

Tree Survey and Impact Assessment

*for land at
Little Tew
Chipping Norton*

Client

CDG Estates Limited
Jubilee House
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London
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Document history

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Rev0	Final	Initial combined Tree Survey and Impact Assessment	JK / 09 April 2024

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1.0 Introduction

- 1.1 This report sets out the information about trees to inform the planning process about the quality of trees on site. Following the tree survey the information is extended to consider the impact to them from the proposed development and how construction may proceed whilst ensuring trees are successfully retained.
- 1.2 In this report we consider the proposals for development of the site. We consider those proposals in relation to the survey of trees we conducted as part of the site analysis.
- 1.3 The area subject of this survey consists of a parcel of fields set just outside the village of Little Tew, Chipping Norton.
- 1.4 The fields are bounded by hedgerows containing a number of established trees.
- 1.5 Most of the trees are ash that have suffered a combination of factors including stem decay by *Inonotus hispidus* and Ash Dieback.
- 1.6 One field margin contains a large mature English oak of broad-spreading form.
- 1.7 Along the lane, growing within the verge, is a row of young English oak trees and, toward the southern end, a row of established lime trees.
- 1.8 We have checked the online portals, including West Oxfordshire District Council for statutory protection of trees applicable to the site. Online portals are not always reliable so before works are undertaken to trees a direct enquiry with the Council should be made.
 - **TREE PRESERVATION ORDERS** - details were not available online to identify if trees upon the site were protected by Tree Preservation Order. As such we advise that a direct enquiry to the Council is made to ascertain if trees are protected by Tree Preservation Order
 - **CONSERVATION AREAS** - details were available online and confirmed that the site IS NOT within a Conservation Area.
 - The MAGIC information portal revealed that Ancient and Semi-Natural Woodland IS NOT located within/adjacent to the site. Land upon the site IS NOT listed on the Priority Habitat Inventory - Deciduous Woodland (England)
 - The online portal of the Woodland Trust, Ancient Tree Inventory, revealed that there are NO veteran trees recorded on site.

- 1.9 Nationally adopted guidance has been followed in the preparation of this report. *BS5837:2012: Trees in relation to design, demolition and construction – Recommendations* sets out a structure approach to considering trees during the development process. Guidance is given on the surveying of trees, the protected space that should be allocated to trees, what elements may give rise to harm to trees and what techniques can be deployed to minimise harm.
- 1.10 Sustainable development requires the coordination between disciplines throughout the project, accordingly the package of arboricultural information supports the design process and follows through to construction ensuring effective tree protection. We recognise the need to integrate with other disciplines to achieve a balanced approach to development proposals.
- 1.11 We set out how our key elements interact with others at [Appendix1](#) of this report. The appendix provides comprehensive information about the stages of providing tree information within the planning process.
- 1.12 Further explanatory notes about tree survey information are given in [Appendix2](#).

2.0 Tree survey

- 2.1 The objective of this tree survey is to assess the significant trees and woody vegetation on the site to obtain dimensions, assess their quality and evaluate their condition to provide sufficient information to enable decisions to be made on planning aspects of the site and its potential development.
- 2.2 The tree survey:
 - 2.2.1 was conducted on the 29th March 2021 and 28 March 2024 by Jago Keen, MSc, Dip.Arb., MArborA, MICFor from ground level, in accordance with the guidance in British Standard *BS5837:2012 Trees in relation to design, demolition and construction – Recommendations*;
 - 2.2.2 is intended for planning purposes only;
 - 2.2.3 is not intended for the detailed design of foundations (further information upon vegetation can be provided upon request);
 - 2.2.4 is not a detailed health and safety condition survey of trees;

- 2.2.5 recommends only preliminary works. Tree works required to achieve the scheme of development will be considered as part of the Impact Assessment and detailed on the Tree Protection Plan;
- 2.2.6 places reliance on the topographical survey.
- 2.3 Details of each tree are recorded in the Schedule of Trees at [Appendix3](#).
- 2.4 Site soil investigations have not been conducted. The (online) 'Geology of Britain Viewer' that contains British Geological Survey materials © NERC [2018] reveals the following soil information:
 - 2.4.1 Bedrock geology: Lias Group - mudstone, siltstone, limestone and sandstone.
 - 2.4.2 Superficial deposits: None recorded.
- 2.5 Survey information is used to prepare the constraints posed by trees on development. These constraints are shown on the Tree Constraints Plan. The Plan shows root protection areas prescribed by the guidance within BS5837 paragraph 4.6.2 and adjusted where appropriate as recommended in subsequent paragraph 4.6.3. The root protection area (RPA) is the minimum extent of rooting required to sustain the tree.
- 2.6 Trees change over time hence the contents of this survey can only be relied upon for a period of up to two years. The survey should be refreshed after two years or immediately prior to the design of detailed site layouts where they are phased.

3.0 Application of survey information

- 3.1 Trees place constraints on sites but they also provide opportunities in order to achieve optimum use of the site and location of built structures. This is set out below:

Avoid

The starting point of site layout design should be to avoid the RPA. Ideally, structures should be outside the root protection area to provide working space for construction however protection measures can be taken if such clearance, in isolated cases, is not achievable.

Mitigate

Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:

- a) Foundations that avoid trenching e.g. screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.
- b) Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods.
- c) Service runs that cannot be routed outside the root protection area(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable. Offsite provision may be considered in some circumstances but this will require negotiation with the local planning authority.

