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Preliminary Arboricultural Assessment

RIBA Stage 3

Bidbury Mead, Bidbury Lane, Havant

A Report To: The Clancy Group
Report Number: RT-MME-159849-01
Date: January 2023

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Report Verification

Report Version	Date	Completed by:	Checked and Approved by:
Final	07/02/2023	Luke Webb BSc (Hons) MArborA Senior Arboricultural Consultant	Duncan Smith BSc (Hons) MArborA Arboricultural Manager

Declaration of Compliance

This study has been undertaken in accordance with British Standard 5837:*2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'.*

Disclaimer

The contents of this report are the responsibility of Middlemarch. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees, groups, and hedgerows on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

The document is designed to identify the existing trees on the site to aid design and avoid unnecessary tree removal. An Arboricultural Impact Assessment which identifies the relationship between the existing, retained trees and future proposed development will be required to accompany the planning application.

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1. Introduction

1.1 Project Background

This Preliminary Arboricultural Assessment was commissioned by The Clancy Group as part of a planning application for the installation of a new pipeline at Bidbury Mead, Havant. A survey of the trees on site and within influencing distance of the boundaries was undertaken on the 3rd February 2023 to aid design and avoid unnecessary tree removal.

The tree survey and assessment of existing trees has been carried out in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction - Recommendations*'[1] (hereafter referred to as BS5837).

The purpose of this report is to:

- Record the current condition of the trees found during the survey and categorise them using criteria outlined in BS5837.
- Provide a Tree Survey Plan that identifies the opportunities and constraints to development presented by the trees including Root Protection Areas (RPA) as described in BS5837.
- Provide general guidance detailing arboricultural opportunities and constraints to development and factors to be considered during the design process in relation to the findings on site.

1.2 Site Description, Drawings & Appendices

Attribute	Description
National Grid Reference	SU 704 065
Topography	Mostly flat area of green space
Tree Cover	High, medium and low quality individual trees and groups of trees which were predominantly planted specimens, a high number ornamental trees were also recorded during the assessment.
Drawings attached	Tree Survey Plan – C159849-01-01
Appendices	Appendix A – Tree Schedule

Table 1.1: Summary of Site and Surroundings

[1] British Standards Institution. (2012). *British Standard 5837:2012, Trees in relation to design, demolition, and construction – Recommendations.* British Standards Institution, London.

2. Survey Methodology

2.1 Survey Scope

To determine the status of the trees within the site, a full arboricultural survey has been undertaken, assessing the species and status of all trees present. This survey has been carried out in accordance with BS5837.

All individual trees with a stem diameter greater than 75 mm are shown on the Tree Survey Plan and have been assigned a unique reference number. Trees were visually assessed and a schedule prepared listing:

- Tree number
- Species
- Tree height
- Minimum crown clearance
- Stem diameter
- Crown spread
- Age class
- Vigour
- Structural condition

Measurements for tree height, minimum crown clearance and crown spread were taken to an accuracy of 0.5 m. Stem diameter measurements were recorded to the nearest 10 mm. Any specific observations were also noted. All observations and measurements are included in Appendix A Tree Schedule.

Trees were assessed and assigned one of the following categories:

Category U:
Trees 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.
Category A:
Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B:
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C:
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

Categories A, B and C have further sub-categories with regards to the reasons for tree retention:

- Mainly arboricultural qualities.
- Mainly landscape qualities.
- Mainly cultural values, including conservation.

N.B. Certain trees considered unsuitable to retain in their current context (Retention Category U) may possess existing or potential conservation value which make them desirable to preserve in the context of wildlife habitat (e.g. areas with limited public access).

2.2 Root Protection Area (RPA)

To avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees in accordance with section 4.6 of BS5837. BS5837 recommends this as the minimum area around a tree that contains sufficient roots and rooting volume to maintain viable tree vigour and structure. Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree stem in each group and so may exceed the Root Protection Area required for some of the individual specimens within the group. Further detailed inspection of the individual trees forming a group may be required where development impacts upon individual trees forming the combined group.

