HAYDEN'S
Arboricultural Consultants

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

Proj. No **10515**	**Land at Clatterbury Lane, Hill Green, Clavering, Essex, CB11 4QU**		
Client:		BAYA Group	
Date of Report:	01/12/2023	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 submit an outline application with all matters reserved except access for up to 28 dwellings (Class C3) including public open space, sustainable drainage systems, landscaping and associated infrastructure. As a result, five individual trees, seven groups of trees, three areas of trees and two hedges were inspected. The arboricultural related implications of the proposal are as follows:

1 It is necessary to fell one low quality individual tree and sections of three low quality landscape features to achieve the proposed layout. Additionally, one tree and three landscape features require minor surgery to permit construction space or access.

2 The alignment of the 28 residential dwellings and associated detached garages 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.

3 The alignment of the new visitor parking bay hard surface nominally intrudes within the Root Protection Area of Tree - T002. This has only minor influence on the Root Protection Area 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

4 This report recommends that specialist advice is obtained by expert practitioners in other disciplines. Such input should always be sought prior to the submission of this report in support of a planning application to demonstrate that the techniques and methods hereby proposed are achievable. In this circumstance it is necessary to contact the following:

- Structural Engineer (foundation design, item 4.4.1

5 All trees and landscape features that are to remain as part of the development should suffer no structural damage provided that the findings with this report are complied with in full. This includes ensuring that protective fencing is erected as detailed at items 4.6 and 5.1 of this report.

6 Post Planning Permission – Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following: fencing type, ground protection measures, 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 – BAYA Group			
Address [redacted]	**Contact** Mark Forbes	**Tel:** **E-mail:**	[redacted]

Local Planning Authority – Uttlesford District Council			
Address Council Offices London Road Saffron Walden Essex CB11 4ER	**Trees Officer** Ben Smeeden	**Tel:** **E-mail:**	[redacted]

Arboricultural Consultant – Hayden's Arboricultural Consultants Limited			
Address 5 Moseley's Farm Business Centre Fornham All Saints Bury St Edmunds Suffolk IP28 6JY	**Report Author:** Lewis Alexander	**Tel:** **E-mail:**	[redacted]

Contents

1.0 Introduction

1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by BAYA Group to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Land at Clatterbury Lane, Hill Green, Clavering, Essex, CB11 4QU.

1.1.2 The site survey was carried out on 03/10/2023. 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 Mark Forbes of Baya Group on 29/08/23
- Definition of site boundary
- Description of requirements/deadlines
- Topographical survey/map
- Proposed layout

2.0 The Site

2.1 Overview

The site is Land to the west of Clatterbury Lane, Clavering, Essex.

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

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

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 in perpetuity.

It is recommended professional legal advice be sought before removing hedgerows to determine whether the hedgerow might be protected by the Inclosure Act. Details of the Inclosures Act are held by the Local Records Office.

3.0 Tree Survey

3.1 As part of this survey a total of five individual trees, seven groups of trees, three areas of trees and two hedges have been identified. These have been numbered T001 – T005, G001 – G007, A001 – A002 and H001 – H002 respectively.

3.2 A topographical survey was provided which showed the position of the trees on site. It should be noted however that topographical surveys are not always comprehensive and sometimes it is considered appropriate to record details of trees and landscape features omitted from or beyond the scope of the plan. If this circumstance occurs, the location of the individual tree or landscape feature is estimated. The position of each tree is shown on the attached drawing no. 10515-D-AIA-A.

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:

A001	Remove major deadwood over road.

3.6 Recorded within this tree survey is the approximate location of a fallen tree of low risk to persons or property. This is denoted on drawing no. 10515-D-AIA-A with a red symbol, as per the drawing key. As there is little health and safety concern with regards to this identified tree, it is to the landowners discretion whether it is removed or left in situ (i.e., for wildlife/habitat purposes).

3.7 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 submit an outline application with all matters reserved except access for up to 28 dwellings (Class C3) including public open space, sustainable drainage systems, landscaping and associated infrastructure and development.

4.2 Access

4.2.1 Site access is unencumbered by the Root Protection Areas (RPA) of any trees to be retained. Therefore, and from a purely arboricultural perspective, it will not be necessary to install a proprietary temporary load bearing road to protect 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 for the 28 residential dwellings and associated detached garages 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 visitor parking bay hard surface encroaches within a small portion of Tree– 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 Excavation of an attenuation basin is shown to encroach within a small portion of the RPA of a tree within landscape feature– G006. 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.

4.5 Implications of Sloping Ground

4.5.1 The arboricultural implications of the proposed structures assume 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 Tree Surgery to Facilitate Proposed Development

4.10.1 In order to enable the proposed development it will be necessary to undertake the following tree surgery works to retained trees: -

Feature No	Description of Works Required	BS Category*
A002	Crown lift Northen aspect to 2.5m. Crown reduce on western aspect as shown on drawing 10515-D-AIA-A.	C
A003	Crown reduce on western aspect by up to 2m.	C
G006	Root prune along attenuation basin as shown on drawing 10515-D-AIA-A. Crown lift northern aspect to 3m.	A
T002	Root prune along visitor parking bay as shown on drawing 10515-D-AIA-A. Crown lift section to 2.5m over visitor bay only.	A

4.10.2 Further to the above, Area A003 will require ongoing pruning works, on an annual or similar basis, to maintain clearance from the apartment block and one detached house.

4.11 Landscape Implications

4.11.1 The items listed in the table below require felling to permit the proposed development to proceed: -

Feature No	Reason for Removal	BS Category*	Visual Amenity Assessment*
A001 (Section)	To allow for construction of roadway and footpaths. To achieve required Visibility Splay.	C	High
H001 (Section)	To allow construction of footpath.	C	Moderate
H002 (Section)	To allow construction of road	C	Low
T001	To allow construction of road	C	Low

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

4.12 Post Development Implications

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

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

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

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

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

5.1.1 The trees to be retained will be protected by the use of stout barrier fencing erected in the positions indicated on the attached Preliminary Arboricultural Impact Assessment & Tree Protection drawing no. 10515-D-AIA-A. 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. 10515-D-AIA-A. Any encroachment within this protected area will only be with the prior agreement of the Local Planning Authority.

