



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

Proj. No 9677	Old Wood, Skellingthorpe, Lincolnshire, LN6 5UA		
Client:		GSC Solicitors LLP	
Date of Report:	25/10/2023	Revision:	A

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 construct a residential dwelling with associated hard surfacing and garden space. As a result, eight individual trees, one group of trees, two hedges and a woodland were inspected. The arboricultural related implications of the proposal are as follows:

- 1 In order to achieve the proposed layout one specimen (T005) requires coppicing, and another specimen (T006) requires crown lifting to create the new access.
- 2 The alignment of the new dwelling does not encroach within the Root Protection Areas of any trees that are to be retained. In view of this, and as assessed in accordance with BS5837:2012, no specialist foundation designs or construction techniques will be required to prevent damage to tree roots. Specialist foundations may still be required for other reasons, including mitigating the influencing distance of tree roots, subject to expert advice from a structural engineer.
- 3 The alignment of the new access and parking area encroach within the Root Protection Areas of T004, T005 and T006 but given the use of modern “no dig” construction techniques this is not considered to be a substantial issue.
- 4 This report recommends that specialist advice is obtained by expert practitioners in other disciplines. Such input should always be sought prior to the submission of this report in support of a planning application in order to demonstrate that the techniques and methods hereby proposed are achievable. In this particular circumstance it is necessary to contact the following:

Structural Engineer (foundation design, item 4.4.1)
Civil Engineer (“no dig” surfacing, item 4.4.2)
- 5 All trees and landscape features that are to remain as part of the development should suffer no structural damage provided that the findings with this report are complied with in full. This includes ensuring that protective fencing is erected as detailed at items 4.6 and 5.1 of this report.



- 6 Post Planning Permission – Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, phasing and an 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 – GSC Solicitors LLP			
Address 31-32 Ely Place London EC1N 6TD	Contact Philip Kratz	Tel: E-mail:	[REDACTED]

Local Planning Authority – North Kesteven District Council			
Address PO Box 3 District Council Offices Kevsteven Street Sleaford Lincolnshire NG34 7EF	Trees Officer David Kolebuk	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 Authors: Stephen Holyland Lewis Alexander	Tel: E-mail:	[REDACTED]



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1.0 Introduction

1.1 Terms of Reference

- 1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by GSC Solicitors LLP to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Old Wood, Skellingthorpe, Lincolnshire, LN6 5UA.
- 1.1.2 The site survey was carried out on 22/03/2023. 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.
- 1.2.4 Where the trees inspected stand within woodland, the frequency with which these trees/woodlands are accessed, or will be accessed, must be considered as an integral part of the recommendations given for the future management of these trees/woodlands. Priority will be given to those trees near existing and proposed footpaths, public highways and the site boundaries where it is assumed that the presence of persons and property will be more frequent and therefore of a potentially higher risk. Many of the trees surveyed within the woodland areas present little or no risk (barring exceptional circumstances) to site users and could therefore be left unmanaged.



The decision regarding the frequency of use of these areas within the site, and the management decisions taken based on this frequency, must ultimately be the responsibility of the client.

1.3 Documentation

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

Email of instruction by Philip Kratz on 09/03/2023
Definition of site boundary
Description of requirements/deadlines
Topographical survey 1\001
Proposed site layout 22208_PL03

2.0 The Site

2.1 Overview

2.1.1 The site is Land south of the Old Wood, Skellingthorpe LN6 5UA.

2.2 Soils

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

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

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

2.3 Statutory Tree Protection

2.3.1 Tree Preservation Order(s)

The local planning authority North Kesteven District Council have deemed it appropriate to provide statutory protection to trees on this site through the serving of a Tree Preservation Order (TPO), Ref no N652. The effect of this on the owners, managers or any persons wishing to undertake work on preserved trees is to require them to obtain written permission from North Kesteven District Council prior to actioning any surgery or felling etc. The purpose of this process is to try to ensure that the works are appropriate, proportionate, and in keeping with the long-term aims of the TPO (as expressed in the original TPO statement) but, given that trees are living organisms, and the locality within which they are set is liable to change, it is often the case that local planning authority decisions relating to TPO applications require regular review to reflect the current situation rather than the historical perspective of the original date of protection.