4.0 Assessment of impact upon trees

- 4.1 This assessment will consider the impact upon trees of implementing the proposals shown on the drawings listed below:

Table 1 - List of drawings referred to in the impact assessment

Originator	Drg No	Title
Colson Stone Practice	LA/204 Rev A	Landscape Masterplan
Keen Consultants	2287-KC-XX-YTREE-TCP01Rev0	Tree Constraints Plan
Keen Consultants	2287-KC-XX-YTREE-TPP01Rev0	Tree Protection Plan

4.2 Site proposals considered in this application include:

4.2.1 New residential dwelling and ancillary buildings

4.2.2 Access, parking and other hard surfaces

4.2.3 Utilities, services and SuDS schemes

4.2.4 New and replacement tree planting

4.3 The proposals are considered with reference to the following guidance documents referred to in this report:

Table 2 - List of documents used to inform the impact assessment

Originator	Title/Reference
British Standards Institute	<i>BS5837:2012 Trees in relation to design, demolition and construction – Recommendations</i>
Trees and Design Action Group	<i>Trees in the townscape: A guide for decision makers</i>
Ministry of Housing, Communities and Local Government	<i>National Planning Policy Framework (NPPF)</i>

4.4 National planning policy (paragraph 136 of the NPPF refers) makes clear the important contribution made by trees to the character and quality of built environments. Trees help to mitigate and adapt to climate change. The application proposals are respectful of the benefits trees provide and have been developed to ensure the retention of trees and the incorporation of new trees within the layout.

4.5 In summary, the proposals seek to embrace the existing landscape and enhance it through extensive new tree planting. Some tree and hedgerow loss are required but this loss is concentrated on the moderate and lower quality trees at the site. No high quality trees are proposed for removal.

Impact of application proposals

- 4.6 The central tenet of the layout design is landscape-led to provide a verdant setting for the new dwelling. The existing landscape is embraced, informing the layout of dwelling and ancillary buildings. The dwelling is located at the head of a shallow valley to enjoy views across the land.
- 4.7 Achieving the view requires the loss of short sections of established but outgrown hedgerows (sections of hedgerow 5 and 14) as well as three ash trees (12, 13 and 15). The ash, as is typical of this species now, are showing signs of Ash Dieback and will be lost in the near future, irrespective of these proposals.
- 4.8 To provide a landscape fitting the new dwelling further tree and hedgerow removal is required. A short section of hedgerow 34 (a sparse hedgerow), 36 (an established but outgrown mixed hedgerow, and 37 (another outgrown hedgerow containing snowberry). In addition, individual trees growing within the hedgerow (35, 38, 39 and 40) are proposed for removal. These are all ash trees showing both Ash Dieback and stem decay. None of these are good specimens and will be lost in the near future, irrespective of these proposals.
- 4.9 None of these trees/hedges being removed are of exceptional quality and their loss, subject to the proposed planting, does not materially detract from the local tree cover. The losses are from internal tree groups with their absence barely perceptible from the public realm. Whatever little impact their loss has is more than offset by the substantial new tree and hedgerow planting brought forward by these proposals.
- 4.10 Two short sections of hedgerow 28, the hedgerow along the boundary with the public road, are proposed for removal to create new access points. These small interruptions in the hedgerow do not materially detract from the feature and are in keeping with local landscape character where access points are commonplace to gain access to the land the hedgerow borders. A further, short break is proposed in hedgerow 25 to provide connectivity with the field beyond. This is no different to any other access necessary to connect fields.
- 4.11 A lake is proposed north of the tree belt containing trees 68 to 72. It is remote from the tree belt and can be achieved without material harm.

Impact of drainage and services

- 4.12 The proposed drainage and service routes are not shown on the proposed layout however there is ample scope to locate them outside of root protection areas and require no specialist measures for their installation.
- 4.13 If services do need to be installed within root protection areas then specialist techniques for their installation will be needed. Such specialist techniques include moling, thrust-boring, broken trench or excavation by AirSpade.
- 4.14 No other installations, including mechanical and electrical equipment, are proposed in an area that would be of detriment to trees.

5.0 New and replacement tree planting

- 5.1 The development proposals bring forward significant new tree planting to enhance the local landscape through the provision of a parkland setting to the new dwelling. The planting bolsters the retained tree belts, delivering linear woodland blocks along the boundary with the public road and along the southern boundary where it will provide a backdrop to the lake. Further specimen tree planting is proposed in the parkland around the dwelling, as well as more intimate landscape in the formal gardens. The overall result is a substantial net gain of diverse tree cover.
- 5.2 Retaining existing trees and introducing new trees ensures a resource of trees in places where residents and guests alike will enjoy multiple benefits provided by the tree stock. In so doing the tree stock will be able to withstand climate change, protecting and enhancing the resources of soil, air, water, landscape, amenity value, culture and biodiversity, and increasing the contribution that trees make to the quality of life. In that respect the proposals are in line with the very latest guidance, in terms of integrating trees with built form, contained in *Trees in the townscape: A guide for decision makers* produced by the Trees and Design Action Group and the requirement of paragraph 136 of the National Planning Policy Framework.
- 5.3 Those multiple benefits of this new tree planting, as part of the site's green infrastructure, include contribution to setting, enhancement of sustainable drainage systems, and enhancement of biodiversity. In addition, as those new trees develop, so they will further contribute to local climatic regulation and, where they stand within the sun path of proposed buildings or surfaces within the residence, they will minimise solar gain during summer months, and provide an accessible choice of shade and shelter.

