

# **Pre-Development Arboricultural Impact Assessment**

Proposed Africa Hoof House, Knowsley Safari Park

**Site:**

Knowsley Safari Park, Prescot, L34 4AN

**Client:**

Carter Jonas LLP

**Date:**

22 August 2023

## Summary

Planning consent is being sought for the construction of an Africa Hoof House within the grounds of Knowsley Safari Park. Trees are found adjacent to the proposed development which could be influenced by it if not fully considered.

A tree survey and this report is compiled in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*

Details for eight individual and groups of trees were recorded.

A Tree Constraints Plan included in Appendix A shows the current site and its tree stock.

A Tree Impact Plan, also included in Appendix A shows the current site trees and area of proposed development.

- No trees need to be removed in order to enable the development
- Some birch trees may need to be pruned to allow post development access, but this would likely need to be undertaken whether development goes ahead or not
- Trees could be adequately protected with temporary tree protective fencing through the development. A Tree Protection Plan can be produced as a planning condition if required

Arboricultural Method Statement 'heads of terms' are included in section 8 which would be detailed further if required to inform the client and LPA through the discharge of planning conditions. Appendix D provides extracts from British Standard 5837 informing of the timing of tree related information in the planning process.

It is considered the development can go ahead following recommendations in British Standard 5837 without significant detriment to retained trees.

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## 1. Introduction

### 1.1 Purpose of the Report

Planning consent is being sought for the construction of an Africa Hoof House within the grounds of Knowsley Safari Park. Trees are found adjacent to the proposed development which could be influenced by it if not fully considered.

Carter Jonas LLP provided Aire Valley Tree Consultancy Ltd with a plan showing on-site trees and highlighting the areas of the site which were proposed for development.

Carter Jonas LLP instructed Aire Valley Tree Consultancy Ltd to undertake a pre-development tree survey to British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

This report will include the following information:

1. Results from a tree survey, undertaken in accordance with *British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations*
2. An appraisal of the trees located within the influencing distances and their possible constraints to the development
3. An Arboricultural Impact Assessment of the development and recommendations for tree retention, pruning and removal
4. Make recommendations to ensure the health and longevity of retained trees, informing client, contractor and planners of the requirements to protect retained trees

### 1.2 Terms of Reference

Instructions were given by Carter Jonas LLP to visit the site and prepare the findings in a report. The report should be read in conjunction with the Tree Constraints & Tree Impact Plan located in Appendix A.

### 1.3 Method of Inspection

The inspection of the trees was undertaken at ground level using visual assessment (VTA) of the trees canopy, stem and basal area, based on methodology devised by Mattheck (1998). No diagnosis tools were used in the survey. The survey is compiled in accordance with British Standard 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* (hereafter BS5837). Root Protection Areas (RPAs) are based upon equations taken from section 4.6 of BS5837.

### 1.4 Qualifications and Experience

This report is based on the author's site observations and the provided information. Conclusions have been made in light of his experience and qualifications. A list of the authors experience and qualifications in arboriculture are detailed in Appendix B. The client may choose to accept or disregard the recommendations made in this report, or seek additional advice.

### 1.5 Trees Subject to Statutory Controls

Before authorising any works checks with the Local Planning Authority (LPA) should be completed. Statutory permission may be required before any work can take place. It is a criminal offence to cut down, top, lop, uproot, wilfully damage or destroy any tree covered by a Tree Preservation Order, within a Conservation Area or subject to planning conditions unless the LPA has specifically permitted the work. Roots have as much protection as branches.

## **2.0 Caveats and Limitations**

### **2.1 Scope of Survey & Report**

This report is concerned only with trees in relation to construction. This report makes no attempt to provide a full health and safety inspection of the trees surveyed. It should not be seen as an alternative for a tree hazard assessment which is specific to minimising the risk and liability associated with trees. Potentially/obviously hazardous trees will be highlighted and appropriate recommendations made only where seen and when urgent action is required in the interests of public safety.

Any observations made with regards to the condition of built structures are from a layperson's view. No assessment of the potential influence of trees, upon buildings or other structures resulting from the effects of trees upon shrinkable load-bearing soils has been made.