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

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

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

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

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

2.3.2 Felling Licence

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

A Felling Licence is not required in the following instances:

- To fell trees in a garden, an orchard, a churchyard, or a designated open space (Commons Act 1899).

- To carry out surgery operations such as pruning, reduction, dead wooding or pollarding.

- To fell less than 5 cubic metres in a calendar quarter. (Please note that not more than 2 cubic metres in a calendar quarter may be sold).

- To fell trees that are 8 centimetres or less in diameter when measured 1.3 metres from the ground. Trees removed for thinning may have a diameter of up to 10 centimetres and trees managed under a coppice regime may have a diameter of up to 15 centimetres.

- To fell trees previously approved for removal under a Dedication Scheme, or where Detailed Planning Permission has been granted.

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



3.0 Tree Survey

- 3.1 As part of this survey a total of eight individual trees, one group of trees, two hedges and a woodland have been identified. These have been numbered T001 – T008, G001, H001 – H002 and W001 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. 9677-D-AIA Rev 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:

T004	Remove all deadwood.
T006	Remove all deadwood.

- 3.6 Recorded within this tree survey are the approximate locations of dead trees of low risk to persons or property. These are denoted on drawing no. 9677-D-AIA Rev A with a red symbol, as per the drawing key. As there is little health and safety concern with regards to these identified trees, it is to the landowners discretion whether they are 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 construct a residential dwelling with associated hard surfacing and garden space within the curtilage of the site.

4.2 Access

- 4.2.1 Site access is encumbered by the Root Protection Areas (RPA) of the following retained trees – T005 and T006. Although this has been used as a regular site access it is unlikely to be sufficiently robust to protect the vulnerable tree roots during the construction process. Therefore, and from a purely arboricultural perspective, it will be necessary to install the “no dig” surfacing proposed at item 4.4.2 below as a first phase of development, immediately after the completion of the necessary tree surgery and the installation of protective fencing (provided that it is designed to be of sufficient load bearing capacity to cope with construction traffic) and sealed to prevent contamination. The seal can then be removed to allow air and moisture penetration at the completion of the project.

4.3 Demolition

- 4.3.1 The proposal requires the removal of the existing driveway surface within the theoretical RPA of the following retained items – T005 and T006. It is unknown whether the presence of the hard surfacing will have precluded significant root encroachment. However, to ensure there is no damage to the roots of these specimens, works must only be completed under arboricultural supervision and primarily by hand (supported with appropriate lightweight machinery only if agreed by the supervising arboriculturalist) within the calculated RPA.

4.4 Construction

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

- 4.4.2 Installation of new driveway hard surfaces encroach within the RPA of the following items to be retained – T004, T005 and T006. Provided that these work with finished levels and required load bearings without cutting into the ground, the surfaces should be attended to by the use of “no dig” construction methods. In the detailed Arboricultural Method Statement & Tree Protection Plan, Hayden’s Arboricultural Consultants will supply a sample design of “no dig” surfacing. However, the exact specification (adhering to the principles of the sample design) must be designed by a Civil Engineer who can confirm that the finished levels and load bearings are achievable with this type of design without cutting into the ground. In order to protect the RPA of the affected trees, these areas should be constructed as a first phase of the development – i.e. immediately after the necessary tree surgery has been completed and protective fencing erected. It is recognised that the final top dressing of the hard surfaces could be added at the completion of the project, however during the construction phase the permeable surface must be sealed and protected to prevent contamination and compaction.



Whatever method of sealing and protection is used, this must be removed at the completion of construction to allow for moisture penetration and gaseous exchange.

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 demolition and construction 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 limited internal space to locate a construction compound outside the RPA of any trees that are to be retained. As such the project will require careful phasing to manage the storage of materials.

