Arboricultural assessment & method statement

East Leigh House, Bartons Road, Havant

barrell
TREE CONSULTANCY

Chris Allder **MSc HNDArb FArborA MICFor RCArborA**

27th March 2019 18334-AA2-CA

Site location and report purpose

Site location

This aerial image is provided courtesy of Google. The yellow line indicates the approximate site boundary and is illustrative only.

Report purpose

This arboricultural assessment report provides sufficient information for the Local Planning Authority (LPA) to consider the effect of the proposed development on local character from a tree perspective. It is fully compliant with the BS 5837 advice relating to the planning application stage of the process and it meets national standard planning application validation requirements.

More specifically, the development proposal is to construct one house at East Leigh House, Bartons Road, Havant.

This report includes:

- A **Tree protection plan** illustrating tree locations, categories, the location of the proposed development, and the proposed tree protection measures.
- An **Arboricultural assessment** (section 1 of the report) providing an analysis of the tree issues to assist the LPA in assessing the impact on local character.
- An **Arboricultural method statement** (section 2 of the report) describing how retained trees will be protected and managed during the development activity.
- **Appendices** (**Appendix 1** – Background administrative information, and data collection; **Appendix 2** – Tree schedule and explanatory notes; and, **Appendix 3** – QR Codes for SGNs).
- A companion document to supplement the main report titled ***Manual for managing trees on development sites*** **(Version 2.1)**, which provides explanations of how retained trees will be managed on site in the form of Site Guidance Notes (SGNs) covering the relevant issues.

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1: Arboricultural assessment

1.1 Relevant background information

For clarification this report relates to one plot. There is currently an extant consent for the other part of the site which is currently under construction. This report relates solely to those trees within or immediately adjacent to the red line b9oudnary.

1.2 Table 1: Summary of trees affected and protected by the proposal

From my review of the constraints and the proposed layout, my assessment of the impact on trees, both during and after development, and those that need protection using special precautions, is summarised in Table 1:

	British Standard 5837 Category		
	A (High quality)	**B (Moderate quality)**	**C (Low quality)**
Remove	None	2 stems in G50	T48, T49, T51, 1 stem in G52
Prune	None	None	G22
Protect using special precautions See Notes below	None	T1, T2, T4, G50	None
Post development considerations	None	T24, part of G50	None

T = Tree; G = Group

Note on types of protection: All retained trees will be protected during development by using fencing and ground protection, and only those requiring special precautions to limit the impact of encroachment are listed in Table 1.

1.3 The impact of tree removals on local character

Category B trees (2 stems in G50)

These trees are well within the site and are not prominent from outside the site. There are significant retained trees that will buffer any loss to the extent that there will be no impact on local character.

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Photo 1: 2 stems in G50 to be removed

Photo 2: T51 to be removed

Category C trees T48, T49, T51, 1 stem in G52

These trees are well within the site and are not prominent as a skyline feature from any public viewpoints. There are significant retained trees that will buffer any loss to the extent that there will be no impact on local character.

1.4 The impact of tree pruning on local character

Other than pruning G22 for normal maintenance, no trees will be pruned because of this development.

1.5 The impact of works in precautionary areas

Category B trees T1, T2, and T4

This part of the site has been considered under an existing consent, but is included within this report for completeness. These trees may be affected by the removal of existing surfacing and replacement with new surfacing. I have carefully reviewed the levels in these areas, and it would be feasible to install custom designed no-dig specification surfacing without causing any significant disturbance to the RPAs. From our previous experience at installing such surfacing (www.barrelltreecare.co.uk/case-studies/SurfacingNearTrees.pdf), I am confident that this can be implemented without any-long term detrimental impact on tree health, with the detail to be agreed as part of a planning condition. This surfacing solution is within the advice set out in BS 5837 (8.6) and would be appropriate in this situation. In summary, if the guidance set out in SGN9 *Installing/upgrading surfacing in RPAs* is observed, I believe that the proposed works can be implemented without any long term detrimental impact on tree health, and therefore local character.

