



Broad Oak Tree Consultants Limited
Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex
TN21 8SS Tel: 01435 862444 office@broadoaktrees.co.uk



**ARBORICULTURAL IMPLICATIONS ASSESSMENT REPORT
AND ARBORICULTURAL METHOD STATEMENT
FOR
PROPOSED ACCESS DRIVE AND GARAGE**

AT

**61 KIPPINGTON ROAD
SEVENOAKS
KENT
TN13 2LL**

by

**Tim Laddiman
BSc.(Hons) M.I.C.For. M.Arbor.A.
Chartered Arboriculturist**

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CONTENTS

Page No.

1.	INTRODUCTION	1
2.	GENERAL SITE DESCRIPTION	1
3.	SCOPE OF TREE SURVEY	1
4.	DATA COLLECTION	1
5.	RISK ASSESSMENT - INFORMATIVES	2
6.	RESULTS OF TREE INSPECTIONS	3
7.	BS CALCULATED ROOT PROTECTION AREAS (RPAs)	4
	ARBORICULTURAL IMPLICATIONS ASSESSMENT	
8.	DEVELOPMENT PROPOSALS	5
9.	TREES FOR REMOVAL – DEVELOPMENT	5
10.	POTENTIAL IMPACT OF PROPOSALS ON RETAINED TREES	6
11.	TREE SURGERY REQUIREMENTS	6
12.	TREE PROTECTION MEASURES – FENCING	7
13.	GROUND PROTECTION MEASURES	7
14.	SITE OPERATIONS AND MATERIALS STORAGE	8
15.	SERVICES/DRAINAGE/SOAKAWAYS	8
16.	ARBORICULTURAL METHOD STATEMENT	8
17.	SUMMARY	8

APPENDICES:

1. EXPLANATORY SHEETS, TREE INSPECTION SHEETS
2. TREE CONSTRAINTS PLAN, DRAWING NO. J60.63/01
3. TABLE OF BS CALCULATED ROOT PROTECTION AREAS (RPAs)
4. TREE PROTECTION PLAN, DRAWING NO. J60.63/02
5. EXAMPLES OF FENCING SPECIFICATION AND SIGNAGE
6. ARBORICULTURAL METHOD STATEMENT

1. INTRODUCTION

- 1.1 Broad Oak Tree Consultants Ltd. received instructions from Mr. A. Locke to undertake an inspection of trees located on and immediately adjacent to the site referred to as No. 61 Kippington Road, Sevenoaks, Kent, TN13 2LL. The purpose of the inspection was to produce a base inventory of the tree stock and an Arboricultural Implications Assessment of development proposals.
- 1.2 The proposals are for the formation of a new access drive leading onto an area of existing parking with a new detached garage and landscaping. Proposed alterations to the house have been approved under the consented scheme, Application No. 20/00616. Details of the proposals will have been submitted by Stephen Langer Architects and BG Design Studio Ltd.
- 1.3 At the time of reporting online checks with Sevenoaks Council have indicated that the site sits within the Kippington Conservation Area.
- 1.4 The trees were inspected on 23rd June 2021 by Tim Laddiman, BSc.(Hons) M.I.C.For. M.Arbor.A., Chartered Arboriculturist and Principal Consultant of Broad Oak Tree Consultants Ltd.

2. GENERAL SITE DESCRIPTION

- 2.1 No. 61 Kippington Road is located on the east side of the private road with its access drive to the north-east off a shared drive serving several other properties to the east. The tarmac drive leads to an attached garage and turning/parking area. To the north is a dense belt of trees and shrubs which continues along the eastern boundary on a raised bank.
- 2.2 To the rear of the house is a patio area with lawn beyond, a water feature to the south-west, an area of play equipment to the south-east and a wooden shed towards the southern boundary. Further belts of trees and shrubs run along the south and east boundaries with some of the trees in the grounds of adjoining properties.

3. SCOPE OF TREE SURVEY

- 3.1 All trees and shrubs of 75mm diameter or more at 1.5m above ground level located on a supplied topographic survey were included in the inspections. This included trees immediately adjacent to the site.
- 3.2 For the offsite trees estimates of location, dimensions and condition had to be made.

4. DATA COLLECTION

- 4.1 All trees were inspected from the ground and no climbing or specialist investigations were undertaken. Only those trees within the site boundary could be basally inspected, with the structural integrity of the trees located outside the site unconfirmed. Each tree was inspected to the requirements of Section 4.4 "Tree Survey" of BS 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".

- 4.2 The tree survey followed the numbered sequence from T1 to T62 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J60.63/01 in Appendix 2. This drawing also includes crown spreads based on four compass points and BS calculated root protection areas.
- 4.3 The following categories of information were obtained for each tree. Separate detailed tree survey sheets are attached in Appendix 1, together with comprehensive explanatory sheets which cover the details of the categories listed below.

- (1) Tree reference number
- (2) Species
- (3) Height in metres
- (4) Stem count
- (5) Stem diameter or equivalent in millimetres
- (6) Branch spread in metres
- (7) Age class
- (8) Height of crown clearance in metres
- (9) Physiological condition
- (10) Estimated remaining contribution in years
- (11) Category grading
- (12) Structural condition
- (13) Preliminary management recommendations

- 4.4 Within the assessment of physiological condition and remaining contribution, a visual inspection of each tree was undertaken to assess the crown and stem for any weak structures, deadwood, hollows, forks or other defects that might affect its stability and safety. The base of each tree was also visually inspected, together with tapping and probing, to search for signs of root lifting, bark death or decay. Where stems were heavily ivy clad, no full assessment of structural integrity could be undertaken. Clearance of the ivy would be necessary for confirmation of tree condition.

5. RISK ASSESSMENT - INFORMATIVES

- 5.1 Although the potential risk to someone passing beneath a tree when the tree or part of it fails is relatively remote, the risk is present. This increases significantly in areas of consistent and regular usage on a year round basis, such as footpaths, gardens and roadways. Where static structures exist, the risks become constant and an assessment is made as to whether complete or partial failure of a tree could potentially cause physical damage to such structures.
- 5.2 Within the scope of any tree survey it is a fact that not all risks of stem or crown failure can be covered, particularly in relation to freak occurrences of weather when even healthy trees can suffer stem snap or windblow. There is also a well known propensity for mature trees to occasionally shed limbs for no discernible reason, even on calm days. Although relatively rare, limbs may occasionally be shed and this should be acknowledged as a risk that cannot entirely be mitigated.

6. RESULTS OF TREE INSPECTIONS

- 6.1 A total of 62 individual trees and small groups/screens were inspected across the whole site, ranging from young Pear and Beech of less than 15 years of age through to mature Lime, Beech and Conifers, both on and offsite, of upto 120 years of age. All of the trees have been planted as part of various landscaping schemes since the estate was developed, presumably in the early 1900's. Extensive use of evergreens has been made, both as feature trees and fast growing screening, with a number of the screen plantings having been left to develop unchecked for upto several decades.
- 6.2 The extensive past planting and subsequent additions over the decades has produced very crowded growing conditions and many of the screens and shrub plantings have outgrown their original purpose. Many of the trees are heavily crowded, resulting in drawn up, high crowns or suppressed, asymmetric canopy development. With considerable future growth potential for most of the younger trees and screens there is the potential for some thinning out of numbers to improve conditions for those that remain and improve spatial settings and light availability.
- 6.3 The majority of the trees appear to be in a reasonable condition, though a few structural weaknesses and decay/damage points exist which would be expected in such a diverse age structure and with the numbers present.
- 6.4 Several of the Ash present are clearly starting to succumb to Ash Dieback, an airborne disease which is always fatal and causes canopy dieback over a number of years. Those not showing signs are at high risk as the naturally immune population appears to be very small. The trees not showing signs of infection should be monitored over the coming years to assess their future life expectancy. Trees with confirmed infection are normally recommended for early removal as the trees become increasingly brittle and dangerous to work on the more developed the dieback becomes
- 6.5 Of the trees inspected, the following is a breakdown of the various numbers of trees and groups in each BS category.

BS Category	Tree No.	Sub Total
A	26, 27, 61	3
B	1, 13, 20, 22, 54, 58	6
C	2, 3, G4, 5, 6, 8, G9, G11, 12, 14, 15, 16, 17, 19, G21, 23, 24, 25, 28, 29, 30, 32, G33, 34, 35, 36, 37, 38, G39, 40, G41, 42, 43, G44, 46, 47, 48, 49, 51, 52, 55, 56, 57, G59, G60, 62	46
C/U	G10, 31, 45	3
U	7, 50, 53, 18	4
	TOTAL	62

6.6 *Interpretation of table*

Category A Retention most desirable. Of high quality and value and in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested).

