



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

Proj. No <b>8240</b>	<b>Land off Richard Avenue, Wivenhoe, Essex, CO7 9JF</b>		
Client:		Taylor Wimpey East London	
Date of Report:	19/03/2021	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 up to 117 new residential dwellings with associated hard surfacing, services, garden space and open spaces. As a result, twenty-nine individual trees, fifteen groups of trees, four areas 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 one low quality or poor longevity individual tree and one low quality or poor longevity landscape feature in order to achieve the proposed layout. Additionally, one tree and one group of trees require minor below ground surgery to permit construction space or access.
- 2 Two individual trees and one group of trees have been identified for removal irrespective of any development proposals. It should be noted that the group of trees – G009 – is an off-site feature and so there should be consideration to share the recommendations in this report with the owner of the trees.
- 3 The alignment of proposed dwellings 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 pedestrian and vehicular hard surfacing nominally intrudes within the Root Protection Areas of one individual tree and one group of trees to be retained. This has only 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 “no dig” construction techniques at this location
- 5 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)



- 6 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.
- 7 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, 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

Client – Taylor Wimpey East London			
<b>Address</b> Ground Floor, East Wing BT Brentwood 1 London Road Brentwood Essex CM14 4QP	<b>Contact</b> Ms Lydia Reeves	<b>Tel:</b> <b>E-mail:</b>	01277 236852 <a href="mailto:Lydia.Reeves@taylorwimpey.com">Lydia.Reeves@taylorwimpey.com</a>

Local Planning Authority – Colchester Borough Council			
<b>Address</b> Rowan House, 33 Sheepen Road, Colchester Essex CO3 3WG	<b>Trees Officer</b> Mr Liam McKarry	<b>Tel:</b> <b>E-mail:</b>	01206 282222 <a href="mailto:liam.mckarry@colchester.gov.uk">liam.mckarry@colchester.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 Alex Turner	<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 Taylor Wimpey East London to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Land off Richard Avenue, Wivenhoe, Essex, CO7 9JF.
- 1.1.2 The site survey was carried out on 17/07/2020. 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 Rob Piggott dated 10<sup>th</sup> March 2021
- Definition of site boundary
- Description of requirements/deadlines
- Topographical survey
- Proposed site layout drawing no. TW027 CAD Layout Option 9 rev P 03-03-2021

## 2.0 The Site

### 2.1 Overview

2.1.1 The site is an agricultural field located east of Richard Avenue and south of Wivenhoe Town Football Club.

### 2.2 Soils

2.2.1 The soils type commonly associated with this site are slightly acidic loams and clays with impeded drainage. They are of moderate to high fertility and support a wide range of pasture and woodland type habitats. This soil type constitutes approximately 10.6% 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

The local planning authority Colchester District Council have deemed it appropriate to provide statutory protection to neighbouring trees that overhang this site through the serving of a Tree Preservation Order (TPO), Ref no 10/76 A1 & A2. 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 Colchester District 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.

### 2.3.2 Felling Licence

All trees within the United Kingdom are protected under the Forestry Acts. In general, anyone felling more than 5 cubic metres of timber in any calendar quarter requires a Felling Licence from the Forestry Commission. There are exemptions however and these are as follows:-

A Felling Licence is not required in the following instances:

- To fell trees in a garden, an orchard, a churchyard, or a designated open space (Commons Act 1899).
- To carry out surgery operations such as pruning, reduction, dead wooding or pollarding.
- To fell less than 5 cubic metres in a calendar quarter. (Please note that not more than 2 cubic metres in a calendar quarter may be sold).
- To fell trees that are 8 centimetres or less in diameter when measured 1.3 metres from the ground. Trees removed for thinning may have a diameter of up to 10 centimetres and trees managed under a coppice regime may have a diameter of up to 15 centimetres.
- To fell trees previously approved for removal under a Dedication Scheme, or where Detailed Planning Permission has been granted.

Substantial fines exist for not complying with the requirements of a Felling Licence.





### 2.3.3 Hedgerow Regulations and Inclosure Act

Certain hedgerows within the United Kingdom are protected under The Hedgerow Regulations 1997. The regulations apply to any hedgerow growing in, or adjacent to, any common land, protected land (local nature reserves and SSSIs), or land used for agriculture, forestry or the breeding or keeping of horses, ponies or donkeys, if it: (a) has a continuous length of, or exceeding 20m; or (b) it has a continuous length of less than 20m and, at each end, meets another hedgerow. The regulations do not apply to hedgerows within the curtilage of, or marking a boundary of the curtilage of, a dwelling house.

Anybody wishing to remove or destroy a hedge must apply to their Local Planning Authority (LPA) for consent. Substantial fines exist for not complying with the requirements The Hedgerow Regulations.

Older hedges could be protected by old Inclosure Acts. These Acts may require that hedges are retained and managed forever more.

It is recommended professional legal advice be sought before removing hedgerows to determine whether the hedgerow might be protected by an Inclosure Act. Many Inclosure Acts are deposited in Local Records Offices.

## 3.0 Tree Survey

- 3.1 As part of this survey a total of twenty-nine individual trees, fifteen groups of trees, four areas of trees and seven hedges have been identified. These have been numbered T001 – T029, G001 – G015, A001 -A004 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. 8240-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 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 up to 117 new residential dwellings with associated hard surfacing, services, garden space and open spaces 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 – T002. Therefore, and from a purely arboricultural perspective, it will be necessary, as part of the access facilitation pruning, to undertake root pruning. This will obviate the necessity to install a proprietary temporary load bearing surface to prevent compaction damage to tree roots.

### **4.3 Demolition**

4.3.1 There is no demolition associated with this proposal.

### **4.4 Construction**

4.4.1 Construction of foundations or structural supports 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 surfacing encroach within a small portion of the RPA of the following tree to be retained – T002. 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 “no dig” construction methods in this situation.

