



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

Proj. No 9892	Thelnetham House, High Street, Thelnetham, Diss, Suffolk, IP22 1JL		
Client:		Marsh Architects	
Date of Report:	18/11/2022	Revision:	Original

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

Summary

The purpose of this report is to provide a preliminary consideration of the arboricultural implications created by the proposed development. In accordance with the feasibility and planning sections of BS5837:2012 “*Trees in relation to design, demolition and construction – Recommendations*”, trees deemed to be within the influencing distance of the projected construction have been evaluated for quality, longevity, and initial maintenance requirements. Where trees do not have to be removed for health and safety reasons, a detailed and objective assessment has been made of the consequences of the intended layout.

In this circumstance it is intended to erect a new timber frame structure. As a result, four individual trees, three groups of trees and four hedges were inspected. The arboricultural related implications of the proposal are as follows:

- 1 It is necessary to fell three low quality or poor longevity individual trees, a section of one landscape feature and four low quality or poor longevity landscape features in order to achieve the proposed layout. Additionally, one tree and one landscape feature require minor surgery to permit construction space or access.
- 2 The alignment of the proposed timber frame structure nominally intrudes within the Root Protection Area of one tree to be retained. This has only a 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 construction techniques at these locations.
- 3 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)
- 4 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.
- 5 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, access facilitation pruning specification, phasing and an extensive auditable monitoring schedule.

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



Contact Details

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1.0 Introduction

1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Marsh Architects to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Thelnetham House, High Street, Thelnetham, Diss, Suffolk, IP22 1JL.

1.1.2 The site survey was carried out on 02/11/2022. 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 Jordan Marsh dated 17th October 2022
- Definition of site boundary
- Description of requirements/deadlines
- Proposed site layout drawing no. 252.2



2.0 The Site

2.1 Overview

2.1.1 The site is Thelnetham House, High Street, Thelnetham, Diss, Suffolk, IP22 1JL.

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 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 West Suffolk Council prior to commencing works to trees. It should be noted however, that West Suffolk Council have the power to serve Tree Preservation Orders very rapidly, and therefore it is incumbent upon owners, managers or any persons wishing to undertake work to any trees to contact the local planning authority prior to commencing works to ensure that the situation has not changed.

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

3.0 Tree Survey

3.1 As part of this survey a total of four individual trees, three groups of trees and four hedges have been identified. These have been numbered T001 – T004, G001 – G003 and H001 – H004 respectively.

3.2 An accurate topographical survey was not available at the time of inspection. Therefore, the position of each tree shown on the attached drawing no. 9892-D-AIA has been fixed by use of a hand-held GPS surveying unit. Given this, the position of the trees must be considered indicative, although drawing no. 9892-D-AIA provides a fair representation of the relationship of the trees as distributed across the site.



- 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 a new timber frame structure within the curtilage of the site.

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 surface 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 structural supports for the proposed timber frame structure marginally encroach within the calculated RPA of one tree to be retained – T003. Given the minor extent of the intrusion at this location it is considered appropriate to undertake linear root pruning as part of the access facilitation pruning (AFP) works. This operation will obviate the need for arboriculturally imperative specialised foundation construction methods in this situation. However, dependent on the soil type, species and topography, trees may have an influence on the soil beyond their calculated RPA. Given the proximity of the proposed construction to the trees to be retained, it is recommended that a Structural Engineer is consulted to assess the implications of the tree retention on the required foundation design.
- 4.4.2 It is understood that there are no new hard surfaces associated with this proposal.
- 4.4.3 Excavation and soil re-modeling is not shown to encroach within the RPA of any retained trees. Therefore, no adverse arboricultural implications are expected.