Category B	Retention desirable. Of moderate quality and value and in such a condition as to make a significant contribution (a minimum of 20 years is suggested).
Category C	Could be retained – of low quality and value. Poor crown form, heavily asymmetric, large numbers of similar species/size. Currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested) or young trees with a stem diameter below 150mm.
Category C/U	Trees that would be included in category C but have structural faults, areas of decay, etc. that require more detailed investigations or climbing inspections to ascertain whether or not they can be safely retained. Groups that include dead/dying/dangerous individuals.
Category U	Trees for removal. Dead/dying/dangerous trees due to structural defects, fungal decay or root plate uplift. Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

7. BS CALCULATED ROOT PROTECTION AREAS (RPAs)

- 7.1 To provide an indication of the critical areas of root plate necessary for tree survival and longevity, BS 5837:2012 requires the calculation of RPAs for trees in the BS Categories A, B and C. Calculations are not made for Category U trees which will require removal on safety grounds within 10 years.
- 7.2 The table in Appendix 3 has been calculated using the measured stem diameters and the formula as described in Section 4.6 in BS 5837:2012. These are represented as basic circles on the Tree Constraints Plan. Where buildings, walls, services and hard surfacing exist within the indicated RPAs it is likely that the architecture of root systems will have been affected. Foundations to walls and buildings can completely obstruct root development, depending on their depth and the nature of the underlying soils. In the absence of detailed site investigations the indicated RPA circles should be used for guidance only within any development proposals.

ARBORICULTURAL IMPLICATIONS ASSESSMENT

8. DEVELOPMENT PROPOSALS

- 8.1 The proposals are for the formation of a new access drive leading onto an area of existing parking with a new detached garage and landscaping. Proposed alterations to the house have been approved under the consented scheme, Application No. 20/00616. Details of the proposals will have been submitted by Stephen Langer Architects and BG Design Studio Ltd.
- 8.2 The supplied BG Design Studio Ltd “LOC1 Landscaping Plan 02A” has been used as the base for the Broad Oak Tree Consultants Ltd. Tree Protection Plan, drawing no. J60.63/02 in Appendix 4. This indicates trees for removal and measures to protect retained trees in accordance with BS5837:2012 recommendations.

9. TREES FOR REMOVAL – DEVELOPMENT

- 9.1 Based on the supplied plan the following trees will require removal for the proposed development to proceed and as part of the landscaping proposals.

Table: Trees for removal – development

Tree No.	Species	BS Category	Comments
G4	Cypress, Sycamore, Yew	C	Small, young, crowded trees.
T5	Cypress	C	Low quality non native evergreen.
T6	Wild Cherry	C	Weak stem union at 1.7m. Crowded.
T7	Ash	U	Canopy decline. Ash Dieback.
G10	Lawson Cypress, Western Red Cedar	C/U	Crowded. Tree to N. decayed at base.
G11	2no. Western Red Cedar	C	Low quality non native evergreens.
T14	Lawson Cypress	C	Low quality non native evergreen.
T16	Chinese Juniper	C	Crowded. Leaning NE.
T17	Cypress variety	C	Crowded. Low quality tree.

- 9.2 All of the above are either BS category C, C/U or U and as such should not represent a constraint to the proposals, according to BS5837:2012. Most were originally planted for screening purposes (evergreens) without an understanding of their full growth potential.
- 9.3 The trees for removal for development purposes are indicated as such with blue dashed crown outlines on the Tree Protection Plan.

10. POTENTIAL IMPACT OF PROPOSALS ON RETAINED TREES

- 10.1 The routing of the new drive has taken into account the tree constraints and has been designed to minimise impacts on retained trees. Where regrading of the banks either side of the new drive are required that overlap with the outer edge of the RPAs of T2 and T3 impacts on roots will be minimal. These areas will be dominated by the root systems of the trees for removal and the bank edges to the east potentially affecting T2 and T3 will be cut using hand tools only. This is indicated on the Tree Protection Plan and will avoid potential root tearing associated with machinery excavation and minimise any wound size and exposure of tissues.
- 10.2 Similarly the localised levelling in the outer edge of the RPA of T12 Holly will also be undertaken by hand tools only. This represents limited impacts to a BS category C tree and as such should not represent a significant constraint.
- 10.3 Overall the potential arboricultural impact on retained trees will be minimal and should not represent grounds for a refusal.

11. TREE SURGERY REQUIREMENTS

- 11.1 Based on the proposals the following tree works will be required, along with basic maintenance works to T13 Yew that would be required whether or not the proposals go ahead.

Table: Tree Surgery Requirements

Tree No.	Species	Works required
G9	Hornbeam, Horse Chestnut	Trim back outer fine branches to S. by 1m.
T12	Holly	Trim back outer fine branches to N. and E. by 1m and raise crown base to 2m.
T13	Yew	Raise crown base to 2m and trim back outer fine branches to E. to give 1.5m clearance from existing house.

- 11.2 All tree work should be carried out by a competent tree surgeon to comply with BS3998:2010 "Tree Work - Recommendations".
- 11.3 All trees recommended for felling and tree surgery works should be checked for the presence of bats or nesting birds prior to works commencing. Disturbance to bats or nesting birds could contravene the Wildlife and Countryside Act 1981 and result in prosecution.

12. TREE PROTECTION MEASURES – FENCING

12.1 *Location of fencing*

12.1.1 The Tree Protection Plan indicates the proposed location of protective fencing based on the calculated tree protection areas and space available. Account is also taken of new boundary fencing which will be installed prior to works commencing.

12.2 *Design of fencing*

12.2.1 The protective fencing is to be constructed of scaffold uprights driven into the ground to a minimum depth of 0.6m and at no greater than 3m spacing. Uprights to be braced with angled scaffold poles and anchors. On to the uprights weldmesh panels such as “Heras” or a similar product will be securely mounted with all weather notices attached to every 5th panel reading “Keep Out – Protected Area”. The fencing will form enclosed areas to which no access will be allowed. This design of fencing is considered appropriate to the site and scale of development proposed.

12.2.2 Examples of the fencing specification and signage required are included in Appendix 5.

12.3 *Timing of fencing*

12.3.1 Protective fencing is to be erected prior to commencement of site works and remain in place until completion of construction. The location and suitability of the fencing can be confirmed to the local authority by an arboricultural consultant prior to commencement of construction. Any tree felling will need to be undertaken prior to fence installation to minimise risks to operatives. All tree surgeons’ vehicles will be kept outside the indicated protection zones utilising existing areas of hard standing and drive.

12.4 *Additional precautions*

12.4.1 Potentially injurious materials such as fuels, oils, chemicals and cement will be stored at least 20m from any stem, or in a bunded storage vessel. No fires will be lit within 5m of the drip line of any retained tree. No level changes will occur, either raising or lowering within the protected areas. A list of these additional precautions are included on the Tree Protection Plan.

13. GROUND PROTECTION MEASURES

13.1 In areas within root protection zones where access around the building footprints will be required during construction, specific ground protection measures will be required. For machinery access these should comprise interlocking, specifically designed load bearing temporary roadway plates, commonly made of steel or specialised plastics. They will minimise any risk of compaction whilst providing a running platform for machinery.

13.2 Where foot access only is required, ground protection measures should comprise a base layer of geotextile, over which 100mm of woodchip will be laid, topped by side butting scaffold boards or non-slip surfaced minimum 12mm thick plywood or other boards.

13.3 Installation of the ground protection measures should take place at the same time as the protective fencing, prior to demolition, and remain in place until completion of construction.

14. SITE OPERATIONS AND MATERIALS STORAGE

- 14.1 Details of site zoning cannot be specified by an Arboriculturalist as these are commonly determined by contractors on the basis of Health & Safety Assessments. However, the robust protective fencing will define the remaining site space available for storage and operations.
- 14.2 The various areas of existing hard surfacing and parking provide ample storage space for machinery, materials and temporary welfare/office units.
- 14.3 As this is a small scale development the requirement for storage space is minimal and materials will be delivered on an “as and when” needed basis in appropriate quantities for the space available.

15. SERVICES/DRAINAGE/SOAKAWAYS

- 15.1 Based on the supplied layout, any new services, drainage or soakaway alignments should be outside root protection areas. Where possible the existing runs currently serving the building will be reused. If incursion into the protective areas of retained trees is unavoidable, then the routing should be obtained either by hand tool excavation or air spade, supervised by an arboricultural consultant. Any works within the protective areas will need to be undertaken to the requirements of NJUG Volume 4 “Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees”.

16. ARBORICULTURAL METHOD STATEMENT

- 16.1 A site specific Arboricultural Method Statement is included in Appendix 6.

17. SUMMARY

- 17.1 The proposed development will result in the removal of six individual trees and three small groups, all of which are BS category C, C/U or U and as such should not represent a constraint to the proposals, according to BS5837:2012.
- 17.2 Potential impacts on retained trees have been minimised by design and where minor impacts may arise measures have been recommended to minimise these impacts.
- 17.3 Robust tree protection measures are proposed, in accordance with BS5837:2012 recommendations to ensure that the retained trees are appropriately protected during the construction works.
- 17.4 The Tree Protection Plan can be referred to as an approved drawing or in a specifically worded condition to ensure that the retained trees are appropriately protected during the demolition and construction works.