### **2.2 Change in Weather Conditions**

The content of this report may become invalidated if a change of circumstance affecting the trees arises as a result of unusual weather conditions. Particularly, but not limited to extreme storms and high winds.

### **2.3 Change of Soil Conditions**

Structural or chemical soil disruption around the trees may invalidate the findings in this report, especially where there is significant damage to the rooting area of the trees not following recommendations in BS5837 or National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees).

### **2.4 Investigative Method Limitations and Extent of Investigation**

The trees in question were surveyed using non-invasive methods. Recommendations regarding internal cavities and/or internal decay cannot be made from this report without further inspection. Chemical analysis of the soil was not undertaken. Comments made upon the structure of the tree are based upon inspection from ground level.

### **2.5 Force Majeure**

The contents of this report may become invalidated by any 'Force Majeure' such as significant natural or man-made disasters out of the control of any specific party.

### **2.6 Report Manipulation**

The report is issued for the purposes of the instructing client in the form it is given and therefore no liability is accepted to any other party where reproduction, manipulation or reliance upon any incorrect representation of this report has been undertaken.

### 3.0 Survey Details & Brief Site Description

#### 3.1 Survey Details:

- A tree survey took place on 28 July 2023
- On the day of inspection, the weather conditions were dry, with no visibility constraints
- Horizontal and vertical measurements were taken using a laser rangefinder. Estimations were made where access could not be gained, or vegetation prevented accurate recordings
- Tree locations were plotted on the provided topographical survey. Tree T5 however was plotted on site using off-set measurements. I am not a land surveyor but consider its locations is accurate enough for the purpose of this report

#### 3.2 Tree Observations & Categorisation

Trees were visually assessed and all relevant information recorded on site. Trees were graded on their quality and remaining life expectancy. Section 4.5.2 of BS 5837 states *'The purpose of the tree categorisation method, which should be applied by an arboriculturist, 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'*.

There are four retention category's, U, A, B and C, with sub category's 1, 2 & 3 to reflect arboricultural, landscape or cultural values respectively. The category colours as given below are represented on all maps and plans to aid removal/retention and site design.

- **Category U – Trees in such poor** condition that they cannot realistically be retained in the context of the current land use for greater than 10 years.
- **Category A – Trees of high quality** with an estimated life expectancy of at least 40 years.
- **Category B – Trees of moderate** quality with an estimated life expectancy of at least 20 years.
- **Category C – Trees of low** quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter of less than 150mm.

Category U trees are those that should be removed in the short term and should not be considered further in the planning process unless there is ecological/habitat value. All other category trees are material considerations in the planning process.

#### 3.3 Identification and Location of the Trees

The report should be read in conjunction with the Tree Constraints & Impact Plan located in Appendix A.

#### 3.4 Site Use and Description

The site is a roughly triangular plot wider to its south and tapering to the north west. An existing grass/grazing area with trees mostly as boundary or near boundary features. Site is fenced with access gates to the south west, south east and north west. Old farm buildings are found off-site to the south and further grazing to all other sides.

#### 3.5 Topography

The site is reasonably flat, with a gentle raise in slope to the south east.

## 4.0 Tree Appraisal

### 4.1 Number of Trees, Age Mix & Species Diversity

- Details were recorded for eight individual trees and groups
- Most trees were early mature or mature in age
- Species included Sycamore, Hornbeam, Alder, Birch and Oak

### 4.2 Tree Categorisation

The breakdown of quantities for each category of tree recorded is shown below in Table 1

**Table 1- Tree retention categories**

| Retention Category | Description                | Quantity | %    |
|--------------------|----------------------------|----------|------|
| A                  | High quality and value     | 2        | 25 % |
| B                  | Moderate quality and value | 2        | 25 % |
| C                  | Low quality and value      | 2        | 25 % |
| U                  | Unsuitable for retention   | 2        | 25 % |

### 4.3 Site Photographs

|                                                                                     |                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| T1 Sycamore to left<br>T2 Standing dead stem to right                               | T4, T5 & T6 Alder & Ash                                                              |
|  |  |

| G7 Birch                                                                          | T8 Oak                                                                             |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

