# <u>Trees and Construction</u> BS5837 Tree Survey Assessment Implications Assessment & Method Statement

- Site: Oxpens, Wigginton, Banbury, Oxfordshire, OX15 4LE
- **Ref:** 19366/A3
- **Client:** Virginia Sweetingham



# Cotswold Wildlife Surveys

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- June 2020 -



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Revision	Description	Date
/	Tree Survey Advice (20356/A1)	18/07/2019



#### 1. INTRODUCTION

1.1 **Instruction:** This advice has been prepared for Virginia Sweetingham(hereafter; client) and is in respect of the tree related planning considerations at Oxpens, Wigginton, Banbury, Oxfordshire (hereafter; site).

As the proposal relates to development works at site, the advice herein is produced in accordance with the British Standard 5837 : 2012 '*Trees in Relation to Design*, *Demolition and Construction - Recommendations*' (hereafter; BS5837).

- 1.2 BS5837: The scope of BS5837 is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity by trees which are appropriate for retention.
- 1.3 **Scope of this advice:** This advice has been produced in accordance with BS5837 and is intended to demonstrate the site's realistic arboricultural constraints and assist with the design process. The objective is to systematically assess and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.
- 1.4 Following instruction the consultant surveyed the site on the 3rd June 2019 where a site walkover and BS5837 tree survey were carried out; all trees on site and around the application boundary were surveyed from ground level and plotted as either an individual or a tree group.
- 1.5 This advice is subject to caveat at Appendix I, outlines relevant terms and definitions at Appendix II and constitutes the findings of the preliminary site assessment and associated arboricultural recommendations.
- 1.6 The survey data and site observations use the supplied topographical survey to illustrate the surveyed trees in plan format as a 'Tree Constraints Plan' (hereafter; TCP); the TCP and the tree survey data table are at Appendix III.



#### 2. SITE INFORMATION & TREE ASSESSMENT

- 2.1 The site currently comprises 2 separate parcels of land, the southerly part is mainly open field with trees predominantly set to the field edges and boundaries. An existing 'barn' building is set to the north of this part of the site. The northerly section is set around a central man made pond with a small island. The boundaries of the pond have been planted with White Willow. The boundary of the site itself has mature and overmature trees. For the most part the rest of the site is planted with Ash Oak and Cherry standards which have now closed canopy to form a continuous woodland with the willow and mature trees to the boundaries.
- 2.2 **Proposal:** It is intended to construct an architecturally outstanding dwelling inside the existing Ash plantation woodland. The works also include extensive mixed, native species re-planting of the Ash plantation, which is monoculture in nature, with no understorey, poor ground flora and is largely uniform in structure. The existing pond will be re-modelled and engineered to provide a lake with graded sides to allow for the establishment of a diverse, native emergent flora, and there will be wildflower meadow areas, patches of damp woodland and a wetland flush. An old barn near the entrance to the wood will be retained, with access along an existing dirt track which will be re-surfaced.
- 2.3 The site requires consideration from an arboricultural perspective due to the presence of trees on and around the site; these trees are deemed to be within impacting distance of the existing property and potential construction area.
- 2.4 <u>The trees</u> -
- 2.4.1 The tree survey and assessment resulted in the BS5837 quality/retention categories of 'A' Good, 'B moderate', 'C low' and 'U Unclassified' being attributed to trees/tree groups; it is also worth noting that the BS5837 circular RPAs are considered to halt at the extents of existing property.
- 2.4.2 There are established features on site the most dominant trees being the 'A' class trees and groups of woodland. T8, T9, T10, T11, T12, T17, T29, T31, T32, T41, T43, T44, T45, T49, T50, T59, T60, T73, G15 and G16.
- 2.4.3 It should be noted that there are also many 'B' Class trees within the survey that are constituent parts of the groups outlined in the TCP.
- 2.4.4 No council search/contact has been requested and hence confirmation as to whether any tree is protected by Tree Preservation Order. We have been advised by the client that no TPOs are in effect on site



2.4.5 It should be noted that the majority of the woodland consists of a monoculture of planted Ash, with a band of mature White Willow around the pond. Although this provide a continuous canopy cover, the willows are all exhibiting disease with extensive dead wood in their crowns, whilst Ash die-back is widespread in the district. It is thus highly likely that the woodland will be affected by die-back, requiring re-planting irrespective of the proposed scheme.

#### 3. FINDINGS & RECOMMENDATIONS

- 3.1 The following information, as with the prior contents of this report, should be read with the appended tree data table and tree constraints plan (19366/TCP/01).
- 3.2 <u>General Considerations for Tree Retention / Removal</u>
- 3.2.1 Based on the boundary line location/neighbour's site location of T73, its retention and protection is to be assumed as part of the scheme.
- 3.2.2 'A' class trees should generally be protected by avoidance
- 3.2.3 The 'B' Class trees are considered of value both individually and in the landscape and should be retained by design. Proposed encroachment or removal would need to be justifiable and mitigated in any approved scheme.
- 3.2.4 The site's trees, when compared to better examples of their species and the close surrounds of the site, are considered to be those of a smaller scale, declining or limited contribution, and are therefore categorised as low quality 'C' category.