Tim Laddiman
Chartered Arboriculturist
Broad Oak Tree Consultants Ltd.

APPENDIX 1

CASCADE CHART FOR TREE QUALITY ASSESSMENT

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
Category U Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management	<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 R category 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 (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree.)			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria - Subcategories			Identification on plan
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
Category A Those of high quality and value: in such a condition as to be able to make a substantial construction (a minimum of 40 years is suggested)	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 which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodland, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.	Trees not qualifying in higher categories	Trees present in groups or woodland, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit.	Trees with very limited conservation or other cultural benefits	GREY
NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation				

TREE SURVEY EXPLANATORY SHEET

Height	in metres (estimated where ground uneven or access restricted).
Stem count	number of stems
Stem diameter	in mm. at 1.5m. above ground level.
Branch spread	radial spread in metres at four main compass points (estimated where no access).
Age class	Young - Y Semi Mature - SM Mature - M Over mature - OM Veteran - V
Height of crown clearance	in metres. Normally range of heights of outer branches above ground level, e.g. 2-4m.
Physiological condition	Good, Fair, Poor, Dead, Variable
Estimated remaining contribution	in years e.g. less than 10, 10-20, 20-40, 40+
Category grading	see attached sheet
Structural condition	comment on presence of defects, decay, crown form, past management, deadwood, other features worthy of note. N.B. If trees are ivy clad, no full structural assessment will have been possible.
Preliminary management recommendations	requirements of further investigations, works necessary to alleviate potential hazards based on current setting and levels of access. NB: Works that may be necessary in relation to development are not included here

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
1	Western Hemlock	15	3	760	6.5	5.5	8	7.5	M	2.3+	Fair	20-40	B2	Three stems from ground level. Weak union in W. stem at 3.5m and leaning N. Crossing limb at 7.5m with rub wounding. Deadwood. Part ivy clad. Leaning N. and E.	Deadwood crown. Brace stems together at circa 8m and remove crossing limbs.
2	Cypress	18	2	490	3	1.5	2	3	SM	5+	Poor	10-20	C1	Twin stemmed from under 1m with weak union. Crowded. Deadwood in lower and mid crown.	
3	Yew	12	1	410	3.5	3.5	5.5	3	Y	2+	Fair	20-40	C2	Lean to SE. Crowded.	
G4	Cypress, Sycamore, Yew	<8	1/2	<100	<2	<2	<2	<2	Y	1+	Variable	10-20	C1	Crowded. Drawn up slender stems.	
5	Cypress	18	3	630	3	3	4.5	3.5	SM	0+	Fair	20-40	C2	Three stems near ground level. One low to S. before curving N. vertical. Part ivy clad.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
6	Wild Cherry	12	1	210	1	4	5.5	5	Y	1.2+	Fair	20-40	C2	Twin stemmed at 1.7m. Weak union. Becoming ivy clad. Crowded.	
7	Ash	20	1	c600	9	7	9	9	M	5+	Poor	<10	U	Part ivy clad. Multi stemmed at 4m.	
8	Elm	9	2	240	5	3.5	5	5	Y	3+	Fair	10-20	C1	Twin stemmed from ground level. One stem dominant. Deadwood. High risk of Dutch Elm Disease.	
G9	Hornbeam, Horse Chestnut	<8	1	<150	<3	<4	<3	<4	Y	1+	Variable	20-40	C2	Crowded. Several still with planting stakes.	
G10	Lawson Cypress, Western Red Cedar	<15	Multi	<580	3.5	2.5	3.5	2.5	SM	0+	Variable	<10-40	C/U1	Multi stemmed from ground level. Main tree twin stemmed from ground level. Tree to N. decayed at base. Western Red Cedar to S.	Fell N. tree.
G11	2no. Western Red Cedar	<14	1	<520	<3	<3.5	<2.5	<3.5	SM	0+	Fair	20-40	C2	Forming one crown.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
12	Holly	9	Multi	330	3.5	3	3	4	SM	0+	Fair	20-40	C2	Four stems near ground level.	
13	Yew	8	1	410	4	6	5	5	Y	1+	Fair	20-40	B2		
14	Lawson Cypress	14	1	440	2	2.5	2.5	2	SM	0+	Fair	20-40	C2		
15	Lime	11	1	210	3	1.5	3	3	Y	2+	Good	40+	C2	Crowded.	
16	Chinese Juniper	10	1	250	1.5	2	1	1	SM	0+	Fair	20-40	C2	Crowded. Leaning NE.	
17	Cypress var.	10	1	150	2.5	2	1	1	Y	0+	Fair	20-40	C2	Crowded.	
18	Ash	14	1	430	4.5	4	3.5	8	M	1.5+	Poor	<10	U	Crown raised in past. Contorted upper crown. Kinked to W. Stem lean to NW. Beginnings of Ash Dieback.	
19	Portugal Laurel	6	Multi	170	2	3	4	3	Y	1+	Fair	20-40	C2	Multi stemmed near ground level. Crowded. Overgrown shrub.	
20	Douglas Fir	19	1	510	5.5	4.5	5	7	M	3+	Fair	20-40	B2	Part ivy clad. Open crown. Long slender branches. Minor thinning.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
G21	Western Red Cedar, Cypress	<5	1	<100	<2	<2	<2	<1	Y	0+	Good	40+	C2	Overtopped. Crowded.	
22	Douglas Fir	23	1	c650	7	6	6	8	M	5+	Unconfirmed	20-40	B2	Heavily ivy clad lower and mid stem therefore no basal inspection. Open crown of long slender branches.	
23	Variigated Sycamore	5.5	1	130	3.5	3	3	2	Y	1+	Fair	20-40	C2	Crowded to SW. Part overtopped.	
24	Himalayan Birch	8	Multi	170	3	4.5	4	1.5	Y	1+	Fair	20-40	C2	Part overtopped. Multi stemmed near ground level. Leaning E.	
25	Western Red Cedar	6	Multi	130	2	1	2	1.5	Y	0+	Good	40+	C2	Trimmed back to E.	
26	Lime	21	Multi	700	5	6	5	6	M	0+	Good	40+	A2	Three stems near ground level. Basal epicormics. Ivy clad therefore no basal inspection.	
27	Beech	19	1	c800	7	8	c8	9	M	3+	Unconfirmed	40+	A2	Located in adjoining garden therefore no basal inspection.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
28	Cherry Laurel	6	2	c220	3	6	c2.5	2	M	0+	Unconfirmed	10-20	C1	Twin stemmed near ground level. Ownership unclear. Stem to W. dead upper crown. Stem to E. dominant and leaning E.	
29	Cypress	12	1	c550	2	2.5	c2	2	SM	2+	Unconfirmed	10-20	C1	Located in adjoining garden therefore no basal inspection. Topped in past year. Multi stemmed at under 3m.	
30	Poplar	6	1	290	0	1	2	1	SM	4+	Poor	10-20	C1	Crowded. Leaning S. over fence. Twin stemmed at 3.5m. Pollarded at circa 5m with regrowth.	
31	Ash	16	1	250	3	3	c3	7	SM	7+	Poor	<10-20	C/U1	Crowded. Drawn up. High crown. Minor crown thinning.	
32	Silver Birch	18	1	310	4	2.5	2.5	3.5	M	1.2+	Unconfirmed	20-40	C2	Crowded to S. and SE. Ivy clad. Slight lean to E.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
G33	Cherry Laurel, Cypress, Yew	<7	1/Multi	<150	<3	<2	<3	<2	SM	0+	Variable	10-40	C2	Overgrown screen planting. Mostly overtopped. Crowded.	
34	Purple Norway Maple	15	1	220	4.5	4	2	2	SM	3+	Fair	20-40	C2	Heavily crowded.	
35	Pear	9	2	140	2.5	1.5	1	2	Y	1.3+	Fair	20-40	C2	Crowded to S. and SE. Twin stemmed at 1.4m.	
36	Willow Leaf Pear	3.5	1	120	2.5	3	2	2	Y	0.5+	Good	20-40	C2	Multi stemmed at 1.7m. Pendular dense crown.	
37	Ornamental Cherry	5	Multi	360	5	5.5	5	6.5	M	1.2+	Fair	10-20	C1	Multi stemmed from under 1.1m. Crown raised in past. Mower damage and decay to surface roots.	
38	Tulip Tree	12	1	260	4.5	4	4.5	4	Y	1.5+	Fair	20-40	C1	Rising crown. Minor deadwood and fine dieback.	
G39	3no. Leyland Cypress	<19	1	<490	<3	<2	<3	<2	SM	0+	Fair	20-40	C2	Overgrown screen planting.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
40	Beech	17	1	200	3	3	c3	3	Y	3+	Fair	20-40	C2	Crowded. Drawn up.	
G41	Cherry Laurel, occ. Yew, Hawthorn	<8	1/Multi	<200	<3	<4	<3	<2	Y/SM	0+	Variable	10-40	C2	Overgrown shrubs and screen planting. Extends into adjoining garden.	
42	Sycamore	14	1	260	6.5	1	c5	6.5	SM	2.1+	Fair	20-40	C2	Leaning W. Heavily crowded. Part ivy clad mid crown.	
43	Unconfirmed	c18	1	410	0	c4	c7	c3	SM	10+	Unconfirmed	20-40	C2	Crowded. High crown mainly to S.	
G44	2no. Western Red Cedar	<18	1	<450	<4	<3	<2.5	<2	SM	0+	Unconfirmed	20-40	C2	Located in adjoining garden therefore no basal inspection.	
45	Ash	20	1	360	5	c5	c5	7	SM	8+	Fair	<10-20	C/U1	Crowded. High crown. Twin stemmed at 4m. Minor thinning.	
46	Western Red Cedar	8	1	c120	2	c2	1.5	1	Y	1.5+	Unconfirmed	20-40	C2	Heavily crowded. Located in adjoining garden therefore no basal inspection.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
47	Copper Beech	7	1	210	4.5	c3	2	3.5	Y	1+	Fair	20-40	C2	Crowded. Squat upper crown. Overtopped.	
48	Lawson Cypress	10	1	c180	2	2	2	2	Y	0+	Unconfirmed	20-40	C2	Located in adjoining garden therefore no basal inspection. Twin stemmed at under 2.5m.	
49	Common Oak	7	2	170	3	1.5	0.5	1	Y	3+	Unconfirmed	10-20	C2	Twin stemmed at circa 1m. Heavily ivy clad. Crowded. Topped in past.	
50	Copper Beech	9	1	c180	3	1	2	7	Y	2+	Poor	<10	U	Contorted stem to W. Extensive squirrel damage.	Fell.
51	Laburnum?	9	1	c350	c4	c4	3	3	M	3+	Unconfirmed	10-20	C2	Multi stemmed at circa 1.6m. Rising crown. Located in adjoining garden therefore no basal inspection.	
52	Copper Beech	15	1	c250	2.5	c4	6	5	SM	1.7+	Unconfirmed	20-40	C2	No access therefore no basal inspection. Heavily crowded. Crown to S. Stem lean to S.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
53	Ash	15	1	c400	4	c5	5	5.5	M	2+	Poor	<10	U	No access therefore no basal inspection. Fine dieback. Ash Dieback. Twin stemmed from under 3m.	Fell.
54	Coastal Redwood	22	1	c1000	5	c9	6	6	M	7+	Unconfirmed	20-40	B2	Ivy clad. Located in adjoining garden therefore no basal inspection. Possibly topped in past. Open crown of long limbs.	
55	Copper Beech	6	3	170	3.5	1	2	5.5	Y	1.2+	Fair	20-40	C2	Heavily crowded. Overtopped. Curved out to W. Three stems from ground level.	
56	Elm	5	1	c200	1	0	3	5	Y	2+	Poor	10-20	C1	Located in adjoining garden therefore no basal inspection. Leaning heavily W. Pollarded in past.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
57	Western Red Cedar	21	1	c600	6	c3	5	6	M	1.8+	Unconfirmed	20-40	C2	Located in adjoining garden therefore no basal inspection. Crowded to NE/E.	
58	Cedar	24	1	c700	c6	c6	c4	c6	M	7+	Unconfirmed	20-40	B2	Located in adjoining garden therefore no basal inspection. High main crown.	
G59	Cypress, Western Red Cedar	<7	1	<150	<1	<1	<1	<1.5	Y	0+	Good	40+	C2	Clipped screen. Located in adjoining garden therefore no basal inspection.	
G60	Portugal Laurel	<6	Multi	<200	<2	<2	<2	<3	M	0+	Unconfirmed	10-20	C2	Previously heavily reduced. Located in adjoining garden therefore no basal inspection.	
61	Cedar	c20	1	c1100	c9	c10	12	9	M	4+	Unconfirmed	40+	A2	Open high crown. Located in adjoining garden therefore no basal inspection. Long limbs.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
62	Portugal Laurel	7	Multi	c250	4.5	c3	2	4	M	0+	Unconfirmed	10-20	C2	One dominant stem. Leaning NW. Topped in past at circa 4m. Located in adjoining garden therefore no basal inspection.	