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Retained tree in G50

The proposal is to install a new cycle store using an above-ground foundation slab, or similar no-dig base. This installation can be carried out without any significant new excavation into existing soil levels. In summary, if the guidance set out in SGN 9 *Installing/upgrading surfacing in RPAs* and SGN 10 *Installing structures in RPAs*, is observed, I believe that the proposed works can be implemented without any long-term detrimental impact on tree health, and therefore local character.

1.6 Post development considerations

If trees are retained or planted too close to occupied buildings and/or garden amenity space, it is sometimes claimed that they can cause excessive shade or anxiety, which interferes with the normal use of the property. In extreme cases, this can result in pressure from future owners to fell or severely prune, thus reducing the long-term contribution of the trees to local character. However, in our experience, these problems are extremely rare and there is very little evidence that such pressures ever result in any significant harm to the wider setting. Indeed, there is an increasing body of evidence that the benefits from trees close to occupied areas significantly outweigh any disadvantages caused by shade or anxiety. Furthermore, important trees can be protected using tree preservation orders, which come with an overarching presumption to retain protected trees unless the normal use of the property is harmed to a significant extent. To our knowledge, there is no published evidence to support that trees are being lost to the detriment of local character for these reasons. I have considered these concerns in my analysis for this site and my conclusions take full account of those important issues.

1.7 Summary of impact on local character

This proposal will result in the loss of several trees that are all low category because of their poor condition or small size. Two stems in a moderate category group will also be lost but they are close to retained trees that will buffer the initial impact and their loss will have no long term detrimental impact on the present character of the area. The matter of adverse impacts on retained trees due to post-development pressures to fell or prune has been considered and I concluded that no further trees will be affected. There is plenty of space for tree planting. The proposed changes may affect further trees if appropriate protective measures are not taken. However, if adequate precautions to protect the retained trees are specified and implemented through the arboricultural method statement included in this report, the development proposal will have no long term detrimental impact on tree health or the contribution of trees to character in the wider setting.

For these reasons, I conclude that the proposed development would not cause an unacceptable or adverse impact on the long-term vitality of the retained trees, and therefore the character and appearance of the area. Furthermore, it fully aligns with the broad guidance set out in the National Planning Policy Framework.

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2: Arboricultural method statement

2.1 Site Guidance Notes (SGNs)

This section of the report identifies which trees on this site will be protected and managed, and by what means. This site-specific summary is supplemented by more detailed explanations and descriptions of specific operations set out in the accompanying *Manual for managing trees on development sites*. That document is a compilation of 12 individual SGNs addressing the following tree protection and management issues that regularly arise in the construction phase of development:

- SGN1 *Monitoring tree protection* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn01?stage=Stage)
- SGN2 *Fencing protected trees* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn02?stage=Stage)
- SGN3 *Ground protection* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn03?stage=Stage)
- SGN4 *Pollution control* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn04?stage=Stage)
- SGN5 *Site cranes & piling rigs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn05?stage=Stage)
- SGN6 *Height restrictions* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn06?stage=Stage)
- SGN7 *Excavating in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn07?stage=Stage)
- SGN8 *Removing surfacing and structures in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn08?stage=Stage)
- SGN9 *Installing/upgrading surfacing in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn09?stage=Stage)
- SGN10 *Installing structures in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn10?stage=Stage)
- SGN11 *Installing services in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn11?stage=Stage)
- SGN12 *Landscaping in RPAs* (https://www.barrelltreecare.co.uk/resources/technical-guidance/sgn12?stage=Stage)

NOTE: Each individual SGN can be downloaded by using the links above and the QR Code links in Appendix 3.

2.2 Identification of areas to be protected

The tree protection plan shows the areas where protective measures are necessary. The fencing location is shown by the heavy black dashed lines, with the construction exclusion zone behind as the lighter black diagonal hatch. Precautionary areas are shown by a yellow fill and new temporary ground protection is shown by a blue fill.

2.3 Arboricultural supervision

An arboricultural consultant will be appointed to advise on the tree management for the site and to attend:

- a pre-commencement meeting before any work starts;

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- regular supervision visits to oversee the agreed tree protection, as agreed at the pre-commencement meeting; and
- further supervision visits, as necessary, to oversee any unexpected works that could affect trees.

The detail of how the arboricultural supervision will be carried out is explained in SGN1 *Monitoring tree protection* in the accompanying Manual.