Protection of the roots and soil structure within the RPA should be treated as a priority. These figures have been calculated utilising the formulas within Section 4.6 and Annex D of BS5837.

2.3 Tree Schedule

Appendix A details the individual trees, groups, hedgerows, and woodlands (where present) and includes the relevant information for each at the time of inspection. General observations of any structural and physiological condition and the presence of any decay or physical defects have also been included.

2.4 Assessment Limitations

This survey has been undertaken in accordance with BS5837 and trees with a stem diameter of less than 75mm and the specific location of species within a hedgerow have not been identified in accordance with the guidance. It may therefore be necessary during detailed design to undertake further assessment and accurate positioning of juvenile trees or woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations and NHBC Chapter 4.2 *Building near Trees*[2].

This survey is not a full or thorough assessment of the health and safety of the trees on or adjacent to the site; and therefore, it is recommended that detailed tree inspections are undertaken on a regular basis with the express purpose of complying with the landowner's duty of care to satisfy health and safety requirements.

For the purposes of this assessment, a hedgerow is described as a line of trees or shrubs with canopies less than 5m wide which is regularly managed through pruning. Where trees are present within a hedgerow that are significantly different in character from the remainder, these have been identified and recorded separately. A tree survey in accordance with BS5837 does not assess hedgerows against the Hedgerow Regulations 1997[3] or from an ecological perspective.

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[2] National House Building Council. (2022). *NHBC Standards 2022: Chapter 4.2 - Building Near Trees*. NHBC, Milton Keynes.

[3] Department of the Environment, Transport, and the Regions: London. (1997). *The Hedgerows Regulations 1997: A Guide to the Law and Good Practice.*

The exact position of individual trees or species included as part of a tree group, hedgerow or woodland should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.

2.5 Conditions of Tree Survey

The survey was completed by a suitably qualified and experienced Arboriculturist from ground level and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches was not undertaken at this stage. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees and hedgerows have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.

2.6 Tree Survey Plan

The Tree Survey Plan identifies the existing trees including above and below ground constraints which should be considered during the design process.

3. Statutory Designation

3.1 Tree Preservation Order and Conservation Area Protection

A desk-based study was undertaken to identify if any of the trees present within or near the site are affected by statutory constraints as detailed in Table 3.1 below.

Statutory Constraint	Present ✓ ✗	Source	Details
TPO	✗	Local Authority website	N/A
Conservation Area	✓	Local Authority website	Bidbury Mead Conservation Area
Ancient Woodland	✗	Multi Agency Geographical Information for the Countryside (MAGIC)	N/A

Table 3.1: Summary of Statutory Constraints that Affect the Site

Where a tree preservation order, conservation area or ancient woodland applies to trees within the assessment area, statutory constraints will apply to the development in respect of trees.

No works must be undertaken on the protected trees without prior permission from the Local Authority unless authorised as part of an approved planning application. Works include pruning, topping, lopping, uprooting or wilful damage or wilful destruction of these trees. Any proposed pruning works not currently approved will need to be fully specified and agreed within a future planning application.

3.2 Protected Species

Bats

Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017)[4]. They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981[5], as amended. Consequently, causing damage to a bat roost constitutes an offence.

[4] HM Government – The National Archives (2017) [online] The Conservation of Habitats and Species Regulations 2017. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made

[5] HM Government – The National Archives 2017. *Wildlife and Countryside Act 1981*. [online] Available at: http://www.legislation.gov.uk/ukpga/1981/69/contents

Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

Birds

Trees offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act (WCA) 1981, as amended. Some species (listed in Schedule 1 of the WCA) are protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).

If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.

4. Results Summary

4.1 Preliminary Arboricultural Assessment

The assessment identified thirty-one individual trees and six groups of trees as detailed in Appendix A Tree Schedule and Table 4.1 below.