These may be suitable for retention for the most part but should not present a significant constraint to the scheme as mitigation planting can replicate and enhance their contribution.

- 3.2.5 'U' -Class trees should be removed for Arboricultural reasons; T1, T33, T39 and T70
- 3.2.6 The removal of the above trees or vegetation may have an impact on the green cover in the first instance, however, the scheme presents a significant enhancement opportunity. Said removals would have no impact on the long term amenity of the site and will allow for the selection of native species to enhance amenity and biodiversity.



#### 4. SCHEME / IMPLICATIONS ASSESSMENT

4.1 For this assessment, the proposed scheme has been considered (see; s.2.2 herein). This includes consideration for arboricultural management / tree works for H&S tree risk management, tree removal and pruning options, design solutions, tree protection and sensitive measures to account for trees. As per s.1.6 and s.2.2 herein, the TCP scheme overlay illustrates the proposed scheme.

#### 4.2 Consideration for G20, G22, G23

As per 2.4.5 above these trees will be removed in their entirety

4.2.1 Consideration for T37, T40, T42, T42, T43, T44, G15, G14

A new access is intended to pass in close proximity to the above trees, There is an existing farm track but this will need to be expanded and improved. Parts of G14 will need to be pruned back to provide clearance for the new track. As the track passes through the RPAs of significant trees and groups it is intended to construct this section with a porous surface that maintains existing levels. As this track will be required to gain access to the site during the build it must either be completed first or partially completed with adequate for the type of traffic temporary ground protection put in place. If the road is temporary the permanent road treatment can be finished in the landscape phase of the works after construction

4.2.2 Consideration for T71 -

The trees RPA is significantly within the proposed new guest parking bays. The area affected will be constructed of a porous surface using no-dig techniques to install and preserve the existing ground levels as per the example on the TPP. This will be undertaken in the landscape phase of the construction and should be protected by fencing and ground protection during the construction phase as per the TPP.

4.2.3 Consideration for remaining trees-

The remaining trees can be protected by avoidance, protective fencing (as shown on TPP)



#### 5. METHOD STATEMENT

- 5.1 <u>Arboricultural Construction Restrictions</u>
- 5.1.1 The following restrictions are considered relevant for tree protection purposes which are illustrated on the appended Tree Protection Plan:
- a) *Tree Works -* are to be completed prior to any and all site works: no tree works not specified within this document (or leaning against or attaching of objects to a tree) are permitted unless agreed in writing by the council (subject to standard exemptions).
- b) *Tree Protection* If a site compound is to be set up within the application boundary, it must exclude the surveyed trees as per the TPP, or Protective Barrier Fencing (PBF) is to be installed as per the TPP with works clearance, i.e. 1.5-2.0m around the hard landscape extents, existing boundary walls retained and supplemented to prevent RPA, stem or crown impact; to be installed after tree works and prior to site works.
- c) Construction Exclusion the fenced off areas are Construction Exclusion Zones (CEZ).
- d) *Site Restrictions -* no chemicals/materials are to be transported/stored/used/mixed within the CEZ, and no fires are to be lit and no machinery, plant or vehicles are to be washed down within 10m of the tree's canopy or in a CEZ.
- *e) Ground Works -* during site works RPAs/CEZ may not be breached, i.e. no surface works, without the consultant's prior advice and council consent, and no mechanical digging or scraping is permitted within RPAs/CEZ;
- e) *Sensitive Landscape* the PBF may be temporarily moved to allow pedestrian access to start sensitive soft landscape works within RPA, i.e. turf removal, retained soil levels, new planting, mulch borders.

*Completion -* only following construction and hard landscape completion can PBF be removed and remaining soft landscape works undertaken within RPAs / CEZ (ground levels to be retained and works undertaken manually with non-driven machinery).

#### 5.2 <u>Arboricultural Site Monitoring / Supervision</u>

- 5.2.1 The council will typically request *'a scheme of supervision for the arboricultural protection measures'* to confirm tree protection and adherence to working methods around trees.
- 5.2.2 The appointed site contractor and project manager will be provided with an approved AMS and TPP and will need to be briefed as to prohibited works and tree protection.



- 5.2.3 A record of each site visit will be kept and a summary letter drafted for the client, the site manager and the local authority (to be sent to the client for distribution), thus -
  - (1) *Pre-commencement* to confirm approved tree works, site hoarding / tree protection fence line and construction restrictions for ground works;
  - (2) *Access Treatment-* Proposed access is to be complete or partially completed using ground protective measures suitable for the intended traffic. Vegetation clearance to accommodate the track to be completed at this time
  - (3) *Tree Works-* All tree work to be completed including removal of G20 G22 and G23.
  - (4)*Tree Protection* Installation of fencing tree protection and other ground protection for T71;
  - (5)*Half way* through the program to confirm maintained tree protection, no tree damage and exclusion of RPA access;
  - (6) *After-construction* to confirm excavations of existing hard surfaces, and discuss tree protection requirements with the landscape team;
  - (7) *During soft landscape works* to confirm manual works, retained soil levels and planting with mulch layer; Installation of new driveway within the RPA of as above (2) if not already completed
  - (8) *Development completion* after all hard landscape works and tree and shrub planting is complete to sign off the site as having adhere to the AMS.
- 5.3 <u>Protective Barrier Fencing (PBF) Specification</u>
- 5.3.1 Barrier fencing is to be installed (and signed off by way of arboricultural supervision) following the completion of the tree works. It is to be illustrated on a Tree Protection Plan to aid installation and is to remain in situ for the entire duration of demolition/construction processes unless otherwise agreed in writing by the council.
- 5.3.2 The barrier fencing is to consist of a series of Heras panels secured in place by driven scaffold posts or a scaffold frame to ensure that the fencing lines are well braced to resist impact, prevent access to RPAs and the designated CEZs around the tree groups.



