HAYDEN'S
Arboricultural Consultants

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

Proj. No **10024**	**Manor Court, 152 Abbey Road, London, NW6 4ST**		
Client:		Studio 5 Architects Ltd	
Date of Report:	26/01/2023	Revision:	Original

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

Summary

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

In this circumstance it is intended to construct a third floor, comprised of four new flats, onto the existing structure. As a result, nine individual trees were inspected. The arboricultural related implications of the proposal are as follows:

1 It is not necessary to fell and trees to achieve the proposed layout.

2 It has been confirmed the existing post war building can bear the weight of the additional floor without interventions to the existing structure. It is not therefore a requirement to install new or reinforce the existing foundations to facilitate construction of the additional floor, as discussed at item 4.4.1.

3 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 4.5 and 5.1 of this report.

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

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Contents

1.0 Introduction

2.0 The Site

3.0 Tree Survey

4.0 Arboricultural Impact Assessment

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

6.0 Recommendations

7.0 Limitations & Qualifications

8.0 References

9.0 Appendices

1.0 Introduction

1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Studio 5 Architects to prepare a Tree Survey, Arboricultural Impact Assessment, Preliminary Arboricultural Method Statement and Preliminary Tree Protection Plan for the existing trees at Manor Court, 152 Abbey Road, London, NW6 4ST.

1.1.2 The site survey was carried out on 12/01/2023. The relevant qualitative and quantitative tree data was recorded 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 based on 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 near 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 received Emmanuel Andreopoulos on 19/12/2022
- Definition of site plan - drawing no. 812-EX100 rev. P1
- Proposed site layout – drawing no. 812-GA02 rev. P2

2.0 The Site

2.1 Overview

2.1.1 The site is Manor Court, 152 Abbey Road, London. It is a residential block of flats that is accessed on its south-eastern aspect via Abbey Road. Residential premises border the site's northern and eastern aspects and Abbey Road its southern and western aspects. The trees surveyed were located within and adjacent the site's curtilage and they were found to be of mixed age and condition and to provide a variety of amenity benefits.

2.2 Soils

2.2.1 The soil 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. 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 Conservation Area

The site is located within a locality specifically identified by London Borough of Camden Council as a "Conservation Area". This is a planning designation that seeks to provide control over the built environment, but which also has provision for tree protection. The effect of this on anyone wishing to undertake work on trees sited within a Conservation Area is to require them to submit 6 weeks written notice detailing the tree works they plan to undertake. No work may be carried during the 6-week period unless written permission has been received from London Borough of Camden Council. The Local Planning Authority (LPA) can only prevent works notified to them within the 6-week period by serving a Tree Preservation Order. If this happens, the owner of the tree has a right to object to the serving of the Order.

There are certain circumstances where written permission from the LPA may not be necessary before undertaking works. These include:

- Making a tree safe if it is an imminent threat to people or property.
- Removing deadwood or a dead tree.
- Trees with stem diameters of less than 75mm (measured at 1.5m from ground level). If the works being carried out are to help promote the growth of other trees, then trees with stem diameters of less than 100mm (at 1.5m) may be removed or pruned.

Anyone wishing to undertake work as an exemption to the written notification process are **required** to provide the LPA 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 LPA prior to carrying out such operations. Furthermore, even in the event of an emergency, there is still a duty to notify the LPA that work has been completed including supplying an explanation of the necessity. Failure to comply with the requirements of Conservation Area 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.

2.3.2 If **detailed planning permission** is granted and as part of the relevant approval works (felling or surgery) to trees located within a Conservation Area are agreed as acceptable by the LPA, 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
(iii) the works are being completed solely to implement the detailed planning permission.

3.0 Tree Survey

3.1 As part of this survey a total of nine individual trees have been identified. These have been numbered T001 – T009 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. 10024-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. 10024-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 Several items would benefit from tree surgery or additional investigation, be it for health and safety, cultural, aesthetic or structural reasons as detailed in the attached Schedule of Trees. Including the trees recommended for felling, the items requiring the **most urgent** intervention are as follows:

Within six months:

T001 to T006	Structural Engineer to assess integrity of retaining wall.
T009	Remove lowest lateral branch extending over site access. Remove deadwood.