BS5837:2012 Category	Tree/ Group/ Hedgerow Reference
U	T8
A	T3, T14, T17, T18, T21, T25, T26, G4
B	T1, T2, T12, T13, T22, T23, T24, T29, T30, T31, G2, G3, G6
C	T4, T5, T6, T7, T9, T10, T11, T15, T16, T19, T20, T27, T28, G1, G5

Table 4.1: Summary of Trees, Groups and Hedgerows in BS5837:2012 Categories

The study area was located along Bidbury Lane within the Bidbury Mead recreation ground, which is situated within the borough of Havant, Hampshire. The site is positioned between the local historic towns of Portsmouth and Chichester with good access to the nearby A27. The assessment included recreational green space containing a significant proportion of mature specimen trees mostly located around the boundaries of the site.

It should be noted that this assessment was conducted as a BS5837 compliant survey to form part of proposed utilities pipeline installation, with tree location and measurement data captured. However, no defects were recorded as part of this assessment (see Appendix A – Tree Schedule) and therefore tree safety should only be considered as part of a Tree Safety Assessment, if required.

One individual tree (T8) assessed during the survey was considered unsuitable to retain (Retention Category U). T8 was a Hinoki cypress located adjacent to the car park access road towards the southwest of the site. Due to the poor structural condition of T8, it is unlikely the tree will provide a remaining contribution of more than 10 years and, therefore, it is recommended that T8 is removed and replaced by a suitable species of nursery stock size as part of the landscaping plan for the site.

The site contained numerous individual high-quality trees considered ‘Retention Category A’ due to their significant arboricultural and landscape contribution to the surrounding area (see drawing C159849-01-01). These high-quality specimens included seven individual trees and one group of trees as follows: T3, an early-mature Wellingtonia; T14, a mature Walnut; T17, a semi-mature English oak; T18, a mature Red oak; T25 a Semi-mature Beech tree; T26, a mature European lime and G4 which included a group of semi-mature English oak trees. The majority of these trees were spread throughout the site, but most were only visually prominent from within the study area. The retainment of ‘Retention Category A’ trees should be considered a priority due to their potential future contribution to the surrounding landscape, which would be expected to exceed 40 years.

A proportion of the trees assessed on site were found to be of moderate retention value and categorised as ‘Retention Category B’. This grouping contained ten individual trees and three groups of trees (see Table 4.1). Most of these trees were prominent due to a combination of their

height, maturity, species, and visibility throughout the local landscape. The trees within this group presented good retention value due to their arboricultural and landscape qualities which would be expected to continue for at least twenty years.

The remaining individual trees and groups of trees, identified within the survey were considered low retention value and were designated Retention Category C. These trees were mostly located adjacent to the car park in the southwest portion of the study area and either exhibited low quality due to a combination of defects or their juvenility. Moreover, they provided limited beneficial impact to the site, offering an estimated remaining contribution timescale of approximately ten to twenty years.

5. Arboricultural Design Guidance

5.1 Opportunities and Constraints

The information provided within this section of the report aims to inform designers, architects, builders, landscape architects and engineers of the opportunities and constraints posed by the trees to ensure that trees selected for retention can be successfully integrated within the proposed development. The objective is to achieve a harmonious and sustainable relationship between trees and structures for the future.

The presence of existing trees provides the opportunity to enhance the site and offer a mature landscape to the final development. All retained trees must therefore be protected, and sufficient offsets provided during the development to ensure they positively contribute to the new site use.

The removal of trees across the site should be minimised and new tree planting should be provided to adequately mitigate any essential tree loss.

5.2 Above Ground Constraints

Existing Canopy Spreads

The existing canopy spreads and indicative shade patterns of the assessed trees are shown on the Tree Survey Plan. Whilst larger, more mature trees offer significant value in term of their contribution to the future site use and are unlikely to grow much larger, the future crown spreads of younger trees will need to be fully considered when designing any built development nearby.

Where built development is proposed near to existing trees, consideration should be given to the amount of working space required to allow construction access (typically 2.5m for scaffolding).

Where development is proposed near to existing canopy spreads, the likelihood of leaf or fruit fall or an accumulation of tree sap or aphid honeydew causing nuisance should be considered.

An indicative shade pattern for each tree has been shown on the Tree Survey Plan. The shade from trees can be considered both a constraint and opportunity and therefore its effect upon the new development should be fully considered to ensure a harmonious and sustainable relationship can be achieved.

