Part 1: BS: 5837 Tree Survey & Tree Constraints Plan Report

SITE:

Highgate Cemetery
Swain's Lane
Highgate
London
N6 6PJ

PREPARED FOR:

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BARTLETT PROJECT REFERENCE:

JPL/210717/R

SITE VISIT DATE:

16th November 2021

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1.0 EXECUTIVE SUMMARY:

1.0.1 The following report evaluates the trees within and adjacent to the above site using the criteria and guidance set out in the British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*.

1.0.2 The wider amenity and landscape values of the trees, as well as their useful life expectancies are determined, and as a result, a category grading to all trees for retention using the "Cascade Chart for Tree Quality Assessment" is assigned.

1.0.3 A Tree Constraints Plan has also been drawn and appended to the report. The Plan illustrates the tree locations, their above and below ground constraints and their above ground spatial requirements with any proposed development

1.0.4 Highgate Cemetery is a designated place of burial in north London, England. There are approximately 170,000 people buried in around 53,000 graves across the West and East Cemeteries, and is designated Grade I on the Register of Historic Parks and Gardens.

1.0.5 Highgate Cemetery contains a diverse mixture of native, naturalised and exotic deciduous and evergreen tree species, there is extensive coverage of predominantly self-set Ash which are causing damage to graves and gravestones.

Figure 1: Photograph taken from the East Cemetery main northern footpath looking towards the entrance.

1.1 Table 1: BS: 5837 (2012) Tree Quality Assessment

BS: 5837 (2012) Category	Number
A1	5
A2	5
B1	30
B2	440
Total	480

2.0 SCOPE OF REPORT

2.1 Instruction

2.1.0 Bartlett Consulting has been instructed to undertake a tree survey loosely in accordance with British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*, for the important trees within the boundary of East & West Cemeteries of Highgate Cemetery, Swain's Lane, Highgate, London, N6 6PJ, that have the potential to influence any proposed design and development, which therefore must be considered as a constraint within the project planning.

2.2 Documents & Supporting Information

2.2.0 Bartlett Consulting was provided with the following documentation and plans prior to the site visit & tree survey. They were sent via email in both PDF and DWG file format:

- *Highgate Cemetery Memorial Plan, Drawing Number: C0701001-P-02, dated January 2021*

2.3 Aspects Included within Report

2.3.0 The tree survey included within this report follows the guidance of Clause 4 of British Standard 5837: *Trees in Relation to Design, Demolition and Construction – Recommendations*. The tree survey schedule, included within Appendix 3, details: tree common name; various physical dimensions; notable observations; tree categorisation with respect to their landscape/cultural value and perceived life expectancy.

2.3.1 The tree survey has been conducted in accordance with the principals of the Visual Tree Assessment (VTA) method developed by Mattheck & Breloer (1994). This is a basic visual tree assessment, and must not be misinterpreted as a detailed/advanced tree condition inspection or tree risk assessment.

2.3.2 Any prescribed tree works are made with regards to good tree management, irrespective of any proposed development. Management recommendations may also be made in response to a pathogen or pest of known contagion which may pose a concern to people or other trees.

2.3.3 This report is accompanied by a Tree Constraints Plan (TCP) accurately detailing the positions of surveyed trees and vegetation; illustrating the physical dimensions of the crowns as per the average radius; the calculated Root Protection Area (RPA) of each tree; and tree shade/shadow patterns.

2.3.4 Modified RPA's will be illustrated if known below ground level obstructions exist.

2.3.5 Future canopy spread for young trees will also be illustrated where necessary.

2.4 Aspects Excluded from Report

2.4.0 The prescribed tree works contained within this report do not take into consideration possible facilitation pruning. This report does not include an Arboricultural Impact Assessment (AIA), Arboricultural Method Statement (AMS), or a Tree Protection Plan (TPP).

2.4.1 The contents of this report do not include discussions regarding subsidence and/or heave as a result of retention or tree removal, nor does this report consider the water demands of trees present to determine foundation design and depth. If required, this can be provided on request.

3.0 TREE PRESERVATION ORDER & CONSERVATION AREA PROTECTION STATUS

3.0.1 The Town & Country Planning Act (Tree Preservation) (England) Regulations 2012 and the Town & Country Planning Act 1990 (as amended) provides legislative protection for trees within England.

3.0.2 A tree protection status check was conducted by Bartlett Consulting on 30th November 2021, via accessing the London Borough of Camden Council online (external) mapping link:

3.0.3 https://www.flickr.com/photos/camdencouncil/6257979712/sizes/l/in/photostream/

3.1 Tree Preservation Order (TPO) Status

3.1.0 None

3.2 Conservation Area (CA) Status

3.2.0 Highgate Conservation Area, designated 2007

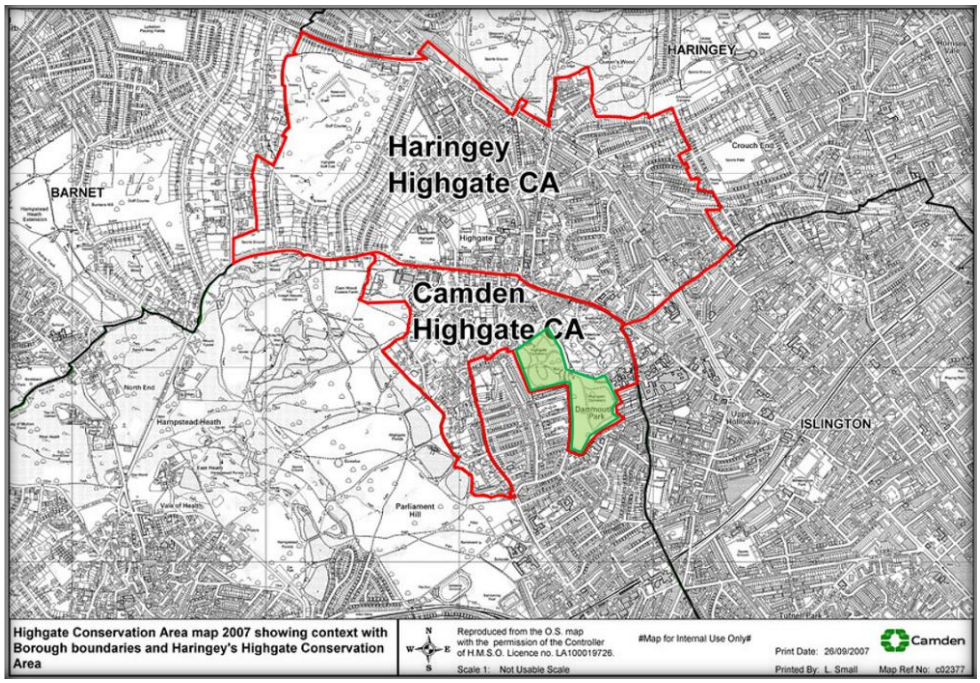

Figure 2: Annotated plan showing The London Borough of Haringey & Camden 'Highgate Conservation Area', Highgate Cemetery identified by a green polygon.

3.3 Tree Management Implications

3.3.0 It has been established by viewing information held by the Local Planning Authority (LPA): London Borough of Camden Council website that the trees subject to this report are not currently subject to a Tree Preservation Order (TPO). However the site does stand within a designated Conservation Area (CA). This status affects all trees of a stem diameter greater than 75mm, when measured at 1.5m above ground level. Therefore trees will be protected by virtue of their location in the designated CA.

3.3.1 Under the Town and Country Planning Act 1990 (as amended), a Section 211 Notice must be served upon the LPA, providing them with 6 weeks' notice of any intention to implement works to protected trees. The purpose of this notice is to provide the LPA an opportunity to consider whether a TPO should be made in respect of the trees.

Please note that the removal of dead trees and the pruning of dead wood from living trees are permitted and "excepted" works under the 2012 Regulation listed above.

4.0 GENERAL SITE DETAILS

4.1 Description of the Site

4.1.0 As detailed within the Executive Summary, Highgate Cemetery is a place of burial in north London, England. There are approximately 170,000 people buried in around 53,000 graves across the West and East Cemeteries. Highgate Cemetery is notable both for some of the people buried there as well as for its de facto status as a nature reserve. The Cemetery is designated Grade I on the Register of Historic Parks and Gardens.

Figure 3: Photograph of the remains of a historic Lime tree avenue, and dominance of self-sewn Ash within the East Cemetery.

4.2 Local Landscape and Amenity Evaluation

4.2.0 The East and West Cemeteries each benefit from a scattering of mature trees throughout numerous compartments contained within each cemetery. The path layout in the older West Cemetery can be regarded as serpentine with a natural flowing design, taking ques from the natural landscape, whilst the newer East Cemetery is less natural and more formal with a well-structured grid layout.

4.2.1 The West Cemetery contains a diverse mixture of native, naturalised and exotic deciduous and evergreen tree species; there are several mature Ash, Beech, English Elm, False Acacia, Horse Chestnut, Common Lime, Sycamore, whilst English Yew, Corsican Pine, Cedar, Wellingtonia, and Monkey Puzzle make up the coniferous component.

4.2.2 The East Cemetery is predominantly deciduous with a smaller number of evergreen species. The majority of the tree population is comprised of self-sewn Ash but benefits from the addition of Cherry, Horse Chestnut, Hornbeam, Common Lime, Mongolian Lime, London Plane and Pedunculate Oak, whilst the evergreen species include English Yew, Lawson's Cypress, Sawara Cypress and Cedar.

4.2.3 In both the East & West Cemeteries, there is extensive secondary Ash woodland which has developed naturally under the over-storey framework since the 1970s. This Ash layer requires proactive management in light of the threat of disease to Ash, and also of the damage these self-set Ash are causing to graves and gravestones.

4.2.4 The trees subject to the report are considered to have high public visibility and amenity value, as they can be seen from Swain's Lane, Dartmouth Park Hill, Raydon Street and Chester Road.

4.3 Previous Surveys & Site History

4.3.0 We are not aware of any other surveys being conducted on site, other than the Topographical Site Survey. Nor are we aware of any historical or cultural values relating to the trees.

5.0 GENERAL TREE DETAILS

5.1 Tree Identification & Location

5.1.0 The trees subject to this report are located within the curtilage of the East & West Cemeteries, Highgate Cemetery, Swain's Lane, Highgate, London, N6 6PJ.

5.1.1 The locations of the surveyed trees are illustrated on the Tree Constraints Plan (TCP) accompanying this report.

5.1.2 The accuracy of the tree locations were largely based upon the provided Topographical Site Survey Drawing, referenced in Section 2.2 above. Whilst some trees subject to this report have been surveyed and plotted by Bartlett Consulting using a laser distometer, a measuring tape and fixed points. Whilst this method does not guarantee accuracy provided by a land or topographical site survey, it is considered sufficient to allow the plotting of calculated Root Protection Areas.

5.1.3 Where deemed appropriate to do so, based on tree species, age, size and proximity to one another, some trees have been referenced and surveyed as a group. The dimensions of the largest tree in each group have been recorded within the tree survey schedule.

5.2 Trees Included within Survey

5.2.0 Only trees considered to be of the higher value (category A and B) as per British Standard 5837 (2012): *Trees in Relation to Design, Demolition and Construction – Recommendations*, are included within the survey.

5.2.1 Only trees with a measured stem diameter equal to or greater than 75 millimetres (at 1.5 metres above ground level) are included within the survey.

5.3 Categorisation & Gathered Data

5.3.0 All gathered data contained within the Tree Survey Table is provided within Appendix 1 of this report follows the guidance in part with Clause 4.4 of British Standard 5837 (2012): *Trees in Relation to Design, Demolition and Construction – Recommendations*.

5.3.1 Furthermore, each tree within the Tree Survey Table at Appendix 1 is categorised as per the "Cascade Chart for Tree Quality Assessment" given as Table 1 within British Standard 5837:2012 – a copy of which is provided within Appendix 2 of this report.

