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Arboricultural Report

BS5837 Tree Survey

Arboricultural Impact Assessment

Tree Protection Specification

Site

**115B Tile Kiln Lane
Bexley
Kent
DA5 2BD**

Proposal

**5 x Detached
Two-Storey Residences**

Client

Ms P Willy

by

Curtis Barkel

RCArborA, F.Arbor.A, Prof Dip (RFS)

Ref: SA/2166/23-A

Date: 04 January 2024



Arboricultural Consultant: Curtis Barkel - RCArborA, DipArb(RFS), FArborA
Fellow and Registered Consultant of the Arboricultural Association

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INTRODUCTION

Site Address	115B Tile Kiln Lane, Bexley, Kent. DA5 2BD.
Survey Date	20 July 2023
Report Date	04 January 2024
Surveyed by	Curtis Barkel

1.0 Instructions

- 1.1 Sylvanarb has received instructions to carry out a BS5837 Tree Survey in order to provide an arboricultural impact assessment and tree protection specification, in respect of the proposed development as detailed on the 2-4C, Proposed Site Plan, Ref. 23-638 P01, Rev. B.

2.0 Documents Supplied

- Chinery Land Surveys, Topographical Survey, Ref. CLS23077002, dated June 2023.
- 2-4C, Proposed Site Plan, Ref. 23-638 P01, Rev. B.

3.0 Aim of Report

- 3.1 To survey existing trees in accordance with BS5837 2012: *Trees in Relation to Design, Demolition and Construction* (BS5837), in order to assess the condition and quality of trees located within the area of the proposed development.
- 3.2 To assess the impact of the proposed development on existing trees.
- 3.3 To advise on tree retention/removal and provide a specification for tree protection measures required to protect trees identified for retention throughout the development of the site.
- 3.4 To advise on tree work required to accommodate the proposed development.

4.0 Scope of Report

- 4.1 The survey has been carried out in accordance with British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction* (BS5837).
- 4.2 Subject trees have been inspected considering the current and proposed site use. Assessment categories have been allocated on the condition and merits of the individual tree irrespective of the proposed development.
- 4.3 A detailed condition survey and hazard assessment of the subject trees has not been carried out, where obvious faults have been noted a further detailed condition assessment may be recommended in the tree survey comments column (see Appendix A).
- 4.4 The 'Required Tree Works' set out in Section 16.0 detail the tree works required to accommodate the proposal.
- 4.5 Prior to any tree work being carried out the Local Authority is to be consulted to ascertain whether prior permission is required to carry out such work.
- 4.6 A tree with internal structural faults will often display associated external evidence of such faults, these would be noted in a visual tree inspection. However such signs are not apparent at all times of the year, for example pests and diseases or leaf size and condition. The following findings and recommendations have been drawn from the evidence present on the day of inspection.
- 4.7 All advice given in this report is based on the information available on the day of inspection. Should additional information not available or apparent on the day of inspection come to light, the right is reserved to modify the conclusions found within this report. This report is valid for 12 months notwithstanding change of site conditions, extremes of weather or other such overriding environmental changes.

5.0 Survey Method

- 5.1 The survey includes those trees within the vicinity of the proposed development with a stem diameter greater than 75mm measured at 1.5m from ground level.
- 5.2 Subject trees have been allocated identification numbers prefixed with 'T'.
- 5.3 Where appropriate several trees growing closely together have been surveyed as groups. In such cases the group value is recognised and graded as a whole, as opposed to grading the individual members of the group. Groups are allocated identification numbers prefixed with 'G'.
- 5.4 Subject trees have been plotted on the arboricultural plans over the locations provided on the Chinery Land Surveys Topographical Survey. The locations of all trees are assumed to be accurate.
- 5.5 The survey was carried out with the help of the following inspection aids:
- Digital Clinometer To calculate tree heights
 - Diameter tape To measure stem diameters
 - Laser measure To plot canopy extents
- 5.6 Each tree was inspected from ground level noting external faults and features only. The inspection did not include an aerial crown inspection, detailed excavation of the root system or the use of internal decay detection equipment.

