



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

Proj. No <b>8961</b>	<b>The Lilacs, Old Hall Lane, Fornham St Martin, Suffolk, IP31 1SS</b>		
Client:		Dr King	
Date of Report:	02/08/2021	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 BS5837:2012 "*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 erect a new residential dwelling and establish a new site access to serve both the existing property and the proposed. As a result, nineteen individual trees, six groups of trees, and seven hedges were inspected. The arboricultural related implications of the proposal are as follows:

- 1 In addition to trees which require felling irrespective of development, it is necessary to fell six low quality or poor longevity individual trees, sections of four landscape features and one whole low quality or poor longevity landscape feature in order to achieve the proposed layout. Additionally, one tree requires minor surgery to permit construction space or access.
- 2 One tree has been identified for removal irrespective of any development proposals.
- 3 The alignment of the proposed dwelling does not encroach within the Root Protection Areas of any trees that are to be retained. In view of this, and as assessed in accordance with BS5837:2012, no specialist foundation designs or construction techniques will be required to prevent damage to tree roots. Specialist foundations may still be required for other reasons, including mitigating the influencing distance of tree roots, subject to expert advice from a structural engineer.
- 4 The alignment of the access driveway that connects the existing property to the site of the proposal encroaches within the Root Protection Area of one tree to be retained and the method of achieving the surface using a modern "no dig" construction technique must be addressed by a Civil Engineer.
- 5 The construction process may require the installation of a temporary load bearing surface to protect the rooting area of T001 unless a "no dig" specification surface is installed early in the process of construction.



- 6 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:
- Structural Engineer (foundation design, item 4.4.1)
  - Civil Engineer (“no dig” surfacing, item 4.4.2)
- 7 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 4.6.1 and 5.1 of this report.
- 8 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 extensive auditable monitoring schedule.

Given the above, there are no overt or overwhelming arboricultural constraints that can be reasonably cited to preclude the proposed construction.



## Contact Details

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# 1.0 Introduction

## 1.1 Terms of Reference

- 1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Dr King to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at The Lilacs, Old Hall Lane, Fornham St Martin, IP31 1SS.
- 1.1.2 The site survey was carried out on 15th July 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;

- Email of instruction from Dr King dated 7<sup>th</sup> July 2021
- Definition of site boundary
- Description of requirements/deadlines
- Topographical survey drawing no. 8753-1
- Proposed site layout drawing Thurlow Architects Proposed Site Plan Proj no.7427 210719 The Lilacs

## 2.0 The Site

### 2.1 Overview

2.1.1 The site is land north of the residential address The Lilacs, Old Hall Lane, Fornham St Martin, Suffolk, IP31 1SS.

### 2.2 Soils

2.2.1 The soils type commonly associated with this site are lime rich loams and clays with impeded drainage. They are of high fertility and support base-rich pastures, and classic 'chalky boulder clay' ancient woodland type habitats. This soil type constitutes approximately 5.3% 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 Tree Preservation Order(s)

The local planning authority West Suffolk Council have deemed it appropriate to provide statutory protection to trees on this site through the serving of a Tree Preservation Order (TPO), Ref no 290(1973) and 175a(1993). The effect of this on the owners, managers or any persons wishing to undertake work on preserved trees is to require them to obtain written permission from West Suffolk Council prior to actioning any surgery or felling etc. The purpose of this process is to try to ensure that the works are appropriate, proportionate, and in keeping with the long-term aims of the TPO (as expressed in the original TPO statement) but, given that trees are living organisms, and the locality within which they are set is liable to change, it is often the case that local planning authority decisions relating to TPO applications require regular review to reflect the current situation rather than the historical perspective of the original date of protection.



There are certain circumstances where written permission from the local planning authority may not be necessary before undertaking works. These include;

- Making a tree safe if it is an imminent threat to people or property.
- Removing dead wood, or a dead tree.

Owners, managers or any persons wishing to undertake work as an exemption to the written permission process **are required** to provide the local planning authority with 5 days' notice prior to attending to a tree which they deem as being dead or dangerous; unless such works are required in an emergency. It is the tree owner's responsibility to provide proof that the tree was indeed dead or dangerous should this exception be challenged; hence, it is advisable always to request an inspection by the Local Planning Authority prior to carrying out such operations. Furthermore, and even in the event of an emergency situation, there is still a duty to notify the local planning authority that work has been completed including supplying an explanation of the necessity. Failure to comply with the requirements of TPO legislation can lead to a maximum fine of up to £20,000 per tree in the Magistrates Court. Fines in the Crown Court are unlimited.

NB: If **detailed planning permission** is granted and as part of the relevant approval, works (felling or surgery) to trees protected by a TPO are agreed as acceptable by the local planning authority, no **additional** written permission to proceed will be required provided that (i) the planning permission remains live, (ii) the works are in strict accordance with the specification of the extant planning permission, and (iii) the works are being completed solely to implement the detailed planning permission.

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 nineteen individual trees, six groups of trees, and seven hedges have been identified. These have been numbered T001 – T019, G001 – G006 and H001 – H007 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. 8961-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:

T001	Remove Ivy to ensure not masking defects and reinspect.
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- 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 erect a new residential dwelling and establish a new site access to serve both the existing property and the proposed within the curtilage of the site.

### 4.2 Access

- 4.2.1 Site access is encumbered by the Root Protection Areas (RPA) of the following retained tree – T001. Therefore, and from a purely arboricultural perspective, it will be necessary to install a proprietary temporary load bearing surface to prevent compaction damage to tree roots. This must be installed as a first stage of development, immediately after the completion of the necessary tree surgery and the installation of protective fencing. Alternatively, the “no dig” surfacing proposed at item 4.4.2 below could be installed as a first phase of development (provided that it is designed to be of sufficient load bearing capacity to cope with construction traffic) and sealed to prevent contamination. The seal can then be removed to allow air and moisture penetration at the completion of the project.

### 4.3. Demolition

- 4.3.1 Demolition of three existing lightweight structures and a tank affects the theoretical RPA of the following retained tree – T001. In order to prevent damage to this specimen works must only be completed with appropriate machinery or by hand within the calculated RPA and may only commence once protective fencing has been erected. In the proximity of the retained trees, all walls and material must be demolished inwards into the footprint of the building and away from the stems (often referred to as “top down, pull back”). Additionally, all plant and vehicles engaged in demolition should either operate outside the theoretical RPA, or should run on a temporary load bearing surface to protect the underlying soil structure. All foundations or hard surfaces within the theoretical RPA are to be broken out with extreme care, either manually or with a breaker and small mini digger (operating outside the RPA, or on the temporary load bearing surface).