4.4.3 Installation of new pedestrian hard surfacing encroach within a small portion of the RPA of the following group of trees to be retained – G002. 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 “no dig” construction methods in this situation.

4.4.4 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 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 Access Facilitation Pruning 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*
H001 (section)	Conflicts with proposed access and hard surfacing	C	Low
T001	Conflicts with proposed access and hard surfacing	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. 8240-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. 8240-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 arboricultural contractor approved by the Local Planning Authority 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 Construction within the Root Protection Area

5.8.1 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 Taylor Wimpey East London 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, 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:**



March 2021.....

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





## 8.0 References

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## 9.0 Appendices

Appendix	<b>A</b>	Species List & Tree Problems
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## Appendix A - Species List & Tree Problems


### Species List:


Ash	<i>Fraxinus excelsior</i>
Blackthorn	<i>Prunus spinosa</i>
Cherry	<i>Prunus sp</i>
Cypress	<i>Cupressus sp</i>
Elder	<i>Sambucus nigra</i>
English Elm	<i>Ulmus minor var. 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>
Holly	<i>Ilex aquifolium</i>
Honey Locust	<i>Gleditsia triacanthos</i>
Lawson Cypress	<i>Chamaecyparis lawsoniana</i>
Macrocarpa	<i>Cupressus macrocarpa</i>
Norway Spruce	<i>Picea abies</i>
Spanish Oak	<i>Quercus falcata</i>
Spinning Gum	<i>Eucalyptus perriniana</i>
Wild Cherry	<i>Prunus avium</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>Hedera helix</i> (Ivy)	
<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)** Land off Richard Avenue, Wivenhoe, Essex

Surveyed By: Alex Turner Date: 17/07/2020

Managed By: Alex Turner

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 (m²)	Aspect	Aspect						
A001	Hawthorn, Blackthorn, Elder	220	5		Low	N3, E3, S3, W3	Dense impenetrable mass of thorn, Ivy and Elder. Forms an unmanaged screen between field to east and dwelling to west. Unremarkable trees of limited merit.	C2	No works required.	4		
		2.64	0		SM	High						
		Yes	21.9			10+ years						
A002	Hawthorn	290	5.5		Moderate	N3, E3, S3, W3	Dense impenetrable mass of Hawthorn and Ivy. Forms an unmanaged screen between field to east and dwelling to west. Unremarkable trees of limited merit. Appears to be part of the other two fragmented sections of a former, lengthier hedgerow.	C2	No works required.	4		
		3.48	0		SM	High						
		Yes	38			10+ years						
A003	Hawthorn	220	6.5		Moderate	N3, E3, S3, W3	Dense impenetrable mass of thorn, Ivy, Rose and Elder. Forms an unmanaged screen between field to east and dwelling to west. Unremarkable trees of limited merit.	C2	No works required.	4		
		2.64	0		SM	High						
		Yes	21.9			10+ years						
A004	English Oak	1200	22.5		High	N10.5, E10.5, S10.5, W10.5	Lengthy feature of semi-mature to mature English Oak along the eastern boundary of a field. There is a drainage ditch on the eastern side of the bulk of the feature which switches to the western side of the trees in the northern section. Overall the trees are of excellent form and condition and form a tall, principal arboricultural feature of high amenity value.	A2	No works required.	4		
		14.4	2.5		M	High						
		Yes	651.4			40+ years						
G001	Hawthorn, Elder	390	4		Low	N2.5, E2.5, S2.5, W2.5	Two scruffy trees which may be the remnant of a former hedgerow. Densely covered in Ivy and each are suppressed by larger trees to the north of the boundary fence. Unremarkable trees of limited merit.	C2	No works required.	4		
		4.68	0		SM	High						
		Yes	68.8			10+ years						
G002	English Oak, Macrocarpa	700	12.5		High	N4.5, E4.5, S7.5, W4.5	Group of six English Oak, five of which are located in the rear garden of dwellings to the north. Specimens are of generally poor form, perhaps as a result of growth competition for sunlight and pruning on the northern aspect as well as pollarding to maintain clearance from the overhead lines above. Forms a well established screen between the gardens and the field to the south.	B2	No works required.	4	Root prune on southern aspect as shown on drawing no. 8240-D-AIA	0
		8.4	1.5		SM	High						
		Yes	221.7			40+ years						