APPENDIX 2

APPENDIX 3

TABLE OF BS CALCULATED ROOT PROTECTION AREAS (RPAs)
AT
61 KIPPINGTON ROAD, SEVENOAKS, KENT, TN13 2LL

Tree no.	Species	BS Category	Stem diameter or calculated equivalent (mm.)	BS calc. radial equiv. root protection area (m.)	BS calc. total RPA (m ²)
1	Western Hemlock	B2	760	9.1	260
2	Cypress	C1	490	5.9	109
3	Yew	C2	410	4.9	75
G4	Cypress, Sycamore, Yew	C1	<100	<1.2	<5
5	Cypress	C2	630	7.6	181
6	Wild Cherry	C2	210	2.5	20
7	Ash	U	-	-	-
8	Elm	C1	240	2.9	26
G9	Hornbeam, Horse Chestnut	C2	<150	<1.8	<10
G10	Lawson Cypress, Western Red Cedar	C/U1	<580	<7	<154
G11	2no. Western Red Cedar	C2	<520	<6.2	<121
12	Holly	C2	330	4	50
13	Yew	B2	410	4.9	75
14	Lawson Cypress	C2	440	5.3	88
15	Lime	C2	210	2.5	20
16	Chinese Juniper	C2	250	3	28
17	Cypress var.	C2	150	1.8	10
18	Ash	U	-	-	-
19	Portugal Laurel	C2	170	2	13
20	Douglas Fir	B2	510	6.1	117
G21	Western Red Cedar, Cypress	C2	<100	<1.2	<5
22	Douglas Fir	B2	c.650	c.7.8	c.191
23	Variegated Sycamore	C2	130	1.6	8
24	Himalayan Birch	C2	170	2	13
25	Western Red Cedar	C2	130	1.6	8
26	Lime	A2	700	8.4	222
27	Beech	A2	c.800	c.9.6	c.290
28	Cherry Laurel	C1	c.220	c.2.6	c.21
29	Cypress	C1	c.550	c.6.6	c.137
30	Poplar	C1	290	3.5	38
31	Ash	C/U1	250	3	28
32	Silver Birch	C2	310	3.7	43
G33	Cherry Laurel, Cypress, Yew	C2	<150	<1.8	<10

TABLE OF BS CALCULATED ROOT PROTECTION AREAS (RPAs)
 AT
 61 KIPPINGTON ROAD, SEVENOAKS, KENT, TN13 2LL

34	Purple Norway Maple	C2	220	2.6	21
35	Pear	C2	140	1.7	9
36	Willow Leaf Pear	C2	120	1.4	6
37	Ornamental Cherry	C1	360	4.3	58
38	Tulip Tree	C1	260	3.1	30
G39	3no. Leyland Cypress	C2	<490	<5.9	<109
40	Beech	C2	200	2.4	18
G41	Cherry Laurel, occ. Yew, Hawthorn	C2	<200	<2.4	<18
42	Sycamore	C2	260	3.1	30
43	Unconfirmed	C2	410	4.9	75
G44	2no. Western Red Cedar	C2	<450	<5.4	<92
45	Ash	C/U1	360	4.3	58
46	Western Red Cedar	C2	c.120	c.1.4	c.6
47	Copper Beech	C2	210	2.5	20
48	Lawson Cypress	C2	c.180	c.2.2	c.15
49	Common Oak	C2	170	2	13
50	Copper Beech	U	-	-	-
51	Laburnum?	C2	c.350	c.4.2	c.55
52	Copper Beech	C2	c.250	c.3	c.28
53	Ash	U	-	-	-
54	Coastal Redwood	B2	c.1000	c.12	c.452
55	Copper Beech	C2	170	2	13
56	Elm	C1	c.200	c.2.4	c.18
57	Western Red Cedar	C2	c.600	c.7.2	c.163
58	Cedar	B2	c.700	c.8.4	c.222
G59	Cypress, Western Red Cedar	C2	<150	<1.8	<10
G60	Portugal Laurel	C2	<200	<2.4	<18
61	Cedar	A2	c.1100	c.13.2	c.547
62	Portugal Laurel	C2	c.250	c.3	c.28

APPENDIX 4

TREE PROTECTION INFORMATION

Protective fencing measures to be installed at locations specified prior to commencement of any site demolition works

Protective fencing to comprise scaffold uprights driven into the ground to 60cm depth at no more than 3m spacing. Framework to be braced with high usage/Construction/demolition areas. Weldmesh panels to be securely fixed to framework to produce a continuous barrier.

