



**Tree Survey, Arboricultural Impact Assessment  
Preliminary Arboricultural Method Statement & Tree Protection Plan  
In Accordance with BS 5837:2012**

Proj. No <b>8586</b>	<b>Perkins Farm, Tan Office Lane, Mendlesham Green, Stowmarket, Suffolk, IP14 5RL</b>		
Client:		Roger Balmer Design	
Date of Report:	08/02/2021	Revision:	Original

# **Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement & Tree Protection Plan – In Accordance with BS 5837: 2012**

## **Summary**

The purpose of this report is to provide a preliminary consideration of the arboricultural implications created by the proposed development. In accordance with the feasibility and planning sections of BS 5837: 2012 “*Trees in relation to design, demolition and construction – Recommendations*”, trees deemed to be within the influencing distance of the projected construction have been evaluated for quality, longevity, and initial maintenance requirements. Where trees do not have to be removed for health and safety reasons, a detailed and objective assessment has been made of the consequences of the intended layout.

In this circumstance it is intended to 1) remodel and extend the existing barn on the north side of the site with associated parking; 2) construct a new garage and cart lodge and four eco pods/shepherd huts with associated parking to the south of the site. As a result, sixteen individual trees, two groups of trees, seven areas of trees and two hedges were inspected. The arboricultural related implications of the proposal are as follows:

- 1 It is only necessary to fell or cut back sections of low-quality landscape features in order to achieve the proposed layout.
- 2 The alignment of the extension to the barn nominally intrudes within the Root Protection Area of one landscape feature to be retained. This has only a minor influence on the Root Protection Areas and as such it is considered appropriate to undertake linear root pruning, thus obviating the need for specialist construction techniques at this location. Specialist foundations may still be required for other reasons, including mitigating the influencing distance of tree roots, and as such expert advice should always be sought from a structural engineer. All other foundations or structural supports are to be constructed outside of the Root Protection Areas of tree or landscape features to be retained.
- 3 The alignment of three areas of hard surfacing encroach within the Root Protection Areas of trees or landscape features that are to be retained. However, the use of modern “no dig” construction techniques this is not considered to be a substantial issue.
- 4 This report recommends that specialist advice is obtained by expert practitioners in other disciplines. Such input should always be sought prior to the submission of this report in support of a planning application in order to demonstrate that the techniques and methods hereby proposed are achievable. In this particular circumstance it is necessary to contact the following:
  - Civil Engineer (“no dig” surfacing, item 4.4.3)
- 5 All trees and landscape features that are to remain as part of the development should suffer no structural damage provided that the findings with this report are complied with in full. This includes ensuring that protective fencing is erected as detailed at items 4.6 and 5.1 of this report.



- 6 Post Planning Permission – Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, phasing and an auditable monitoring schedule.



# Contact Details

Client – Roger Balmer Design			
<b>Address</b> Fountain House Studio The Street East Bergholt Colchester Essex CO1 6TB	<b>Contact</b> Ms Penny Clements	<b>Tel:</b> <b>E-mail:</b>	01206 297124 <a href="mailto:pc@rogerbalmerdesign.co.uk">pc@rogerbalmerdesign.co.uk</a>

Local Planning Authority – Mid Suffolk District Council			
<b>Address</b> Endeavour House 8 Russell Road Ipswich Suffolk IP1 2BX	<b>Trees Officer</b> Mr David Pizzey	<b>Tel:</b> <b>E-mail:</b>	01449 724555 <a href="mailto:david.pizzey@babergmidsuffolk.gov.uk">david.pizzey@babergmidsuffolk.gov.uk</a>

Arboricultural Consultant – Hayden’s Arboricultural Consultants Limited			
<b>Address</b> 5 Moseley’s Farm Business Centre Fornham All Saints Bury St Edmunds Suffolk IP28 6JY	<b>Report Author</b> Mr Ben Figg	<b>Tel:</b> <b>E-mail:</b>	01284 765391 <a href="mailto:info@treesurveys.co.uk">info@treesurveys.co.uk</a>



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# 1.0 Introduction

## 1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Roger Balmer Design to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Perkins Farm, Tan Office Lane, Mendlesham Green, Stowmarket, Suffolk, IP14 5RL.

1.1.2 The site survey was carried out on 25<sup>th</sup> January 2021. The relevant qualitative tree data was recorded in order to assess the condition of the existing trees, their constraints upon the prospective development and the necessary protection and construction specifications required to allow their retention as a sustainable and integral part of the completed development.

1.1.3 Information is given on condition, age, size and indicative positioning of all the trees, both on and affecting the site. This is in accordance with the British Standard 5837: 2012 *Trees in relation to design, demolition and construction - Recommendations*.

## 1.2 Scope of Works

1.2.1 The survey of the trees and any other factors are of a preliminary nature. The trees were inspected on the basis of the Visual Tree Assessment (VTA) method as developed by Mattheck and Breloer (1994). The trees were inspected from ground level with no climbing inspections undertaken. It is not always possible to access every tree and as such some measurements may have to be estimated. Trees with estimated measurements are highlighted in the schedule of trees. No samples have been removed from the site for analysis. The survey does not cover the arrangements that may be required in connection with the removal of existing underground services.

1.2.2 Whilst this is an arboricultural report, comments relating to non arboricultural matters are given, such as built structures and soil data. Any opinion thus expressed should be viewed as provisional and confirmation from an appropriately qualified professional sought. Such points are clearly identified within the body of the report.

1.2.3 An intrinsic part of tree inspection in relation to development is the assessment of risk associated with trees in close proximity to persons and property. Most human activities involve a degree of risk with such risks being commonly accepted, if the associated benefits are perceived to be commensurate. In general, the risk relating to trees tends to increase with the age of the trees concerned, as do the benefits. It will be deemed to be accepted by the client that the formulation of the recommendations for all tree management will be guided by the cost-benefit analysis (in terms of amenity), of the tree work.

## 1.3 Documentation

1.3.1 The following documentation was provided prior to the commencement of the production of this report:

- Letter of instruction from Penny Clements, dated 17<sup>th</sup> December 2020
- Topographical survey/map
- Proposed site layout



## 2.0 The Site

### 2.1 Overview

2.1.1 The site is two portions of the grounds associated with Perkins Farm. The first is to the north-west corner where an existing barn stands. There are a few young and mature trees and hedges in this portion of the site, most of which are of relatively poor quality. The second portion of the site is within a dense area of trees and scrub to the south. This area contains a few trees in good condition, or which are of landscape importance.

### 2.2 Soils

2.2.1 The soils type commonly associated with this site are slowly permeable and seasonally wet, slightly acid but base-rich loams and clays. They are of moderate fertility and mainly support seasonally wet pastures and woodlands type habitats. This soil type constitutes approximately 19.9% the total English land mass.

2.2.2 The data given was obtained from a desk top study which provides indications of likely soil types. By definition, this information is not comprehensive and therefore any decisions taken with regards the management, usage or construction on site should be based on a detailed soil analysis.

2.2.3 Further to item 2.2.2, this report provides no information on soil shrinkability. It may be necessary for practitioners in other disciplines (e.g. engineers considering foundation design) to obtain this data as required.

### 2.3 Statutory Tree Protection

2.3.1 Hayden's Arboricultural Consultants Limited have been informed that at the *date of the tree inspection* the trees concerned were not located within a Conservation Area or the subject of a Tree Preservation Order. As such, no written permission would be required from the local planning authority Mid Suffolk District Council prior to commencing works to trees. It should be noted however, that Mid Suffolk District Council have the power to serve Tree Preservation Orders very rapidly, and therefore it is incumbent upon owners, managers or any persons wishing to undertake work to any trees to contact the local planning authority prior to commencing works to ensure that the situation has not changed.

This information was sourced using the Local Planning Authority's Online Mapping System (as instructed by them) and to our best knowledge was current and accurate at the time the information was accessed. We would advise it prudent that before any tree work commences, this is checked directly with the Local Planning Authority to confirm that their online mapping system is definitive.

## 3.0 Tree Survey

3.1 As part of this survey a total of sixteen individual trees, two groups of trees, seven areas of trees and two hedges have been identified. These have been numbered T001 – T016, G001 – G002, A001 – A007 and H001 – H002 respectively.



- 3.2 A topographical survey was provided which showed the position of the trees on site. It should be noted however that topographical surveys are not always comprehensive and sometimes it is considered appropriate to record details of trees and landscape features omitted from or beyond the scope of the plan. If this circumstance occurs, the location of the individual tree or landscape feature is estimated. The position of each tree is shown on the attached drawing no. 8586-D-AIA.
- 3.3 In order to provide a systematic, consistent and transparent evaluation of the trees included within this survey, they have been assessed and categorised in accordance with the method detailed in item 4.3 of *BS 5837: 2012 "Trees in Relation to Design, Demolition and Construction - Recommendations"*. For further information, please see the attached Explanatory Notes.
- 3.4 The detailed assessment of each tree and its work requirements with priorities are listed in the attached Schedule of Trees.
- 3.5 Several items would benefit from tree surgery or additional investigation, be it for health and safety, cultural, aesthetic, or structural reasons as detailed in the attached Schedule of Trees. Including the trees recommended for felling, the items requiring the **most urgent** intervention are as follows:

Within six months:

A006	Coppice.
G001	Fell to ground level.
T012	Remove the lowest stem on the south-west aspect as a minimum. Consider re-coppicing the entire stool.

