



**Tree Survey and Arboricultural Impact Assessment
In Accordance with BS 5837:2012**

Project No: 11420	Land to the North of Leyland - S5_13A, World's End, Burgess Hill, West Sussex, RH15 0RZ		
Client:		Circet UK Wireless	
Date of Report:	20/02/2025	Revision:	A

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Summary

In this circumstance it is intended to erect a telecommunications mast with associated temporary site access. The arboricultural related implications of the proposal are summarised in Tables 1 and 2 below and detailed where necessary within the report.

All trees and landscape features that are to remain as part of the development should suffer no structural damage provided that the findings within this report are complied with in full.

Table 1 - Construction and ongoing constraints from an arboricultural perspective (subject to necessary tree surgery being completed):

Potential Design/ Build Constraints	Arboricultural Impact?	Comments/Solution
Construction Access	Yes	Temporary load bearing surface to be installed, as per item 4.1
Demolition	No	No demolition proposed, as per item 4.2.
New Structures	No	Telecommunications mast to be erected outside of RPA of retained trees, as per item 4.3
Compound	No	Compound and crane set down area to be located outside of RPA of retained trees, as per item 4.4
Services	Yes	Services to be located outside of RPA of retained trees wherever possible, as per item 4.5
Protective Measures	Yes	Protective barriers to be installed, as per item 4.6

NB: No surgery is required to facilitate this proposal.

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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1.0 Introduction

1.1 Purpose

1.1.1 As part of the United Kingdom planning process, applicants are required to supply Local Planning Authorities (LPA) with a detailed evaluation of how their proposals will impact trees. The nationally recognised procedure for doing this is laid out in *BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"*. In summary, this must include the following information as a minimum:

- A Tree Survey and Tree Constraints Plan
- An Arboricultural Impact Assessment of sufficient detail to confirm the feasibility of the design from a tree perspective
- A scaled Tree Retention and Removal drawing showing retained trees and their root protection area on the proposed layout

1.1.2 This report has been prepared to ensure that this information is provided to the LPA in a straightforward and clear way so that they can make an informed decision about how (if at all) trees are affected.

1.1.3 When planning permission is granted it is typically the case that the LPA will require specific conditions to be fulfilled. This means that a subsequent detailed Arboricultural Method Statement and Tree Protection Plan may be required. This will be detailed on the LPA's decision notice.

1.2 Scope

1.2.1 In accordance with the above, Circet UK Wireless have commissioned Hayden's Arboricultural Consultants to prepare a Tree Survey and Constraints Plan, Arboricultural Impact Assessment and scaled Tree Retention and Removal drawing for the existing trees at Land to the North of Leyland - S5_13A, World's End, Burgess Hill, West Sussex, RH15 0RZ.

1.2.2 Unless stated within the survey, all trees were inspected from ground level with no climbing inspections undertaken. As such, the findings are of a preliminary nature. It is not always possible to access every tree and therefore some measurements may have to be estimated.

1.2.3 The trees were inspected on the basis of "*Visual Tree Assessment*" (Mattheck & Breloer - 1994) and "*Common Sense Risk Management of Trees*" National Tree Safety Group guidance – 2011.

1.2.4 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.

1.3 Documentation

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

- Email of instruction from Sophie Reeves dated 12/12/2024
- Proposed site layout – drawing no. S5-13A_MD & S5-13A_ML



2.0 The Site

2.1 Overview

- 2.1.1 The site is Land to the North of Leyland - S5_13A, World's End, Burgess Hill, West Sussex, RH15 0RZ.

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 desktop 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 plasticity. 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 Information on any Local Planning Authority or Forestry Commission controlled statutory tree protection (Tree Preservation Orders, Conservation Areas and Felling Licenses etc) is recorded on the attached drawing no. 11420-D-AIA Rev A.
- 2.3.2 Further details regarding any existing Statutory Tree Protection is recorded at Appendix B.

3.0 Tree Survey

- 3.1 The tree survey was carried out on 03/02/2025 in accordance with *BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations"*, the relevant qualitative and quantitative tree data was recorded in order to assess the condition of the existing trees and their constraints upon the proposed development.
- 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. 11420-D-AIA Rev A 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. 11420-D-AIA Rev A provides a fair representation of the trees 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 *BS5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations"*. For further information, please see the attached Explanatory Notes.



- 3.4 The detailed assessment of each tree and its work requirements with priorities are listed in the attached Schedule of Trees.
- 3.5 In accordance with item 4.2.4 (c) of BS5837:2012, 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 (Additional or Specific Comments)

4.1 Construction Access

- 4.1.1 Site access is encumbered by the Root Protection Areas (RPA) of A002 and A003. From a purely arboricultural perspective, it will therefore be necessary to install a temporary load bearing surface to prevent compaction damage to tree roots. This must be installed as a first stage of development, immediately after the completion of the necessary tree surgery and the installation of protective fencing.
- 4.1.2 In this instance it is proposed to install trackway (i.e. Ground-Guards or similar), as shown on the attached drawing no. 11420-D-AIA Rev A.

4.2 Demolition

- 4.2.1 There is no demolition associated with this proposal.

4.3 New Structures

- 4.3.1 Construction of the telecommunication mast's foundations do not encroach RPA of any trees to be retained, as shown on the attached drawing no. 11420-D-AIA Rev A. From an arboricultural perspective, no specialised construction or foundation techniques will therefore 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 Compound

- 4.4.1 The site provides adequate internal space to locate a construction compound outside the RPA of any trees that are to be retained.
- 4.4.2 The proposed crane set down area is located outside the RPA of any trees that are to be retained, as shown on the attached drawing no. 11420-D-AIA Rev A.