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>G003</b>	Ash, Field Maple	260	7.5		Low	N4.5, E4.5, S4.5, W4.5	Group of three Field Maple and five Ash located adjacent to a Chestnut paling fence in the south west corner of site. Good overall form and condition but planted too close together and likely to result in etiolated growth.	B2	No works required.	4					
		3.12	1		SM	Moderate									
<b>No</b>		30.6			20+ years	Bare earth									
<b>G004</b>	English Oak	600	17		High	N8, E8, S8, W8	Group of three semi-mature to early mature English Oak along the eastern boundary of a field. There is a drainage ditch on the eastern side of the feature. Overall the trees are of excellent form and condition and appear to be a continuation of the larger feature to the south.	A2	No works required.	4					
		7.2	4		EM	High									
<b>Yes</b>		162.9			40+ years	Bare earth									
<b>G005</b>	English Oak, Hawthorn	400	8		Moderate	N6.5, E6.5, S6.5, W6.5	Mixed species boundary feature forming screen between site and neighbouring land. Canopy formed by Oak and shrub layer formed by Hawthorn. Evidence of past surgery to keep crowns away from adjacent overhead cables which accounts for the atypical stem diameter: height ratio. Central Oak has been left to grow vertically and so is approximately 13 metres tall. Ivy clad stems prevents full inspection and bloats DBH measurement. Major and minor deadwood. Easternmost trees are off-site but crowns encroach on to site. Overall fair form and condition with good screening value.	B2	No work required.	4					
		4.8	1		SM	High									
<b>Yes</b>		72.4			20+ years	Grass, Ivy, Light undergrowth									
<b>G006</b>	English Oak	450	15		High	N6.5, E6.5, S6.5, W6.5	Off-site trees forming cohesive feature. Crown encroach on to site. Average dimensions provided. Minor deadwood in crowns. Good form and condition with high landscape value.	B2	No work required.	4					
		5.4	2		EM	High									
<b>No</b>		91.6			40+ years	Grass									
<b>G007</b>	English Oak	450	15		High	N8, E8, S8, W8	Off-site trees forming cohesive feature. Crowns encroach on to site. Average dimensions provided. Major and minor deadwood in crowns. Ivy clad stems prevents full inspection of all trees. Good form and condition with high landscape value.	B2	No work required.	4					
		5.4	0.5		EM	High									
<b>No</b>		91.6			20+ years	Grass									
<b>G008</b>	English Oak	700	12		High	N8.5, E8.5, S8.5, W8.5	Tight cluster of trees between road terminus to the west and site to the east. Ivy clad stems prevents full inspection and bloats DBH measurement. Average dimensions provided. Minor deadwood. Good form and condition.	B2	Remove Ivy and reinspect.	3					
		8.4	3		EM	High									
<b>No</b>		221.7			40+ years	Tarmac, Dense undergrowth, 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
			RPA (m²)	Aspect	Aspect	SULE							Ground Cover
<b>G009</b>	English Oak	250	10		Low	N2.5, E2.5, S2.5, W2.5	Four off-site stems forming group. Trees are either dead or in notable decline.	U	Fell to ground level.	3			
		3	5		SM	High							
<b>No</b>		28.3			<10 years	Off-site/no access							
<b>G010</b>	English Oak	450	14		High	N6, E6, S6, W6	Off-site trees forming cohesive feature. Majority of trees within feature not on topo survey. Crowns encroach on to site. Average dimensions provided. Ivy clad stems prevents full inspection of some trees. Minor deadwood in crowns. Good form and condition with high landscape value.	B2	No work required.	4			
		5.4	3		EM	High							
<b>No</b>		91.6			20+ years	Grass, Off-site/no access							
<b>G011</b>	English Oak	450	14		Moderate	N6, E6, S6, W6	Off-site trees forming sub group within wider feature. Trees have been subject to crown reductions that have resulted in Epicormic growth trying to restore the canopy but the trees look sparse. Unclear how well the trees will continue to grow and whether they will form full crowns again. Crowns encroach on to site. Average dimensions provided. Ivy clad stems prevents full inspection of some trees. Minor deadwood in crowns. Fair form and condition.	C2	No work required.	4			
		5.4	3		EM	High							
<b>No</b>		91.6			20+ years	Grass, Off-site/no access							
<b>G012</b>	English Oak	400	13		High	N6, E6, S6, W6	Linear feature forming boundary of site. Road to north likely limits rooting extents. Average dimensions provided. Ivy clad stems prevents full inspection of some trees. Major and minor deadwood. Trees form cohesive landscape feature that encloses the site and creates a screen from neighbouring land. Overall good form and condition.	B2	Remove Ivy and reinspect.	3			
		4.8	1.5		SM	High							
<b>Yes</b>		72.4			40+ years	Grass, Tarmac, Bare earth							
<b>G013</b>	English Oak	300	7		Moderate	N4, E4, S4, W4	Linear feature forming boundary of site. Compacted earth to north and east likely limits rooting extents. Average dimensions provided. Ivy clad stems prevents full inspection of some trees. Minor deadwood. Fair form and condition.	C2	Remove Ivy and reinspect.	3			
		3.6	1		SM	High							
<b>Yes</b>		40.7			20+ years	Grass, 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
			On site	RPA (m <sup>2</sup> )	Aspect	Aspect							SULE
G014	English Oak	450	13		High	N6, E6, S6, W6	Linear feature forming boundary of site. Trees form cohesive landscape feature that encloses the site and creates a screen from neighbouring land. Ditch that runs to the west of the stems may limit rooting extent. Average dimensions provided. Ivy clad stems prevents full inspection of some trees. Major and minor deadwood. Overall good form and condition.	B2	Remove Ivy and reinspect.	3			
		5.4	1.5		EM	High							
Yes		91.6			40+ years	Grass, Bare earth							
G015	English Oak	350	12		High	N6.5, E6.5, S6.5, W6.5	Linear feature forming boundary of site. Trees form cohesive landscape feature that encloses the site and creates a screen from neighbouring land. Ditch runs north of most of the stems and may limit rooting extent. Average dimensions provided. Minor deadwood. Overall good form and condition.	B1	No work required.	4			