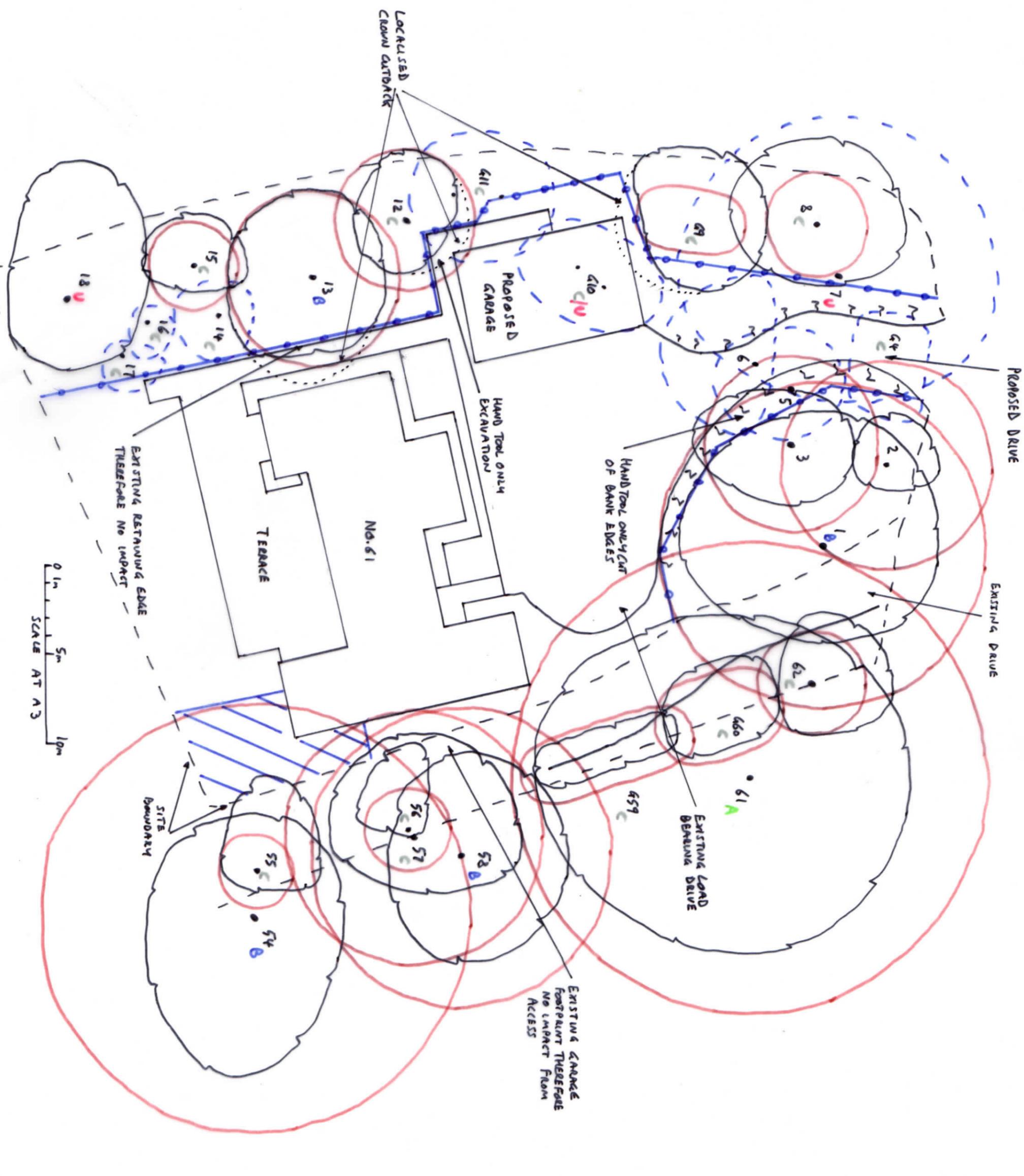
Waterproof signs to be attached to every 5th panel declaring TREE ROOT PROTECTION ZONE - KEEP OUT or similar wording. Fencing to be constructed in accordance with Fig 2 and Section 6 Specifications of BS5837:2012

Ground protection measures to comprise a single thickness of side bracing scaffold boards over a 100mm compressible layer laid onto a geotextile

Buildings in proximity to protective fencing areas to be demolished by machinery pulling walls inwards onto the building footprint.

The fenced protection zones around retained trees, hedges and scrubby are to be regarded as sacrosanct and none of the following are to occur within these areas:

- Storage or disposal of any soil, building materials, machinery, fuel or waste residues of any description.
- Siting of any temporary structures of any description including site offices/sales buildings, temporary car parking facilities, porta-toos, storage compounds or temporary hard standing areas.
- Excavations, soil/lift stripping, raising/lowering of existing levels or alterations to the existing natural surface/ground conditions of any other description.
- Location of temporary drainage, water supplies or any other temporary underground services.
- No use, movement or parking of any machinery or vehicles of any description.
- Additionally, no fires shall be lit within 20m of the trunks of any trees or the centre line of any hedgerow to be retained.
- Any services, drainage and soakaways are to be kept outside indicated root protection areas wherever possible. Where excavation is necessary, these should be undertaken by hand and to the requirements of NUG Volume 4 Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees.



Broad Oak Tree Consultants Limited Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex, TN21 8SS Tel: 01435 862444	
Site:	61 Kippington Road, Sevenoaks, Kent, TN13 2LL
Title:	TREE PROTECTION PLAN
Key:	<ul style="list-style-type: none"> • Tree Location I Group Location 1-62 Tree/Group Number ☁ Crown spread ○ BS calculated root protection area
BS Category of Condition	<ul style="list-style-type: none"> Green A - most desirable for retention Blue B - desirable for retention Grey C - could be retained Red U - unsuitable for retention
	Tree for removal - safety
	Tree for removal - development
	Protective Fencing
	Ground Protection Measures
Base drawing from BG Design Studio Ltd "LOC1 Landscaping Plan 02A"	
Scale: 1:200 @ A3 Date: 16.09.2021 DRAWING NO.: J60.63J02	