6.0 Protection of trees during construction

- 6.1 To ensure the retained trees are safeguarded a tree protection plan has been prepared to show the location of protective measures. These measures need to be implemented in advance of construction and maintained until such time as soft landscape proposals require their removal.
- 6.2 The tree protection measures are focussed on the areas where construction activity will be greatest. It may be necessary to extend the protection measures subject to the temporary needs for contractor parking, material storage, welfare units etc, as and when that becomes known.
- 6.3 In order to ensure the protective and specialist measures are understood, implemented and maintained a scheme of monitoring and supervision shall be put in place.
- 6.4 A scheme of supervision/monitoring shall typically include:
- a pre-commencement meeting;
 - a site visit by an arboriculturist at no more than one month intervals;
 - a report to be prepared after each site visit and presented to the Council within 7 days of the visit.

7.0 Summary of impact assessment

- 7.1 The proposed development results in the loss of very few trees and short sections of hedgerow. The individual trees are of low quality and value due to disease and will be lost in the near future, irrespective of these proposals. The internal sections of hedgerow impacted are mainly those that are weak or outgrown. Those short sections of hedgerow lost from against the public road result in no material change to the landscape.
- 7.2 Services and utility installation can be sited remote from trees but if they do need to be located within root protection areas specialist measures can be deployed for their installation to minimise harm to retained trees.
- 7.3 Substantial new and replacement tree planting is delivered by these development proposals. This net gain of new tree cover, as part of the proposed parkland setting, provides a diverse portfolio of tree cover to ensure sustainability of green infrastructure in the future.

- 7.4 The application proposals recognise the important contribution trees make to the character and quality of the site's environment, and the role they play to help mitigate and adapt to climate change. The proposals seek to retain existing trees and integrate new trees in accordance with the requirement of local and national planning policy.

Appendix 1

Introduction to key elements of tree information

Sustainable development requires the coordination between disciplines throughout the project, accordingly the package of arboricultural information supports the design process and follows through to construction ensuring effective tree protection.

Keen Consultants break the process down to coordinate with the key elements within both the RIBA Plan of Work (2013) and 'British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations', this is set out in the table and explained below.

Figure 1 - Keen Consultants co-ordinated approach with cross references to key guidance.

Keen Consultants Tree Information	RIBA Stage	BS5837
Tree Survey	Concept	Feasibility
↓	↓	↓
Impact Assessment	Developed design	Proposals
↓	↓	↓
Method Statement	Technical design	Technical Design
↓	↓	↓
Site Monitoring	Construction	Demolition and construction

This cross referenced approach ensures trees are a material consideration and those to be retained will be safeguarded.

Tree Survey and Tree Constraints Plan

To inform the design and layout of the proposed development a tree survey has been undertaken to identify the size and quality of trees both within the site and immediately offsite. We have then used this information to prepare the Tree Constraints Plan drawing that shows the location of each tree, its size and the area around each tree that needs to be considered during the design process. Once prepared this information has been provided to the design team so that they know what constraints the trees pose.

Impact Assessment and Tree Protection Plan

During the design process the design team has consulted with the arboriculturist to ascertain if constraints may be breached, consider options emerging from the design and what spaces for new trees are needed.

Once the design was finalised an impact assessment has been prepared to accompany the planning application. The impact assessment demonstrates the proposals meet national and local planning policy and guidance. It demonstrates the benefits of the retained trees and incorporates new tree planting.

Another essential element of any application is the Tree Protection Plan.

Method Statement

This statement sets out in words how each element of work is undertaken in relation to the trees. It dictates when activities occur and the method that will be used to achieve them. It will also set out a scheme of monitoring and supervision.

Site Monitoring

Following the receipt of planning consent, it is a requirement that the installation of the protective barriers and ground protection are supervised, together with operations such as excavations or surfacing close to trees.

This varies according to the intensity of development near trees, the process is set out to ensure what is planned for in the Tree Protection Plan and method statement is delivered.

Appendix 2

Tree Survey Explanatory Notes

The survey of trees has been carried out in accordance with the criteria set out in Chapter 4 of *British Standard 5837:2012 Trees in relation to design, demolition and construction-Recommendations* (BS5837). The survey has been undertaken by the qualified and experienced arboriculturist detailed at Table 1 of this report and they recorded information relating to all those trees within the site and those immediately adjacent to the site which may be of influence to any proposals.

The results are recorded in the Schedule of Trees at Appendix 3.

Schedule of trees

Appendix 3 presents details of the individual trees, groups and hedgerows including heights, diameters at breast height, crown spread (given as a radial measurement of cardinal points from the stem), age class, comments as to the overall condition at the time of inspection, BS5837 category of quality and suitability for retention, and the root protection area information.

General observations particularly of structural and physiological condition for example the presence of any decay and physical defect and preliminary management recommendations have also been recorded where appropriate.

Details of the individual trees, groups and hedgerows

All trees were assessed for their quality and benefits within the context of proposed development in a transparent, understandable and systematic way.

Individuals

The default position is to record each tree as an individual for its unique contribution to the landscape

Groups and woodlands

Trees have been assessed as groups where it has been determined appropriate by the surveyor. The term group has been applied where trees form cohesive arboricultural features either aerodynamically, visually or culturally.

Hedges and shrub masses

We consider a hedgerow to typically comprise a line of trees or shrubs that currently is subject to, or has undergone, a pruning regime to contain its dimensions.

For the tree survey hedgerows and substantial internal or boundary hedges (including evergreen screens) have either been recorded in the Tree Schedule, including lateral spread, height and stem diameter(s), or indicated on the Tree Constraints Plan.