5.3 Below Ground Constraints

Root Protection Areas (RPAs)

Root Protection Areas for each tree and group of trees have been determined in accordance with BS5837 and is detailed within Appendix A Tree Schedule.

Initial RPAs have been plotted onto the Tree Survey Plan as circles, with the main tree stem/s located centrally, extending to encompass the area of ground, and thus the root-able soil volume, required for protection.

There are areas on site where, due to the presence of existing structures and hard surfaces, tree root development may have been restricted because of reduced nutrient or moisture availability and a lack of provision for gaseous exchange. In such areas it may be appropriate to modify the shape of the RPAs, whilst not reducing their area, to consider the likely root morphology and distribution of the affected trees.

Determining the extent of a tree's root system, however, is not a simple process and whilst roots can generally be considered absent beneath substantial buildings, they may be present beneath lighter structures and areas of hard surfacing. Where possible, all development, including new hard landscaping, should be situated outside of the designated Root Protection Areas of retained trees.

If accurate root mapping is required, further assessment using ground penetrating radar can be provided as an additional service to better inform design processes.

5.4 Tree Categorisation

Trees assessed as retention category A, B or C are a material consideration in the planning process and provide future value to the new site use, however, the prioritisation for tree retention should be based upon the guidance contained within BS5837.

Retention Category U

Trees found unsuitable to retain (retention category U) have limited, transient retention value due to their current condition and, in most circumstances, such specimens will not be considered for retention within new development unless they offer wildlife habitat potential and are situated in areas with limited pedestrian access.

Retention Category A

Trees of high quality should be given the highest priority when deciding which trees should be retained and incorporated into proposed development layouts. These trees offer the opportunity to significantly contribute to the future of the site in arboricultural and landscape terms and their loss should be avoided.

Retention Category B

Moderate quality trees should be retained and incorporated into development proposals as they offer the potential to provide medium to long term benefits to the site. These trees are typically found to have remediable defects that may improve over time. The removal of Retention Category B trees should generally be avoided.

Retention Category C

When considering which Retention Category C trees to retain in the new development, priority should be given to those trees that have been included within this category solely due to their young age and limited proportions (stem diameters of less than 150 mm at 1.5 m above ground level). These young specimens offer future potential as established tree cover but could be removed and replaced or translocated to areas away from potential development to avoid their loss. The remaining trees in this category would provide only temporary or transient landscape benefits until new tree planting becomes established and therefore, should not constrain the development of a site

5.5 Construction within Root Protection Areas

Construction near to trees has the potential to cause soil compaction, root damage and a reduction in nutrient and moisture availability to roots and should therefore be avoided. To minimise harm because of such works, specialist construction methods may be required to ensure any potential impact is fully considered.

The use of traditional strip footings can result in extensive root loss and should be avoided. The insertion of specially engineered structures within RPAs may be justified if this enables the

retention of a good quality tree that would otherwise be lost (usually Categories A or B). Designs for foundations that minimize adverse impact on trees should include particular attention to existing levels, proposed finished levels and cross-sectional details. To arrive at a suitable solution, site-specific and specialist advice regarding foundation design should be sought from the Project Arboriculturist and Structural Engineer. In shrinkable soils, foundation design should consider the risk of indirect damage through subsidence and heave.

5.6 Building Foundations

Any structures built on the site should comply with the current building regulations and *NHBC Chapter 4.2 building near trees (2022)*. Foundation depths for buildings near or adjacent to tree/s should consider the potential size of the tree/s at maturity and their subsequent water demand. The soil types throughout the site should be fully investigated and appropriate mitigation measures taken. If trees are removed across the site, the potential for soil heave should be assessed and foundations designed accordingly.

This survey has been undertaken in accordance with BS5837 recommendations and therefore, further assessment in accordance with current building regulations will be required to inform foundation design.

5.7 Subterranean Utilities and Services Easements

All new below-ground service runs, utilities and similar infrastructure should consider tree roots. RPAs should be avoided to ensure potential impacts are minimised and trees remain safe and healthy into the future. Service easements should also be considered when designing new infrastructure to ensure retained trees are not adversely impacted upon.