- 3.6 In accordance with item 4.2.4 (c) of BS 5837: 2012, the items inspected and detailed within this report have been selected for inclusion due to the likely influence of any proposed development on the trees, rather than strictly adhering to the curtilage of the site. However, it must be understood that there may be trees beyond the site and not included in this survey which may exert an influence on the development. Where works for cultural, health and safety, quality of life, or development purposes have been recommended on trees outside the ownership of the site, these can only progress with the agreement of the owner, except where it involves portions of the trees overhanging the boundary.

## 4.0 Arboricultural Impact Assessment

### 4.1 The Proposal

- 4.1.1 The proposal is to: 1) remodel and extend the existing barn on the north side of the site with associated parking; 2) construct a new garage and cart lodge and four eco pods/shepherd huts with associated parking to the south of the site.

### 4.2 Access

- 4.2.1 Access for the works on the north side of the site will be via the existing access off Tan Office Lane. Workspace for the barn extension and garage will encroach within portions of the Root Protection Areas (RPAs) of trees to be retained. As such, it will be necessary to install ground protection where this is to be the case, to avoid compaction damage to the ground during development.



Where access into the clearings within A007 will be required for the proposed pods, this will utilise existing gaps and clearings where possible (some additional and localised removals over and above that indicated on drawing no. 8586-D-AIA may be required).

#### 4.3. Demolition

4.3.1 It is understood that there is no demolition associated with this proposal.

#### 4.4 Construction

4.4.1 Construction of foundations or structural supports for the extension to the barn will marginally encroach within the calculated RPA of A003. Given the minor extent of the intrusion at this location it is considered appropriate to undertake linear root pruning as part of the access facilitation pruning (AFP) works. This operation will obviate the need for arboriculturally imperative specialised foundation construction methods in this situation. However, dependent on the soil type, species and topography, trees may have an influence on the soil beyond their calculated RPA. Given the proximity of the proposed construction to the trees to be retained, it is recommended that a Structural Engineer is consulted to assess the implications of the tree retention on the required foundation design.

4.4.2 Construction of foundations or structural supports for the remaining buildings within the proposal will not encroach within the RPAs of any trees to be retained. Therefore, from an arboricultural perspective, no specialised construction or foundation techniques will be required to protect tree roots. However, dependent on the soil type, species and topography, trees may have an influence on the soil beyond their calculated RPA. Given the proximity of the proposed construction to the trees to be retained, it is recommended that a Structural Engineer is consulted to assess the implications of the tree retention on the required foundation design.

4.4.3 Installation of new hard surfaces will encroach within the RPAs of the following items to be retained – A003, A005, A007, G002 and T009. Provided that these work with finished levels and required load bearings without cutting into the ground, the surfaces should be attended to by the use of “no dig” construction methods. In the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden’s Arboricultural Consultants will supply a sample design of “no dig” surfacing. However, the exact specification (adhering to the principles of the sample design) must be designed by a Civil Engineer who can confirm that the finished levels and load bearings are achievable with this type of design without cutting into the ground. In order to protect the RPA of the affected trees, these areas should be constructed as a final phase of the development. Prior to this, the RPAs should be protected with a combination of protective fencing and ground protection where workspace is required.

4.4.4 The existing access to the parking area for the barn to the north of the site will be widened on the north side, but this will not encroach within the RPAs of any trees to be retained.

4.4.5 Excavation and soil re-modelling is not shown to encroach within the RPA of any retained trees. Therefore, no adverse arboricultural implications are expected.

#### 4.5 Implications of Sloping Ground

4.5.1 The arboricultural implications of the proposed structures are based on an assumption that because there are no significant existing slopes on site, level changes will not occur within the RPA of trees that are shown to be retained.



#### **4.6 Requirement for Tree Barrier Fencing**

4.6.1 Prior to the commencement of construction and immediately after the completion of the necessary tree surgery and felling work, protective fencing will be erected on site. This must be fit for purpose (including any ground protection if necessary) in full accordance with the requirements of BS 5837: 2012 and positioned as shown on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing. Full details of fencing will be supplied by Hayden's Arboricultural Consultants in the detailed Arboricultural Method Statement & Tree Protection Plan.

#### **4.7 Compound**

4.7.1 The site provides adequate internal space to locate a construction compound outside the RPA of any trees and landscape features that are to be retained.

#### **4.8 Phasing**

4.8.1 The proposal involves the integration of a number of complex aspects that affect tree protection (e.g. – but not exclusively – access, movement of materials and the installation of services). For this reason, the project must be carefully phased to ensure the highest level of protection for retained trees at all times. As part of the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will produce an in-depth phasing recommendation to cover the major operations on site as they affect retained trees.

#### **4.9 Monitoring**

4.9.1 In accordance with item 6.3 of BS 5837: 2012, the site and associated development should be monitored regularly by a competent Arboriculturalist to ensure that the arboricultural aspects of the planning permission are complied with. As part of the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden's Arboricultural Consultants will produce an extensive auditable monitoring schedule to assess the progress of key site events/activities.

#### **4.10 Cultural Implications for Retained Trees**

4.10.1 Low. Details of specific works are listed in the attached Schedule of Works to Permit Development.



#### 4.11 Landscape Implications

4.11.1 In addition to trees and landscape features necessitating removal for health and safety, cultural or quality of life reasons, (as detailed in the attached Schedule of Works – Irrespective of Development) the items listed in the table below require felling to permit the proposed development to proceed: -

Feature No.	Reason for Removal	BS Category*	Visual Amenity Assessment*
A001 (section)	One tree conflicts with widened access.	C	High
A004 (section)	Conflicts with new path and construction space for replacement building.	C	Low
A005 (section)	Two trees within feature conflict with proposed drive and parking area.	C	Moderate
A007 (section)	Westernmost portion conflicts with proposed dwelling and parking areas. Four additional small clearings are required for holiday pods/huts.	C	Moderate

\* Please see definitions in the Explanatory Notes attached to this report.

#### 4.12 Post Development Implications

4.12.1 No adverse arboricultural implications are considered reasonably foreseeable for the trees that remain provided that the recommendations of this report are complied with in full.

4.12.2 Due to the dynamic nature of trees and their interaction with the environment, their health and structural integrity is liable to change over time. Because of this it is recommended that all trees on or adjacent to the site be inspected on an annual basis.

4.12.3 As stated in BS 5837: 2012, regular maintenance of newly planted trees is of particular importance for at least three years during the critical post-planting period and might, where required by site conditions, planning requirements or legal agreement, be necessary for five years or more. Therefore, the designer of the new landscaping should, in conjunction with the landscape design proposals, prepare a detailed maintenance schedule covering this period, and appropriate arrangements made for its implementation.

## 5.0 Design Advice, Preliminary Arboricultural Method Statement & Tree Protection Plan

### 5.1 Securing of Tree Structure and Root Protection Areas (RPA)

5.1.1 The trees to be retained will be protected by the use of stout barrier fencing erected in the positions indicated on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing no. 8586-D-AIA. This fencing will be in accordance with the requirements of BS 5837: 2012 including any necessary ground protection.



5.1.2 All fencing provided for the safeguarding of trees will be erected prior to any demolition or development commencing on the site, therefore ensuring the maximum protection. This fencing, which must have all weather notices attached stating "Construction Exclusion Zone – No Access" will be regarded as sacrosanct and, once erected, will not be removed or altered without the prior consent of the Local Planning Authority.

5.1.3 Where footpaths, access drives, or parking bays are constructed within the RPA of retained trees, careful attention will be paid to the type of surface treatment used in these areas, details of which are given in item 5.8, below. If possible, these should be installed as a final phase of the project, thereby protecting the RPA throughout the major construction phase of the proposed development.

5.1.4 Where fencing is impractical, consideration must be given to other forms of effective above ground tree structure protection. An example of this would be a combination of Barksavers to secure the stems and a temporary load bearing surface to shield the ground.

## 5.2 **Location of Site Office, Compound and Parking**

5.2.1 The position of the office, compound and parking will be agreed in writing with the Local Planning Authority prior to commencement of any permitted development works. Any proposed re-location of these items through the various phases of development will be agreed prior to re-siting with the Local Planning Authority.

## 5.3 **On Site Storage of Spoil and Building Materials**

5.3.1 Prior to and during all construction works on site, no spoil or construction materials will be stored within the RPA of any tree on, or adjacent to the site, even if the proposed development is to be within the RPA. This is to reduce to a minimum the compaction of the roots of the trees. Details of the RPA for each tree where no spoil or building materials will be stored are indicated on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing no. 8586-D-AIA. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority.

5.3.2 Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The volume of the bund compound shall be at least equivalent to the capacity of the tank plus 10%. If there is a multiple tankage, the compound shall be at least equivalent to the capacity of the largest tank, or the combined capacity of interconnected tanks, plus 10%. All filling points, vents, gauges and sight glasses shall be located within the bund. The drainage system of the bund shall be sealed with no discharge to any watercourse, land or underground strata. Associated pipe-work shall be located above ground and protected from accidental damage. All filling points and tank overflow pipe outlets shall be detailed to discharge downwards into the bund.