3.6 In accordance with item 4.2.4 (c) of BS 5837:2012, the items inspected and detailed within this report have been selected for inclusion due to the likely influence of any proposed development on the trees, rather than strictly adhering to the curtilage of the site. However, it must be understood that there may be trees beyond the site and not included in this survey which may exert an influence on the development. Where works for cultural, health and safety, quality of life or development purposes have been recommended on trees outside the ownership of the site, these can only progress with the agreement of the owner except where it involves portions of the trees overhanging the boundary.

4.0 Arboricultural Impact Assessment

4.1 The Proposal

4.1.1 The proposal is to construct a third floor, comprised of four new flats, onto the existing structure within the site's curtilage.

4.2 Access

4.2.1 Site access is encumbered by the theoretical Root Protection Area (RPA) of the following off-site tree – T009. In this case the RPA is safeguarded by existing hard surfaces, as shown on the attached drawing no. 10024-D-AIA. From a purely arboricultural perspective, it will therefore not be necessary to install a temporary load bearing road to protect tree roots.

4.3 Demolition

4.3.1 Although a small amount of demolition is required (i.e. the existing roof) this will not have an adverse impact on the retained trees.

4.4 Construction

4.4.1 It has been confirmed the existing post war building is substantial and capable of bearing the weight of the additional floor without interventions to the existing dwelling. It is not therefore a requirement to install new, or reinforce the existing, foundations to facilitate construction of the additional floor. No adverse arboricultural implications are therefore expected.

4.4.2 It is understood the existing hard surfaces associated with this proposal are to be retained.

4.5 Requirement for Tree Barrier Fencing

4.5.1 Prior to the commencement of construction, protective fencing will be erected on site. This must be fit for purpose, in full accordance with the requirements of BS 5837:2012 and positioned as shown on the attached drawing no. 10024-D-AIA.

4.6 Compound

4.6.1 The site compound will be located outside of the RPA of retained trees, as shown on the attached drawing no. 10024-D-AIA. No adverse arboricultural implications are therefore expected.

4.7 Phasing

4.7.1 Given the retained trees will be afforded robust protection throughout the duration of the development following installation of the protective barriers discussed at item 4.5.1, shown on the attached drawing no. 10024-D-AIA and included at Appendix F, from an arboricultural perspective there are no further phasing issues that require consideration in relation to tree protection.

4.8 Monitoring

4.8.1 Given the retained trees will be afforded robust protection throughout the duration of the development following installation of the protective barriers discussed at item 4.5.1, shown on the attached drawing no. 10024-D-AIA and included at Appendix F, arboricultural monitoring is not deemed necessary in this instance.

4.9 Tree Surgery to Facilitate Proposed Development

4.9.1 It is not necessary to undertake tree surgery works to retained trees in order to facilitate the proposed development.

4.10 Landscape Implications

4.10.1 No trees have been identified for felling for the sole purpose of achieving the proposed layout.

4.11 Post Development Implications

4.11.1 Whilst retained trees T001 to T006 are located in proximity to the existing structure on and adjacent to the site's northern boundary, given the trees are managed as pollards to ensure the existing tree: building juxtaposition remains harmonious it is considered the construction of the additional floor, the footprint of which is set back further from the trees that the existing floors below, will therefore not result in future pressure being placed on the trees to be unsympathetically pruned or felled.

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

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 using stout barrier fencing erected in the positions indicated on the attached drawing no. 10024-D-AIA. This fencing will be in accordance with the requirements of BS 5837:2012.

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 LPA.

5.2 Location of Site Office, Compound and Parking

5.2.1 The site compound will be located outside of the RPA of retained trees, as shown on the attached drawing no. 10024-D-AIA.

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. 10024-D-AIA.

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

5.6 Levels

5.6.1 No alterations to soil levels within the RPA of retained trees are proposed. No adverse arboricultural implications are therefore expected.

5.7 **Services and Drainage**

5.7.1 It is proposed to connect to the existing service network and drainage system servicing the existing structure. No adverse arboricultural implications are therefore expected.

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.

6.3 Given the retained trees will be afforded robust protection throughout the duration of the development following installation of the protective barriers discussed at item 4.5, in this instance it is considered a detailed arboricultural method statement and monitoring schedule are not required.