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

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

5.4 Programme of Works

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

5.5 Tree Surgery

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

5.6 Levels

5.6.1 Other than for any specific exception which may be referred to at item 4.0, no alterations to soil levels within the RPA of retained trees are envisaged. However, if it is necessary for these to occur, appropriate measures must be taken to prevent or minimise any detrimental effects on the affected root systems as detailed in 5.6.2 and 5.6.3 below.

5.6.2 If it is necessary to excavate so close to trees that roots greater than 50mm diameter are likely to be encountered, particular care will be taken to avoid damage. Excavation in these areas will be undertaken by hand or using an air spade, avoiding any damage to the bark. The roots will be surrounded with sharp sand prior to the replacing of any soil or other material in the vicinity.

5.6.3 If it is necessary to raise levels, it is essential that adequate supplies of water and oxygen pass through the soil to the trees' roots. Therefore, where necessary, a granular material will be used which will not inhibit gaseous diffusion. Possible options are no-fines gravel, cobbles or, Type 2 road-stone. All hard surfaces will be of suitable specification to allow such gaseous diffusion, e.g. brick pavers.

5.7 Services

5.7.1 At the time of writing this report, no details on proposed services were available. However, the following principles should be adhered to when planning for their installation.

5.7.2 It is proposed that all underground service runs will be placed outside the RPA of the trees on or adjacent to the site. Where it is not possible to do this, the proposed length infringing the RPA will be hand dug 'broken trenches' (NJUG 4 paragraph 4) to ensure the maximum protection of the trees' roots. The trenches may also be excavated using an air spade, or trenchless technology can be employed if this methodology is considered appropriate by the relevant service company (thus allowing services to pass below and through the roots without the need for traditional excavation). If it is necessary to cut any small roots as part of any of these processes, they should be severed in such a way as to ensure that the final wound is as small as possible and free from ragged, torn ends.

5.7.3 All routes for overhead services will aim to avoid the trees. Where this is not possible, any tree work will be agreed prior to commencement with the Local Planning Authority.

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

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

5.8 Hard Surface Types & Construction within the Root Protection Area

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

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

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

5.9 Reporting and Monitoring Procedures

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

December 2023……..
For and on Behalf of Hayden's Arboricultural Consultants Limited

8.0 References

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

British Standards Institute. (2012). *Trees in Relation to Design, Demolition and Construction – Recommendations BS5837:2012* BSI, London.

Ministry of Housing, Communities & Local Government. (2014). *Tree Preservation Orders and trees in conservation areas.* London: Ministry of Housing, Communities & Local Government.

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

NHBC Standards (2023) *Chapter 4.2 'Building Near Trees'.* National House-Building Council.

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

Forestry Commission (2023). *Tree Felling – Getting Permission.* Country Services Division, Forestry Commission, Edinburgh.

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

Lonsdale, D. (1999). *Research for Amenity Trees No 7: Principles of Tree Hazard Assessment and Management*, HMSO, London.

DEFRA (1997). *The Hedgerow Regulations 1997 – A Guide to the Law and Good Practice.* Department of the Environment, Transport and the Regions, HMSO, London.

Weber, K., Mattheck, C. (2003). *Manual of Wood Decays*. The Arboricultural Association

9.0 Appendices

Appendix	**A**	Species List & Tree Problems
Appendix	**B**	Schedule of Trees
Appendix	**C**	Schedule of Works - Irrespective of Development
Appendix	**D**	Preliminary Schedule of Works to Allow Development
Appendix	**E**	Explanatory Notes
Appendix	**F**	Tree Preservation Order Enquiry/Response
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 Checklist (v.4)
3. BS 5837:2012 Figure 2 - Default specification for protective barrier
4. BS 5837:2012 Figure 3 - Examples of above-ground stabilising systems

Appendix	**H**	Drawing No 10515-D-AIA-A

Appendix A - Species List & Tree Problems

Species List:

Ash	*Fraxinus excelsior*
Blackthorn	*Prunus spinosa*
Dogwood	*Cornus controversa*
Elder	*Sambucus nigra*
Elm	*Ulmus sp*
Field Maple	*Acer campestre*
Hawthorn	*Crataegus monogyna*
Hazel	*Corylus avellana*
Sycamore	*Acer pseudoplatanus*

Tree Problems:

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

Name: Adventitious Growth	
Symptoms/damage type and cause:	A physiological condition whereby previously dormant buds produce new growth as a reaction to changes in the environment of the affected part of the tree such as changes in crown form and increased light levels caused by limb loss or removal of nearby trees. This is often an attempt to replace any lost energy.
Consequence:	Adventitious growth is sometimes capable of replacing a lost limb over time, however, where it is a reaction to deliberate actions which lead to the production of adventitious growth the new growth may be undesirable.
Control:	Control of new growth may be achievable by remedial tree surgery or formative pruning.
Images:	 

Name: Deadwood	
Symptoms/damage type and cause:	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.
Consequence:	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.
Control:	Detailed monitoring should be undertaken on those trees showing signs of excessive deadwood production to identify the underlying cause.
Species affected:	Most tree species.
Images:	 

Name: Epicormic growth	
Symptoms/damage type and cause:	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.
Consequence:	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.
Control:	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.
Species affected:	Most tree species, including European Lime, Willow species, Sweet Chestnut, and Silver Maple.
Images:	  

Name: *Hedera helix* **(Ivy)**	
Symptoms/damage type and cause:	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.
Consequence:	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.
Control:	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 whist relieving the pressure on the tree.
Species affected:	Most trees can be affected.
Images:	 

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

Appendix B

Schedule of Trees

SCHEDULE OF TREES (AIA)