		4.2	0.5		EM	High							
Yes		55.4			40+ years	Grass							
H001	Hawthorn	200	5.5		Low	N2.5, E2.5, S2.5, W2.5	Apparently unmanaged hedgerow of Hawthorn and Rose species. Three Hawthorn have started to take form as individual trees owing to lack of management but could be reduced and managed back into the hedgerow. Forms a screen between field to east and highway of Richard Avenue to west.	C2	Continue annual maintenance.	3	Fell section to ground level as shown on drawing no. 8240-D-AIA	0	
		2.4	0		SM	High							
Yes		18.1			10+ years	Bare earth							
H002	Hawthorn	300	7		Moderate	N4, E4, S4, W4	Well maintained semi-mature to early mature Hawthorn hedge on southern side of Chestnut paling fence. Attractive and effective delineation between fields.	B2	Continue annual maintenance.	3			
		3.6	1.5		SM	High							
Yes		40.7			20+ years	Bare earth							
H003	Cherry Spp	40	3		Moderate	N1.5, E1.5, S1.5, W1.5	Understorey forming screen between road and site. Unmanaged feature. Fair form and condition.	C2	No work required.	4			
		0.48	0.1		SM	Moderate							
Yes		0.7			10+ years	Dense undergrowth, Grass							
H004	Holly, Blackthorn	50	2.5		Moderate	N1, E1, S1, W1	Unmanaged hedge forming shrub layer under group of trees. Hedge provides screening value. Fair form and condition.	C2	No work required.	4			
		0.6	0.1		Y	Moderate							
Yes		1.1			10+ years	Grass							
H005	Hawthorn, Blackthorn, Goat Willow, English Elm	70	3		Moderate	N1.5, E1.5, S1.5, W1.5	Unmanaged hedge forming shrub layer under group of trees. Hedge provides screening value. Fair form and condition.	C2	No work required.	4			
		0.84	0.1		Y	High							
Yes		2.2			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 (m <sup>2</sup> )	Aspect	Aspect							SULE
H006	English Elm, Blackthorn, English Oak	100	4		Moderate	N2, E2, S2, W2	Unmanaged hedge forming shrub layer under group of trees. Hedge provides screening value. Fair form and condition.	C2	No work required.	4			
		1.2	0.1		SM	High							
Yes		4.5			10+ years	Dense undergrowth, Grass							
H007	Hawthorn, Blackthorn	100	3		Moderate	N1, E1, S1, W1	Unmanaged hedge forming shrub layer under group of trees. Hedge provides screening value. Fair form and condition.	C2	No work required.	4			
		1.2	0.1		SM	High							
Yes		4.5			10+ years	Grass, Dense undergrowth							
T001	English Oak	150	5.5		Low	N2.5, E2.5, S2.5, W2.5	Young Oak located adjacent to unmade footpath access into field from Richard Avenue. Limited growth space	C1	No works required.	4	Fell to ground level.	0	
		1.8	1.8		Y	High							
Yes		10.2			20+ years	Light undergrowth							
T002	English Oak	600	8.5		Moderate	N6.5, E6, S2.5, W5.5	Semi-mature Oak on west boundary of field. Dense vegetation and Ivy prevents full assessment. Ivy scales the stem and engulfs the crown into the apex, where little live growth protrudes beyond. The bulk of the crown is supported on lateral branches to the west, north and east. The squat form may be the result of suppression from a larger Oak to the immediate south.	C1	Remove all Ivy and reinspect.	3	Root prune on northern aspect as shown on drawing no. 8240-D-AIA	0	
		7.2	3		SM	High							
Yes		162.9			20+ years	Dense undergrowth							
T003	English Oak	800	11		High	N8.5, E7.5, S7.5, W5.5	Early mature Oak on west boundary of field, with sudden drop in ground level on west side into garden of off-site dwelling. Overcrowded branch structure has stifled vertical growth giving a somewhat broad and flat crown, however the specimen appears physiologically healthy. There are a number of small branch cavities and spaces between crowded branches that give good bat roost potential.	B3	No works required.	4			
		9.6	3.5		EM	High							
Yes		289.5			40+ years	Dense undergrowth							
T004	Lawson Cypress	180	6		Low	N2.5, E2.5, S2.5, W2.5	Cypress located adjacent to early mature Oak on west boundary of field and east boundary of dwelling. Suppressed crown. An unremarkable specimen of limited merit.	C1	No works required.	4			
		2.16	0.5		SM	High							
Yes		14.7			10+ years	Dense undergrowth							
T005	English Oak	650	9.5		Moderate	N6, E6, S6, W6	Oak located on east side of ditch between fields. Multi-stemmed from ground level, possibly a regrowing coppice. Physiologically healthy. The crown has been reduced in height to maintain clearance from the overhead cables above.	B1	No works required.	4			
		7.8	0.5		SM	High							
Yes		191.1			40+ 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
<b>T006</b>	English Oak	630	12		Moderate	N7, E5.5, S5.5, W5.5	Oak located on east side of ditch between fields. Multi-stemmed from ground level, with a wide union. It appears a fourth stem has failed in the centre of the union and has long since healed over. Physiologically healthy. The apex of the southern stem has been reduced in height to maintain clearance from the overhead cables above.	B1	No works required.	4					
		7.56	3		EM	High									
<b>Yes</b>		179.6			40+ years	Bare earth									
<b>T007</b>	Elder	90	4		Low	N1.5, E1.5, S1.5, W1.5	Off-site tree. Multi-stemmed form. Crown encroaches on to site. All dimensions are estimated due to restricted access. Fair form and condition.	C1	No work required.	4					
		1.08	1.5		SM	Moderate									
<b>No</b>		3.7			10+ years	Off-site/no access, Grass									
<b>T008</b>	Elder	80	3		Low	N1.5, E1.5, S1.5, W1.5	Tree not on topo so location is indicative. Climbing plant has become established. Fair form and condition.	C1	Remove climbing plant.	3					
		0.96	0.5		SM	Moderate									
<b>Yes</b>		2.9			10+ years	Grass									
<b>T009</b>	Norway Spruce	150	5		Low	N2, E2, S2, W2	Off-site tree with crown encroaching onto site. Good form and condition.	C1	No work required.	4					
		1.8	1		Y	Moderate									
<b>No</b>		10.2			20+ years	Block paving, Grass									
<b>T010</b>	Honey Locust	170	5		Low	N1.5, E1.5, S1.5, W1.5	Off-site tree with crown encroaching onto site. Tree may have been subject to pollarding or crown reduction due to how tight and dense the crown appears. Fair form and condition.	C1	No work required.	4					