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 near 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 LPA 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:

January 2023
For and on Behalf of Hayden's Arboricultural Consultants Limited

8.0 References

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

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

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

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

NHBC Standards (2007) *Chapter 4.2 'Building Near Trees'.* National House-Building Council.

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

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

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.

9.0 Appendices

Appendix	**A**	Species List & Tree Problems
Appendix	**B**	Schedule of Trees
Appendix	**C**	Schedule of Works - Irrespective of 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. 10024-D-AIA

Appendix A - Species List & Tree Problems

Species List:

Ash	*Fraxinus sp*
False Acacia	*Robinia sp*
London Plane	*Platanus sp*
Sycamore	*Acer sp*

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 most 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) Manor Court, 152 Abbey Road, London

Surveyed By: Nick Hayden Date: 12/01/2023
Managed By: Nick Hayden

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m²)	Aspect	Aspect	SULE	Ground Cover						
T001	Sycamore	420	12.5		Moderate	N3, E1.5, S3, W3.5	Located at apex of bank with a retaining wall, circa. 1m high, located circa. 1.5m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Bifurcates at circa. 0.75m above ground level (agl), bark inclusion at union. Pollarded at circa. 11m agl. Branch wounds. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		5.04	2.1-4m		EM	Moderate						
Yes		79.8			10+ years	Bare earth						
T002	Ash	330	12.5		Moderate	N3.5, E2.5, S3.5, W2.5	Located at apex of bank with a retaining wall, circa. 1m high, located circa. 1.5m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Pollarded at circa. 11m. Branch wounds. Nest. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		3.96	2.1-4m		EM	Moderate						
Yes		49.3			10+ years	Bare earth						
T003	Sycamore	340	13		Moderate	N3.5, E2.5, S3, W3	Located on neighbouring land into which access could not be obtained during the site visit. Detailed inspection therefore impeded and estimated DBH provided. Located at apex of bank with a retaining wall, circa. 1m high, located circa. 2m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Pollarded at circa. 11m. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		4.08	2.1-4m		EM	Moderate						
No		52.3			10+ years	Bare earth						
T004	Sycamore	310	12		Moderate	N1.5, E2.5, S2.5, W1.5	Located at apex of bank with a retaining wall, circa. 1m high, located circa. 1.5m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Pollarded at circa. 11m. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		3.72	2.1-4m		EM	Moderate						
Yes		43.5			10+ years	Bare earth						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m²)	Aspect	Aspect	SULE	Ground Cover						
T005	Sycamore	410	13		Moderate	N3.5, E3.5, S3, W2.5	Located on neighbouring land into which access could not be obtained during the site visit. Detailed inspection therefore impeded and estimated DBH provided. Twin-stemmed. Located at apex of bank with a retaining wall, circa. 1m high, located circa. 2.5m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Pollarded at circa. 11m. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		4.92	2.1-4m		EM	Moderate						
No		76			10+ years	Bare earth						
T006	Sycamore	230	11		Moderate	N3, E3, S3, W1	Located on neighbouring land into which access could not be obtained during the site visit. Detailed inspection therefore impeded and estimated DBH provided. Twin-stemmed. Located at apex of bank with a retaining wall, circa. 1m high, located circa. 2.5m to the south. Retaining wall leans to the south and rear access beyond has drainage running beneath it. Exposed surface roots. Pollarded at circa. 9m. Reasonable vigour.	C2	Structural Engineer to assess integrity of retaining wall.	2		
		2.76	2.1-4m		SM	Moderate						
No		23.9		W	10+ years	Bare earth						
T007	Ash	600	17		Moderate	N4, E4, S4, W4	Located on neighbouring land into which access could not be obtained during the site visit. Detailed inspection therefore impeded and estimated DBH and crown spread provided. Circa. 2.5m high retaining wall circa. 2m south of stem, beyond which is parking for the application site. Retaining wall considered most likely to have precluded root encroachment into site's curtilage. Pollarded at circa. 15m. Reasonable vigour.	C2	No work required	4		
		7.2	6.1-10m		M	Moderate						
No		162.9			10+ years	Tarmac						