APPENDIX 5

BS5837:2012: FENCING SPECIFICATIONS

Figure 2 Default specification for protective barrier

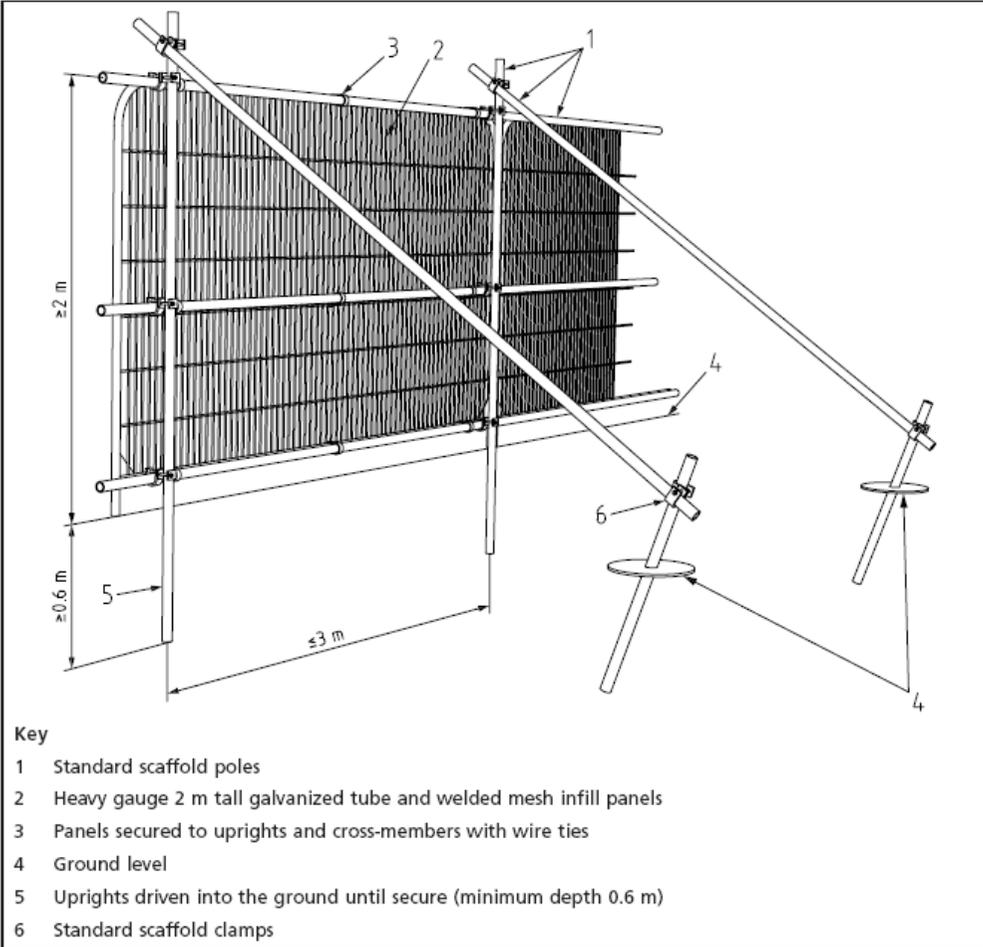
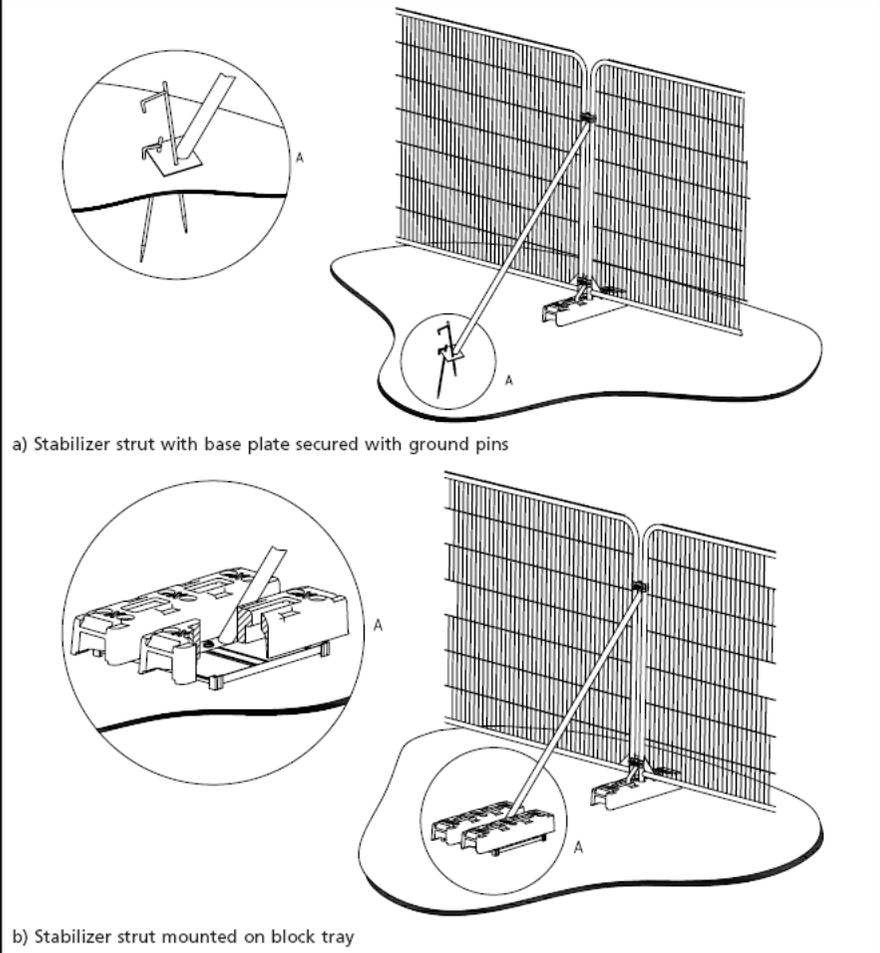
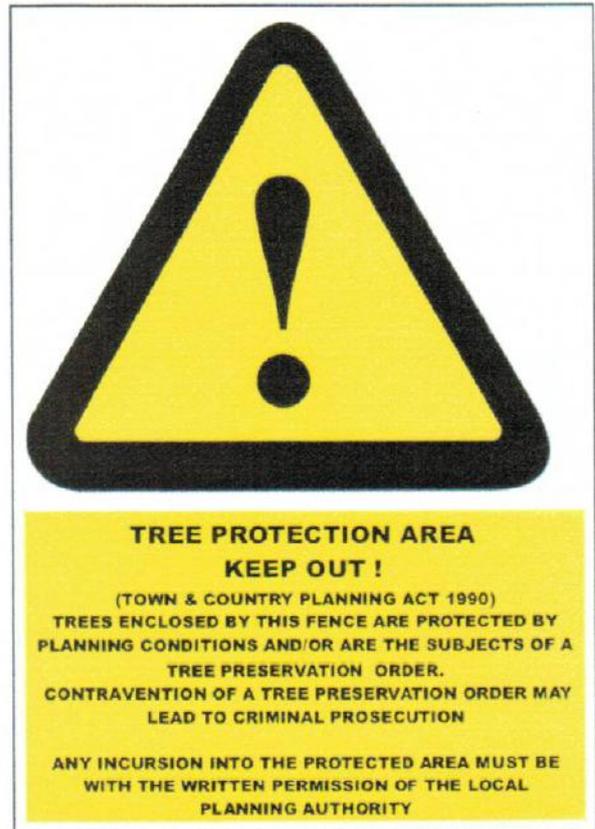


Figure 3 Examples of above-ground stabilizing systems



EXAMPLE OF FENCING SIGNAGE



APPENDIX 6



Broad Oak Tree Consultants Limited
Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex
TN21 8SS Tel: 01435 862444 office@broadoaktrees.co.uk



**ARBORICULTURAL METHOD STATEMENT
FOR
PROPOSED ACCESS DRIVE AND GARAGE**

AT

**61 KIPPINGTON ROAD
SEVENOAKS
KENT
TN13 2LL**

by

**Tim Laddiman
BSc.(Hons) M.I.C.For. M.Arbor.A.
Chartered Arboriculturist**

**Our ref: J60.63
29th September 2021**

CONTENTS

Page No.

1.	INTRODUCTION	1
2.	LIAISON/COMMUNICATION	1
3.	ARBORICULTURAL WORKS	2
4.	TREE PROTECTION FENCING	3
5.	GROUND PROTECTION	4
6.	HAND TOOL EXCAVATION	4
7.	INSTALLATION OF SERVICES/DRAINAGE/SOAKAWAYS	4
8.	ARBORICULTURAL OVERSIGHT OF WORKS AND MONITORING	5

APPENDICES:

1. TREE PROTECTION PLAN, DRAWING NO. J60.63/02
2. EXAMPLES OF FENCING SPECIFICATION AND SIGNAGE

1. INTRODUCTION

Broad Oak Tree Consultants Ltd. have received instructions to produce an Arboricultural Method Statement for the proposed works at No. 61 Kippington Road, Sevenoaks, Kent, TN13 2LL.

The proposed works of relevance to this Arboricultural Method Statement (AMS) comprise the formation of a new access drive leading onto an area of existing parking and a new detached garage with associated landscaping.

This AMS sets out the methodology for proposed works with the potential to affect trees. Compliance with this AMS will be a requirement of all relevant contracts associated with the development. All contractors will be responsible for undertaking their own risk assessments with regard to any of the works detailed in this AMS. The documents to be referred to in conjunction with this statement are as follows:

- BS5837:2012 “Trees in Relation to Design, Demolition and Construction - Recommendations” hereinafter referred to as BS5837:2012.
- BS3998:2010 “Tree Work Recommendations”, hereinafter referred to as BS3998:2010.
- Broad Oak Tree Consultants Ltd. Tree Protection Plan, drawing no. J60.63/02, hereinafter referred to as the TPP, attached in Appendix 1.
- NJUG Volume 4 “Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees” hereinafter referred to as NJUG Volume 4.

2. LIAISON/COMMUNICATION

Once all tree protection measures that are indicated on the TPP to be installed post tree removal are in place a precommencement meeting will be held between the appointed Arboricultural Consultant (AC), the Site Manager and the Council Tree Officer to confirm that the appropriate protective measures are in place and to the required specification as detailed on the TPP. The meeting will confirm that the Site Manager is conversant with the content of the AMS and their obligations to ensure that all operators on site comply with its requirements and respect the tree protection measures as shown on the TPP.

The details of the meeting and photographic confirmation of the positioning and specification of the tree protection measures will be sent to the Council Tree Officer and client.

The client shall inform the AC if the Site Manager is replaced during the construction process. The AC will then arrange a meeting with the new Site Manager to review all the remaining aspects of the AMS.

Following on from the precommencement meeting the frequency of any monitoring visits will be agreed with the Council Tree Officer. The results of such visits will be communicated to the Council Tree Officer in the form of a written statement confirming the condition of the site and protective measures, any reportable infringements of protection areas and details of any mitigation measures necessary. Monitoring will continue until construction and the soft landscaping have been completed.

The Site Manager shall notify the AC of any issues arising from progress on site that could impact on canopies or RPAs of retained on and off site trees not covered in this AMS. The AC will then determine whether a site visit is required or matters can be dealt with by telephone/email. Should circumstances require changes to tree protection measures or layouts that could affect trees then the AC will discuss these with the Council Tree Officer and agree any variations necessary and revisions to the AMS or TPP.

Where any works are carried out on site that deviate significantly from this AMS that would jeopardise tree health or stability the AC will report the incident and circumstances to the Council Tree Officer. An appropriate mitigation programme will be agreed and communicated to the client and Site Manager for implementation.

3. ARBORICULTURAL WORKS

Prior to the installation of tree protection measures the following tree works will need to be undertaken. These are to be undertaken prior to protective measures to minimise risks to operatives.

Operative's vehicles will utilise the existing access drive and surfaced parking area only.