6.0 TREE CONSTRAINTS PLAN

6.1 Below Ground Level Constraints

6.1.0 The below ground level constraint on any site will include the root system and rooting environment of trees being retained. The data gathered during the tree survey permits the creation of a Tree Constraints Plan (TCP). The TCP illustrates the tree location within and adjacent to the site, the physical dimensions of the main stem and average crown radius above ground as well as the constraints below ground level caused by the calculated Root Protection Area (RPA) of each tree.

6.1.1 The calculated RPA is indicated by the orange broken circle on the TCP and shows the minimum area around each tree or groups of trees, subject to the tree survey, which is deemed to contain sufficient roots and rooting environment to maintain the current vitality of the tree. This area is as per the recommendations of Clause 4.6 of British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.

6.1.2 In the first instance, the RPA should remain a construction exclusion zone and all proposed development should be planned and located outside the RPA for trees of such quality and value to be retained, essentially leaving the RPA sacrosanct.

6.2 Modification of RPA

6.2.0 Whilst not affecting the total area of the calculated RPA, in some circumstances, the shape of the RPA has been modified from the default circle. This decision has been made by Bartlett Consulting when taking into account the morphology and disposition of roots as influenced by topography of the site and existing site conditions such as the presence of hard surfacing, kerbing, concrete etc.

6.3 Above Ground Level Constraints

6.3.0 The above ground level constraints on a development site can be numerous, resulting primarily from the current and/or ultimate crown height and spread of the retained tree; tree species characteristics such as evergreen or deciduous; the height of the tree crown above ground level; and any "nuisance" that might be the result of a tree's proximity to living areas.

6.3.1 Proposed structures should be designed and/or located with due consideration of above ground constraints so as to prevent direct damage from occurring to the structure, as well as the need for unnecessary and possibly damaging tree management works due to shade and/or falling leaves affecting amenity space and living areas.

6.3.2 Where considered appropriate to do so, this report will give consideration to the growth potential of younger trees and the possible effects caused of this above ground constraint on the site.

7.0 CONCLUSIONS

7.1 Initial Considerations

7.1.0 Whilst all trees on site were inspected and assessed by Bartlett Consulting Project Arboriculturalists, in accordance with the guiding principles *of BS: 5837 (2012) Trees in relation to design, demolition & construction – Recommendations*, only those trees qualified to be high quality (Category A) and moderate quality (Category B) were recorded. Each tree was then subsequently graded as per its arboricultural (1), landscape (2) or cultural & conservation (3) values.

7.1.1 By default, all other remaining trees present within the East & West Cemeteries, not included within this report would otherwise be graded as low value (Category C).

7.1.2 Trees with significant structural defects and/or poor physiological condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years, would naturally be graded as Category U. These trees have been identified within the separate report; *Tree Survey Condition Management Report (Ref. JPL/210717/R)*.

7.1.3 As detailed in discussions above, all of the trees included within this report are considered to be important within the landscape either as amenity, screening assets, as well as for wildlife habitat, with the potential for being incorporated into any proposed landscaping design/development.

7.2 Future Considerations

7.2.0 Once a more detailed landscape scheme has been presented, an Arboricultural Impact Assessment (AIA) can be undertaken, formally taking into account any issues relating to the proposed development design and site layout, with regards to the existing trees.

7.2.1 Those trees identified to potentially form a physical constraint whether it be below ground or above, will require a more detailed tree survey to be undertake; to accurately record crown spreads and crown heights to all cardinal points, as guided by the principles contained within *BS: 5837 (2012) Trees in relation to design, demolition & construction – Recommendations*.

7.2.2 The AIA will identify any trees that will require facilitation pruning or removal, and the appropriateness of such works, as well as the requirement for replacement tree planting.

7.2.3 Where the AIA has identified potential tree and development conflicts, we will provide recommendations for design modification and adjustment of the proposed footprint where necessary. The AIA will also provide methods of mitigation to ensure potential conflict does not cause damage to any retained trees.

7.2.4 An Arboricultural Method Statement (AMS) will be the final phase of the project, whereby specific construction methods and details pertaining to mitigation measures are provided.

7.3.4 The Tree Protection Plan (TPP) is typically composed at the same time when the AMS is written, following finalisation of a development design/ site layout. The TPP will identify trees to be retained, removed, and pruned for facilitation purposes, as well as the location and specification of tree protection barriers and non-compacting ground protection to be installed on site.

7.3.5 The AMS will consider construction activities where they are in close proximity to retained trees, dealing with issues such as site access, intensity of activity, the provision of a suitable working space, designated areas for delivery and storage of building materials, and if know at the time of writing the location of service runs and soakaways.

APPENDIX 1 TREE SURVEY KEY

Tree Reference Number	The tree number of physical tree tag (if applicable) provided to an individual tree or group of trees, as shown on the Tree Constraints Plan.
Species	Generally the common name given to the tree species. The Latin name is sometimes provided as clarification where deemed necessary.
Height	This figure is given in metres. Measurements are obtained using a digital clinometer. A black asterisk * will denote that the measurement is estimated.
Stem Diameter	This figure is given in millimetres. Measurement are obtained using a standard diameter tape, whilst measured from 1.5 metres above ground level, or otherwise indicated. A black asterisk * will denote that the measurement is estimated.
Crown Spread	This figure is given in metres. Measurements are obtained radially for all four cardinal points using a laser range finder. A black asterisk * will denote that the measurement is estimated.
Crown Clearance	This figure is given in metres. Measurements are obtained radially for all four cardinal points, between the crown and ground level, and obtained using a digital clinometer. A black asterisk * will denote that the measurement is estimated.
Height to first major branch	This is an approximate figure given in metres. Measurements are obtained by identifying the lowest lateral branch within the crown. Recorded information will also refer to a cardinal direction, and obtained using a digital clinometer. A black asterisk * will denote that the measurement is estimated.
Age	The following abbreviations are used to give the age of the tree; NP = Newly Planted, Y = Young, aged less than one quarter of its life expectancy, SM = Semi-Mature, trees of approx. one quarter of its life expectancy, EM = Early-Mature, between one quarter & half of its life expectancy, M = Mature, trees of over half of its life expectancy, OM = Over Mature, trees exceeding their life expectancy, V = Veteran, over mature trees which contain multiple wildlife habitat features & associations.
Physiological Condition	The following considerations are used to evaluate the physiological conditions of a tree (foliage & vitality): Dead, Poor, Fair & Good, with intermediate descriptions using same phrasing.
Structural Condition	Standard comments referring to the visible structural condition of tree: Hazardous, Poor, Fair, Good, with intermediate descriptions using same phrasing.
Observations	These are brief comments which relate to observations from ground level, unless otherwise stated. These observations are made to assist in categorising the tree. They do not provide or replace a comprehensive condition survey.
Preliminary Management Recommendations	These recommendations will only identify the need for more detailed assessment/inspection or tree management due to tree hazards of features which present an immediate risk to persons & property. The tree works do not consider general husbandry or required management of the trees, nor do they consider tree works that may be required prior to development or to facilitate access to the site.
Estimated Remaining Contribution	This is the number of estimated years that the tree will remain present and contribute to the local landscape. The following bands are used; <10 years, 10+ years, 20+ years & 40+ years.
Categorisation	This is the grading category applied following the tree survey. Trees are categorised in accordance with the cascade chart provided within Table 1 in BS: 5837 (2012). A copy of this chart is provided within Appendix 2 of this report. A red asterisk * will denote that the categorisation as given will be dependent upon information gained from further detailed inspection of the tree.
Root Protection Area & Root Protection Radius	The RPA is a figure given in metres squared, the minimal area which should be left undisturbed. The RPR is a figure given in metres, a measured radial distance away from the trees main stem.

APPENDIX 2 BRITISH STANDARD: 5837 (2012) TABLE 1: TREE CATEGORISATION

TREES UNSUITABLE FOR RETENTION				
CATEGORY & DEFINITION	**CRITERIA**			**IDENTIFICATION ON PLAN**
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 serious, irremediable, structural defects, 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. NOTE: Category U trees can have existing or potential conservation value which might be desirable to preserve.			**DARK RED**
TREES TO BE CONSIDERED FOR RETENTION				
CATEGORY & DEFINITION	**CRITERIA (subcategories)**			**IDENTIFICATION ON PLAN**
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
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)	**LIGHT GREEN**
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 & 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	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	**MID BLUE**
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 significant greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	**GREY**
	NOTE: Whilst category C trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150 mm should be considered for relocation.			