4.5 Implications of Sloping Ground

4.5.1 The arboricultural implications of the proposed structures are based on an assumption that 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*
G003	Crown lift section to 3m as shown on drawing no. 9892-D-AIA.	C
T003	Reduce crown to boundary and root prune as shown on drawing no. 9892-D-AIA.	C



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*
G001	Conflicts with position of structure and poor longevity	U	Low
G002 (section)	Conflicts with position of structure	C	Low
H001	Conflicts with position of structure	C	Low
H003	Conflicts with repositioned compost bins	C	Moderate
H004	Conflicts with proposed planting	C	Moderate
T001	Conflicts with position of structure and tight unions pose a hazard to long-term safe retention	C	Moderate
T002	Conflicts with position of structure	C	Low
T004	Conflicts with repositioned compost bins	C	Moderate

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

4.11.2 T001 has been identified as being multi-stemmed and having tight unions but a safe and useful life expectancy of 10+ years. Given the introduction of a new structure and the general unpredictability of tight unions splitting, it is considered prudent to fell T001. The recommendation to fell may still be appropriate irrespective of development to safeguard against future mechanical failure.

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. 9892-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 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. 9892-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 F-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 **Construction within the Root Protection Area**

5.8.1 Where it is shown that the construction of a timber upright encroaches within the RPA of a retained tree, the foundations of the upright 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.

5.8.2 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 Marsh Architects 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, 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:



November 2022.....

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.

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

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

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Strouts, R.G. & Winter, T.G. (1994). *Research for Amenity Trees No.2: Diagnosis of Ill-Health in Trees*. Department of the Environment, 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	Preliminary Schedule of Works to Allow Development
Appendix	D	Explanatory Notes
Appendix	E	Tree Preservation Order Enquiry/Response
Appendix	F	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	G	Drawing No 9892-D-AIA




Appendix A - Species List & Tree Problems

Species List:


Alder	<i>Alnus glutinosa</i>
Beech	<i>Fagus sylvatica</i>
Berberis	<i>Berberis sp</i>
Black Mulberry	<i>Morus nigra</i>
Cherry	<i>Prunus sp</i>
Cherry Plum	<i>Prunus cerasifera</i>
Elaeagnus	<i>Elaeagnus ebbingei</i>
Elder	<i>Sambucus nigra</i>
Holly	<i>Ilex aquifolium</i>
Hornbeam	<i>Carpinus betulus</i>
Privet	<i>Ligustrum sp</i>
Sycamore	<i>Acer pseudoplatanus</i>

Tree Problems:

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

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: <i>Hedera helix</i> (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 whilst relieving the pressure on the tree.
Species affected:	Most trees can be affected.
Images:	