A tree survey in accordance with BS5837 does not assess hedgerows against *The Hedgerow Regulations 1997* or specifically from an ecological perspective, as such would be outside the scope of the British Standard assessment.

Shrub masses are collectives of woody plants, rather than trees, and are recorded where they are a significant feature of the site. They have either been recorded in the Tree Schedule or indicated on the Tree Constraints Plan.

Individual trees within groups, woodlands and hedges

An assessment of individual trees within the groups has been made where there has been a clear need to differentiate between them for example, in order to highlight significant variation between attributes including physiological or structural condition or where a potential conflict may arise.

BS5837 Categorisation

Trees have been divided into one of four categories based on Table 1 of BS5837, 'Cascade chart for tree quality assessment'. For a tree to qualify under any given category it should fall within the scope of that category's definition (see below).

Category U trees are those which would be lost in the short term for reasons connected with their physiology or structural condition. They are, for this reason not considered in the planning process on arboricultural grounds. Categories A, B & C are applied to trees that should be of material considerations in the development process. Each category also having one of three further sub-categories (i, ii, iii) which are intended to reflect arboricultural, landscape and cultural or conservation values accordingly.

Please note that the estimated remaining life expectancy figures are taken for BS5837 and relate to their categorisation. The life expectancy figures are therefore arbitrary and may vary in reality.

Category (U)

Trees that have a serious irremediable structural defect such that their early loss is expected due to collapse and includes trees that will become unviable after removal of other category U trees.

Trees that are dead or are showing signs of significant, immediate or irreversible overall decline.

Trees that are infected with pathogens of significance to the health and/ or safety of other nearby trees or are very low quality trees suppressing adjacent trees of better quality.

Certain category U trees can have existing or potential conservation value which may make it desirable to preserve.

Category (A)

Shown green on Tree Constraints Plan: Trees that are considered for retention and are of high quality with an estimated remaining life expectancy of at least 40 years and with potential to make a lasting contribution. Such trees may comprise:

Sub categories

- 1) trees that are particularly good examples of their species, especially if rare or unusual, or are essential components of groups such as formal or semi-formal arboricultural features for example the dominant and/or principal trees within an avenue.
- 2) trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.
- 3) trees, groups or woodlands of significant conservation, historical, commemorative or other value for example veteran or wood pasture.

Category (B)

Shown blue on Tree Constraints Plan: Trees that are considered for retention and are of moderate quality with an estimated remaining life expectancy of at least 20 years and with potential to make a significant contribution. Such trees may comprise:

Sub categories

- 1) trees that might be included in category A but are downgraded because of impaired condition for example the presence of significant though remediable defects, including unsympathetic past management and storm damage.
- 2) 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.
- 3) trees with material conservation or other cultural value.

Category (C)

Shown grey on Tree Constraints Plan: Trees that are considered for retention and are of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Such trees may comprise:

Sub categories

- 1) unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.
- 2) trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value or trees offering low or only temporary/transient screening benefits.
- 3) trees with no material conservation or other cultural value.

Devising BS5837 root protection areas

Default situation

The root protection area is a function of the stem diameter, it is multiplied by 12 to give a radius. For multi-stemmed trees the stems are combined to provide an effective diameter figure which is then multiplied.

Initially the root protection area should be plotted as a circle, and in many situation it remains a circle.

Influenced situation

Adjustments to the root protection area are made where pre-existing site conditions that would influence root distribution are present. Typically this will be buildings and retaining walls, lighter structures such as hard surfacing, sheds and garages generally do not have the same influence.

Ponds, rivers and watercourses will also influence root distribution as waterlogged soils are not conducive to root growth. Rainwater attenuation and ditches are likely to have a lesser impact if they are dry for significant periods.

Veteran trees

Natural England have introduced Standing Guidance that requires the allocation of buffer zones to veteran (including ancient) trees. They have prescribed that a buffer zone of 15 times the stem diameter of the tree is allocated. This will result in a buffer zone of larger diameter than the root protection area. Where veteran trees are identified during the tree survey they are allocated a Natural England buffer zone on the Tree Constraints Plan.

The Guidance is silent on what can and cannot be done within the buffer zone but it is reasonable to assume that it is prescribed to avoid material harm to the tree. It is also silent on what can and cannot be done when the land within the buffer zone is previously developed.

With this added layer of protection it is important to establish if a tree is veteran or not. The Guidance was not intended to be applied to all mature trees but to the sub-set of trees that are of great age. This is analogous with the NPPF requirement to safeguard trees that have attained an age where they are worthy of veteran or ancient status.

It is therefore important to establish a basis for defining trees as veteran as opposed to those trees that may have veteran characteristics or those trees that are mature.

Stem size is a useful guide and, in combination with size, so are characteristics of the tree. If we consider the guidance on stem size being a suitable guide to classifying trees as veteran we see:

- a) The most up to date (2013) guidance is that in ¹*Ancient and other veteran trees: further guidance on management* edited by David Lonsdale and published by The Tree Council in conjunction with The Ancient Tree Forum. Lonsdale considers that many trees may have veteran characteristics at any age however proposes, at a species level, size thresholds when a tree may be considered a veteran. A chart (see Figure 1 below) lists, species by species, the size criteria for trees reaching veteran status and then moving on to the later, ancient stage of life. Of those species listed in the chart we only need consider oak. We see that until trees attain a stem girth of around 4.6m (equivalent stem diameter of 1.46m) then an oak is only considered to be 'Locally notable'
- b) A somewhat older (1999) publication, ²*Veteran Trees: A guide to good management* edited by Helen Read and published by English Nature et al, is very similar in its definition by setting out three distinct bands for oak trees:
 - i) those with a diameter of more than 1.0m are potentially interesting
 - ii) those with a diameter of more than 1.5m are valuable in terms of conservation
 - iii) those over 2.0m in diameter are truly ancient
- c) English Nature's own ³*Development of a veteran tree site assessment protocol (Report Number 628)* of 2005 sought to give more structure to grading sites where veteran trees were present. It considered that trees over 1.0m diameter could be classed as veteran.