APPENDIX 3 BRITISH STANDARD: 5837 (2012) TREE SURVEY SCHEDULE

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T1	Cherry Laurel *(Prunus laurocerasus)*	8	240 275 380 430	6	Mature	20+	B2	211.0 (8.2)
T2	Pedunculate Oak *(Quercus robur)*	16	480	6	Semi-mature	20+	B2	104.2 (5.8)
T3	Common Alder *(Alnus glutinosa)*	18	660	6	Mature	20+	B2	197.1 (7.9)
T4	English Yew *(Taxus baccata)*	8	440	4	Semi-mature	20+	B2	87.6 (5.3)
T5	Holly *(Ilex aquifolium)*	14	330	4	Semi-mature	20+	B2	49.3 (4.0)
T6	Sweet Chestnut *(Castanea sativa)*	15	370	5	Semi-mature	20+	B2	61.9 (4.4)
T7	Common Lime *(Tilia x europaea)*	12	260	4	Semi-mature	20+	B2	30.6 (3.1)
T8	Hornbeam *(Carpinus betulus)*	8	190	3	Semi-mature	20+	B2	16.3 (2.3)
T9	Field Maple *(Acer campestre)*	8	180	3	Semi-mature	20+	B2	14.7 (2.2)
T10	Ash *(Fraxinus excelsior)*	22	1260	12	Mature	20+	B2	706.9 (15.0)
T11	English Yew *(Taxus baccata)*	14	370 630	6	Early-mature	20+	B2	243.0 (8.8)
T12	Holm Oak *(Quercus ilex)*	9	220	3	Semi-mature	20+	B2	22.0 (2.6)
T13	Common Lime *(Tilia x europaea)*	16	330 330 300	5	Semi-mature	20+	B2	141.0 (6.7)
T14	English Yew *(Taxus baccata)*	13	820	5	Early-mature	20+	B2	304.2 (9.8)
T15	English Yew *(Taxus baccata)*	13	830	5	Early-mature	20+	B2	311.7 (10.0)
T16	Ash *(Fraxinus excelsior)*	22	590	8	Early-mature	20+	B2	157.5 (7.1)
T17	Ash *(Fraxinus excelsior)*	22	500 580 230	7	Early-mature	20+	B2	290.0 (9.6)
T18	Robinia *(Robinia pseudoacacia)*	20	590	7	Early-mature	20+	B2	157.5 (7.08)
T19	English Yew *(Taxus baccata)*	14	460 590	8	Early-mature	20+	B2	254.0 (9.0)
T20	Ash *(Fraxinus excelsior)*	22	600 550	10	Early-mature	20+	B2	302.0 (9.8)
T21	English Yew *(Taxus baccata)*	6	160 150 150	4	Semi-mature	20+	B2	32.0 (3.2)
T22	English Yew *(Taxus baccata)*	6	190 160	3	Semi-mature	20+	B2	28.0 (3.0)
T23	English Yew *(Taxus baccata)*	7	310 260	7	Semi-mature	20+	B2	75.0 (4.9)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T24	Sycamore *(Acer pseudoplatanus)*	21	940	8	Early-mature	20+	B2	399.7 (11.3)
T25	English Yew *(Taxus baccata)*	15	600 270	7	Early-mature	20+	B2	196.0 (7.9)
T26	Ash *(Fraxinus excelsior)*	22	500	7	Semi-mature	20+	B2	113.1 (6.0)
T27	English Yew *(Taxus baccata)*	7	230	4	Semi-mature	20+	B2	23.9 (2.8)
T28	Pedunculate Oak *(Quercus robur)*	13	190	4	Semi-mature	20+	B2	16.3 (2.3)
T29	Pedunculate Oak *(Quercus robur)*	8	160	4	Semi-mature	20+	B2	11.6 (1.9)
T30	Ash *(Fraxinus excelsior)*	20	500	10	Semi-mature	20+	B2	113.1 (6.0)
T31	Ash *(Fraxinus excelsior)*	22	780	12	Early-mature	20+	B2	275.2 (9.4)
T32	English Yew *(Taxus baccata)*	9	160 230 210	6	Semi-mature	20+	B2	55.0 (4.2)
T33	Field Maple *(Acer campestre)*	12	250	4	Semi-mature	20+	B2	28.3 (3.0)
T34	Robinia *(Robinia pseudoacacia)*	15	300 210	4	Semi-mature	20+	B2	61.0 (4.4)
T35	Field Maple *(Acer campestre)*	16	320 280	6	Semi-mature	20+	B2	82.0 (5.1)
T36	Field Maple *(Acer campestre)*	15	300	5	Semi-mature	20+	B2	40.7 (3.6)
T37	Bird Cherry *(Prunus padus)*	16	230	5	Semi-mature	20+	B2	23.9 (2.8)
T38	Pedunculate Oak *(Quercus robur)*	15	250	5	Semi-mature	20+	B2	28.3 (3.0)
T39	English Yew *(Taxus baccata)*	8	190 180 150	6	Semi-mature	20+	B2	41.0 (3.6)
T40	Bird Cherry *(Prunus padus)*	18	370	5	Early-mature	20+	B2	61.9 (4.4)
T41	Bird Cherry *(Prunus padus)*	18	320	4	Early-mature	20+	B2	46.3 (3.8)
T42	Ash *(Fraxinus excelsior)*	20	490	7	Early-mature	20+	B2	108.6 (5.9)
T43	Holly *(Ilex aquifolium)*	9	200	3	Semi-mature	20+	B2	18.1 (2.4)
T44	English Yew *(Taxus baccata)*	10	270 460	6	Semi-mature	20+	B2	33.0 (3.2)
T45	Bird Cherry *(Prunus padus)*	10	260	4	Semi-mature	20+	B2	30.6 (3.1)
T46	Bird Cherry *(Prunus padus)*	16	410	6	Early-mature	20+	B2	76.0 (4.9)
T47	Holm Oak *(Quercus ilex)*	12	220	6	Semi-mature	20+	B2	21.9 (2.6)
T48	Robinia *(Robinia pseudoacacia)*	25	980	7	Mature	20+	B2	434.5 (11.8)
T49	Cherry Laurel *(Prunus laurocerasus)*	6	270	8	Mature	20+	B2	33.0 (3.2)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T50	Cherry Laurel *(Prunus laurocerasus)*	6	260	8	Mature	20+	B2	30.6 (3.1)
T51	Cherry Laurel *(Prunus laurocerasus)*	6	290	8	Mature	20+	B2	38.0 (3.5)
TG52	10x English Yew *(Taxus baccata)*	4	150 Avg.	3	Semi-mature	20+	B2	10.2 (1.8)
T53	Cherry Laurel *(Prunus laurocerasus)*	5	250 260	6	Mature	20+	B2	58.0 (4.3)
T54	Cherry Laurel *(Prunus laurocerasus)*	7	290 220 260 370	7	Mature	20+	B2	154.0 (7.0)
TG55	15+x English Yew *(Taxus baccata)*	3	150	3	Semi-mature	20+	B2	10.2 (1.8)
T56	Holm Oak *(Quercus ilex)*	10	180	3	Semi-mature	20+	B2	14.7 (2.2)
T57	English Yew *(Taxus baccata)*	12	300	6	Semi-mature	20+	B2	40.7 (3.6)
T58	English Yew *(Taxus baccata)*	12	380 320	6	Semi-mature	20+	B2	113.0 (6.0)
T59	Common Lime *(Tilia x europaea)*	17	730	8	Early-mature	20+	B2	241.1 (8.8)
T60	Silver Birch *(Betula pendula)*	20	410	5	Early-mature	20+	B2	76.0 (4.9)
T61	Holm Oak *(Quercus ilex)*	12	330	7	Semi-mature	20+	B2	49.3 (4.0)
T62	Bird Cherry *(Prunus padus)*	20	380	7	Early-mature	20+	B2	65.3 (4.6)
T63	Silver Birch *(Betula pendula)*	18	210 570	7	Early-mature	20+	B2	167.0 (7.3)
T64	Field Maple *(Acer campestre)*	8	220	6	Semi-mature	20+	B2	21.9 (2.6)
T65	Robinia *(Robinia pseudoacacia)*	16	300	5	Semi-mature	20+	B2	40.7 (3.6)
T66	Ash *(Fraxinus excelsior)*	20	530	8	Early-mature	20+	B2	127.1 (6.4)
T67	Holly *(Ilex aquifolium)*	15	240 240 290	5	Early-mature	20+	B2	92.0 (5.4)
T68	English Yew *(Taxus baccata)*	13	250 250 150	5	Semi-mature	20+	B2	66.0 (4.6)
T69	English Yew *(Taxus baccata)*	9	300	4	Semi-mature	20+	B2	40.7 (3.6)
T70	English Yew *(Taxus baccata)*	12	220 220 290	6	Semi-mature	20+	B2	82.0 (5.1)
T71	Lawson Cypress *(Chamaecyparis lawsoniana)*	15	550	2	Early-mature	20+	B2	136.8 (6.6)
T72	Bird Cherry *(Prunus padus)*	22	650	5	Mature	20+	A2	191.1 (7.8)
T73	Holly *(Ilex aquifolium)*	8	220	4	Semi-mature	20+	B2	21.9 (2.6)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T74	Lawson Cypress *(Chamaecyparis lawsoniana)*	12	320	2	Early-mature	20+	B2	46.3 (3.8)
T75	Holly *(Ilex aquifolium)*	11	210	3	Semi-mature	20+	B2	20.0 (2.5)
T76	Silver Birch *(Betula pendula)*	12	210 200	5	Semi-mature	20+	B2	38.0 (3.5)
T77	Silver Birch *(Betula pendula)*	12	140 160	4	Semi-mature	20+	B2	21.0 (2.6)
T78	Silver Birch *(Betula pendula)*	12	220	4	Semi-mature	20+	B2	21.9 (2.6)
T79	Silver Birch *(Betula pendula)*	12	210	3	Semi-mature	20+	B2	20.0 (2.5)
T80	Irish Yew *(Taxus baccata)* 'Fastigiata'	8	250	3	Semi-mature	20+	B2	28.3 (3.0)
T81	English Yew *(Taxus baccata)*	6	210	5	Semi-mature	20+	B2	20.0 (2.5)
T82	Pedunculate Oak *(Quercus robur)*	12	370	8	Semi-mature	20+	B2	61.9 (4.4)
T83	Holm Oak *(Quercus ilex)*	11	300	5	Semi-mature	20+	B2	40.7 (3.6)
T84	Goat Willow *(Salix caprea)*	12	340 370 340 170 270	7	Mature	20+	B2	211.0 (8.2)
T85	Holly *(Ilex aquifolium)*	11	140 140 160	4	Semi-mature	20+	B2	30.0 (3.1)
T86	Holm Oak *(Quercus ilex)*	10	290	4	Semi-mature	20+	B2	38.0 (3.5)
T87	Holm Oak *(Quercus ilex)*	14	410	5	Early-mature	20+	B2	76.0 (4.9)
T88	Holm Oak *(Quercus ilex)*	14	480	5	Early-mature	20+	B2	104.2 (5.8)
T89	Silver Birch *(Betula pendula)*	12	170	3	Semi-mature	20+	B2	13.1 (2.0)
T90	Silver Birch *(Betula pendula)*	13	170	3	Semi-mature	20+	B2	13.1 (2.0)
T91	Holm Oak *(Quercus ilex)*	14	240 270	6	Semi-mature	20+	B2	58.0 (4.3)
T92	Silver Birch *(Betula pendula)*	11	100	2	Semi-mature	20+	B2	4.5 (1.2)
T93	Silver Birch *(Betula pendula)*	12	140	3	Semi-mature	20+	B2	8.9 (1.7)
T94	Holly *(Ilex aquifolium)*	10	130 160	3	Semi-mature	20+	B2	20.0 (2.5)
T95	Holm Oak *(Quercus ilex)*	10	200	4	Semi-mature	20+	B2	18.1 (2.4)
T96	Holly *(Ilex aquifolium)*	10	270	4	Semi-mature	20+	B2	33.0 (3.2)
T97	Common Hazel *(Corylus avellana)*	11	220	7	Early-mature	20+	B2	21.9 (2.6)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T98	Irish Yew *(Taxus baccata)* 'Fastigiata'	6	130 130 130	3	Early-mature	20+	B2	23.0 (2.7)
T99	Irish Yew *(Taxus baccata)* 'Fastigiata'	7	250 250	4	Early-mature	20+	B2	55.0 (4.2)
T100	Common Beech *(Fagus sylvatica)*	12	490	5	Semi-mature	20+	B2	108.6 (5.9)
T101	Ash *(Fraxinus excelsior)*	18	380 370 270 300	7	Early-mature	20+	B2	201.0 (8.0)
T102	Ash *(Fraxinus excelsior)*	18	380	5	Semi-mature	20+	B2	65.3 (4.6)
T103	Ash *(Fraxinus excelsior)*	18	350 340	10	Early-mature	20+	B2	55.4 (4.2)
T104	English Yew *(Taxus baccata)*	8	200	3	Semi-mature	20+	B2	18.1 (2.4)
T105	Ash *(Fraxinus excelsior)*	22	910	12	Mature	20+	B2	374.6 (10.9)
T106	Ash *(Fraxinus excelsior)*	22	580	10	Early-mature	20+	B2	152.2 (6.7)
T107	Ash *(Fraxinus excelsior)*	22	400 430 230 350	8	Early-mature	20+	B2	238.0 (8.7)
T108	Field Maple *(Acer campestre)*	19	290	5	Semi-mature	20+	B2	38.0 (3.5)
T109	Field Maple *(Acer campestre)*	20	380	6	Early-mature	20+	B2	65.3 (4.6)
T110	Pedunculate Oak *(Quercus robur)*	17	310	6	Semi-mature	20+	B2	43.5 (3.7)
T111	Holly *(Ilex aquifolium)*	15	240 150 250	6	Semi-mature	20+	B2	64.0 (4.5)
T112	Bird Cherry *(Prunus padus)*	18	330 300	6	Early-mature	20+	B2	92.0 (5.4)
T113	Holly *(Ilex aquifolium)*	10	240	4	Semi-mature	20+	B2	26.1 (2.9)
T114	Apple (*Malus* sp.)	10	240	4	Semi-mature	20+	B2	26.1 (2.9)
T115	Field Maple *(Acer campestre)*	13	280 240	5	Early-mature	20+	B2	61.0 (4.4)
T116	Field Maple *(Acer campestre)*	18	340	5	Early-mature	20+	B2	52.3 (4.1)
TG117	Lawson Cypress *2x (Chamaecyparis lawsoniana)* 1x Ash *(Fraxinus excelsior*	18	380 390 320 330 220	8	Early-mature	20+	B2	249.0 (8.9)
T118	Holly *(Ilex aquifolium)*	7	310	5	Semi-mature	20+	B2	43.5 (3.7)
T119	Holly *(Ilex aquifolium)*	6	200 190	5	Semi-mature	20+	B2	34.0 (3.3)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T120	Pedunculate Oak *(Quercus robur)*	14	290	5	Semi-mature	20+	B2	38.0 (3.5)
T121	Bird Cherry *(Prunus padus)*	16	450	5	Early-mature	20+	B2	91.6 (5.4)
T122	Pedunculate Oak *(Quercus robur)*	16	410	7	Semi-mature	20+	B2	76.0 (4.9)
T123	Ash *(Fraxinus excelsior)*	16	450	5	Semi-mature	20+	B2	91.6 (5.4)
T124	Bird Cherry *(Prunus padus)*	16	380	5	Early-mature	20+	B2	65.3 (4.6)
T125	Bird Cherry *(Prunus padus)*	16	300	4	Early-mature	20+	B2	40.7 (3.6)
TG126	4x Bird Cherry *(Prunus padus)*	16	390 360 200 240	8	Early-mature	20+	B2	172.0 (7.4)
T127	Silver Birch *(Betula pendula)*	16	310	5	Early-mature	20+	B2	43.5 (3.7)
T128	Holm Oak *(Quercus ilex)*	16	240	3	Semi-mature	20+	B2	26.1 (2.9)
T129	Sycamore *(Acer pseudoplatanus)*	16	420	6	Semi-mature	20+	B2	79.8 (5.0)
T130	Bird Cherry *(Prunus padus)*	16	320 190	7	Early-mature	20+	B2	64.0 (4.5)
T131	Goat Willow *(Salix caprea)*	15	420	8	Early-mature	20+	B2	79.8 (5.0)
T132	Wellingtonia *(Sequoiadendron giganteum)*	22	1090	5	Early-mature	20+	B2	537.5 (13.1)
TG133	2x Holly *(Ilex aquifolium)*	10	290 240 210	5	Semi-mature	20+	B2	85.0 (5.2)
T134	Horse Chestnut *(Aesculus hippocastanum)*	20	750 540 850 850	12	Mature	20+	B2	707.0 (15.0)
T135	Holly *(Ilex aquifolium)*	14	290	5	Semi-mature	20+	B2	38.0 (3.5)
T136	Pedunculate Oak *(Quercus robur)*	17	400	5	Semi-mature	20+	B2	72.4 (4.8)
T137	Sycamore *(Acer pseudoplatanus)*	20	880	9	Early-mature	20+	B2	350.3 (10.6)
T138	Pedunculate Oak *(Quercus robur)*	18	430	6	Semi-mature	20+	B2	83.6 (5.2)
T139	Bird Cherry *(Prunus padus)*	16	340	6	Semi-mature	20+	B2	52.3 (4.1)
T140	Field Maple *(Acer campestre)*	15	310	6	Semi-mature	20+	B2	43.5 (3.7)
T141	Pedunculate Oak *(Quercus robur)*	15	430	6	Semi-mature	20+	B2	83.6 (5.2)
T142	Field Maple *(Acer campestre)*	14	380	5	Semi-mature	20+	B2	65.3 (4.6)
T143	Field Maple *(Acer campestre)*	14	360	5	Semi-mature	20+	B2	58.6 (4.3)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T144	Field Maple *(Acer campestre)*	14	310	5	Semi-mature	20+	B2	43.5 (3.7)
T145	Field Maple *(Acer campestre)*	17	500	7	Early-mature	20+	B2	113.1 (6.0)
T146	Field Maple *(Acer campestre)*	16	300	5	Semi-mature	20+	B2	40.7 (3.6)
T147	Field Maple *(Acer campestre)*	17	330	5	Semi-mature	20+	B2	49.3 (4.0)
T148	Holm Oak *(Quercus ilex)*	15	300	5	Semi-mature	20+	B2	40.7 (3.6)
T149	Field Maple *(Acer campestre)*	16	310	6	Semi-mature	20+	B2	43.5 (3.7)
T150	Field Maple *(Acer campestre)*	16	300	5	Semi-mature	20+	B2	40.7 (3.6)
T151	Field Maple *(Acer campestre)*	14	340	6	Semi-mature	20+	B2	52.3 (4.1)
T152	Field Maple *(Acer campestre)*	16	270	4	Semi-mature	20+	B2	33.0 (3.2)
T153	Ash *(Fraxinus excelsior)*	22	550 300	8	Early-mature	20+	B2	177.0 (7.5)
T154	Ash *(Fraxinus excelsior)*	23	460	8	Early-mature	20+	B2	95.7 (5.5)