SITE DESCRIPTION

6.0 Site Details

- 6.1 The property is located in a residential area between Bexley and Dartford and within the London Borough of Bexley.
- 6.2 The site is accessed via a long private driveway from Tile Kiln Lane.
- 6.3 The site accommodates a detached house with several outbuildings, one of these is used to provide kennel services.
- 6.4 For the purposes of tree protection the site is considered to be level.
- 6.5 The property adjoins Joydens Wood to the south, an area of Ancient Woodland.
- 6.6 The British Geological Survey describes the underlying geology as Thanet Sand, with no superficial deposits. This presents no restrictions to tree rooting potential and is unlikely to present concerns relating to indirect root damage to buildings.

PROPOSED WORKS

7.0 Planning Proposal

- 7.1 Planning permission is sought for the construction of five detached dwellings in the location of the existing outbuildings.
- 7.2 The existing house is to be retained, with the new properties served by a continuation of the existing driveway.
- 7.3 The proposed scheme has been designed under arboricultural advice provided in the form of a Sylvanarb Tree Constraints Plan, in accordance with Section 5.1-5.3 of BS5837.
- 7.4 This has allowed the layout to be designed around the constraints presented by all high value trees, ensuring that only low value trees and one tree of moderate value require removal to accommodate the scheme.
- 7.5 The position of the proposed dwellings has been governed by the relationship with these retained trees, this resulting in no incursions within the specified Root Protection Areas (RPA).
- 7.6 As such, no special engineering works or tree protection measures are required, other than the installation of tree protection fencing as specified on the Tree Protection Plans at Appendix B.
- 7.7 The scheme presents the opportunity to secure extensive soft landscaping proposals that will serve to improve and enhance the diversity of species and habitats on the property.

BS5837 TREE SURVEY

8.0 Subject Trees

- 8.1 The survey identifies fifteen individual trees and four group of trees.
- 8.2 The trees have been graded into quality assessment categories in accordance with recommendations given in BS5837:2012 *Trees in Relation to Design, Demolition and Construction*. Table 1 provides a breakdown of tree quality assessment (see Appendix A for full category definitions):

Table 1: Retention Category Breakdown

BS5837:2012 Category	Tree Survey Numbers	Total
A	T4, T7 G3	2 x Individuals 1 x Groups
B	T1,T2, T3, T5, T6, T12-T15 G4	9 x Individuals 1 x Groups
C	T8-T11 G1-G2	4 x Individuals 2 x Groups
U	-	0

- 8.3 Trees classified in Category A are considered to be of high value with a minimum of forty years potential in the existing setting. These trees are located along the eastern boundary, the scheme has been designed to ensure that all of these trees are successfully retained to maintain the character of the existing setting.
- 8.4 Trees classified in Category B are recognised as being trees of moderate quality and value with a minimum of 20 years potential in the existing setting. A number of these trees are also located along the eastern boundary, combining with the higher value Category A trees to form a strong boundary feature. In addition, four pollarded Category B trees are located along the western boundary, where they contribute to the character of the setting.
- 8.5 Trees classified in Category C are considered to be of low arboricultural value and of no significance to the wider character of the locality.
- 8.6 LB Bexley have confirmed that none of the subject trees are protected by Tree Preservation Order and the property is not located within a Conservation Area, as such the permission of the Local Authority is not required prior to carrying out tree work on the property.

ARBORICULTURAL IMPACT ASSESSMENT

9.0 Trees Requiring Removal to Accommodate Proposal

9.1 One individual tree and two groups will require removal to accommodate the proposed development. Table 2 provides brief details:

Table 2: Trees Requiring Removal to Accommodate Proposal.

Tree No.	Species	Condition/Comments	Reason for Removal	BS5837 Cat.
T1	Oak	Bifurcated at 2m where one of two main limbs (700 x 500) has been removed.	To facilitate demolition/level changes, unsuitable for retention within proposed garden setting.	B1
G1	Leyland Hedge	Semi-mature, unmaintained hedge.	To facilitate demolition/level changes, unsuitable for retention within proposed garden setting.	C2
G2	Leyland Hedge	Young, unmaintained hedge.	To accommodate proposed dwelling.	C2

9.2 The locations of the trees requiring removal are provided on the Tree Protection Plans at Appendix B.

9.3 The two groups identified for removal are unmaintained conifer hedges that have outgrown the existing setting, these are considered to be of low value and are graded in BS5837 Category C.

9.4 Category C trees are not considered to be of such value as to impose significant constraints to the proposed development of the site.