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*
T005	Coppice to allow access.	C
T006	Crown lift to 4.5m to allow access.	B



4.11 Landscape Implications

4.11.1 It is not necessary to fell any trees in order to achieve the proposed layout.

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. 9677-D-AIA Rev 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. 9677-D-AIA Rev 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 GSC Solicitors LLP 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 processes of demolition and construction.
- 6.2 Subject to achieving Planning Permission, it is recommended that a detailed Arboricultural Method Statement & Tree Protection Plan should be provided. This will include the following: fencing type, ground protection measures, “no dig” surfacing, access facilitation pruning specification, project phasing and an extensive auditable monitoring schedule.
- 6.3 Tree surgery should be completed as detailed in the Schedule of Trees. Where this has been identified for reasons other than to permit development, this work should be completed within the advised timescales irrespective of any development proposals.
- 6.4 The tree surgery works proposed as part of this Survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed development. To this end, should these recommendations be overruled, this Survey stands as the opinion of Hayden’s Arboricultural Consultants Limited, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the Local Planning Authority, cannot be the responsibility of this practice.



7.0 Limitations & Qualifications

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

General exclusions

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

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

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

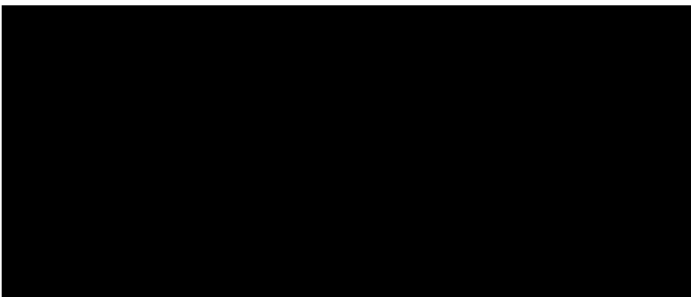
However, if any additional alterations to the property or soil levels are carried out and/or further tree works undertaken other than specified within the report, it will become invalid and a new tree inspection strongly recommended.

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

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

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

Signed:



**October 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.

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9.0 Appendices

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Appendix A - Species List & Tree Problems

Species List:

Cherry Laurel	Prunus laurocerasus
English Oak	Quercus robur
European Lime	Tilia x europaea
Goat Willow	Salix caprea
Hawthorn	Crataegus monogyna
Privet	Ligustrum sp
Silver Birch	Betula pendula
Western Red Cedar	Thuja plicata
White Poplar	Populus alba

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:	