## 5.0 Tree Constraints

### 5.1 Above Ground Constraints – Tree Trunk and Canopy

The trees current canopy spread is marked on plans to aid site design. Consideration needs to be made to the following:

- Mature height and spread
- Species characteristics such as evergreen or deciduous, honeydew (sap) drip, fruit fall
- Shade potential
- Potential incompatibilities between layout and trees proposed for retention
- Working/access space needed for construction phase
- Protection of tree canopies from machinery impact or scaffold clearance
- Infrastructure requirements- easements, lighting, solar collectors, CCTV

### 5.2 Below Ground Constraints – Root Protection Area

BS 5837 states a '*root protection area (RPA) is a 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*'.

For single stems the RPA is calculated as an area equivalent to a circle with a radius 12 times the stem diameter. The RPA is plotted on plans as a circle, but where pre-existing site conditions are considered to have altered the rooting area a polygon will be produced.

The default position is that proposed structures should be located outside the RPA's of retained trees. If operations are proposed within the RPA, the arboriculturist should:

- Demonstrate that the tree can remain viable and that the area lost to encroachment can be compensated for elsewhere, contiguous with its RPA
- Propose a series of mitigation measures to improve the soil environment that is used by the tree for growth

If utility operations within the RPA are proposed consideration should be given to NJUG4 (National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees)).

### 5.3 Tree Impact Plan

A plan accompanying this report (found in Appendix A) has highlighted the trees retention category, canopy extent and their current below ground constraints (RPA) superimposed upon the proposed site design. This is used to highlight any possible conflicts/impacts between tree constraints and site design.

## 6.0 Arboricultural Impact Assessment

### 6.1 Development Proposal

The proposal is the construction of an African Hoof House to provide animal accommodation during certain times of the year.

### 6.2 Arboricultural Impact of the Development

Table 2- Arboricultural Impact of the Development

| Impact / work recommended |                                                                                     | Retention Category |   |   |   |
|---------------------------|-------------------------------------------------------------------------------------|--------------------|---|---|---|
|                           |                                                                                     | A                  | B | C | U |
| 1                         | Trees, groups to be removed to enable development                                   | -                  | - | - | - |
| 2                         | Trees, groups recommended for pruning for site access or post development clearance | G7                 | - | - | - |

### 6.3 Above Ground Tree Constraints – Tree Trunk and Canopy

Table 2, above highlights the arboricultural impact of the proposed development

- No trees need to be removed in order to enable the development
- Some trees in G7 (Birch shelterbelt) may need to be pruned either side on an existing gate on the north western boundary. This gate/access is historic and these trees would be pruned cyclically whether development goes ahead or not
- Trees in G7 have the potential to grow in height and spread. The canopy spread increase however is unlikely to be significant whereby any cyclical pruning would be detrimental to the trees health or longevity
- As the scheme is non 'human' residential no shade plans have been produced, although it would appear that the proposed will be in full sun all day
- Leaf and seed fall has the potential to accumulate on the proposed but the type of building proposed can easily be cleaned and maintained as part of normal maintenance

### 6.4 Below Ground Tree Constraints – Root Protection Areas (RPA's)

- No trees need to be removed in order to enable the development through significant or total loss of RPA
- The proposed is outside/and can be constructed outside the trees RPA's
- It is assumed water and electric supplies will be routed either from the buildings to the south east or those to the north west. Either can be routed outside the trees RPA's or through those of Birch G7 if appropriately considered

### 6.5 Construction Access & Storage of Materials

Construction plant and machinery can access the site from the current or proposed new access points to the south west, north west, north east and south east. The existing access points have seen decades of vehicle use, the RPA to the west/south west of Oak T8 is hardcore surfaced and historic, used without any apparent detriment to it.

There is ample storage space to the south of the site or outside it is large paddock areas.

As such no planned plant and machinery movements will enter the RPA's of retained trees. However, temporary tree protective fencing should be installed to prevent any unplanned incursion into the RPA's of retained trees.