#### 5.4 <u>Underground utilities</u>

- 5.4.1 Any new underground utilities are to utilise the construction area for new installations and avoid the need for works in proximity to trees. Certainly, utility installations are to be:
  - Located outside of RPAs and construction exclusion zones; and
  - Installed only following the installation of the protective barrier fencing to ensure the retained trees and their RPAs are protected.
- 5.4.2 The following restrictions are recommended for underground utilities within RPAs:
  - Any necessary excavations to be undertaken sensitively using either a no-dig method (e.g. Air-Spade) and/or under arboricultural supervision;
  - Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them;
  - Small roots which are identified (those less than 25mm diameter) may be carefully pruned back with a clean sharp tree saw; and
  - Larger roots which are identified (those greater than 25mm in diameter) are to be retained and protected as they may be necessary for a tree's health and stability.
- 5.5 <u>Ground Works within RPAs</u>
- 5.5.1 Direct RPA incursion is anticipated [as indicated at s.4.2.1, 4.2.2] retained levels detail to be demonstrated by the client in the form of a 'site levels plan'.
- 5.5.2 Any excavations within an RPA must:
  - Use sensitive excavation techniques to protect the tree roots and their existing growing conditions.
- 5.5.3 Any exposed roots shall be packed with a clean damp sand (not builders sand) and wrapped in hessian sacking to protect them from temperature changes and drying out.
- 5.5.4 Small roots (those less than 25mm in diameter) may be carefully pruned back with a clean sharp tree saw. However, pruning large roots (those greater than 25mm in diameter) will require the advice of the consultant and permission of the council; these may be necessary for a tree's health and stability.
- 5.5.5 Once the hard surface material (including compacted base) has been removed, any hessian wrapping will be removed and roots will be surrounded/packed with a sharp sand and any existing ruts, holes or dips are to be infilled with a mix of sharp sand and high grade tree planting soil.



#### 5.8 Landscape Detail

5.8.1 A landscape masterplan has been drafted for the client currently titled 'OXO\_Landscape masterplan\_stage3' which illustrates the intended landscape plan. This includes the exact proposals for hard and soft landscaping together with the details for any new trees' planting locations, species and stock selection, installation and maintenance; and is to have the full support of the arboricultural consultant where required.

#### 5.6 <u>Report Handling</u>

- 5.6.1 This report is released to the client and architect to be distributed at their discretion and the consultant is available for queries relating to this report and/or trees.
- 5.6.2 The proposed scheme is reviewed in respect of the arboricultural constraints and is considered to be achievable in line with the BS5837 guidance. The tree protection methods herein may be approved by the council based on the approved information and other detail i.e. utility layout, final landscape plan, construction management plan (CMP) etc.
- 5.6.3 This AMS and the TPP may be approved by the council in support of the application, as a means of authorised tree protection measures; all site personnel will have access to a copy and the tree work and protection details are to be inspected as per s.5.2 for '*Arboricultural Monitoring / Supervision*'.

#### This concludes our advice.



Virginia Sweetingham| CLIENT Oxpens, Wigginton, Banbury, Oxfordshire| SITE 19366/A3 | REF 18/10/19 | DATE



Virginia Sweetingham| CLIENT Oxpens, Wigginton, Banbury, Oxfordshire| SITE 19366/A3 | REF 18/10/19 | DATE

### Appendix I

#### Caveat

Any and all information supplied to Indigo Surveys Ltd by/on behalf of the client is assumed to be accurate unless otherwise informed. | This advice is limited to the observations made on the date of inspection as detailed herein and any deletion, editing or alteration will result in the advice being null and void in its entirety. | This advice in its entirety may be deemed null and void if remedial works are undertaken on any area of the site, on or after the date of the survey. | No liability is assumed by the author or by Indigo Surveys Ltd for any misuse, misinterpretation or misrepresentation of this advice. | This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events. | No responsibility is assumed either by the author of this advice or by Indigo Surveys Ltd for any legal matters that may arise as a consequence. | Neither the author nor Indigo Surveys Ltd will be required to attend court or give testimony as part of this agreement. | The responsibility for any works undertaken on the basis of the recommendations of this advice does not form part of this agreement.



## Appendix II

#### **Terms and Definitions**

"*Arboriculturist*" - person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.

*"Competent Person"* - person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.