As a precautionary measure, the demolition of the tank to the south of T001 must be completed under arboricultural supervision if removal necessitates uninstalling any below ground infrastructure. Linear root pruning may need to be employed in the case of removing below ground infrastructure.

#### **4.4 Construction**

4.4.1 Construction of foundations or structural supports for the proposed dwelling do not encroach within the Root Protection Area (RPA) 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.

4.4.2 Installation of new vehicular hard surfaces that will form the access driveway and six parking bays encroach within the RPA of the following item to be retained – T001. 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 across the existing slope and without cutting into the ground. In order to protect the RPA of the affected tree, this area should be constructed as a first phase of the development – i.e. immediately after the necessary tree surgery has been completed and protective fencing erected, as explained above in item 4.2.1. It is recognised that the final top dressing of the hard surfaces could be added at the completion of the project, however during the construction phase the permeable surface must be sealed and protected to prevent contamination and compaction. Whatever method of sealing and protection is used, this must be removed at the completion of construction to allow for moisture penetration and gaseous exchange. Alternatively, the protective fencing could be re-sited to the edge of the RPA of this tree and the “no dig” construction completed as a final phase of development.

4.4.3 Excavation and soil re-modeling 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 while there is a slope in the RPA of T001, level changes from excavation will not occur in this zone. Once the “no dig” surface required in item 4.4.2 is installed then the surface will be higher than what is currently present.

#### **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 one tree 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*
G006 (section)	Conflicts with proposed hard surfacing	U	Moderate
H003	Conflicts with proposed access driveway	C	Low
H004 (section)	Conflicts with proposed access driveway	C	Moderate
H005 (section)	Conflicts with proposed access	C	Moderate
H006 (section)	Conflicts with proposed access	C	Moderate
T002	Conflicts with proposed access	C	Low
T006	Conflicts with proposed dwelling	C	Moderate
T007	Conflicts with proposed dwelling	C	Moderate
T008	Conflicts with proposed dwelling	C	Moderate
T014	Conflicts with proposed hard surfacing	U	Moderate
T015	Conflicts with proposed access	C	Low

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



## 4.12 Post Development Implications

- 4.12.1 The design of the development, together with the orientation of the site is such that matters involving retained trees (e.g. shading, privacy, screening, direct damage, future pressure for removal) are not considered to be significant issues.
- 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. 8961-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. 8961-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.



## 5.9 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 Dr King 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 extensive 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.

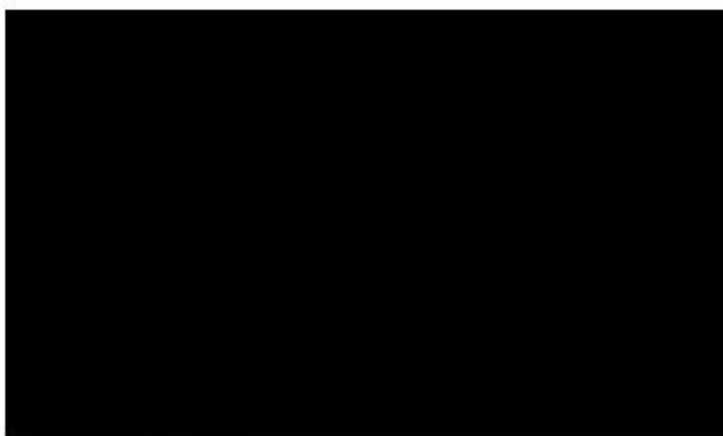
However, if any additional alterations to the property or soil levels are carried out and/or further tree works undertaken other than specified within the report, it will become invalid and a new tree inspection strongly recommended.

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:**



July 2021.....

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





## 8.0 References

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## 9.0 Appendices

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## Appendix A - Species List & Tree Problems

### Species List:

Blackthorn	<i>Prunus spinosa</i>
Cherry	<i>Prunus sp</i>
Cherry Laurel	<i>Prunus laurocerasus</i>
Corsican Pine	<i>Pinus nigra ssp. laricio var. Maritime</i>
Crab Apple	<i>Malus sylvestris</i>
English Oak	<i>Quercus robur</i>
Holly	<i>Ilex aquifolium</i>
Hornbeam	<i>Carpinus betulus</i>
Horse Chestnut	<i>Aesculus hippocastanum</i>
Hybrid Black Poplar	<i>Populus x canadensis</i>
Laburnum	<i>Laburnum anagyroides</i>
Leyland Cypress	<i>X Cuprocyparis leylandii</i>
Sea Buckthorn	<i>Hippophae rhamnoides</i>
Swedish Whitebeam	<i>Sorbus intermedia</i>
Sycamore	<i>Acer pseudoplatanu</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: <i>Ganoderma applanatum</i> (Artist's Fungus)</b>	
<b>Symptoms/damage type and cause:</b>	is parasitic and saprophytic, with a perennial bracket typically found low on the stem or close to the roots. The bracket is flat and usually a series of dull grey concentric semi circles for each year of growth. The bracket has a 1-2mm thick crust above the brown internal pore layers. The crust cannot be cracked with a nail. The underside of the bracket is cream/white colour. The perennial nature of the fungus means that the infection is constant and the extent of decay can align with the size of the bracket. It is not uncommon for more than one bracket to be present on a single tree and compounds the effects of the fungus on the host. The spores produced by the fungus are a red-brown colour that can heap up at the base of host trees.
<b>Consequence:</b>	The fungal pathogen causes white rot in the sapwood and heartwood. The wood becomes soft and prone to tearing or windthrow during high wind events.
<b>Control:</b>	There is no control for this fungus and it may be necessary to fell the infected tree to prevent it becoming a hazard in the future.
<b>Species affected:</b>	Broadleaved species