## 6.6 Impact on Amenity

The site is private and cannot be seen from any general public viewpoint so there will be no impact on the amenity of the area.

## 6.7 Trees Protection Status

No check has been made with the local planning authority at this time.

## 6.8 Indirect Damage Potential

Section 4.3 of BS 5837 states that a soil assessment should be undertaken by a competent person to determine 'shrinkability' or volume change. Aire Valley Tree Consultancy Ltd are not a soil scientists and therefore recommend a specialist in this field is consulted before any foundation design stage if required.

## 6.9 Tree Protection – Temporary Fence

Retained trees will have to be protected from direct damage by machinery impact or storage of materials and compaction of rooting areas. Robust fences will have to be installed prior to any other onsite works. The timing and method can be found in section 7 below.

## 6.10 Conclusions

- Details were recorded for eight individual trees and groups
- No trees require removal to implement the development
- Trees will require protection by the installation of tree protective fencing. Service routes will need to be located outside or with arboricultural consideration on the periphery of trees RPA's. Both issues can be agreed as part of an Arboricultural Method Statement/Tree protection Plan, to be produced as a planning condition – see section 7 below
- It is considered the development can go ahead following recommendations in British Standard 5837 without significant detriment to retained trees

## 7.0 Recommendations

### 7.1 Project Arboriculturist

BS5837 recommends the appointment of a Project Arboriculturist to ensure that on and off-site trees are fully considered during the development process. Aire Valley Tree Consultancy Ltd can be instructed if required. Any tree related enquiry, no matter how minor should be directed to the chosen Project Arboriculturist.

### 7.2 Tree/Ground Protection – Generic Precautions

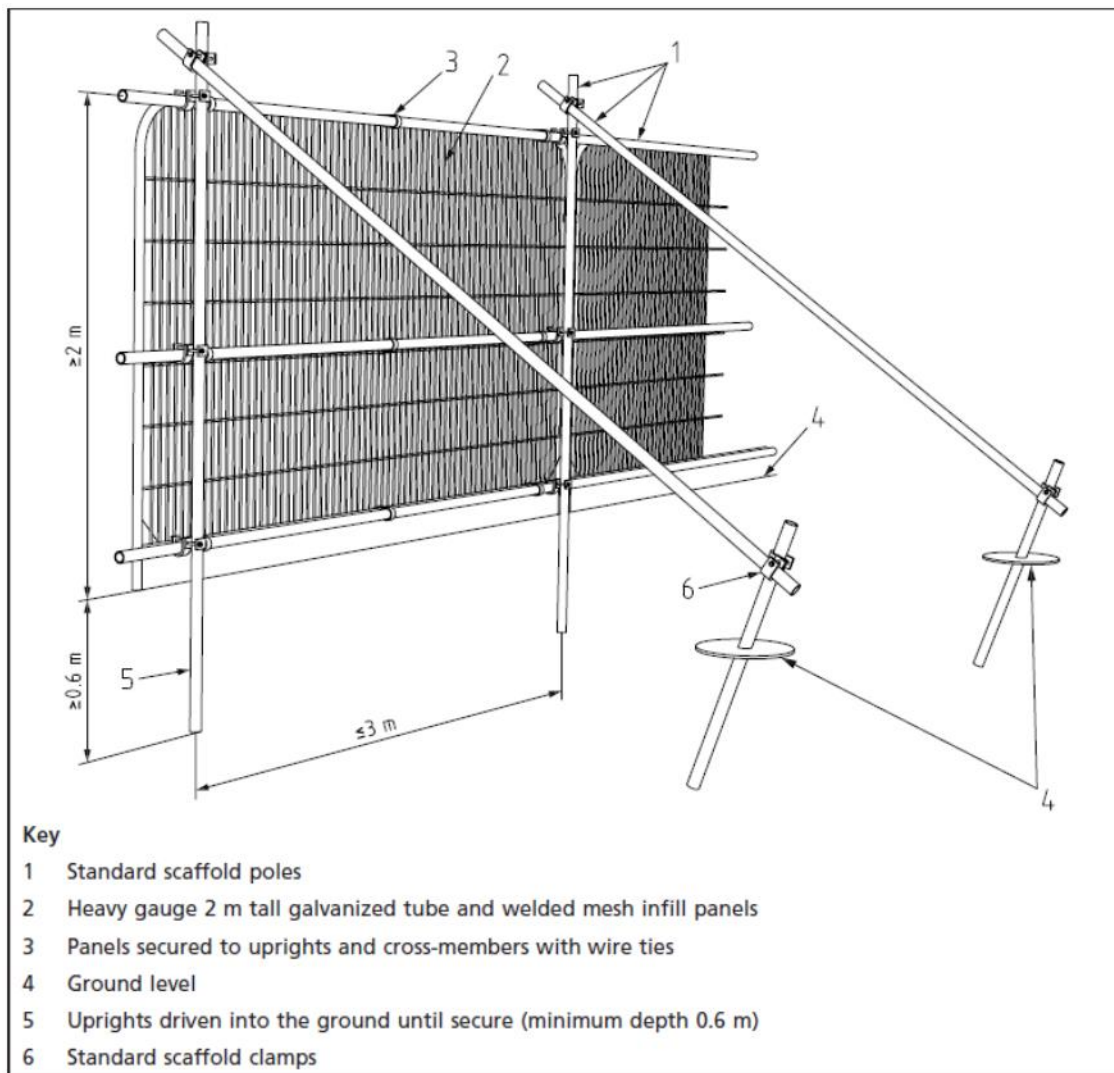
These general precautions **must** be followed within the RPAs of **retained** trees during the construction phase:

- No soil disturbance, including compaction
- No change in the soil level, by stripping or filling unless stated below
- No excavation, without prior discussion with the Project Arboriculturist and/or the Local Planning Authority
- No redirection of surface water runoff into or out of the RPA
- No temporary buildings, sheds, or offices, without prior discussion with the Project Arboriculturist and/or the Local Planning Authority
- No storage of materials or fuel
- No dumping of materials, whether into a skip or onto the ground
- No fires within 10m of the RPA or tree canopy, whichever is greater
- No refuelling of mechanical equipment
- No storage or mixing of cement
- No washing of cement mixers within or uphill of the RPA
- Follow the guidance contained within the National Joint Utilities Group Volume 4 (Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2, 2007); [www.njug.org.uk](http://www.njug.org.uk) ) when installing underground services inside or other excavation in the RPA of a tree.

### 7.3 Temporary Tree Protective Fencing

Protective fencing should be erected as shown on a Tree Protection Plan forming a 'Construction Exclusion Zone'. This can be produced to meet a planning condition following a finalised and approved site design.

Fencing will prevent construction activity that could cause damage to retained trees or their rooting areas. No plant, equipment or vehicles should operate within the protective fencing without suitable ground protection and agreement from the Project Arboriculturist or Local Planning Authority. The fencing must be robust enough to withstand impacts from machinery and plant equipment operating in the area. Paragraph 6.2.2 and Fig. 2 & 3 of BS5837 details the appropriate fencing specification. The appropriate fencing is shown below.



The protective fencing should be erected prior to any other development activity taking place and remain in place for the duration of the construction phase.

The picture below shows the required fencing specification used elsewhere as an example



This sign (below) must be laminated and securely fixed to the outside/site side of the Tree Protective Fence line every 6m. Replace when weathered or lost. Available as a pdf on request



**PROTECTIVE FENCING. THIS  
FENCING MUST BE  
MAINTAINED IN ACCORDANCE  
WITH THE APPROVED PLANS  
AND DRAWINGS FOR THIS  
DEVELOPMENT.**



**TREE PROTECTION AREA  
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)  
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY  
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A  
TREE PRESERVATION ORDER.  
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY  
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE  
WITH THE WRITTEN PERMISSION OF THE LOCAL  
PLANNING AUTHORITY**

## 8.0 Arboricultural Method Statement 'Heads of Terms'

Section 6.1 and Table B1 of BS 5837 state the need for Arboricultural Method Statements.