Appendix B

Schedule of Trees

SCHEDULE OF TREES (AIA) Old Wood, Skellingthorpe, Lincolnshire

Surveyed By: Steve Holyland Date: 22/03/2023
 Managed By: Steve Holyland

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
		RPA (m²)	Aspect	Aspect	SULE	Ground Cover						
G001	Silver Birch	200	16		Moderate	N2.5, E2.5, S2.5, W2.5	A group of Silver Birch close to the site boundary. All trees have tall straight main stems with high crowns. No significant defects observed at time of survey.	C2	No work required.	4		
		2.4	2		SM	Low						
Yes		18.1			10+ years	Woodland floor						
H001	Western Red Cedar	150	5		Moderate	N1.5, E1.5, S1.5, W1.5	Boundary hedgerow. Fairly unmanaged form. No significant defects observed at time of survey.	C2	No work required.	4		
		1.8	0		SM	Moderate						
Yes		10.2			10+ years	Woodland floor						
H002	Cherry Laurel, Privet Spp, Hawthorn, English Oak	120	6		Moderate	N2, E2, S2, W2	Unmanaged boundary hedgerow to the frontage of the site. No significant defects observed at time of survey.	C2	No work required.	4		
		1.44	0		SM	High						
Yes		6.5			10+ years	Light undergrowth						
T001	White Poplar	120	7.5		Low	N2, E2.5, S2, W2	Small establishing tree. Good form and health. No significant defects observed at time of survey.	C1	No work required.	4		
		1.44	1.5		SM	High						
Yes		6.5			10+ years	Woodland floor						
T002	White Poplar	120	7.5		Low	N2, E2.5, S2, W2	Small establishing tree. Good form and health. No significant defects observed at time of survey.	C1	No work required.	4		
		1.44	1.5		SM	High						
Yes		6.5			10+ years	Woodland floor						
T003	Goat Willow	250	7		Low	N4, E3, S3.5, W3	Multi-stemmed specimen close to site boundary. Typical tight unions. No significant defects observed at time of survey.	C2	No work required.	4		
		3	0.5		SM	High						
Yes		28.3			10+ years	Woodland floor						
T004	English Oak	700	22		Moderate	N8, E10, S9, W8.5	DBH estimated due to water filled ditch. Tree is located in the verge between site and road. Tree is slightly asymmetric toward the east. Typical amounts of deadwood present throughout the crown. Overall no significant defects observed at time of survey.	A2	Remove all deadwood.	2		
		8.4	3.5		EM	High						
Yes		221.7			40+ years	Light undergrowth, Water						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
		RPA (m²)	Aspect	Aspect	SULE	Ground Cover						
T005	Goat Willow	430	18		Moderate	N4, E5.5, S4, W4.5	Tree located next existing access. Main stem has a wound on the north east side from base level. This could possibly be due to an old tear out wound. Otherwise no significant defects observed at time of survey.	C1	Monitor annually for signs of deterioration.		Coppice to allow access.	0
		5.16	3.5		EM	High						
Yes		83.6			10+ years	Light undergrowth						
T006	English Oak	740	22		Moderate	N8, E9.5, S8.5, W8	Twin stemmed specimen located next to existing access. Main union is close to base and is tight. Typical amounts of deadwood present throughout the crown. Overall no significant defects observed at time of survey.	B2	Remove all deadwood.	2	Crown lift to 4.5m to allow access.	0
		8.88	3		EM	High						
Yes		247.7			20+ years	Light undergrowth						
T007	English Oak	240	3		Low	N1.5, E2, S1, W0.5	Small specimen which has been kept topped in order stop interference with overhead power cable. Otherwise no significant defects observed at time of survey.	C1	No work required.	4		
		2.88	1		SM	High						
Yes		26.1			10+ years	Light undergrowth						
T008	Silver Birch	500	18		Moderate	N5.5, E6.5, S5, W5	Multi-stemmed specimen from base. Tree has recently suffered a complete failure of one of the smaller stems. Otherwise no significant defects observed at time of survey.	C2	No work required.	4		
		6	4.5		M	Low						
Yes		113.1			10+ years	Light undergrowth						
W001	English Oak, Silver Birch, Goat Willow, Lime Spp	650	20		Moderate	N7, E7, S7, W7	A dense woodland which crosses over the site and part of the wider Old Wood. Species is predominantly Oak with some Silver Birch in between. Woodland understorey is relatively clear and whilst the site appears unmanaged it is in good condition with little work needed. Dumped rubbish and detritus in places. Likely high habitat value. Overall a high quality woodland of landscape importance.	A2	No work required.	4		
		7.8	2		EM	High						
Yes		191.1			40+ years	Woodland floor						

Appendix C

Schedule of Works - Irrespective of Development

SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Old Wood, Skellingthorpe, Lincolnshire

Surveyed By: Steve Holyland

Surveyed: 22/03/2023

Managed By: Steve Holyland

Tree No.	Species	Work required	Priority
T004	English Oak	Remove all deadwood.	2
T006	English Oak	Remove all deadwood.	2

Appendix D

Preliminary Schedule of Works to Allow Development

SCHEDULE OF WORKS (AIA)

Old Wood, Skellingthorpe, Lincolnshire

Surveyed By: Steve Holyland

Surveyed: 22/03/2023

Managed By: Steve Holyland

Tree No.	Species	Work required	Priority
T005	Goat Willow	Coppice to allow access.	0
T006	English Oak	Crown lift to 4.5m to allow access.	0

Appendix E

Explanatory Notes

Explanatory Notes



Categories

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

No Identifies the tree on the drawing.

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

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

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

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

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

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

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

Sub Category 1 - Mainly arboricultural qualities;

Sub Category 2 - Mainly landscape qualities;

Sub Category 3 - Mainly cultural values, including conservation .

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

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

Age Recorded as one of seven categories:

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

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

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

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

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



D Dead.