TreeNo	Species	DBH	Height		Visual	Crown Spread	Problems / Comments	BS Cat	Work Required (TS)	Priority (TS)	Work Required (AIA)	Priority (AIA)
		Min Dist	Crown Base	Lowest Branch	Age	Water Demand						
On site		RPA (m^2)	Aspect	Aspect	SULE	Ground Cover						
T008	London Plane	850	18		Moderate	N5.5, E5.5, S5.5, W5.5	Located on neighbouring land into which access could not be obtained during the site visit. Detailed inspection therefore impeded and estimated DBH and crown spread provided. Circa. 2.5m high retaining wall circa. 2m south of stem, beyond which is parking for the application site. Retaining wall considered most likely to have precluded root encroachment into site's curtilage. Pollarded at circa. 16m. Reasonable vigour.	B2	No work required	4		
		10.2	6.1-10m		M	Moderate						
No		326.9			20+ years	Tarmac						
T009	False Acacia	610	16.5		High	N6, E5.5, S5, W8	Located in neighbouring front garden. Hard surfacing covers majority of RPA. Lowest lateral branch extending west over site access has bark inclusion at union. Localised branch tip dysfunction and dieback. Moderate deadwood. Low crown.	C2	Remove lowest lateral branch extending over site access. Remove deadwood.	2		
		7.32	2.1-4m		M	Moderate						
No		168.3			10+ years	Bare earth, Concrete, Block paving						

Appendix C

Schedule of Works - Irrespective of Development

SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Manor Court, 152 Abbey Road, London

Surveyed By: Nick Hayden
Surveyed: 12/01/2023
Managed By: Nick Hayden

Tree No.	Species	Work required	Priority
T001	Sycamore	Structural Engineer to assess integrity of retaining wall.	**2**
T002	Ash	Structural Engineer to assess integrity of retaining wall.	**2**
T003	Sycamore	Structural Engineer to assess integrity of retaining wall.	**2**
T004	Sycamore	Structural Engineer to assess integrity of retaining wall.	**2**
T005	Sycamore	Structural Engineer to assess integrity of retaining wall.	**2**
T006	Sycamore	Structural Engineer to assess integrity of retaining wall.	**2**
T009	False Acacia	Remove lowest lateral branch extending over site access. Remove deadwood.	**2**

Appendix D

Explanatory Notes

Explanatory Notes

HAYDEN'S Arboricultural Consultants

Categories

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

No Identifies the tree on the drawing.

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

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

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

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

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

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

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

Sub Category 1 - Mainly arboricultural qualities;

Sub Category 2 - Mainly landscape qualities;

Sub Category 3 - Mainly cultural values, including conservation .

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

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

Age Recorded as one of seven categories:

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

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

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

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

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

D Dead.

Height	Recorded in metres, measured from the base of the tree.
Crown Base	Recorded in metres, the distance from ground and aspect of the lowest branch material.
Lowest Branch	Recorded in metres, the distance from ground and aspect of the emergence point of the lowest significant branch.
Life Expectancy	Relates to the prospective life expectancy of the tree and is given as 4 categories: 1 = 40 years+; 2 = 20 years+; 3 = 10 years+; 4 = less than 10 years.
Crown Spread	Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.
Minimum Distance	This is a distance equal to 12 times the diameter of the tree measured at 1.5 metres above ground level for single stemmed trees and 12 times the average diameter of the tree measured at 1.5 metres above ground level tree for multi stemmed specimens. (BS 5837:2012, section 4.6).
RPA	This is the Root Protection Area, measured in square metres and defined in BS5837:2012 as "a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority". The RPA is shown on the drawing.. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations. Some methods of construction can be carried out within the RPA of a retained tree but only if approved by the Local Planning Authority's tree officer.
Water Demand	This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 "Building Near Trees".
Visual Amenity	Concerns the planning and landscape contribution to the development site made by the tree, hedge or tree group, in terms of its amenity value and prominence on the skyline along with functional criteria such as the screening value, shelter provision and wildlife significance. The usual definitions are as follows: Low — An inconsequential landscape feature. Moderate — Of some note within the immediate vicinity, but not significant in the wider context. High — Item of high visual importance.
Problems/ Comments	May include general comments about growth characteristic, how it is affected by other trees and any previous surgery work; also, specific problems such as deadwood, pests, diseases, broken limbs, etc.
Work Required (TS)	Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems identified in the "Problems/comments" category.