Appendix B

Schedule of Trees

SCHEDULE OF TREES (AIA) Thelnetham House, High Street, Thelnetham, Diss, Suffolk

 Surveyed By: Alex Turner Date: 02/11/2022
 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	Lowest Branch	Age	Water Demand						
		On site	RPA (m ²)	Aspect	Aspect	SULE						
G001	Hornbeam	90	8		Low	N2.5, E2.5, S2.5, W2.5	Pair of trees growing on boundary line. Ownership unclear. All dimensions are estimated due to lack of access. No Topo position so location is indicative. Fair form and condition but will conflict with adjacent wooden building in the near future. SULE and category are based on the future conflict only.	U	No work required.	4	Fell to ground level.	0
		1.08	3		Y	Moderate						
		3.7			<10 years	Building, Dense undergrowth						
G002	Sycamore	250	9.5		Low	N3, E3, S3, W3	Pair of trees growing on boundary line. Ownership unclear. All dimensions are estimated due to lack of access. Ivy clad stems inhibits full visual inspection. No Topo position so location is indicative. Fair form and condition.	C1	No work required.	4	Fell western tree as shown on drawing no. 9892-D-AIA.	0
		3	3		SM	Moderate						
		28.3			10+ years	Grass, Light undergrowth						
G003	Cherry Plum	200	7		Moderate	N3.5, E3.5, S3.5, W3.5	Linear feature growing along boundary. Average dimensions provided. Fair form and condition.	C1	No work required.	4	Crown lift section to 3m as shown on drawing no. 9892-D-AIA.	0
		2.4	2		SM	Moderate						
		Yes	18.1			10+ years						
H001	Cherry Spp, Elder, Holly, Sycamore	30	3		Low	N1.5, E1.5, S1.5, W1.5	Understorey feature forming screen between site and neighbouring garden. Mixture of planted specimens and natural regeneration. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0
		0.36	0.1		Y	Moderate						
		Yes	0.4			10+ years						
H002	Beech	30	2.5		Moderate	N1, E1, S1, W1	Managed hedge feature. Fair form and condition.	C1	No work required.	4		
		0.36	0.1		Y	Moderate						
		Yes	0.4			10+ years						
H003	Elaeagnus ebbingei	60	3.5		Moderate	N2, E2, S2, W2	Managed hedge feature. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0
		0.72	0.5		EM	Moderate						
		Yes	1.6			10+ 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 ²)	Aspect	Aspect	SULE	Ground Cover						
H004	Berberis Spp, Holly, Privet Spp	50	2.5		Moderate	N1.2, E1.2, S1.3, W1.3	Mixed species hedge forming cohesive feature. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0
		0.6	0.1		SM	Moderate						
Yes		1.1			10+ years	Bare earth						
T001	Sycamore	650	13		Moderate	N8, E8, S7, W6	Multi-stemmed form from 0.5 metres. Tight unions. Point where unions form, is filled with green waste detritus that has accumulated naturally and then decayed. West stem goes on to become multi-stemmed again from 1.5 metres. Evidence of past surgery to lift crown base. Minor deadwood. Compost bins have been installed west of stem within 0.3 metre and so there is potential for root compaction. Majority of crown base is between 2 - 2.5 metres above ground level. Competition between the stems and the subsequent stress on the unions reduces the safe and useful life expectancy of the tree. Poor form. Fair condition.	C1	No work required.	4	Fell to ground level.	0
		7.8	2		EM	Moderate						
Yes		191.1			10+ years	Building, Grass, Bare earth						
T002	Cherry Plum	210	8		Low	N2, E3.5, S3, W3	Multi-stemmed form from 1.6 metres. Tree appears typical for species. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0
		2.52	2		EM	Moderate						
Yes		20			10+ years	Bare earth, Light undergrowth						
T003	Alder Sp	300	9		Low	N4, E3, S0.1, W4	Off-site tree. All dimensions are estimated due to lack of access. Crown is asymmetric due to neighbouring trees. No Topo position so location is indicative. Fair form and condition.	C1	No work required.	4	Reduce crown to boundary and root prune as shown on drawing no. 9892-D-AIA.	0
		3.6	2.5		SM	Moderate						
No		40.7			10+ years	Bare earth, Grass						
T004	Black Mulberry	260	5		Moderate	N2, E5, S3, W2.5	Multi-stemmed form from 0.5 metre. DBH measurement is estimated due to lack of access. Fair form and condition.	C1	No work required.	4	Fell to ground level.	0
		3.12	1		EM	Moderate						
Yes		30.6			10+ years	Dense undergrowth, Grass						

Appendix C

Schedule of Works to Allow Development

SCHEDULE OF WORKS (AIA)

Thelnetham House, High Street, Thelnetham, Diss, Suffolk

Surveyed By: Alex Turner

Surveyed: 02/11/2022

Managed By: Alex Turner

Tree No.	Species	Work required	Priority
G001	Hornbeam	Fell to ground level.	0
G002	Sycamore	Fell western tree as shown on drawing no. 9892-D-AIA.	0
G003	Cherry Plum	Crown lift section to 3m as shown on drawing no. 9892-D-AIA.	0
H001	Cherry Spp, Elder, Holly, Sycamore	Fell to ground level.	0
H003	Elaeagnus ebbingei	Fell to ground level.	0
H004	Berberis Spp, Holly, Privet Spp	Fell to ground level.	0
T001	Sycamore	Fell to ground level.	0
T002	Cherry Plum	Fell to ground level.	0
T003	Alder Sp	Reduce crown to boundary and root prune as shown on drawing no. 9892-D-AIA.	0
T004	Black Mulberry	Fell to ground level.	0

Appendix D

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.