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 F

Tree Preservation Order Enquiry/Response

To see order, green map

Tree preservation orders

Title: WOODLAND

Ref: N652

Location: Skellingthorpe (Land at Old Wood House) Tree Preservation Order 2005

Species: Oak, Birch, Lime and other coniferous and broad leaf

Tree preserv



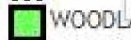
TREE C



TREE G



TREES



WOODLAND

Conservation Areas

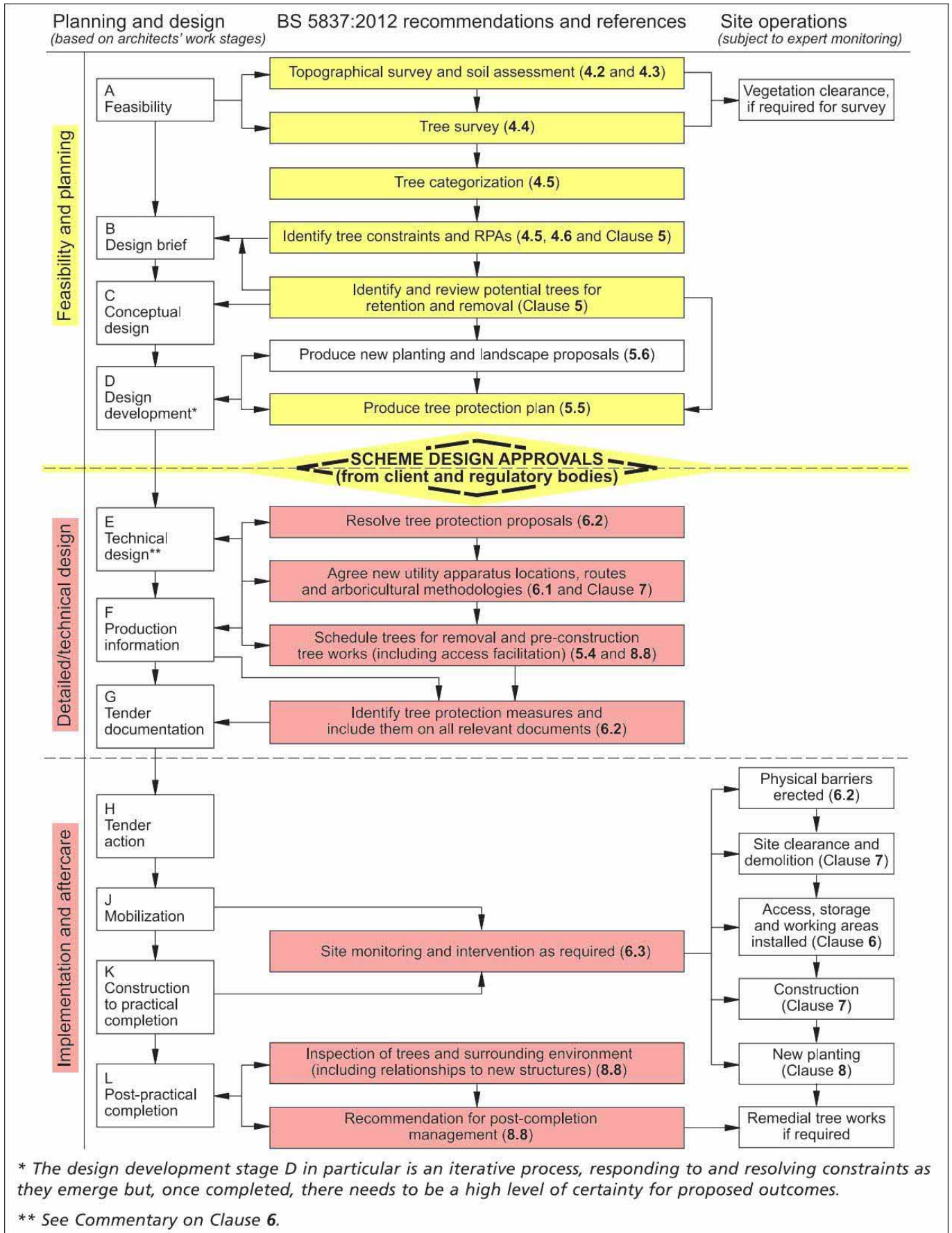


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Appendix G

Advisory Information & Sample Specifications

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

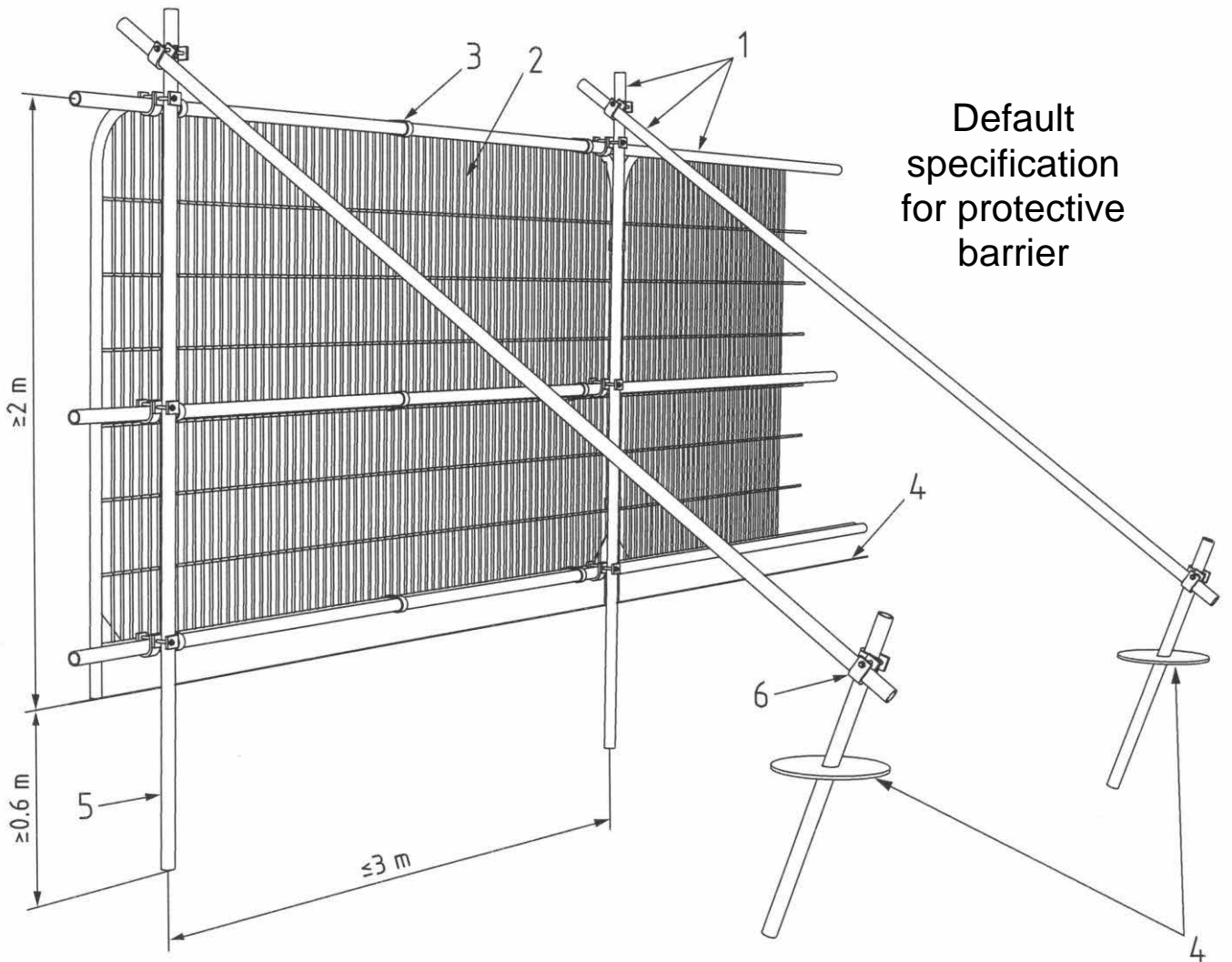


2.