Work Required (AIA)	Identifies the tree work specifically necessary to allow a proposed development to proceed.
Priority	This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey. **1** Urgent – works required immediately; **2** Works required within 6 months; **3** Works required within 1 year; **4** Re-inspect in 12 months, **0** Remedial works as part of implementation of planning consent.

BS 5837:2012 Terms and Definitions

Access Facilitation Pruning	One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.
Arboricultural Method Statement	Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.
Arboriculturist	Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.
Competent Person	Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. *NOTE - a competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.*
Construction	Site-based operations with the potential to affect existing trees.
Construction Exclusion Zone	Area based on the root protection area from which access is prohibited for the duration of a project.
Root Protection Area (RPA)	Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.
Service	Any above or below ground structure or apparatus required for utility provision. **NOTE** - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.
Stem	Principal above ground structural component(s) of a tree that supports its branches.
Structure	Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.
Tree Protection Plan	Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.
Veteran Tree	Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. **NOTE** - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.

Appendix E

Tree Preservation Order Response/Enquiry

Beth Jennings

From: Rav Curry <Rav.Curry@camden.gov.uk>
Sent: 19 January 2023 13:59
To: Beth Jennings
Subject: RE: 10024 | TPO Enquiry - Manor Court, 152 Abbey Road, London, NW6 4ST

Importance: High

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Beth

This location falls within The South Hampstead Conservation Area and therefore all trees at Manor Court are protected and you will require permission from London Borough of Camden to carry out tree works at number 152.

There are no TPOs at Manor Court.

Regards

Rav Curry
Planning Assistant
London Borough of Camden

Telephone: 0207 974 3770

From: Beth Jennings <bethj@treesurveys.co.uk>
Sent: 19 January 2023 09:48
To: Planning Planning <Planning@camden.gov.uk>
Subject: 10024 | TPO Enquiry - Manor Court, 152 Abbey Road, London, NW6 4ST

Good Morning,

Could you please advise if the above mentioned site is covered by TPO or is located within a Conservation Area?

I have attached a site map for your use.

I look forward to hearing from you.