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. <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>
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 E

Tree Preservation Order Response/Enquiry

My House

My Maps

Thelnetham House, High Street, Thelnetham, IP22 1JL

Find

The interface displays a map of Thelnetham House and its surroundings. On the left, a sidebar lists various planning constraints with checkboxes and counts:

- Planning Applications: 0/7
- Planning Constraints: 2/17
 - Conservation areas: (2 green dots on map)
 - Housing settlement boundary:
 - Article 4 Direction:
 - Tree Preservation Orders: (1 green icon on map)
 - Listed buildings:
 - Scheduled ancient monuments:

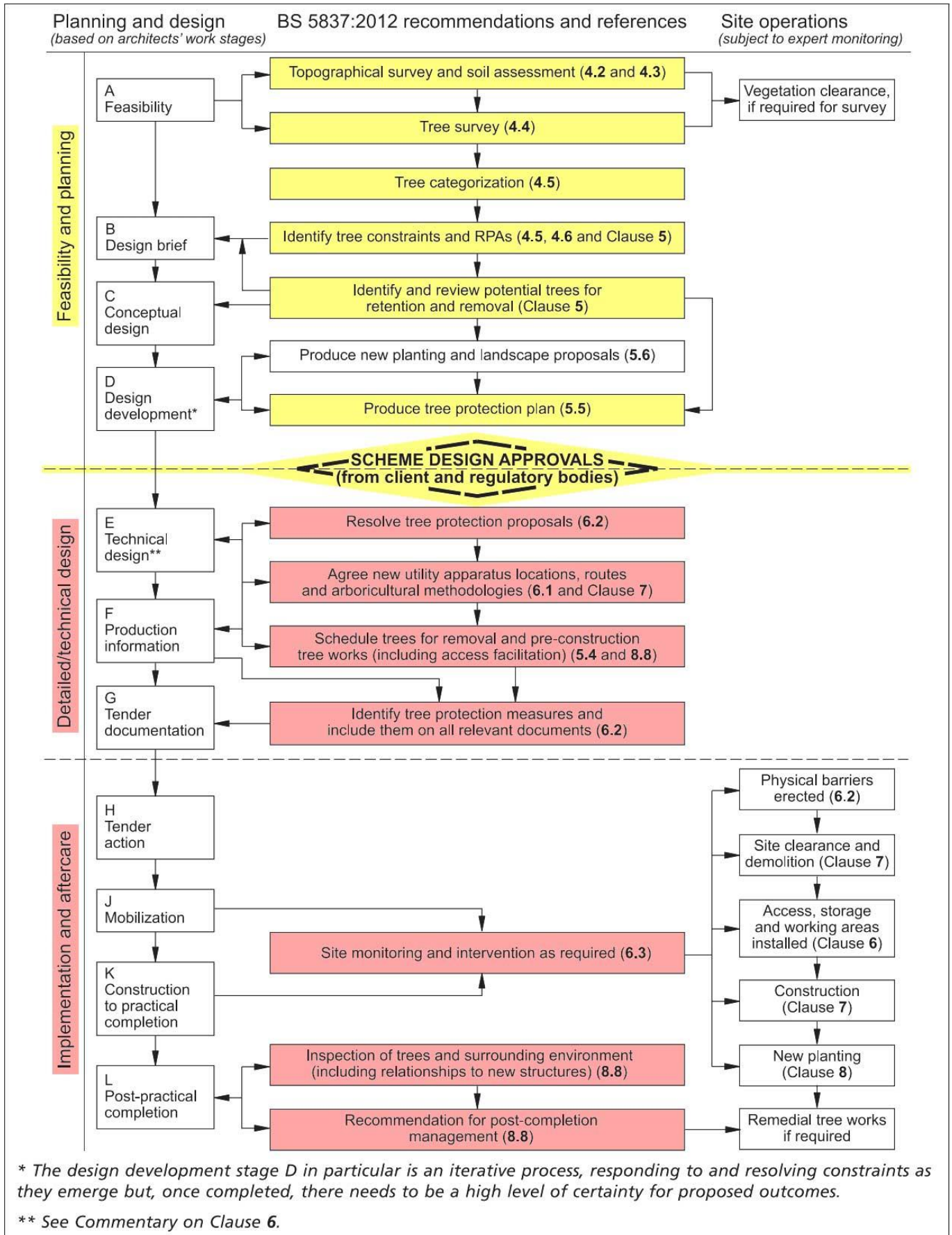
The map shows buildings including Barn Lodge, Lodge Farm, Middleton Barn, and Middleton Granary. A pond and moat are also visible. The map is overlaid with a 'West Suffolk Council' watermark. At the bottom of the map area, there is a copyright notice: '(c) Crown Copyright and database rights 2022 OS 100023282.'