*"Topographical survey"* - an accurately measured land survey undertaken to show all relevant existing site features. *A method of carrying out topographical surveys is given in RICS specification* Surveys of land buildings and utility services at scales of 1:500 and larger.

"*BS5837 Tree survey*" - should be undertaken by an arboriculturist to record information about the trees on or adjacent to a site. The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to designers prior to and/or independently of any specific proposals for development.

*"Tree categorisation method"* - trees should be categorised in accordance with the BS5837 cascade chart by an arboriculturist. This is to identify the quality and value (in a non-fiscal sense) of the existing tree stock, allowing informed decisions to be made concerning which trees should be removed or retained in the event of development occurring.

"*Root protection area* (*RPA*)" - layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority, shown as an arboricultural constraint in m<sup>2</sup>. The radius is calculated using the BS5837 calculation method. An arboriculturist may change the shape of an RPA but not reduce its area.

"*Arboricultural implications assessment*" - a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

"*Arboricultural method statement*" - methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

*"Tree protection plan"* - a scale drawing, informed by descriptive text where necessary, based upon the finalised proposals, showing trees for retention and illustrating the tree and landscape protection measures.



Virginia Sweetingham| CLIENT Oxpens, Wigginton, Banbury, Oxfordshire| SITE 19366/A3 | REF 18/10/19 | DATE

Appendix III

Data Table:

As appended (BS5837 Tree Survey Key & Table)

**Tree Constraints Plan:** 

As appended (19366/TCP/01)

	CLIENT: Virginia Sweetingham PROJECT REF: 19366 SITE: Oxpens, Wigginton, Banbury, Oxfordshire	Virginia Sweetingham	Sweeting	gham		Ľ	ROJE	PROJECT REF: 19366	19366				SITE:	SITE: Oxpens, Wigginton, Banbury, Oxfordshire	
	CONTACT:	-				S	URVE	SURVEY DATE: 10 July	10 July 2	2019		ARB CON	ARB CONSULTANT:		
TREE REF.#	SPECIES	AGE	HEIGHT (in m)		САNОРҮ (in m) N - S - E - W	, T (in		STEM (in mm)	RPA (in m)	CLEARANCE (in m)	1st BRANCH (in m)	VITALITY	LIFE EXPEC.	NOTES ES CAT.	MANAGEMENT
	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Σ	15	4	4	4	4	580	7.0	5	2	Low	×10	Crown dieback (high). The appearance of the tree is consitant with symptoms of Ash Dieback. Ivy present precluding VTA (Visual Tree Assessment)	
<b>T</b> 2	Crack Willow, Salix fragilis, Saliaceae	R	15	~	~	~	~	1200	14.4	o	Ν	Norm	20-40	The tree has been managed by pollarding in the past. Hollow stem. Multistemmed from C 3 F knuckle at 2m	Re-Pollard to existing pollard points for nature conservation
T3	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	R	18	Q	~	ω	~	540;530	9 1	4	4	Norm	10_20	The appearance of the tree is consistant with symptoms of Ash Dieback. Crown dieback (moderate). Restricted assessment due To undergrowth around the base. Old pruning wounds on the stem	
T4	Crack Willow, Salix fragilis, Saliaceae	WO	15	Q	~	Q	Q	560;770	11.4	1.5	7	Norm	20-40	Possibly meets veteran tree status for its C 3 F species. Split in the main stem. Leaning east	Re-Pollard to existing pollard points for nature conservation
Т5	Crack Willow, Salix fragilis, Saliaceae	Σ	15	~	~	Q	Q	1000	12.0	1.5	7	Norm	20-40	The tree has been managed by pollarding in C 3 F	Re-Pollard to existing pollard points for nature conservation
Т6	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	R	17	Q	~	Q	2	800	9.0	ĸ	m	Low	20-40	Restricted assessment due To undergrowth around the base. Sparser than expected B 3 foliage within the crown	

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Restricted assessment due To undergrowth around the base. Sparser than expected foliage within the crown. The tree has grown as part of a long standing field boundary	Restricted assessment due To undergrowth around the base. Sparser than expected foliage within the crown. The tree has grown as part of a long standing field boundary. Ivy on stem	Restricted assessment due To undergrowth around the base.The tree has grown as part of a long standing field boundary . Split Main Stem with Ear Ridges. The tree possibly meets the criteria for veteran status	Restricted assessment due To undergrowth around the base.The tree has grown as part of a long standing field boundary	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary. Habitat cavity within the crown. The tree possibly meets the criteria for veteran status	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary	Young tree
20-40	20-40	20-40	20-40	40+	20-40	40+
Low	Norm	Norm	Norm	Norm	Norm	Norm
m	ო	ო	σ	ო	ო	ო
ю	ო	က	က	ო	ო	-
0.7	7.2	12.0	7.4	11.7	8 <u>.</u> 0	2.5
580	600	1000	620	975	670	210
~	~	~	~	თ	9	ო
Q	9	Ø	9	~	9	ო
~	2	ω	~	10	9	e G
Q	Q	Q	9	~	Q	ო
17	17	17	17	17	17	ω
R	R	R	R	WO	Σ	Ш Ш
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, Quercus robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
17	Т8	D L	T10	T11	T12	T13

