.5.3 Fires must not be lit in a position where their flames could extend to within 10m of foliage, branches or trunk.
- 5.5.4 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.
- 5.5.5 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.
- 5.5.6 A copy of this report and the Tree Protection Plan must be kept on site and must be fully understood by the Site Agent.

6 ARBORICULTURAL IMPACT ASSESSMENT

- 6.1 No tree work is proposed and protection measures have been specified to protect the Root Protection Area of all trees.
- 6.2 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.
- 6.3 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.” The shading pattern for the mature oak has been shown on the Tree Protection Plan. This shows that the new extension is outside the potential shading area.
- 6.4 Provided the recommendations in this report are followed, the arboricultural impact of this development on existing trees will be minimal.

7 REFERENCES

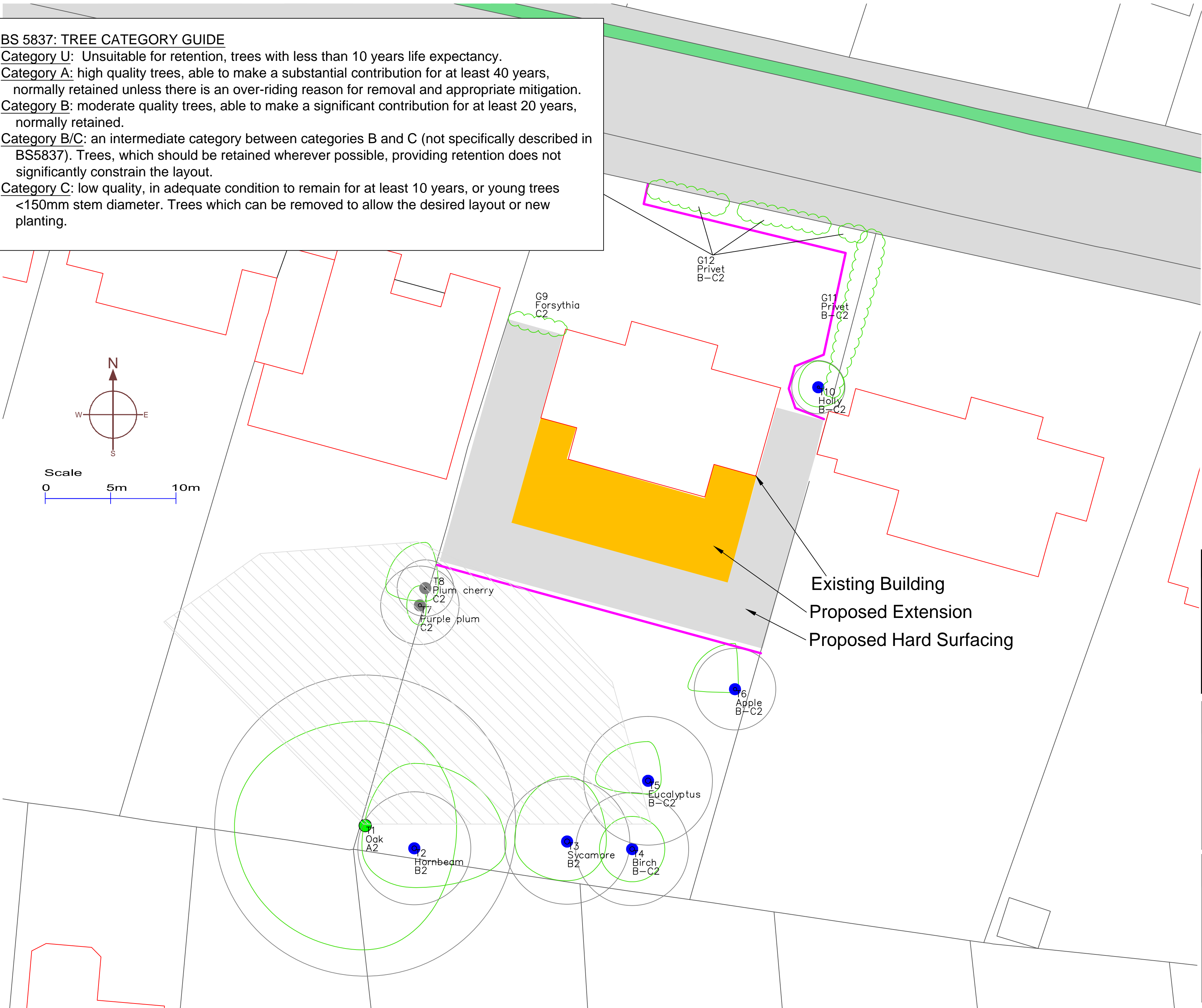
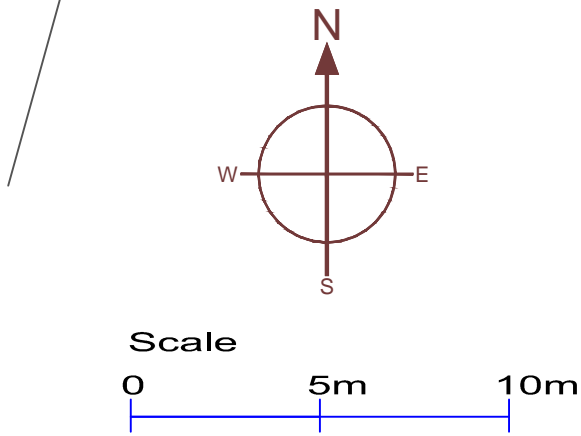
- *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.*
- *BS3998:2010 Tree Work. Recommendations.*
- *Common sense risk management of trees (FCMS024). Published by the National Tree Safety Group (www.ntsgroup.org.uk)*