9.5 Tree T1 is a tree of moderate value, being graded in category B. However, the tree is of poor form, having been made worse by the removal of a large primary main limb at the point of stem bifurcation (2m), the resulting wound is approximately 700mm x 500mm. This has left the tree asymmetric and misshapen with a wound that presents a high risk of decay establishment. As such, the tree is not considered to be in an appropriate condition for retention within the proposed residential setting.

9.6 The loss of these trees can be suitably mitigated through the provision of replacement landscaping specifically selected to provide a variety of habit improvements and to provide sustainable long-term tree cover on the site.

9.7 It is expected that such landscaping proposals will be agreed with the Local Authority under conditions attached to any planning approval granted.

10.0 Impact of Development on Trees Identified for Retention

- 10.1 Assuming that the tree protection measures recommended herein are applied, all trees shown for retention on the Tree Protection Plans can be successfully retained in accordance with BS5837:2012.
- 10.2 The proposed dwellings are over 50m from the rear site boundary with the Ancient Woodland of Joyden Woods, with no development proposed within this distance. The proposals do not therefore present a risk to the habitats associated with the woodland, whilst the removal of the kennel activity on the site is seen to be an improvement to the Ancient Woodland setting.
- 10.3 All of the proposed dwellings are located beyond the Root Protection Areas (RPA) of retained trees; with the proposed layout having been governed by the relationship with these trees, ensuring they are successfully retained to complement the setting.
- 10.4 Minor crown lifting works and the re-pollarding of one previously pollarded tree will be required to accommodate the development, a specification for these works is provided at Section 16.0.

TREE PROTECTION MEASURES

11.0 Monitoring and Maintenance

- 11.1 The trees identified for retention are likely to be protected under planning conditions attached to any approval granted. To cause damage to these trees, even unintentional damage, may result in Planning Enforcement action. It is therefore imperative that the following tree protection measures are adhered to for the duration of the project.
- 11.2 The contract manager is to be made aware of their responsibility to ensure that the protection of retained trees is maintained throughout the development of the site.
- 11.3 The details of tree protection measures and work restrictions within RPA's is to be highlighted at the induction of all contractors involved with the project.

12.0 Operations Resulting in Damage to Trees

- 12.1 The following operations are likely to result in significant damage to trees. Damage resulting from these operations may take immediate effect resulting in the rapid death of a tree, or alternatively may result in years or even decades of gradual decline and ultimate early death.
- 12.2 *Compaction of Soil*
Whether from repeated pedestrian passage or due to just a single passing of a vehicle, soil compaction within a Root Protection Area will inevitably lead to root death and may ultimately greatly reduce the longevity of a tree.

12.3 *Storage or Spillage of Toxic Materials*

The following materials commonly used during construction operations are toxic to trees:

- Builders Sand (due to salt content)
- Cement
- Fuels
- Tarmac

The uncontrolled storage or use of such materials on unsealed surfaces within 10 metres of trees is likely to be detrimental to their long-term health.

12.4 *Excavations / Soil Grading / Lowering of Levels*

Contrary to popular belief nearly all of a tree root system is located within the top 1 metre of soil, often with the majority of roots found within 600mm of the soil surface.

The Root Protection Area (RPA) is the *minimum* area of protection required to retain a tree. The full root system of a tree will extend beyond this, usually to a distance at least equivalent to the height of the tree.

Any excavations within the specified RPA's are therefore to be carried out in strict accordance with the arboricultural advice provided herein.

12.5 *Raising of Levels*

Roots absorb both oxygen and water from the soil and therefore develop in free-draining, aerated conditions.

Where levels are raised over tree roots the availability of oxygen is reduced and moisture filtration hindered, tree roots may subsequently be starved of oxygen and water leading to root death, potential disease and reduced longevity.

13.0 **Tree Protection Fencing**

13.1 Two Tree Protection Plans are provided at Appendix B: one providing details of protection required during the demolition phase; and one providing details of protection required during the construction phase.

13.2 Tree protection fencing is to be installed in the locations specified on the Tree Protection Plans prior to the commencement of demolition/construction.

13.3 The fenced off areas are to be treated as Construction Exclusion Zones, with no contractor access permitted without the prior approval of the Local Authority Tree Officer.

13.4 Suitable barriers '*fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work...*' (BS5837: s. 6.2.2.1) are to be installed. It is recommended that Heras type fencing be used with the fence bases pinned into place and the panels braced to ensure the barrier remains rigid, a specification is provided on the Tree Protection Plans.