Reference should be made to the TPP for tree locations and numbering.

Trees For Removal

Based on the supplied plan the following trees will require removal for the proposed development to proceed and as part of the landscaping proposals.

Table: Trees for removal – development

Tree No.	Species	BS Category
G4	Cypress, Sycamore, Yew	C
T5	Cypress	C
T6	Wild Cherry	C
T7	Ash	U
G10	Lawson Cypress, Western Red Cedar	C/U
G11	2no. Western Red Cedar	C
T14	Lawson Cypress	C
T16	Chinese Juniper	C
T17	Cypress variety	C

The trees for removal for development purposes are indicated as such with blue dashed crown outlines on the TPP.

Tree Surgery Requirements

Based on the proposals the following tree works will be required, along with basic maintenance works to T13 Yew that would be required whether or not the proposals go ahead.

Table: Tree Surgery Requirements

Tree No.	Species	Works required
G9	Hornbeam, Horse Chestnut	Trim back outer fine branches to S. by 1m.
T12	Holly	Trim back outer fine branches to N. and E. by 1m and raise crown base to 2m.
T13	Yew	Raise crown base to 2m and trim back outer fine branches to E. to give 1.5m clearance from existing house.

No other trees/shrubs are to be removed or pruned without reference to the AC.

An appropriately qualified and insured tree surgery company will undertake all recommended felling and tree surgery works to the requirements of BS3998:2010.

No fires or chip piling to occur within 5m of the drip line of any tree canopy or within 15m of any tree stem, whichever is the further.

Stumps of all trees within 10m of retained trees to be ground out using pedestrian guided wheeled/tracked grinding machines.

Prior to tree surgery/felling works commencing, the trees for works should be checked for the presence of nesting birds or bats. Disturbance of nesting birds or bats could represent an offence and result in prosecution under the Wildlife and Countryside Act 1981.

4. TREE PROTECTION FENCING

Protective fencing to be erected at indicated locations on the TPP once tree works are completed and prior to general clearance of the site.

The protective fencing is to be constructed of scaffold uprights driven into the ground to a minimum depth of 0.6m and at no greater than 3m spacing. Uprights to be braced with angled scaffold poles and anchors. On to the uprights weldmesh panels such as "Heras" or a similar product will be securely mounted with all weather notices attached to every 5th panel reading "Keep Out – Protected Area". The fencing will form enclosed areas to which no access will be allowed. This design of fencing is considered appropriate to the site and scale of development proposed.

Examples of the fencing specification and signage required are included in Appendix 2.

Protective fencing is to be erected prior to commencement of site works and remain in place until completion of construction. The location and suitability of the fencing can be confirmed to the local authority by the AC prior to commencement of construction. Any tree felling will need to be undertaken prior to fence installation to minimise risks to operatives. All tree surgeons' vehicles will be kept outside the indicated protection zones utilising existing areas of hard standing and drive.

Potentially injurious materials such as fuels, oils, chemicals and cement will be stored at least 20m from any stem, or in a bunded storage vessel. No fires will be lit within 5m of the drip line of any retained tree. No level changes will occur, either raising or lowering within the protected areas. A list of these additional precautions are included on the TPP.

5. GROUND PROTECTION

In the area within the root protection zone of T55 and T57 where access around the building footprint will be required during construction, specific ground protection measures will be necessary. For machinery access these should comprise interlocking, specifically designed load bearing temporary roadway plates, commonly made of steel or specialised plastics. They will minimise any risk of compaction whilst providing a running platform for machinery.

Where foot access only is required, ground protection measures should comprise a base layer of geotextile, over which 100mm of woodchip will be laid, topped by side butting scaffold boards or non-slip surfaced minimum 12mm thick plywood or other boards.

Installation of the ground protection measures should take place at the same time as the protective fencing and remain in place until completion of construction.

6. HAND TOOL EXCAVATION

The banks to the drive cut nearest the retained trees are to be formed using hand tools only. The alignment nearest the trees should be cut by spade first with the central alignment then excavated by machine.

The levelling for the access path around the garage footprint within the root zone of T12 is also to be undertaken by hand tools only closest to the tree. A trench cut can be made by spade to the required depth and then all material beyond the trench furthest from the tree removed by machine as any roots present will have been severed.

Any roots encountered are to be neatly cut back to the excavation face nearest the tree(s) using sharp secateurs/loppers to minimise wound size and tissue exposure.

If any roots over 50mm diameter are encountered the AC should be contacted to confirm that severance can go ahead or whether alternative measures may need to be considered.

7. INSTALLATION OF SERVICES/DRAINAGE/SOAKAWAYS

All new services, foul drainage and soakaways will be located outside of calculated root protection areas as indicated on the TPP. Existing runs will be retained and adapted, where practical. Any requirements to excavate within the root protection areas, for whatever reasons, will be undertaken to the requirements of NJUG Volume 4 and observed by the AC.

8. ARBORICULTURAL OVERSIGHT OF WORKS AND MONITORING

The AC will undertake monthly inspections of the site and produce a written statement to the Council Tree Officer confirming the condition of the site and protective measures, any reportable infringements of protection areas and details of any mitigation measures necessary. Monitoring will continue until construction and the soft landscaping have been completed.

In addition, the AC will provide confirmation of completion in compliance with this AMS of the following works:

- Hand tool excavation works within tree RPAs.
- Any service/drainage route excavations within tree RPAs.

Tim Laddiman
Chartered Arboriculturist
Broad Oak Tree Consultants Ltd.

AMS

APPENDIX 1

TREE PROTECTION INFORMATION

Protective fencing measures to be installed at locations specified prior to commencement of any site demolition works.

Protective fencing to comprise scaffold uprights driven into the ground to 60cm depth at no more than 3m spacing. Framework to be braced within high usage/Construction/demolition areas. Weldmesh panels to be securely fixed to framework to produce a continuous barrier.

Waterproof signs to be attached to every 5th panel declaring "TREE ROOT PROTECTION ZONE - KEEP OUT" or similar wording. Fencing to be constructed in accordance with Fig. 2 and Section 6 Specifications of BS5837:2012.

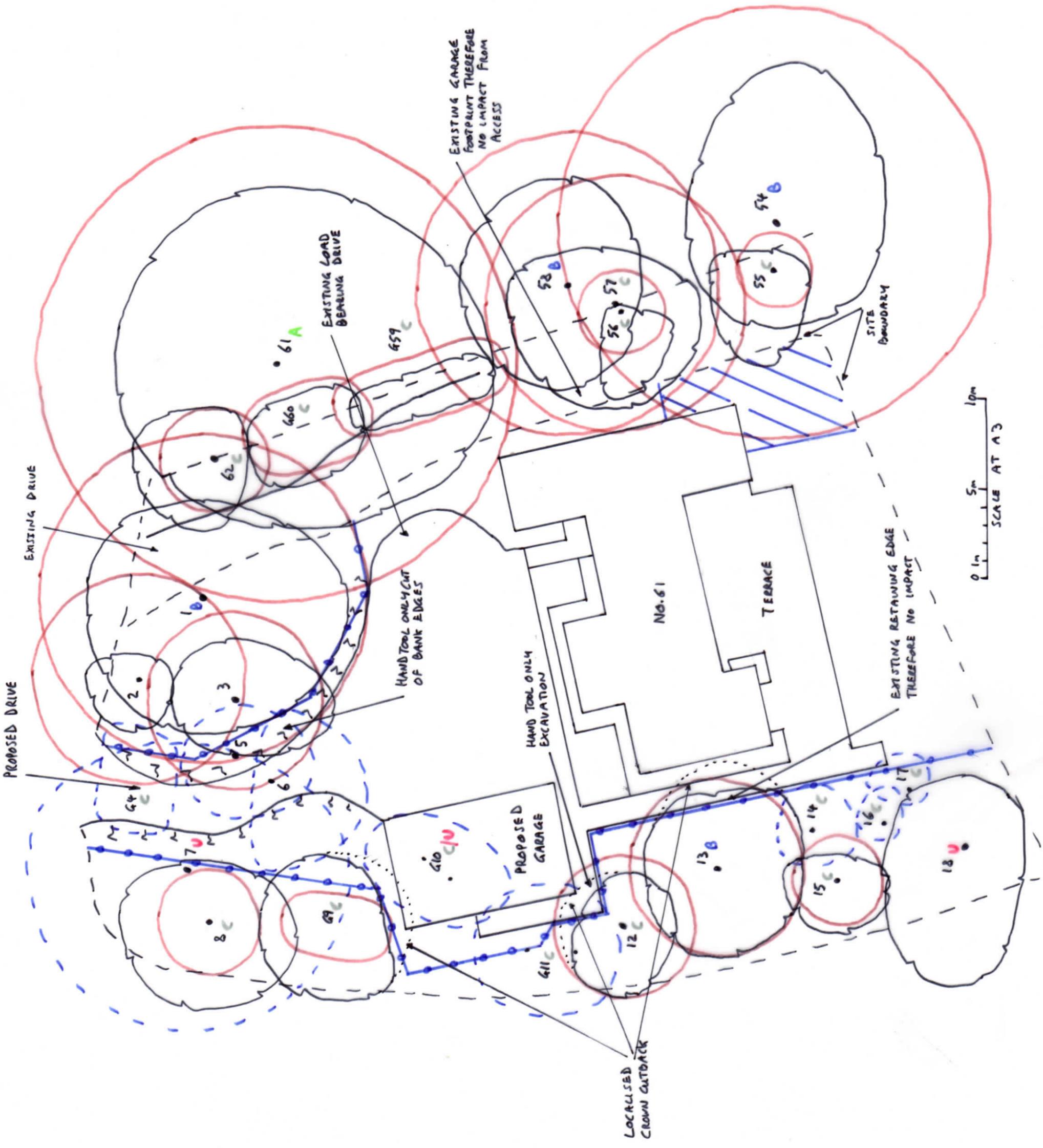
Ground protection measures to comprise a single thickness of side butting scaffold boards over a 100mm compressible layer laid onto a geotextile.

