Arboricultural impact appraisal and method statement

Furners Lane, Henfield, West Sussex. BN5 9JD

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barrell
TREE CONSULTANCY

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22054-AIA3-DC

Site location and report purpose

Site location

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

Report purpose

This arboricultural impact appraisal 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 for the erection of 29 homes with associated landscaping, open space, parking and creation of new vehicular access from Furners Lane at Furners Lane, Henfield, West Sussex. BN5 9JD.

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 impact appraisal** (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.

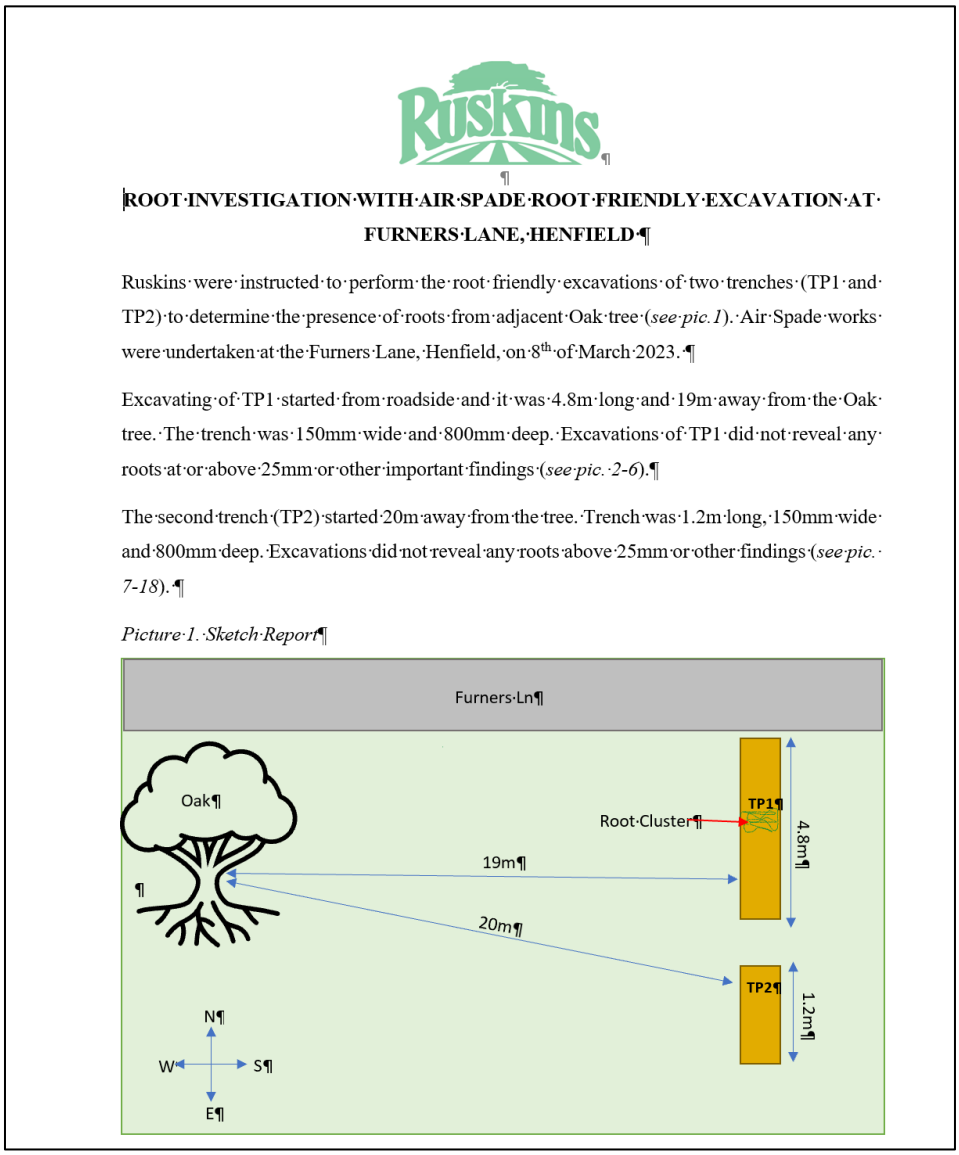
Site location and report purpose

- **Appendices** (**Appendix 1** – Background administrative information and data collection; **Appendix 2** – Tree schedule and explanatory notes; and, **Appendix 3** – QR Codes for Site Guidance Notes (SGNs).
- A companion document to supplement the main report titled ***Manual for managing trees on development sites*** **(Version 3.0)**, which provides explanations of how retained trees will be managed on site in the form of SGNs covering the relevant issues.

