

**Arboricultural Impact Assessment & Method Statement in accordance
with BS5837:2012 '*Trees in relation to design, demolition and
construction – Recommendations*'**

Project name:	Wayside, Haywards Heath Road, Balcombe, RH17 6NJ		
Project Ref:	2530	Date of report:	2 June 2023
Written by:	Owen Allpress <i>Bsc (Hons) Arb</i> Working in the Arboricultural sector for almost two decades, I have achieved both an FdSc and a BSc (Hons) in arboriculture, am a LANTRA certified Professional Tree Inspector and a professional member of the Arboricultural Association. Starting out working as an arborist, I progressed into a management role running a large and successful tree surgery. I later moved into a consultant position with one of the largest tree consultancies in the south east before becoming an independent consultant.		
Record of amendments:	- Initial version issued 02/06/2023		



Local Authority Validation Summary

This arboricultural report contains supporting information regarding potential impact to retained trees as part of the proposed development.

To assist local authority (LA) verification this survey contains the following information:

- A complete Initial Tree Survey in compliance with *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations*, carried out by a qualified arboricultural consultant.
- Scale plans with north indicated, detailing tree positions and tree categorisation.
- Implications for trees from the proposed development have been explored including trees retained and/or removed to facilitate the proposal.
- Preliminary Arboricultural Method Statement for use on site. Outlining means of executing the proposal including methods where available, to be implemented to reduce the impact to retained trees.



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1.0 Introduction

1.1 Instruction: I have been instructed by MATSIM to provide an Arboricultural Impact Assessment and Method Statement as part of the proposed development at the site. The proposal is to develop adjacent land at the existing construction project to provide additional dwellings.

1.2 Scope: This report serves as an Arboricultural Survey, Impact Assessment, and Method Statement. It provides a detailed description of the existing trees, their significance, and any limitations they may pose to the proposed development plans. The report has been compiled according to the guidelines outlined in BS5837: 2012 'Trees in relation to design, demolition and construction - Recommendations'.

1.3 Please note that this survey is not a tree safety assessment. The evaluation of individual trees was carried out as per the standards mentioned in BS5837: 2012, and the report does not provide detailed information about their condition or the potential risks they may pose to the site's users. Therefore, the report should not be used for such purposes. If there are any concerns regarding tree safety or if insurers require this information, a separate evaluation should be conducted.

1.4 Report contents: The following contents are included to provide a comprehensive assessment of the trees, their value and the constraint they may present to the proposed development.

- **A Tree Retention & Protection Plan** – A plan detailing retained trees and any protection measures required to allow the proposal to be completed with reduced risk of impact to trees at the site.
- **An Initial Tree Survey** – a written summary of the initial survey, site description and methodologies employed.
- **An Arboricultural Impact Assessment** – an assessment of the impact presented by the proposed development activities on trees.
- **Arboricultural Method Statement:** A method statement outlining working methodologies to achieve the proposed construction whilst minimising impact to trees at or adjacent to the site.
- A series of appendices including supporting documents.



1.5 Supporting documentation: The following documents were supplied prior to and in support of this assessment.

- Existing site layout
- Proposed site layout

2.0 Initial Tree Survey

2.1 Site survey: Building on the original 2018 site survey, a second site visit was carried out on 3rd April 2023 to improve and update existing site data. The weather conditions at the time of the survey were dry and bright. Visibility was not impeded by weather conditions and an appropriately scaled assessment of trees, recording the required information, was carried out.

2.2 Site description and layout: The site as it was at the time of re-assessment consisted of a live construction site as the ongoing works to construct the approved design are undertaken. Primarily the visit consisted of updating dimensions for existing trees at the site and removing any of the now removed trees from drawings. Reference should be made to the original arboricultural report for more detail. Further information regarding trees recorded at the site can be found in the survey sheets located in appendix 2.

2.3 Statutory protection: Mid-Sussex District Council's online mapping service was accessed on the 26th May 2023 to ascertain the presence of any tree related designations relevant to this report. At the time of this check no Tree Preservation Orders, (TPO), were present and the site is not located within a conservation area. This check is not clearance to carry out tree work without subsequent checking as the status of the site may be subject to change. Permission for tree works should be sought were the trees in question are protected by Tree Preservation Order, (TPO) or the site is within a conservation area. Tree works identified in this report require no additional permission where this report forms part of full planning permission, (without condition). It remains the contractors responsibility to ascertain if permission for works is required prior to any tree works occurring.