σ	m		σ	σ	σ	
ບ ບ	<u>۵</u>	$\supset$	×	<u>۵</u>	<u>۵</u>	<u>د</u>
Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary. Crown dieback (moderate). The appearance of the tree is consitant with symptoms of Ash Dieback	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary. The appearance of the tree is consitant with symptoms of Ash Dieback. basal Suckers More vigorous	The tree has grown as part of a long standing field boundary. The tree possibly meets the criteria for veteran status. Bottle shaped base. Crown dieback (high)	The tree has grown as part of a long standing field boundary. Bottle shaped base. Crown dieback (high). Ivy on stem. Large pieces of dead wood	The tree has grown as part of a long standing field boundary. Crown dieback (low)	The tree has grown as part of a long standing field boundary. Crown dieback (low). Part of contiguous group	The tree has grown as part of a long standing field boundary. Crown dieback (low). Part of contiguous group. The tree possibly meets the criteria for veteran status
10_20	20-40	<10	20-40	20-40	20-40	20-40
Low	Low	Low	Norm	Norm	Norm	Norm
n	n	က	n	n	σ	n
-	N	р	Ν	Ν	Ν	Ν
6.7	6.7	14.4	10.0	10.0	0 <sup>.</sup> 0	11.4
260	560	1200	830	830	825	950
сл	5	2	~	~	ω	4
ъ	2 <sup>1</sup>	9	~	~	~	თ
2	2 <sup>2</sup>	9	œ	Q	~	~
4	4	~	~	4	~	~
15	17	20	20	17	17	17
Σ	L	WO	L	L	L L	Ľ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, Quercus robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
Т14	T15	Т16	Т17	T18	Т19	Т20

	Re-Pollard to existing pollard points for nature conservation	Re-Pollard to existing pollard points for nature conservation	Re-Pollard to existing pollard points for nature conservation	Re-Pollard to existing pollard points for nature conservation		Re-Pollard to existing pollard points for nature conservation
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	U	U	U	U	Ê	۵
The tree has grown as part of a long standing field boundary. Crown dieback (low). Habitat cavity within the crown. Suckering around the base of the tree	lvy present precluding VTA. The tree has been managed by pollarding in the past	Ivy present precluding VTA. The tree has been managed by pollarding in the past. Restricted assessment due To undergrowth around the base	Ivy present precluding VTA. The tree has been managed by pollarding in the past. Restricted assessment due To undergrowth around the base	lvy present precluding VTA. The tree has been managed by pollarding in the past. Restricted assessment due To undergrowth around the base	lvy present precluding VTA. The tree has grown as part of a long standing field boundary	Restricted assessment due To undergrowth around the base
20-40	20-40	20-40	20-40	20-40	40+	40+
Norm	Norm	Norm	Norm	Norm	Norm	Norm
Ν	~	-	-	~	-	-
N	1.5	1.5	1.5	1.5	Ν	Ν
<u>0</u>	10.8	<u>6</u>	13.2	13.2	<u>3</u> .6	<u>9</u> 8
540	006	780	1100	1100	300	300
сı	4	4	2	2	4	4
4	2	4	5	Q	4	4
ى ب	4	4	4	Q	4	4
т	Q	4	Q	Q	4	4
7	10	0	5	6	5	6
Σ	Z L	Σ	Z L	Z	М Ш	Ш
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Crack Willow, Salix fragilis, Saliaceae	Crack Willow, <i>Salix</i> fragilis, Saliaceae	Crack Willow, Salix fragilis, Saliaceae	Crack Willow, Salix fragilis, Saliaceae	English Oak, Quercus robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
T21	T22	Т23	Т24	T25	Т26	Т27

	σ	σ	σ	σ		
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Restricted assessment due To undergrowth around the base	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary . Large pieces of dead wood. Split Broken Branches	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary. Large pieces of dead wood. Split Broken Branches. storm damaged	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary. Basal Bulging	Restricted assessment due To undergrowth around the base. The tree has grown as part of a long standing field boundary	Restricted assessment due To undergrowth around the base. Crown dieback (moderate)
40+	40+	40+	40+	40+	<10	10_20
Nor	Norm	Norm	Norm	Norm	Dead	Low
~	n	4.5	4.5	4.5	4.5	4.5
7	2.5	4	4	4	4	4
2.08	9 <u>.</u> 4	9 9	<u>6</u>	10.8	10.8	0 0
480	780	570	570	006	006	540
2	თ	Q	Q	~	~	2
2ı	ω	ø	~	ω	ω	~
ى ب	თ	Q	~	ω	ω	2
сı	ω	Q	Q	თ	თ	4
5	18	18	19	20	19	17
ы Ш	LM	R	R	R	R	Ľ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
T28	Т29	Т30	Т31	T32	Т33	Т34