1 Arboricultural impact assessment

1.1 Relevant background information

As part of the design process trial excavation works were undertaken at the edge of the buffer zone to VT1 & VT12. This work was undertaken by Ruskins, a specialised contractor with extensive experience in the use of air spading to assess root activity within Root Protection Areas (RPAs). The work took place on 8th March 2023 with two trial trenches located at the edge of the buffer zone into the site on the southern side at 20 m from the trees. Neither trench revealed significant rooting and no roots over 25mm diameter. The Council tree officer, Mr Bush, was informed of the trenching works and confirmed the location of the access road would not result in a negative impact on either tree.



Ruskins

ROOT INVESTIGATION WITH AIR SPADE ROOT FRIENDLY EXCAVATION AT FURNERS LANE, HENFIELD

Ruskins were instructed to perform the root friendly excavations of two trenches (TP1 and TP2) to determine the presence of roots from adjacent Oak tree (*see pic.1*). Air Spade works were undertaken at the Furners Lane, Henfield, on 8th of March 2023.

Excavating of TP1 started from roadside and it was 4.8m long and 19m away from the Oak tree. The trench was 150mm wide and 800mm deep. Excavations of TP1 did not reveal any roots at or above 25mm or other important findings (*see pic. 2-6*).

The second trench (TP2) started 20m away from the tree. Trench was 1.2m long, 150mm wide and 800mm deep. Excavations did not reveal any roots above 25mm or other findings (*see pic. 7-18*).

Picture 1. Sketch Report

Image 1: An extract from the Ruskins air spade report carried out to inform the access in relation to VT1 & VT12. The findings of the trial excavation determined no significant roots were found within the area at the edge of the trees buffer zone.

In addition, following comments by the Council Tree Officer I prepared a briefing note (Our reference: 22054-Briefing-DC, which addressed the comments and provided more detailed explanation of the impact on trees VT1 & VT12 including amended RPAs. This information has been transferred to the current scheme and tree protection plan associated with this updated report.

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

From our review of the constraints and the proposed layout, our 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	None	H8 (part), T25, T26, T27
Prune	None	None	None
Protect using special precautions See Notes below	VT1, VT12	T9, T16	T13, T14, T15, T17
Post development pressure to fell	None	None	None

T = Tree; H = Hedge; VT= Veteran Tree

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.

Note on category U trees: Trees categorised as U (G36, dead elm regeneration) are in such poor condition that they have been assessed as needing removal for management reasons irrespective of any development proposals. Removal of category U trees is a management decision and not caused by this proposal, so should not be considered a direct impact.

1.3 The impact of tree removals on local character

Trees H8 (part),T25, T26 & T27

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 for normal maintenance, no trees will be pruned because of this development and so there will be no impact on local character for that reason.

1.5 The impact of works in precautionary areas

Trees VT1, T9, VT12, T13, T14, T15, T16 & T17

There will be encroachment into the RPAs of this these trees in the form of new no-dig surfacing. The existing tarmac access drive will be carefully removed and replaced with a footpath only but within the alignment of the existing access. A Cellular confinement system will be utilised which will result in a gain in terms of available and productive rooting zone than currently exists. From our previous experience at installing such surfacing (www.barrelltreecare.co.uk/case-studies/SurfacingNearTrees.pdf), we are 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 addition, the existing soft area to the east of VT1 & VT12 will be improved by applying same species mulch to improve the rooting zone for both trees.

In summary, if the guidance set out in SGN 7 *Excavating in RPAs* and SGN 9 *Installing/upgrading surfacing in RPAs* is observed, we believe that the proposed works can be implemented without any long-term detrimental impact on tree health, and therefore local character. All new surfacing must be installed before any construction access to prevent damage to the RPA from the construction activity.

Photo 1: Looking south along the existing access track. The existing tarmac surface will be carefully removed and a new footpath (no vehicular access) will be installed approximately where the yellow are shown which will be narrower than the existing track and constructed using a cellular confinement system improving the available rooting zone for the trees adjacent to the access, including VT1 & VT12.