		2.04	1.5		SM	Moderate									
<b>No</b>		13.1			10+ years	Grass									
<b>T011</b>	Spinning Gum	200	5		Low	N2, E2, S2, W2	Off-site tree with crown encroaching onto site. All dimensions are estimated. Fair form and condition.	C1	No work required.	4					
		2.4	1.5		Y	High									
<b>No</b>		18.1			10+ years	Grass									
<b>T012</b>	Cypress Sp	250	8		Low	N2.5, E2.5, S2.5, W2.5	Off-site tree with crown encroaching onto site. Twin stemmed form. All dimensions are estimated. Fair form and condition.	C1	No work required.	4					
		3	1.5		SM	High									
<b>No</b>		28.3			10+ years	Grass									
<b>T013</b>	English Oak	360	7		Moderate	N4, E5, S5, W5	Off-site tree with crown encroaching onto site. Twin stemmed form. All dimensions are estimated. Fair form and condition.	C1	No work required.	4					
		4.32	0.5		SM	High									
<b>No</b>		58.6			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
			On site	RPA (m²)	Aspect	Aspect							SULE
T014	English Oak	500	12		Moderate	N5, E5, S5, W5	Off-site tree with crown partially encroaching onto site. Tight and dense crown indicates regrowth from a crown reduction. All dimensions are estimated. Fair form and condition.	C1	No work required.	4			
		6	6		EM	High							
No		113.1			20+ years	Grass							
T015	English Oak	700	8		Moderate	N5, E5, S3, W5	Off-site tree. All dimensions are estimated. Fair form and condition.	C1	No work required.	4			
		8.4	1.5		EM	High							
No		221.7			20+ years	Grass							
T016	Wild Cherry	250	10		Moderate	N2, E4.5, S4.5, W4.5	Off-site tree. All dimensions are estimated. Fair form and condition.	C1	No work required.	4			
		3	3		EM	Moderate							
No		28.3			10+ years	Block paving, Grass							
T017	Goat Willow	130	3		Low	N2.5, E3, S2.5, W1.5	Multi-stemmed form from ground level. Fair form and condition.	C1	No work required.	4			
		1.56	0.5		Y	High							
Yes		7.6			10+ years	Dense undergrowth, Ivy, Grass							
T018	Hawthorn	170	5		Low	N2.5, E2.5, S2.5, W2.5	Twin stemmed from 2 metres. Ivy clad stem prevents full inspection. Fair form and condition.	C1	Remove Ivy and reinspect.	3			
		2.04	0.5		SM	High							
Yes		13.1			10+ years	Ivy, Grass							
T019	English Oak	500	13		High	N3, E3, S3, W3	Compacted gravel and bare earth surface to north. Ditch to south possibly reducing rooting area. Twin stemmed form from ground level. Tree exhibits significant dieback. Poor form and condition.	U	Fell to ground level.	3			
		6	0.5		SM	High							
Yes		113.1			<10 years	Bare earth, Grass, Ivy							
T020	English Oak	170	3		Low	N3, E1.5, S2.5, W2.5	Suppressed tree with no vertical leader above 2 metres. Stem leans southwards sharply before straightening. Poor form and condition.	U	No work required.	4			
		2.04	0.1		Y	High							
Yes		13.1			<10 years	Grass, Bare earth							
T021	English Oak	500	12		High	N6, E6, S6, W6	Boundary tree. Compacted surface to north and east likely limiting rooting extent. Ditch present to south and west. Ivy clad stem prevents full inspection and inflates DBH measurement. Good form and condition.	B1	Remove Ivy and reinspect.	3			
		6	0.5		EM	High							
Yes		113.1			20+ years	Bare earth, Grass							
T022	English Oak	470	7		Moderate	N4, E4, S4, W4	Boundary tree. Compacted surface to north and east likely limiting rooting extent. Ditch present to south and west. Ivy clad stem prevents full inspection and inflates DBH measurement. Squat form. Fair form and condition.	C1	Remove Ivy and reinspect.	3			
		5.64	1		SM	High							
Yes		99.9			20+ 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
			RPA (m <sup>2</sup> )	Aspect	Aspect	SULE							Ground Cover
<b>T023</b>	English Oak	500	13		High	N6, E6, S6, W6	Boundary tree. Compacted surface to north and east likely limiting rooting extent. Ditch present to south and west. Ivy clad stem prevents full inspection and inflates DBH measurement. Minor deadwood. Good form and condition.	B1	Remove Ivy and re-inspect.	3			
		6	2		EM	High							
<b>Yes</b>		113.1			20+ years	Bare earth, Grass							
<b>T024</b>	Goat Willow	310	7		Low	N4, E4, S4, W4	Multi-stemmed form from. Tight unions. Rubbing branches. Fused stems. Compacted surface to north and east likely limiting rooting extent. Ditch present to south and west. Dieback in apex. Fair form and poor condition.	C1	No work required.	4			
		3.72	2		SM	High							
<b>Yes</b>		43.5			10+ years	Grass, Bare earth							
<b>T025</b>	Hawthorn	410	8		Moderate	N3, E3, S3, W3	Multi-stemmed form from ground level Ditch that runs to the west of the stems may limit rooting extent. Average dimensions provided. Fair form and condition.	C1	No work required.	4			
		4.92	0.5		M	High							
<b>Yes</b>		76			20+ years	Grass							
<b>T026</b>	English Oak	710	8		High	N5, E5, S5, W4	Boundary tree. Twin stemmed form from ground level. Somewhat sparse crown. Ditch present to south and west. Minor deadwood. Fair form and condition.	C1	No work required	4			
		8.52	1.5		EM	High							
<b>Yes</b>		228			20+ years	Bare earth, Grass							
<b>T027</b>	English Oak	150	6		Low	N4, E0.5, S1, W2	Tree exhibits significant dieback and deadwood.	U	Fell to ground level.	3			
		1.8	2		Y	High							
<b>Yes</b>		10.2			<10 years	Grass, Dense undergrowth							
<b>T028</b>	English Oak	500	12		High	N7, E7, S7, W7	Boundary tree. Evidence of past surgery. Ditch present to south and west may limit rooting extent. Partially suppressed by neighbouring tree. Major and minor deadwood. Fair form and condition.	B1	No work required.	4			
		6	0.5		EM	High							
<b>Yes</b>		113.1			20+ years	Bare earth, Grass							
<b>T029</b>	English Oak	500	12		High	N7, E7, S7, W7	Boundary tree. Evidence of past surgery. Possibility of lost vertical leader in the past and lateral branches took over crown formation due to dog-leg in main stem. Ditch present to south and west may limit rooting extent. Partially suppressed by neighbouring tree. Major and minor deadwood. Fair form and condition.	C1	No work required.	4			
		6	1		EM	High							
<b>Yes</b>		113.1			20+ years	Bare earth, Grass							