2.4 Table 2: Summary of the site operations requiring arboricultural input

For this site, arboricultural input will be needed for the following operations:

Brief operation summary	Trees affected	Location of detailed explanations
Pre-commencement meeting: Meeting on site with all parties to agree protective measures, as described in SGN1. Will be carried out before any significant site works begin.	All trees	SGN1 *Monitoring tree protection*
Tree felling and pruning: Contractor will carry out agreed works as described in Appendix 2. Will be completed before any significant site works begin.	Fell T48, T49, 2 stems in G50, T51, 1 stem in G52 Prune G22	Appendix 2
Installing fencing and ground protection: Agreed tree protection measures will be installed and checked, as described in SGN2 and SGN3. Will be completed before any significant site works begin.	Fencing all trees Ground protection for T24 and G50	Tree protection plan, SGN2 *Fencing protected trees*, and SGN3 *Ground protection*
Pollution control near retained trees: Any pollution control measures identified during risk assessment will be installed as described in SGN4. Will be completed before any potential pollutants arrive on site.	All trees	SGN4 *Pollution control*
Regular arboricultural supervision: Provision will be made to carry out and record agreed arboricultural supervision, as described in SGN1.	All trees	SGN1 *Monitoring tree protection*
Installing/upgrading surfacing in RPAs: These operations will be carried out as described in the SGN9.	T1, T2, T4	SGN9 *Installing/upgrading surfacing in RPAs*
Installing structures in RPAs: These operations will be carried out with care, as described in SGN 10.	G50	SGN 10 *Installing structures in RPAs*
Installing services in RPAs: These operations will be carried out with care, as described in SGN11.	All trees	SGN11 *Installing services in RPAs*
Landscaping in RPAs: These operations will be carried out with care, as described in SGN12.	All trees	SGN12 *Landscaping in RPAs*
Removing tree protection: Protection can only be removed when there is no risk of damage to retained trees, as described in SGN1.	All trees	SGN1 *Monitoring tree protection*

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The operations summarised in this table, and supplemented by the more detailed explanations set out in the SGNs and the rest of this document, form the arboricultural method statement for this site. The Site Manager will ensure that its details and any agreed amendments are known and understood by all site personnel. Copies of the agreed documents will be available on site.

All personnel who could have an impact on trees will be briefed on the specific tree protection requirements as part of the site induction procedures. This requirement will be written into the site management documentation.

If unanticipated issues arise on site not referenced in the above explanations, further guidance on how to manage them can be found in the accompanying Manual.

2.5 Construction method statement (heads of terms summary)

A construction method statement is a description of how operations that may affect trees will be carried out to minimise any adverse impact on them. The details of how the site will be managed are construction and contractual matters that can only be finalised once the post-consent detailed planning begins. For that reason, at this stage in the planning process, as explained in clause 5.5.6 of BS 5837, it is normally sufficient to list a heads of terms summary of the issues requiring more detailed consideration once consent is issued. On this site, those issues are likely to include:

1. Preparation of a written site management protocol for dealing with tree issues, to be incorporated into formal site management procedures, and to specifically include induction training for all operatives related to tree protection.
2. The order of work on site, including site clearance, the installation of protective measures, the phasing of successive work locations, installation of new surfacing, the removal of tree protection, and any necessary reinstatement.
3. Erection and maintenance of tree protection measures.
4. Who will be responsible for protecting the trees on site.
5. Detailed proposals for inspecting and supervising the tree protection.
6. How accidents and emergencies involving trees will be managed, including accidental damage to roots and their treatment.
7. Details of facilitation pruning and access into site. What size vehicles will be used under canopies and will large machinery be lifted over trees.
8. The parking arrangements for workers and visitors.
9. A schedule of emergency contact numbers relating to trees.
10. Areas for loading and unloading of materials and storage of materials and plant.
11. Where site facilities will be located and when will they be installed.
12. How machinery and equipment (such as excavators, cranes and their loads, concrete pumps and piling rigs) will enter, move on, work on, and leave the site.
13. Pollution control to specifically consider chemical storage and wheel washing facilities in relation to trees.
14. Recycling and storage of waste in relation to trees.
15. Details of earthworks, grading and mounding and removal of spoil, including any planned lowering or raising of ground levels.
16. Precise services locations, including the method of excavation when near trees.
17. Details and precise cross-sections where no-dig surfacing and structures are to be installed.
18. How post-construction impacts through compaction to soil near trees will be ameliorated.