1.6 Post development considerations

Our assessment is that there will be no adverse impacts through future pressure to fell or severely prune retained trees once the development is completed and occupied.

1.7 New tree planting to enhance local character

To supplement retained trees and enhance local character, the project landscape architect has specified a comprehensive new tree planting scheme. We understand that the final selection of species, size and location are flexible and open to amendment, as appropriate. All new trees will

be specified and planted in accordance with the recommendations in BS 8545 (2014) *Trees: from nursery to independence in the landscape –Recommendations*. These new trees would have the potential to reach a significant height without excessive inconvenience and be sustainable into the long term, significantly improving the potential of the site to contribute to local character.

1.8 Unanticipated upgrading of existing services or installation of new services

Retained trees may be adversely affected by the installation of new services and / or the upgrading of existing services if that work encroaches into their RPAs. However, it is often difficult to know the detail of service locations until the construction is in progress, and sometimes encroachment into RPAs is unavoidable. Where possible, the default approach must be to use any existing service runs and keep all new services outside RPAs. Where existing services within RPAs require upgrading, or new services must be installed in RPAs, great care must be taken to minimise any disturbance. Trenchless installation will be the preferred option, but if that is not feasible, any excavation must be carried out by hand according to the guidelines in SGN 11 *Installing services in RPAs*.

1.9 Summary of impact on local character

This proposal will result in the loss of three individual trees and part of one hedge that are all low quality because of their poor condition or small size. All the significant boundary tree cover will remain intact and no medium or high-quality trees will be removed. There is space for tree planting and a landscaping scheme will be feasible in response to an appropriate condition. The construction activity has the potential to adversely affect retained trees if proper 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 detrimental impact on the contribution of trees to local character.

For these reasons, we conclude that the proposed development would not cause an unacceptable or adverse impact on the character and appearance of the area from a tree perspective.

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:

- SGN 1 *Monitoring tree protection* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-1-Monitoring-V3.pdf)
- SGN 2 *Fencing protected trees* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-2-Fencing-V3.pdf)
- SGN 3 *Ground protection* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-3-Ground-Protection-V3.pdf)
- SGN 4 *Pollution control* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-4-Pollution-V3.pdf)
- SGN 5 *Site cranes & piling rigs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-5-Cranes-Rigs-V3.pdf)
- SGN 6 *Height restrictions* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-6-Height-V3.pdf)
- SGN 7 *Excavating in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-7-Excavation-in-RPAs-V3.pdf)
- SGN 8 *Removing surfacing and structures in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-8-Removing-Surfaces-V3.pdf)
- SGN 9 *Installing/upgrading surfacing in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-9-Installing-Surfacing-V3.pdf)
- SGN 10 *Installing structures in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-10-Structures-V3.pdf)
- SGN 11 *Installing services in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-11-Services-V3.pdf)
- SGN 12 *Landscaping in RPAs* (https://www.barrelltreecare.co.uk/assets/Uploads/SGN-12-Landscaping-V3.pdf)

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;

- 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 SGN 1 *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 SGN 1. Will be carried out before any significant site works begin.	All retained trees	SGN 1 *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 trees H8 (part), T25, T26, T27, G36	Appendix 2
Installing fencing and ground protection: Agreed tree protection measures will be installed and checked, as described in SGN 2 and SGN 3. Will be completed before any significant site works begin.	All retained trees Fencing all retained trees Ground protection for trees VT1, VT12, T40	Tree protection plan, SGN 2 *Fencing protected trees*, and SGN 3 *Ground protection*
Pollution control near retained trees: Any pollution control measures identified during risk assessment will be installed as described in SGN 4. Will be completed before any potential pollutants arrive on site.	All retained trees	SGN 4 *Pollution control*
Regular arboricultural supervision: Provision will be made to carry out and record agreed arboricultural supervision, as described in SGN 1.	All retained trees	SGN 1 *Monitoring tree protection*
Excavating in RPAs: These operations will be carried out as described in SGN 7.	VT1, T9, VT12, T13, T14, T15, T16, T17	SGN 7 *Excavating in RPAs*
Removing surfacing in RPAs: These operations will be carried out as described in SGN 8.	VT1, T9, VT12, T13, T14, T15, T16, T17	SGN 8 *Removing surfacing and structures in RPAs*
Installing/upgrading surfacing in RPAs: These operations will be carried out as described in the SGN 9.	VT1, T9, VT12, T13, T14, T15, T16, T17	SGN 9 *Installing/upgrading surfacing in RPAs*
Installing services in RPAs: These operations will be carried out as described in SGN 11.	All retained trees	SGN 11 *Installing services in RPAs*
Landscaping in RPAs: These operations will be carried out as described in SGN 12.	All retained trees	SGN 12 *Landscaping in RPAs*
Removing tree protection: Protection can only be removed when there is no risk of damage to retained trees, as described in SGN 1.	All retained trees	SGN 1 *Monitoring tree protection*