Land at Clatterbury Lane, Hill Green, Clavering, Essex

Surveyed By: Lewis Alexander Date: 03/10/2023
Managed By: Lewis Alexander

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 (m²)	Aspect	Aspect	SULE	Ground Cover						
A001	Sycamore, Elm Spp, Hawthorn, Blackthorn, Field Maple, Ash	300	14		High	N4, E4, S4, W4	A largely unmanaged landscape feature that provides an effective screen from the road. The stems of the area are close to the highway, and this northern side has been regularly pruned back from the road to provide clearance to a height of approximately 4 metres. The southern aspect of the feature facing into the site is more open and unmanaged. Some mature specimens are present, as well as lots of newer, adventitious trees. A possible lapsed drainage ditch runs through the area. Overhead cables cross through at the eastern aspect of the feature. Also expected to be a good wildlife habitat.	C2	Remove major deadwood over road.	2	Fell sections as detailed in drawing 10515-D-AIA-A.	0
		3.6	0.1		SM	High						
Yes		40.7			10+ years	Tarmac, Grass						
A002	Blackthorn, Elm Spp, Elder Spp, Hawthorn, Sycamore	250	12		Moderate	N5, E5, S5, W5	An off-site area of trees that runs alongside and creates a semi permeable screen to sites southern boundary. A shallow ditch runs through the feature. Canopy overhangs boundary fence by up to 4 metres.	C2	No work required.	4	Crown lift Northen aspect to 2.5m. Crown reduce on western aspect as shown on drawing 10515-D-AIA-A.	0
		3	0.5		SM	High						
No		28.3			10+ years	Grass, Light undergrowth						
A003	Dogwood Spp, Field Maple, Hazel, Hawthorn	280	9		Moderate	N4, E4, S4, W4	A semi formal linear row of off-site trees that are quite uniform in size. Screens the sites eastern boundary. Canopy overhangs the sites boundary fence by 4 metres. Trees appear in good health and condition.	C2	No work required.	4	Crown reduce on western aspect by up to 2m.	0
		3.36	1.5		SM	Moderate						
No		35.5			10+ years	Grass, Light undergrowth						
G001	Elm Spp	300	8		Moderate	N2.5, E2.5, S2.5, W2.5	A group of three multi-stemmed Elm emerging from a hedge. Most of the canopy appears to be healthy but signs of Dutch Elm Disease are present with dieback occurring primarily in branches in the middle of the canopy where some major deadwood is present. A shallow ditch runs alongside the eastern aspect of the group. Undergrowth inhibits full inspection.	C1	No work required.	4		
		3.6	2		SM	High						
Yes		40.7			10+ years	Bare earth, Light undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m²)	Aspect	Aspect	SULE	Ground Cover						
G002	Elm Spp	300	9		Moderate	N3, E3, S3, W3	A group of three closely spaced Elm trees emerging from a hedge. A shallow ditch runs alongside the eastern aspect of the group. Trees appear in good physiological condition. Ivy clad stems inhibits full inspection.	B1	No work required.	4		
		3.6	2.5		SM	High						
Yes		40.7			20+ years	Bare earth, Grass						
G003	Elm Spp	300	8		Moderate	N3, E3, S3, W3	A group of two Elm trees emerging from a hedge. A shallow ditch runs alongside the eastern aspect of the group. Trees appear in good physiological condition. Undergrowth inhibits full inspection.	B1	No work required.	4		
		3.6	3		SM	High						
Yes		40.7			20+ years	Bare earth, Light undergrowth						
G004	Hawthorn	250	5		Low	N2.5, E2.5, S2.5, W2.5	A group of two off-site, multi-stemmed Hawthorn trees. Canopy overhangs site by less than 1 metre. Good physiological condition. Western specimen is heavily Ivy clad. Boundary fence prevents full inspection.	C1	No work required.	4		
		3	1		M	Moderate						
Yes		28.3			10+ years	Grass, Light undergrowth						
G005	Field Maple, Sycamore, Elm Spp	240	13		Moderate	N6, E6, S6, W6	A group of five trees consisting of one Elm, two Sycamore and two Field Maple which are similar in size and grow together. Good physiological condition. Elm features some deadwood. Ivy clad stems. Canopy overhangs site by 6 metres. Undergrowth and boundary fence prevent full inspection.	C1	No work required.	4		
		2.88	2		SM	High						
Yes		26.1			10+ years	Bare earth, Light undergrowth						
G006	Elm Spp	480	18		Moderate	N10, E10, S10, W10	A group of three off-site Elm trees. Canopy overhangs site boundary fence by 9 metres. Trees are large and healthy specimens. Good canopy cover and leaf colour is displayed throughout, with only minor deadwood observed. Fence and undergrowth prevent full inspection.	A1	No work required.	4	Root prune along attenuation basin as shown on drawing 10515-D-AIA-A. Crown lift northern aspect to 3m.	0
		5.76	2		M	High						
No		104.2			40+ years	Light undergrowth, Grass						
G007	Hawthorn	200	6		Low	N3, E3, S3, W3	A group of two off-site, multi-stemmed Hawthorn trees. Overhang site boundary fence by less than 1 metre. Eastern specimen has poor form. Good physiological condition. Boundary fence prevents full inspection.	C1	No work required.	4		
		2.4	2		M	Moderate						
No		18.1			10+ years	Dense undergrowth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
H001	Hawthorn, Ash, Elm Spp	80	4.5		Moderate	N0.5, E0.5, S0.5, W0.5	A boundary hedge of primarily Hawthorn that effectively screens the site from the neighbouring car park. Has received infrequent management. It is recommended that it is maintained to keep it as a formal screening feature.	C2	No work required.	4	Fell small section as detailed in drawing 10515-D-AIA-A.	0
		0.96	0.1		SM	High						
Yes		2.9			10+ years	Tarmac, Grass						
H002	Blackthorn, Elm Spp, Hawthorn, Hazel, Field Maple	100	2		Low	N1.5, E1.5, S1.5, W1.5	Maintained agricultural hedge of mixed species.	C1	No work required.	4	Fell small section as detailed in drawing 10515-D-AIA-A.	0
		1.2	0.1		SM	High						
Yes		4.5			10+ years	Bare earth, Light undergrowth						
T001	Ash	920	16		Low	N7, E6, S6, W3.5	A tree located on the edge of a field within an area of other trees. A main stem is joined by three adventitious, sub dominant stems at ground level. The main stem is very hollow, as seen from a large open cavity on the southern aspect, which extends longitudinally from approx. 1 to 4 metres above ground level. The canopy exhibits retrenchment with major deadwood and dead branches, primarily in the upper canopy. Leaf cover is sparse, but the foliage colour is good.	C1	No work required.	4	Fell to ground level	0
		11.04	1.5		M	Moderate						
Yes		382.9			10+ years	Light undergrowth, Dense undergrowth						
T002	Elm Spp	710	20		High	N10, E9, S9, W10	A large multi-stemmed tree or several closely spaced individuals. Unable to verify due to dense vegetation preventing access to base of tree and obscuring sight of lower portion of stems. A high-quality specimen in good health and form. Leaf colour and coverage are good. Small amount of minor deadwood in canopy. One dead branch on southern aspect at approx. 5 metres.	A1	No work required.	4	Root prune along visitor parking bay as shown on drawing 10515-D-AIA-A. Crown lift section to 2.5m over visitor bay only.	0
		8.52	2		M	High						
Yes		228			40+ years	Dense undergrowth, Tarmac, 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 (m²)	Aspect	Aspect	SULE	Ground Cover						
T003	Elm Spp	470	17		High	N4, E4, S5, W4	A large tree in an area of dense vegetation which prevents full inspection. Ivy clad stem. Tree shows some signs of Dutch Elm Disease with some major deadwood and dead branches. These are mostly within the lower canopy however and overall the health is good. Epicormic regrowth is present and good leaf colour is seen in a well covered canopy for the time of year.	B1	Remove major deadwood. Reinspect in one year.	3		
		5.64	3		M	High						
Yes		99.9			20+ years	Dense undergrowth, Light undergrowth						
T004	Hazel	380	6.5		Low	N7, E6.5, S3, W3	An off-site multi-stemmed tree typical of species. Overhangs site by 6 metres. Some areas of bark damage on lower stems. Good physiological condition. Boundary fence prevents full inspection.	C1	No work required.	4		
		4.56	2		EM	Moderate						
No		65.3			10+ years	Light undergrowth						
T005	Field Maple	320	8		Low	N5, E5, S5, W5	Off-site tree appears in good condition. However, boundary fence prevents full inspection. Canopy overhangs site by 1 metre.	C1	No work required.	4		
		3.84	2		EM	Moderate						
Yes		46.3			10+ years	Grass, Light undergrowth						

