



139 Bush Road, Cuxton, Rochester, Kent. ME2 1EZ.

☎ 01634 724023 ☎ 07816 400991

✉ info@sylvanarb.co.uk

🌐 sylvanarb.co.uk

Arboricultural Report

BS5837 Tree Survey

Tree Protection Method Statement & Specification

**As required by Sevenoaks DC under Conditions 4, 5 & 6
of Planning Approval 23/00916/HOUSE**

Site
**60 Hitchen Hatch Lane
Sevenoaks
Kent
TN13 3AU**

Client
Mr & Mrs May

by
Curtis Barkel
RCArborA, F.Arbor.A, Prof Dip (RFS)

Ref: SA/2182/23

Date: 23 October 2023



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

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Site	60 Hitchen Hatch Lane, Sevenoaks, Kent. TN13 3AU.
Planning Ref:	23/00916/HOUSE
Survey Date	21 September 2023
Surveyed by	Curtis Barkel
Report Date	23 October 2023

1.0 Instructions

- 1.1 Sylvanarb has received instructions to carry out a BS5837 tree survey and provide a tree protection specification and arboricultural method statement in respect of the proposed development of 60 Hitchen Hatch Lane, Sevenoaks; as required under Conditions 4, 5 and 6 of the Sevenoaks DC planning approval, Ref: 23/00916/HOUSE.

2.0 Documents Supplied

- Sevenoaks DC planning approval, Ref: 23/00916/HOUSE.
- Offset Architects, Proposed Site & Levels Plan Ref. 6214-WD-220.
- MJ Zara, Topographical Survey, Ref: 7103, dated February 2012.

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 adjacent to the proposed development.
- 3.2 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.
- 3.3 To advise on tree work required to accommodate the proposed development.
- 3.4 The information within this report has been provided in order to satisfy and discharge Conditions 4, 5 and 6 of the extant Sevenoaks DC planning approval.

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 The trees have been inspected considering the current and proposed site use. The 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 11.0 detail the tree works required to accommodate the proposal.
- 4.5 Prior to tree work being carried out the Local Planning 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 located within the vicinity of the approved 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 to the Tree Survey Plan and Tree Protection Plan over the locations provided on the MJ Zara 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.

6.0 Planning Approval

6.1 The development approved under 23/00916 is described as:

Single storey extensions to south/west elevations. Linked garage to north elevation. Internal alterations. Loft conversion to habitable rooms with new dormer windows. New balcony. Solar panels to garage roof and Air Source Heat Pump. Alterations to driveway and paved areas. Alterations to fenestration. Alterations to roof. Rooflights.

6.2 The scheme was approved by Sevenoaks DC, subject to conditions, in May 2023. The following three conditions relate to arboricultural matters:

Condition 4

No development shall take place until details are submitted and approved for tree protection, including:

A) A plan showing the location of, all existing trees on the land which have a stem with a diameter exceeding 75mm when measured over the bark at a point 1.5m above ground level. The plan shall identify those trees which are to be retained and the crown spread of each retained tree. In paragraphs 'b' to 'e' below references to a "retained tree" mean an existing tree which is to be retained in accordance with this plan.

B) Details of the species, diameter (measured in accordance with paragraph A) above), the approximate height, and an assessment of the general state of health and stability of each retained tree and of each tree which is on land adjacent to the site and to which paragraphs (C) and (D) below apply.

C) Details of any proposed topping or lopping of any retained tree, or of any tree on land adjacent to the site.

D) Details of any proposed alterations in existing ground levels and of the position of any proposed excavations or other engineering operations. These details shall be illustrated by a series of cross-sections showing existing and proposed levels.

E) Details of the specification and position of fencing or other measures to create a 'retained tree protected area' for the protection of any retained tree from damage before or during the course of development.

F) Details of the location and extent of any area on the land to be used during the construction period for storage (including materials, plant and machinery) and/or for siting any temporary ancillary structures, such as a site office.

Condition 5

Before any equipment, machinery or materials are brought on to the land for the purposes of the development, the means of protection for any retained tree shall be undertaken in accordance with the details submitted to and approved in writing by the local planning authority under condition 4 above. In this condition a "retained tree" means an existing tree which is to be retained in accordance with condition 4 above. Also:

A) The means of protection shall be maintained until all equipment, machinery and surplus materials have been removed from the land.

B) Within a retained tree protected area: -Levels shall not be raised or lowered in relation to the existing ground level -No roots shall be cut, trenches cut, or soil removed -No buildings, roads, or other engineering operations shall be constructed or carried out -No fires shall be lit;-No vehicles shall be driven or parked over the area;-No materials or equipment shall be stored.