5.3.3 All material storage facilities and work areas must consider the effects of sloping ground on the movement of potentially harmful liquid spillages towards or into protected areas.



## 5.4 Programme of Works

- 5.4.1 All tree surgery works, once approved by the Local Planning Authority, will be carried out prior to any other site works. Once completed, the proposed protective fencing will be erected along the lines indicated above. All of this will be carried out prior to commencement of any development works on the site. Outline details of the proposed programme are given in the Design and Construction and Tree Care flow chart attached (Appendix G-1).

## 5.5 Tree Surgery

- 5.5.1 All tree work will be agreed with the Local Planning Authority and will be carried out in line with BS 3998: 2010 (Recommendations for Tree Works). An appropriately qualified, experienced and insured arboricultural contractor will carry out the work. Any alterations to the proposed schedule of works will be agreed with the Local Planning Authority prior to commencement of works.

## 5.6 Levels

- 5.6.1 Other than for any specific exception which may be referred to at item 4.0, no alterations to soil levels within the RPA of retained trees are envisaged. However, if it is necessary for these to occur, appropriate measures must be taken to prevent or minimise any detrimental effects on the affected root systems as detailed in 5.6.2 and 5.6.3 below.
- 5.6.2 If it is necessary to excavate so close to trees that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand or using an air spade, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.
- 5.6.3 If it is necessary to raise levels, it is essential that adequate supplies of water and oxygen pass through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion. Possible options are no-fines gravel, cobbles or, Type 2 road-stone. All hard surfaces will be of suitable specification to allow such gaseous diffusion, e.g. brick pavers.

## 5.7 Services

- 5.7.1 At the time of writing this report, no details on proposed services were available. However, the following principles should be adhered to when planning for their installation.
- 5.7.2 It is proposed that all underground service runs will be placed outside the RPA of the trees on or adjacent to the site. Where it is not possible to do this, the proposed length infringing the RPA will be hand dug 'broken trenches' (NJUG 4 paragraph 4) to ensure the maximum protection of the trees' roots. The trenches may also be excavated using an air spade, or trenchless technology can be employed if this methodology is considered appropriate by the relevant service company (thus allowing services to pass below and through the roots without the need for traditional excavation). If it is necessary to cut any small roots as part of any of these processes, they should be severed in such a way as to ensure that the final wound is as small as possible and free from ragged, torn ends.
- 5.7.3 All routes for overhead services will aim to avoid the trees. Where this is not possible, any tree work will be agreed prior to commencement with the Local Planning Authority.



5.7.4 All service providers (Statutory Authorities) will be consulted prior to commencement of works with the aim of minimising the number of service runs on the site.

5.7.5 All service runs/trenches where they encroach within the RPA of retained trees will be agreed with the Local Planning Authority prior to commencement of works.

## 5.8 **Hard Surface Types & Construction within the Root Protection Area**

5.8.1 Where it is necessary to construct footpaths, driveways, non-adoptable roads, and other hard surfaces within the RPA as calculated in accordance with BS 5837: 2012 (item 4.6.1), it is proposed that the design will comply with the 'no-dig' principles of the Arboricultural Advisory Information Services (AAIS) Practice Note 12 "*Through the Trees to Development*" – the only difference being that instead of a geo-grid, a geo-textile base is provided, and the no-fines road stone is incorporated in and retained by a geo-web cellular confinement system. Given the individual requirements of each site, it is essential that a specialist engineer is consulted to specify the construction detail. Where it is necessary to remove any existing hard surface, or lower the ground level within the RPA, this may expose roots. This operation must be undertaken using hand tools or an air spade. Any roots found should be treated with the greatest care and surrounded by sharp sand to provide a level base. Please note that 'no-dig' surfaces are not always considered acceptable for adoption.

5.8.2 Where it is shown that the construction of a boundary wall or dwelling encroaches within the RPA of a retained tree, the foundations of the wall or dwelling will be designed in such a manner so as to minimise the detrimental effect of the construction on the tree's roots. In these situations, any excavations within the RPA of an affected tree will only be undertaken following exploration of the existing root system with an air spade (or by hand digging if soil conditions preclude) and the necessary root pruning undertaken to allow excavation without unnecessary pulling and tearing of the roots to be retained. This will ensure minimal damage to tree roots where pad and beam or cantilever foundations are considered appropriate. Should a piling rig be required to create piles, any access facilitation pruning or felling necessary to allow access must be undertaken before the commencement of works and only with prior consent of the Local Planning Authority.

5.8.3 If boundary fencing is to be erected within the RPA of retained trees, it is proposed that the fence posts will be secured by the use of "Met-Posts" or similar design in order to keep the disturbance and damage of the roots of the trees to a minimum.

## 5.9 **Reporting and Monitoring Procedures**

5.9.1 In accordance with item 6.3 of BS 5837: 2012, the site and associated development should be monitored regularly by a competent arboriculturalist to ensure that the arboricultural aspects of the planning permission (e.g. the installation and maintenance of protective measures and the supervision of specialist working techniques) are implemented. Furthermore, regular contact between the Site Manager and the Arboriculturalist allows them to effectively deal with and advise on any tree related problems that may occur during the development process. This system should be auditable. Should any issues arise during the arboricultural monitoring of the development the Arboriculturalist will contact the Local Planning Authority and appropriate action taken only with the prior permission of Roger Balmer Design and the Local Planning Authority.



## 6.0 Recommendations

- 6.1 It is recommended that the measures outlined in this report are implemented in full to provide retained trees with the highest level of protection during the process of construction.
- 6.2 Subject to achieving Planning Permission, it is recommended that a detailed Arboricultural Method Statement & Tree Protection Plan should be provided. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, project phasing and an auditable monitoring schedule.
- 6.3 Tree surgery should be completed as detailed in the Schedule of Trees. Where this has been identified for reasons other than to permit development, this work should be completed within the advised timescales irrespective of any development proposals.
- 6.4 The tree surgery works proposed as part of this Survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed development. To this end, should these recommendations be overruled, this Survey stands as the opinion of Hayden’s Arboricultural Consultants Limited, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the Local Planning Authority, cannot be the responsibility of this practice.



## 7.0 Limitations & Qualifications

Tree inspection reports are subject to the following limitations and qualifications.

### General exclusions

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the prior confirmation from the client that such works should be undertaken.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third-party data will be undertaken. Hayden's Arboricultural Consultants Limited will not be responsible for the recommendations within this report where essential data are not made available or are inaccurate.

This report will remain valid for one year from the date of inspection subject to the recommendations specified within being adhered to. It must also be appreciated that recommendations proposed within this report may be superseded by extreme weather, or any other unreasonably foreseeable events.

However, if any additional alterations to the property or soil levels are carried out and/or further tree works undertaken other than specified within the report, it will become invalid and a new tree inspection strongly recommended.

It will be appreciated, and deemed to be accepted by the client and their insurers, that the formulation of the recommendations for the management of trees will be guided by the following:

1. The need to avoid reasonably foreseeable damage.
2. The arboricultural considerations - tree safety, good arboricultural practice (tree work) and aesthetics.

The client and their insurers are deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where sources are limited by time constraints or the client, this may lead to an incomplete quantification of the risk.

**Signed:**



**February 2021**.....

**For and on Behalf of Hayden's Arboricultural Consultants Limited**



## 8.0 References

British Standards Institute (2010) *BS 3998: 2010 Recommendations for Tree Work*. BSI, London.

British Standards Institute (2012) *BS 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations*. BSI, London.

Department for Communities and Local Government (2014) *Tree Preservation Orders and trees in conservation areas*.

Mattheck, C. and Breloer, H. (1994) *Research for Amenity Trees No. 4: The Body Language of Trees*. HMSO, London.

NHBC Standards (2018) *Chapter 4.2 'Building Near Trees'*. National House-Building Council.

NJUG 4 Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Issued 16<sup>th</sup> November 2007.

Patch, D. and Holding, B. (2006) *Arboricultural Practice Note 12 (APN12), Through the Trees to Development*. Arboricultural Advisory and Information Service (AAIS).

Roberts, J., Jackson, N. & Smith, M. (2006) *Research for Amenity Trees No. 8: Tree Roots in the Environment*. Department for Communities and Local Government. HMSO, London.