Appendix C

Schedule of Works - Irrespective of Development

SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Land at Clatterbury Lane, Hill Green, Clavering, Essex

Surveyed By: Lewis Alexander
Surveyed: 03/10/2023
Managed By: Lewis Alexander

Tree No.	Species	Work required	Priority
A001	Sycamore, Elm Spp, Hawthorn, Blackthorn, Field Maple, Ash	Remove major deadwood over road.	**2**
T003	Elm Spp	Remove major deadwood. Reinspect in one year.	**3**

Appendix D

Preliminary Schedule of Works to Allow Development

SCHEDULE OF WORKS (AIA)

Land at Clatterbury Lane, Hill Green, Clavering, Essex

Surveyed By: Lewis Alexander
Surveyed: 03/10/2023
Managed By: Lewis Alexander

Tree No.	Species	Work required	Priority
A001	Sycamore, Elm Spp, Hawthorn, Blackthorn, Field Maple, Ash	Fell sections as detailed in drawing 10515-D-AIA-A.	**0**
A002	Blackthorn, Elm Spp, Elder Spp, Hawthorn, Sycamore	Crown lift Northen aspect to 2.5m. Crown reduce on western aspect as shown on drawing 10515-D-AIA-A.	**0**
A003	Dogwood Spp, Field Maple, Hazel, Hawthorn	Crown reduce on western aspect by up to 2m.	**0**
G006	Elm Spp	Root prune along attenuation basin as shown on drawing 10515-D-AIA-A. Crown lift northern aspect to 3m.	**0**
H001	Hawthorn, Ash, Elm Spp	Fell small section as detailed in drawing 10515-D-AIA-A.	**0**
H002	Blackthorn, Elm Spp, Hawthorn, Hazel, Field Maple	Fell small section as detailed in drawing 10515-D-AIA-A.	**0**
T001	Ash	Fell to ground level	**0**
T002	Elm Spp	Root prune along visitor parking bay as shown on drawing 10515-D-AIA-A. Crown lift section to 2.5m over visitor bay only.	**0**

Appendix E

Explanatory Notes

Explanatory Notes

HAYDEN'S Arboricultural Consultants

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.

Height	Recorded in metres, measured from the base of the tree.
Crown Base	Recorded in metres, the distance from ground and aspect of the lowest branch material.
Lowest Branch	Recorded in metres, the distance from ground and aspect of the emergence point of the lowest significant branch.
Life Expectancy	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.
Crown Spread	Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.
Minimum Distance	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).
RPA	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.
Water Demand	This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 "Building Near Trees".
Visual Amenity	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.
Problems/ Comments	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.
Work Required (TS)	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.