TG155	15x English Yew *(Taxus baccata)*	10	300	5	Semi-mature	20+	B2	40.7 (3.6)
T156	Corsican Pine *(Pinus nigra)*	19	700	9	Mature	20+	B2	221.7 (8.4)
T157	Holly *(Ilex aquifolium)*	8	270 230	6	Early-mature	20+	B2	58.0 (4.3)
T158	Bird Cherry *(Prunus padus)*	14	300	4	Semi-mature	20+	B2	40.7 (3.6)
T159	Sycamore *(Acer pseudoplatanus)*	19	840	9	Mature	20+	B1	319.2 (10.1)
T160	Holly *(Ilex aquifolium)*	8	120	2	Semi-mature	20+	B1	6.5 (1.4)
T161	Cedar of Lebanon *(Cedrus libani)*	6	700	7	Early-mature	20+	B1	221.7 (8.4)
T162	Sycamore *(Acer pseudoplatanus)*	20	760	8	Early-mature	20+	B2	261.3 (9.1)
T163	Common Lime *(Tilia x europaea)*	20	800	5	Early-mature	20+	B2	289.5 (9.6)
T164	Horse Chestnut *(Aesculus hippocastanum)*	20	1020	8	Mature	20+	B2	470.7 (12.2)
T165	Common Lime *(Tilia x europaea)*	14	300	5	Semi-mature	20+	B2	40.7 (3.6)
T166	Common Lime *(Tilia x europaea)*	19	580	6	Early-mature	20+	B2	152.2 (7.0)
T167	Common Lime *(Tilia x europaea)*	16	260 270	5	Semi-mature	20+	B2	64.0 (4.5)
T168	Pedunculate Oak *(Quercus robur)*	12	430	6	Semi-mature	20+	B2	83.6 (5.2)
T169	Ash *(Fraxinus excelsior)*	17	440	7	Semi-mature	20+	B2	87.6 (5.3)
T170	Common Lime *(Tilia x europaea)*	14	200 280	6	Semi-mature	20+	B2	53.0 (4.1)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T171	Ash *(Fraxinus excelsior)*	20	540 350	8	Early-mature	20+	B2	186.0 (7.7)
T172	Common Lime *(Tilia x europaea)*	17	440	6	Semi-mature	20+	B2	87.6 (5.3)
T173	Ash *(Fraxinus excelsior)*	18	380 340	9	Early-mature	20+	B2	117.0 (6.1)
T174	Ash *(Fraxinus excelsior)*	18	400	6	Semi-mature	20+	B2	72.4 (4.8)
T175	Whitebeam *(Sorbus aria)*	13	550	6	Mature	20+	B2	136.8 (6.6)
T176	Holly *(Ilex aquifolium)*	11	210	3	Semi-mature	20+	B2	20.0 (2.5)
T177	Holly *(Ilex aquifolium)*	8	200	3	Semi-mature	20+	B2	18.1 (2.4)
TG178	Cherry Laurel *(Prunus laurocerasus)*	8	300	6	Early-mature	20+	B2	40.7 (3.6)
T179	English Yew *(Taxus baccata)*	17	880	8	Mature	20+	B2	350.3 (10.6)
T180	English Yew *(Taxus baccata)*	17	680 370 290 300	8	Mature	20+	B2	353.0 (10.6)
T181	Bird Cherry *(Prunus padus)*	14	260	5	Semi-mature	20+	B2	30.6 (3.1)
T182	Ash *(Fraxinus excelsior)*	22	820	9	Mature	20+	B2	304.2 (9.8)
T183	Ash *(Fraxinus excelsior)*	22	810	9	Mature	20+	B2	296.8 (9.7)
T184	Ash *(Fraxinus excelsior)*	22	810	9	Mature	20+	B2	296.8 (9.7)
T185	Cherry Laurel *(Prunus laurocerasus)*	7	280 290 170	6	Mature	20+	B2	85.0 (5.2)
T186	Pedunculate Oak *(Quercus robur)*	17	440	8	Semi-mature	20+	B2	87.6 (5.3)
T187	Holm Oak *(Quercus ilex)*	13	260	3	Semi-mature	20+	B2	30.6 (3.1)
T188	Robinia *(Robinia pseudoacacia)*	19	840	8	Mature	20+	B2	319.2 (10.1)
T189	English Yew *(Taxus baccata)*	12	430 200	6	Semi-mature	20+	B2	102.0 (5.7)
T190	Sycamore *(Acer pseudoplatanus)*	18	740	8	Early-mature	20+	B2	247.7 (8.9)
T191	English Yew *(Taxus baccata)*	12	780	6	Early-mature	20+	B2	275.2 (9.4)
T192	Bird Cherry *(Prunus padus)*	18	540	6	Mature	20+	B2	131.9 (6.5)
T193	Ash *(Fraxinus excelsior)*	18	760	8	Mature	20+	B2	261.3 (9.1)
T194	Bird Cherry *(Prunus padus)*	18	550	5	Mature	20+	B2	136.8 (6.6)
T195	English Yew *(Taxus baccata)*	15	1040	7	Mature	40+	A1	489.3 (12.5)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T196	Common Lime *(Tilia x europaea)*	16	320 300 250 230	6	Semi-mature	20+	B2	141.0 (6.7)
T197	Holly *(Ilex aquifolium)*	11	250	5	Semi-mature	20+	B2	28.3 (3.0)
T198	Ash *(Fraxinus excelsior)*	17	450	7	Early-mature	20+	B2	91.6 (5.4)
T199	Bird Cherry *(Prunus padus)*	19	490	7	Mature	20+	B2	108.6 (5.9)
T200	Silver Birch *(Betula pendula)*	18	410 340	6	Mature	20+	B2	129.0 (6.4)
T201	Holly *(Ilex aquifolium)*	9	250	4	Semi-mature	20+	B2	28.3 (3.0)
T202	Pedunculate Oak *(Quercus robur)*	16	550	8	Semi-mature	20+	B2	136.8 (6.6)
T203	Ash *(Fraxinus excelsior)*	18	610	7	Mature	20+	B2	168.3 (7.3)
T204	Bird Cherry *(Prunus padus)*	18	500	7	Mature	20+	B2	113.1 (6.0)
T205	Common Lime *(Tilia x europaea)*	20	450 420	6	Early-mature	20+	B2	172.0 (7.4)
T206	Bird Cherry *(Prunus padus)*	16	380 320	6	Mature	20+	B2	113.0 (6.0)
T207	Bird Cherry *(Prunus padus)*	17	460	7	Mature	20+	B2	95.7 (5.5)
T208	Holly *(Ilex aquifolium)*	16	310	4	Semi-mature	20+	B2	43.5 (3.7)
T209	Goat Willow *(Salix caprea)*	16	350	6	Early-mature	20+	B2	55.4 (4.2)
T210	Goat Willow *(Salix caprea)*	16	510	8	Early-mature	20+	B2	117.7 (6.1)
T211	Silver Birch *(Betula pendula)*	16	400	6	Early-mature	20+	B2	72.34 (4.8)
T212	Bird Cherry *(Prunus padus)*	17	450	6	Mature	20+	B2	91.6 (5.4)
T213	Pedunculate Oak *(Quercus robur)*	14	410	7	Semi-mature	20+	B2	76.0 (4.9)
T214	Common Lime *(Tilia x europaea)*	18	540	6	Early-mature	20+	B2	131.9 (6.5)
T215	English Yew *(Taxus baccata)*	16	960	9	Mature	40+	A2	416.9 (11.5)
T216	Cypress species *(Chamaecyparis sp.)*	13	330	3	Early-mature	20+	B2	49.3 (4.0)
T217	Holly *(Ilex aquifolium)*	15	320	5	Early-mature	20+	B2	46.3 (3.8)
T218	English Yew *(Taxus baccata)*	6	250	4	Semi-mature	20+	B2	28.3 (3.0)
T219	Common Lime *(Tilia x europaea)*	18	350	5	Semi-mature	20+	B2	55.4 (4.2)
T220	English Yew *(Taxus baccata)*	4	300	4	Semi-mature	20+	B2	40.7 (3.6)
T221	English Yew *(Taxus baccata)*	16	600	5	Early-mature	40+	A2	162.9 (7.2)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T222	Common Lime *(Tilia x europaea)*	15	340	5	Semi-mature	20+	B2	52.3 (4.1)
T223	Ash *(Fraxinus excelsior)*	18	1000	8	Mature	20+	B2	452.4 (12.0)
T224	Ash *(Fraxinus excelsior)*	22	720	10	Mature	20+	B2	234.5 (8.6)
T225	Pedunculate Oak *(Quercus robur)*	18	460	8	Semi-mature	20+	B2	95.7 (5.5)
T226	Holly *(Ilex aquifolium)*	10	220	3	Semi-mature	20+	B1	21.9 (2.6)
T227	Common Beech *(Fagus sylvatica)*	20	580 620	9	Early-mature	20+	B2	327.0 (10.2)
T228	English Yew *(Taxus baccata)*	14	730	7	Early-mature	20+	B2	241.1 (8.8)
T229	Pedunculate Oak *(Quercus robur)*	22	1030	10	Early-mature	20+	B2	479.9 (12.4)
T230	Pedunculate Oak *(Quercus robur)*	6	230	4	Semi-mature	20+	B2	23.9 (2.8)
T231	Holly *(Ilex aquifolium)*	10	370	4	Early-mature	20+	B2	61.9 (4.4)
T232	English Elm *(Ulmus procera)*	15	360	7	Semi-mature	20+	B2	58.6 (4.3)
TG233	5x Ash *(Fraxinus excelsior)*	18	500	9	Early-mature	20+	B2	113.1 (6.0)
T234	English Elm *(Ulmus procera)*	17	550 320	7	Early-mature	20+	B2	181.0 (7.6)
T235	Ash *(Fraxinus excelsior)*	20	760	9	Mature	20+	B2	261.3 (9.1)
T236	English Yew *(Taxus baccata)*	10	420 320	5	Early-mature	20+	B2	125.0 (6.3)
T237	Lawson Cypress *(Chamaecyparis lawsoniana)*	18	530	4	Early-mature	20+	B2	127.1 (6.4)
T238	Bird Cherry *(Prunus padus)*	18	400 360	6	Mature	20+	B2	133.0 (6.5)
T239	Bird Cherry *(Prunus padus)*	18	370	4	Early-mature	20+	B2	61.9 (4.4)
T240	Holly *(Ilex aquifolium)*	16	380	6	Mature	20+	B2	65.3 (4.6)
T241	Holly *(Ilex aquifolium)*	11	220	3	Semi-mature	20+	B2	21.9 (2.6)
T242	Bird Cherry *(Prunus padus)*	19	560	6	Mature	20+	B2	141.9 (6.7)
T243	Ash *(Fraxinus excelsior)*	20	620	8	Mature	20+	B2	173.9 (7.4)
T244	Common Lime *(Tilia x europaea)*	18	440	5	Semi-mature	20+	B2	87.6 (5.3)
T245	Pedunculate Oak *(Quercus robur)*	20	450	8	Early-mature	20+	B2	91.6 (5.4)
T246	Pedunculate Oak *(Quercus robur)*	20	610	8	Early-mature	20+	B2	168.3 (7.3)
T247	Bird Cherry *(Prunus padus)*	18	500	6	Mature	20+	B2	113.1 (6.0)
T248	Sycamore *(Acer pseudoplatanus)*	20	760	9	Mature	20+	B2	261.3 (9.1)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T249	English Yew *(Taxus baccata)*	7	1090	8	Mature	20+	B2	537.5 (13.1)
T250	Hornbeam *(Carpinus betulus)*	14	380	7	Semi-mature	20+	B2	65.3 (4.6)
T251	Common Lime *(Tilia x europaea)*	16	360 360 250	8	Early-mature	20+	B2	145.0 (6.8)
T252	Holly *(Ilex aquifolium)*	8	240 150	3	Semi-mature	20+	B2	36.0 (3.4)
T253	Common Lime *(Tilia x europaea)*	15	320 410	6	Semi-mature	20+	B2	121.0 (6.2)
T254	Common Lime *(Tilia x europaea)*	14	280	5	Semi-mature	20+	B2	35.5 (3.4)
T255	Pedunculate Oak *(Quercus robur)*	6	210	5	Semi-mature	20+	B2	20.0 (2.5)
T256	Sycamore *(Acer pseudoplatanus)*	16	360	6	Semi-mature	20+	B2	58.6 (4.3)
T257	English Yew *(Taxus baccata)*	12	600	7	Early-mature	20+	B2	162.9 (7.2)
T258	Horse Chestnut *(Aesculus hippocastanum)*	14	300 250	5	Semi-mature	20+	B1	69.0 (4.7)
T259	Holly *(Ilex aquifolium)*	10	210	3	Semi-mature	20+	B2	20.0 (2.5)
T260	Pedunculate Oak *(Quercus robur)*	19	540	7	Semi-mature	20+	B1	131.9 (6.5)
T261	Lawson Cypress *(Chamaecyparis lawsoniana)*	18	540	5	Early-mature	20+	B1	131.9 (6.5)
T262	Bird Cherry *(Prunus padus)*	17	390	4	Early-mature	20+	B2	68.8 (4.7)
T263	Bird Cherry *(Prunus padus)*	16	490	5	Early-mature	20+	B2	108.6 (5.9)
T264	Holly *(Ilex aquifolium)*	14	340 210	4	Early-mature	20+	B2	72.0 (4.8)
T265	Sycamore *(Acer pseudoplatanus)*	16	650	4	Early-mature	20+	B2	191.1 (7.8)
T266	Holm Oak *(Quercus ilex)*	9	210	4	Semi-mature	20+	B2	20.0 (2.5)
T267	Ash *(Fraxinus excelsior)*	22	990	12	Mature	20+	B2	443.4 (11.9)
T268	Atlas Cedar *(Cedrus atlantica)*	16	1110	13	Mature	20+	B1	557.4 (13.3)
T269	Holly *(Ilex aquifolium)*	17	350 310	4	Early-mature	20+	B2	99.0 (5.6)
T270	Ash *(Fraxinus excelsior)*	24	1170	8	Mature	40+	A1	619.3 (14.0)
T271	Cedar of Lebanon *(Cedrus libani)*	5	170	2	Semi-mature	20+	B1	13.1 (2.0)
TG272	Holly *(Ilex aquifolium)*	5	150 140 130 130	3	Semi-mature	20+	B2	34.0 (3.3)
T273	Holm Oak *(Quercus ilex)*	5	220	4	Semi-mature	20+	B1	21.9 (2.6)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T274	Ash *(Fraxinus excelsior)*	23	910	10	Mature	20+	B1	374.6 (10.9)
T275	Holly *(Ilex aquifolium)*	9	220	3	Semi-mature	20+	B2	21.9 (2.6)
T276	Holly *(Ilex aquifolium)*	9	230	3	Semi-mature	20+	B2	23.9 (2.8)
T277	Holm Oak *(Quercus ilex)*	8	290	5	Semi-mature	20+	B2	38.0 (3.5)
T278	Bird Cherry *(Prunus padus))*	15	350 240	8	Early-mature	20+	B2	82.0 (5.1)
T279	Bird Cherry *(Prunus padus)*	17	380	5	Early-mature	20+	B2	65.3 (4.6)
T280	Cherry Laurel *(Prunus laurocerasus)*	8	270	8	Early-mature	20+	B2	33.0 (3.2)
T281	Hornbeam *(Carpinus betulus)*	12	230	5	Semi-mature	20+	B2	23.9 (2.8)
T282	English Yew *(Taxus baccata)*	13	570	6	Semi-mature	40+	A1	147.0 (6.8)
T283	Holly *(Ilex aquifolium)*	15	340	5	Early-mature	20+	B2	52.3 (4.1)
T284	Holly *(Ilex aquifolium)*	13	290	4	Semi-mature	20+	B2	38.0 (3.5)
T285	Cypress species *(Chamaecyparis sp.)*	14	370	4	Early-mature	20+	B2	61.9 (4.4)
T286	Cypress species *(Chamaecyparis sp.)*	13	220	2	Semi-mature	20+	B2	21.9 (2.6)
T287	Holm Oak *(Quercus ilex)*	15	210	3	Semi-mature	20+	B2	20.0 (2.5)
T288	Bird Cherry *(Prunus padus)*	17	420	6	Early-mature	20+	B2	79.8 (5.0)
T289	Holly *(Ilex aquifolium)*	9	130 160	3	Semi-mature	20+	B2	20.0 (2.5)
T290	Holly *(Ilex aquifolium)*	11	190	3	Semi-mature	20+	B2	16.3 (2.3)
T291	Holly *(Ilex aquifolium)*	9	170	2	Semi-mature	20+	B2	13.1 (2.0)
T292	Holly *(Ilex aquifolium)*	12	400	4	Mature	20+	B2	72.4 (4.8)
T293	English Yew *(Taxus baccata)*	14	810	6	Early-mature	20+	B1	296.8 (9.7)
T294	Ash *(Fraxinus excelsior)*	20	550	8	Early-mature	20+	B1	136.8 (6.6)
T295	Bird Cherry *(Prunus padus)*	5	210	4	Semi-mature	20+	B1	20.0 (2.5)
T296	Holm Oak *(Quercus ilex)*	11	260 280 230 240	5	Early-mature	20+	B1	117.0 (6.1)
T297	English Yew *(Taxus baccata)*	11	760 310 310	6	Early-mature	20+	B1	346.0 (10.5)
T298	Bird Cherry *(Prunus padus)*	5	300 220 220	5	Early-mature	20+	B1	85.0 (5.2)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T299	Bird Cherry *(Prunus padus)*	6	205	3	Semi-mature	20+	B1	19.0 (2.5)
T300	Sycamore *(Acer pseudoplatanus)*	6	405 340 240 395	6	Semi-mature	20+	B2	222.0 (8.4)
T301	Pedunculate Oak *(Quercus robur)*	13	450 430	9	Semi-mature	20+	B2	177.0 (7.5)
T302	Ash *(Fraxinus excelsior)*	15	465	8	Semi-mature	20+	B2	97.8 (5.6)
T303	Goat Willow *(Salix caprea)*	8	325	6	Semi-mature	20+	B2	47.8 (3.9)
T304	Norway Spruce *(Picea abies)*	12	295	3	Semi-mature	20+	B1	39.4 (3.5)
T305	Ash *(Fraxinus excelsior)*	13	300 300	6	Semi-mature	20+	B1	82.0 (5.1)
T306	Pedunculate Oak *(Quercus robur)*	11	520	7	Semi-mature	40+	A1	122.3 (6.2)
T307	Turkey Oak *(Quercus cerris)*	16	365 390	5	Semi-mature	20+	B1	133.0 (6.5)
T308	Sycamore *(Acer pseudoplatanus)*	14	490	5	Semi-mature	20+	B2	108.6 (5.9)
T309	Hornbeam *(Carpinus betulus)*	9	285	7	Semi-mature	20+	B1	36.7 (3.4)
T310	Hornbeam *(Carpinus betulus)*	8	210	5	Semi-mature	20+	B2	20.0 (2.5)
T311	Hornbeam *(Carpinus betulus)*	14	656	7	Early-mature	20+	B2	194.7 (7.9)
T312	Turkey Oak *(Quercus cerris)*	19	375	5	Semi-mature	20+	B2	63.6 (4.5)
T313	Horse Chestnut *(Aesculus hippocastanum)*	12	800	7	Early-mature	20+	B1	289.5 (9.6)