Buildings in proximity to protective fencing areas to be demolished by machinery pulling walls inwards onto the building footprint.

The fenced protection zones around retained trees, hedges and shrubbery are to be regarded as sacrosanct and none of the following are to occur within these areas:

- Storage or disposal of any soil, building materials, machinery, fuel or waste residues of any description.
- Siting of any temporary structures of any description including site offices/sales buildings, temporary car parking facilities, porta-toos, storage compounds or temporary hard standing areas.
- Excavations, soil/turf stripping, raising/lowering of existing levels or alterations to the existing natural surfaces/ground conditions of any other description.
- Location of temporary drainage, water supplies or any other temporary underground services.
- No use, movement or parking of any machinery or vehicles of any description.
- Additionally, no fires shall be lit within 20m of the trunks of any trees or the centre line of any hedgerow to be retained.
- Any services, drainage and soakaways are to be kept outside indicated root protection areas wherever possible. Where excavation is necessary, these should be undertaken by hand and to the requirements of NUJG Volume 4 "Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees".

Broad Oak Tree Consultants Limited Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex, TN21 8SS Tel: 01435 862444	
Site:	61 Kippington Road, Sevenoaks, Kent, TN13 2LL
Title:	TREE PROTECTION PLAN
Key:	Tree Location Group Location Tree/Group Number Crown spread BS calculated root protection area
BS Category of Condition Green A - most desirable for retention Blue B - desirable for retention Grey C - could be retained Red U - unsuitable for retention	
Tree for removal - safety Tree for removal - development Protective Fencing Ground Protection Measures	
Base drawing from BG Design Studio Ltd "LOC1 Landscaping Plan 02A"	
Scale:	1:200 @ A3 Date: 16.09.2021
DRAWING NO.: J60.63/02	



AMS

APPENDIX 2

BS5837:2012: FENCING SPECIFICATIONS

Figure 2 Default specification for protective barrier

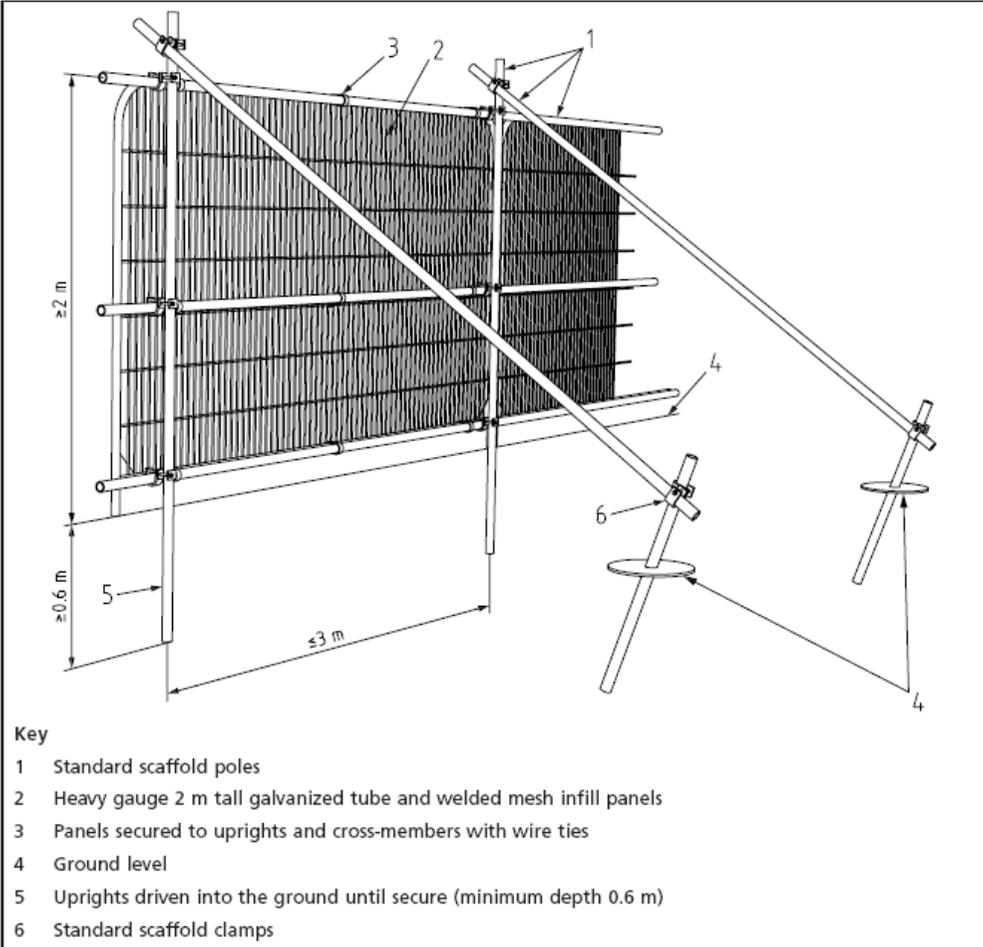
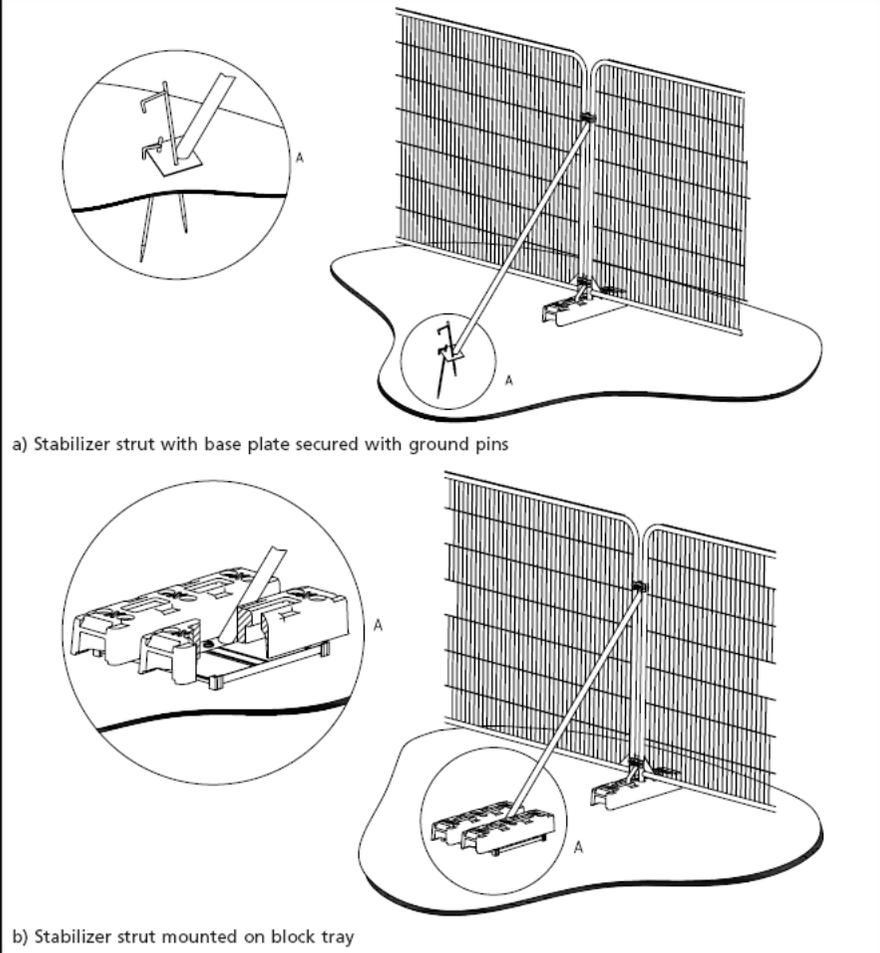


Figure 3 Examples of above-ground stabilizing systems



EXAMPLE OF FENCING SIGNAGE