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Appendix 1: Background administrative information and data collection

A1.1 Table 3: Background administrative information

	Background administrative information
Report date & reference	27th March 2019; 18334-AA2-CA
Tree protection plan reference	BT2
Instructing client	Ibex Homes Limited
Instructions	Visit the site, assess the relevant trees, prepare a schedule of their details, describe the impact of the proposal on those trees and identify the tree protection issues in an arboricultural method statement with a tree protection plan, if appropriate
Provided documents	Topographical survey, drawing number '12852', received by email on 8th October, and layout drawing number '18-1051-1000-A', received by email on 22nd March 2019
Report author and credentials	Chris Allder is a Chartered Forester (www.charteredforesters.org) and a Fellow of the Arboricultural Association (www.trees.org.uk), and fully qualified to undertake the assessments in this report. Further details of his credentials can be found at https://www.barrelltreecare.co.uk/who-we-are/.
Report limitations	• We have not checked if there is any statutory protection on the trees because this can delay the production of the report. If any tree works are proposed before a planning consent is given, then the possible existence of any statutory protection must be checked with the LPA. • This report does not consider ecological or archaeological issues, or any other matter beyond the assessment of the trees.
Technical references	In preparing the analysis in this report, we considered the guidance and advice in the following technical references: • Climate Change Act (2008) www.legislation.gov.uk/ukpga/2008/27/contents • Town and Country Planning Act 1990 www.legislation.gov.uk/ukpga/1990/8/contents • National Planning Policy Framework, published by the DCLG www.gov.uk/government/publications/national-planning-policy-framework--2 • BS 5837 (2012) *Trees in relation to design, demolition and construction – Recommendations*, BSI www.shop.bsigroup.com/ • BS 8545 (2014) *Trees: from nursery to independence in the landscape – Recommendations*, www.shop.bsigroup.com/ • BS 3998 (2010) *Tree work – Recommendations*, BSI www.shop.bsigroup.com/ • *Trees in the Townscape: A Guide for Decision Makers*, published by the Trees & Design Action Group http://www.tdag.org.uk/ • *Trees in Hard Landscapes: A Guide for Delivery*, published by the Trees & Design Action Group www.tdag.org.uk/ • National Joint Utilities Group (2007) Volume 4, Issue 2: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees* www.njug.org.uk/publications/

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Appendix 1: Background administrative information and data collection

A1.2 Table 4: Data collection

	Data collection
Date of site visit	9th October 2018
People present during site visit	Chris Allder
Weather & visibility	Clear, still and dry with good visibility
Limitations to observations	• The inspection of the trees for the purposes of assessing their condition and work requirements was made on the basis that they will be annually inspected in the future to identify any changes in condition and review the original recommendations. For these reasons, the tree assessment advice only remains valid for one year from the date that the trees were last inspected. • All observations were of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level. • Observations of trees outside the site boundaries are confined to what was visible from within the site. • All dimensions were estimated unless otherwise indicated.
Tree Preservation Orders (TPOs), Conservation Areas, and tree categorisation	TPOs cannot always be reliably interpreted from the documentation to identify which trees are protected, especially as time passes and site conditions change from when they were originally made. It is common for TPO plans to be inaccurate and schedules often become out of date as trees die or are removed. Frequently, trees deteriorate and, although they may be technically protected by the TPO, are in such poor condition or causing such unreasonable inconvenience that their suitability for retention becomes questionable. In a planning context, if poor trees are assessed as unsuitable for retention, then it would be inappropriate to show them as a material constraint in development planning. For these reasons, although TPOs do need to be considered, they do not form the primary basis for tree categorisation. Poor quality trees assessed as not worthy of retention will be shown as such, irrespective of whether they are protected or not. Similarly, good quality trees that are not protected will still be shown as material constraints. The same rationale will be applied to Conservation Areas.
Tree location and numbering	Each tree and group, was inspected, and the numbering scheme is indicated on the tree protection plan. Where important trees were found on site that were not included on the provided plan, their approximate positions and canopy extents are indicated on the plan.
Recording of tree data	For each identified tree and group, the information collected was recorded on the tree schedule in Appendix 2 and the tree protection plan.
Compliance of data collection with BS 5837	The data collection is fully compliant with the advice in subsection 4.4.2 of BS 5837. When collecting this information, specific consideration was given to any low branches that may influence future use, age class, physiological condition, structural condition, and remaining contribution. Where appropriate, crown spreads were also noted where they differed from those shown on the provided land survey.
Calculation of RPAs	Following the recommendations in Table D1 of BS 5837, the diameter of each tree was rounded up to the next 2.5cm increment, with the radius of a nominal circle and the resultant RPA taken directly from that table. This information is listed for each tree in the tree schedule in Appendix 2.