## 9.0 Appendices

Appendix	<b>A</b>	Species List & Tree Problems
Appendix	<b>B</b>	Schedule of Trees
Appendix	<b>C</b>	Schedule of Works – Irrespective of Development
Appendix	<b>D</b>	Preliminary Schedule of Works to Allow Development
Appendix	<b>E</b>	Explanatory Notes
Appendix	<b>F</b>	Tree Preservation Order Enquiry/Response
Appendix	<b>G</b>	Advisory Information & Sample Specifications
		1. BS 5837: 2012 Figure 1 - Flow Chart – Design and Construction & Tree Care
		2. European Protected Species and Woodland Operations Checklist (v.4)
		3. BS 5837: 2012 Figure 2 - Default specification for protective barrier
		4. BS 5837: 2012 Figure 3 - Examples of above-ground stabilising systems
Appendix	<b>H</b>	Drawing No. 8586-D-AIA



## Appendix A - Species List & Tree Problems

### Species List:

Ash	<i>Fraxinus excelsior</i>
Beech	<i>Fagus sylvatica</i>
Blackthorn	<i>Prunus spinosa</i>
Cherry	<i>Prunus</i> spp.
Cherry Plum	<i>Prunus cerasifera</i>
Crack Willow	<i>Salix fragilis</i>
Dogwood	<i>Cornus sanguinea</i>
Elder	<i>Sambucus nigra</i>
English Elm	<i>Ulmus minor</i> var. <i>vulgaris</i>
English Oak	<i>Quercus robur</i>
Field Maple	<i>Acer campestre</i>
Goat Willow	<i>Salix caprea</i>
Hawthorn	<i>Crataegus monogyna</i>
Hazel	<i>Corylus avellana</i>
Horse Chestnut	<i>Aesculus hippocastanum</i>



## Tree Problems:

This gives a brief description of the problems identified in the attached Tree Survey.

<b>Name: Deadwood</b>	
<b>Symptoms/damage type and cause:</b>	This relates to dead branches in the crown of the tree. In the majority of cases, this is caused by the natural ageing process of the tree or shading due to its close proximity to neighbouring trees. However, in some situations, it may be related to fungal, bacterial or viral infection.
<b>Consequence:</b>	Depending upon the location and mass of dead wood removal of the affected tissue may be necessary to prevent harm to persons or property as the wood will become unstable as it decays and in some circumstances is likely to fall from the tree with little or no warning.
<b>Control:</b>	Detailed monitoring should be undertaken on those trees showing signs of excessive deadwood production to identify the underlying cause.
<b>Species affected:</b>	Most tree species.
<b>Images:</b>	

<b>Name: Epicormic growth</b>	
<b>Symptoms/damage type and cause:</b>	This is the production of numerous shoots on the main stem and branches of the tree. They are produced by the bursting into life of otherwise dormant buds. It is commonly associated with elevated levels of stress on the tree.
<b>Consequence:</b>	Whilst epicormic growth is usually symptomatic of an issue elsewhere within the tree, heavy proliferation can cause the trees resources to become depleted or may mask significant structural weaknesses within the framework of the tree.
<b>Control:</b>	Pruning off epicormic growth may be necessary to improve the visual amenity of the tree or prevent the development of a hazard or obstruction. No direct means of prevention are available other than therapeutic measures to alleviate stresses on the tree.
<b>Species affected:</b>	Most tree species, including European Lime, Willow species, Sweet Chestnut, and Silver Maple.
<b>Images:</b>	



<b>Name:</b> <i>Hymenoscyphus fraxineus</i> (Ash Dieback)	
<b>Notifiable to the Forestry Commission:</b> If you suspect that a tree exhibits this pathogen, you should report it immediately to: Forest Research via the TreeAlert system: <a href="https://www.forestryresearch.gov.uk/tools-and-resources/tree-alert/">https://www.forestryresearch.gov.uk/tools-and-resources/tree-alert/</a>	
<b>Symptoms/damage type and cause:</b>	Symptoms of the disease can be visible on leaves, shoots, stems and branches of affected trees. The primary symptom is leaves and young shoot growth wilting and turning black in the late summer months. The leaves will often drop ahead of the usual period of senescence. As the fungus spreads towards the stem, branches start to show a black diamond that marks the area of infection. The diamond will continue to grow as the fungus progresses until it girdles the branch and kills the vascular tissue. In severe cases, the entire crown shows leaf loss and dieback, which is often associated with the formation of epicormic shoots on branches and the trunk.
<b>Consequence:</b>	The genetic variation within the <i>Fraxinus</i> genus means that individual trees have differing levels of resistance to <i>Hymenoscyphus fraxineus</i> resulting in some trees dying in the year of infection and others displaying minimal symptoms and surviving alongside the presence of the pathogen. Infected trees will fall somewhere on this spectrum.
<b>Control:</b>	You can slow the spread of the Ash dieback disease by locally burning, burying or composting fallen Ash leaves.
<b>Species affected:</b>	<i>Fraxinus excelsior</i>
<b>Images:</b>	



<b>Name: <i>Ophiostoma novo-ulmi</i> (Dutch Elm Disease)</b>	
<b>Symptoms/damage type and cause:</b>	The first symptom is the yellowing of the leaves from July onwards. It spreads rapidly often causing death in the same season - it is very rare for a tree to survive once the fungus has occurred. Dark brown streaks are evident when the bark and outer wood are peeled from the infected branches. Brown blotches may also be seen on infected branches if they are cut cleanly in a transverse section. The tree is infected by the Elm Bark Beetle which carries the disease (through fungal spores on their backs). Once active in the tree, the fungus produces yeast like cells in the wood which are transported within the trees water conducting tissues. These cause blockages of the tissue and hence both the wilting of the leaves and the brown staining of the infected wood mentioned above. Galleries (tunnels) can be found between the bark and the wood where the beetles have fed and laid their eggs. The beetles eat through the bark of stems and larger limbs and thus form emergence holes which contribute to disease identification.
<b>Consequence:</b>	This is the most serious disease in Elm trees and is still common in Britain. Infected trees decline and die rapidly.
<b>Control:</b>	Control by fungicidal injections has been successful in specimen trees of high value however the cost of this recurrent procedure usually outweighs the value of the affected tree.
<b>Species affected:</b>	<i>Ulmus</i> spp. and <i>Zelkova</i>



# **Appendix B**

Schedule of Trees

**SCHEDULE OF TREES (AIA)** Perkins Farm, Tan Office Lane, Mendlesham Green, Stowmarket, Suffolk

Surveyed By: Ben Figg Date: 18/01/2021

Managed By: Ben Figg

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)			
			Min Dist	Crown Base									Lowest Branch	Age	Water Demand
			RPA (m²)	Aspect									Aspect	SULE	Ground Cover
<b>A001</b>	English Oak, Field Maple	190	10.5		High	N3, E3, S3, W3	A cluster of nine young trees which have been planted close together in a hedge. Given the species size at maturity, they are too close together and if all retained will likely all develop poor structures due to their proximity and influence on each others growth. Two of the best quality trees have been identified on the drawing which could be singled out to develop into open grown specimens. These could then grow into good quality features for the long term. Some of the others could be retained at a lower level under a pollard regime, though the low growth would likely conflict with the road. They could otherwise be cut down into the hedge to help thicken the hedge.	C2	Consider thinning trees to retain the best quality specimens as indicated for long term retention.	3	Fell southernmost tree to permit development.	0			
		2.28	4		SM	High									
<b>Yes</b>		16.3			10+ years	Dense undergrowth, Grass, Tarmac									
<b>A002</b>	Ash	160	8.5		Moderate	N2, E2, S2, W2	A cluster of trees planted very closely together. Given their mature size, they should be thinned to retain one tree which has sufficient space in which to develop. Bearing in mind their proximity to the nearest tree recommended for retention within A001, the easternmost of these trees should be selected.	C2	Consider thinning trees to retain easternmost tree for long term retention.	3					
		1.92	3		SM	Moderate									
<b>Yes</b>		11.6			10+ years	Dense undergrowth, Grass									
<b>A003</b>	Hawthorn, Blackthorn	180	6		Moderate	N3, E3, S3, W3	A healthy, currently unmanaged hedgerow.	C2	No work required.	4	Cut back section on south side as indicated on drawing no. 8586-D-AIA to provide construction space for new extension. Undertake limited linear root pruning to facilitate construction of foundations for extension to barn.	0			
		2.16	0		M	High									
<b>Yes</b>		14.7			40+ years	Dense undergrowth, Grass, Building									
<b>A004</b>	Cherry Plum	180	9		Low	N5, E5, S5, W5	This feature was likely originally planted as a hedge but not managed as such and the trees have developed their mature form. The species tolerate pruning well or could be coppiced to encourage dense regrowth which can then be maintained as a hedge if preferred. The species can be prone to breaking apart in their mature form.	C2	Consider cutting back heavily/coppicing to encourage dense re-growth allowing feature to be managed as a hedge in future.	3	Fell two northernmost trees to permit development.	0			
		2.16	1.3		M	Moderate									
<b>Yes</b>		14.7			10+ years	Building, Grass									