4.5 **Services**

- 4.5.1 Wherever possible, all underground service runs will be placed outside the RPA of the retained trees on or adjacent to the site. Where it is not possible to do this, any infringement must be agreed with the LPA and addressed by hand digging or trenchless technology.

4.6 **Protective Measures**

- 4.6.1 Protective fencing will be erected at the locations shown on the attached drawing no. 11420-D-AIA Rev A prior to the commencement of construction.



5.0 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.

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.

Tree surgery works may also be proposed as part of this survey 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 LPA, cannot be the responsibility of this practice.

Moreover, 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 required.

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:



February 2025

For and on Behalf of Hayden's Arboricultural Consultants Limited



6.0 References

British Standards Institute. (2010). *Recommendations for Tree Work BS3998:2010* BSI, London.

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

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

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

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.

Forestry Commission (2007). *Tree Felling – Getting Permission*. Country Services Division, Forestry Commission, Edinburgh.

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

National Tree Safety Group (2011). *Common Sense Risk Management of Trees*. Forestry Commission.



7.0 Appendices

Appendix	A	Species List & Tree Problems
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Appendix A - Species List & Tree Problems

Species List:

Ash	<i>Fraxinus sp</i>
Birch	<i>Betula sp</i>
Cherry	<i>Prunus sp</i>
Cherry Laurel	<i>Prunus sp</i>
Hawthorn	<i>Crataegus sp</i>
Hazel	<i>Corylus sp</i>
Hornbeam	<i>Carpinus sp</i>
Horse Chestnut	<i>Aesculus sp</i>
Oak	<i>Quercus sp</i>
Norway Maple	<i>Acer sp</i>
Sycamore	<i>Acer sp</i>
Willow	<i>Salix sp</i>



Tree Problems:

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

Name: Deadwood	
Symptoms/damage type and cause:	This relates to dead branches in the crown of the tree. In 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:	 

Name: <i>Hedera helix</i> (Ivy)	
Symptoms/damage type and cause:	Ivy may grow to varying degrees on all areas of a tree from the base to the upper crown. It is possible that in doing so it will out-compete the host tree for available light thereby suppressing the host.
Consequence:	This is generally only harmful to the tree on already unhealthy specimens which may be constricted by large ivy stems around the trunk or may have their top growth suppressed by a mass of flowering shoots in the crown. Ivy can also mask potentially dangerous faults on a tree.
Control:	Ivy should only be removed if absolutely necessary because it provides abundant cover to wildlife and then by severing twice close to the ground and removing a length of stem thereby causing the gradual dying away of the aerial parts of the plant providing extended benefit to wildlife whilst relieving the pressure on the tree.
Species affected:	Most trees can be affected.
Images:	 



Appendix B - Statutory Tree Protection Advice & Tree Preservation Order Enquiry/Response

Statutory Tree Protection Advice

Tree Preservation Order(s)

The LPA have deemed it appropriate to provide statutory protection to trees neighbouring this site through the serving of Tree Preservation Orders (TPO), ref no. BH/04/TPO/74 and TP/13/0005. The effect of this on anyone wishing to undertake work on preserved trees is to require them to obtain written permission from the LPA prior to actioning any tree works. 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. However, given that trees are living organisms and the locality within which they are set is liable to change, it is often the case that LPA 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 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.

Anyone wishing to undertake work as an exemption to the written permission 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 situation, 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 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.

This information was sourced using the LPA'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 LPA to confirm that their online mapping system is definitive.

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 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



Felling Licence

All trees within the United Kingdom are protected under the Forestry Acts. In All trees within the United Kingdom maybe subject to protections under the Forestry Acts (principally the Forestry Act 1967). 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:

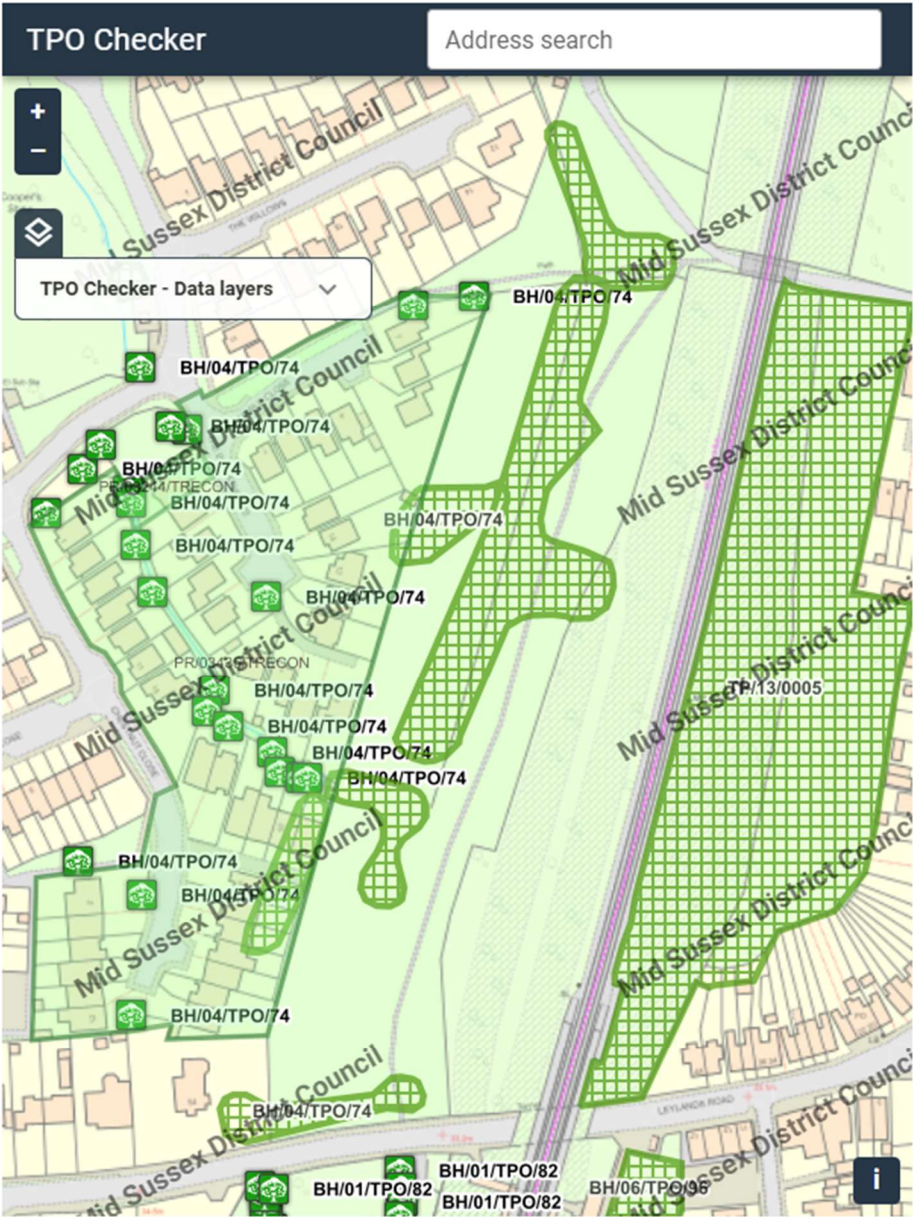
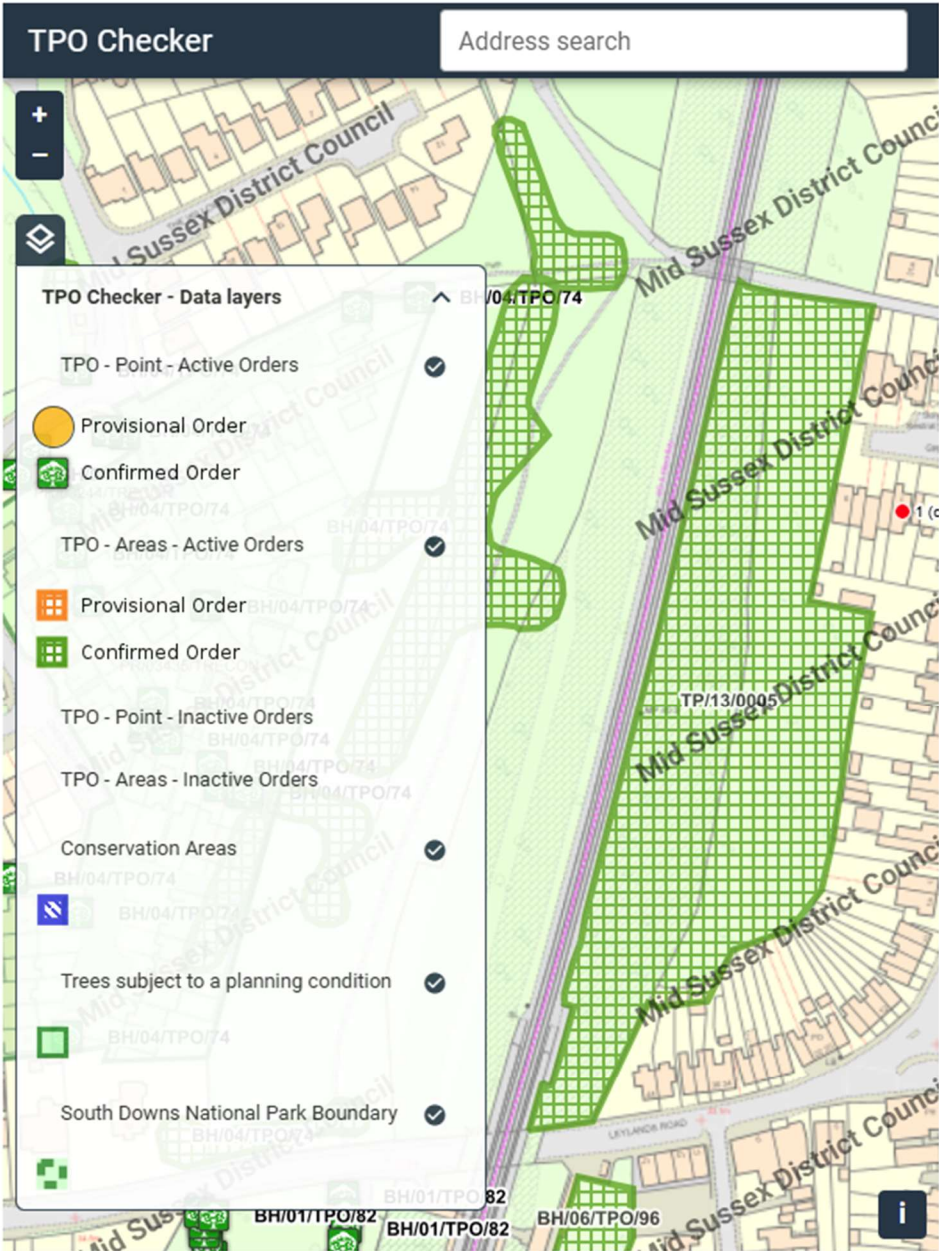
A Felling Licence is not required in the following instances:

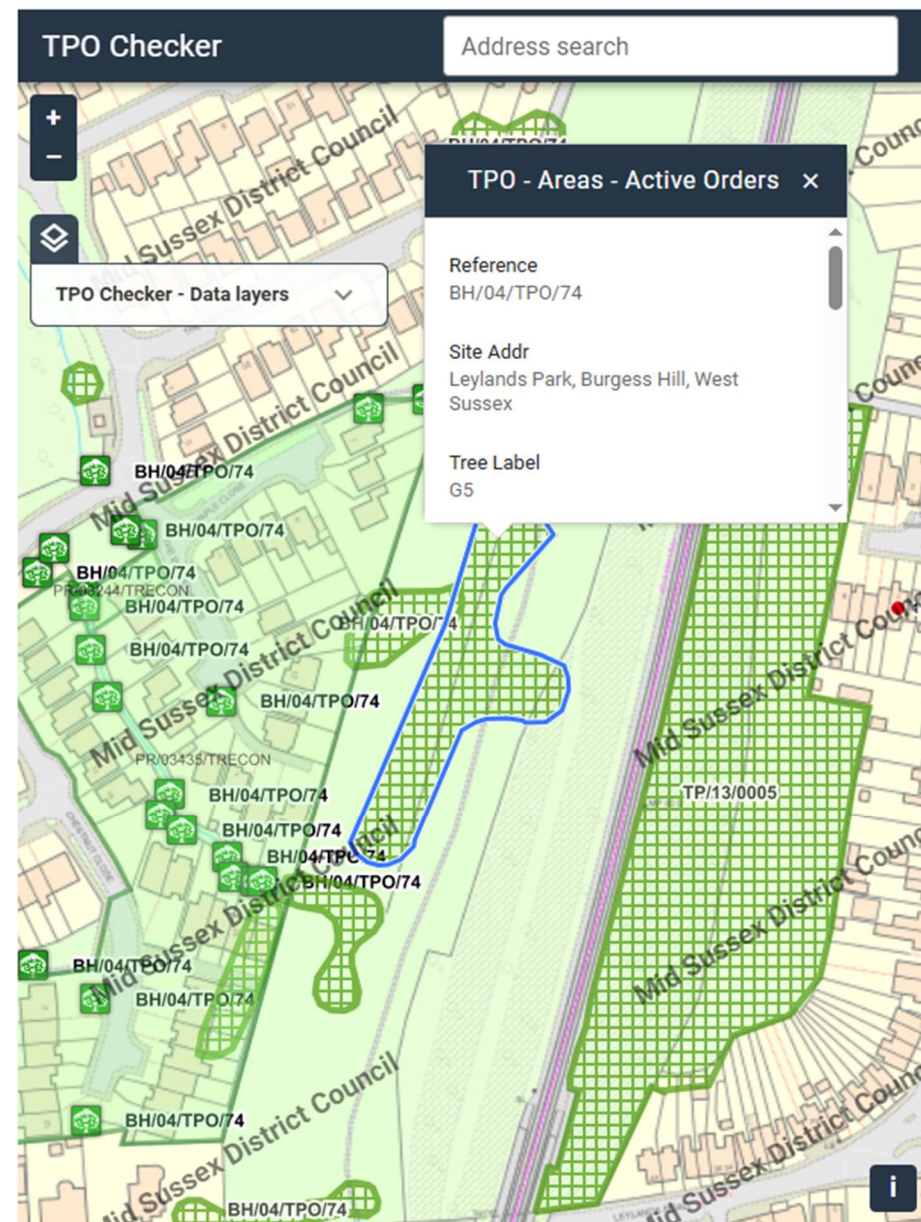
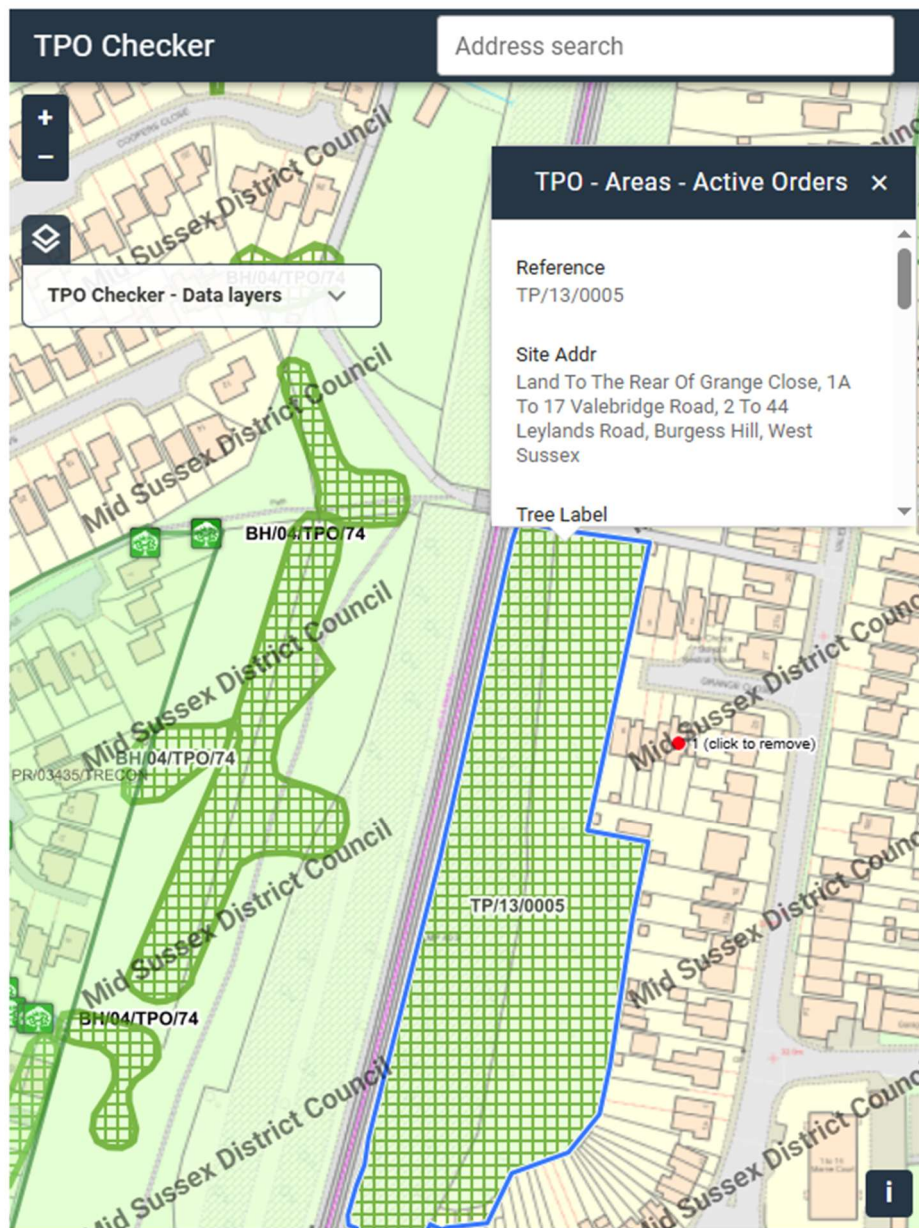
- To fell trees in a garden, an orchard, a churchyard or a designated open space (Commons Act 1899 and Section 9 of the Forestry Act 1967).
- To carry out surgery operations such as pruning, reduction, dead wooding or pollarding.
- To fell less than 5 cubic metres in a calendar quarter. (Please note 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.
- To fell trees to prevent danger or abate a legal nuisance.
- To fell trees in compliance with any obligation imposed by or under an Act of Parliament.
- To fell trees at the request of an electricity operator, because the trees are or will be in such proximity to installed or about to be installed electric line or electrical plant in accordance with paragraph 9(1)(a) or (b) of Schedule 4 to the Electricity Act 1989.