<b>Name: <i>Hedera helix</i> (Ivy)</b>	
<b>Symptoms/damage type and cause:</b>	Ivy may grow to varying degrees on all areas of a tree from the base to the upper crown. It is possible that in doing so it will out-compete the host tree for available light thereby suppressing the host.
<b>Consequence:</b>	This is generally only harmful to the tree on already unhealthy specimens which may be constricted by large ivy stems around the trunk or may have their top growth suppressed by a mass of flowering shoots in the crown. Ivy can also mask potentially dangerous faults on a tree.
<b>Control:</b>	Ivy should only be removed if absolutely necessary because it provides abundant cover to wildlife and then by severing twice close to the ground and removing a length of stem thereby causing the gradual dying away of the aerial parts of the plant providing extended benefit to wildlife whilst relieving the pressure on the tree.
<b>Species affected:</b>	Most trees can be affected.
<b>Images:</b>	



## **Appendix B**

Schedule of Trees

**SCHEDULE OF TREES (AIA)** The Lilacs, Old Hall Lane, Fornham St Martin, Suffolk

 Surveyed By: Alex Turner  
 Managed By: Alex Turner

Date:

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							
G001	Swedish Whitebeam	150	2.5		Low	N2.5, E2.5, S2.5, W2.5		Big leaved Sorbus. Pair of trees with multi-stemmed form. Stout but wide crowns. Unremarkable specimens. Fair form and condition.	C1	No work required.	4		
		1.8	0.3		SM	Moderate							
Yes		10.2			10+ years	Grass							
G002	English Oak	380	18		Moderate	N6.5, E6.5, S6.5, W6.5		Group of three trees including one off-site tree that has been recorded due to proximity with site and influencing distance. Crowns are fairly etiolated due to growing close to the Leyland Cypress hedge and the competition for available light. Minor deadwood. Fair form and condition.	C1	No work required.	4		
		4.56	3		SM	High							
Yes		65.3			10+ years	Bare earth, Grass							
G003	Corsican Pine	310	20		Moderate	N3, E3.5, S6, W6		Pair of trees forming group. Northern and eastern crown extents are curtailed by surrounding trees. Southern trees exhibits tight stem unions at 10 metres. Fair form and condition.	C1	No work required.	4		
		3.72	2		EM	Moderate							
Yes		43.5			10+ years	Bare earth, Grass							
G004	Hybrid Black Poplar	470	20		High	N4.5, E4.5, S4.5, W4.5		Group of six trees forming L-shaped feature on the boundary. Average dimensions provided. Stems located on the boundary have occluded three metal fencing wires where they were attached to the trees instead of fence posts. The wires cannot be removed from the trees now. Evidence of past surgery to crown lift. Forms appear typical for species. Fair form and condition.	C1	No work required.	4		
		5.64	1.5		EM	High							
Yes		99.9			10+ years	Grass, Woodland floor							
G005	Leyland Cypress	450	18		High	N5, E5, S5, W5		Large well established but unmanaged hedge that has been allowed to grow into individual trees forming a group of overlapping crowns growing off-site. Crown encroaches on to site. Average dimensions provided. Trees on eastern aspect are younger and shorter but have the same horizontal extent. Trees appear typical for species. Fair form and condition.	C2	No work required.	4		
		5.4	1		EM	Moderate							
No		91.6			10+ years	Bare earth, 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	Age	Water Demand
			RPA (m <sup>2</sup> )	Aspect									Aspect	SULE	Ground Cover
G006	Cherry Spp	300	14		Moderate	N4.5, E4.5, S4.5, W4.5	Group of four trees growing beneath overhead power lines. All trees bar one are multi-stemmed. All trees have been subject to topping but not all stems have been affected. Evidence of past surgery. Two trees exhibit significant bark damage and visible decay to their stems. Damaged stems included those that have been topped and those that have not. These damaged stems must be monitored to assess vitality when leaves and flowers appear compared to three undamaged specimens. Location beneath power lines is poor. Intervention surgery to protect the power lines will be a constant constraint on the health of the trees. Poor form and condition.	U	No work required.	4	Fell westernmost tree as shown on drawing no. 8961-D-AIA.	0			
		3.6	1		M	Moderate									
Yes		40.7			<10 years	Grass									
H001	Leyland Cypress	40	2		Moderate	N0.5, E0.5, S0.5, W0.5	Boundary hedge. Managed. Forms good screen. Fair form and condition.	C2	No work required.	4					
		0.48	0.1		Y	High									
Yes		0.7			10+ years	Grass									
H002	Cherry Laurel, Box	50	2		Moderate	N0.7, E0.7, S0.7, W0.7	Linear hedge feature reinforcing screen on site boundary. Fair form and condition.	C2	No work required.	4					
		0.6	0.1		SM	Moderate									
Yes		1.1			10+ years	Bare earth, Grass									
H003	Leyland Cypress	40	1.5		Low	N0.6, E0.6, S0.6, W0.6	Low lying managed hedge. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		0.48	0.1		Y	High									
Yes		0.7			10+ years	Grass, Gravel									
H004	Cherry Laurel, Sea Buckthorn	50	2.5		Moderate	N0.5, E0.5, S0.5, W0.5	Linear feature along boundary. Managed. Fair form and condition.	C2	No work required.	4	Fell westernmost section as shown on drawing no. 8961-D-AIA.	0			
		0.6	0.1		SM	Moderate									
Yes		1.1			10+ years	Bare earth, Grass									
H005	Blackthorn	40	2		Moderate	N0.7, E0.7, S0.7, W0.7	Boundary hedge. Managed. Fair form and condition.	C2	No work required.	4	Fell central section as shown on drawing no. 8961-D-AIA.	0			
		0.48	0.1		SM	Moderate									
Yes		0.7			10+ years	Bare earth									