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
			Min Dist	Crown Base								
		On site	RPA (m <sup>2</sup> )	Aspect	Aspect	SULE						
<b>A005</b>	Field Maple, Cherry Plum, Hazel, Hawthorn	320	11		Moderate	N6, E6, S6, W6	A healthy section of lapsed hedgerow, the main part of which is located on a slight bank. Many of the trees originate from old coppice stools and have most recently been repeatedly topped at approximately 4m to maintain a minimum clearance below the overhead power lines. To avoid conflict with the lines, the most optimum management option would be to manage the feature as a regularly trimmed hedge. To achieve this, they should be coppiced to encourage dense regrowth from the original stools which can then be trimmed at the preferred height. This would provide a better screen at lower levels and would also allow interplanting the gaps with new trees to provide a continuous dense hedge.	C2	No work required.	4	Fell two trees to permit development. Coppice remainder of feature alongside proposed dwelling and parking to provide construction space.	0
	3.84	0		M	High							
<b>Yes</b>	46.3			10+ years	Woodland floor, Light undergrowth							
<b>A006</b>	Field Maple	400	16		Low	N3.5, E3.5, S3.5, W3.5	A cluster of trees growing below the crown of T014. As a result of this, their growth has been suppressed. Additionally, a stem of the westernmost tree has failed and the remaining upright stem may also be at risk of failure. Coppicing would facilitate the retention of the trees but encourage dense re-growth from the stumps to form a more dense boundary feature at this location.	U	Coppice.	2		
	4.8	4		EM	Moderate							
<b>Yes</b>	72.4			<10 years	Dense undergrowth, Woodland floor							
<b>A007</b>	Cherry Plum, Blackthorn, Hawthorn, Hazel, Field Maple, Elder	200	10		Moderate	N4, E4, S4, W4	A scattered area of localised dense clusters of mostly mature Cherry Plum, some of which has fallen over and layered. The species can commonly be prone to fail when mature. Selective removal and coppicing of some of the trees would allow interplanting with other suitable species and form better quality screening at lower levels. It would also facilitate interplanting with some larger species trees if preferred, to increase the woodland feel. Area is represented on plan as continuous, though there are already small gaps and clearings/walkways, but not every stems was indicated on the topographical survey.	C2	Fell or coppice dying fire damaged tree as indicated on drawing.	3	Fell five sections to permit development. Cut back retained trees where required to provide construction space for new dwelling.	0
	2.4	0		M	High							
<b>Yes</b>	18.1			10+ years	Dense undergrowth, Woodland floor							

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)			
			Min Dist	Crown Base									Lowest Branch	Age	Water Demand
			RPA (m <sup>2</sup> )	Aspect									Aspect	SULE	Ground Cover
<b>G001</b>	Crack Willow	180	12		Low	N4, E4, S4, W4	A pair of poor quality, dying trees, one of which leans toward the road.	U	Fell to ground level.	2					
		2.16	3		EM	High									
<b>Yes</b>		14.7			<10 years	Grass									
<b>G002</b>	Ash	500	15		Moderate	N9, E9, S9, W9	A pair of trees which form a cohesive crown. Both appear healthy. There is a remnant of a stump from a third stem which previously failed, but this appears most likely to have been a separate tree and there are no indications of decay within the remaining two trees.	B2	No work required.	4					
		6	4		EM	Moderate									
<b>Yes</b>		113.1			20+ years	Dense undergrowth, Grass, Woodland floor									
<b>H001</b>	Field Maple, Dogwood - native, Hawthorn	80	2		High	N0.5, E0.5, S0.5, W0.5	A healthy section of boundary hedge.	C2	Continue annual maintenance.	3					
		0.96	0		EM	High									
<b>Yes</b>		2.9			40+ years	Tarmac, Grass, Gravel									
<b>H002</b>	Beech	80	2		Low	N0.5, E0.5, S0.5, W0.5	A healthy young hedge.	C2	Continue annual maintenance.	3					
		0.96	0		SM	Moderate									
<b>Yes</b>		2.9			40+ years	Grass									
<b>T001</b>	Cherry Spp	270	8.5		Moderate	N5.5, E4.5, S3, W3	A healthy tree of poor structural form but with no significant defects.	C1	No work required.	4					
		3.24	1		M	Moderate									
<b>Yes</b>		33			10+ years	Gravel, Dense undergrowth, Grass									
<b>T002</b>	Ash	180	11.5		Moderate	N3.5, E3.5, S3, W2	This tree features a sunken area of bark on the main stem which may be as a result of Ash Dieback and there is some epicormic growth which can also be an indicator. This would, however, be easier to reassess next summer.	C1	Reassess tree for ill-health and indicators of Ash dieback next summer.	3					
		2.16	3		SM	Moderate									
<b>Yes</b>		14.7			10+ years	Grass, Gravel, Dense undergrowth									
<b>T003</b>	Ash	130	9		Moderate	N1.5, E0.5, S1.5, W2	This trees growth is being suppressed by surrounding more dominant trees.	U	Fell and treat stump.	3					
		1.56	4		SM	Moderate									
<b>Yes</b>		7.6			<10 years	Grass, Gravel, Dense undergrowth									
<b>T004</b>	Horse Chestnut	230	9		Moderate	N3, E3, S4, W3	Tree currently appears healthy but stands within an area of waterlogged ground which the species will unlikely tolerate in the long term.	C1	No work required.	4					
		2.76	2		SM	Moderate									
<b>Yes</b>		23.9			10+ years	Grass									

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)	
			Min Dist	Crown Base									Lowest Branch
			On site	RPA (m²)	Aspect	Aspect							SULE
T005	English Elm	160	9		Moderate	N3, E3.5, S2.5, W2	Tree is currently healthy, though will likely succumb to Dutch Elm disease and die within a few years. The species can be maintained below 4m within a hedge, however, and generally survives the disease in this case (as the beetle which acts as the vector for the fungus flies above this height).	U	Coppice and trim re-growth into the hedge.	3			
		1.92	2		SM	High							
Yes		11.6			<10 years	Dense undergrowth, Grass							
T006	English Elm	200	11		Moderate	N3, E3, S3, W3	Tree is currently healthy, though will likely succumb to Dutch Elm disease and die within a few years. The species can be maintained below 4m within a hedge however and generally survives the disease in this case (as the beetle which acts as the vector for the fungus flies above this height).	U	Coppice and integrating trim re-growth into the hedge.	3			
		2.4	2		SM	High							
Yes		18.1			<10 years	Dense undergrowth, Grass							
T007	Goat Willow	480	6.5		Moderate	N4, E3, S3, W3.5	Tree is healthy but of poor structural form. It has, however, been cut back which has reduced its weight and likelihood of splitting. The species can tolerate heavy pruning and can also be maintained under a coppice regime, which may help increase its safe and useful retention.	C1	No work required.	4			
		5.76	1.5	0.5	M	High							
Yes		104.2			10+ years	Gravel, Grass							
T008	Goat Willow	430	6		Low	N2, E2, S2, W2	Tree has recently been pollarded. It appears healthy.	C1	No work required.	4			
		5.16	2		EM	High							
Yes		83.6			10+ years	Building, Gravel, Dense undergrowth							
T009	Crack Willow	780	19		High	N5.5, E6.5, S5, W5	A healthy tree with no structural defects. It has multiple stems from 1.5m but these are very upright. It should be noted that the species can be prone to branch failures in maturity particularly during periods of high winds. This may, therefore, limit this trees suitability for retention into the long term. The species do tolerate pollarding well, however, which would maintain the tree at a smaller size and it should be noted that if not managed this tree may still have considerable growth potential.	B1	No work required.	4			
		9.36	2		M	High							
Yes		275.2			20+ years	Grass, Gravel, Building							
T010	Ash	730	16		High	N8, E7, S5, W6	A multi-stemmed tree which originates from an old coppice stool. Although there is some decay within the stool itself, this is not likely to be structurally significant at present, given the amount of healthy callous. This tree appears healthy with an evenly dense crown.	A2	No work required.	4			
		8.76	4	3	M	Moderate							
Yes		241.1		NW	40+ years	Woodland floor, Grass, Dense undergrowth							

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)			
			Min Dist	Crown Base									Lowest Branch	Age	Water Demand
			RPA (m²)	Aspect									Aspect	SULE	Ground Cover
T011	Ash	360	14		Moderate	N4.5, E6, S1.5, W0.5	This tree is healthy and free of significant defects but its growth is partially suppressed by T010.	C1	No work required.	4					
		4.32	3.5		EM	Moderate									
Yes		58.6			10+ years	Dense undergrowth, Woodland floor									
T012	Ash	780	14.5		High	N0.5, E9.5, S8, W5.5	Tree originates from a large coppice stool. All of the stems on the north side have been removed and the regrowth repeatedly cut back due to the overhead power lines. The remaining arms on the south side have been retained and have not been coppiced for some time. The lowest stem on the south-west aspect has a poorly formed union and could be at risk of failure. This overhangs a public right of way and so should be removed as a minimum. However, due to the almost complete removal of growth on the north, completely recoppicing this tree may be prudent, and the re-growth coppiced on a fairly short cycle.	C1	Remove the lowest stem on the south-west aspect as a minimum. Consider re-coppicing the entire stool and maintaining the coppice regime on a short cycle to limit conflict with overhead power lines	2					
		9.36	2		M	Moderate									
Yes		275.2			10+ years	Dense undergrowth, Woodland floor, Grass									
T013	Field Maple	350	11		Low	N2.5, E3.5, S3.5, W2	Tree is healthy but partially suppressed by T014.	C1	No work required.	4					
		4.2	3		EM	Moderate									
Yes		55.4			10+ years	Dense undergrowth, Grass, Woodland floor									
T014	Ash	700	16		High	N8, E8, S7.5, W7	Tree is healthy and in good structural condition.	A2	No work required.	4					
		8.4	4		M	Moderate									
Yes		221.7			40+ years	Grass, Dense undergrowth, Woodland floor									
T015	English Oak	280	14		Moderate	N0.5, E2.5, S3.5, W5.5	Tree is healthy with no significant defects. It has grown at a slight angle toward the south due to its proximity to T014, but is suitable for retention within the current woodland type setting and will continue to grow to form a cohesive crown with the neighbouring tree.	B2	No work required.	4					
		3.36	5.5		SM	High									
Yes		35.5			40+ years	Woodland floor, Dense undergrowth									
T016	Field Maple	280	12		Low	N4.5, E2.5, S0.5, W2.5	Tree is healthy but has a very poor shape as its growth has been entirely suppressed on the south side by A005. If A005 is coppiced to form a dense hedge (as recommended), then this tree should also be coppiced as it would become more exposed to the wind which it will not have adapted to.	C1	If A005 is to be coppiced as recommended, then coppice this tree at the same time.	3					
		3.36	3		EM	Moderate									
Yes		35.5			10+ years	Dense undergrowth, Woodland floor									