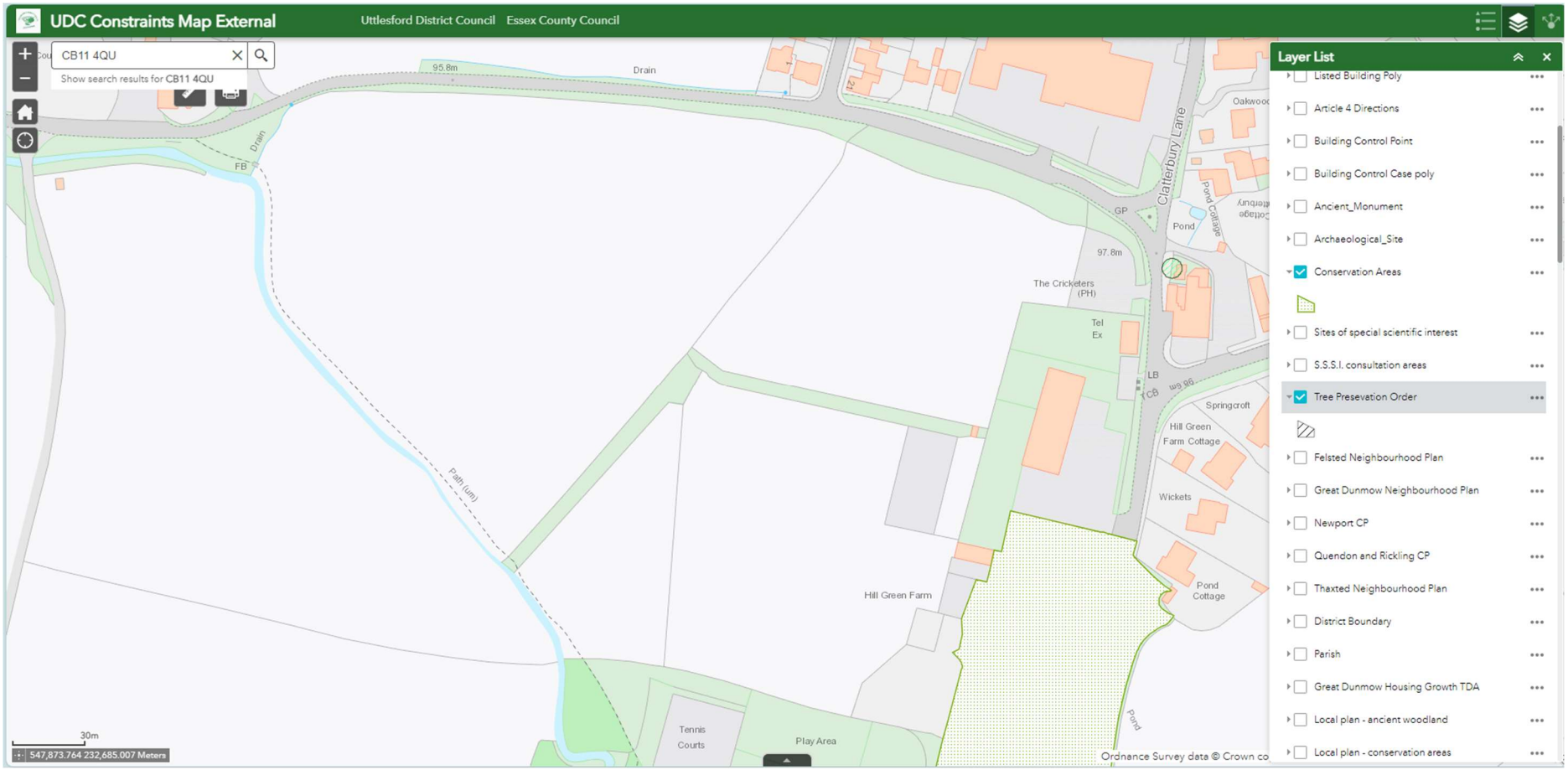
BS 5837:2012 Terms and Definitions

Access Facilitation Pruning	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.
Arboricultural Method Statement	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.
Arboriculturist	Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
Competent Person	Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. *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.*
Construction	Site-based operations with the potential to affect existing trees.
Construction Exclusion Zone	Area based on the root protection area from which access is prohibited for the duration of a project.
Root Protection Area (RPA)	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.
Service	Any above or below ground structure or apparatus required for utility provision. **NOTE** - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.
Stem	Principal above ground structural component(s) of a tree that supports its branches.
Structure	Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.
Tree Protection Plan	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.
Veteran Tree	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. **NOTE** - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.

Appendix F

Tree Preservation Order Enquiry/Response

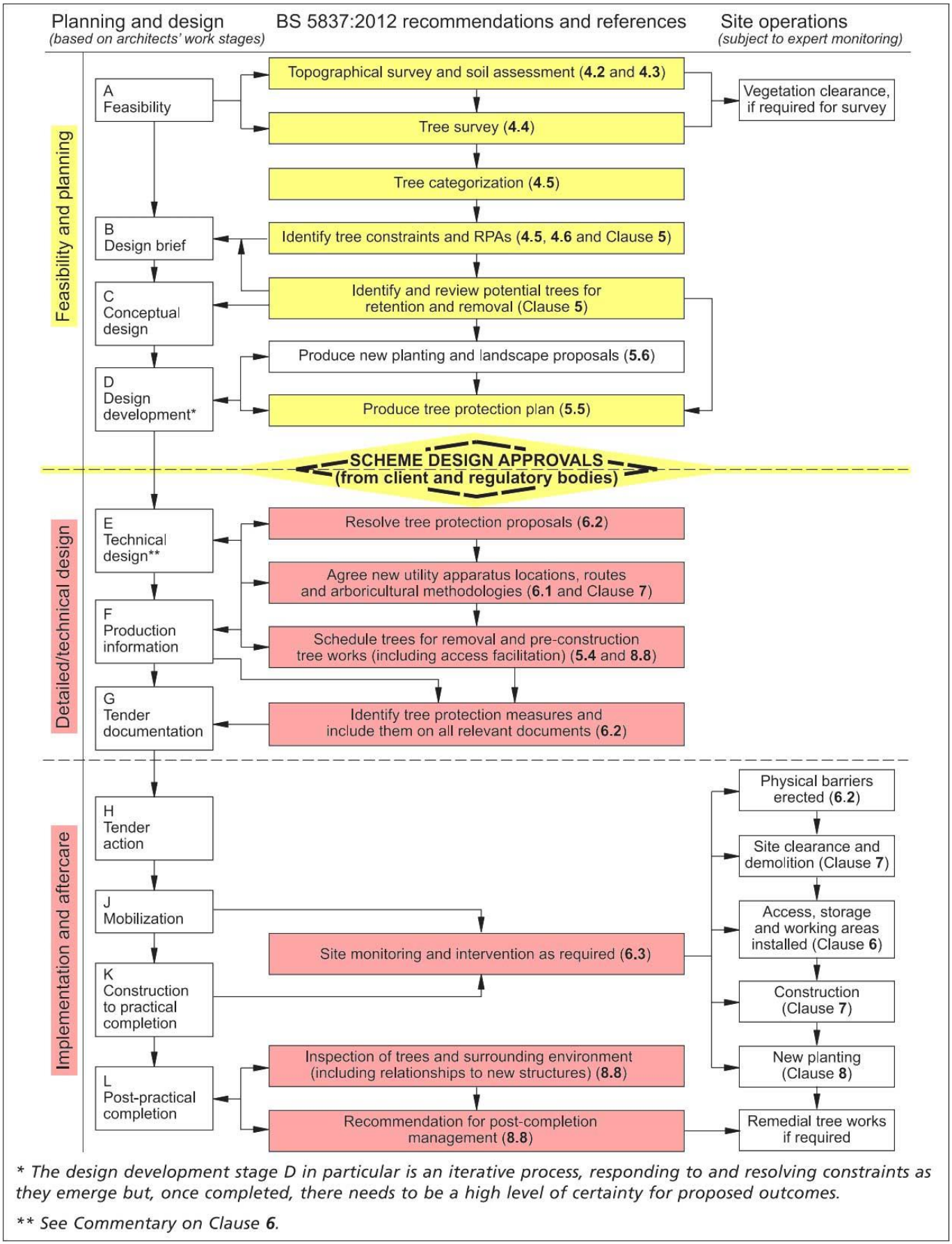
Tree Preservation Order / Conservation Area Online Mapping Extract