¹ *Ancient and other veteran trees: further guidance on management* edited by David Lonsdale and published by The Tree Council in conjunction with The Ancient Tree Forum

² *Veteran Trees: A guide to good management* edited by Helen Read and published by English Nature et al

³ *Development of a veteran tree site assessment protocol (Report Number 628)* of 2005

In summary, a tree may enter its veteran stage at 1.0m diameter but a more reliable size threshold, as held out by the latest guidance on the matter, is 1.5m diameter.

The other factor, tree characteristics, is also worth considering as veteran tree characteristics can be found on even young trees. Of course, if we count every tree with veteran tree characteristics as veteran we do a disservice to those truly veteran trees that warrant protection.

Read (1999), as set out above, considers veteran tree characteristics as:

- large girth for species
- major trunk cavities or progressive hollowing
- naturally forming water pools
- decay hollows
- physical damage to trunk
- bark loss
- large quantities of deadwood within the crown
- sap runs
- crevices in the bark, under branches or on the root plate sheltered from direct rainfall
- fungal fruiting bodies
- high number of interdependent wildlife species
- epiphytic plants
- an 'old' look
- high aesthetic interest

Lonsdale (2013) adds to this list:

- progressive narrowing of successive annual increments in the stem
- changes in crown architecture
- progressive or episodic reduction in post-mature crown size, often known as retrenchment

Lonsdale also states that "In order to qualify as a veteran, the tree should show signs of crown retrenchment and signs of decay in the trunk, branches or roots, such as exposed deadwood or fungal fruit bodies".

The English Nature Report Number 628 refers to Read (1999) for a list of veteran features but does add that in addition a tree may also:

- have a pollard form or show indications of past management
- have a cultural/historic value
- be in a prominent position in the landscape

These three criteria, when examined, are not truly indicative of a veteran tree on their own as these criteria could be applied to street trees in peri-urban locations that date from the mid-20th century - many of those are of pollard form, have cultural and historic value and a prominent position in the landscape.

In summary, it is important to consider the size of the tree and its characteristics. Just because a tree is mature does not mean it is veteran neither does the presence of veteran characteristics alone.

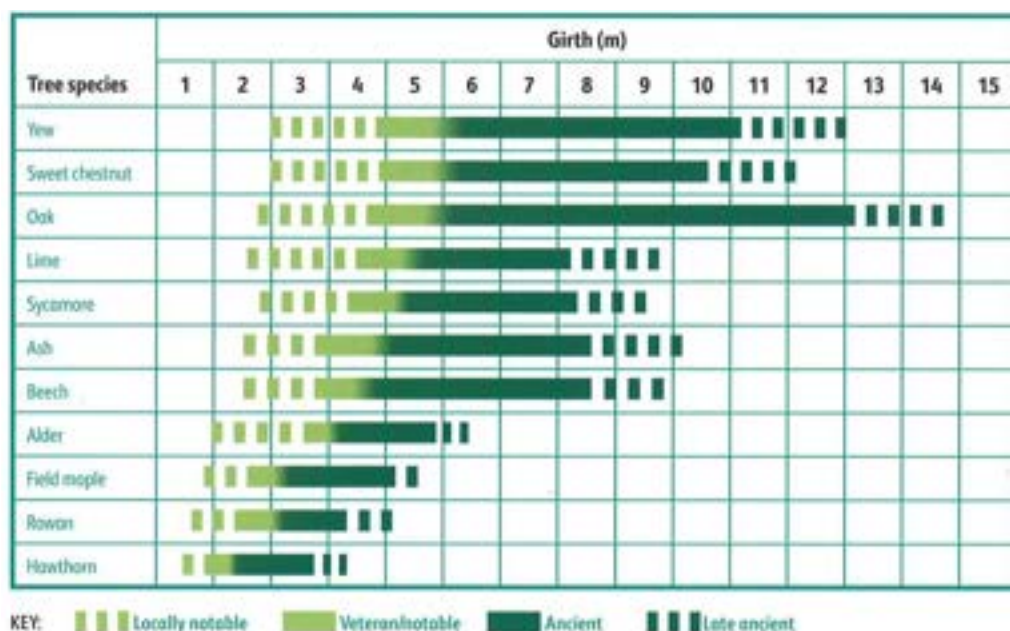


Figure 1- Chart of girth in relation to age and developmental classification of trees