Kind Regards

Beth Jennings
Administrator

HAYDEN'S
Arboricultural Consultants

Tel: 01284 765391 info@treesurveys.co.uk **www.treesurveys.co.uk**

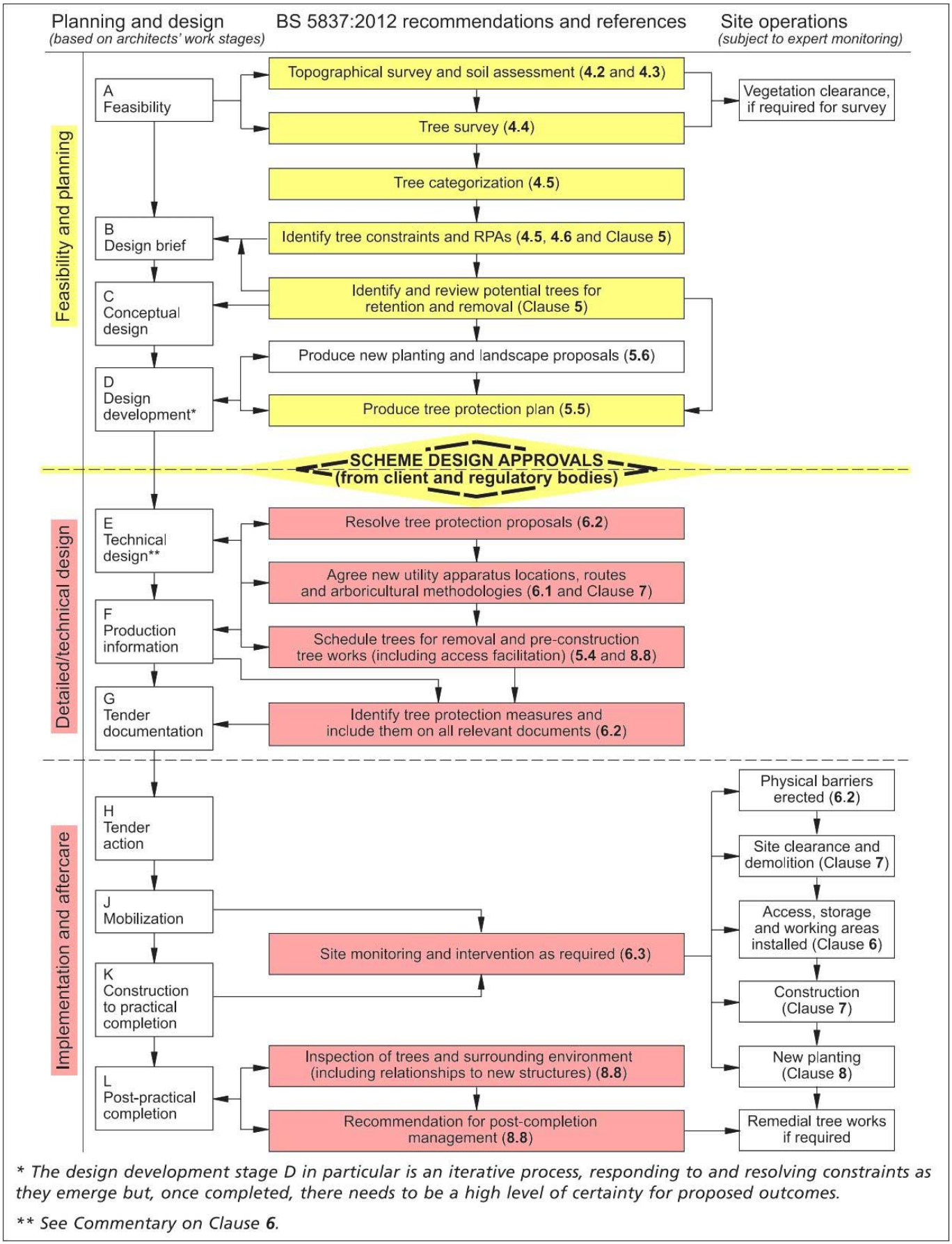
Head Office: 5 Moseley's Farm Business Centre, Fornham All Saints, Bury St. Edmunds, Suffolk, IP28 6JY
Southern Office: Unit 6, Enterprise House, Cherry Orchard Lane, Salisbury, Wiltshire, SP2 7LD

FACEBOOK TWITTER LINKEDIN INSTAGRAM

Appendix F

Advisory Information & Sample Specifications

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



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

*** See Commentary on Clause **6**.*

2.

European Protected Species and woodland operations. (V4)

Complete all sections of the Checklist

✔

Checklist

1 **Are you within, or close to, the known mapped range of any of the protected species OTHER THAN BATS which are potentially everywhere? Tick any that apply.**
See distribution maps in the Good Practice Guidance for each species -

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

YES ☐ NO ☐

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

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

YES ☐ NO ☐

3 **Have any of the protected species been recorded in this wood or on adjoining sites? Tick any that apply.**
Indicate which sources of information you have checked:

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

Specify Other:

YES ☐ NO ☐

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

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

Details:

YES ☐ NO ☐

Details

Name of Wood:

Grid Reference:

Area: (ha) .

Date of Assessment:

Name of Assessor:

CHECK POINT

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

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

Notes

5 **Do the operations comply with Good Practice for bats and any other species found (or likely to be found in your wood) or can the operations be modified to do so?**
Details: Use reverse of form to expand as required:

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

NO ☐ You will need to obtain a licence BEFORE carrying out the work (see EPS Licence Application Forms and Notes)

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

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

Other means:

YES ☐

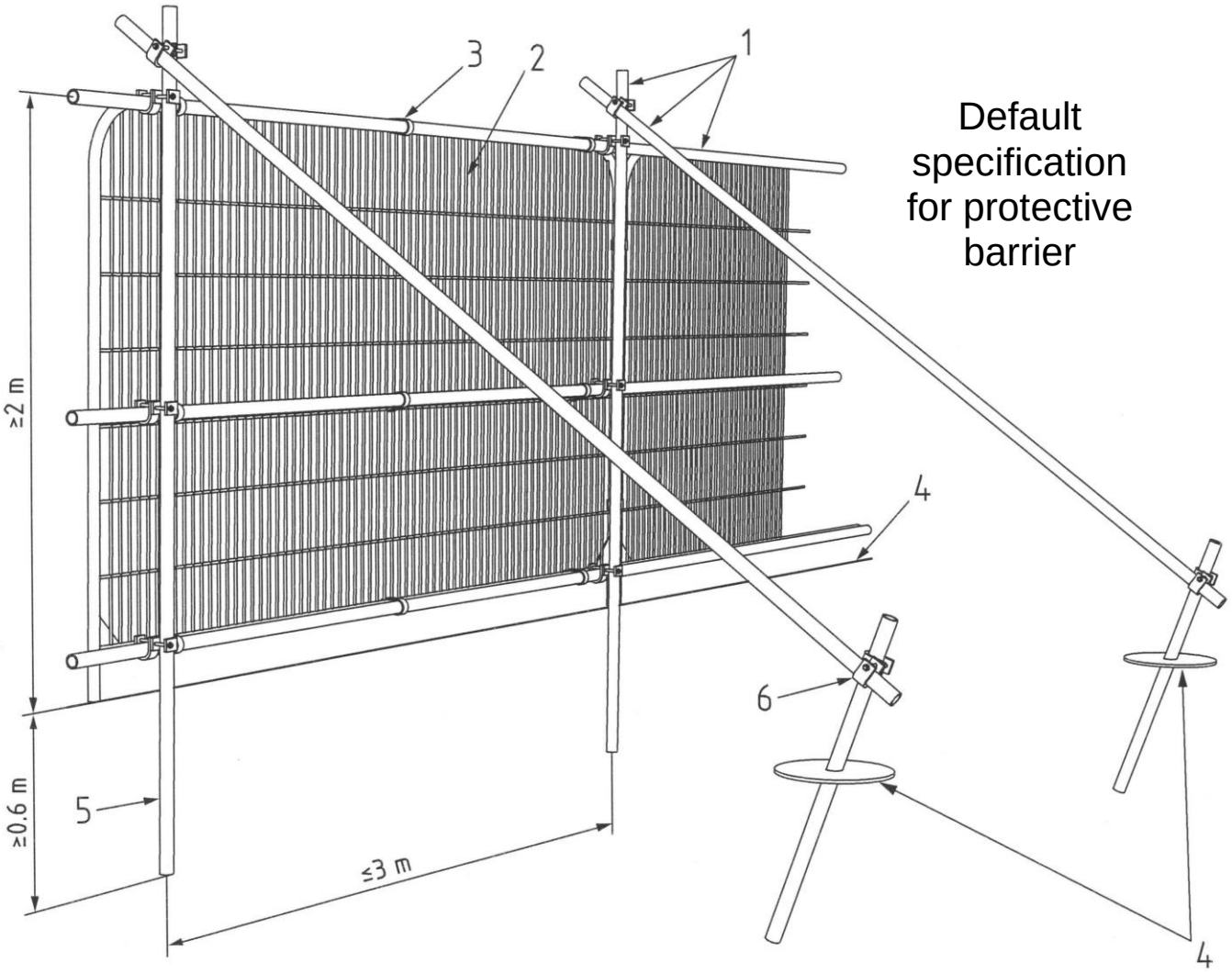
NO ☐ You may commit an offence if you do not tell your operators about the protected species in your wood.

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

YES ☐

NO ☐ You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.