## **Appendix C**

Schedule of Works - Irrespective of Development



# SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Land off Richard Avenue, Wivenhoe, Essex

Surveyed By: Alex Turner

Surveyed: 17/07/2020

Managed By: Alex Turner

Tree No.	Species	Work required	Priority
<b>G008</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>G009</b>	English Oak	Fell to ground level.	<b>3</b>
<b>G012</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>G013</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>G014</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>H001</b>	Hawthorn	Continue annual maintenance.	<b>3</b>
<b>H002</b>	Hawthorn	Continue annual maintenance.	<b>3</b>
<b>T002</b>	English Oak	Remove all Ivy and reinspect.	<b>3</b>
<b>T008</b>	Elder	Remove climbing plant.	<b>3</b>
<b>T018</b>	Hawthorn	Remove Ivy and reinspect.	<b>3</b>
<b>T019</b>	English Oak	Fell to ground level.	<b>3</b>
<b>T021</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>T022</b>	English Oak	Remove Ivy and reinspect.	<b>3</b>
<b>T023</b>	English Oak	Remove Ivy and re-inspect.	<b>3</b>
<b>T027</b>	English Oak	Fell to ground level.	<b>3</b>

## **Appendix D**

Preliminary Schedule of Works to Allow Development

## SCHEDULE OF WORKS (AIA)

Land off Richard Avenue, Wivenhoe, Essex

Surveyed By: Alex Turner

Surveyed: 17/07/2020

Managed By: Alex Turner

Tree No.	Species	Work required	Priority
<b>G002</b>	English Oak, Macrocarpa	Root prune on southern aspect as shown on drawing no. 8240-D-AIA.	<b>0</b>
<b>H001</b>	Hawthorn	Fell section to ground level as shown on drawing no. 8240-D-AIA.	<b>0</b>
<b>T001</b>	English Oak	Fell to ground level.	<b>0</b>
<b>T002</b>	English Oak	Root prune on northern aspect as shown on drawing no. 8240-D-AIA.	<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

Planning

Tools

Base

Track

34m

32m

34m

32m

Football Ground

Broad Lanes

B1027

Broad Lane

PH

F Sta

Track

Mast

MEDE WAY

PADDOCK W

ASH GR

LEYS ROAD

VINE DRIVE

VINE FARM ROAD

MEDE WAY

PADDOCK W

ASH GR

BROADFIELDS

RICHARD AVENUE

BETH WY

HERENARD C

FEEDHAMS C

ELM

X, Y: 604457.24, 223468.88  
 Lon, Lat: 0.968641, 51.872314

**Tree Preservation Orders**

**TPO** 10/76  
**TreeID** A2  
**Location** Broadfields, Elmstead Road, Wivenhoe  
**Address** Broadfields, Elmstead Road,  
**Description**  
**TreeCount** 0  
**TreeSpecies** Mixed  
**TPOStatus** Confirmed  
**PlanningDescription** A TPO (Tree Preservation Order) makes it an offence to cut down, lop, top, uproot or damage the tree(s) described in that particular TPO. A TPO is issued by the local planning authority and includes species of tree but not bushes, hedges or shrubs.

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Map Legend

- ▶ Planning Applications 2014-2015
- ▶ Planning Applications 2012-2013
- ▶ Planning Applications 2010-2011
- ▶ Planning Applications 2008-2009
- ▶ Planning Applications 2006-2007
- ▶ Planning Applications 2004-2005
- ▶ Planning Applications 2002-2003
- ▶ Planning Applications 2000-2001
- ▼ Planning Constraints 
  - Article 4 - Control...
  - Conservation Areas
  - Restrictions On D...
- ▶ Section 106 Agreements
- ▶ Listed Structures and Assets
- ▶ Garrison\_TPO
- ▼ Tree Preservation Orders 
  - Tree Preservation ...

Planning

Tools

Base

Map Legend

- ▶ Planning Applications 2014-2015
- ▶ Planning Applications 2012-2013
- ▶ Planning Applications 2010-2011
- ▶ Planning Applications 2008-2009
- ▶ Planning Applications 2006-2007
- ▶ Planning Applications 2004-2005
- ▶ Planning Applications 2002-2003
- ▶ Planning Applications 2000-2001
- ▼ Planning Constraints 
  - Article 4 - Control...
  - Conservation Areas
  - Restrictions On D...
- ▶ Section 106 Agreements
- ▶ Listed Structures and Assets
- ▶ Garrison\_TPO
- ▼ Tree Preservation Orders 
  - Tree Preservation ...

X, Y: 604385.67, 223520.15  
 Lon, Lat: 0.967633, 51.872801

**Tree Preservation Orders**

**TPO** 10/76  
**TreeID** A1  
**Location** Broadfields, Elmstead Road, Wivenhoe  
**Address** Broadfields, Elmstead Road,  
**Description**  
**TreeCount** 0  
**TreeSpecies** Mixed  
**TPOStatus** Confirmed