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Appendix F

Advisory Information & Sample Specifications

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

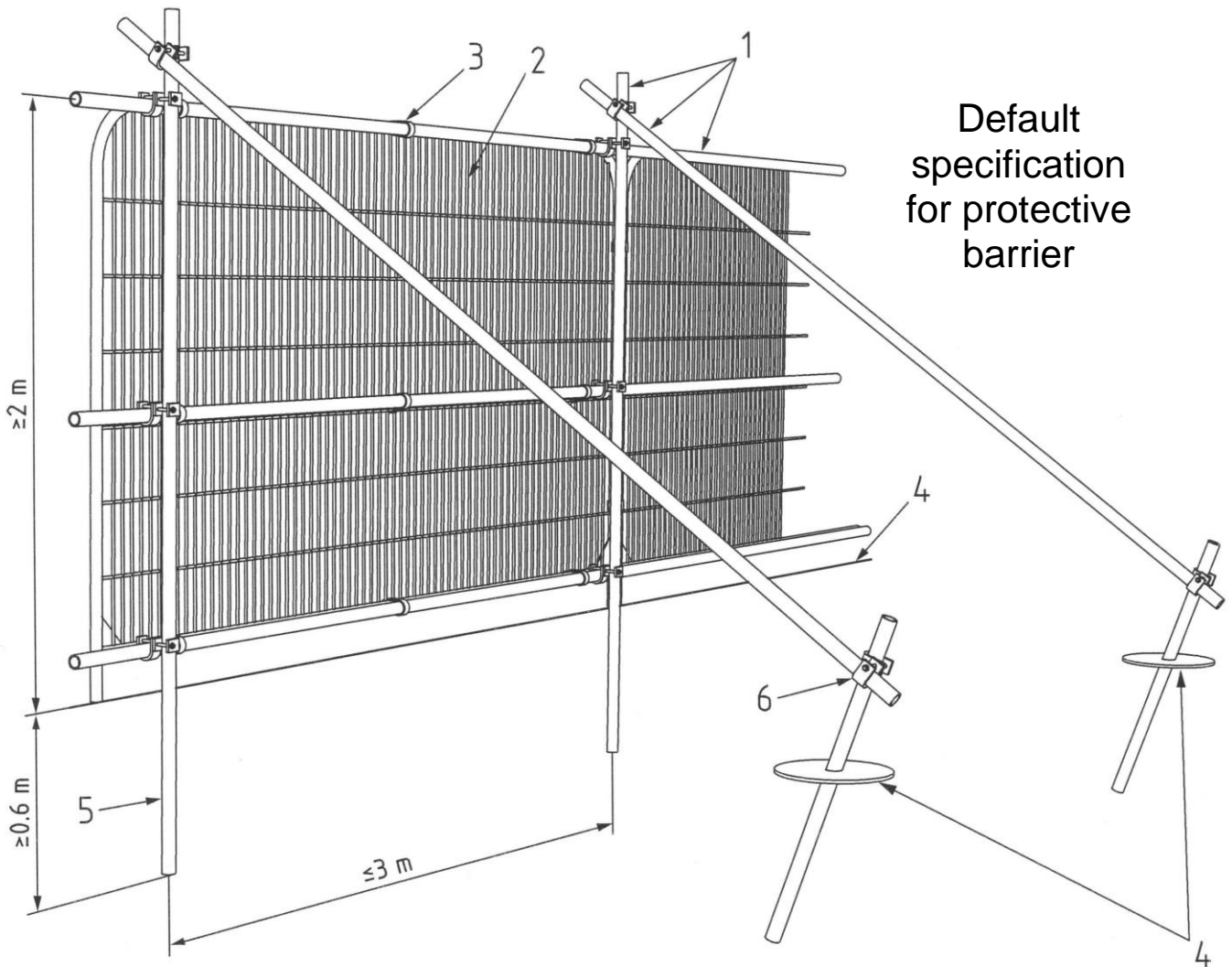


2.

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

Checklist		Details												
1	<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"> <input type="checkbox"/> Dormice <input type="checkbox"/> Otters <input type="checkbox"/> Great crested newts <input type="checkbox"/> Sand lizards <input type="checkbox"/> Smooth snakes 	<p>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/>												
2	<p>Does your wood contain any of the following habitats? Tick any that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Old trees with holes and crevices which might be used bats <input type="checkbox"/> Species rich scrub/coppice, early growth stage plantations and forest interfaces <input type="checkbox"/> Rivers on which otters might be found <input type="checkbox"/> Ponds which might be occupied by great crested newts <input type="checkbox"/> Open areas on heathy soils 	<p>YES</p> <p>NO</p>												
3	<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"> <input type="checkbox"/> National Biodiversity Network (www.nbn.org.uk) <input type="checkbox"/> Local Biological Records Centre <input type="checkbox"/> Local Wildlife Trust <input type="checkbox"/> Other <p>Specify Other:</p>	<p>YES</p> <p>NO</p>												
4	<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"> <input type="checkbox"/> Signs (e.g. otter spraint, nuts gnawed by dormice, leaves folded by newts) <input type="checkbox"/> Sightings (or echo-location) <input type="checkbox"/> Potential breeding or roosting sites (e.g. veteran trees, old trees with crevices, riverside hollow trees, ponds, timber stacks, large fallen deadwood) <input type="checkbox"/> Confirmed breeding or roosting sites (i.e. evidence of sites actually being used) <p>Details:</p>	<p>YES</p> <p>NO</p>												
CHECK POINT	<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>													
5	<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>												
6	<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"> <input type="checkbox"/> Included in documentation (e.g. contract, letter of instruction, site assessment or other management plan) <input type="checkbox"/> Shown to operators and/or their supervisor <input type="checkbox"/> Marked with paint or hazard tape <input type="checkbox"/> Shown on the site plan <p>Other means:</p>	<p>YES</p> <p>NO</p>												
7	<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>												
		Notes												
		<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