Condition 6

No works of excavation shall take place under the canopy of the trees on the northern boundary unless it is in accordance with a method statement which has been submitted to and approved in writing by the local planning authority.

- 6.3 All information required under Conditions 4 and 6 is provided within this report; Condition 5 is a compliance condition only.

7.0 Primary Tree Protection Considerations

- 7.1 The trees on the site are protected under planning conditions, any damage resulting from poor practice may result in planning enforcement action being taken.
- 7.2 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 measures are taken down prematurely.
- 7.3 All recommended tree protection is to be maintained throughout the duration of the works on site in accordance with the guidance set out within this report and as specified on the Tree Protection Plan.
- 7.4 An individual, such as the Contract Manager, is to be identified as a point of contact for arboricultural affairs during works. This individual is to be fully aware of the arboricultural requirements on the site and is to be responsible for the monitoring and enforcement of tree protection measures.
- 7.5 The Contract Manager is to ensure that all contractors and operatives visiting the site are aware of the reason and location of tree protection measures prior to commencing any works on site.

8.0 Operations Resulting in Damage to Trees

8.1 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.

8.2 *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.

8.3 *Storage or Spillage of Toxic Materials*

The following materials commonly used on development sites 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.

8.4 *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 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.

Therefore any excavations within a Root Protection Area are likely to result in damage to the tree root system.

8.5 *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 will subsequently be starved of oxygen and water leading to root death, potential disease and reduced longevity.

9.0 Tree Protection Requirements

9.1 *Tree Protection Fencing*

- 9.1.1 Tree protection barriers are to be installed in the locations specified on the Tree Protection Plan (see Appendix B). The fenced off areas are to be treated as Construction Exclusion Zones, with no contractor access permitted without the prior approval of the LPA Tree Officer or the Project Arboriculturist.
- 9.1.2 As specified at S. 6.2.2.1 of BS5837 tree protection fencing is to be 'fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work...'. It is recommended that Heras type fencing panels be installed in accordance with Figure 3 of BS5837 (see Appendix B).
- 9.1.3 Informative signs (model sign provided at Appendix B) are to be laminated and attached to the fencing.
- 9.1.4 All tree protection fencing on the site is to remain in the positions shown on the Tree Protection Plan through to completion of the works contract, or immediately prior to approved soft landscaping works within Root Protection Areas (RPA).

9.2 *Temporary Ground Protection Measures*

- 9.2.1 Temporary ground protection is required to protect the soil profile where contractor access is required through unfenced sections of RPA.
- 9.2.2 The location for the required ground protection is shown on the Tree Protection Plan. Ground protection is to be installed in conjunction with the installation of tree protection fencing.
- 9.2.3 The ground protection is to be installed in accordance with the principles provided at 6.2.3 of BS5837: 2012, a specification is provided at Appendix C.
- 9.2.4 Ground protection is to be maintained through to completion of the main extension construction, with the sections alongside the northern side of the house removed to accommodate the proposed paving works and the remainder removed upon full completion of the works contract (or immediately prior to any approved soft landscaping proposed within the RPA's of retained trees).

10.0 Service / Drainage Installation, Regrading of Levels (and all other excavations)

- 10.1 Services and drainage are expected to tie into existing runs already installed. This is unlikely to present any risk to retained trees. Should any new service/drainage runs be required the following guidance is to be adhered to.
- 10.2 No trenching, excavations or grading of soil levels are to be carried out within the specified Root Protection Areas, as shown on the Tree Protection Plan, without prior arboricultural consultation and the approval of the Local Authority Tree Officer.
- 10.3 It is imperative that any such works proposed within the Root Protection Areas of retained trees be first approved by the Project Arboriculturist and LPA Tree Officer. Root damage associated with trenching operations may result in trees being left in an unsafe condition, or otherwise significantly reduce life expectancy.
- 10.4 Particular care is required to ensure that all roots larger than 25mm diameter encountered during works on site are not severed or damaged. Should roots of 25mm or larger be encountered, excavations are to stop and further advice is to be sought from the arboricultural advisor and LPA tree officer prior to continuing.

11.0 Required Tree Works

- 11.1 Table 1 provides details of the tree work required to accommodate the proposal.

Table 1: Proposed Tree Work

Tree No.	Schedule of Works
T9	Fell and grind/grub-out stump.
T5	Reduce radial spread to provide 2m clearance from proposed garage.
T6	Crown lift over application site to 6m.