BS 5837: TREE CATEGORY GUIDE
Category U: Unsuitable for retention, trees with less than 10 years life expectancy.
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.
Category B: moderate quality trees, able to make a significant contribution for at least 20 years, normally retained.
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 significantly constrain the layout.
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.

APPENDIX A

Key

- Category U
- Category A
- Category B
- Category C
- Crown spread: retained trees
- Trees For Removal
- Root Protection Area
- Tree Protection Fence
- BS5837 Tree Shade



SJ Stephens Associates
Savernake Barn, Stokke Common
Great Bedwyn
Marlborough
Wiltshire SN8 3LL
01672 871862
www.sjstephens.co.uk

JOB TITLE		
5 MOOR PARK ROAD		
DRAWING TITLE		
TREE PROTECTION PLAN		
DRAWING NUMBER		REV
2103-01		
REVISIONS		
SCALE	DATE	DRAWN BY
1:200 at A2	MAY 23	sjss

Tree/ Group No.	Species	Height (m)	Stem Diam. at 1.5m (mm)	Branch Spread (m)				Canopy Clearance (m)	Age Class	Observations	Management Recommendations	Estimated Remaining Contribution (years)	BS 5837 Category Grading	Protect- ion Distance (m)	Root Protect. Area (m2)
				N	S	E	W								
T1	Oak	22	960	8	9.5	7	10	2.5	Mature	Fine tree. Cavity under root plate, but no sign of decay.		>40	A2	11.5	417
T2	Hornbeam	11	360	6.5	3	7	4	2.5	Early mature	Twin stem from 0.7m -230 and 270mm.		20-40	B2	4.3	59
T3	Sycamore	16.5	400	5	3	3	4	3.0	Early mature	Crown previously reduced. Reasonable vigour.		20-40	B2	4.8	72
T4	Birch	11	360	2.5	2.5	2.5	2.5	2.5	Mature	Crown previously reduced. Reduced vigour.		15-30	B-C2	4.3	59
T5	Eucalyptus	8.5	410	3	1	1	4	1.8	Early mature	Leaning to north-west. Heavily reduced in past, but vigorous regrowth.		15-30	B-C2	4.9	76
T6	Apple	2.5	260	3.5	0	0	3.5	1.2	Mature	Leaning to north - propped.		15-30	B-C2	3.1	31
T7	Purple plum	4.5	est250	1.5	1.5	0.5	1		Mature	Growing in adjacent property-base not inspected. Heavily reduced.		10-20	C2	3.0	28
T8	Plum cherry	3.5	est180	3.5	1	1	3	1.6	Early mature	Growing in adjacent property-base not inspected. Leaning to north.		10-20	C2	2.2	15
G9	Forsythia	1.8	25-75	0	0	0	0	0.2	Mature	Regularly cut to form a hedgerow.		10-20	C2	0.9	3
T10	Holly	3.5	170	2	1.5	2	1.5	1.7	Early mature	Moderate vigour.		15-30	B-C2	2.0	13
G11	Privet	1.9	25-75	0	0	0	0	0	Mature	Dense hedge - approx 1.5m wide. Good screening.		15-30	B-C2	0.9	3
G12	Privet	1.6	25-75	0	0	0	0	0	Mature	Dense hedge - approx 1.0m wide. Good screening.		15-30	B-C2	0.9	3