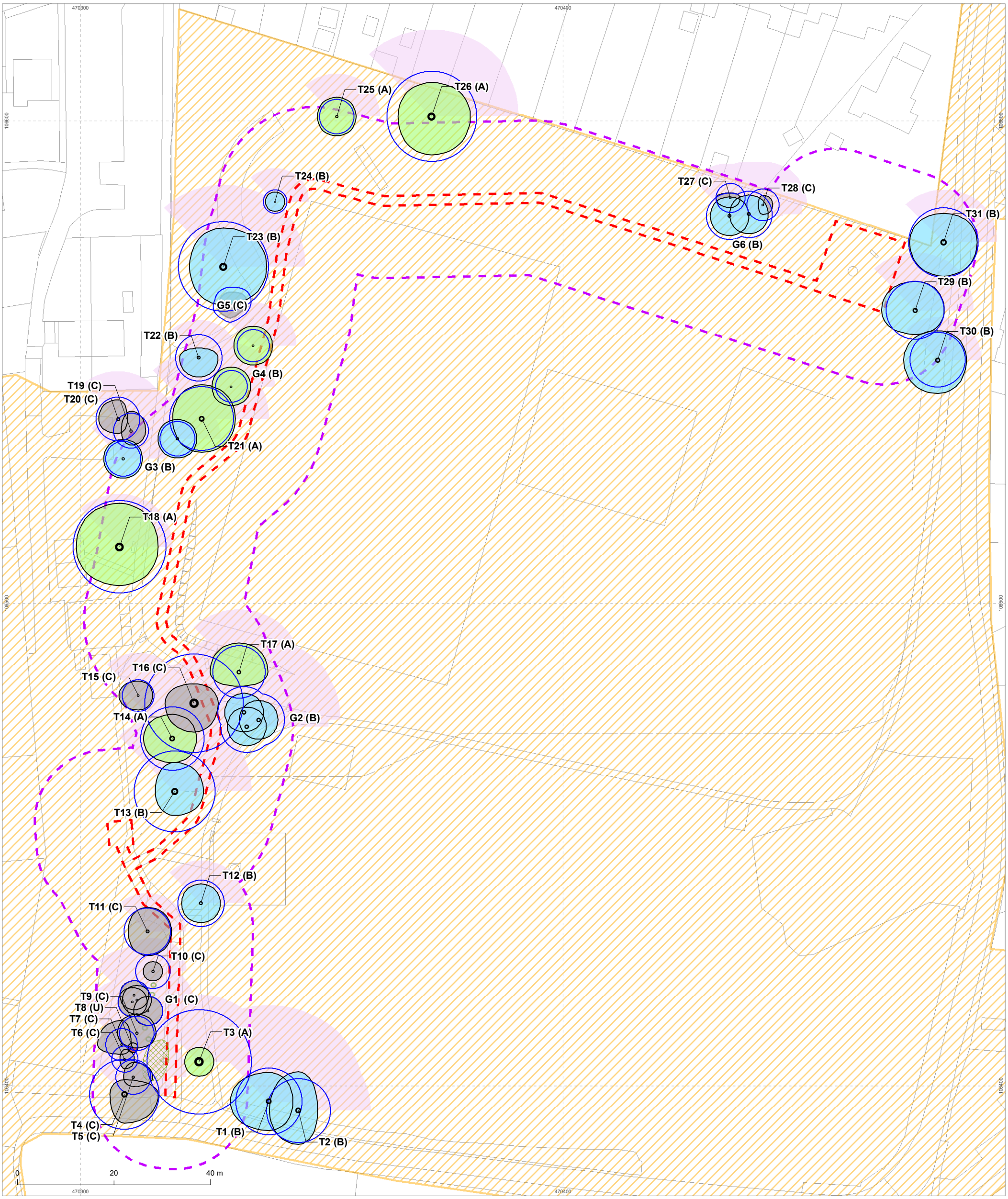
5.8 Future Tree Growth

Where trees are to be retained, their ultimate crown spread and height should be fully considered as future branch growth may result in conflict with the proposed development, damage to branches and the need for a long-term tree pruning regime. As trees grow, they absorb carbon dioxide from the atmosphere and store it in the form of roots, stems and branches and loss of the woody parts of trees should therefore be avoided if possible.