T314	Hornbeam *(Carpinus betulus)*	9	155 105	5	Semi-mature	20+	B1	17.0 (2.3)
T315	Bird Cherry *(Prunus padus)*	13	330 240 360	6	Early-mature	20+	B2	133.0 (6.5)
T316	Field Maple *(Acer campestre)*	14	370 320	6	Early-mature	20+	B2	109.0 (5.9)
T317	London Plane *(Platanus x hispanica)*	13	525	6	Semi-mature	20+	B2	124.7 (6.3)
T318	Horse Chestnut *(Aesculus hippocastanum)*	11	365 300	5	Semi-mature	20+	B2	102.0 (5.7)
T319	Holly *(Ilex aquifolium)*	9	165 135 160	3	Semi-mature	20+	B2	34.0 (3.3)
T320	Holly *(Ilex aquifolium)*	7	135	2	Semi-mature	20+	B1	8.2 (1.6)
T321	Hawthorn *(Crataegus monogyna)*	7	250	4	Early-mature	20+	B1	28.3 (3.0)
T322	Common Lime *(Tilia x europaea)*	12	400	4	Early-mature	20+	B2	72.4 (4.8)
T323	Common Lime *(Tilia x europaea)*	14	470	5	Early-mature	20+	B2	99.9 (5.6)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T324	Common Lime *(Tilia x europaea)*	14	645	5	Early-mature	20+	B2	188.2 (7.7)
T325	Pedunculate Oak *(Quercus robur)*	17	600	8	Early-mature	20+	B2	162.9 (7.2)
T326	Ash *(Fraxinus excelsior)*	20	935	8	Mature	20+	B2	395.5 (11.2)
T327	Pedunculate Oak *(Quercus robur)*	18	540	6	Early-mature	20+	B2	131.9 (6.5)
T328	Bird Cherry *(Prunus padus)*	14	265	5	Early-mature	20+	B2	31.8 (3.2)
T329	Ash *(Fraxinus excelsior)*	18	615 550	7	Mature	20+	B2	308.0 (9.9)
T330	Hornbeam *(Carpinus betulus)*	9	325	6	Semi-mature	20+	B2	47.8 (3.9)
TG331	Sycamore *(Acer pseudoplatanus)*	14	415 500 380	6	Early-mature	20+	B2	260.0 (9.1)
T332	Cypress species *(Chamaecyparis sp.)*	7	380	3	Early-mature	20+	B2	65.3 (4.6)
T333	Bird Cherry *(Prunus padus)*	15	295	5	Early-mature	20+	B2	39.4 (3.5)
T334	Ash *(Fraxinus excelsior)*	18	410	6	Semi-mature	20+	B2	76.0 (4.9)
T335	Ash *(Fraxinus excelsior)*	20	630	6	Early-mature	20+	B2	179.6 (7.6)
T336	Holly *(Ilex aquifolium)*	7	195	3	Semi-mature	20+	B2	17.2 (2.3)
T337	Common Lime *(Tilia x europaea)*	8	560	4	Early-mature	20+	B2	141.9 (6.7)
T338	Sycamore *(Acer pseudoplatanus)*	15	330 340	6	Semi-mature	20+	B2	102.0 (5.7)
T339	Common Lime *(Tilia x europaea)*	12	375	4	Semi-mature	20+	B2	63.6 (4.5)
T340	Ash *(Fraxinus excelsior)*	15	430 545	8	Early-mature	20+	B2	222.0 (8.4)
T341	Common Lime *(Tilia x europaea)*	10	305	5	Semi-mature	20+	B2	42.1 (3.7)
T342	Common Lime *(Tilia x europaea)*	9	210	4	Semi-mature	20+	B2	20.0 (2.5)
T343	Common Lime *(Tilia x europaea)*	15	635	6	Early-mature	20+	B2	182.4 (7.6)
T344	Common Lime *(Tilia x europaea)*	9	235	4	Semi-mature	20+	B2	25.0 (2.8)
T345	Common Lime *(Tilia x europaea)*	13	390 340	6	Semi-mature	20+	B2	121.0 (6.2)
T346	Ash *(Fraxinus excelsior)*	15	300 380 355	8	Early-mature	20+	B2	163.0 (7.2)
T347	Holly *(Ilex aquifolium)*	9	305	4	Semi-mature	20+	B2	42.1 (3.7)
T348	Common Lime *(Tilia x europaea)*	15	580	7	Early-mature	20+	B2	152.2 (7.0)
T349	Common Lime *(Tilia x europaea)*	14	310 255	5	Early-mature	20+	B2	75.0 (4.9)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T350	Bird Cherry *(Prunus padus)*	10	470	6	Early-mature	20+	B2	99.9 (5.6)
TG351	2x Bird Cherry *(Prunus padus)*	15	505 280	6	Early-mature	20+	B2	154.0 (7.0)
TG352	12x Bird Cherry *(Prunus padus)*	12	300	10	Semi-mature	20+	B2	40.7 (3.6)
T353	Sycamore *(Acer pseudoplatanus)*	16	640	8	Early-mature	40+	A1	185.3 (7.7)
T354	Sycamore *(Acer pseudoplatanus)*	16	500 580	9	Early-mature	20+	B2	266.0 (9.2)
T355	Ash *(Fraxinus excelsior)*	20	300 300 300 300	8	Early-mature	20+	B2	163.0 (7.2)
T356	Common Lime *(Tilia x europaea)*	22	600	6	Early-mature	20+	B2	162.9 (7.2)
T357	Pedunculate Oak *(Quercus robur)*	20	400	4	Semi-mature	20+	B2	72.4 (4.8)
T358	Sycamore *(Acer pseudoplatanus)*	15	345 370 345	7	Semi-mature	20+	B2	172.0 (7.4)
T359	Pedunculate Oak *(Quercus robur)*	18	385	6	Semi-mature	20+	B2	67.1 (4.6)
T360	Ash *(Fraxinus excelsior)*	18	400 415	8	Early-mature	20+	B2	154.0 (7.0)
T361	Holly *(Ilex aquifolium)*	7	100 100 100 100	4	Semi-mature	20+	B2	18.0 (2.4)
T362	Ash *(Fraxinus excelsior)*	20	540 300 540	11	Early-mature	20+	B2	302.0 (9.8)
T363	Hornbeam *(Carpinus betulus)*	12	290	6	Semi-mature	20+	B2	38.0 (3.5)
T364	Bird Cherry *(Prunus padus)*	17	440	6	Early-mature	20+	B2	87.6 (5.3)
T365	Holly *(Ilex aquifolium)*	7	200 200 140 100	3	Semi-mature	20+	B2	50.0 (4.0)
T366	Holm Oak *(Quercus ilex)*	9	310	6	Semi-mature	20+	B2	43.5 (3.7)
T367	Hornbeam *(Carpinus betulus)*	10	385	6	Semi-mature	20+	B2	67.1 (4.6)
T368	Bird Cherry *(Prunus padus)*	17	650	7	Mature	20+	B2	191.1 (7.8)
T369	Common Lime *(Tilia x europaea)*	17	660	5	Early-mature	20+	B2	197.1 (7.9)
T370	Common Lime *(Tilia x europaea)*	11	280	3	Semi-mature	20+	B2	35.5 (3.4)
T371	Ash *(Fraxinus excelsior)*	19	640 680	6	Semi-mature	20+	B2	394.0 (11.2)
T372	Ash *(Fraxinus excelsior)*	18	555	7	Early-mature	20+	B2	139.3 (6.7)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T373	Dogwood *(Cornus sanguinea)*	5	140 100 85	5	Semi-mature	20+	B2	17.0 (2.3)
T374	Dogwood *(Cornus sanguinea)*	6	130 130	4	Semi-mature	20+	B2	15.0 (2.2)
T375	Dogwood *(Cornus sanguinea)*	7	130 85 80 95	3	Semi-mature	20+	B2	18.0 (2.4)
T376	Silver Birch *(Betula pendula)*	17	495 430	6	Early-mature	20+	B1	196.0 (7.9)
T377	Ash *(Fraxinus excelsior)*	10	420	5	Semi-mature	20+	B2	79.8 (5.0)
T378	Dogwood *(Cornus sanguinea)*	6	145 130 110	4	Semi-mature	20+	B2	23.0 (2.7)
T379	Ash *(Fraxinus excelsior)*	15	335 330 295 375	8	Early-mature	20+	B2	206.0 (8.1)
T380	Dogwood *(Cornus sanguinea)*	6	170 140 130 110	4	Early-mature	20+	B1	34.0 (3.3)
T381	Field Maple *(Acer campestre)*	12	385	7	Semi-mature	20+	B2	67.1 (4.6)
T382	Holly *(Ilex aquifolium)*	9	250	3	Semi-mature	20+	B1	28.3 (3.0)
T383	Ash *(Fraxinus excelsior)*	16	310 315 585	6	Early-mature	20+	B2	249.0 (8.9)
T384	Sycamore *(Acer pseudoplatanus)*	12	305 315 325	7	Semi-mature	20+	B2	141.0 (6.7)
T385	Sycamore *(Acer pseudoplatanus)*	16	325 305 310 300 320	6	Semi-mature	20+	B2	222.0 (8.4)
T386	London Plane *(Platanus x hispanica)*	7	715	1.5	Semi-mature	20+	B2	231.3 (8.6)
T387	London Plane *(Platanus x hispanica)*	22	870	10	Early-mature	20+	B2	342.4 (10.4)
T388	London Plane *(Platanus x hispanica)*	22	775	12	Early-mature	20+	B2	271.7 (9.3)
T389	London Plane *(Platanus x hispanica)*	22	1060	12	Early-mature	20+	B2	508.3 (12.7)
T390	London Plane *(Platanus x hispanica)*	22	770	12	Early-mature	20+	B2	268.2 (9.2)
T391	Mongolian Lime *(Tilia mongolica)*	10	280	5	Semi-mature	20+	B2	35.5 (3.4)
T392	Common Lime *(Tilia x europaea)*	22	1065	10	Early-mature	20+	B2	513.1 (12.8)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T393	Ash *(Fraxinus excelsior)*	24	570	8	Early-mature	20+	B2	147.0 (6.8)
T394	Sycamore *(Acer pseudoplatanus)*	22	365 410 290 320 240	9	Early-mature	20+	B2	249.0 (8.9)
T395	Ash *(Fraxinus excelsior)*	22	530 440	10	Semi-mature	20+	B2	127.1 (6.4)
T396	Mongolian Lime *(Tilia mongolica)*	9	295	6	Semi-mature	20+	B2	39.4 (3.5)
T397	London Plane *(Platanus x hispanica)*	8	910	2	Early-mature	20+	B2	374.6 (10.9)
T398	Ash *(Fraxinus excelsior)*	18	770	11	Early-mature	20+	B2	268.2 (9.2)
T399	London Plane *(Platanus x hispanica)*	17	1020	8	Early-mature	20+	B2	470.7 (12.2)
T400	Bird Cherry *(Prunus padus)*	9	250	5	Semi-mature	20+	B2	28.3 (3.0)
T401	Mongolian Lime *(Tilia mongolica)*	10	300	4	Semi-mature	20+	B2	40.7 (3.6)
T402	Bird Cherry *(Prunus padus)*	7	260	4	Semi-mature	20+	B2	30.6 (3.1)
T403	Cypress species *(Chamaecyparis sp.)*	8	300	3	Early-mature	20+	B2	40.7 (3.6)
T404	Cypress species *(Chamaecyparis sp.)*	10	295	4	Early-mature	20+	B2	39.4 (3.5)
T405	Norway Maple *(Acer platanoides)*	10	190 155 185 125 140	7	Semi-mature	20+	B2	61.0 (4.4)
T406	London Plane *(Platanus x hispanica)*	20	970	7	Early-mature	20+	B2	425.7 (11.6)
T407	Holly *(Ilex aquifolium)*	8	325 375	4	Semi-mature	20+	B2	113.0 (6.0)
T408	Pedunculate Oak *(Quercus robur)*	9	180	3	Semi-mature	20+	B2	14.7 (2.2)
T409	Turkey Oak *(Quercus cerris)*	16	390	6	Semi-mature	20+	B2	68.8 (4.7)
T410	Holly *(Ilex aquifolium)*	7	145	3	Semi-mature	20+	B2	9.5 (1.7)
T411	Pedunculate Oak *(Quercus robur)*	10	240	5	Semi-mature	20+	B2	26.1 (2.9)
T412	Ash *(Fraxinus excelsior)*	22	510 440 500	11	Early-mature	20+	B2	320.0 (10.1)
T413	Pedunculate Oak *(Quercus robur)*	19	570	8	Early-mature	20+	B2	147.0 (6.8)
T414	Hornbeam *(Carpinus betulus)*	10	280	5	Semi-mature	20+	B2	35.5 (3.4)
T415	Hornbeam *(Carpinus betulus)*	9	325	6	Semi-mature	20+	B2	47.8 (3.9)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T416	Ash *(Fraxinus excelsior)*	18	325 440	6	Early-mature	20+	B2	47.8 (3.9)
T417	Ash *(Fraxinus excelsior)*	18	350 345 405 330	6	Early-mature	20+	B2	55.4 (4.2)
T418	Pedunculate Oak *(Quercus robur)*	18	580	10	Early-mature	20+	B2	152.2 (6.96)
T419	Holly *(Ilex aquifolium)*	9	200 260	3	Semi-mature	20+	B2	18.1 (2.4)
T420	Ash *(Fraxinus excelsior)*	18	490	5	Semi-mature	20+	B2	108.6 (5.9)
T421	Pedunculate Oak *(Quercus robur)*	19	1020	7	Early-mature	20+	B2	470.7 (12.2)
T422	Bay *(Laurus nobilis)*	12	255 250 210 250	7	Mature	20+	B2	29.4 (3.1)
T423	Bird Cherry *(Prunus padus)*	20	365	3	Early-mature	20+	B2	60.3 (4.4)
T424	London Plane *(Platanus x hispanica)*	19	1010	7	Early-mature	20+	B2	461.5 (12.1)
T425	London Plane *(Platanus x hispanica)*	19	935	7	Early-mature	20+	B2	395.5 (11.2)
T426	London Plane *(Platanus x hispanica)*	19	815	7	Early-mature	20+	B2	300.5 (9.8)
T427	London Plane *(Platanus x hispanica)*	19	1000	7	Early-mature	20+	B2	452.4 (12.0)
T428	Ash *(Fraxinus excelsior)*	20	645	10	Early-mature	20+	B2	188.2 (7.7)
T429	Bird Cherry *(Prunus padus)*	10	210	3	Semi-mature	20+	B2	20.0 (2.5)
T430	Holly *(Ilex aquifolium)*	6	175	2	Semi-mature	20+	B1	13.9 (2.1)
T431	London Plane *(Platanus x hispanica)*	19	1050	6	Early-mature	20+	B2	498.8 (12.6)
T432	English Yew *(Taxus baccata)*	7	185	4	Semi-mature	20+	B2	15.5 (2.2)
T433	Ash *(Fraxinus excelsior)*	20	495 595	6	Early-mature	20+	B2	110.8 (5.9)
T434	Field Maple *(Acer campestre)*	9	210	4	Semi-mature	20+	B2	20.0 (2.5)
T435	Hawthorn *(Crataegus monogyna)*	4	150	3	Semi-mature	20+	B2	10.2 (1.8)
T436	Field Maple *(Acer campestre)*	11	310	4	Early-mature	20+	B2	43.5 (3.7)
T437	Field Maple *(Acer campestre)*	11	370	4	Early-mature	20+	B2	61.9 (4.4)
T438	Tibetian Cherry *(Prunus serrula)*	9	290	5	Semi-mature	20+	B2	38.0 (3.5)
T439	Lawson Cypress *(Chamaecyparis lawsoniana)*	9	450 475	3	Semi-mature	20+	B2	91.6 (5.4)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
T440	Ash *(Fraxinus excelsior)*	20	410 380 600 400 250	10	Early-mature	20+	B2	76.0 (4.9)
T441	Ash *(Fraxinus excelsior)*	18	455	7	Early-mature	20+	B2	93.7 (5.5)
T442	Pedunculate Oak *(Quercus robur)*	14	370	5	Semi-mature	20+	B2	61.9 (4.4)
T443	Pedunculate Oak *(Quercus robur)*	14	335	6	Semi-mature	20+	B2	50.8 (4.0)
T444	Pedunculate Oak *(Quercus robur)*	18	660	6	Early-mature	20+	B2	197.1 (7.9)
T445	Pedunculate Oak *(Quercus robur)*	13	300 170	6	Semi-mature	20+	B2	40.7 (3.6)
T446	Common Lime *(Tilia x europaea)*	13	515	5	Early-mature	20+	B2	120.0 (6.2)
T447	Common Lime *(Tilia x europaea)*	12	495	6	Early-mature	20+	B2	110.8 (5.9)
T448	Pedunculate Oak *(Quercus robur)*	9	170	4	Semi-mature	20+	B2	13.1 (2.0)
T449	Common Lime *(Tilia x europaea)*	13	505	5	Early-mature	20+	B2	115.4 (6.1)
T450	Pedunculate Oak *(Quercus robur)*	15	300	5	Semi-mature	20+	B2	40.7 (3.6)
T451	Pedunculate Oak *(Quercus robur)*	13	260	5	Semi-mature	20+	B2	30.6 (3.1)
T452	Pedunculate Oak *(Quercus robur)*	10	145	3	Semi-mature	20+	B2	9.5 (1.7)
T453	Pedunculate Oak *(Quercus robur)*	15	355	4	Semi-mature	20+	B2	57.0 (4.3)
T454	Pedunculate Oak *(Quercus robur)*	20	735	10	Early-mature	20+	B2	244.4 (8.8)
T455	Bird Cherry *(Prunus padus)*	14	350	5	Early-mature	20+	B2	55.4 (4.2)
T456	Pedunculate Oak *(Quercus robur)*	15	345	5	Semi-mature	20+	B2	53.8 (4.1)
T457	Pedunculate Oak *(Quercus robur)*	20	600	7	Early-mature	20+	B2	162.9 (7.2)
T458	Ash *(Fraxinus excelsior)*	22	530	8	Early-mature	20+	B2	127.1 (6.4)
T459	Norway Maple *(Acer platanoides)*	8	175	5	Semi-mature	20+	B2	13.9 (2.1)
T460	Pedunculate Oak *(Quercus robur)*	20	670	7	Early-mature	20+	B2	203.1 (8.0)
T461	Pedunculate Oak *(Quercus robur)*	21	865	8	Early-mature	20+	B2	338.5 (10.4)
T462	Turkey Oak *(Quercus cerris)*	16	465	8	Semi-mature	20+	B2	97.8 (5.6)
T463	Horse Chestnut *(Aesculus hippocastanum)*	15	800	8	Early-mature	20+	B2	289.5 (9.6)
T464	Ash *(Fraxinus excelsior)*	12	555	5	Early-mature	20+	B2	139.3 (6.7)