2.4 Tree survey methodology: The initial survey recorded information about trees at and adjacent to the site that were deemed to be relevant to the scope of the report. Third party trees are recorded where they are in such proximity that their root structure or canopy above ground may be impacted by development proposals.

2.5 Limitations: The survey was restricted to a visual assessment carried out from ground level. No aerial inspection, ground disturbance or invasive methods were implemented. No independent checking of third-party data occurred as part of its use in this report and its inclusion is done so fully with client permission and at the liability of the data originator. All tree positions are approximate as no detailed topographical study was supplied prior to this report.



2.6 Data recorded: Trees at the site have been assessed and data recorded in accordance with the requirements set out within BS5837: 2012. The following data was collected from each tree while at the site.

- REF: This is a sequential tree reference number beginning with a letter to define individual trees (T), tree groups (G), hedges (H) and woodlands (W). It is used to locate and refer to trees throughout the remainder of this report including subsequent reports at the same site.
- SPECIES: Tree species are recorded in the following format, "Common name, (*Scientific name*)". Scientific names are italicised and placed within parenthesis.
- Est HEIGHT: Tree height estimate recorded to the nearest meter.
- DBH: Diameter at Breast Height, recorded at the appropriate location along the stem dependent on tree form, (usually 1.5m from ground level however this will vary depending on the form of the tree).
- CROWN SPREAD: Crown spread of the tree recorded to the nearest meter using four cardinal points as a reference.
- AGE CLASS: Age classification. This is a broad description used to detail approximate age. Age class is specific to tree species and their individual growth habit ranging from juvenile, semi-mature, mature and over-mature. The classifications 'veteran' and 'dead' are also used where relevant.
- CONDITION SUMMARY: Details of the trees overall condition in order to qualify its classification.
- PRELIMINARY MANAGEMENT ACTION: Management recommendations that are recommended to be carried out regardless of the development proposal. These are based on current site use and setting and may include trees with obvious defects that should be addressed regardless of the future of the site.
- CATEGORY GRADING: Category grading according BS5837: 2012 (see appendix 4).
- ROOT PROTECTION AREA (RPA): This measurement may be useful for designers to plot RPAs during early stages of the proposal's design or at a later stage to ascertain the dimensions of the root protection area for each tree prior to construction, (see appendix 5).



2.7 In this report, a root protection area, as defined by BS5837:2012, is the minimum optimal area necessary for a tree's rooting system to remain healthy and viable. This area should be considered as an allowance for future growth to sustain the tree beyond any construction works, and it may not necessarily contain roots. The formula found in Appendix 4 is used to calculate the root protection area for each tree based on its diameter measurement.

2.8 The Tree Protection Plan in Appendix 1 shows the root protection areas (RPA) for each tree, color-coded to indicate tree categorization.

2.9 The Arboricultural Impact Assessment is conducted following the Initial Tree Survey and is included in later sections of this report. The purpose of the assessment is to determine the physical impact of construction on the trees and recommend protective measures that need to be taken during construction.

3.0 Arboricultural Impact Assessment

3.1 The proposal: Redevelop adjacent land at the existing development site for creation of a number of smaller residential dwellings.

3.2 Trees to be removed: A single category C tree is required to be removed to facilitate the proposal. The loss of this tree is to be mitigated by planting of a number of trees throughout the site as part of the landscape design. I am satisfied that its loss is suitably mitigated by this fact.

3.3 Access facilitation pruning: Based on the information available at the time of this report no access facilitation pruning is proposed to be required to achieve the development. To allow a more informed decision regarding the potential need for pruning to occur, discussion should be had at pre-commencement site meeting with contractors present to discuss matters relating to phasing and access during construction.

3.4 Works within root protection areas: No works are proposed to occur within root protection areas of retained trees. All root protection areas will be protected for the duration of the construction phase either by tree protection fencing or temporary ground protection.