2 Arboricultural method statement

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 requiring work approved by the LPA, but not referenced in the above explanations, for example the unexpected need to install services in RPAs, or landscaping in RPAs, 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, the removal of existing surfacing, the 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 of upgrading/removing/replacing existing surfacing and areas where this will happen, including detailed and precise cross-sections where no-dig surfacing is to be installed.
18. How post-construction impacts through compaction to soil near trees will be ameliorated.

Appendix 1: Background administrative information and data collection

A1.1 Table 3: Background administrative information

	Background administrative information
Report date & reference	5th February 2025; 22054-AIA3-DC
Tree protection plan reference	22054-5
Instructing client	Elivia Homes (Southern) 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.
Provided documents	• Topographical survey, drawing reference 31022, received by email on 6th April 2022 • Layout drawing reference L90-200 Rev F, received by email 3rd February 2025
Report author and credentials	David Cashman is a Chartered Forester (www.charteredforesters.org), and a Registered Consultant of the Arboricultural Association (www.trees.org.uk), and is fully qualified to undertake the assessments in this report (https://www.barrelltreecare.co.uk/who-we-are/)
Report limitations	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 MHCLG www.gov.uk/government/publications/national-planning-policy-framework--2 • BS 5837 (2012) *Trees in relation to design, demolition and construction – Recommendations*, https://shop.bsigroup.com/ProductDetail?pid=000000000030213642 • BS 8545 (2014) *Trees: from nursery to independence in the landscape – Recommendations*, https://shop.bsigroup.com/ProductDetail?pid=000000000030219672 • BS 3998 (2010) *Tree work – Recommendations*, BSI https://shop.bsigroup.com/ProductDetail?pid=000000000030089960 • *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* http://streetworks.org.uk/wp-content/uploads/2016/09/V4-Trees-Issue-2-16-11-2007.pdf
BS 5837 compliance	This report is BS 5837 compliant. *BS 5837 (2012) Trees in relation to design, demolition and construction – Recommendations* is 10 years old. Since its publication, there have been significant advancements in technology and thinking, informed by a decade of practical experience of putting principles into practice. In the document

Appendix 1: Background administrative information and data collection

	Background administrative information
	Foreword, it states: "*Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations*". This statement provides the opportunity for practitioners to claim compliance while moving best practice forward in the context of emerging technology, ideas, and experience. Although much of the BS 5837 content remains relevant and useful for managing trees in a planning context, there are now several aspects that are dated, and it is no longer appropriate to rigidly apply them to current planning submissions. Barrell Tree Consultancy (BTC) specialises in managing trees on development sites and retains a complete paper archive of every project it has carried out since starting business in 1980, with a digital data base listing those from 2004. In the decade since BS 5837 was published (April 2012), interrogation of the BTC archive confirms that we have been involved in a total of 3,884 projects, of which we estimate that about 3,845 were development related, and it is that depth of experience that informs the following statements on BS 5837 compliance. All BTC reports are prepared to be BS 5837 compliant and, although explanations are not explicitly required to claim compliance, the justifications for any deviations from its recommendations are set out below, referenced by the BS clause number: 1. **4.3 – soil assessment:** All BTC consultants have basic training relating to soil assessment and regularly deal with soil issues during their daily work, but none are soil specialists and BTC has no specialist investigation equipment for carrying out the type of soil assessment listed in this BS clause. In a modern development context, it is not for arboricultural consultants to demand or carry out professional soil investigations, and BTC does not do that. However, we will review soil information provided from appropriate specialists, if available, and incorporate that into our assessments. 2. **4.4.2.1 – tagging trees:** In some instances, it is not appropriate to tag trees, e.g., sensitive species, trees that are easily identified without a tag, inadequate access, project confidentiality, client instructions to the contrary, etc, and so although there will be a presumption to tag trees where feasible and appropriate, that may not be possible or necessary in every instance. 3. **4.4.2.5 *e*) – branch spread:** BTC only work from provided topographical surveys and where the branch spreads are shown correctly on those surveys, there is not normally any practical need to regurgitate that information in a schedule. Additionally, in closely spaced groups or in treacherous terrain, it is sometimes not safe or realistically possible to collect this data for every tree. For these reasons, BTC normally only collects crown spread data to the four cardinal points where the provided topographical survey is assessed as unreliable, or where a full canopy cover assessment is requested, and it is both safe and practically feasible to do so. 4. **4.4.2.5 *f*) – branch and canopy height:** In the absence of any definition of '*canopy*' or '*significant*' relating to branches in the *Terms and definitions* clause, and the lack of any practical guidance for reliably assessing these characteristics, BTC has adopted the following default