Tree Ref No.	Species	Height (m)	DBH (mm)	Crown Spread Radius (m)	Age	Life Exp.	Cat.	RPA in m2 (Radius/m)
TG465	3x Ash *(Fraxinus excelsior)*	11	385 380 360	5	Early-mature	20+	B2	67.1 (4.6)
T466	Ash *(Fraxinus excelsior)*	11	450	5	Early-mature	20+	B2	91.6 (5.4)
T467	Pedunculate Oak *(Quercus robur)*	14	275	4	Semi-mature	20+	B2	34.2 (3.3)
T468	London Plane *(Platanus x hispanica)*	15	1070	8	Early-mature	20+	B2	517.9 (12.8)
T469	Goat Willow *(Salix caprea)*	13	430	5	Early-mature	20+	B2	83.6 (5.2)
TG470	3x Pedunculate Oak *(Quercus robur)*	16	365 170 150	5	Semi-mature	20+	B2	60.3 (4.4)
T471	Pedunculate Oak *(Quercus robur)*	15	300	5	Semi-mature	20+	B2	40.7 (3.6)
T472	Ash *(Fraxinus excelsior))*	13	440 200	5	Early-mature	20+	B2	87.6 (5.3)
T473	Horse Chestnut *(Aesculus hippocastanum)*	9	235	5	Semi-mature	40+	A2	25.0 (2.8)
T474	Ash *(Fraxinus excelsior)*	12	560	4	Early-mature	20+	B2	141.9 (6.7)
T475	Pedunculate Oak *(Quercus robur)*	10	165	4	Semi-mature	20+	B2	12.3 (2.0)
T476	Ash *(Fraxinus excelsior)*	12	450	4	Early-mature	20+	B2	91.6 (5.4)
T477	Ash *(Fraxinus excelsior)*	12	410 510	6	Early-mature	20+	B2	76.0 (4.9)
T478	Pedunculate Oak *(Quercus robur)*	11	205	4	Semi-mature	20+	B2	19.0 (2.5)
T479	Common Yew *(Taxus baccata)*	5	115	3	Semi-mature	40+	A2	6.0 (1.4)
T480	Ash *(Fraxinus excelsior)*	14	470	5	Early-mature	20+	B2	99.9 (5.6)