3.5 Ancient Woodland: In a planning context, it is the responsibility of an ecologist to assess the potential impact on habitats, including ancient woodland. However, individual tree impacts will be assessed if trees that may be a component of ASNW are located within the range of the survey area. It's important to note that this report does not include any checks or investigation related to the presence of ASNW. Therefore, if the presence of ancient woodland is suspected, we recommend that the client engage an experienced and qualified ecologist to provide guidance and advice.

3.6 Tree protection measures: Tree protection fencing will be deployed to delineate the construction exclusion zone. The specification for tree protection fencing is included in Appendix 6 and consists of light-duty HERAS panels with angled supports secured in place with driven stakes. The installation of tree protection fencing must make it purposely difficult, even impossible, to move or adapt without proper tools or access. For it to be fit for purpose, it must be immovable and remain in place for the duration of construction, unless otherwise discussed in the method statement within this or subsequent reports. Contravention of this amounts to a breach of planning permission, where this report forms part of said permission.



3.7 The arboricultural method statement, included in the final section of this report, provides working methodologies that follow on from the assessments made in the impact assessment. It is based on information available at the time of this report and may require updating as new, more detailed information becomes available regarding construction methods and final foundation designs.

3.8 The arboricultural impact assessment is based on the current layout at the time of this report. However, if the layout changes, the associated impact on trees may also be affected and may need to be re-considered. It is the client's duty to inform the project arboriculturist of significant changes to the scheme that may affect the usefulness of this report.

4.0 Preliminary Arboricultural Method Statement

This section of the report is the Arboricultural Method Statement for the specified construction activities and tree protection measures at the site. This document describes how trees will be protected and managed during the demolition & construction phase. This method statement is based on information available at the time of this report and may need to be updated as necessary as new information or changes in the site arise. It is the client's responsibility to communicate these changes to ensure the effectiveness of this document as it is intended to be used as briefing material and referred to throughout the development of the site.

A copy of this method statement must remain on site for the duration of the construction phase. This document may need to be circulated at key stages prior to commencement such as:

- At tendering of works to allow the effective identification and quantification of protective measures required to be carried out by the contractor.
- Plan the timing of key operations to minimise the impact of trees
- Referred to on site by contractors for practical guidance on how to protect trees at the site.

Activity	Timing	Notes
Tree works	Prior to construction phase	Carry out tree works listed in tree survey schedule appendix 2.
Install tree protection fencing	Prior to construction phase	Tree protection fencing to be installed at locations illustrated within tree protection plan appendix 1.

Table 2: Schedule of tree protection measures and tree related actions.



4.1 Requirements: A copy of this Arboricultural Method Statement must remain on site throughout the duration of construction and be available for use both as a reference and as briefing material for any operation that may affect retained trees at the site. No specialist arboricultural input is proposed at this stage other than arboricultural representation at the pre-commencement site meeting. The below preliminary AMS represents the minimum level of consideration expected by contractors to be observed throughout construction phase.

4.2 Protection of Construction Exclusion Zone (CEZ): To ensure the safety of trees during the construction phase, installation of tree protection fencing in the CEZ, as depicted in the Tree Protection Plan within appendix 1, should be done before any construction traffic or delivery of materials on the site. It is important to note that certain activities are prohibited within the CEZ as outlined in paragraph 4.3. The location of the tree protection fencing must adhere to the specifications of the Tree Protection Plan and should not be altered or breached in any way without explicit instructions either outlined in this method statement or by the project arboriculturist. The fencing must remain in place throughout the construction works to ensure the protection of trees

4.3 The areas protected by fencing or ground protection shall be referred to as the construction exclusion zones. The following actions shall be prohibited within the construction exclusion zones:

- Vehicular access (unless on suitable ground protection specified within this report).
- Regular pedestrian access unless on suitable ground protection.
- Storage of construction materials.
- Storage or handling of harmful chemicals.
- Any change in ground level unless otherwise stated in this report or under supervision of an arboriculturist.
- Construction activities including hard surfacing.

4.5 Services: No information relating to existing or proposed underground services was provided for assessment as part of this report. Any new service routes or adjustments to existing services should not occur without first consulting the project arboriculturist.