Appendix 3

Schedule of Trees

*for land at
Little Tew
Chipping Norton*

Key to Tree Schedule

Column Heading	Explanation
Tree No.	Unique number corresponding with number on plan
Species	English names
Ht (m)	Height in metres
Branch Spread	Crown radius in metres to cardinal points of the compass
Stem diameters (cm)	All measurements conform to Annex C of BS 5837:2012 Single stem - Stem diameter in centimetres measured at 1.5m above ground level. Multi-stemmed tree with 2 to 5 stems – Diameter of each stem Multi-stemmed tree with more than 5 stems – Average stem diameter and number of stems
Height of crown clearance	Height in metres between the ground and underside of canopy
Height of first major branch and direction of growth	Height from ground level to base of first major branch and the approximate direction of growth
Abbreviations as suffix to a dimension	<i>Suffix 'e' denotes an estimated dimension.</i> <i>Suffix 'av' denotes an average dimension</i>
Age class	Age Class definitions: Y = Young S = Semi-mature E = Early mature M = Mature O = Over mature
Category grading (see Appendix A2 for detailed explanation) and Estimated remaining contribution (yrs)	Summary of BS 5837: 2012 categorisation: 1. Trees that do not warrant consideration for retention: U = those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management. 2. Trees to be considered for retention: A1, 2 or 3 = trees of high quality and value (substantial contribution >40 yrs) B1, 2 or 3 = trees of moderate quality and value (significant Contribution >20 yrs) C1, 2 or 3 = trees of low quality and value (but adequate, ie >10 yrs or young trees – until new planting can be established)
Estimated remaining contribution	Useful estimated remaining contribution of the tree or tree group
Condition	Brief description including physiological and structural defects
Preliminary management recommendations	Describes current arboricultural requirement for the tree in its current context and should be undertaken as soon as reasonably practicable.
Root protection radius	Radius of minimum root protection area in metres calculated from section 4.6 and Annex D of BS5837:2012
Root protection area	Total area of minimum root protection area extrapolated from root protection radius

Survey of trees on land at Little Tew, Chipping Norton

Tree No.	Species	Ht (m)	Branch Spread (m)				Stem diameters (cm)							Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Tree Works to BS3998	Root protection radius (m)	Root protection area sq.m	
							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia										No. stems
1	Mixed broadleaf hedge	10av	4av				15av								0	-	E	B2	>20	Established but outgrown hedge alongside bridleway. Species include ash, hawthorn, blackthorn and field maple.		1.80	10
2	Mixed broadleaf hedge	7av	2av				10av								0	-	E	B2	>20	Established but outgrown hedge alongside bridleway. Predominantly hawthorn and blackthorn with occasional ash sapling.		1.20	5
3	Group of ash	15av	6av				55av								5	5S	E	C2	>10	Larger components of hedgerow but all showing signs of Ash Dieback. Some with decay pockets associated with past branch loss.		6.60	137
4	Ash	15	7	7	7	7	60e								3	3W	E	C1	>10	Larger component of hedgerow but showing signs of Ash Dieback. Surrounded in dense bramble.		7.20	163
5	Mixed broadleaf hedge	5av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow at field margin. Predominantly hawthorn with some blackthorn, field maple and ash saplings.	Remove section as shown.	1.20	5
6	Group of ash	12av	6av				30av								2	2W	S	C2	>10	Closely spaced group of trees within hedgerow. Showing signs of Ash Dieback.		3.60	41
7	English oak	19	11	14	15	10	140e								4	4E	M	A3	>40	Visually significant tree growing within hedgerow. Numerous cavities and splits associated with past branch loss. Has characteristics of veteran tree.		15.00	707
8	Ash	16	9	8	7	9	75e								5	5W	E	C1	>10	Decay at past points of branch loss. Showing signs of Ash Dieback.		9.00	255
9	Group of ash	13av	7av				40av								2	2E	S	C2	>10	Larger components of hedgerow but showing signs of Ash Dieback.		4.80	72
10	Ash	16	9	8	8	8	85e								5	5W	E	C2	>10	Decay at past points of branch loss. Showing signs of Ash Dieback.		10.20	327
11	Group of ash	13av	7av				40av								2	2E	S	C2	>10	Larger components of hedgerow but showing signs of Ash Dieback.		4.80	72

Survey of trees on land at Little Tew, Chipping Norton

Tree No.	Species	Ht (m)	Branch Spread (m)				Stem diameters (cm)								Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Tree Works to BS3998	Root protection radius (m)	Root protection area sq.m
							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
12	Ash	15	9	7	8	8							20	7	2	2S	S	C2	>10	Multi-stemmed growing from common stump. Showing signs of Ash Dieback.	Remove.	6.35	127
13	Ash	17	7	5	9	6	75e								3	7NW	E	C1	>10	Larger example growing within hedgerow. Lower stem covered in ivy. Extensive decay in upper stem as a result of <i>Inonotus hispidus</i> . Showing signs of Ash Dieback.	Remove.	9.00	255
14	Mixed broadleaf hedge	10av	5av				25av								0	-	E	B2	>20	Established but outgrown hedgerow at edge of field. Predominantly hawthorn with occasional blackthorn, field maple and taller examples of ash. Ash showing signs of Ash Dieback.	Remove section as shown.	3.00	28
15	Ash	13	7	7	8	6	54								3	3S	E	C2	>10	Larger component of hedgerow. Showing signs of Ash Dieback.	Remove.	6.48	132
16	Ash	18	7	8	8	8	75e								5	5W	E	C2	>10	Larger component of hedgerow . Lower stem smothered in ivy. Showing signs of Ash Dieback.		9.00	255
17	Ash	16	8	9	7	7	80e								3	3NW	E	C2	>10	Larger component of hedgerow but advanced signs of Ash Dieback. Main stem and crown densely smothered in ivy.		9.60	290
18	Ash	18	9	9	10	10	80e								2	5E	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Showing signs of Ash Dieback.		9.60	290
19	Hawthorn hedge	3av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow at edge of field. Appears to have previously been managed at circa 1 metre in height. Contains occasional elder and blackthorn.		1.20	5
20	Ash	13	8	7	6	7	80e								3	3S	E	C2	>10	Larger component of hedgerow. Advanced signs of Ash Dieback. Main stem covered in dead ivy. Appears to be some decay in lower stem.		9.60	290
21	Ash	16	9	8	10	9	95e								0	-	E	C2	>10	Larger component of hedgerow. Showing signs of advanced Ash Dieback. Main stem densely smothered in ivy.		11.40	408