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
H006	Hornbeam	40	1.5		Moderate	N0.5, E0.5, S0.5, W0.5	Boundary hedge. Managed. Fair form and condition.	C2	No work required.	4	Fell central section as shown on drawing no. 8961-D-AIA.	0			
		0.48	0.1		Y	Moderate									
Yes		0.7			10+ years	Bare earth, Grass									
H007	Hornbeam	30	2		Moderate	N0.5, E0.5, S0.5, W0.5	Managed boundary hedge. Fair form and condition.	C2	No work required.	4					
		0.36	0.1		SM	Moderate									
Yes		0.4			10+ years	Bare earth, Grass, Gravel									
T001	Horse Chestnut	1060	15		High	N5.5, E8, S7, W7	Tree growing on site boundary and adjacent to the level change slope between south west and north east sections of the site. Evidence of the ground being lowered around the stem base. Epicormic growth is sprouting from lower in the soil than where the base of the stem meets the ground. Old severed roots are visible sticking out of the soil where the slope for the level change is. Ivy clad stem inhibits full visual inspection. Multi-stemmed form from 2 metres with the major stems forming structure of crown. Evidence of past surgery to reduce crown. Bud health looks good. No leaves on tree to assess current active vitality. Crown base over slope is approximately 3 metres above ground level. Good form and condition.	B1	Remove Ivy to ensure not masking defects and reinspect.	2	Crown lift to 3m as shown on drawing no. 8961-D-AIA.	0			
		12.72	2		M	Moderate									
Yes		508.3			20+ years	Grass, Dense undergrowth									
T002	Holly	60	2.5		Low	N1, E1, S1, W1	Multi-stemmed form from ground level. Good vitality. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		0.72	0.1		Y	Low									
Yes		1.6			10+ years	Bare earth, 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	Age	Water Demand						
		On site	RPA (m <sup>2</sup> )	Aspect	Aspect	SULE						
T003	Sycamore	990	17		High	N8.5, E10, S9, W9	Large tree. Major and minor deadwood throughout crown. Signs of apical dieback. Large piece of hanging deadwood located high on stem. Evidence of past surgery and natural tear outs. A surgery wound on the eastern aspect at approximately 4 metres appears to have formed a cavity but the angle makes it difficult to see how deep it goes. No obvious causations of the dieback other than age. Deadwood should be removed if site use changes. Good form. Fair condition.	C3	No work required.	4		
		11.88	1.8		OM	Moderate						
Yes		443.4			10+ years	Grass						
T004	Horse Chestnut	630	13		Moderate	N5, E5, S4.5, W6	Off-site tree with crown overhanging on to site. Multi-stemmed form from ground level. Average dimensions provided due to lack of access. Tight unions. Poor form. Fair condition.	C1	No work required.	4		
		7.56	1.5		EM	Moderate						
No		179.6			10+ years	Dense undergrowth, Grass						
T005	English Oak	630	17		High	N5, E9, S9, W9	Tree growing on site boundary and amongst a large Leyland Cypress hedge. Crown extent on the northern aspect is limited compared to the other aspects. Minor deadwood. Multi-stemmed form from 2 metres where auxin deficiency has led to branches becoming over sized and forming stems. Main stem features two codominant stems and a tight union that starts at 1.5 metres but has separated at 2.5 metres. Unclear when the break occurred or how secure it is currently. Recommend felling the tree. Poor condition.	U	Fell to ground level.	3		
		7.56	2		EM	High						
Yes		179.6			<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	Age	Water Demand
			RPA (m <sup>2</sup> )	Aspect									Aspect	SULE	Ground Cover
<b>T006</b>	English Oak	320	12		Moderate	N5, E3, S6, W6	Tree with asymmetric form likely due to trees to the south casting shade where the eastern portion of the crown should be. Evidence of tree surgery on eastern aspect removing one branch. Occlusion of the wound is poor due to not cutting back to branch collar. Deadwood present low in crown. Twin stemmed from 2.5 metres with a wide U shaped union. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		3.84	1		SM	High									
<b>Yes</b>		46.3			10+ years	Grass									
<b>T007</b>	English Oak	340	16		Moderate	N5, E3.5, S1.5, W4.5	Tree with asymmetric form likely due to close proximity with neighbouring tree to the south not having enough space between stems to form a full crown on the southern aspect. Evidence of past tree surgery to lift crown. Minor deadwood. Twin stemmed from 3 metres with a narrow union but the southern stem is smaller and somewhat subordinate to the main stem. Tree suppresses the tree to the north and the tree to tree south. Long term conflict with tree to the south is inevitable due to too close proximity. It may be prudent to fell this tree to benefit its neighbours. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		4.08	2		SM	High									
<b>Yes</b>		52.3			10+ years	Grass									
<b>T008</b>	English Oak	470	16		Moderate	N4, E5, S6, W6	Tree with under formed crown on northern aspect due to close proximity with neighbouring tree. Twin stemmed form from 2 metres forming a U shaped union. Minor deadwood. Evidence of past surgery to lift crown. Form may be improved by the removal of the tree to the north otherwise condition is limited and there will be a long term conflict between both trees. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		5.64	1		SM	High									
<b>Yes</b>		99.9			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	Age	Water Demand						
		RPA (m <sup>2</sup> )	Aspect	Aspect	SULE	Ground Cover						
T009	English Oak	320	15		Moderate	N0.1, E0.1, S5, W6	Off-site tree with crown forming exclusively on to site. Leyland Cypress hedge to the north and east prevents crown formation on those aspects. Evidence of past surgery to lift crown and dead stubs have been left on the stem. Tree will never reach its potential with the Leyland Cypress neighbouring it. Asymmetric form. Twin stemmed from 3 metres. Wire fence touches stem but has not been occluded yet. Poor form. Fair condition.	C1	No work required.	4		
		3.84	2		SM	High						
No		46.3			10+ years	Grass, Woodland floor						
T010	Corsican Pine	450	18		Moderate	N3, E5, S5, W3.5	Off-site tree with crown overhanging on to site. Crown is partially suppressed by neighbouring trees. Good form and condition.	B1	No work required.	4		
		5.4	2.5		EM	Moderate						
No		91.6			20+ years	Grass, Woodland floor						
T011	Cherry Sp	640	10		Moderate	N5.5, E6, S5.5, W4	Multi-stemmed form from ground level. Off-site tree so all dimensions are estimated. Tree is located beneath overhead power lines and so has been subject to topping in the past. Tree is in an unbreakable relationship with the power lines and future conflict and surgery is inevitable. Fair form and condition despite the topping.	C1	No work required.	4		
		7.68	2		M	Moderate						
No		185.3			10+ years	Bare earth, Dense undergrowth						
T012	English Oak	430	18		High	N8.5, E7.5, S2.5, W6.5	Established tree. Southern crown portion is suppressed likely as a result of neighbouring trees to the south as well as the overhead power lines. Stem leans gently northwards. Minor deadwood. Hanging deadwood. Good form and condition despite an underdeveloped southern crown.	B1	No work required.	4		
		5.16	3		SM	High						
Yes		83.6			20+ 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	Age	Water Demand
			RPA (m <sup>2</sup> )	Aspect									Aspect	SULE	Ground Cover
T013	Cherry Sp	250	6		Low	N3, E1.5, S2.5, W3.5	Twin stemmed from ground level. Tree has been subject to topping as a result of growing beneath overhead power lines. Tree used to have four stems but two have been felled in the past. Three Ganoderma brackets are present at ground level over the two stems. No topo position so location is indicative. Poor location due to power lines. Poor form and condition.	U	No work required.	4					
		3	1.5		EM	Moderate									
Yes		28.3			<10 years	Grass									
T014	English Oak	390	10		Moderate	N3.5, E4, S5, W5.5	Tree growing north of an existing shed with a concrete base. Unclear whether the concrete base has affected the health of the tree. Tree has been subject to tipping due to proximity with overhead power lines. Power lines pose a constant constraint to the health and structure of the tree. Location of tree so close to utilities is poor. Poor form. Fair condition.	U	No work required.	4	Fell to ground level.	0			
		4.68	2		SM	High									
Yes		68.8			10+ years	Building, Grass									
T015	Unknown	110	6		Low	N3, E2, S1, W2	Tree becoming established. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0			
		1.32	0.5		Y	Moderate									
Yes		5.5			10+ years	Grass									
T016	Cherry Sp	250	5.5		Moderate	N4, E3, S3.5, W4	Tree growing on edge of driveway. Wide spreading form. Fair form and condition.	C1	No work required.	4					
		3	0.5		EM	Moderate									
Yes		28.3			10+ years	Grass, Gravel									
T017	Crab Apple - Native	210	7		Low	N2, E2, S3.5, W3.5	Tree growing on edge of driveway. Evidence of past pruning to lift crown. Fair form and condition.	C1	No work required.	4					
		2.52	1		EM	Moderate									
Yes		20			10+ years	Grass, Gravel									
T018	Cherry Sp	240	7		Moderate	N3.5, E3.5, S3.5, W3	Multi-stemmed form from 1 metre. Tight unions. Fair form and condition.	C1	No work required.	4					
		2.88	1		SM	Moderate									
Yes		26.1			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	Age	Water Demand						
		RPA (m <sup>2</sup> )	Aspect	Aspect	SULE	Ground Cover						
T019	Laburnum	220	7		Low	N2.5, E2.5, S2.5, W2.5	Twin stemmed form from 1 metre. Growing within hedge. Unable to measure crown on north and east aspects due to boundary. Fair form and condition.	C1	No work required.	4		
		2.64	2		SM	Moderate						
Yes		21.9			10+ years	Dense undergrowth, Grass						