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



Tree Preservation Order / Conservation Area Online Mapping Extract





Appendix C

Schedule of Trees

SCHEDULE OF TREES (AIA) Land to the North of Leyland -S5_13A, World's End, Burgess Hill, West Sussex

Land to the North of Leyland -S5_13A, World's End, Burgess Hill, West Sussex

Surveyed By: Nick Hayden Date: 03/02/2025

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						
A001	Ash, Horse Chestnut, Norway Maple	400	11		High	N4, E4, S4, W4	Many stems densely clad in Ivy. Linear belt of Horse Chestnut pollards adjacent to highway. Landowner advised to remove Ivy and inspect Chestnut pollards adjacent to road.	C2	Landowner advised to remove Ivy and inspect Chestnut pollards adjacent to road.	2		
		4.8	2.1-4m		EM	Moderate						
No		72.4			10+ years	Water, Bare earth, Grass, Tarmac						
A002	Ash, Hawthorn, Hazel, Oak, Sycamore, Willow	750	20		High	N6, E6, S6, W6	Located behind security fencing. Trees located on a steep bank that rises to the adjacent railway. Many trees densely clad in Ivy. Ash Dieback throughout. Failed trees on bankside. Category B landscape feature but assessed individually many of the trees would be ascribed a C classification. Ownership unclear.	B2	No work required.	4		
		9	0-2m		EM	High						
No		254.5			20+ years	Ivy						
A003	Cherry, Hornbeam, Oak, Hawthorn, Hazel	1100	22		High	N9, E9, S9, W9	Linear tree belt predominantly comprised of Oak. Old field / hedgerow boundary trees. Detailed survey not undertaken as TOPO survey not provided. However, as to be expected with mature hedgerow trees, there is evidence of various defects. These include large stem / branch wounds and cavities, storm damaged branches, tearout wounds, deadwood, woodpecker / nesting holes and dead stems. Public footpath to east of tree belt. Landowner advised to regularly inspect trees.	B2	Landowner advised to ensure tree belt is under regular / cyclical inspection routine.	3		
		13.2	0-2m		M	High						
No		547.4			20+ years	Dense undergrowth, Grass						
A004	Cherry Laurel, Hazel, Oak Species, Willow Species, Birch Species	800	17		Moderate	N7, E7, S7, W7	Located behind security fencing. Trees located on a steep bank that rises to the adjacent railway. Majority of trees densely clad in Ivy. Retained dead pollard. Failed trees. Category B landscape feature but assessed individually most of the trees would be ascribed a C classification. Ownership unclear.	B2	No work required.	4		
		9.6	2.1-4m		M	High						
No		289.5			20+ years	Light undergrowth, Ivy						