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

1 **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 -

- ☐ Dormice
- ☐ Otters
- ☐ Great crested newts
- ☐ Sand lizards
- ☐ Smooth snakes

YES ☐ NO ☐

2 **Does your wood contain any of the following habitats? Tick any that apply.**

- ☐ Old trees with holes and crevices which might be used bats
- ☐ Species rich scrub/coppice, early growth stage plantations and forest interfaces
- ☐ Rivers on which otters might be found
- ☐ Ponds which might be occupied by great crested newts
- ☐ Open areas on heathy soils

YES ☐ NO ☐

3 **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:

- ☐ National Biodiversity Network (www.nbn.org.uk)
- ☐ Local Biological Records Centre
- ☐ Local Wildlife Trust
- ☐ Other

Specify Other:

YES ☐ NO ☐

4 **Have your inspections or any expert surveys found any of the following signs or evidence? Tick any that apply.**

- ☐ Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts)
- ☐ Sightings (or echo-location)
- ☐ Potential breeding or roosting sites (e.g. veteran trees, old trees with crevices, riverside hollow trees, ponds, timber stacks, large fallen deadwood)
- ☐ Confirmed breeding or roosting sites (i.e. evidence of sites actually being used)

Details:

YES ☐ NO ☐

CHECK POINT

If you have answered NO to ALL of the above then only bats need to be considered in your operations.

If you have answered YES to any of the above then the species concerned must be considered as well as bats.

5 **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?**
Details: Use reverse of form to expand as required:

YES ☐ NO ☐

6 **Whether or not a licence is required...**
Has the information been communicated to operators (including the location of breeding sites and sensitive areas)? Tick any that apply.

- ☐ Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan)
- ☐ Shown to operators and/or their supervisor
- ☐ Marked with paint or hazard tape
- ☐ Shown on the site plan

Other means:

YES ☐ NO ☐

7 **Have arrangements for supervision been made to ensure Good Practice guidance is complied with during the operations?**
Details:

YES ☐ NO ☐

Details

Name of Wood:

Grid Reference:

Area: (ha) .

Date of Assessment:

Name of Assessor:

Notes

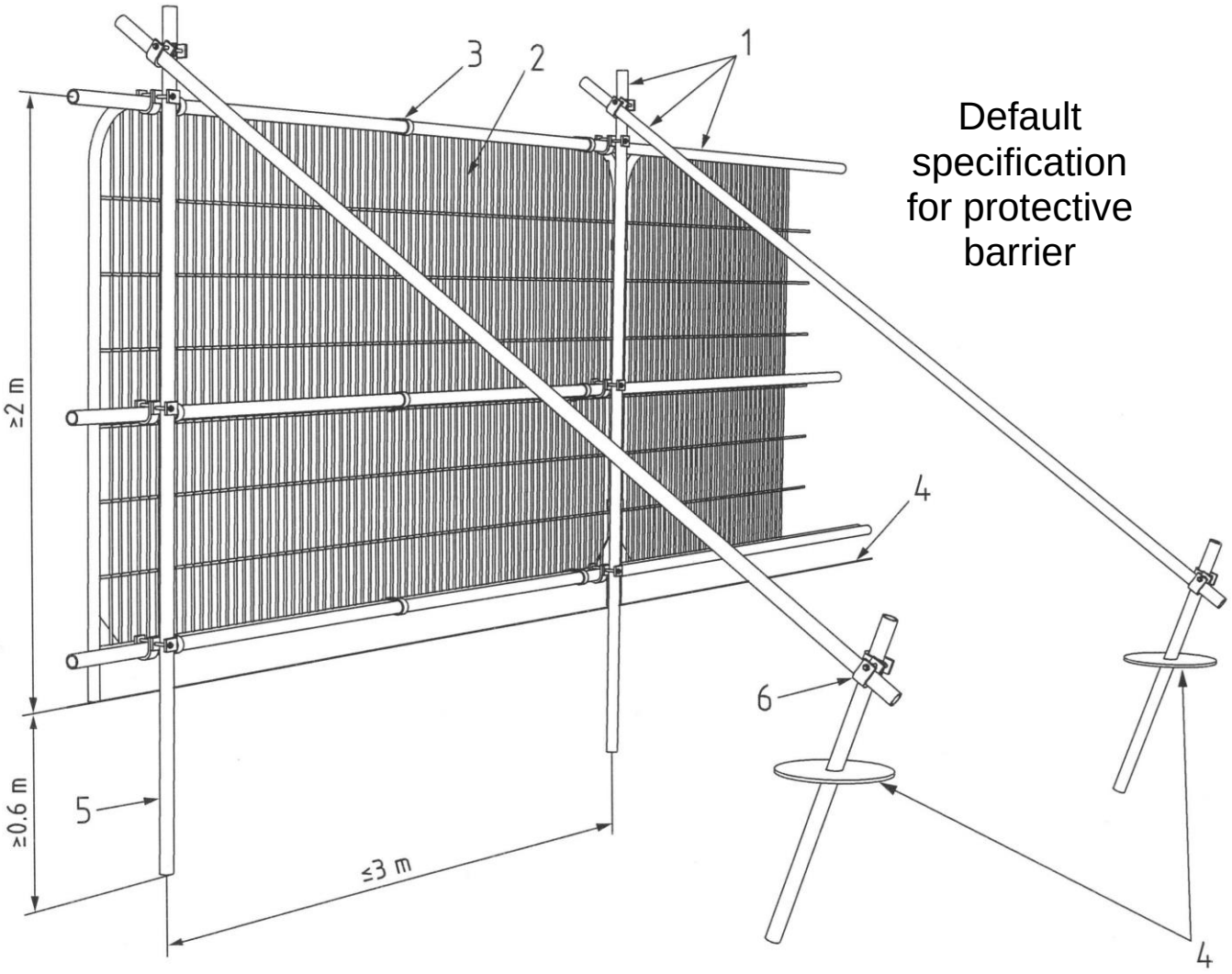
A licence is not required but continue to sections 6 and 7 below