## **Appendix C**

Schedule of Works - Irrespective of Development

## SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

The Lilacs, Old Hall Lane, Fornham St Martin, Suffolk

Surveyed By: Alex Turner

Surveyed:

Managed By: Alex Turner

Tree No.	Species	Work required	Priority
<b>T001</b>	Horse Chestnut	Remove Ivy to ensure not masking defects and reinspect.	<b>2</b>
<b>T005</b>	English Oak	Fell to ground level.	<b>3</b>

## **Appendix D**

Preliminary Schedule of Works to Allow Development



## SCHEDULE OF WORKS (AIA)

The Lilacs, Old Hall Lane, Fornham St Martin, Suffolk

Surveyed By: Alex Turner

Surveyed:

Managed By: Alex Turner

Tree No.	Species	Work required	Priority
<b>G006</b>	Cherry Spp	Fell westernmost tree as shown on drawing no. 8961-D-AIA.	<b>0</b>
<b>H003</b>	Leyland Cypress	Fell to ground level.	<b>0</b>
<b>H004</b>	Cherry Laurel, Sea Buckthorn	Fell westernmost section as shown on drawing no. 8961-D-AIA.	<b>0</b>
<b>H005</b>	Blackthorn	Fell central section as shown on drawing no. 8961-D-AIA.	<b>0</b>
<b>H006</b>	Hornbeam	Fell central section as shown on drawing no. 8961-D-AIA.	<b>0</b>
<b>T001</b>	Horse Chestnut	Crown lift to 3m as shown on drawing no. 8961-D-AIA.	<b>0</b>
<b>T002</b>	Holly	Fell to ground level.	<b>0</b>
<b>T006</b>	English Oak	Fell to ground level.	<b>0</b>
<b>T007</b>	English Oak	Fell to ground level.	<b>0</b>
<b>T008</b>	English Oak	Fell to ground level.	<b>0</b>
<b>T014</b>	English Oak	Fell to ground level.	<b>0</b>
<b>T015</b>	Unknown	Fell to ground level.	<b>0</b>

## **Appendix E**

Explanatory Notes

# Explanatory Notes



## Categories

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

<b>No</b>	Identifies the tree on the drawing.
<b>Species</b>	Common names are given to aid understanding for the wider audience.
<b>BS 5837 Main Category</b>	<p>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:</p> <p><b>Category A</b> - Those of high quality with an estimated remaining life expectancy of at least 40 years;</p> <p><b>Category B</b> - Those of moderate quality with an estimated remaining life expectancy of at least 20 years;</p> <p><b>Category C</b> - 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;</p> <p><b>Category U</b> - 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.</p>
<b>BS 5837 Sub Category</b>	<p>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:</p> <p><b>Sub Category 1</b> - Mainly arboricultural qualities;</p> <p><b>Sub Category 2</b> - Mainly landscape qualities;</p> <p><b>Sub Category 3</b> - Mainly cultural values, including conservation .</p> <p>Please note that a specimen or landscape feature may fulfil the requirements of more than one Sub Category.</p>
<b>DBH (mm)</b>	<p>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.</p>
<b>Age</b>	<p>Recorded as one of seven categories:</p> <p><b>Y</b> Young. Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. less than 150 mm DBH.</p> <p><b>S/M</b> Semi-mature. An established tree, but one which has not reached its prospective ultimate height.</p> <p><b>E/M</b> 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.</p> <p><b>M</b> Mature. A mature specimen with limited potential for any significant increase in size, even if healthy.</p> <p><b>O/M</b> 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.</p>