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	Oak	1100	19		High	N10.5, E10, S9, W8		Located adjacent to highway. Detailed inspection of base impeded by dense bramble. However, remnants of decaying fruiting body observed between buttress roots on south west aspect. Landowner advised to undertake secondary investigations given proximity to highway, results of which will determine final B.S. category and any necessary works.	U	Landowner advised to undertake secondary investigations.	2		
		13.2	2.1-4m		M	High							
No		547.4			<10 years	Dense undergrowth, Tarmac, Grass							
T002	Hawthorn	370	10		Moderate	N3.5, E4, S5, W3.5		Multi-stemmed from ground level. Single stem blackthorn and Oak intertwined in crown. Crown dimensions includes all stems. Ivy clad. Deadwood. Nest in upper central crown. Failed Willow behind fencing to east overhanging footpath.	C2	No work required.	4		
		4.44	2.1-4m		EM	High							
Yes		61.9			10+ years	Grass, Tarmac							
T003	Willow	290	7.5		Moderate	N2.5, E5, S5, W2		Poor form and condition. Companion tree to north recently felled. Notable basal cavity on south aspect and stem decay evident up to circa. 1m above ground level (agl). Decaying branches. Split, hung up branches. Branches resting on powerline to south. Limited SULE.	U	No work required.	4		
		3.48	0-2m		EM	High							
Yes		38			<10 years	Grass, Tarmac							
T004	Oak	860	18.5		High	N10, E9, S10, W8		No evidence of any fungal fruiting bodies around base or on lower stem. Tapping lower stem with a sounding hammer did not reveal the presence of notable decay. Multi-stemmed from circa. 6.5m agl, unions appear stable. Moderate deadwood. Powerlines beneath crown south aspect.	B2	No work required.	4		
		10.32	4.1-6m		M	High							
Yes		334.6			20+ years	Grass, Tarmac							

Appendix D

Schedule of Works – Irrespective of Development

SCHEDULE OF WORK IRRESPECTIVE OF DEVELOPMENT

Land to the North of Leyland -S5_13A, World's End, Burgess Hill, West
Sussex

Surveyed By: Nick Hayden
Surveyed: 03/02/2025
Managed By: Nick Hayden

Tree No.	Species	Work required	Priority
A001	Ash, Horse Chestnut, Norway Maple	Landowner advised to remove Ivy and inspect Chestnut pollards adjacent to road.	2
T001	Oak	Landowner advised to undertake secondary investigations.	2
A003	Cherry, Hornbeam, Oak, Hawthorn, Hazel	Landowner advised to ensure tree belt is under regular / cyclical inspection routine.	3

Appendix E

Explanatory Notes

Explanatory Notes

Categories

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 (BWS 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 life expectancy of at least 40 years; Category C - Those of low quality with an estimated remaining 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.
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.

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.

V Veteran. A tree considered a 'survivor' having endured injury, disease and/or decay, developing important habitat features such as decay, trunk hollowing, deadwood, fungal fruiting bodies (plus others) not solely as a consequence of time. Veteran trees are afforded additional protection within the planning system where they may be influenced by change.

A Ancient. A tree that has the features of a Veteran tree but has also surpassed the typical lifespan for its species. These trees may differ in appearance from a Veteran tree, such as having a thick/wide trunk and a small crown. Ancient trees are usually considered to have exceptional cultural significance. Ancient trees are afforded additional protection within the planning system where they may be influenced by change.

Safe Useful Life Expectancy (SULE)

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.
Works 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/Ancient Tree Buffer

A diagrammatic representation of the additional protection measures afforded to Veteran and Ancient Trees by the imposing of a geographical 'buffer' space between the Veteran/Ancient Trees and any potential activity such as construction, that may affect the trees. The buffer zones are calculated as follows:

For ancient woodlands, the proposal should have a buffer zone of at least 15 metres from the boundary of the woodland to avoid root damage (known as the root protection area). Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic.

For ancient or veteran trees (including those on the woodland boundary), the buffer zone should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter. This will create a minimum root protection area.

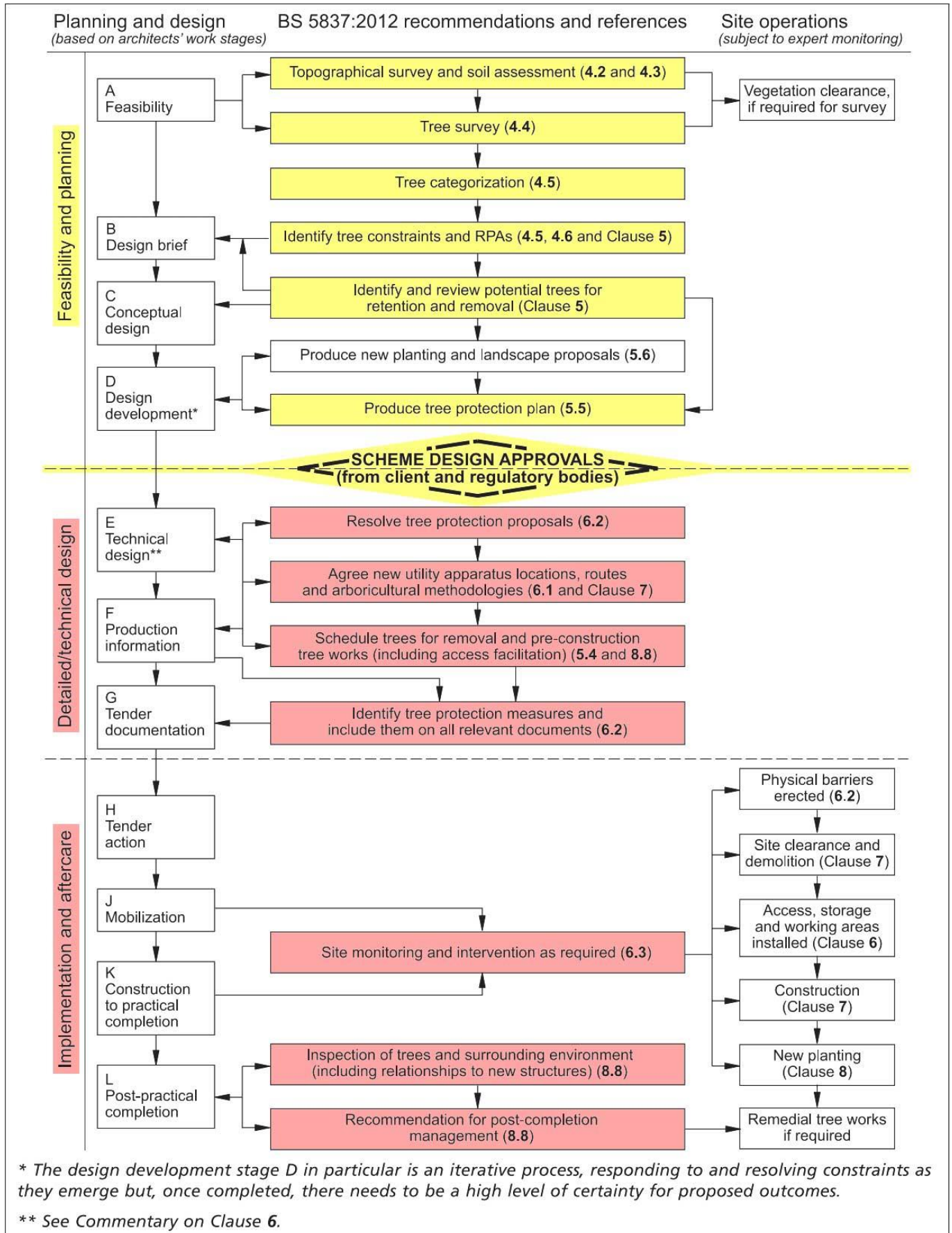
Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone.