13.5 Informative signs (model sign provided at Appendix B) are to be laminated and attached to the installed fencing.

13.6 The demolition phase fencing is to be maintained through to completion of demolition/prior to ground works; the construction phase fencing is to be maintained through to completion of all superstructure works and only removed immediately prior to approved landscaping.

14.0 General Protection Measures

14.1 Other than approved development no level changes, excavations or other development works are permitted within the RPA's specified on the Tree Protection Plans without prior arboricultural approval.

14.2 No fires are permitted where flames will reach within 5m of a tree canopy.

14.3 No storage or discharge of materials harmful to tree health is permitted on unsealed surfaces within 10m of any retained tree, including storage of fuels, tarmac, cement and oil.

14.4 No cement mixing is to be carried out on unsealed surfaces within 10m of any retained tree.

15.0 Excavations Within RPA's: Foundations, Drainage, Services etc

15.1 Details of proposed drainage runs/services have not been finalised at this stage, these are to be designed to ideally avoid the specified Root Protection Areas of retained trees. Finalised proposals will require arboricultural comment on design and the approval of the Local Authority Tree Officer; it is expected that such details can be approved under conditions attached to any planning approval granted.

15.2 Other than approved development, no trenching or excavations are to be carried out within the specified Root Protection Areas of retained trees, as shown on the Tree Protection Plans, without prior arboricultural consultation.

15.3 It is imperative that any such works proposed within the Root Protection Areas of retained trees first be approved by the project arboriculturist. Root damage associated with excavations may result in reduced longevity of trees or trees being left in an unsafe condition.

15.4 Particular care is required to ensure any roots of 25mm diameter or greater encountered during excavations within the RPA's of retained trees are not severed or damaged without first seeking arboricultural approval. Should such roots be encountered, works are to stop and further advice is to be sought from the arboricultural advisor or LPA tree officer prior to continuing.

PROPOSED TREE WORKS

16.0 Required Tree Works

16.1 Table 3 provides details of the tree work required to accommodate the proposal.

Table 3: Proposed Tree Work

Tree No.	Schedule of Works
T1 G1, G2	Fell and grind/grub-out stumps.
T3	Crown lift to 3m.
T15	Re-pollard to previous pollard points.

- 16.2 The specified tree works are considered to be required to accommodate the proposed development. Should detailed planning approval for the development be granted it will be assumed, unless the LPA informs otherwise, that the tree works detailed at Table 3 may be carried out without any additional notification of intent or application for tree works.
- 16.3 The proposed tree work is to be carried out prior to the commencement of any demolition/ development operations on the site.
- 16.4 The tree work is to be carried out by a competent arborist in accordance with the British Standard for tree work BS3998: 2010 'Recommendations for Tree Work'.
- 16.5 In addition to the above work it is recommended that T12 also be re-pollarded, irrespective of the development proposals.

CONCLUSION

17.0 Conclusion

- 17.1 The proposed scheme has been designed under arboricultural advice to ensure all key trees are retained to preserve boundary screening and the existing character of the site
- 17.2 All trees identified for retention are to be retained and protected in accordance with BS5837:2012.
- 17.3 The scheme requires the removal of two conifer hedges and one tree of moderate value that has noted defects in terms of form and structure.
- 17.4 The loss of these trees will be of no significant detriment to the character of the site and will be of no loss to the wider visual amenity of the setting.
- 17.5 The proposal also presents the opportunity for the LPA to secure additional landscaping and tree planting across the site that will serve to improve habitat diversity and long-term tree cover for the future.

Appendix A

Tree Survey Data & Plan

Tree Survey Key

Tree No.	Tree Number - cross-referenced with tree numbers shown on Tree Survey Plan.		
Hgt (m)	Height - estimated in metres.		
Dia. at 1.5m (mm)	Stem Diameter - in millimetres taken at 1.5m above highest adjacent ground level		
No. of Stems	Number of main stems arising from below 1.5m above ground level. M = Multi-stemmed tree.		
Crown Spread N,E,S,W (m)	Given as a radial measurement in metres from the centre of the stem to the extremity of the canopy at the four main compass points NESW.		
Crown Cl/nce (m)	Crown Clearance - Height in metres of crown above adjacent ground level.		
Age Class	Y	Young	Staked or recently established tree at the fast growing early stage of establishment.
	SM	Semi mature	An established tree at a stage of rapid growth with increasing future growth potential
	M	Mature	A tree that is at a stage of constant growth nearing ultimate canopy size.
	V	Veteran	A mature tree, often of great ecological or heritage importance, that has reached a stage of natural decline.
Physiological Condition	Provides some evidence of the general well being of the tree. Assessed by comparison of growth characteristics with similar species in the locality and/or from personal experience.		
	Given in four classifications:		
	G	Good	
	F	Fair	
	P	Poor	
	D	Dead	