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Appendix 2: Tree schedule and explanatory notes

NOTE: Colour annotation is A & B trees with green background; C & U trees with blue background; trees to be removed in red text.

Tree No	Species	Height (m)	Diameter (cm) @ 1.5m	Maturity	Low Branches	Category	Notes	Tree Works	RPA radius (m)	RPA area (m2)
All retained trees & hedges							Carry out safety check and lift to 3-4m over site as necessary. Clip to reform hedges as appropriate.			
T1	Sycamore	14	45	Maturing	Yes	B	-	-	5.4	92
T2	Sycamore	14	40	Maturing	Yes	B	-	-	4.8	72
T3	Yew	7	40	Maturing	-	C	Adjacent to driveway	-	4.8	72
T4	Yew	9	55	Mature	-	B	Just off site	-	6.6	137
G5	Yew, laurel, cypress, bay, cherry	9	50	Mature	-	C	Closely spaced group	Felled under extant consent	6.0	113
G6	Sycamore	12	70	Mature	-	C	Approximately 12 stems, coppiced, damaged stems	Felled under extant consent	8.4	222
G7	Sycamore	10	60	Mature	-	C	Severe lean, poor form, major weakness at base, 4 x stems	Felled under extant consent	7.2	163
G8	Acacia	10	25	Mature	-	C	3 x stems	Felled under extant consent	3.0	28
G9	Sycamore	13	45	Mature	-	C	Poor form, leaning	Felled under extant consent	5.4	92
T10	Acacia	14	55	Mature	-	C	Two stems at 0.3m, limited access	Felled under extant consent	6.6	137
G13	Laurel, bay, buddleia	6	30	Maturing	-	C	-	Felled under extant consent	3.6	41
G15	Laurel, goat willow	5	60	Maturing	Yes	C	-	Felled under extant consent	7.2	163
T16	Ash	6	40	Maturing	Yes	C	Growing immediately adjacent to listed wall	Felled under extant consent	4.8	72
T17	Beech	8	30	Maturing	Yes	C	Growing immediately adjacent to listed wall	Felled under extant consent	3.6	41

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Appendix 2: Tree schedule and explanatory notes

Tree No	Species	Height (m)	Diameter (cm) @ 1.5m	Maturity	Low Branches	Category	Notes	Tree Works	RPA radius (m)	RPA area (m2)
G22	Holly, bay	4	0	Maturing	-	C	Dense shrubs and small trees, one fallen sweet chestnut to clear	Cut back lateral growth	2.4	18
T23	Yew	10	65	Mature	-	B	Off site, recently reduced	-	7.8	191
T24	Oak	9	47.5	Maturing	-	B	Ivy	-	5.7	102
T25	Cedar	18	117.5	Mature	-	B	Several dead branches	-	14.1	625
T26	Sycamore	18	65	Mature	-	B	Next door, no access	-	7.8	191
T27	Sycamore	18	60	Mature	-	B	3 x stems, crack in wall adjacent, no access	-	7.2	163
G28	Sycamore	16	50	Maturing	-	C	Next door, several stems, no access	-	6.0	113
T29	Ash	9	50	Maturing	-	B	Close to wall	-	6.0	113
G30	Lime, cherry, ash, cypress	11	100	Maturing	-	C	Coppiced lime stool	-	12.0	452
T31	Cherry	7	60	Mature	-	C	-	-	7.2	163
T32	Bay	8	200	Mature	-	C	Multi stem, poor form	Felled under extant consent	15.0	707
T33	Poplar	15	50	Maturing	-	C	-	-	6.0	113
T34	Poplar	15	60	Maturing	-	C	-	-	7.2	163
T35	Poplar	15	30	Maturing	-	C	Tall and thin	-	3.6	41
T36	Monterey cypress	14	50	Maturing	-	C	-	-	6.0	113
T37	Monterey cypress	12	45	Maturing	-	C	-	-	5.4	92
T38	Western red cedar	10	45	Maturing	-	B	-	-	5.4	92
G39	Western red cedar, cypress	8	35	Maturing	-	C	-	Extant consent to be felled	4.2	55
T40	Poplar	16	60	Maturing	-	C	Several stems, weak junctions	Extant consent to be felled	7.2	163
T41	Poplar	16	45	Maturing	-	C	Poor form	Extant consent to be felled	5.4	92
T42	Poplar	16	45	Maturing	-	C	Poor form	Extant consent to be felled	5.4	92
T43	Poplar	16	45	Maturing	-	C	Poor form	Extant consent to be felled	5.4	92