	Background administrative information
	position. We will only identify the height and orientation of branches where they have the potential to be damaged by vehicular access, i.e., below a height of 6 m, or where their removal would be beyond what the tree could tolerate during normal maintenance management, i.e., the branch removal would significantly adversely affect the health of the tree and potentially compromise its current safe useful life expectancy. 5. **4.4.2.5 *g*) – life stage:** BS 5387 offers examples, but no definitions of what those examples mean. In the absence of a specific BS 5837 recommendation, BTC has reviewed the concept of maturity in a planning context, taking maturity to be a simplistic indication of a tree's ability to cope with change and its potential for further growth. For the purposes of development site advice, BTC conceptualises useful life-stage descriptions as; **young** indicating a potential to significantly increase in size and a high ability to cope with change; **maturing** indicating some potential to increase in size and a medium ability to cope with change; and, **mature** indicating little potential to increase in size and low ability to cope with change. 6. **4.4.2.5 *i*) – estimated remaining contribution:** BTC accepts the category recommendations in Table 1 on the remaining contribution in the context of category, i.e., 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, and so this is also not listed separately in the schedule. 7. **4.5.4 – subcategories:** BTC adopts a presumption that all trees are subcategory 1 (Mainly arboricultural qualities) unless noted to the contrary, and so for conciseness and to avoid complication, the subcategory is not listed in the schedule unless it is 2 or 3. 8. **Table 2 and 4.4.2 – colour coding:** The colours included in this table take no account of the inability of some people to distinguish between red and green, which is not helpful to people suffering with this form of colour blindness. To address this discriminatory failing with the BS approach, BTC has adopted a more intuitively obvious regime of green and blue colours, which can be easily distinguished by colour-blind people, with the best category A and B trees (High and moderate quality) being green, and the lower category C and U trees (Low quality and unsuitable for retention) as blue. The differentiation between the two categories in each colour is provided by symbols rather than using different colours. This is clearly shown on the plan key, so there can be no doubt about what category a tree is, which is an intuitive approach to avoiding discrimination of colour-blind people. In any event, the tree category is now included next to each number, so there can be no question about the category and BS 5837 compliance. 9. **5.2.1 – RPAs:** This clause recommends that the RPAs for category A, B, and C trees are shown as the existing constraints on the plans used in the "*concept and design*", i.e., the tree constraints plan. However, the BS does not explicitly recommend that all those constraints are shown on the tree protection plan, which is logical because only category A (High

Appendix 1: Background administrative information and data collection

	Background administrative information
	quality), and category B (Moderate quality) trees can realistically be material constraints, with category C (Low quality) and category U (Unsuitable for retention) trees obviously unsuitable to be determinative of the final design. Although it is not a BS recommendation to include the RPAs of category C trees on the tree protection plan because they cannot be material constraints, it is sometimes helpful as an informative to be able to see them if category C are planned for retention to assess if that is feasible. For that reason, BTC tree protection plans show the RPAs of category C trees as a thin grey line rather than the thicker grey line denoting category A and B RPAs. 10. **5.2.2 Notes 1 and 2 – shading:** These notes offer general information on how shading can be assessed, which is presented in italics. The implications of the convention of using italics within the BS is set out in the Foreword as: "*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*" Our interpretation of that statement is that the application of Notes 1 and 2 is not part of the BS recommendations, and is not necessary for BS 5837 compliance. In our experience, the assessment of daylight issues is a specialist discipline and way beyond our expertise as arboriculturists, and so we would defer to an appropriate specialist, where any detailed guidance is required.