σ	m	σ			σ	
E E E E E E E E E E E E E E E E E E E	<u>е</u>	0 0	<b>D</b>		с; ш	<u>د</u>
Restricted assessment due To undergrowth around the base. Crown dieback (moderate). Part of contiguous group		Surface Roots Damaged By Farm Traffic	Crown dieback (moderate). Part of contiguous group. Surface Roots Damaged By Farm Traffic	Crown dieback (moderate). Part of contiguous group. Inotus bracket	Part of contiguous group	Part of contiguous group. Ivy on stem
20-40	40+	20-40	<10	10_20	40+	40+
Low	Norm	Norm	Norm	Norm	Norm	Norm
4 5	4.5	o	ო	ი	n	ო
4	~	0	0	0	0	0
6.5	3.2	5.7	3.8	3.5	5.4	4.9
540	270	240;250; 220;230	320	290	260;270; 250	410
υ	б	Q	n	m	m	т
ى ب	б	4	n	n	κ	ю
ω	С	ນ	n	n	4	ო
٥	ю	n	ę	n	n	ى ئ
17	10		10	13	9	-13
R	M	Σ	Σ	Σ	Σ	Σ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, Quercus robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Cherry, Prunus (species), Rosaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, <i>Quercus</i> <i>robur, Fagaceae</i>
T35	T36	Т37	Т38	Т39	T40	T41

0	8	8	σ	σ	σ	
۵	<	<	×	۵	۵	۵
Part of contiguous group. Ivy on stem. Surface Roots Damaged By Farm Traffic	Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group	Part of contiguous group. The tree possibly meets the criteria for veteran status	Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem
20-40	40+	40+	40+	20-40	40+	40+
Norm	Norm	Norm	Norm	Norm	Norm	Norm
m	က	က	က	ი	o	4
o	ო	σ	0	0	0	4
6.2	<u>6</u> .0	9.2	13.2	5.3	6.4	3.6
520	825	770	1100	440	420;330	300
4	~	~	~	m	n	4
4	~	~	2	Q	4	4
4	~	~	ω	N	ω	Q
~	~	~	ω	Q	വ	Q
1	50	20	20	<u>6</u>	5	17
Σ	R	R	LM	L	Σ	Σ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, Quercus robur, Fagaceae	English Oak, Quercus robur, Fagaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
T42	Т43	T44	Т45	T46	Т47	Т48

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4	A	۵	Ē	Ē	m	۵
Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem. The tree possibly meets the criteria for veteran status	Multistemmed stools. Part of contiguous group	Ivy present precluding VTA	Crown dieback (low). Sparser than expected foliage within the crown	Part of contiguous group. Multistemmed stools	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem
40+	40+	40+	40+	20-40	40+	40+
Norm	Low	Norm	Low	Low	Norm	Norm
4	4	4	4	4	4	4
4	4	0	0	0	0	o
6.5	11.7	7.8	5.8	11.6	11.3	10.2
540	975	330;340; 260;270; 160;170	220;230; 250;260	450;510; 490;480	480;470; 490;450	490;220; 430;500
4	4	2	2	7	~	Q
4	4	2	2	~	~	ю
5	2	9	9	~	ω	~
5	2	Q	9	വ	~	~
61	19	18	16	20	19	17
Ľ	WO	Σ	Σ	LM	Σ	Ľ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
T49	T50	Т51	Т52	Т53	T54	Т55

σ	Ϋ́	σ	σ	σ	σ	
۵	۵	B	A	۲	U	۵
Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy on stem	Part of contiguous group. Restricted assessment due To undergrowth around the base. The tree possibly meets the criteria for veteran status	Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group. Restricted assessment due To undergrowth around the base. The tree possibly meets the criteria for veteran status	Part of contiguous group. Restricted assessment due To undergrowth around the base. Crown dieback (moderate)	Part of contiguous group
40+	40+	40+	40+	40+	10_20	20-40
Norm	Norm	Low	Norm	Norm	Norm	Norm
4	4	4	4	4	4	4
o	o	4	4	4	4	0
6.7	11.8	11.7	9.5	13.2	6.1	7.3
320;300; 340	540;490; 480;450	975	062	1100	510	470;390
4	ω	e	2	თ	2	e
ത	4	e	ę	10	2	ى ك
~	~	2	ω	ω	2	ω
ъ	ω	n	10	10	Q	4
-18	6	12	19	19	17	91
L	R	WO	WO	WO	Σ	Σ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, Quercus robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
T56	Т57	Т58	Т59	Т60	Т61	Т62

σ	m	8	σ	σ	~	σ
с; ш	<u>م</u>	8	с) О	с; Ф	U U	0 0
Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group. Restricted assessment due To undergrowth around the base. The tree possibly meets the criteria for veteran status	Part of contiguous group	Part of contiguous group. Restricted assessment due To undergrowth around the base. catastrophic structural failure. Will Recover In Isolation	Part of contiguous group. Restricted assessment due To undergrowth around the base	Crown dieback (moderate)	Crown dieback (moderate)
20-40	40+	40+	40+	40+	10_20	10_20
Norm	Norm	Norm	Norm	Norm	Low	Low
4	4	4	4	4	N	Ν
o	o	0	0	0	Ν	
<u>6 5</u>	7.2	5.4	7.3	7.1	3.1	4 0.
540	600	300;230; 250	610	590	260	410
2 L	Q	~	~	~	N	ю
сı	~	9	4	4	N	ю
2	2	~	Q	9	N	ю
ъ	2	വ	4	4	N	e
17	13	15	13	14	Ø	14
Σ	Σ	R	R	R	M	M M
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Apple, <i>Malus</i> (Spps), Rosaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, Fraxinus excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
Т63	Т64	Т65	Т66	Т67	T68	T69