4.9 Arboricultural supervision: In order to ensure the effective implementation of tree protection measures and enable contractors to discuss works phasing relevant to tree protection, it is strongly recommended that a pre-commencement site meeting be conducted. Although no significant works are anticipated and direct supervision of construction activities is not deemed necessary, the site meeting serves as an opportunity to accurately highlight tree protection measures and potential concerns. It is strongly recommended that the local authority arboricultural officer be given adequate notice to attend the meeting. The following activities require arboricultural supervision:

- Conducting a pre-commencement site meeting with appointed contractors to discuss tree protection measures and phasing of works, and
- Verifying the correct installation of tree protection fencing and delineation of the CEZ. It should be noted that based on available information at the time of this assessment, a more detailed methodology may be required once final surface types are confirmed for use.

4.10 In the event that significant root growth is disturbed during construction activity outside of that which has been previously assessed in this report, work must cease until consultation with the project arboriculturist has taken place. Roots with a diameter exceeding 25mm or areas of dense fibrous matter shall be deemed significant.

4.11 While the calculation and interpretation of root protection areas is guided by industry standards, it should be noted that underground root morphology is influenced by numerous factors. As such, there is the potential for roots to be discovered outside of designated root protection areas, including those which extend beyond roads, as tree root growth is not confined to a constant ideal.

4.12 In the event of any inadvertent damage caused to trees during construction at the site, work must immediately cease until consultation with the project arboriculturist has taken place. The project arboriculturist will assess the likely implications of the damage caused and recommend necessary remedial measures, including providing assessment of impact of any environmental incidents such as fuel spillage, fire, or chemical damage.

4.13 The contractor shall appoint a supervising arboriculturist who will be responsible for overseeing tree-related matters at the site. In this capacity, the supervising arboriculturist may be required to report to the local authority arboricultural officer regarding any changes or unforeseen tree-related issues that arise.



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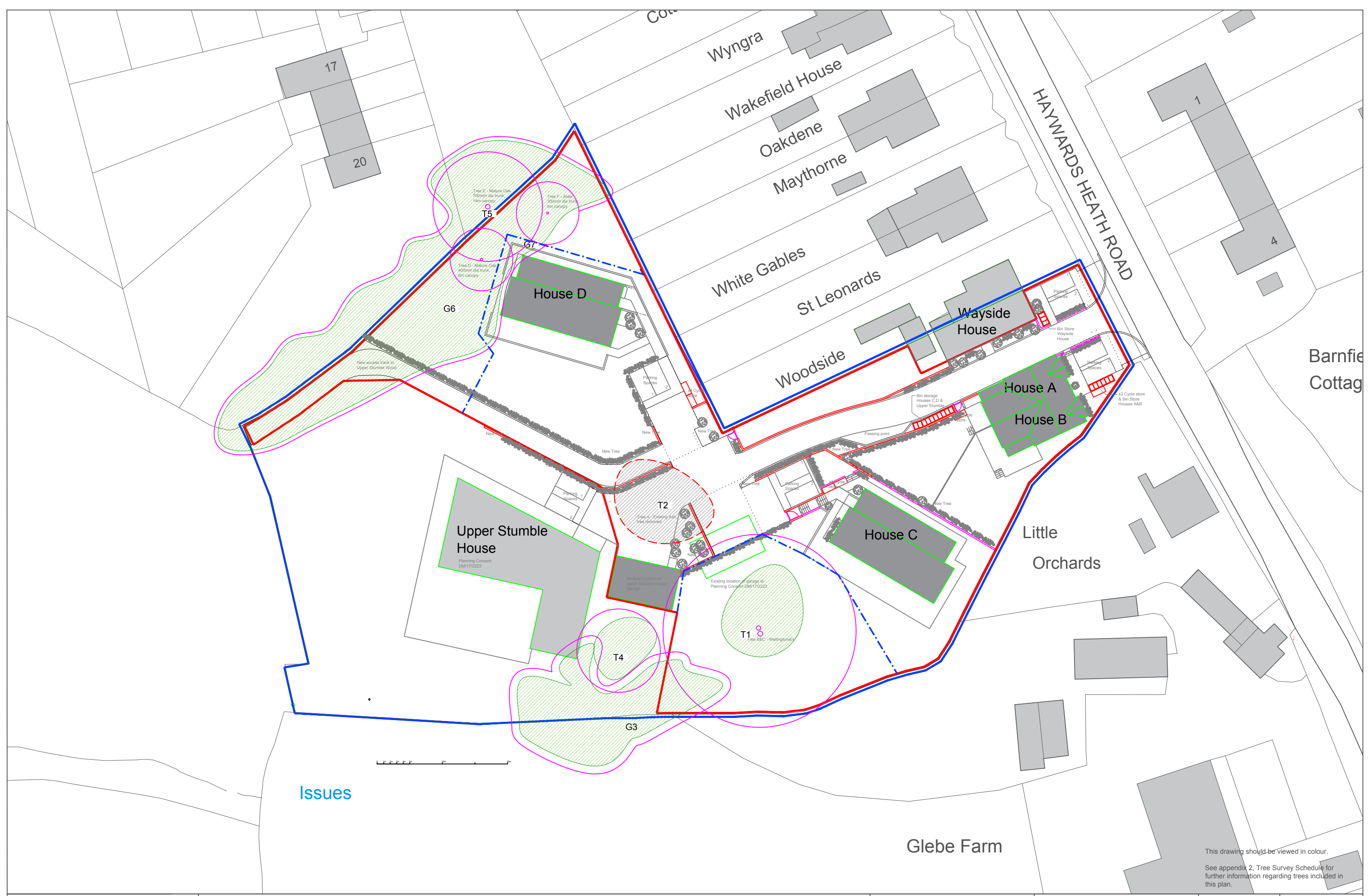
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Appendix 1 - Tree Retention & Protection Plan