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.

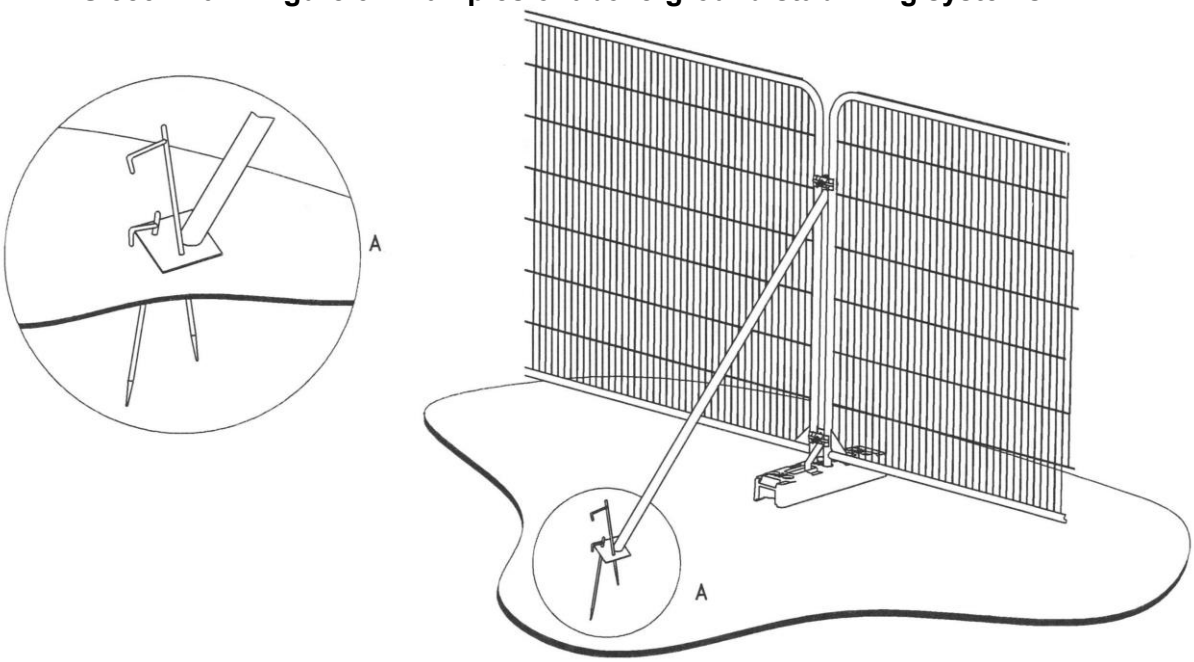
3. BS 5837:2012 Figure 2: Default specification for protective barrier