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Catastrophic structural failure. Crown dieback (high)	Part of contiguous group. Restricted assessment due To undergrowth around the base	Part of contiguous group	Part of contiguous group	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy present precluding VTA	Part of contiguous group. Restricted assessment due To undergrowth around the base. Ivy present precluding VTA. Growth influenced by adjacent tree	Part of contiguous group. Restricted assessment due To undergrowth around the base. Growth influenced by adjacent tree. Ivy present precluding VTA
×10	<10	20-40	40+	40+	20-40	20-40
Low	Low	Norm	Norm	Norm	Norm	Norm
N	n	ო	n	n	ო	m
ю	2	o	ო	ო	ო	ო
11.4	6.2	6.4	12.0	9	<u>6</u> .8	8 8
950	520	280;250; 240;290	1000	570	570	690
сı	2	2	2	~	Q	თ
Q	~	~	~	~	~	ω
Q	~	ູ	~	Q	თ	Q
2	~	~	~	Q	0	თ
17	17	15	20	18	7	17
WO	Σ	Σ	R	R	R	R
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Turkey Oak, <i>Quercus</i> cerrís, Fagaceae	English Oak, <i>Quercus</i> robur, Fagaceae	English Oak, <i>Quercus</i> robur, Fagaceae	Common Ash, <i>Fraxinus</i> excelsior, Oleaceae
021	Т71	Т72	Т73	Т74	Т75	Т76

	σ	σ	σ	σ	N	
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Part of contiguous group. Restricted assessment due To undergrowth around the base. Growth influenced by adjacent tree. Ivy present precluding VTA	Young tree group	The group has grown as part of a long standing field boundary near a stream bed	The group has grown as part of a long standing field boundary near a stream bed. It contains semi mature and mature trees	The group has grown as part of a long standing field boundary near a stream bed. It contains semi mature and mature trees	The group has grown as part of a long standing field boundary near a stream bed	The group has grown as part of a long standing field boundary near a stream bed
20-40 ass	20-40	20-40 st	20-40 star	20-40 star	20-40 st	20-40 st
Lo N	Norm	Norm	Norm	Norm	Norm	Norm
m	0	0	0	0	0	0
m	o	0	0	0	0	0
10.7	1.2	1.2	2.9	5.3	1.6	4. 4.
890	100 (max)	100 (max)	240 (max)	440 (max)	130 (max)	120 (max)
~	0	0	0	0	0	0
ω	0	0	0	0	0	0
ω	0	0	0	0	0	0
ø	0	0	0	0	0	0
19	Q	σ	10	5	ო	n
L	~	ъ Ш	ĒM;	M;L	Σ	Σ
Common Ash, <i>Fraxinus</i> excelsior, Oleaceae	Salix spp	Hawthorn, <i>Crataegus</i> <i>monogyna,</i> Rosaceae	Crataegus monogyna;Fraxinus excelsior;Quercus robur;Salix spp	Salix spp;Fraxinus excelsior;Crataegus monogyna	Hawthorn, <i>Crataegus</i> <i>monogyna</i> , Rosaceae	Hawthorn, <i>Crataegus</i> <i>monogyna,</i> Rosaceae
777	6	62	e B	G4	G5	GG

σ	m	σ	σ	σ	N	
0 0	0 0	0 0	ల ల	с; Ф	0 0	0 0
The group has grown as part of a long standing field boundary near a stream bed	The group has grown as part of a long standing field boundary near a stream bed	The group has grown as part of a long standing field boundary near a stream bed	The group has grown as part of a long standing field boundary near a stream bed	The tree has grown as part of a long standing field boundary	Scrubby field windbreak. Scrubby boundary hedge	Scrubby undergrowth
20-40	20-40	20-40	20-40	20-40	20-40	20-40
Norm	Norm	Norm	Norm	Norm	Norm	Norm
o	o	0	0	o	0	o
o	O	o	o	o	o	o
1.6	1.4	1.6	1. 4.	5.6	1.6	8.1
130 (max)	120 (max)	130 (max)	120 (max)	470 (max)	130 (max)	150 (max)
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
4	4	ო	m	10	ω	ω
Σ	Σ	Σ	Σ	Σ	×. ×	÷.
Hawthorn, <i>Crataegus</i> monogyna, Rosaceae	Hawthorn, <i>Crataegus</i> monogyna, Rosaceae	Hawthorn, <i>Crataegus</i> monogyna, Rosaceae	Hawthorn, <i>Crataegus</i> monogyna, Rosaceae	Hawthorn, <i>Crataegus</i> monogyna, Rosaceae	Hawthorn, Crataegus monogyna, Rosaceae;Plum, Prunus cerasifera Rosaceae	Hawthorn, Crataegus monogyna, Rosaceae;Cherry, Prunus (species), Rosaceae
G7	G8	G	G10	G11	G12	G13