Issues

This drawing should be viewed in colour.

See appendix 2, Tree Survey Schedule for further information regarding trees included in this plan.





Appendix 2 - Tree Survey Schedule

Client:	Matsim			Tree Survey Schedule					 Owen Allpress BSc (Hons) Arb Independent Arboricultural Consultant			
Site address:	Wayside development											
Survey Date:	3rd April 2023											
Surveyor:	O.Allpress											
Ref	Species	Est Height (m)	DBH (mm)	Est Crown spread (m)				Age class	Condition summary	Preliminary management action	Category grading	Root Protection Radius (m)
T1	Coast Redwood, <i>(Sequoia sempervirens)</i>	18	1232	N	E	S	W	Mature	Prev. T6 of original tree survey.	None at time of survey	B2	14.8
				10	7	4	6					
T2	Common ash, <i>(Fraxinus excelsior)</i>	14	573	N	E	S	W	Mature	Prev. T13 construction works up to stem, tree in reduced vitality.	None at time of survey	C1	6.9
				8	#	4	5					
G3	Common ash, <i>(Fraxinus excelsior)</i>	<15	380	N	E	S	W	Mature	Predominantly common ash. Group of trees along boundary. Offset applied to canopy line. Not assessed in detail.	None at time of survey	B2	4.6
			avg est	4 avg								
T4	Common ash, <i>(Fraxinus excelsior)</i>	<15	530	N	E	S	W	Mature	Individual tree adjacent G3. Asymmetric canopy and reduce vitality.	None at time of survey	C2	6.4
				5	6	4	4					
T5	Pedunculata oak, <i>(Quercus robur)</i>	<15	700	N	E	S	W	Mature	Largest tree of G6 closest to proposal area. RPA illustrated on plans. Crown is component of G6.	None at time of survey	B2	8.4
				7 avg								
G6	Mixed native	<20	480	N	E	S	W	Mature	Group of screening trees to eastern boundary. Buffer applied to canopy line. Not assessed in detail. Larger individual within.	None at time of survey	B2	5.8
			avg est	6 avg								
G7	Pedunculate oak, <i>(Quercus robur)</i>	<10	400	N	E	S	W	Mature	2 x trees closest proposal area from G6. Canopies of these trees illustrated within G6.	None at time of survey	B2	4.8
			max est	3 avg								