APPENDIX 4 LIMITATIONS OF REPORT

Limitations of the Tree Survey & Scope of the Report

- This report is restricted to those trees & vegetation shown on the attached Tree Constraints Plan, described within the tree survey schedule, as identified within the instruction as per Section 1.1.
- All plans are illustrative of the discussions within the report and based entirely on the drawings provided to Bartlett Consulting. All scaled measurements must be checked against the original submission documents as well as confirmed on site.
- The survey was based on unaided, visual observations made from ground level only, using the principles of a Visual Tree Assessment (VTA).
- The trees were not climbed at the time of the survey.
- All observations were made from within the curtilage of the site or from a public open space unless otherwise stated.
- The tree survey is preliminary in its nature and must not be interpreted as a detailed tree condition inspection.
- This report does not consider the possible implications to any existing or proposed built structures. These matters will be dealt with in future reports as deemed necessary/ as and when instructed.

Timing of the Tree Survey & the Report

- The observations & finings of this report remain valid for one year, from the date of issuance.
- The observations & findings will be invalidated if any building works are undertaken, soil levels altered or tree works implemented.
- In the instance where building works have occurred, soil levels are altered or tree works completed, it is recommended that a new tree survey and report is completed.

Trees in Relation to Other Properties

- The tree survey and report consider only those trees in relation to the site as identified.
- It does not comment upon the possible effects of trees on neighbouring properties, including matters concerning subsidence or heave, or with regards to potential hazards presented by trees surveyed.
- Neighbouring land/tree owners that are identified as posing a potential risk to the site should seek their own independent advice.
- Damage to, or potential damage to any existing structures that are not referred to within this report is not considered, unless otherwise specified. This is inclusive of built structures within and neighbouring the site.

Trees in Relation to Subsidence, Heave and Direct Damage

- This report does not deal with matters concerning subsidence or heave to any existing built structure on or neighbouring the site. It may be prudent to consider the effects of heave on any built structure if trees are to be removed.
- Similarly, the issue of direct damage (physical damage caused by tree roots) is not dealt with in this report.

Trees Subject to Statutory Controls

- Whilst Bartlett Consulting has made attempts to ascertain if any of the trees subject to this report are 'protected', their status may be subject to change. Therefore the final responsibility for checking statutory protection for trees rests with the employed contractor and not with Bartlett Consulting
- Any prescribed tree works to a protected tree are provided due to perceived hazard and risk, and should be considered acceptable by the Local Planning Authority (LPA). However appropriate notification must still be provided to the LPA as they may take an alternative point of view.

Trees Subject to Environmental Factors

- The statements, findings and preliminary recommendations made within this report do not take into account any effects of extreme climate and weather incidences, vandalism, changes in the natural and built environment around the tree(s) after the date of this report, nor any damage whether physical, chemical or otherwise.

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APPENDIX 5 REPORT REFERENCES

As a progressive company, we keep abreast of research data relating to Arboriculture. All observations, recommendations and works are based on current industry standard reference material and a selection of pertinent items is shown below.

This survey and report have evolved from industry material including the following:

- O'Callaghan & Lawson (1995) *Trees and Development Conflicts: Importance of Advanced Planning & Site Control in Tree Preservation Plans*
- Matheny & Clark (1998) *Trees and Development a Technical Guide*
- BS 5837: (2012) *Trees in Relation to Design, Demolition and Construction – Recommendations*
- BS 3998: (2010) *Tree Works - Recommendations*
- Town & Country Planning Act (Tree Preservation) (England) Regulations 2012
- Mattheck, C, Bethge K, Weber K. (2015) *The Body Language of Trees – Encyclopaedia of Visual Tree Assessment*
  Karlsruhe Institute of Technology Campus North.