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Appendix 2: Tree schedule and explanatory notes

Tree No	Species	Height (m)	Diameter (cm) @ 1.5m	Maturity	Low Branches	Category	Notes	Tree Works	RPA radius (m)	RPA area (m2)
T44	Poplar	9	60	Maturing	-	U	Poor form, leaning	Extant consent to be felled	7.2	163
G45	Sycamore, cherry	10	45	Maturing	-	C	Ivy, poor form	-	5.4	92
T46	Holly	8	30	Mature	-	C	Dense crown, on boundary	-	3.6	41
T47	Sycamore	14	35	Maturing	-	B	Close to boundary	-	4.2	55
T48	Oak	16	25	Maturing	-	C	Tall and slender	Fell	3.0	28
T49	Oak	14	30	Maturing	-	C	Tall and slender	Fell	3.6	41
G50	Sycamore	16	60	Mature	-	B	Multi stemmed from base, slender, co-dominant stems needs thinning	Remove two smaller stems to leave the main tree	7.2	163
T51	Bay	7	40	Mature	-	C	Large shrub	Fell	4.8	72
G52	Holly, bay, laurel	5	30	Maturing	-	C	Small shrubs	Fell one tree	3.6	41

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Appendix 2: Tree schedule and explanatory notes

Explanatory Notes

- **Abbreviations:**
  G: Group
  T: Tree

- **Botanical tree names:**

Acacia	: *Robinia pseudoacacia*
Ash	: *Fraxinus excelsior*
Bay	: *Laurus nobilis*
Beech	: *Fagus sylvatica*
Buddleia	: *Buddleia* sp
Cedar	: *Cedrus*
Cherry	: *Prunus* sp
Cypress	: *Cupressus* sp
Goat willow	: *Salix caprea*
Holly	: *Ilex aquifolium*
Laurel	: *Prunus laurocerasus*
Lime	: *Tilia* sp
Monterey cypress	: *Cupressus macrocarpa*
Oak	: *Quercus robur*
Poplar	: *Populus* sp
Sycamore	: *Acer pseudoplatanus*
Western red cedar	: *Thuja plicata*
Yew	: *Taxus baccata*