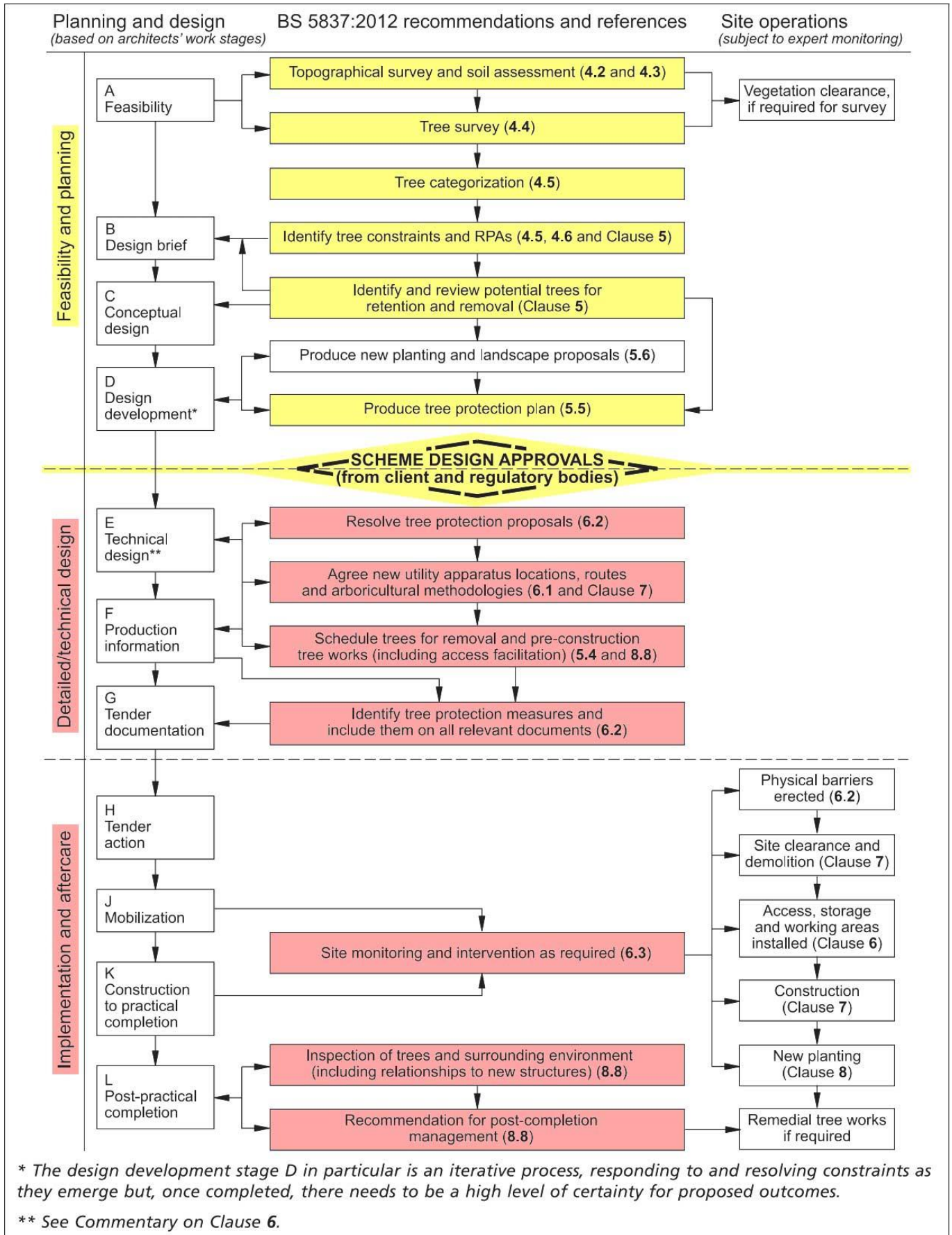
**PlanningDescription** A TPO (Tree Preservation Order) makes it an offence to cut down, lop, top, uproot etc. the tree(s) described in that particular TPO. A TPO is issued by the local planning authority and includes any species of tree but not bushes, hedges or shrubs.

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## **Appendix G**

Advisory Information & Sample Specifications

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



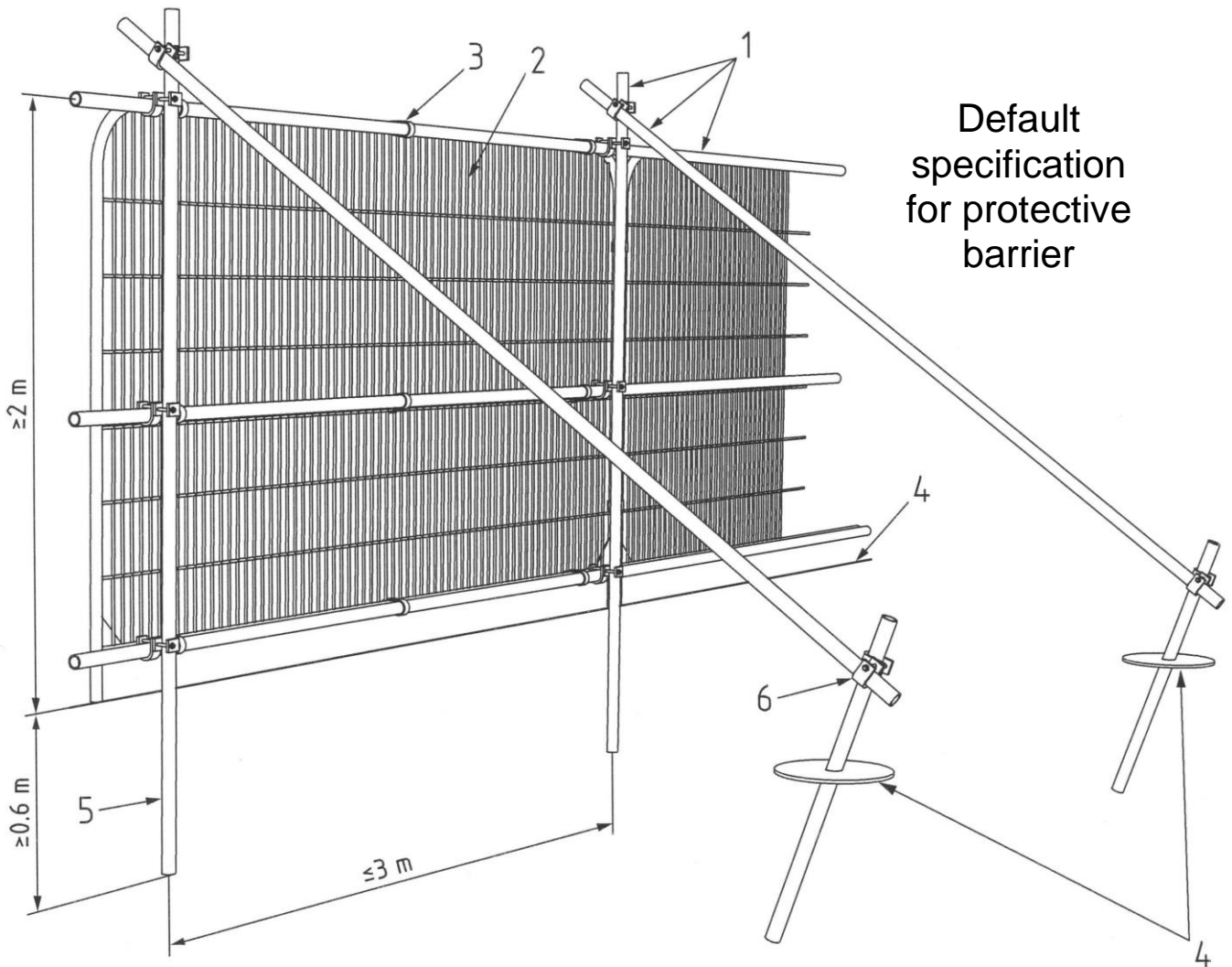
2.