## **Appendix C**

Schedule of Works - Irrespective of Development

# SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Perkins Farm, Tan Office Lane, Mendlesham Green, Stowmarket, Suffolk

Surveyed By: Ben Figg

Surveyed: 18/01/2021

Managed By: Ben Figg

Tree No.	Species	Work required	Priority
<b>A006</b>	Field Maple	Coppice.	<b>2</b>
<b>G001</b>	Crack Willow	Fell to ground level.	<b>2</b>
<b>T012</b>	Ash	Remove the lowest stem on the south-west aspect as a minimum. Consider re-coppicing the entire stool and maintaining the coppice regime on a short cycle to limit conflict with overhead power lines.	<b>2</b>
<b>A001</b>	English Oak, Field Maple	Consider thinning trees to retain the best quality specimens as indicated for long term retention.	<b>3</b>
<b>A002</b>	Ash	Consider thinning trees to retain easternmost tree for long term retention.	<b>3</b>
<b>A004</b>	Cherry Plum	Consider cutting back heavily/coppicing to encourage dense re-growth allowing feature to be managed as a hedge in future.	<b>3</b>
<b>A007</b>	Cherry Plum, Blackthorn, Hawthorn, Hazel, Field Maple, Elder	Fell or coppice dying fire damaged tree as indicated on drawing.	<b>3</b>
<b>H001</b>	Field Maple, Dogwood - native, Hawthorn	Continue annual maintenance.	<b>3</b>
<b>H002</b>	Beech	Continue annual maintenance.	<b>3</b>
<b>T002</b>	Ash	Reassess tree for ill-health and indicators of Ash dieback next summer.	<b>3</b>
<b>T003</b>	Ash	Fell and treat stump.	<b>3</b>
<b>T005</b>	English Elm	Coppice and trim re-growth into the hedge.	<b>3</b>
<b>T006</b>	English Elm	Coppice and integrating trim re-growth into the hedge.	<b>3</b>
<b>T016</b>	Field Maple	If A005 is to be coppiced as recommended, then coppice this tree at the same time.	<b>3</b>

## **Appendix D**

Preliminary Schedule of Works to Allow Development

## SCHEDULE OF WORKS (AIA)

Perkins Farm, Tan Office Lane, Mendlesham Green, Stowmarket, Suffolk

Surveyed By: Ben Figg

Surveyed: 18/01/2021

Managed By: Ben Figg

Tree No.	Species	Work required	Priority
<b>A001</b>	English Oak, Field Maple	Fell southernmost tree to permit development.	<b>0</b>
<b>A003</b>	Hawthorn, Blackthorn	Cut back section on south side as indicated on drawing no. 8586-D-AIA to provide construction space for new extension. Undertake limited linear root pruning to facilitate construction of foundations for extension to barn.	<b>0</b>
<b>A004</b>	Cherry Plum	Fell two northernmost trees to permit development.	<b>0</b>
<b>A005</b>	Field Maple, Cherry Plum, Hazel, Hawthorn	Fell two trees to permit development. Coppice remainder of feature alongside proposed dwelling and parking to provide construction space.	<b>0</b>
<b>A007</b>	Cherry Plum, Blackthorn, Hawthorn, Hazel, Field Maple, Elder	Fell five sections to permit development. Cut back retained trees where required to provide construction space for new dwelling.	<b>0</b>

## **Appendix E**

Explanatory Notes

# Explanatory Notes



## Categories

Below is an explanation of the categories used in the attached Tree Survey.

**No** Identifies the tree on the drawing.

**Species** Common names are given to aid understanding for the wider audience.

**BS 5837 Main Category** Using this assessment (BS 5837:2012, Table 1), trees can be divided into one of the following simplified categories, and are differentiated by cross-hatching and by colour on the attached drawing:

**Category A** - Those of high quality with an estimated remaining life expectancy of at least 40 years;

**Category B** - Those of moderate quality with an estimated remaining life expectancy of at least 20 years;

**Category C** - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm;

**Category U** - Those trees in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

**BS 5837 Sub Category** Table 1 of BS 5837:2012 also requires a sub category to be applied to the A, B, C, and U assessments. This allows for a further understanding of the determining classification as follows:

**Sub Category 1** - Mainly arboricultural qualities;

**Sub Category 2** - Mainly landscape qualities;

**Sub Category 3** - Mainly cultural values, including conservation .

Please note that a specimen or landscape feature may fulfil the requirements of more than one Sub Category.

**DBH (mm)** Diameter of main stem in millimetres at 1.5 metres from ground level. Where the tree is a multi-stem, the diameter is calculated in accordance with item 4.6.1 of BS 5837:2012.

**Age** Recorded as one of seven categories:

**Y** Young. Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. less than 150 mm DBH.

**S/M** Semi-mature. An established tree, but one which has not reached its prospective ultimate height.

**E/M** Early-mature. A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread.

**M** Mature. A mature specimen with limited potential for any significant increase in size, even if healthy.

**O/M** Over-mature. A senescent or moribund specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.



## D Dead.

<b>Height</b>	Recorded in metres, measured from the base of the tree.
<b>Crown Base</b>	Recorded in metres, the distance from ground and aspect of the lowest branch material.
<b>Lowest Branch</b>	Recorded in metres, the distance from ground and aspect of the emergence point of the lowest significant branch.
<b>Life Expectancy</b>	Relates to the prospective life expectancy of the tree and is given as 4 categories:  1 = 40 years+; 2 = 20 years+; 3 = 10 years+; 4 = less than 10 years.
<b>Crown Spread</b>	Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.
<b>Minimum Distance</b>	This is a distance equal to 12 times the diameter of the tree measured at 1.5 metres above ground level for single stemmed trees and 12 times the average diameter of the tree measured at 1.5 metres above ground level tree for multi stemmed specimens. (BS 5837:2012, section 4.6).
<b>RPA</b>	This is the Root Protection Area, measured in square metres and defined in BS5837:2012 as “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”. The RPA is shown on the drawing.. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations. Some methods of construction can be carried out within the RPA of a retained tree but only if approved by the Local Planning Authority’s tree officer.
<b>Water Demand</b>	This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 “Building Near Trees”.
<b>Visual Amenity</b>	Concerns the planning and landscape contribution to the development site made by the tree, hedge or tree group, in terms of its amenity value and prominence on the skyline along with functional criteria such as the screening value, shelter provision and wildlife significance. The usual definitions are as follows:  Low                    An inconsequential landscape feature.  Moderate            Of some note within the immediate vicinity, but not significant in the wider context.  High                    Item of high visual importance.
<b>Problems/ Comments</b>	May include general comments about growth characteristic, how it is affected by other trees and any previous surgery work; also, specific problems such as deadwood, pests, diseases, broken limbs, etc.
<b>Work Required (TS)</b>	Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems identified in the “Problems/comments” category.



**Work Required (AIA)**

Identifies the tree work specifically necessary to allow a proposed development to proceed.

**Priority**

This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey.

- 1** Urgent – works required immediately;
- 2** Works required within 6 months;
- 3** Works required within 1 year;
- 4** Re-inspect in 12 months,
- 0** Remedial works as part of implementation of planning consent.



## BS 5837:2012 Terms and Definitions

<b>Access Facilitation Pruning</b>	One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.
<b>Arboricultural Method Statement</b>	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.
<b>Arboriculturist</b>	Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
<b>Competent Person</b>	Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. <i>NOTE - a competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.</i>
<b>Construction</b>	Site-based operations with the potential to affect existing trees.
<b>Construction Exclusion Zone</b>	Area based on the root protection area from which access is prohibited for the duration of a project.
<b>Root Protection Area (RPA)</b>	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.
<b>Service</b>	Any above or below ground structure or apparatus required for utility provision. <b>NOTE</b> - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.
<b>Stem</b>	Principal above ground structural component(s) of a tree that supports its branches.
<b>Structure</b>	Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.
<b>Tree Protection Plan</b>	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.
<b>Veteran Tree</b>	Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. <b>NOTE</b> - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.