- 11.2 The removal of T9 is required to facilitate contractor access during works; the pruning of trees T5 and T6 is required to facilitate the construction of the approved garage.
- 11.3 It will be assumed, unless the LPA informs otherwise, that the tree works detailed at Table 1 may be carried out under the planning approval without any additional notification of intent or application for tree works.
- 11.4 The tree work is to be carried out prior to the commencement of any demolition/development operations on the site.
- 11.5 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'.
- 11.6 Upon completion of the tree work, the prescribed tree protection measures are to be installed as detailed on the Tree Protection Plan (HH/TPP/2182-02).

12.0 Conclusion

- 12.1 The information provided within this report provides all details required to satisfy and discharge Conditions 4 and 6 of the planning approval.
- 12.2 Condition 5 is a compliance condition requiring that the specified tree protection is installed and maintained as agreed with the LPA prior to commencement; as well as defining restrictions to work operations within Root Protection Areas.
- 12.3 The requirements of Conditions 4 and 6 are addressed as follows:

Condition 4

No development shall take place until details are submitted and approved for tree protection

- This report is to be submitted for the approval of the LPA prior to commencement of works on site.

A) A plan showing the location of all existing trees on the land which have a stem with a diameter exceeding 75mm when measured over the bark at a point 1.5m above ground level. The plan shall identify those trees which are to be retained and the crown spread of each retained tree. In paragraphs 'b' to 'e' below references to a "retained tree" mean an existing tree which is to be retained in accordance with this plan.

- A BS5837 Tree Survey Plan is provided at Appendix A and a Tree Protection Plan showing required tree removals and tree protection is provided at Appendix B.

B) Details of the species, diameter (measured in accordance with paragraph A) above), the approximate height, and an assessment of the general state of health and stability of each retained tree and of each tree which is on land adjacent to the site and to which paragraphs (C) and (D) below apply.

- A BS5837 tree survey schedule is provided at Appendix A.

C) Details of any proposed topping or lopping of any retained tree, or of any tree on land adjacent to the site.

- A specification for required tree work is provided at Table 1.

D) Details of any proposed alterations in existing ground levels and of the position of any proposed excavations or other engineering operations. These details shall be illustrated by a series of cross-sections showing existing and proposed levels.

- Areas of proposed driveway regrading, terrace construction and paving are provided on the Offset Architects Proposed Levels Plan, Ref: 6214-WD-220.

E) Details of the specification and position of fencing or other measures to create a 'retained tree protected area' for the protection of any retained tree from damage before or during the course of development.

- Tree protection measures in accordance with BS5837 are provided at Appendix B.

F) Details of the location and extent of any area on the land to be used during the construction period for storage (including materials, plant and machinery) and/or for siting any temporary ancillary structures, such as a site office.

- The details of which are provided on the Tree Protection Plan at Appendix B.

Condition 6

No works of excavation shall take place under the canopy of the trees on the northern boundary unless it is in accordance with a method statement which has been submitted to and approved in writing by the local planning authority.

- No excavations are proposed within the RPA's of these trees, restrictions to working operations and precautionary measures to be followed within this area are provided on the Tree Protection Plan at Appendix B.

12.4 I confirm that this report provides all details required under Conditions 4 and 6 of the planning approval; and adherence to the tree protection specification provided will ensure the required compliance with Condition 5.

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 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'.
Trees are colour coded on the attached Tree Survey plan.

Given in four categories:

A - Green - Trees of high quality and value

(likely to contribute a further 40+ years)

B - Blue - Trees of moderate quality and value

(likely to contribute a further 20-40 years)

C - Grey - Trees of low quality and value

(likely to contribute a further 10-20 years)

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.

A provisional category may be allocated pending further advised inspection/tree work.

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
T1	Prunus	5.5	<100	M	2	2.5	4	3	2	Semi-mature	Fair	Fair		10-20	C1	1.2	5	Reduced vigour, 3m RPD provided.
G1	Sycamore	12	<350	1	4.5	4.5	4.5	4.5	5	Semi-mature	Good	Fair		20-40	C2	4.2	55	Previously topped at 7.5m, historically at 3m, largest recorded.
T2	Holly	4.5	<100	M	3	4	2	1	2	Young	Good	Fair		>40	C1	1.2	5	On boundary, 2.5m RPD provided.
G2	Sycamore	15	See notes	6	5	3	4	5	5	Young	Good	Fair		20-40	C1	4.1	54	On boundary. Stem dia's (mm): 150 x 4; 120 x 2
T3	Sweet Chestnut	14	350e	1	4	3	2	3	6	Young	Good	Good		>40	B1	4.2	55	Off-site.
G3	Holly/Sycamore	6 to 12	<150e	1	3	3	3	3	6	Young	Good	Good		>40	C2	1.8	10	
T4	Sycamore	12	150 x 2	1	1	4	4	2	6	Young	Fair	Fair		20-40	C1	2.5	20	Bifurcated at 3m, reduced vigour, ivy clad.
T5	Beech	10	170e	1	3	3	3	3	2	Young	Fair	Fair		20-40	C1	2.0	13	Squirrel damage, poor form, reduced vigour.