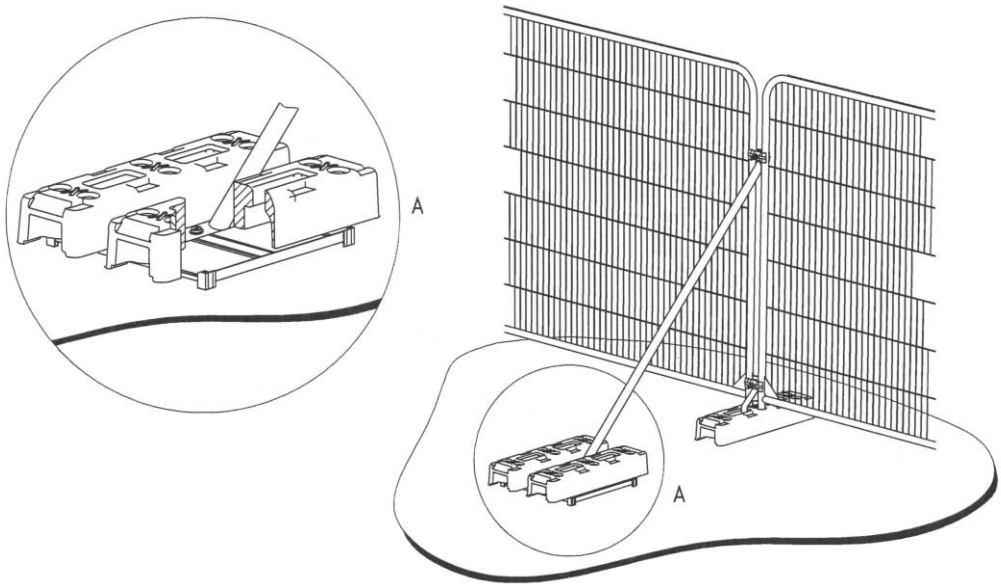
Key

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

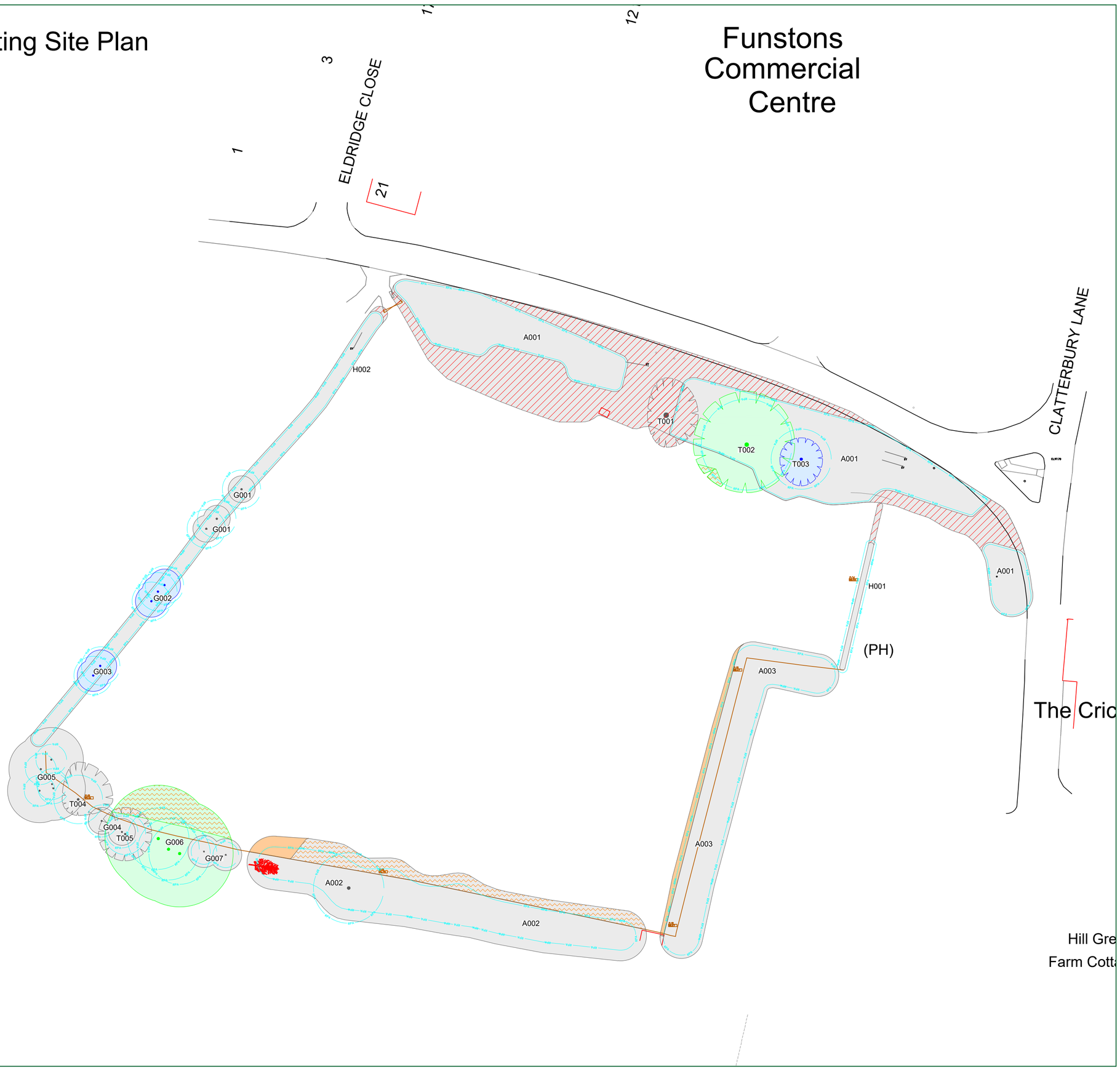


b) Stabilizer strut mounted on block tray

Appendix H

Hayden’s Drawing

Existing Site Plan



Proposed Site Plan

TREE PROTECTION STATUS

Hayden's sourced TPO & Conservation Area status from the Local Planning Authority's Online Mapping System on 05/10/2023.

We were informed that:

- No TPO's are present on site
- The site is not located within a conservation area

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.

CATEGORY AND DEFINTION

Trees unsuitable for retention	
Category U	Those in such condition that they cannot realistically be retained as living trees in the current land use for longer than 10 years
Trees to be considered for retention	
Category A	**Trees of high quality** with an estimated remaining life expectancy of at least 40 years
Category B	**Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years
Category C	**Trees of low quality** with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

NOTE:

Hayden's Arboricultural Consultants were provided with a Topographical Survey but these do not always show the positions of all the trees/features on site. The locations of any additional features have been fixed using GPS. As such the position of the trees/landscape features should not be taken as exact but gives a fair distribution of their locations on site.

North (Indicative)

LEGEND

- Existing Tree/Feature BS 5837:2012 Category A
- Existing Tree/Feature to be crown lifted to allow for development
- Existing Tree/Feature BS 5837:2012 Category B
- Existing Tree/Feature BS 5837:2012 Category C
- Existing Tree/Feature to be crown lifted to allow for development
- Trees which require crown reduction to facilitate the prospective development
- Existing Tree/Feature to be removed to allow for development BS 5837:2012 Category C
- Line of Root Protection Area (RPA) - calculated following guidelines set in BS 5837:2012
- Fallen Tree
- Area of temporary Ground Protection
- Line of proposed temporary protective barrier
- Line of proposed Root Pruning

Rev:	Date:	By:	Revision:
A	30/11/23	GM	Based on Stickling Green,Clavering_Proposed Site Plan
-	20/11/23	GM	Based on SJG4359 and Stickling Green,Clavering_Proposed Site Plan (Final) - 231115

The position, condition, and dimensions of the trees are based on a site survey undertaken on 03/10/23

"The original of this drawing was produced in colour - a monochrome copy should not be relied upon"

Scale 1:500

0m 10m 20m 30m 40m 50m

HAYDEN'S Arboricultural Consultants

5 Moseleys Farm Business Centre
Fornham All Saints,
Bury St Edmunds
Suffolk IP28 6JY

Head Office: 01284 765391
Southern Office: 01722 657423
Email: info@treesurveys.co.uk

www.treesurveys.co.uk

Client:	BAYA Group
Drawing Title:	Prelim AIA
Site:	Land at Clatterbury Lane, Hill Green, Clavering, Essex, CB11 4QU
Date:	30/11/23
Drawn By:	GM
Cad File Ref:	Cli\Pro\10515-D-AIA.dwg
Scale:	1:500 (A1)
Checked By:	LA
Drawing No:	10515-D-AIA
Rev:	A

- 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