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							Single Stem	2-5 stems					More than 5 stems											
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems										
22	Ash	12	7	7	7	6	70e								3	3S	E	C2	>10	Larger component of hedgerow. Extensive crown dieback. Main stem covered in ivy. Showing signs of Ash Dieback.		8.40	222	
23	Mixed broadleaf hedge	3av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow along field margin. Predominantly blackthorn with occasional hawthorn and hazel.		1.20	5	
24	Hawthorn hedge	3av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow at field margin. Contains occasional blackthorn, elder and field maple.		1.20	5	
25	Hawthorn hedge	2av	1av				10av								0	-	E	B2	>20	Established but outgrown hedgerow along field margin. Smothered in bramble.	Remove section as shown.	1.20	5	
26	Ash	14	7	7	7	8	65e								4	4E	E	C2	>10	Larger component of hedgerow. Main stem smothered in ivy. Showing early signs of Ash Dieback.		7.80	191	
27	Sycamore	9	3	3	3	2								10	7	1	1S	Y	C1	>10	Protruding from hedgerow.		3.17	32
28	Mixed broadleaf hedge	3av	2av				10av									0	-	E	B2	>20	Established hedgerow growing alongside road. Predominantly hawthorn with some blackthorn, elder and elm. Most elms are dead, or dying, due to Dutch Elm Disease.	Remove section as shown.	1.20	5
29	English oak	10	3	3	3	3	27								3	3S	Y	C1	>10	Small tree growing on road verge.		3.24	33	
30	Walnut	10	4	4	4	3	26								3	3SW	Y	C1	>10	Small tree growing in verge.		3.12	31	
31	English oak	11	5	5	3	5	31								3	3NW	Y	C1	>10	Established but misshapen tree growing in adjoining road. Has been pruned to provide clearance from overhead wires.		3.72	43	
32	Group of ash	13av	6av				25av								2	2N	S	C2	>10	Cluster of tightly spaced stems growing along hedgeline. Some stems covered in ivy. Showing early signs of Ash Dieback.		3.00	28	
33	English oak	9	4	4	3	3	23								3	3S	Y	C1	>10	Small tree growing in verge alongside road.		2.76	24	
34	Hawthorn hedge	2av	1av				10av									0	-	E	C2	>10	Established but sparse hedgerow at field margin. Some sections dominated in ivy.	Remove section as shown.	1.20	5

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Tree No.	Species	Ht (m)	Branch Spread (m)				Stem diameters (cm)								Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Tree Works to BS3998	Root protection radius (m)	Root protection area sq.m
							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
35	Ash	13	7	6	7	6		30e	30e	30e					2	2N	S	C2	>10	Larger component of hedgerow. All stems covered in ivy. Showing early signs of Ash Dieback.	Remove.	6.24	122
36	Mixed broadleaf hedge	6av	3av				15av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Predominantly blackthorn with some hawthorn, elder and occasional ash sapling.	Remove.	1.80	10
37	Mixed broadleaf hedge	2av	1av				10av								0	-	E	B2	>20	Established hedgerow between fields. Contains a mixture of snowberry, blackthorn and hawthorn.	Remove.	1.20	5
38	Ash	13	5	7	7	5							15	7	3	3N	S	C2	>10	Multi-stemmed form. Growing within hedge. Most stems covered in ivy. Showing signs of Ash Dieback.	Remove.	4.76	71
39	Ash	12	2	2	4	4		15e	15e	15e					3	3N	S	C2	>10	Multi-stemmed form. Growing within hedge. Most stems covered in ivy. Showing signs of Ash Dieback.	Remove.	3.12	31
40	Ash	12	5	6	7	6	60e								3	3SW	E	C2	>10	Larger component of hedgerow. Showing advanced signs of Ash Dieback. Some decay in upper stems associated with <i>Inonotus hispidus</i> .	Remove.	7.20	163
41	Ash	16	8	10	8	7	70e								4	4W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Showing early signs of Ash Dieback.		8.40	222
42	Ash	11	4	6	7	5							15	10	3	3W	S	C2	>10	Multi-stemmed form having previously been managed as part of the hedge. Showing early signs of Ash Dieback.		5.69	102
43	Hawthorn hedge	5av	2av				15av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Predominantly hawthorn but does contain occasional blackthorn and ash sapling.		1.80	10
44	Ash	16	6	6	5	7	60e								2	5W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Showing early signs of Ash Dieback.		7.20	163

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Tree No.	Species	Ht (m)	Branch Spread (m)				Stem diameters (cm)								Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Tree Works to BS3998	Root protection radius (m)	Root protection area sq.m
							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
45	Ash	17	7	8	8	7	65e							1	5W	E	C2	>10	Ivy covered main stem. Larger component of hedgerow. Showing signs of Ash Dieback.		7.80	191	
46	Ash	16	5	7	8	7	50e							2	3W	E	C2	>10	Ivy covered main stem. Larger component of hedgerow. Showing signs of Ash Dieback.		6.00	113	
47	Ash	9	3	4	4	3							10	16	2	2W	S	C2	>10	Multi-stemmed form having previously been managed as part of the hedge. Showing signs of Ash Dieback.		4.80	72
48	Ash	13	7	7	6	4	40e							5	5N	E	C2	>10	Larger component of hedgerow. Showing early signs of Ash Dieback.		4.80	72	
49	Ash	16	7	8	9	7	95e							5	5SW	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback.		11.40	408	
50	Ash	17	6	7	8	6	80e							4	4W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback.		9.60	290	
51	Ash	16	8	8	7	6	70e							4	4W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback. Ivy clad stem.		8.40	222	