TREE NO	SPECIES	HEIGHT (m)	DIAMETER AT 1.5m or aft (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
T6	Sycamore	16	510	1	6.5	6.5	6.5	6.5	3	Semi- mature	Fair	Fair		20-40	B1	6.1	118	Reduced vigour.
G4	Sycamore/ Holly	10	<250 e	1	5	4	2	0	5	Semi- mature	Fair	Good		20-40	C2	3.0	28	Poor form.
G5	Mixed Hedge	3	<100	M	0.5	0.5	0.5	0.5	0	Semi- mature	Good	Good		20-40	C2	1.2	5	Mainly laurel.
G6	Mixed Species	6 to 10	<200 e	1	3	3	3	3	0	Young/ Semi- mature	Good	Good		>40	C2	2.4	18	Mainly laurel, with young Ash and Sycamore.
T7	Holly	5	130e x 2	2	2	2	2	2	1	Semi- mature	Good	Fair		>40	C1	2.2	15	Reduced.
T8	Sycamore	6	150e	1	2	2	2	2	4	Young	Fair	Fair		10-20	C1	1.8	10	Reduced, reduced vigour.
G7	Sycamore x 2 Ash x 2	12	200e 250e	2	3	3	3	3	4	Semi- mature	Good	Fair		>40	C2/B2	3.8	46	Previously topped at 6m, largest recorded, ivy clad, Laburnum, Hawthorn, shrub understory.
T9	Holly	8	300e 200e	2	2.5	2.5	2.5	2.5	2	Mature	Good	Good		20-40	C2	4.3	59	Dense basal shoots, hindering assessment.

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				
	1 Mainly arboricultural values	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 Measures

- **Tree Protection Plan**
- **Tree Protection Specification**
- **Tree Protection Warning Sign**