Source: Natural England; The Forestry Commission; The UK Government Dept. for The Environment.

Appendix F

Advisory Information & Sample Specifications

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



2.

European Protected Species and woodland operations. (V4)

Complete all sections of the Checklist



Checklist

1

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

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

YES

NO

2

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

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

YES

NO

3

Have any of the protected species been recorded in this wood or on adjoining sites? Tick any that apply.

Indicate which sources of information you have checked:

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

Specify Other:

YES

NO

4

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

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

Details:

YES

NO

CHECK
POINT

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

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

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

NO

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

You will need to obtain a licence BEFORE carrying out the work (see EPS Licence Application Forms and Notes)

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?

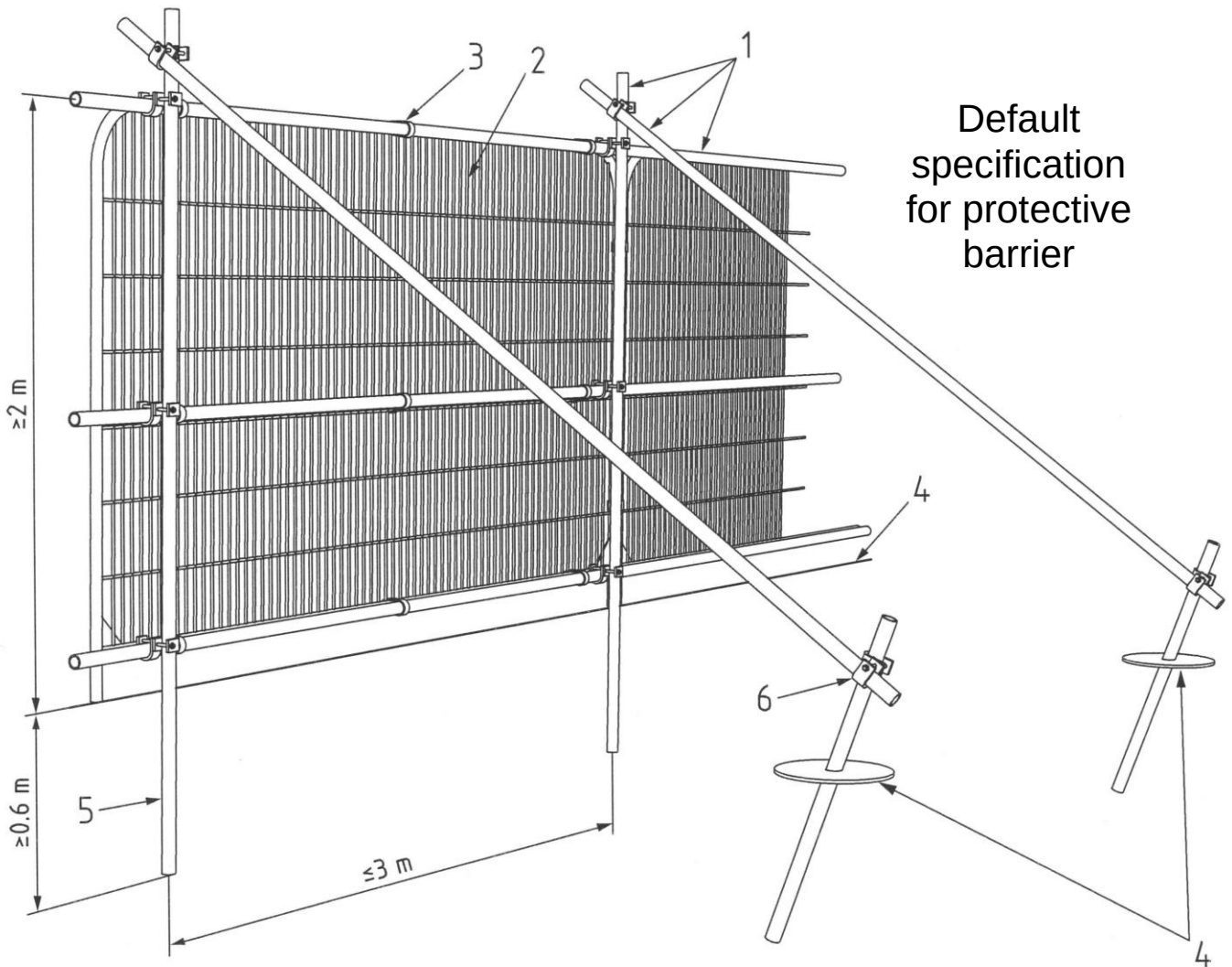
Details:

YES

NO

You may commit an offence if you do not take steps to ensure that your operators comply with the Good Practice guidance.

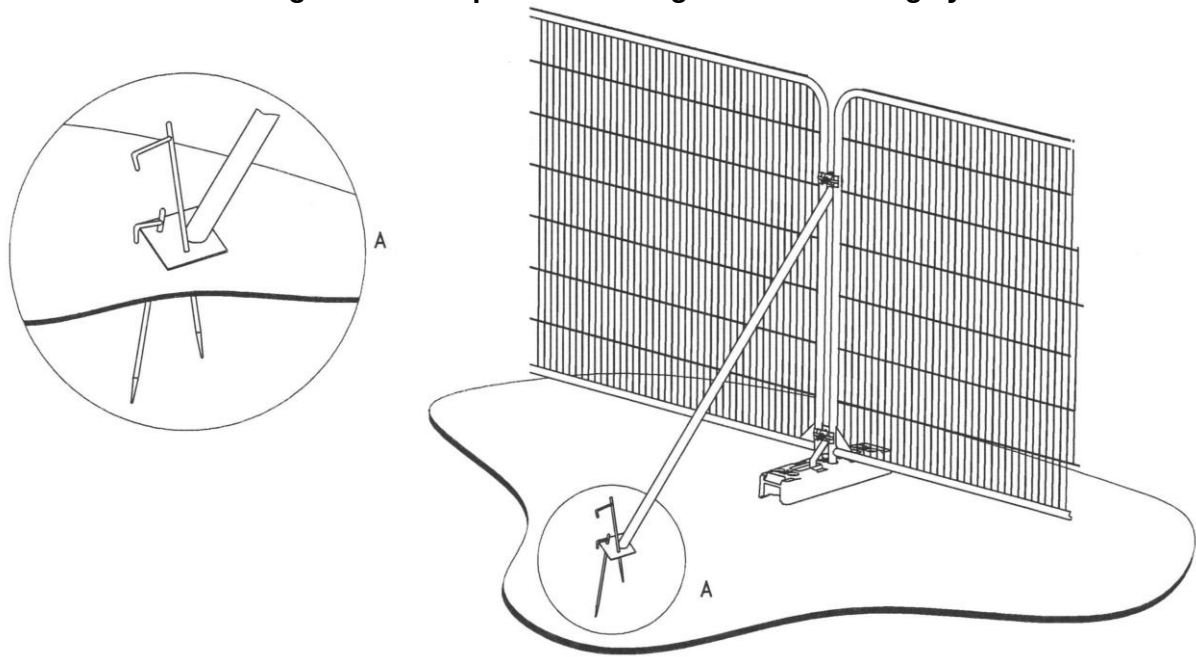
3. BS 5837:2012 Figure 2: Default specification for protective barrier



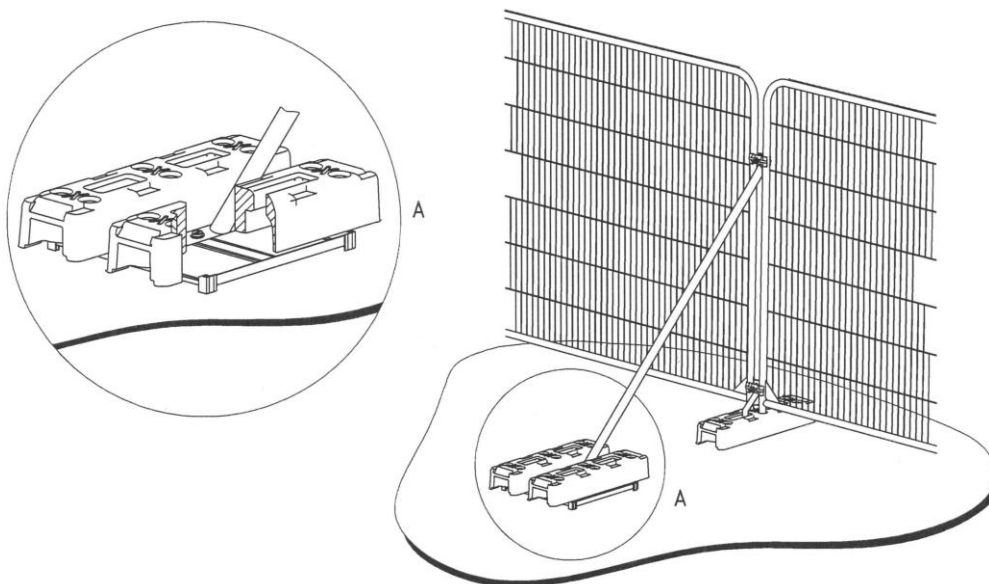
Key

- 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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