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

Checklist		Details												
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

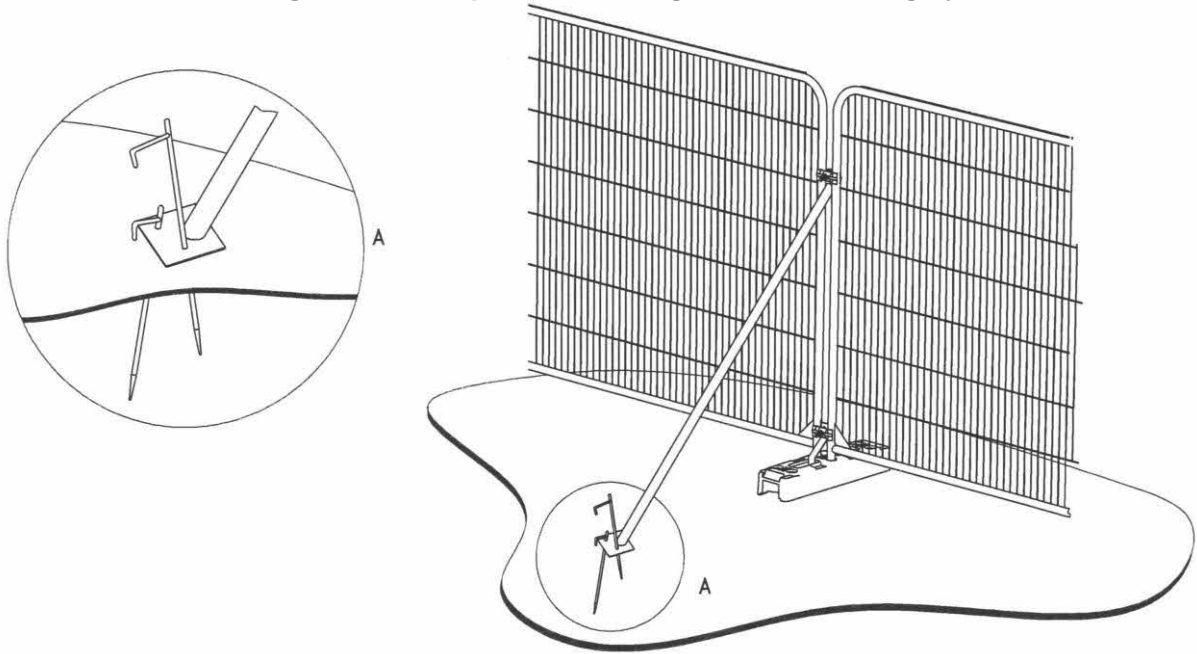


Default
specification
for protective
barrier

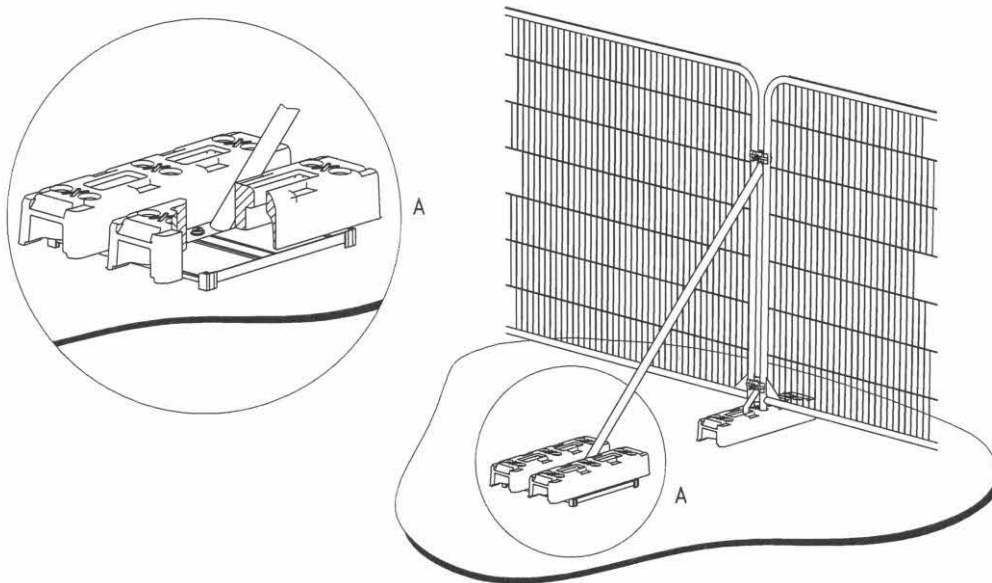
Key

- 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 H

Hayden's Drawing

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



Telephone
01284 765391
Email
info@treesurveys.co.uk
Website
www.treesurveys.co.uk

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