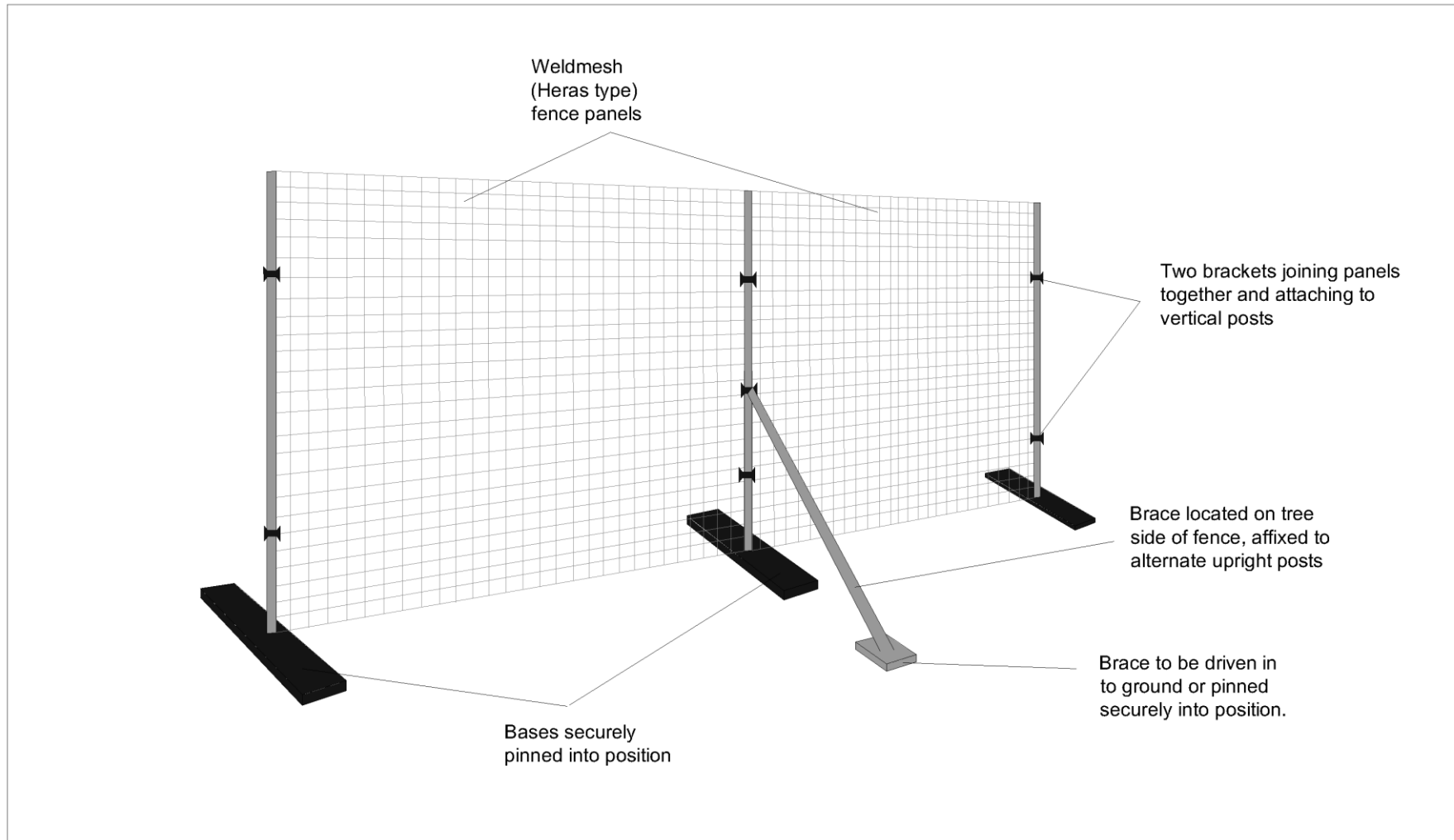
Principles of Tree Protection


- 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, having been adequate throughout development, 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 a retained tree. Consideration for the slope of the ground is to be considered 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. Service runs are to avoid Root Protection Areas and will ideally be laid within one combined trench. Trenching operations are to be carried out in accordance with NJUG Vol.4.
- Should tree roots over 25mm in diameter be encountered whilst carrying out any excavations within the vicinity of retained trees advice from the arboricultural advisor or LPA tree officer is to be sought prior to 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>Site Address: 60 Hitchen Hatch Lane Sevenoaks Kent TN13 3AU</p>	<p>By: C. Barkel Date: Oct 2023 Ref: HH/TPF/Spec2 Scale: NTS</p>	<p>Tree Protection Fencing Specification To be installed in locations shown in RED on Tree Protection Plan Ref: HH/TPP/2182-02</p>
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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
SEVENOAKS DC TREE OFFICER
Tel: 01732 227000**



**Sylvanarb Arboricultural Consultants
Tel:01634 724023 / Email: info@sylvanarb.co.uk**

Appendix C

Temporary Ground Protection Specification

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- i) Tree protection requirements are to be included in the tender specification when seeking quotes from contractors to carry out the building works.
- ii) Prior to installing ground protection the contractor is to determine whether the area is to be used for vehicles/plant or for pedestrian use only. The following specifications are then to be used accordingly as recommended in BS5837:2012:

1. For pedestrian use only.

a) Side-butted scaffold boards (or other non-slip boarding) placed over a layer of compressible material.

- Lay a permeable geotextile membrane over the area to be protected.
- Spread a layer of compression-resistant material over the geotextile. Woodchips resulting from tree pruning operations may be used and spread to a depth of 100mm.
- Lay side-butted scaffold boards or similar boarding over the compressible layer.

b) Scaffold boards suspended over the ground on a scaffold framework.

- Install a raised scaffold framework across the area of protection.
- The framework is to cover the entire area of ground to be protected (see Tree Protection Plan) and form a level platform to support the suspended floor.
- Affix scaffold boards or similar to the framework to form a suspended floor over the protected area.

2. For vehicles/plant up to a gross weight of 2 tonnes.

a) Proprietary ground protection panels, such as *Traxpanels* from TPA Ltd, laid over compression-resistant material.

- Lay a porous geotextile membrane over the area to be protected.
- Spread a layer of compression-resistant material over the geotextile. Woodchips resulting from tree pruning operations may be used and spread to a depth of 150-200mm.
- Install proprietary ground protection panels across area of protection.

iii) Ground protection is to be installed in the locations shown on the Tree Protection Plan at Appendix B.

iv) The ground protection measures described are to be installed at the same time as the tree protection fencing is installed and prior to any other development works being carried out on the site.

v) TGP and Tree Protection Fencing is to be maintained throughout the development phase and through to completion of the project.

vi) The site manager is to be made aware of their responsibility to ensure tree protection measures are maintained throughout the development of the site. Casual daily inspections of fencing and a weekly written record of inspection is recommended.

TREE PROTECTION MEASURES ARE NOT TO BE ALTERED OR REMOVED WITHOUT THE PRIOR APPROVAL OF AN ARBORICULTURAL ADVISOR OR THE LPA TREE OFFICER.