- **BS 5837 (2012) compliance:** All data has been collected based on the recommendations set out in subsection 4.4 of BS 5837.
- **Tree inspections and site limitations:** Each tree was subjected to a quick visual check level of inspection. Where there is restricted access to the base of a tree, its attributes are assessed from the nearest point of access. Climbing inspections are not carried out during this level of inspection and, if heavy ivy is present, tree condition is assessed from what can be seen from the ground. A separate note is recorded if further investigation may be required to clarify its status.
- **Crown spreads:** Crown spread dimensions are not listed in the tree schedule because they are illustrated on the land survey base to all the plans in this document. Where crown spreads of significant trees on site are found to deviate from those shown on the provided land survey, we have noted it in the text of the report and annotated it on our plans.
- **Dimensions:** All dimensions are estimated unless otherwise advised.
- **Species:** Species identification is based on visual observations. Where there is some doubt over tree identity, sp is noted after the genus name to indicate that the species cannot be reliably identified at the time of the survey. Where there is more than one species in a group, only the most frequent are noted and not all the species present may be listed.
- **Height:** Height is estimated to provide a broad indication of the size of the tree.
- **Trunk diameter:** Trunk diameter is estimated or measured and recorded in 2.5cm increments as advised in BS 5837 Table D1. It is measured with a diameter tape unless access is restricted, direct measurement is not possible because of ivy on the trunk or the tree is assessed as low quality. The point of measurement and the adjustments for stem variations are as advised in Figure C1 of BS 5837.
- **Maturity:** In planning context, maturity provides a simplistic indication of a tree's ability to cope with change and its potential for further growth. For the purposes of this report, young indicates a potential to significantly increase in size and a high ability to cope with change, maturing indicates some potential to increase in size and a medium ability to cope with change, and mature indicates little potential to increase in size and limited ability to cope with change.
- **Low branches:** Any low branches that would not be feasible for removal during normal management and should be considered as a design constraint are noted here and explained in the notes.

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Appendix 2: Tree schedule and explanatory notes

- **Category:** Our assessment automatically considered tree physiological/structural condition (BS 5837, 4.4.2.5h), and so these are not listed separately in the schedule. Additionally, the category accounts for the remaining contribution (BS 5837, 4.4.2.5i) as greater than 40 years for A trees, greater than 20 years for B trees, at least 10 years for C trees and less than 10 years for U trees, so this is also not listed separately in the schedule. Category A, B and C trees are automatically listed as sub-category 1 unless otherwise stated.
- **Notes:** Only relevant features relating to physiological or structural condition and low branches that may help clarify the categorisation are recorded. If there are no notes, then the presumption should be that no relevant features were observed.
- **Tree works:** The recommended tree works are based on the quick visual check level of inspection and only intended to address significant hazards identified during that inspection. The following points should also be considered before carrying out any works:
  1. **Reporting during work operations:** In the context of the preliminary nature of the tree inspection, any defects that may affect tree safety discovered by the contractor when carrying out the work recommendations should be reported to the supervising officer. Modification to the schedule of works may be required because of these reports. The contractor should be specifically instructed on this point.
  2. **Implementation of works:** All tree works should be carried out to BS 3998 *Recommendations for Tree Work* as modified by more recent research. It is advisable to select a contractor from the local authority list and preferably one approved by the Arboricultural Association. Their Register of Contractors is available free from The Malthouse, Stroud Green, Standish, Stonehouse, Gloucestershire GL10 3DL; phone 01242 522152; website www.trees.org.uk.
  3. **Statutory wildlife obligations:** The Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 provides statutory protection to birds, bats and other species that inhabit trees. All tree work operations are covered by these provisions and advice from an ecologist must be obtained before undertaking any works that might constitute an offence.
  4. **Stumps:** Stumps to be removed within the RPAs of retained trees should be ground out with a stump grinder to minimise any disturbance unless otherwise authorised by the supervising officer.
- **Future tree safety inspections:** Due to the time that may elapse between the original survey and the start of development, all trees should be re-inspected as part of the standard risk management process before any works start on site. Our assessment of the trees was carried out on the basis that a re-inspection would be carried out within a year of the assessment visit and our advice on tree condition must be reviewed annually from the date of that visit.

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Appendix 3: QR Codes for SGNs (Scan with reader to download)

SGN1 *Monitoring tree protection*	SGN2 *Fencing protected trees*	SGN3 *Ground protection*
SGN4 *Pollution control*	SGN5 *Site cranes & piling rigs*	SGN6 *Height restrictions*
SGN7 *Excavating in RPAs*	SGN8 *Removing surfacing and structures in RPAs*	SGN9 *Installing/upgrading surfacing in RPAs*
SGN10 *Installing structures in RPAs*	SGN11 *Installing services in RPAs*	SGN12 *Landscaping in RPAs*

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barrell
TREE CONSULTANCY

Field House Fordingbridge Business Park Fordingbridge Hampshire SP6 1BD
☎ 01425 651470 info@barrelltreecare.co.uk www.barrelltreecare.co.uk