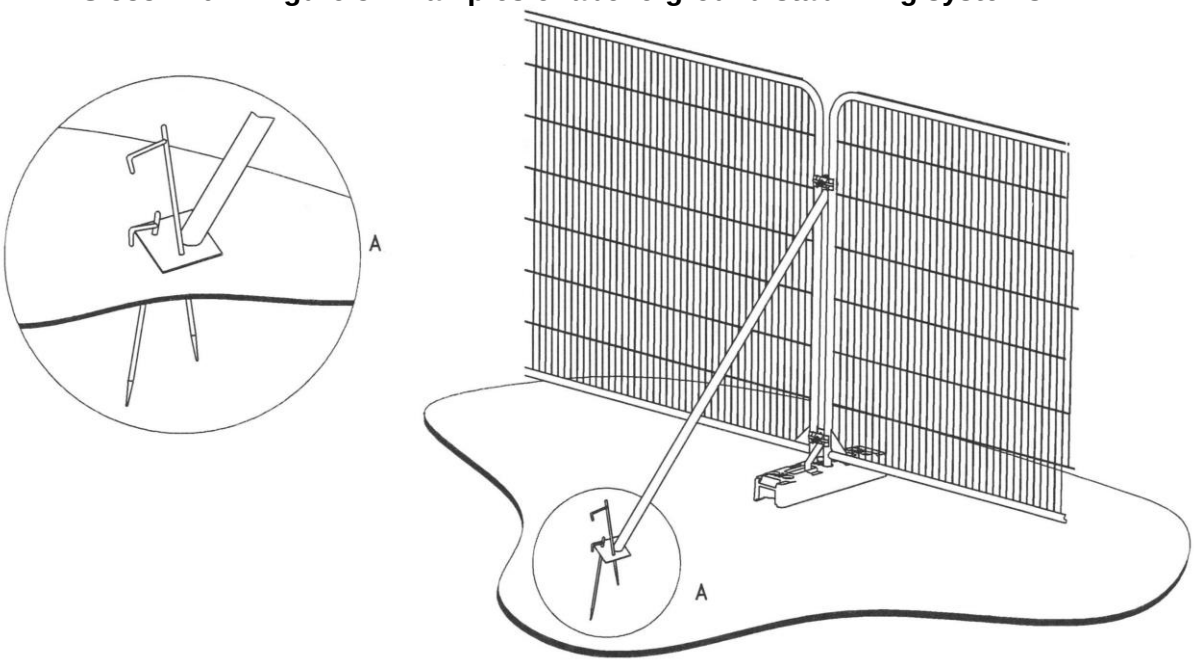
3. BS 5837:2012 Figure 2: Default specification for protective barrier



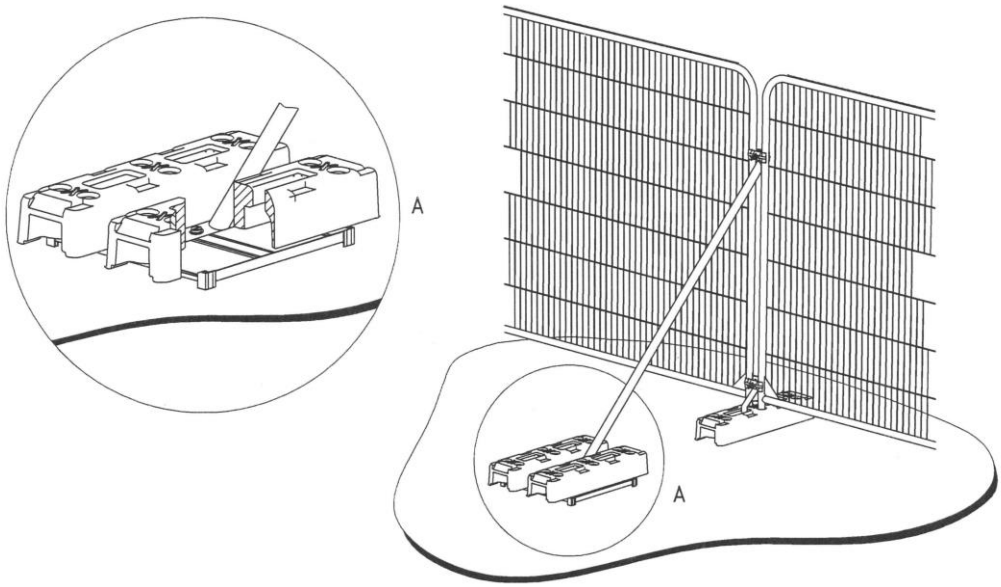
Key

1	Standard scaffold pole
2	Heavy gauge 2m tall galvanised tube and welded mesh infill panels
3	Panels secured to uprights and cross-members with wire ties
4	Ground level
5	Uprights driven into the ground until secure (minimum depth 0.6m
6	Standard scaffold clamps

4. BS 5837:2012 Figure 3: Examples of above-ground stabilizing systems



a) Stabilizer strut with base plate secured with ground pins



b) Stabilizer strut mounted on block tray

Appendix 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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