A1.2 Table 4: Data collection

	Data collection
Date of site visit	27th April 2022
People present during site visit	David Cashman
Weather & visibility	Clear, still and dry, with average 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.
Statutory protection through Tree Preservation Orders and Conservation Areas	• TPO 1491 covers two individual oaks shown in the tree schedule within this report as VT1 & VT12. The TPO refers to T1 (VT1) and T2 (VT12) • TPO 1339 covers two individual oaks shown in the tree schedule as T37 & T38. The TPO refers to T1 (T38) & T2 (T37)
Tree location and numbering	Each tree, hedge and group, was inspected, and the numbering scheme is shown on the tree protection plan. Where significant trees were found on site that were not included on the provided land survey, their approximate positions are illustrated as a brown dot on the tree protection plan.

Appendix 1: Background administrative information and data collection

	Data collection
Crown spreads	We used the crown spreads shown on the provided land survey.
Recording of tree data	For each identified tree, hedge, and group, the information collected was recorded on the tree schedule in Appendix 2 and the tree protection plan.
Calculation of RPAs	The RPAs were calculated as recommended in BS 5837, and the nominal RPA radius for each tree is listed in the tree schedule in Appendix 2. Where appropriate, RPAs for trees on the site were adjusted as recommended in BS 5837 and illustrated on the plan.

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) @ 1.5 m	Maturity	Low Branches	Category	Notes	Tree Works	RPA Radius (m)	RPA Area (m2)
All retained trees & hedges								Carry out safety check and lift over site to 3-4 m as necessary.		
VT1	Oak	30	165*	Veteran		A	Veteran tree - buffer zone 24.75 m. Veteran tree. Relates to T1 of TPO 1491		15	707
T2	Laurel	4	35	Mature		C			4.2	55
T3	Field maple	6	25	Maturing		C			3	28
T4	Laurel	3	30	Maturing		C	Close to utility pole		3.6	41
T5	Oak	28	85	Mature		A	Pair of oaks in neighbouring front garden		10.2	327
T6	Oak	30	85	Mature		A			10.2	327
T7	Laburnum	5	30	Mature		C			3.6	41
H8	Hawthorn	3	25	Mature		C		Fell part for access	3	28
T9	Oak	14	70	Mature		B	Sub dominant to tree T1		8.4	222
T10	Beech	8	15	Young		C			1.8	10
T11	Cypress	4	25	Maturing		C	Poor form		3	28
VT12	Oak	27	197.5*	Veteran		A	Veteran tree - buffer zone 29.625 m. Veteran tree. Relates to T2 of TPO 1491.		15	707
T13	Oak	4	25*	Young		C	Potential		3	28
T14	Oak	4	30*	Young		C	Potential		3.6	41
T15	Hazel	5	17.5	Maturing		C	Birch at base		2.1	14
T16	Acacia	14	65	Mature		B			7.8	191
T17	Acacia	12	45	Maturing		C			5.4	92

Appendix 2: Tree schedule and explanatory notes

Tree No	Species	Height (m)	Diameter (cm) @ 1.5 m	Maturity	Low Branches	Category	Notes	Tree Works	RPA Radius (m)	RPA Area (m2)
T18	Ash	6	25	Young		C			3	28
H19	Holly, Blackthorn	2	25	Mature		C			3	28
T20	Oak	4	15	Young		C			1.8	10
T21	Oak	4	20*	Young		C			2.4	18
T22	Oak	9	45	Maturing		B			5.4	92
T23	Field maple	6	52.5	Mature		C			6.3	125
T24	Pear	5	25	Mature		C			3	28
T25	Ash	6	25	Maturing		C		Fell for development	3	28
T26	Ash	6	45	Maturing		C	Poor form	Fell for development	5.4	92
T27	Oak, Ash	6	45	Maturing		C	Ash growing adjacent	Fell for development	5.4	92
T28	Acacia	10	72.5	Mature		C	Heavily reduced		8.7	238
T29	Horse chestnut	5	15	Young		C			1.8	10
T30	Acacia	9	75	Mature		C	Heavily pollarded		9	254
T31	Weeping willow	4	50	Mature		C	Pollarded, close to electric pole		6	113
T32	Norway maple	8	37.5	Maturing		C	Growing in hedge		4.5	64
G33	Tulip, Ash, Atlantic cedar, Bay	10	45	Mature		B	Closely spaced group		5.4	92
G34	Cherry, Birch, Cypress	6	25	Maturing		C	Off site		3	28
G35	Poplar	14	40	Maturing		C	Poor form		4.8	72
G36	Elm	6	25	Mature		U	Dying	Fell for management	3	28
T37	Oak	18	110*	Mature		A	Some crown dieback. Relates to T2 of TPO 1339.		13.2	547
T38	Oak	25	90	Mature		A	Relates to T1 of TPO 1339.		10.8	366
T39	Beech	14	45*	Mature		B			5.4	92