Unless the proposed development is especially complex the need for a detailed Method Statement can be left to meet reserved matters/planning conditions.

I foresee the 'heads of terms' which would be included in a Method Statement to meet reserved matters or planning condition would be:-

- Phased and auditable system of site procedures, monitoring and responsibility
- Utility route agreed and any arboricultural significance to agree methodology/supervision
- Dimensioned tree protection plan with protective fence location detailed
- Project Arboriculturist monitored installation of tree protection
- Removal of tree protection
- Tree appraisal and recommendations

This list is not exhaustive and will obviously reflect the needs of any consent.

## Appendix A: Tree Constraints & Tree Impact Plan

Tree Constraints Plan showing current site, tree locations, canopy spread, root protection areas and retention category

Tree Impact Plan showing proposed development, tree locations, canopy spread, root protection areas and retention category

## **Appendix B: Authors Qualifications & Experience – Ross Cannon**

### **1. Qualifications**

In 2001 I was awarded a National Diploma in Urban Forestry.

In 2006 I was awarded the Arboricultural Associations Technicians Certificate.

In 2011 I became a Technical Member of the Arboricultural Association.

### **2. Experience**

I have been working and studying within the field of arboriculture since 1999, first as a tree surgeon and latterly in an advisory capacity. Between 2001 and November 2007 I was a tree surgeon for a large local authority. Between November 2007, and December 2008 I worked as a Tree Surveyor and then Arboricultural Officer for Leeds City Council. This involved various large-scale tree condition and management surveys and carrying out detailed tree inspections. Between December 2008 and December 2011 I was a Trees & Woodlands Officer for the Yorkshire Dales National Park Authority administering tree preservation orders, trees in conservation areas and providing advice to the development control section on matters relating to trees in relation to proposed development. From December 2011 to present I have been undertaking independent tree consultancy services for architects, developers, local authorities, parish councils and private landowners.

### **3. Continuing professional development**

I attend courses, conferences, seminars and workshops run by land management, forestry and arboricultural organisations, colleges and universities.

All information given in this report is based upon the experience of the author and backed up with relevant arboricultural knowledge available at the date of inspection

## Appendix C: Tree Details

**Tree ID:** Each tree/group has been given a unique number, which coincides with the site plan located in Appendix A. Where instructed small mounted numbered metal ID tags will be applied to each tree surveyed.

**Species/Common name:** Where a cultivar, variety or species cannot be accurately given the genus name only will be given.

**Height (m):** This is measured approximately to the nearest 1m.

**Stem Diam /DBH (mm):** The Diameter at Breast Height of the given tree at 1.5m above soil level, (On sloping ground taken on the up-slope side of the tree base). Where the tree is multi-stemmed measurements will be taken below the junction where possible.

**Crown Spread:** Describes the crown radius from the base of the tree in four compass directions, recorded to the nearest half meter.

**Low Canopy Height & First Significant Branch and Direction:** In m to aid management options

**Age Class:** Is described (or abbreviated) as newly planted, young, semi-mature, early mature, mature, or over mature.

**Health:** Physiological condition gives an assessment of the tree's health and vitality, die back and the presence of disease. It is described as **Good** – no significant health problems, **Fair** – Tree less than optimal condition, small buds/internodal distance, early decline or **Poor** = significant ill health/in decline.

**Comment:** Narrative comment on general tree condition, significant defects and overall appearance, for example presence of pathogens and structural condition, it is described as **Good** – no significant defects, **Fair** – significant defects that can be remediated or **Poor** – significant defects which cannot be remediated.