						Trees could be managed as pollarded stems which would entail continuous future management
т С	ი ▼	7 7	C C	N C	с В	м О
			0			
Scrubby undergrowth. scrubby undergrowth defining field edge	Corner of woodland contating late mature and mature trees	Including individuals T48 to T63, late mature field boundary feature.	Field boundary hedge	The tree has grown as part of a long standing field boundary	Field boundary hedge. The feature has grown as part of a long standing field boundary	Included unions within crown. Split included union. Split broken branches. Linear wounds on scaffolds. Linear bark wounds on lower stems. Possible water logging symtoms
20-40	40+	40+	40+	20-40	40+	10_20
Norm	Norm	Norm	Norm	Norm	Norm	Low
o	o	0	0	0	0	0
o	o	o	o	o	o	o
<u>+</u>	5.6	6.1	<mark>4</mark> 4	2.5	2 0	5.5
150 (max)	470 (max)	510 (max)	120 (max)	210 (max)	490 (max)	460 (max)
0	0	0	0	0	0	0
0	0	0	0	o	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
ω	8	17	വ	a	-1 -1	ő
, , E	M;L	EM;	Σ	Σ	Σ	Σ
Plum, Prunus cerasifera Rosaceae	Mixed woodland	Common Ash, Fraxinus excelsior, Oleaceae,Mixed woodland	Hawthorn, Crataegus monogyna, Rosaceae;Plum, Prunus cerasifera Rosaceae	Corylus avellana;Hawthorn, Crataegus monogyna, Rosaceae	Hawthorn, Crataegus monogyna, Rosaceae;Common Ash, Fraxinus excelsior, Oleaceae	Salix alba
G14	G15	G16	G17	G18	G19	G20

N	ი	0
U	U	<u>о</u>
Field boundary hedge	Willow growing on an island	Closed canopy young trees. The group also contains young Oak and Cherry
Norm	Norm	Norm
o	o	o
o	o	0
3.4	5.1	3.4
0 0 0 250 (max)	400 (max)	250 (max)
0	0	0
0	o	0
0		0 0 0
വ	18	6
Σ	Σ	Σ
Hawthorn, Crataegus monogyna, Rosaceae;Common Ash, Fraxinus excelsior, Oleaceae	Goat Willow, Salix capreae, Saliaceae	G23 Common Ash, Common Ash, Fraxinus excelsior, Oleaceae, Oleaceae
G21	G22	G23

TREE SURVEY	TREE SURVEY 'KEY' - BRITISH STANDARD 5837:2012 'TREES IN RELATION TO DESIGN, DEMOLITION & CONSTRUCTION - RECOMMENDATIONS'
TPO/CA	On client request: presence of Tree Preservation Orders (TPO) / site location within a Conservation Area (CA) & date checked:
TREE REF #	Tree reference number: tag or plan number (T - individual tree, G - group of trees/shrubs, H - hedge);
SPECIES	Genus, species and/or common name;
AGE	Age classification (NP - new planting, Y - young, EM - Early-Mature, SM - semi mature, M - mature, LM - late mature, OM - over mature);
HEIGHT (in m)	Approximate height of tree in metres;
CANOPY (in m) N - S - E - W	Approximate branch spread in metres of the four principal compass points;
STEM (in mm)	Stem diameter in millimetres: measured in accordance with s.4.6 of BS5837;
RPA (in m)	Circle radius of the Root Protection Area: calculated using the stem diameter (single/multiple stem variant, as outlined within BS5837);
CLEARANCE (in m)	Crown clearance in metres above the adjacent ground level;
IST BRANCH (in m)	Clearance in metres to first significant branch and direction of growth (where relevant);
	Physiological condition typically gauged from canopy cover and annual extension growth (good, fair, poor, dead);
ESTIMATED REMAINING CONTRIBUTION	Approximate number of years a tree will continue to contribute without the need for oppressive arboricultural intervention, categorised in years as <10, 10-20, 20-40 and >40;
NOTES -	Structural and physiological condition observations;
BS CAT.	BS5837 tree quality assessment category: resulting from structural/physiological condition and remaining contribution (approximate useful life expectancy); Standard retention category <b>U</b> : in such a condition that any existing value would be lost within 10 years; Standard retention category <b>A</b> : high quality and value, in such a condition as to be able to make substantial contribution of 40+ years; Standard retention category <b>B</b> : moderate quality and value, in such a condition as to make a significant contribution of 20+ years; Standard retention category <b>B</b> : moderate quality and value, in such a condition as to make a significant contribution of 20+ years; Standard retention category <b>C</b> : low quality and value, currently in adequate condition to remain until new planting could be established 10+ years;
	Standard retention sub-category, mainly due to: 1- Arboricultural values, 2- Landscape values, 3- Cultural values, including conservation;
MANAGEMENT	Preliminary management recommendations (as appropriate);
- *-	Within the survey schedule denotes an estimate