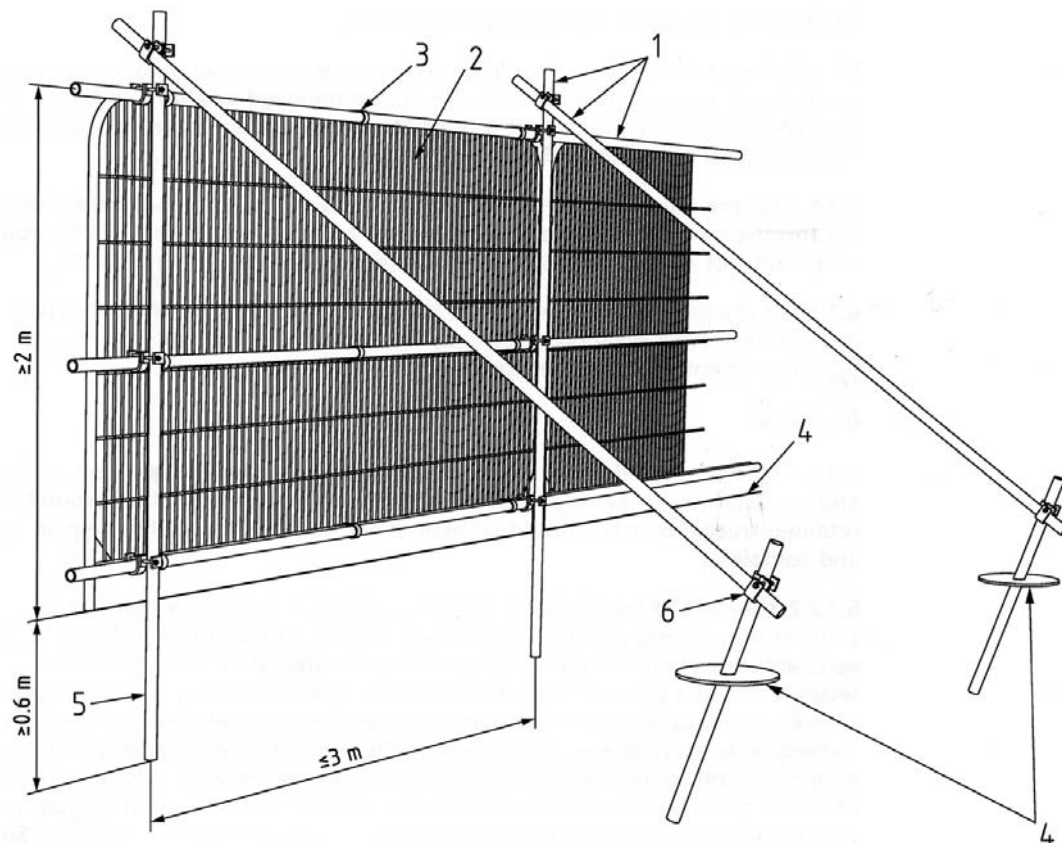
BS 5837:2012, Table 1 Cascade chart for tree quality assessment

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 declineTrees 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 Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></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

Figure 2

Key

- 1 Standard scaffold poles
- 2 Heavy gauge 2 m galvanised tube and welded mesh infill panels
- 3 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