6. Recommendations

The following standard recommendations are made:

- The retention of Category A and B trees across the site should be considered a priority.
- The retention of Category C trees across the site should be retained where possible.
- The retention of Category U trees should not be considered as part of the new development unless they offer wildlife habitat potential.
- All new development should be located outside of the RPA or canopy spread of any retained tree.
- Any proposed new planting should consist of a mix of ornamental, native and wildlife attracting species.
- An updated PAA is recommended after a period of 12 months from the date of this assessment.
- If works take place during the bird breeding season, usually from March to September inclusive, trees should be checked for nesting birds.



Legend

- Tree location and stem diameter
- Category A
- Category B
- Category C
- Category U
- Current canopy extent
- Root Protection Area
- Indicative tree shadow
- Newly planted tree
- Shrub bed
- Bidbury Mean Conservation Area
- PAA Survey Area
- Working Area

NOTES
All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.
The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) havenbeen shown on the Tree Survey Plan.
All survey data is based on a topographical survey where possible, supplied by the client.
Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.
Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements.
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey.
TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.
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Project	Bidbury Mead, Bidbury Lane, Havant
Drawing	Tree Survey Plan
Client	The Clancy Group
Drawing Number: C159849-01-01-RevA	Revision: Rev A
Scale @ A3: 1:750	Date: February 2023
Approved By: LW	Drawn By: RP

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C159849-01-01-RevA

Appendix A - Tree Schedule

<table>
<tr><th>Measurements</th><th>Age Class</th><th>Overall Condition</th><th>Root Protection Area (RPA)</th></tr>
<tr><td>Height - measured from ground level at base of stem/s (m).</td><td>YNG: Juvenile trees that have been recently planted.</td><td>G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention.</td><td rowspan="4">• The RPA column gives the required area (m²).
• The RPA Radius column gives the radius (m) of an equivalent circle.
• The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the required rooting area in order for a tree to be retained.</td></tr>
<tr><td>Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837.</td><td>SM: Semi-mature, trees upto 1/3 life expectancy.</td><td>F - Fair: Trees with minor, but rectifiable, defects or in the early stages of stress from which it may recover.</td></tr>
<tr><td>Crown - crown spread estimated radially from the main stem (m).</td><td>EM: Early mature, trees 1/3 – 2/3 life expectancy.</td><td>P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term.</td></tr>
<tr><td rowspan="3">Abbreviations
Est - Estimated stem diameter
Avg - Average stem diameter
Max - Maximum stem diameter</td><td>M: Mature trees, upto 2/3 life expectancy.</td><td>D - Dead: Trees no longer alive. This could also apply to trees that are dying and unlikely to recover.</td></tr>
<tr><td>OM: Over mature, declining or moribund trees of low vigour.</td><td colspan="2" rowspan="2">In the assessment, of the BS category, particular consideration has been given to the following
• The health, vigour and condition of each tree
• The presence of any structural defects in each tree and its future life expectancy
• The size and form of each tree and its suitability within the context of a proposed development
• The location of each tree relative to existing site features e.g. its screening value or landscape features
• Age class
• Life expectancy</td></tr>
<tr><td></td><td>V: Veteran, tree possessing certain attributes relating to veteran trees.</td></tr>
</table>