Preliminary Mgt	Recommendations for tree work to bring the trees to an acceptable and safe standard in context with the current site use.
Category	<p>Category of quality assessment allocated to a tree derived from an individual's potential contribution to a site: considering tree health, condition, age and value. Full description given on Table 1 of BS5837:2012 'Trees in Relation to Demolition, Design and Construction'.</p> <p>Trees are colour coded on the attached Tree Survey plan.</p> <p>Given in four categories:</p> <p>A - Green - Trees of high quality and value (likely to contribute a further 40+ years)</p> <p>B - Blue - Trees of moderate quality and value (likely to contribute a further 20-40 years)</p> <p>C - Grey - Trees of low quality and value (likely to contribute a further 10-20 years)</p> <p>U - Red - Trees which may require removal on health and safety grounds, be in decline, infected by significant pathogens or, due to their current condition would lose their existing value within 10 years.</p> <p>A provisional category may be allocated pending further advised inspection/tree work.</p>
RPD (m)	Root Protection Distance - The distance in metres of the radius of a circle depicting the root protection area required for an individual tree.
RPA (m)	Root Protection Area – The total area of ground to be protected around an individual tree.
(p)	Provisional quality assessment category – the highest expected category is allocated to the tree based on an incomplete preliminary visual inspection due to limited access ie. ivy clad, basal growth, dense undergrowth or off-site tree.
(e)	Estimated figure due to obstruction such as ivy or off-site tree.

Tree Survey Data

TREE NO	SPECIES	HEIGHT (m)	DIAMETER AT 1.5m or arf (mm)	NO. OF STEMS	CROWN SPREAD N,E,S,W (m)				CROWN CL/NCE (m)	AGE CLASS	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION	PRELIMINARY MGT RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION	CATEGORY	RPD (m)	RPA (m2)	NOTES
G1	Leyland Cypress	17	<450	1	3.5	3.5	3.5	3.5	2	Semi-mature	Good	Good		>40	C2	5.4	92	Ownership unclear.
G2	Leyland Cypress	8	<200	1	2.5	2.5	2.5	2.5	1	Young	Good	Good		>40	C2	2.4	18	Ownership unclear.
T1	Oak	15	770	1	10	6	6	8	5	Mature	Good	Fair		>40	B1	9.2	268	Bifurcated at 2m, with one of the two primary limbs removed (700 x 500mm).
G3	Oak	17	<500e	1	7	7	7	7	9	Semi-mature	Good	Good		>40	A2	6.0	113	Off-site.
T2	Oak	16	500e	1	6	6	6	6	4	Semi-mature	Good	Good		>40	B1	6.0	113	No access.
T3	Oak	16	450e	1	4	4	4	4	2	Semi-mature	Good	Good		>40	B1	5.4	92	No access, side branches reduced.
G4	Mixed Species	15	<400e	1	6	6	6	6	0	Semi-mature	Good	Good		>40	B2	4.8	72	Off-site.
T4	Oak	17	870	1	13	13	13	13	0	Mature	Good	Good		>40	A1	10.4	342	
T5	Ash	17	600e	1	8	8	8	8	3	Mature	Good	Good		20-40	B1	7.2	163	No access, storm damage, woodpecker holes.
T6	Cherry	16	440 360 450	3	8	8	8	8	0	Mature	Good	Good		20-40	B1	8.7	238	