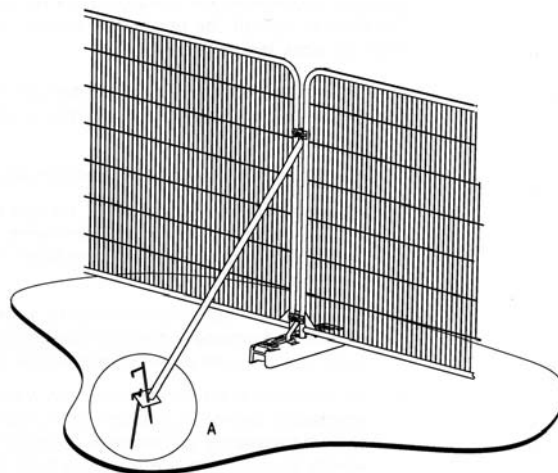
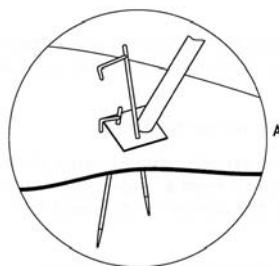
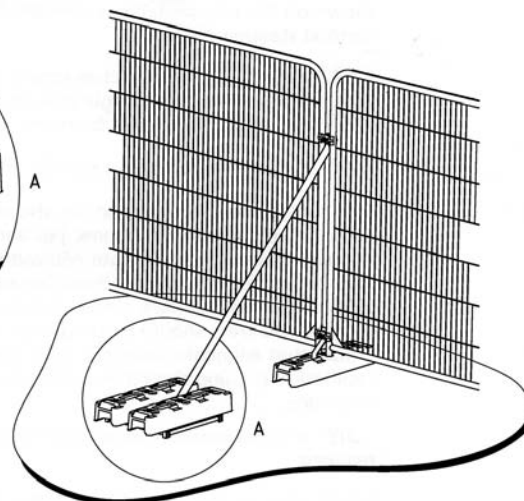
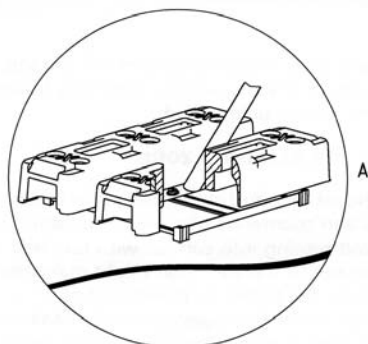


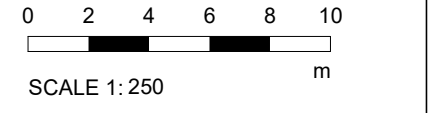
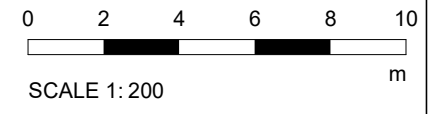
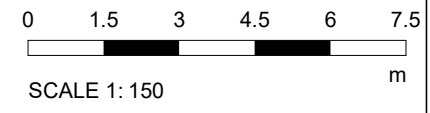
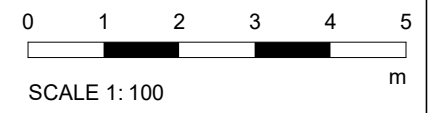
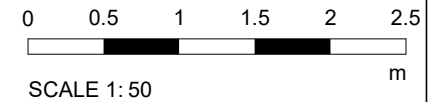
Figure 3b

Stabiliser strut mounted on block tray





Ground floor



GENERAL NOTES

No dimensions to be scaled from the drawings for construction purposes unless otherwise indicated. Any necessary dimensions should be taken from site.



ABEngineers
Consultants in building and Structural Design
Admin@abengineers.co.uk

PROJECT

5 Moor Park Road

TITLE

Proposed ground floor plan

CLIENT

DRAWN BY	CHECKED BY	DATE
-	-	20/03/23

SCALE (@ A3)	PROJECT NUMBER
1 : 100	-

SHEET NUMBER	REV
PL-PR-001	-