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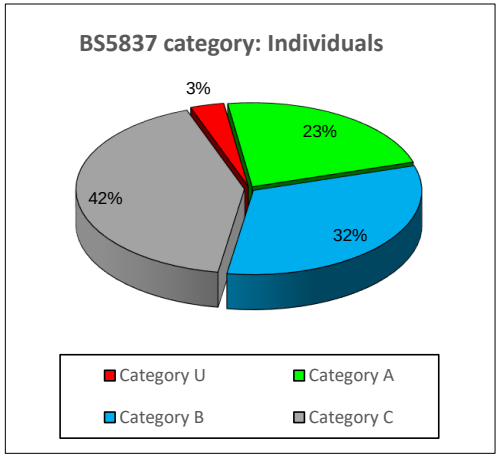
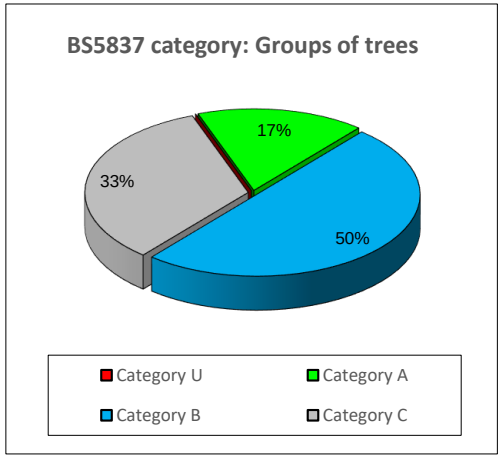
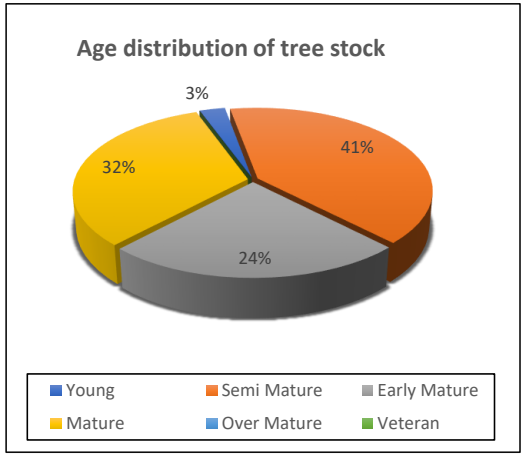
Structural Condition
The following has been considered when inspecting structural condition: • The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay. • Soil cracks and any heaving of the soil around the base. • Any abrupt bends in branches and limbs resulting from past pruning. • Tight or weak 'V' shaped forks and co-dominant stems. • Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994). • Cavities as a result of limb losses or past pruning. • Broken branches or storm damage. • Canker formations. • Loose or flaking bark. • Damage to roots. • Basal, stem or branch / limb cavities. • Crown die-back or abnormal foliage size and colour. • Any changes to the timing of normal leaf flush and leaf fall patterns.

Quality Assessment of Retention Category
Category U - Trees 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.
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.
Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.
Category C - Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm.
Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value







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Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U	T8	1		0
Category A	T3, T14, T17, T18, T21, T25, T26	7	G4	1
Category B	T1, T2, T12, T13, T22, T23, T24, T29, T30, T31	10	G2, G3, G6	3
Category C	T4, T5, T6, T7, T9, T10, T11, T15, T16, T19, T20, T27, T28	13	G1, G5	2
	Total	31	Total	6

	Hedgerows	Totals	Woodlands	Totals
Category U		0		0
Category A		0		0
Category B		0		0
Category C		0		0
	Total	0	Total	0