TREE NO	SPECIES	HEIGHT (m)	DIAMETER AT 1.5m or arf (mm)	NO. OF STEMS	CROWN SPREAD N,E,S,W (m)				CROWN CL/NCE (m)	AGE CLASS	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION	PRELIMINARY MGT RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION	CATEGORY	RPD (m)	RPA (m2)	NOTES
T7	Ash	20	600e	1	12	12	12	12	2	Mature	Good	Good (p)	Clear access/ assess.	>40 (p)	A1 (p)	7.2	163	No access, ivy clad.
T8	Birch	13	520	1	6	6	6	6	1	Mature	Good	Fair		10-20	C1	6.2	122	Decayed stem wound from base to 3m.
T9	Birch	13	370	1	5	5	3	1	1	Mature	Fair	Fair		10-20	C1	4.4	62	Decayed stem wound from base to 3m.
T10	Birch	13	510	1	6	4	6	6	0	Mature	Good	Good		10-20	C1	6.1	118	
T11	Goat Willow	7	110e x 4	4	5	5	5	5	1.5	Semi-mature	Good	Fair		10-20	C1	2.6	22	
T12	Ash	11	600e	1	9	4	3	8	3	Mature	Good	Fair	Pollard side branches	>40	B1	7.2	163	Natural pollard at 5m.
T13	Ash	6	600e	1	3	3	3	3	2	Mature	Good	Fair		>40	B1	7.2	163	Pollard at 3.5m, no access.
T14	Ash	6	500e	1	3	4	3	3	1.5	Mature	Good	Fair		>40	B1	6.0	113	Pollard at 3.5m.
T15	Ash	10	600e	1	6.5	6.5	6.5	6.5	1.5	Mature	Good	Fair		>40	B1	7.2	163	Pollard at 3.5m.

Table 1 (BS5837:2012) – Cascade Chart for Tree Quality Assessment.

Category & Definition		Criteria (Including subcategories where appropriate)			Identification On Plan
TREES UNSUITABLE FOR RETENTION (See Note)					
<p>Category U</p> <p>Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years</p>	<ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low quality trees suppressing adjacent trees of better quality <p>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</p>				DARK RED
TREES TO BE CONSIDERED FOR RETENTION					
Category & Definition	Criteria — Subcategories				
	<i>1 Mainly arboricultural values</i>	2 Mainly landscape values	3 Mainly cultural values, including conservation		
<p>Category A</p> <p>Trees of high quality With an estimated remaining life expectancy of at least 40 years</p>	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN	
<p>Category B</p> <p>Trees of moderate quality With an estimated remaining life expectancy of at least 20 years</p>	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE	
<p>Category C</p> <p>Trees of low quality With an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm</p>	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY	