## **Appendix F**

Tree Preservation Order Enquiry/Response

Controls

Map Layers

- westminster\_const\_region.tab
- county\_electoral\_division\_region.tab
- District Wards
- Parish Boundaries
- BMSDC Land Owned.tab
- BMSDC Polling Stations General Election 2019
- Polling Areas General Election 2019
- Police Stations
- Policing Neighbourhood
- Distict Boundaries
- Gazetteer Points
- GC UI
- EA Floodzones
- Planning & Environment
  - Ancient Woodland.tab
  - Agricultural Land Classification
  - Conservation Areas.tab
  - Listed Buildings BMSDC.tab
  - LDF Village Classifications.tab
  - Local Nature Reserves.tab
  - RMSDC Planning Applications 170220.tab

Address Search

About this property

Find my nearest

Spatial query

Drawing Style

Home Measure Drawing

Select a location ...

search for...

Colour Mapping

Aerial Photography

Train\_WML

Mendlesham Green

Tan Office

Waltham

ROMAN

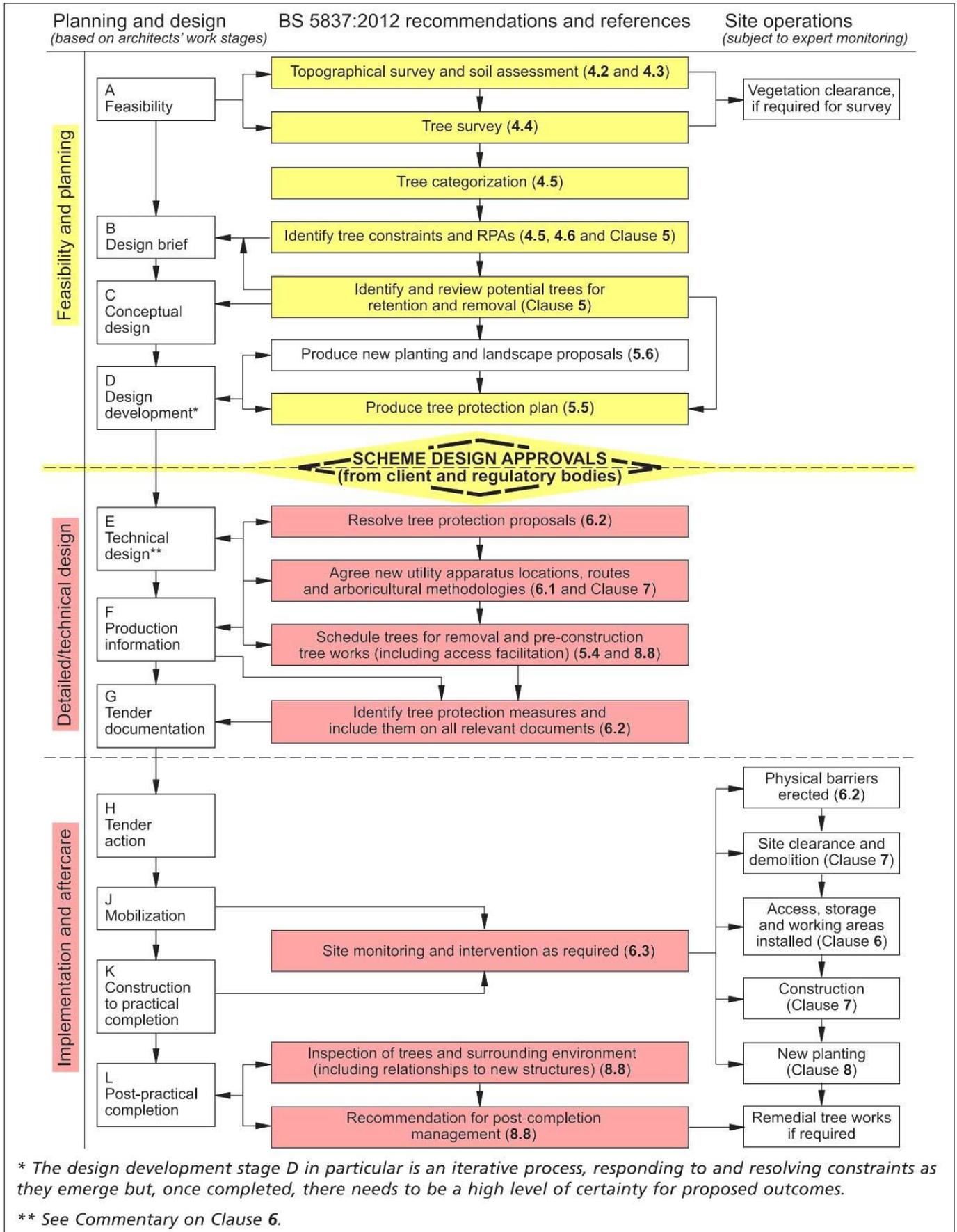
100 m 500 ft

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## **Appendix G**

Advisory Information & Sample Specifications

# 1. BS 5837:2012 Figure 1 - Flow Chart – Design and Construction & Tree Care

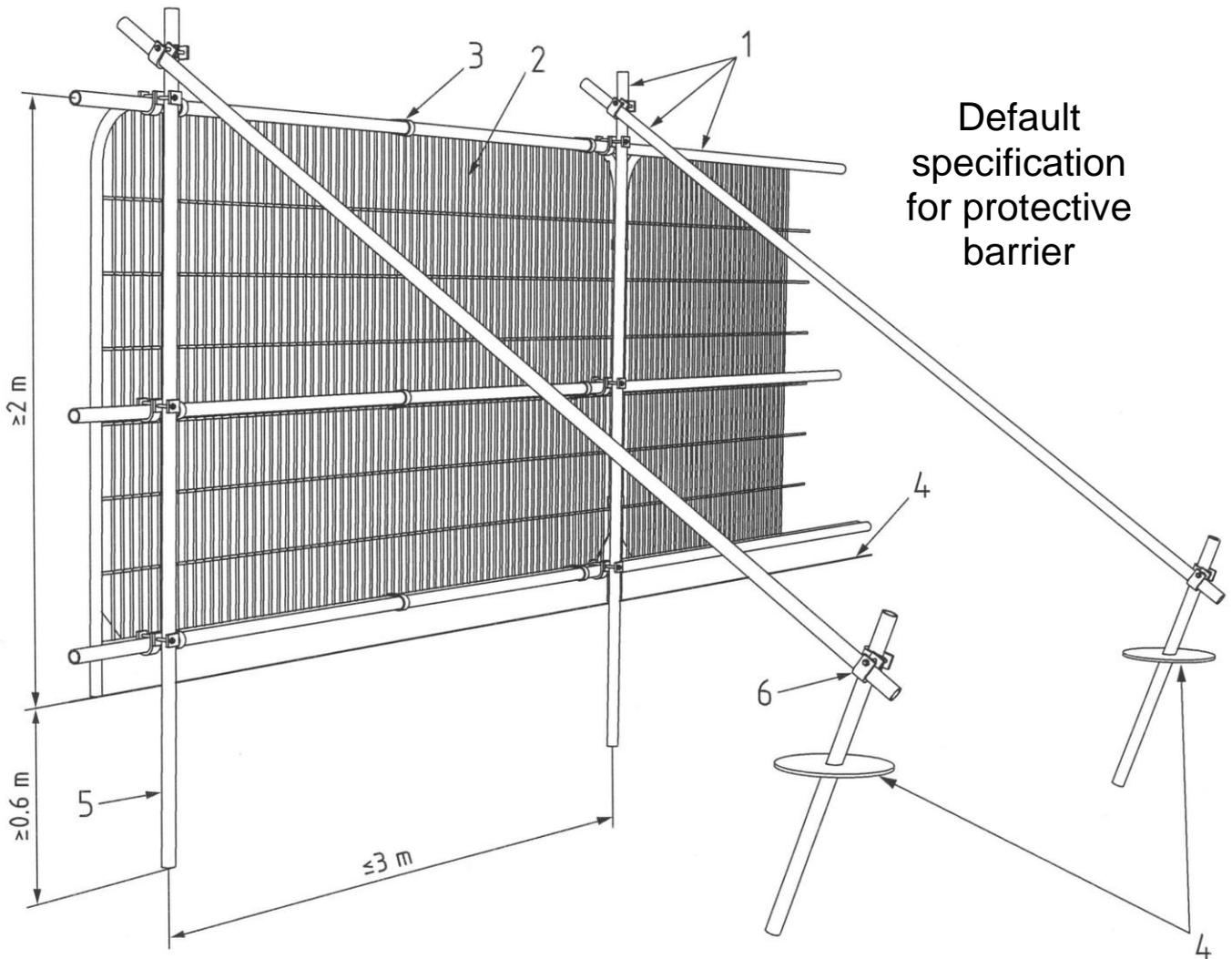


2.