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Tree No.	Species	Ht (m)	Branch Spread (m)				Stem diameters (cm)								Height of crown clearance (m)	Height of first branch (m) and direction (compass point)	Age class	Category grading	Estimated remaining contribution (yrs)	Condition Physiological / Structural	Tree Works to BS3998	Root protection radius (m)	Root protection area sq.m
							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
52	Ash	15	5	5	4	4	70e								3	3W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback. Ivy clad stem.		8.40	222
53	Ash	18	8	8	9	9	95e								4	4W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback. Ivy clad stem.		11.40	408
54	Ash	17	6	7	9	8	80e								5	5N	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Some large decay pockets associated with past branch loss. Signs of the stem decay fungus <i>Inonotus hispidus</i> . What little fine branching it has shows signs of Ash Dieback. Ivy clad stem.		9.60	290
55	Mixed broadleaf hedge	11av	5av				15av								0	-	E	B2	>20	Established but outgrown hedgerow along bridleway. Contains a mixture of taller ash, some hawthorn and blackthorn. Ash with Ash Dieback.		1.80	10
56	English oak	9	3	3	2	2	21								3	3N	Y	C1	>10	Small tree growing in verge alongside road.		2.52	20
57	Ash	13	6	6	7	6		40e	25e						3	3N	S	C2	>10	Twin-stemmed from just above ground level. Main stem covered in ivy. Growing within hedgeline. Showing early signs of Ash Dieback.		5.66	101
58	English oak	9	3	3	3	3	22								3	3N	Y	C1	>10	Small tree growing in verge alongside road.		2.64	22

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							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
59	English oak	8	2	2	1	2	17								3	3W	Y	C2	>10	Small tree growing in verge alongside road.		2.04	13
60	Ash	16	6	6	7	7	65e								3	3W	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Extensive crown dieback. Showing signs of Ash Dieback.		7.80	191
61	Ash	14	7	7	7	7	65e								2	2E	E	C2	>10	Larger component of hedgerow. Main stem covered in ivy. Extensive crown dieback. Showing signs of Ash Dieback.		7.80	191
62	Pair of Lime	17av	7av				85av								2	2N	E	A2	>40	Forms part of a prominent row of the same species of similar dimensions that extends further south along the lane.		10.20	327
63	Lime	9	3	3	3	3							10	10	0	-	S	C1	>10	Multi-stemmed tree growing in verge.		3.79	45
64	Lime	14	7	7	6	6	60e								2	2E	E	A1	>40	Prominent tree growing within verge. Lower stem partially smothered in ivy.		7.20	163
65	English oak	6	3	3	3	3	28								2	2N	S	B1	>20	Established tree growing within verge.		3.36	35
66	Group of mixed broadleaves	14av	7av				50av								0	-	E	B2	>20	Cluster of trees growing at corner of field. Species include ash, crack willow, field maple and horse chestnut. Ash showing signs of Ash Dieback.		6.00	113
67	Mixed broadleaf tree belt	15av	6av				35av								0	-	E	B2	>20	Established belt of trees along edge of field. Predominantly ash that are showing signs of Ash Dieback. Understorey of hawthorn, field maple and blackthorn.		4.20	55
68	Row of mixed broadleaves	15av	7av				50av								0	-	E	B2	>20	Established belt of trees along edge of field. Predominantly ash that are showing signs of Ash Dieback. Understorey of hawthorn, field maple and blackthorn.		6.00	113
69	English oak	17	11	8	10	9	82								4	4S	E	B1	>20	Larger component of tree line. Some broken branches and deadwood within crown.		9.84	304
70	Mixed broadleaf hedgerow	6av	2av				15av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Predominantly hawthorn with some blackthorn.		1.80	10

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							Single Stem	2-5 stems					More than 5 stems										
			N	E	S	W		Stem 1	Stem 2	Stem 3	Stem 4	Stem 5	Mean dia	No. stems									
71	Ash	11	4	3	4	3	25e								3	3S	S	C2	>10	Larger component of hedgerow. Showing early signs of Ash Dieback.		3.00	28
72	Ash	16	9	10	10	10		65e	65e						2	4S	M	U	<10	Partial failure of lower stem. Advanced Ash Dieback. Unsited to long term retention.		11.03	382
73	Group of ash	15av	9av				70av								3	3SE	M	C2	>10	Larger trees within hedge line. Showing signs of advance Ash Dieback.		8.40	222
74	Ash	10	3	5	6	3	80e								3	3N	E	U	<10	Advanced Ash Dieback.		9.60	290
75	Mixed broadleaf hedgerow	3av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Predominantly hawthorn with some blackthorn.		1.20	5
76	Ash	11	5	3	3	3	35e								3	3N	S	C2	>10	Larger component within section of hedgerow. Advanced Ash Dieback.		4.20	55
77	Mixed broadleaf hedgerow	11av	3av				30av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Taller component is primarily ash that are all showing signs of Ash Dieback. At lower level hedgerow consists primarily of hawthorn and blackthorn.		3.60	41
78	Mixed broadleaf hedgerow	3av	2av				10av								0	-	E	B2	>20	Established but outgrown hedgerow between fields. Predominantly hawthorn with some blackthorn.		1.20	5