## 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

**Tree Preservation Orders**

**Order: 290(1973)**  
**Tree Number: G4**  
**Species:** 2 Horse chestnut (*Aesculus hippocastanum*), 1 Elm (*ulmus*), 1 Sycamore (*Acer pseudoplatanus*) and 1 Beech (*Fagus sylvatica*)  
**Category:** Group  
[More Information](#)

**Order: 175a(1993)**  
**Tree Number: T9**  
**Species:** Horse Chestnut

Drain  
Pond  
Churchgate  
Richmond  
St Martins Church  
Jennings  
Home-Lea  
Milton  
Kettlewell  
Ecatha  
Greenbriar  
Lizbert  
Davaar  
The Croft  
Sherborne  
LB  
Bleak H

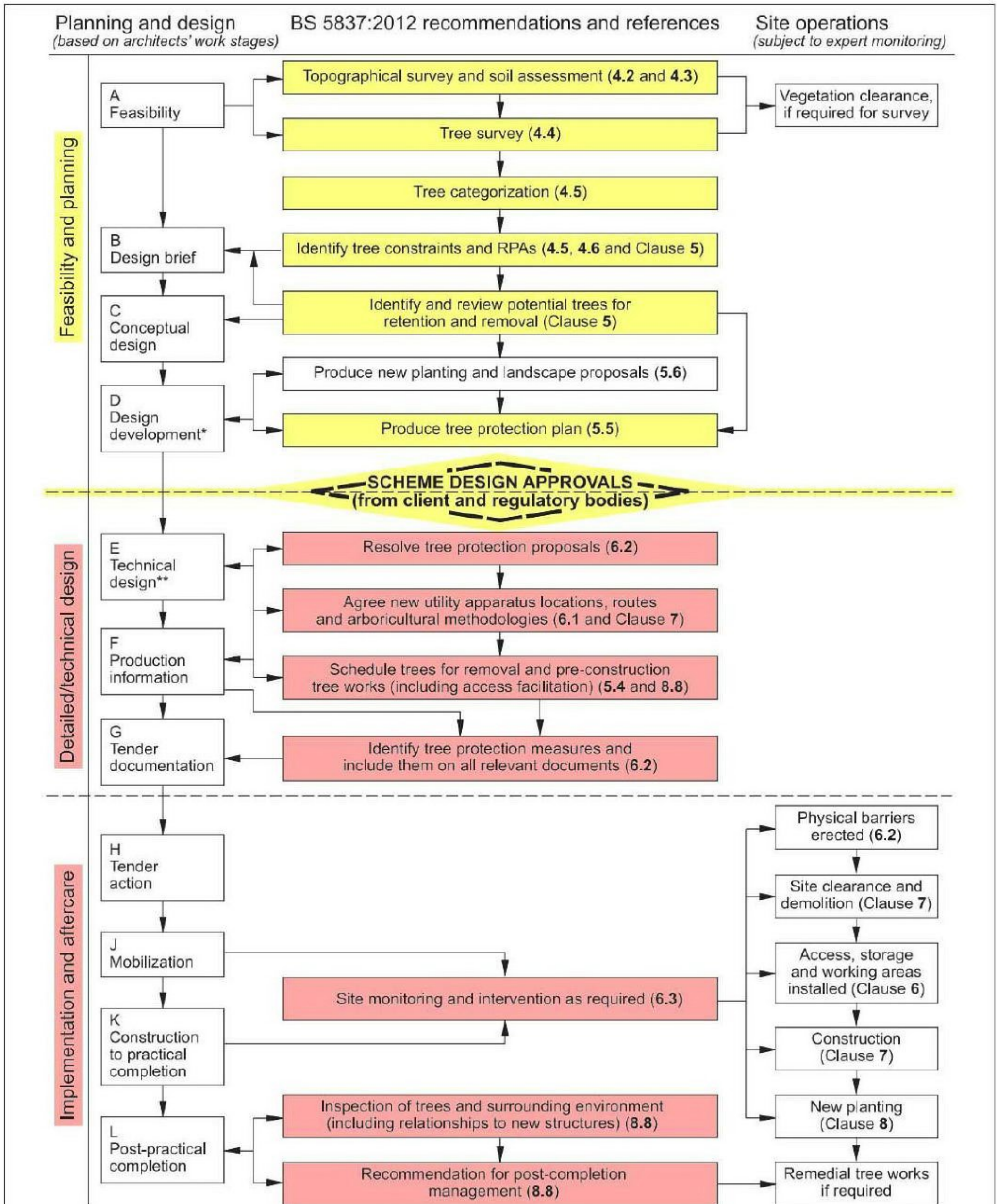
rights 2019 OS 100023282.



## **Appendix G**

### **Advisory Information & Sample Specifications**

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



\* The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.

\*\* See Commentary on Clause 6.

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 <b>OTHER THAN BATS</b> which are potentially everywhere? Tick any that apply. See distribution maps in the Good Practice Guidance for each species -</p> <p><input type="checkbox"/> Dormice  <input type="checkbox"/> Otters  <input type="checkbox"/> Great crested newts  <input type="checkbox"/> Sand lizards  <input type="checkbox"/> Smooth snakes</p>	<p>Name of Wood:</p> <hr/> <p>Grid Reference:</p> <table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> </tr> </table> <p>Area: (ha)</p> <table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> </tr> </table> <p>Date of Assessment:</p> <table border="1" style="width: 100%; height: 20px;"> <tr> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </td> <td style="width: 20px;"> </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> <p><input type="checkbox"/> Old trees with holes and crevices which might be used bats  <input type="checkbox"/> Species rich scrub/coppice, early growth stage plantations and forest interfaces  <input type="checkbox"/> Rivers on which otters might be found  <input type="checkbox"/> Ponds which might be occupied by great crested newts  <input type="checkbox"/> Open areas on heathy soils</p>	<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> <p><input type="checkbox"/> National Biodiversity Network (<a href="http://www.nbn.org.uk">www.nbn.org.uk</a>)  <input type="checkbox"/> Local Biological Records Centre  <input type="checkbox"/> Local Wildlife Trust  <input type="checkbox"/> Other  <i>Specify Other:</i></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> <p><input type="checkbox"/> Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts)  <input type="checkbox"/> Sightings (or echo-location)  <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)  <input type="checkbox"/> Confirmed breeding or roosting sites (i.e. evidence of sites actually being used)  <i>Details:</i></p>	<p>YES</p> <p>NO</p>																								
<b>CHECK POINT</b>	<p>If you have answered <b>NO</b> to ALL of the above then only bats need to be considered in your operations.</p> <p>If you have answered <b>YES</b> to any of the above then the species concerned must be considered as well as bats.</p>	<div style="text-align: center; background-color: #e6f2ff; padding: 5px;"><b>Notes</b></div>																								
<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> <p><input type="checkbox"/> Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan)  <input type="checkbox"/> Shown to operators and/or their supervisor  <input type="checkbox"/> Marked with paint or hazard tape  <input type="checkbox"/> Shown on the site plan  <i>Other means:</i></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>																								