Appendix B

Tree Protection Plans

1. Demolition Phase

2. Construction Phase

Tree Protection Specification

Tree Protection Warning Sign

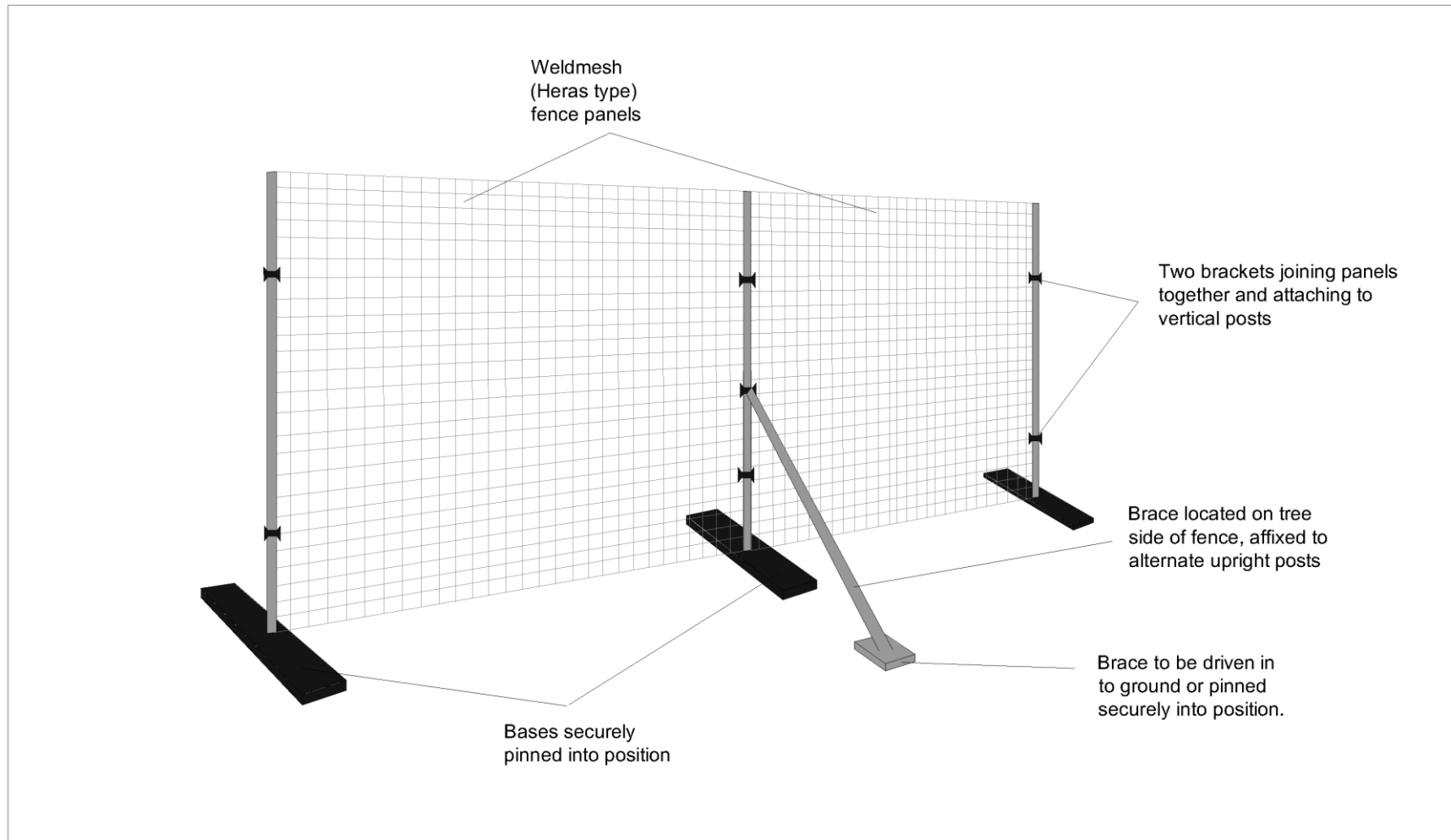
Principles of Tree Protection


- i) The majority of damage to tree root systems on development sites occurs either at the early stages of development when protection measures have not been installed promptly enough, or at the final stages of development when protective fencing is taken down prematurely.
- ii) The tree protection measures described are to be installed prior to the commencement of any other works associated with the proposal.
- iii) The site manager is to be made aware of their responsibility to ensure tree protection measures are maintained throughout the development of the site.

General Precautions

- No materials, that are likely to have an adverse effect on tree health, such as oil, bitumen or cement, will be stored or discharged on unsealed surfaces within 10 metres of the trunk of the retained trees. Consideration for the slope of the ground is to be given when discharging or storing materials that are potentially harmful to trees.
- No fires to be lit where flames could extend to within 5m of foliage, branches or trunks of trees.
- No signs, cables or other items are to be attached to trees.
- Details of service runs have not been provided. All trenching works are to be carried out in accordance with the guidance provided in the National Joint Utilities Guidance document NJUG Vol.4.
- Where tree roots over 25mm in diameter are encountered during excavations within the vicinity of retained trees advice from the arboricultural advisor or LPA tree officer is to be sought prior to severing any such roots and continuing with works.
- Any proposed level changes within Root Protection Areas are to be approved by the Local Authority Tree Officer prior to work being carried out.

Tree Protection Fencing



 <p>Sylvanarb Arboricultural Consultants</p> <p>Tree Protection Fencing</p>	<p>Site Address: 115B Tile Kiln Lane Bexley Kent DA5 2BD</p>	<p>By: C. Barkel Date: Sept. 2023 Ref: TK/TPF/Spec2 Scale: NTS</p>	<div style="border: 1px solid red; padding: 5px;"> <p>Tree Protection Fencing Specification To be installed in locations shown in RED on Tree Protection Plan Ref: TK/TPP/2166-03 & 04</p> </div>
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PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.



**TREE PROTECTION AREA
KEEP OUT !**
(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

!KEEP OUT!

Protected Trees

No Contractor Access Without Local Authority Permission

**REPORT ANY DAMAGE
TO TREES OR FENCING IMMEDIATELY TO
LB BEXLEY TREE OFFICER
Tel: 020 8303 7777**



Sylvanarb Arboricultural Consultants
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