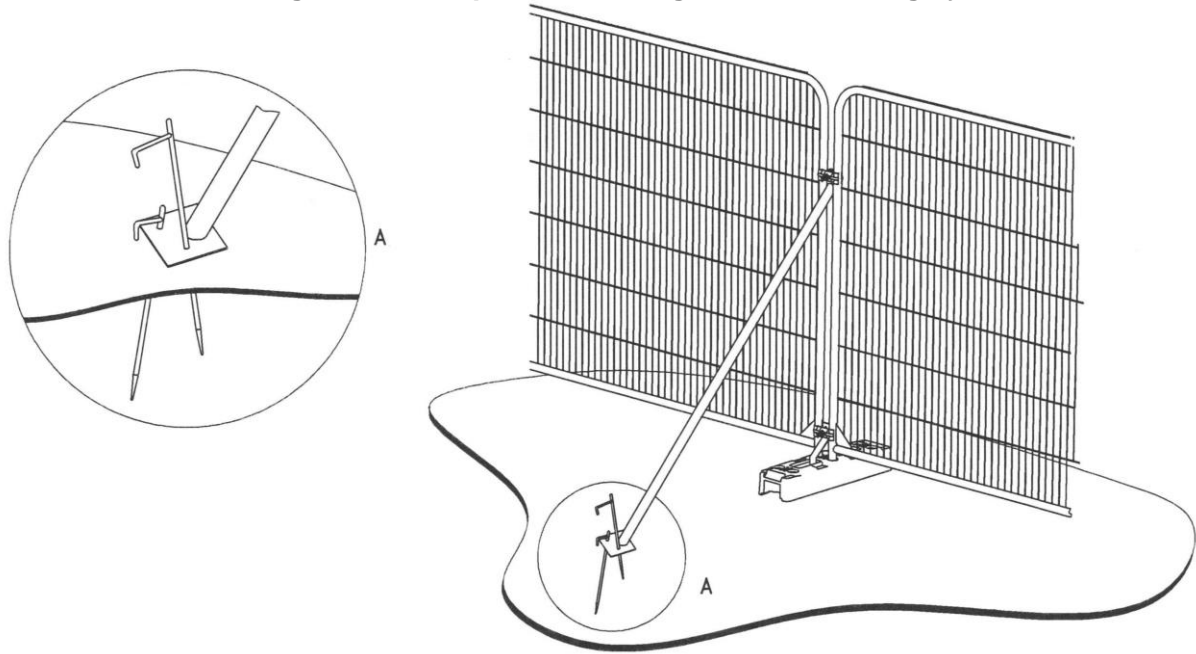


Default
specification
for protective
barrier

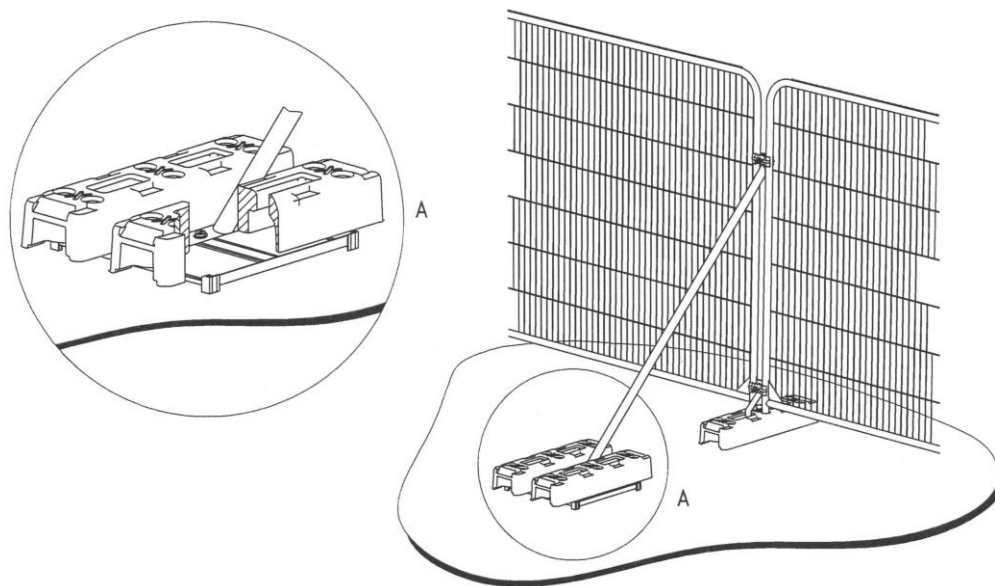
Key

- 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 G

Haydens Drawing

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



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