Appendix 2: Tree schedule and explanatory notes

Tree No	Species	Height (m)	Diameter (cm) @ 1.5 m	Maturity	Low Branches	Category	Notes	Tree Works	RPA Radius (m)	RPA Area (m2)
T40	Oak	14	95	Over mature		B	Off site, pollarded		11.4	408
G41	Cherry, Willow, Hawthorn	6	35	Maturing		C	Off site		4.2	55
H42	Hawthorn, Holly	2	20	Mature		C	Tight hedge		2.4	18

Appendix 2: Tree schedule and explanatory notes

Explanatory Notes

- **Abbreviations:**
  - G: Group
  - H: Hedge
  - T: Tree
  - V: Veteran tree

- **Botanical tree names:**

Acacia	: Fabaceae		
Ash	: Fraxinus excelsior		
Atlantic cedar	: Cedrus libani atlantica		
Bay	: Laurus nobilis		
Beech	: Fagus sylvatica		
Birch	: Betula pendula		
Blackthorn	: Prunus spinosa		
Cherry	: Prunus sp		
Cypress	: Cupressus sp		
Elm	: Ulmus sp		
Field maple	: Acer campestre		
Hawthorn	: Crataegus monogyna		
Hazel	: Corylus avellana		
Holly	: Ilex aquifolium		
Horse chestnut	: Aesculus hippocastanum		
Laburnum	: Laburnum sp		
Laurel	: Prunus laurocerasus		
Norway maple	: Acer platanoides		
Oak	: Quercus robur		
Pear	: Pyrus sp		
Poplar	: Populus sp		
Tulip	: Liriodendron tulipifera		
Weeping willow	: Salix x chrysocoma		
Willow	: Salix sp	Alder	: *Alnus glutinosa*

- **BS 5837 (2012) compliance:** All data has been collected based on the recommendations set out in subsection 4.4 of BS 5837.
- **Tree checks 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:** We used the crown spreads shown on the provided land survey.. For clarification, the viable crown spread is the size of the main body of the crown, and not necessarily the furthest extent of odd branches that extend out beyond this core of the crown.
- **Dimensions:** All dimensions are estimated unless otherwise indicated with an asterix (*) after the figure.
- **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 (with a diameter tape), at the discretion of the consultant. Estimates may be made where access is restricted, direct measurement is prevented 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. Individual diameters for multiple stems are recorded in the notes, with the calculated cumulative diameter recorded in the diameter column.

Appendix 2: Tree schedule and explanatory notes

- **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.
- **Category:** Our assessment automatically considered tree physiological/structural condition (BS 5837, 4.4.2.5*h*), and so these are not listed separately in the schedule. Additionally, the category accounts for the remaining contribution (BS 5837, 4.4.2.5*i*) 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.
- **RPAs:** The RPAs were calculated as recommended in BS 5837, and the nominal RPA radius for each tree listed, irrespective of any modifying factors. Where appropriate, RPAs for trees on the site may have been adjusted as recommended in BS 5837 and illustrated on the plan.
- **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.

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

SGN 1 *Monitoring tree protection*	SGN 2 *Fencing protected trees*	SGN 3 *Ground protection*
SGN 4 *Pollution control*	SGN 5 *Site cranes & piling rigs*	SGN 6 *Height restrictions*
SGN 7 *Excavating in RPAs*	SGN 8 *Removing surfacing and structures in RPAs*	SGN 9 *Installing/upgrading surfacing in RPAs*
SGN 10 *Installing structures in RPAs*	SGN 11 *Installing services in RPAs*	SGN 12 *Landscaping in RPAs*

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