Appendix 3 – Cascade chart for tree categorisation

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

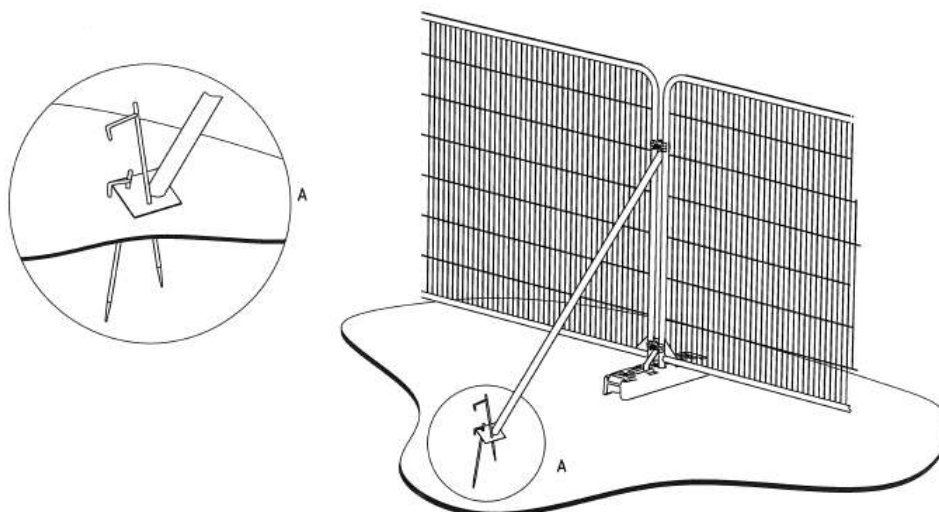
Category and definition	Criteria (including subcategories where appropriate)		
Trees unsuitable for retention (see Note)			
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have 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 decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i>		
	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)
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
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

The above is an extract from BS5837:2012. The key in plans provided in appendix 1 illustrates categorisations described above.

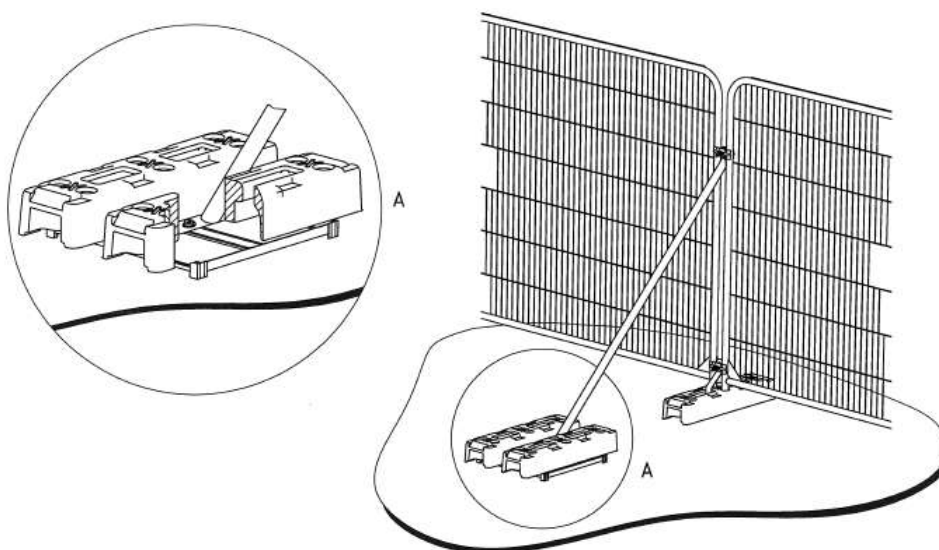
Appendix 4 – Root Protection Area Formulas

Tree type	Formula used. (Taken from BS5837: 2012)
Single Stem	$\text{RPA(m}^2\text{)} = \frac{(\text{stem diameter (mm)} @ 1.5 \text{ m} \times 12)^2 \times 3.142}{1000}$
Up to five stems	$\sqrt{(\text{stem diameter 1})^2 + (\text{stem diameter 2})^2 \dots + (\text{stem diameter 5})^2}$
Trees with more than five stems	$\sqrt{(\text{mean stem diameter})^2 \times \text{number of stems}}$

Appendix 5 – Tree Protection Fencing Specification



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix 6 – Tree Protection Fencing Signage



TREE PROTECTION AREA

Trees enclosed in this area are subject to planning conditions and/or tree preservation orders (TPO).

Contravention of TPOs can result in criminal prosecution

No access beyond this point is permitted unless part of planned operations described within arboricultural method statement.



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