Bartlett Consulting's arboricultural expertise has been used to interpret these references for practical application to the site and the trees which are the subject of this report, and to provide the most appropriate advice and guidance at this stage of project planning.

APPENDIX 6 GLOSSARY

Abiotic. Pertaining to non-living agents; e.g. environmental factors.
Absorptive roots. Non-woody, short-lived roots, generally having a diameter of less than one millimetre, the primary function of which is uptake of water and nutrients
Adaptive growth. In tree biomechanics, the process whereby the rate of wood formation in the cambial zone, as well as wood quality, responds to gravity and other forces acting on the cambium. This helps to maintain a uniform distribution of mechanical stress.
Adaptive roots. The adaptive growth of existing roots; or the production of new roots in response to damage, decay or altered mechanical loading.
Ancient tree. A specimen that has passed maturity, is very old in comparison to other trees of the same species and is in the final stage of its life. Ancient trees are important ecological assets in the landscape.
Architecture. In a tree, a term describing the pattern of branching of the crown or root system.
Bacteria. Microscopic single-celled organisms, many species of which break down dead organic matter, and some of which cause diseases in other organisms.
Bark. A term usually applied to all the tissues of a woody plant lying outside the vascular cambium, hard and rigid with protective capabilities.
Bifurcation. The junction where single stems/branches divide into two at a union, sometimes implying that the two stems above the union are of similar size (see co-dominance).
Biotic. Pertaining to living agents; e.g. viruses, bacteria, fungi, plants & animals.
Bracing. The use of rods or cables to restrain the movement between parts of a tree.
Branch:

- **Scaffold.** A first order branch arising from a stem
- **Lateral.** A second order branch, subordinate to a scaffold branch or stem and bearing sub-lateral branches
- **Sub-lateral.** A third order branch, subordinate to a lateral or scaffold branch, or stem and usually bearing only twigs

Branch bark ridge. The raised arc of bark tissues that forms within the acute angle between a branch and its parent stem.
Branch collar. A visible swelling formed at the base of a branch whose diameter growth has been disproportionately slow compared to that of the parent stem; a term sometimes applied also to the pattern of growth of the cells of the parent stem around the branch base.
Brown-rot. A type of wood decay in which cellulose is degraded, while lignin is only modified.
Buckling. An irreversible deformation of a structure subjected to a bending load.
Canker. A persistent lesion formed by the death of bark and cambium due to colonisation by fungi or bacteria
Co-dominance. In a woodland, a tree whose crown is at the general level of the canopy. Alternatively, within the crown of a tree, branches/stems of equal size above a union.
Compartmentalization. The confinement of disease, decay or other dysfunction within an anatomically discrete region of plant tissue, due to passive and/or active defences operating at the boundaries of the affected region.
Compression strength. The ability of a material or structure to resist failure when subjected to compressive loading; measurable in trees with special drilling devices.
Compression. A force which pushes and tends to compress. The material fails by being crushed or by buckling (following sideways deflection).
Condition. An indication of the physiological vitality of the tree. Where the term 'condition' is used in a report, it should not be taken as an indication of the stability of the tree
Conservation Area (CA). A geographical area recognized in the Town and Country Planning Act 1990 as being *'of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance'.*
Crown/Canopy. The main foliage bearing section of the tree
Crown Clean. The removal of dead, dying, damaged or diseased branches from the crown of a tree. Sometimes called 'dead wooding'.
Crown Lifting. The removal of limbs and/or small branches to achieve a specified vertical clearance above ground level or other surface.
Crown Reduction/shaping. An operation that results in an overall reduction in the height and/or spread of the crown of a tree by means of a general shortening of twigs and/or branches, whilst retaining the main framework of the crown and preserving, as far as possible, the natural tree shape.
Crown Thinning. The removal of a proportion of secondary branch growth throughout the crown to produce an even density of foliage around a well-balanced branch structure.
Defect. Any feature of a tree that is likely to make it less safe (in the case of a structural defect) or otherwise to reduce its health, longevity, landscape prominence or conservation value for any other reason.
Dieback. The death of parts of a woody plant, starting at shoot-tips or root-tips.
Disease. A malfunction in or destruction of tissues within a living organism, usually excluding mechanical damage; in trees, usually caused by pathogenic micro-organisms.
Dominance. In trees, the tendency for a leading shoot to grow faster or more vigorously than the lateral shoots; also the tendency of a tree to maintain a taller crown than its neighbours.
Dysfunction. In woody tissues, the loss of physiological function, especially water conduction, in sapwood.
DBH (Diameter at Breast Height). Stem diameter measured at a height of 1.5m or the nearest measurable point. Where measurement at a height of 1.5 metres is not possible, another height may be specified.
Deadwood. Branch or stem wood bearing no live tissues. Retention of deadwood provides valuable habitat for a wide range of species and seldom represents a threat to the health of the tree. Removal of deadwood is generally recommended only where it represents an unacceptable level of hazard.
Epicormic shoot. A shoot having developed from a dormant or adventitious bud and not having developed from a first year shoot.
Felling licence. In the UK, a permit to fell trees in excess of a stipulated number of stems or volume of timber.
Formative pruning. Pruning of young trees to modify their form at maturity, either to avoid future structural defects (for instance by singling a twin-stem) or to create a desired cultivated tree form.
Flush-cut. A pruning cut which removes part of the branch bark ridge and or branch-collar.
Girdling root. A root which circles and constricts the stem or roots possibly causing death of phloem and/or cambial tissue
Habit. The overall growth characteristics, shape of the tree and branch structure.
Harm. Personal injury or death, property damage, or disruption of activities.
Hazard. An element of tree risk: the tree part(s) with a capacity to cause damage or injury.

Hazard beam. A curved woody stem, where loading tends to bend it against the direction of curvature. They have a tendency to split longitudinally through the centre due to strongly opposing internal stresses.
Heartwood/false-heartwood/ripe wood. Sapwood that has become dysfunctional as part of the natural aging processes.
Included bark (ingrown bark). Bark of adjacent parts of a tree (usually forks, acutely joined branches or basal flutes) which is in face-to-face contact.
Infection. The establishment of a parasitic micro-organism in the tissues of a tree or other organism.
Lever arm. A mechanical term denoting the length of the lever represented by a structure that is free to move at one end, such as a tree or an individual branch.
Lions tailing. A term applied to a branch of a tree that has few if any side-branches except at its end, and is thus liable to snap due to end-loading.
Loading. A mechanical term describing the force acting on a structure from a particular source; e.g. the weight of the structure itself or wind pressure.
Longitudinal. Along the length (of a stem, root or branch)
Lopping. A term often used to describe the removal of large branches from a tree, but also used to describe other forms of cutting.
Minor deadwood. Deadwood of a diameter less than 25mm and or unlikely to cause significant harm or damage upon impact with a target beneath the tree.
Mulch. Material laid down over the rooting area of a tree or other plant to help conserve moisture; a mulch may consist of organic matter or a sheet of plastic or other artificial material.
Natural bracing. A natural/grown structure formed above a union in the crown of a tree, which restricts the movement of the constituent union parts. Without mechanical stimulus, the centre of a union may not develop normally.
Occlusion. The process whereby a wound is progressively closed by the formation of new wood and bark around it.
Photosynthesis. The process whereby plants use light energy to split hydrogen from water molecules, and combine it with carbon dioxide to form the molecular building blocks for synthesizing carbohydrates and other biochemical products.
Pollarding. The removal of the tree canopy, back to the stem or primary branches. Pollarding may involve the removal of the entire canopy in one operation, or may be phased over several years. The period of safe retention of trees having been pollarded varies with species and individuals. It is usually necessary to re-pollard on a regular basis, annually in the case of some species.
Pruning. The removal or cutting back of twigs or branches, sometimes applied to twigs or small branches only, but often used to describe most activities involving the cutting of trees or shrubs.
Reactive Growth/Reaction Wood. Production of woody tissue in response to altered mechanical loading; often in response to internal defect or decay and associated strength loss (cf. adaptive growth).
Risk. The combination of the likelihood of an event and the severity of the potential consequences.
Risk Assessment. The process of risk identification, analysis and evaluation.
Root zone. Area of soils surrounding a tree likely to contain absorptive and/or structural roots of the tree/s. The Primary root zone is that which we consider of primary importance to the physiological well-being of the tree.
Saprophyte: a fungi which uses non-living organic material and works beneficially for its host, recycling carbon, nitrogen, and other nutrients.
Sapwood. Living xylem tissues.
Selective delignification. A kind of wood decay (white-rot) in which lignin is degraded faster than cellulose.
Simultaneous white-rot. A kind of wood decay in which lignin and cellulose are degraded at about the same rate.
Soft-rot. A kind of wood decay in which a fungus degrades cellulose within the cell walls, without any general degradation of the wall as a whole.
Shrub species. Woody perennial species forming the lowest level of woody plants in a woodland and not normally considered to be trees.
Stem/s. The main supporting structure/s, from ground level up to the first major division into branches.
Stress. In plant physiology, a condition under which one or more physiological functions are not operating within their optimum range, for example due to lack of water, inadequate nutrition or extremes of temperature.
Stress. In mechanics, the application of a force to an object
Structural roots. Roots, generally having a diameter greater than ten millimetres, and contributing significantly to the structural support and stability of the tree.
Stub (snag). In woody plants, a portion of a cut or broken stem, branch or root which extends beyond any growing-point or dormant bud; a snag usually tends to die back to the nearest growing point.
Taper. In stems and branches, the degree of change in girth along a given length.
Targets. In tree risk assessment (with slight misuse of normal meaning) persons or property or other things of value which might be harmed by mechanical failure of the tree or by objects falling from it.
Tension. A force which pulls and tends to stretch. A material in tension may suffer ductile failure or brittle failure.
Topping. In arboriculture, the removal of the crown of a tree, or of a major proportion of it.
Tree Preservation Order (TPO). An order made by a local planning authority in England to protect specific trees, groups of trees or woodlands in the interests of amenity.
Understorey. A layer of vegetation beneath the main canopy of woodland or forest or plants.
Union. The area of physiological division of one primary tree stem/branch into two or more secondary members, commonly referred to as 'fork'.
Vascular wilt. A type of plant disease in which water-conducting cells become dysfunctional.
Veteran tree. A loosely defined term for an old specimen that is of interest biologically, culturally or aesthetically because of its age, size or condition and which has usually lived longer than the typical upper age range for the species concerned.
Vigour. The health and resilience of a tree (from the Latin 'to be strong'), reflected in the capacity of the whole tree to grow. The term is often used as a description of overall condition on a qualitative scale from 'high' to 'low'.
Vitality. A close synonym of vigour reserved for active processes in a tree that do not result in the capacity for growth, for instance a tree's response to injury, insect attack or disease.
VTA. Visual Tree Assessment. A structured and systematic evaluation of a tree considering biological and mechanical functions and systems, arriving at a failure criteria and tree management recommendations.
White-rot. A range of kinds of wood decay in which lignin, usually together with cellulose and other wood constituents, is degraded.
Wind exposure. The degree to which a tree or other object is exposed to wind, both in terms of duration and velocity.
Wind pressure. The force exerted by a wind on a particular object.
Windthrow. The blowing over of a tree at its roots.
Woundwood. Wood with atypical anatomical features, developed in response to a wound, often resulting in a swelling (as round a pruning wound) which gradually occludes the wound.

We trust that the contents and recommendations contained within this report were informative, easy to understand and helpful to you, with regards to managing your tree. Should you have any further questions or concerns, please do not hesitate to contact us again.

REPORT CLASSIFICATION: Part 1: BS: 5837 Tree Survey & Constraints Plan

REPORT STATUS: Final

REPORT COMPLETED BY: Mr James Percy-Lancaster Cert Arb (Lv.4) *TechArborA*
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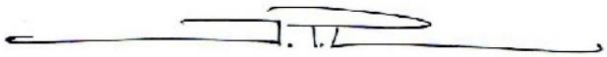
SIGNATURE: 

DATE: 3rd December 2021

REPORT REVIEWED BY: Mr G Davies *FdSc Arb*
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DATE: 3rd December 2021