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T1	Ash	20.0	4.0	1	560	6.0	5.0	6.0	8.0	M	G	F	150	6.9	B 1,2	
T2	Ash	15.0	4.0	1	550	8.0	4.0	7.0	6.0	EM	G	F	137	6.6	B 1,2	
T3	Wellingtonia	14.0	0.5	1	890	3.0	3.0	3.0	3.0	EM	G	G	366	10.8	A 1	
T4	Horse chestnut	10.0	2.0	1	580	3.0	7.0	6.0	3.0	M	P	F	163	7.2	C 1	
T5	Silver birch	11.0	3.0	1	290	3.0	4.0	2.0	2.0	EM	F	F	41	3.6	C 1	
T6	Lawson cypress	7.0	1.0	1	220	2.0	2.0	2.0	1.0	SM	F	G	23	2.7	C 1	
T7	Silver birch	12.0	5.0	1	260	5.0	2.0	2.0	5.0	SM	F	F	34	3.3	C 1	
T8	Hinoki cypress	3.0	1.5	1	110	1.0	1.0	1.0	1.0	SM	P	F	7	1.5	U	
T9	Silver birch	12.0	4.0	1	280	4.0	4.0	3.0	4.0	SM	F	F	41	3.6	C 1	
T10	Leyland cypress Golden	7.0	1.0	1	280	2.0	2.0	2.0	2.0	SM	F	G	41	3.6	C 1	
T11	Red oak	8.0	3.0	1	380	5.0	5.0	5.0	4.0	SM	F	P	72	4.8	C 1	
T12	Silver birch	9.0	2.0	1	380	4.0	4.0	4.0	4.0	EM	G	G	72	4.8	B 1	
T13	Sweet gum	16.0	4.0	3	480 430 220	6.0	6.0	5.0	4.0	M	P	G	222	8.4	B 1,2	
T14	Walnut	14.0	4.0	1	550	5.0	5.0	5.0	6.0	M	G	G	137	6.6	A 1	
T15	Silver birch	9.0	3.0	1	260	3.0	3.0	3.0	4.0	SM	F	F	34	3.3	C 1	
T16	Holly	9.0	3.0	9	840	4.0	5.0	6.0	6.0	M	P	G	327	10.2	C 1	
T17	English oak	13.0	3.0	1	430	6.0	6.0	3.0	6.0	SM	G	G	92	5.4	A 1	
T18	Red oak	11.0	3.0	1	780	9.0	8.0	8.0	9.0	M	G	F	290	9.6	A 1	
T19	Silver birch	10.0	4.0	1	280	4.0	3.0	3.0	2.0	SM	F	F	41	3.6	C 1	
T20	Silver birch	10.0	3.0	1	360	4.0	2.0	3.0	4.0	EM	P	F	64	4.5	C 1	
T21	English oak	14.0	3.0	1	530	7.0	7.0	7.0	6.0	EM	G	G	137	6.6	A 1	
T22	Zelkova	8.0	4.0	1	390	2.0	4.0	4.0	4.0	EM	F	G	72	4.8	B 1	
T23	Silver maple	17.0	3.0	1	760	8.0	9.0	8.0	7.0	M	F	G	272	9.3	B 1	
T24	English oak	7.0	2.0	1	180	2.0	2.0	2.0	2.0	Y	F	F	18	2.4	B 1	
T25	Beech	9.0	3.0	1	280	4.0	4.0	4.0	4.0	SM	F	G	41	3.6	A 1,3	Memorial Tree

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T26	European lime	18.0	4.0	1	760	7.0	8.0	8.0	7.0	M	G	G	272	9.3	A 1,2	
T27	European lime	7.0	2.0	1	240	1.0	2.0	2.0	3.0	SM	F	F	28	3.0	C 1	
T28	Alder	9.0	4.0	1	270	2.0	2.0	2.0	1.0	SM	F	P	34	3.3	C 1	
T29	Ash	12.0	3.0	1	490	6.0	6.0	5.0	7.0	EM	F	F	113	6.0	B 1	
T30	Zelkova	9.0	3.0	1	470	6.0	6.0	7.0	7.0	M	F	F	102	5.7	B 1	
T31	Ash	11.0	4.0	1	590	6.0	7.0	7.0	7.0	M	F	F	163	7.2	B 1	

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
G1	Silver birch	10.0	3.0	-	240	3.0	3.0	3.0	3.0	SM	F	G	28	3.0	C 1	
G2	Silver birch	17.0	3.0	-	430	4.0	4.0	4.0	4.0	M	F	F	92	5.4	B 1,2	
G3	Hornbeam	9.0	2.0	-	300	4.0	4.0	4.0	4.0	EM	F	G	41	3.6	B 1	
G4	English oak	9.0	3.0	-	270	4.0	4.0	4.0	4.0	SM	G	G	34	3.3	A 1	
G5	Wild cherry	10.0	3.0	-	330	3.0	3.0	3.0	3.0	SM	F,P	F	55	4.2	C 1	
G6	Field maple	11.0	3.0	-	380	4.0	4.0	4.0	4.0	M	G	F	72	4.8	B 1	