**Management:** Work recommended or required to implement the development or for good arboricultural practice.

**Retention Category:** Each tree/group is identified with a retention category in accordance with BS 5837,

**Abbreviations:** figures suffixed with a '#' indicate that the value is estimated rather than measured due to site constraints. All measurements in this survey/report should be considered estimates.

| Ref. | Common Name        | Height (m) | Stem Diam (mm) | North | East | South | West | Crown Clearance (m) | First Branch (m) | Age Class | Health | Comment                                                                                                                                           | Management | Retention Category |
|------|--------------------|------------|----------------|-------|------|-------|------|---------------------|------------------|-----------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|--------------------|
| T1   | Sycamore           | 12         | 700            | 7     | 6    | 5.5   | 4.5  | 3                   | 4.5 S            | M         | F/G    | Historic wound to NE, 0.3-1.5m, occluding, little apparent decay, fence around stem so dbh estimated. Some canopy dieback                         | None       | B                  |
| T2   | Standing dead stem | 5          | 500            | 1     | 1    | 1     | 1    | 0                   | .                | .         | Dead   | Standing dead stem                                                                                                                                | None       | U                  |
| G3   | Hornbeam Group     | 6          | 150            | 4     | 2    | 4     | 2    | 0                   | 0.5              | EM        | G      | Approx. seven stems/partial hedge                                                                                                                 | None       | C                  |
| T4   | Alder              | 8          | 300            | 4     | 4    | 5     | 4    | 0                   | 0                | M         | F/G    | Multi-stemmed from base, central stem dead, live stems around it from base forming a single canopy, leaf minor damage, canopy sparser than normal | None       | C                  |
| T5   | Ash                | 6.5        | 150            | 2     | 2.5  | 2     | 2.5  | 0.5                 | 0.5              | EM        | F      | Stem lesions consistent with Ash dieback disease, sparse canopy                                                                                   | None       | U                  |
| T6   | Alder              | 8.5        | 358            | 4.5   | 4    | 5     | 4.5  | 1                   | 0.7w             | M         | G      | Three stems from base                                                                                                                             | None       | B                  |
| G7   | Birch Group        | 9          | 250            | 1     | 1    | 1     | 1    | 1                   | 1                | EM        | G      | Planted shelterbelt of now established trees, occasional Field Maple                                                                              | None       | A                  |
| T8   | Oak                | 13         | 1000           | 7     | 7    | 9     | 8.5  | 2                   | 3.5SW            | M         | G      | Historic basal and stem grazing wounds, occluding, historic wire on stem, occluding. Hardcore track to south                                      | None       | A                  |

## Appendix D: Trees in Design & Planning Process – Extracts from BS 5837: 2012

A copy of table B.1 from BS 5837 is found below. Trees whether subject to statutory protection or not are material considerations taken into account when dealing with planning applications. Table B.1 provides some advice to both developers and local planning authorities (LPA) on the appropriate amount of information required during the application process. Minimum detail includes information that is expected, additional information identifies further details that might be reasonable be sought by the LPA.

Table B.1 – Delivery of tree-related information into the planning system

| Stage of process                                 | Minimum detail                                                                                                                                                                                                                                                                                                                 | Additional information                                                                                                                                                                                          |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre-application</b>                           | Tree survey                                                                                                                                                                                                                                                                                                                    | Tree retention/removal plan (draft)                                                                                                                                                                             |
| <b>Planning application</b>                      | Tree survey (in the absence of pre-application discussions)<br>Tree retention/removal plan (finalised)<br>Retained trees and RPA's shown on proposed layout<br>Strategic hard and soft landscape design, including species and location of new planting<br>Arboricultural impact assessment                                    | Existing and proposed finished levels<br>Tree protection plan<br>Arboricultural method statement – heads of terms<br>Details for all special engineering within the RPA and other relevant construction details |
| <b>Reserved Matters/<br/>Planning conditions</b> | Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method.<br>Dimensioned tree protection plan<br>Arboricultural method statement – detailed<br>Schedule of works to retained trees, e.g. access facilitation pruning<br>Detailed hard and soft landscape design | Arboricultural site monitoring schedule<br>Tree and landscape management plan<br>Post-construction remedial works<br>Landscape maintenance schedule                                                             |

## Appendix E: Authors Signature & Declaration

It is trusted that this report provides the necessary information for the client and LPA to make an informed decision regarding tree management on the site, but should any further advice be required please do not hesitate to contact the author.

Signed Tuesday, 22 August 2023



.....  
**Ross Cannon** ND (Urb. For.). Tech. Cert. (Arbor. A.).

<http://www.avtcl.co.uk/>

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