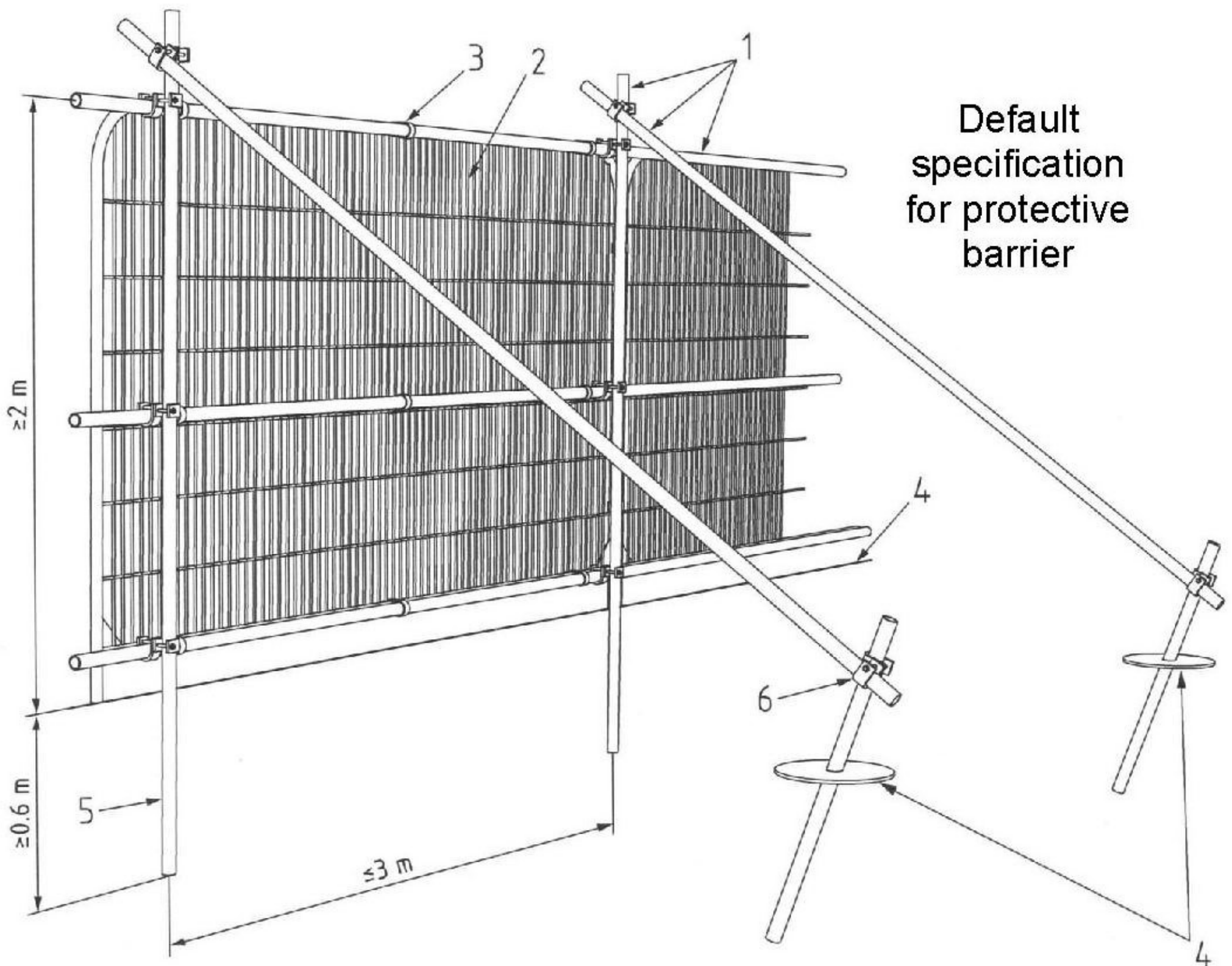
A licence is not required but continue to sections 6 and 7 below

You will need to obtain a licence BEFORE carrying out the work (see EPS Licence Application Forms and Notes)

You may commit an offence if you do not tell your operators about the protected species in your wood.

You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.