**European Protected Species and woodland operations. (V4)**  
Complete all sections of the Checklist

Checklist		Details												
<b>1</b>	<p>Are you within, or close to, the known mapped range of any of the protected species OTHER THAN BATS which are potentially everywhere? Tick any that apply. See distribution maps in the Good Practice Guidance for each species -</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Dormice</li> <li><input type="checkbox"/> Otters</li> <li><input type="checkbox"/> Great crested newts</li> <li><input type="checkbox"/> Sand lizards</li> <li><input type="checkbox"/> Smooth snakes</li> </ul>	<p>Name of Wood:</p> <hr/> <p>Grid Reference:</p> <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <p>Area: (ha)</p> <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <p>Date of Assessment:</p> <table border="1" style="width: 100%; height: 20px; border-collapse: collapse;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> </table> <p>Name of Assessor:</p> <hr/>												
<b>2</b>	<p>Does your wood contain any of the following habitats? Tick any that apply.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Old trees with holes and crevices which might be used bats</li> <li><input type="checkbox"/> Species rich scrub/coppice, early growth stage plantations and forest interfaces</li> <li><input type="checkbox"/> Rivers on which otters might be found</li> <li><input type="checkbox"/> Ponds which might be occupied by great crested newts</li> <li><input type="checkbox"/> Open areas on heathy soils</li> </ul>	<p>YES</p> <p>NO</p>												
<b>3</b>	<p>Have any of the protected species been recorded in this wood or on adjoining sites? Tick any that apply. Indicate which sources of information you have checked:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> National Biodiversity Network (<a href="http://www.nbn.org.uk">www.nbn.org.uk</a>)</li> <li><input type="checkbox"/> Local Biological Records Centre</li> <li><input type="checkbox"/> Local Wildlife Trust</li> <li><input type="checkbox"/> Other</li> </ul> <p>Specify Other:</p>	<p>YES</p> <p>NO</p>												
<b>4</b>	<p>Have your inspections or any expert surveys found any of the following signs or evidence? Tick any that apply.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts)</li> <li><input type="checkbox"/> Sightings (or echo-location)</li> <li><input type="checkbox"/> Potential breeding or roosting sites (e.g. veteran trees, old trees with crevices, riverside hollow trees, ponds, timber stacks, large fallen deadwood)</li> <li><input type="checkbox"/> Confirmed breeding or roosting sites (i.e. evidence of sites actually being used)</li> </ul> <p>Details:</p>	<p>YES</p> <p>NO</p>												
<b>CHECK POINT</b>	<p>If you have answered NO to ALL of the above then only bats need to be considered in your operations.</p> <p>If you have answered YES to any of the above then the species concerned must be considered as well as bats.</p>													
<b>5</b>	<p>Do the operations comply with Good Practice for bats and any other species found (or likely to be found in your wood) or can the operations be modified to do so? <i>Details: Use reverse of form to expand as required.</i></p>	<p>YES</p> <p>NO</p>												
<b>6</b>	<p><u>Whether or not a licence is required...</u> Has the information been communicated to operators (including the location of breeding sites and sensitive areas)? Tick any that apply.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan)</li> <li><input type="checkbox"/> Shown to operators and/or their supervisor</li> <li><input type="checkbox"/> Marked with paint or hazard tape</li> <li><input type="checkbox"/> Shown on the site plan</li> </ul> <p>Other means:</p>	<p>YES</p> <p>NO</p>												
<b>7</b>	<p>Have arrangements for supervision been made to ensure Good Practice guidance is complied with during the operations? <i>Details:</i></p>	<p>YES</p> <p>NO</p>												
		<b>Notes</b>												
		<p>A licence is not required but continue to sections 6 and 7 below</p> <p>You will need to obtain a licence BEFORE carrying out the work (see EPS Licence Application Forms and Notes)</p>												
		<p>You may commit an offence if you do not tell your operators about the protected species in your wood.</p>												
		<p>You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.</p>												

3. BS 5837:2012 Figure 2: Default specification for protective barrier

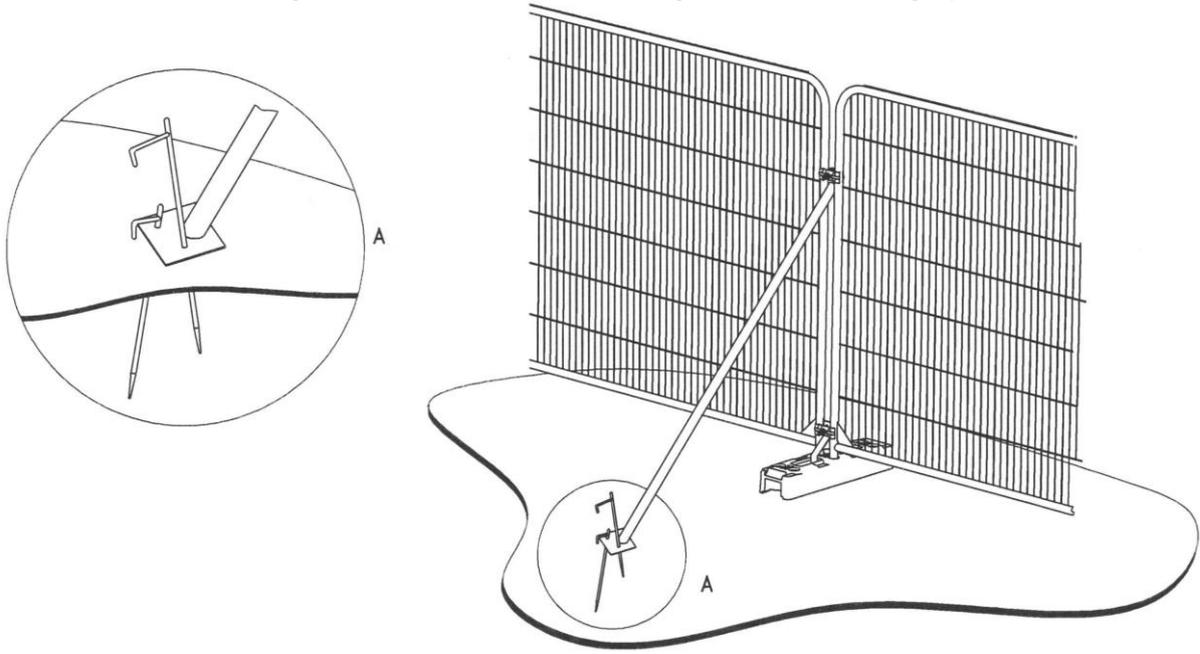


Default  
specification  
for protective  
barrier

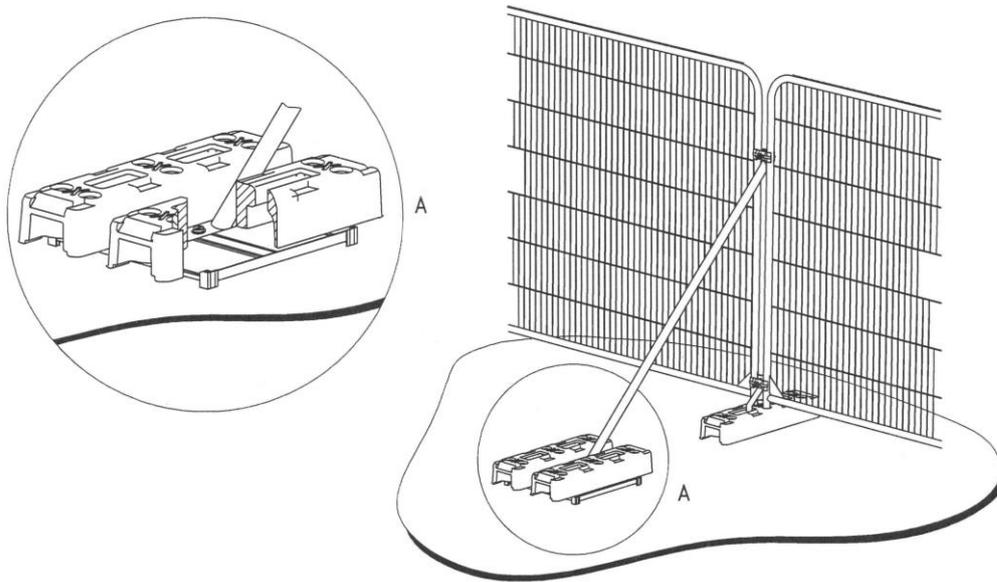
Key

- 1 Standard scaffold pole
- 2 Heavy gauge 2m tall galvanised tube and welded mesh infill panels
- 3 Panels secured to uprights and cross-members with wire ties
- 4 Ground level
- 5 Uprights driven into the ground until secure (minimum depth 0.6m)
- 6 Standard scaffold clamps

4. BS 5837:2012 Figure 3: Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

## **Appendix H**

Hayden's Drawing

- Arboricultural Impact Assessments ●
- Arboricultural Method Statements ●
- Tree Constraints Plans ●
- Arboricultural Feasibility Studies ●
- Shade Analysis ●
- Picus Tomography ●
- Arboricultural Consultancy for Local Planning Authority ●
- Quantified Tree Risk Assessment ●
- Health & Safety Audits for Tree Stocks ●
- Tree Stock Survey and Management ●
- Mortgage and Insurance Reports ●
- Subsidence Reports ●
- Woodland Management Plans ●
- Project Management ●
- Ecological Surveys ●



Telephone  
01284 765391  
Email  
[info@treesurveys.co.uk](mailto:info@treesurveys.co.uk)  
Website  
[www.treesurveys.co.uk](http://www.treesurveys.co.uk)

5 Moseley's Farm  
Business Centre  
Fornham All Saints  
Bury St Edmunds  
Suffolk  
IP28 6JY