**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

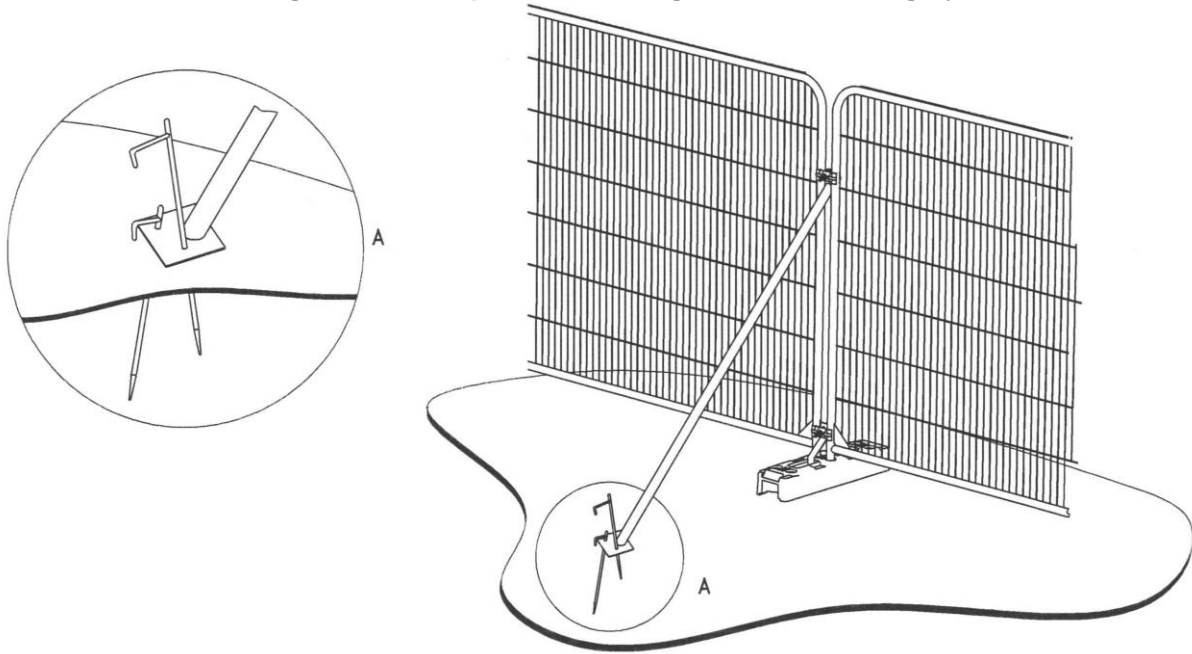


Default  
specification  
for protective  
barrier

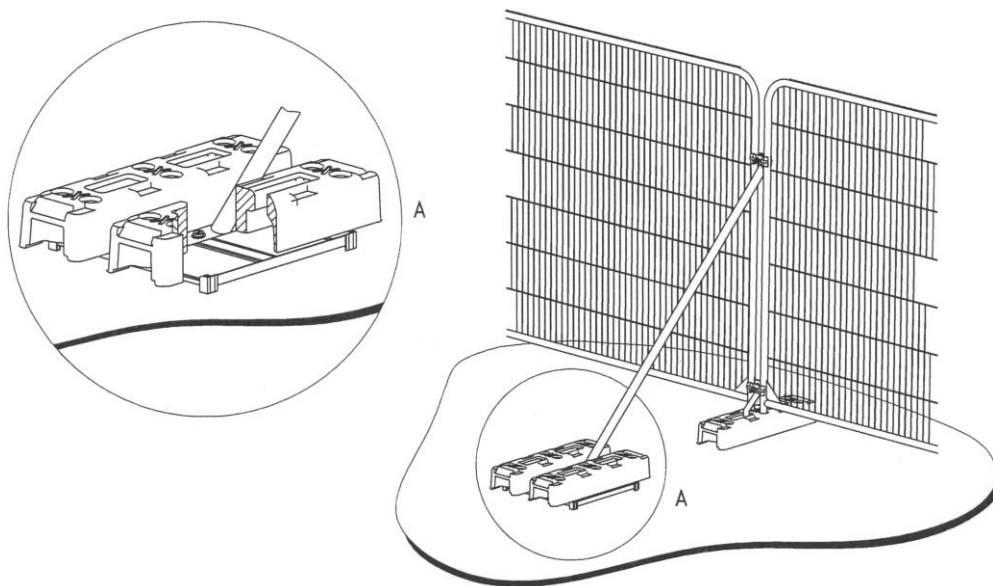
Key

- 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 ●