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

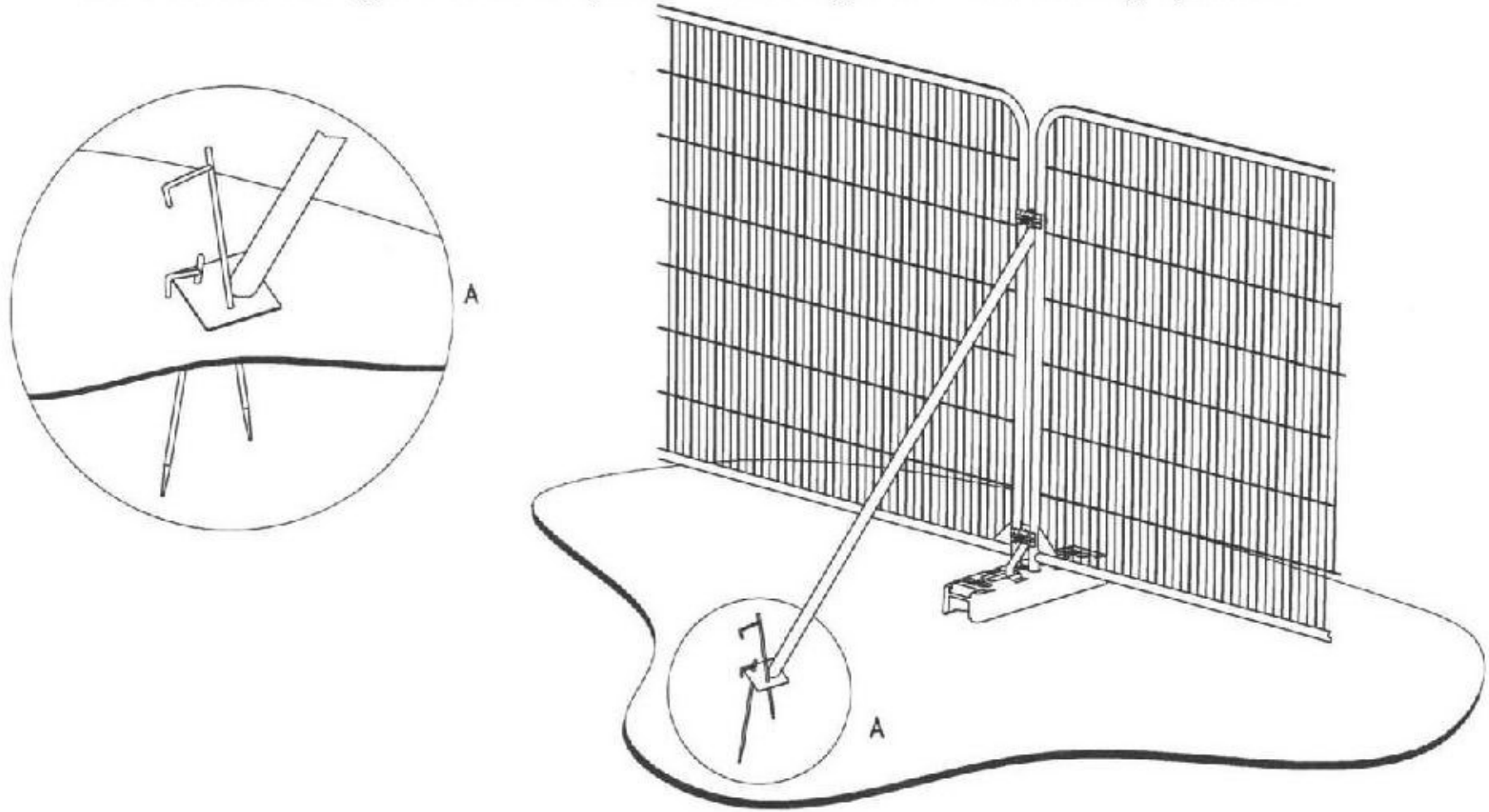


Default  
specification  
for protective  
barrier

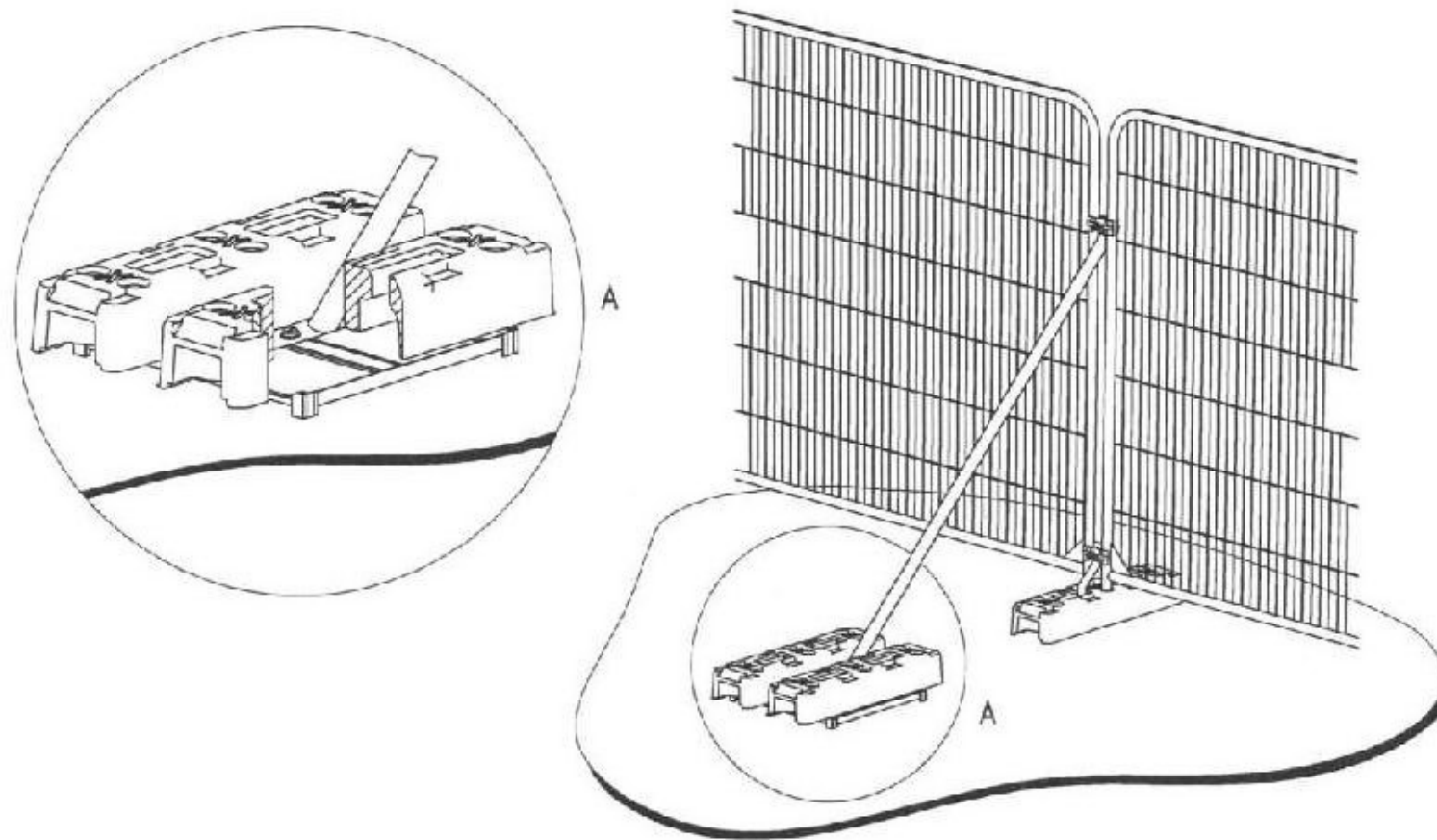
Key

- 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 ●



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