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**ARBORICULTURAL IMPLICATIONS ASSESSMENT
FOR PROPOSED TWO STOREY SIDE ADDITION**

AT

**NO. 1 WINTERGREEN WAY
SAYERS COMMON
HASOCKS
BN6 9ZQ**

BY

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**Our ref: J65.92
29th August 2024**

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1. INTRODUCTION

- 1.1 Broad Oak Tree Consultants Ltd. received instructions from Mr. S. Percy to undertake an inspection of trees located on and immediately adjacent to the site referred to as No. 1 Wintergreen Way, Sayers Common, Hassocks, BN6 9ZQ. 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 construction of a 3m wide, two storey, self contained side addition to the existing house. Details of the proposals will have been submitted by Christopher Jones Projects.
- 1.3 At the time of reporting online checks with Mid Sussex District Council's mapping system did not indicate the site to be within a Conservation Area and no Tree Preservation Orders are indicated to be present.
- 1.4 The trees were inspected on 20th August 2024 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. 1 Wintergreen Way is a two storey semi detached house located on the west side of a paviour drive running parallel with the B2118 that runs north/south. Young Oaks line the ground between the road and drive and along the southern boundary, with scrubland beyond.
- 2.2 To the west and south are lawns with levels falling gradually to the south with a timber garden room between the house and the southern boundary.

3. SCOPE OF TREE SURVEY

- 3.1 The trees along the southern boundary of the site were included in the tree inspections.

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-T6 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J65.92/01 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. A separate detailed tree survey sheet is 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 six young Oaks were inspected, several of which have relatively stunted/deformed crown structures and appear to have developed out of a former boundary alignment. Several have long term basal wounds with decay and fine dieback through to extensive canopy decline and major deadwood present.
- 6.2 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	-	-
B	T3	1
C	T1, T2, T4, T5, T6	5
U	-	-
	TOTAL	6

6.3 *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 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 below 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.

Tree no.	Species	BS Category	Stem diameter or calculated equivalent (mm.)	BS calc. radial equiv. root protection area (m.)	BS calc. total RPA (m²)
T1	Common Oak	C1	400	4.8	72
T2	Common Oak	C2	600	7.2	163
T3	Common Oak	B2	670	8	201
T4	Common Oak	C	400	4.8	72
T5	Common Oak	C1	650	7.8	191
T6	Common Oak	C1	420	5	79

ARBORICULTURAL IMPLICATIONS ASSESSMENT

8. DEVELOPMENT PROPOSALS

- 8.1 The proposals are for the construction of a 3m wide, two storey, self contained side addition to the existing house. Details of the proposals will have been submitted by Christopher Jones Projects.
- 8.2 A supplied indicative proposal from Christopher Jones Projects has been used as the base for the Broad Oak Tree Consultants Ltd. Tree Protection Plan, drawing no. J65.92/02 in Appendix 3. This indicates measures to protect trees in accordance with BS5837:2012 requirements.

9. POTENTIAL IMPACT OF PROPOSALS ON TREES

- 9.1 The proposed addition footprint will not overlap with any RPAs. To avoid any root impacts beyond the RPAs indicated, a minimal ground intervention foundation system is proposed. This represents a prudent approach, with the local geology map indicating Weald Clay to be present, which would typically require trench foundations of 2.5m+ depth. As internal floor levels do not need to tie in with the existing building, and with ground levels falling to the south, a screw/minipile and at ground level ring beam foundation system is proposed. The beams will sit on the ground and only require the hand tool removal of the turf, paving and paving sub base. Small diameter piles will have a minimal potential to cause root damage and the design will allow for the majority of any roots beyond the RPAs to remain in situ beneath the new footprint.
- 9.2 This approach to foundation design accords with the recommendations in section 7.5 “Special engineering for foundations within the RPA” of BS5837:2012 and should therefore be acceptable to the Council, given that the foundations are just outside the RPAs of T2 and T3. Detailing of the foundation design can be made a requirement of a specifically worded precommencement condition and the proposed foundation design is also indicated on the Tree Protection plan.
- 9.3 Whilst the trees are to the south of the proposed addition, there will be no shading issues, with no flank windows. Tree canopies will not cause debris/gutter issues, as their northern extent has been controlled in the past since the houses were built and ongoing maintenance pruning will maintain a separation gap.

10. TREE PROTECTION MEASURES – FENCING

10.1 *Location of fencing*

- 10.1.1 The Tree Protection Plan indicates the proposed location of protective fencing based on the calculated tree protection areas and space available.

10.2 *Design of fencing*

10.2.1 Protective fencing to comprise weldmesh panels securely fixed together with scaffold ties set within rubber/plastic feet to form a continuous barrier. Feet to be pinned to the ground with road pins/short scaffold bars or panel joins back braced. 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 3 of Section 6.2 of BS5837:2012.

10.2.2 Examples of the fencing specification and signage required are included in Appendix 4.

10.3 *Timing of fencing*

10.3.1 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.

10.4 *Additional precautions*

10.4.1 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.

11. GROUND PROTECTION MEASURES

11.1 The area shown hatched on the Tree Protection Plan is to be covered in a geotextile, over which 100mm of woodchip is to be placed, topped with minimum 12mm thickness non slip surfaced OSB/plywood boards or side butting scaffold boards. Alternatively 50cm-100cm of Type 1/MOT could be used instead of woodchip provided it is retained at the edges to facilitate easy removal post construction. Ground protection to be installed and removed at the same time as protective fencing.

11.2 In areas within root protection zones where access around the new building footprints 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.

11.3 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. The area requiring ground protection measures is indicated by cross hatching on the Tree Protection Plan.

12. SITE OPERATIONS AND MATERIALS STORAGE

- 12.1 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.
- 12.2 The various areas of existing hard surfacing and parking provide ample storage space for machinery, materials and temporary welfare/office units.
- 12.3 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.

13. SERVICES/DRAINAGE/SOAKAWAYS

- 13.1 Any services, drainage runs and soakaways are to be kept outside indicated root protection areas wherever possible.
- 13.2 If it is necessary for services/drainage to be brought in within a tree RPA, the trench will need to be hand excavated or air spaded to avoid damaging tree roots. Any excavations within indicated tree RPAs will be undertaken to the requirements of NJUG Volume 4 “Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees” and supervised by an Arboricultural Consultant.

14. ARBORICULTURAL METHOD STATEMENT

- 14.1 A separate Arboricultural Method Statement is not considered necessary for this site. Details of the protective fencing and ground protection specification, timing and location are indicated on the Tree Protection Plan, which can be referred to in a specifically worded condition.

15. SUMMARY

- 15.1 The proposed side addition does not require any tree removal or tree surgery works.
- 15.2 The proposed additions will not impact on tree RPAs. However, a minimal intervention foundation design is proposed to avoid any root damage beyond the RPAs.
- 15.3 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

TREE SURVEY EXPLANATORY SHEET

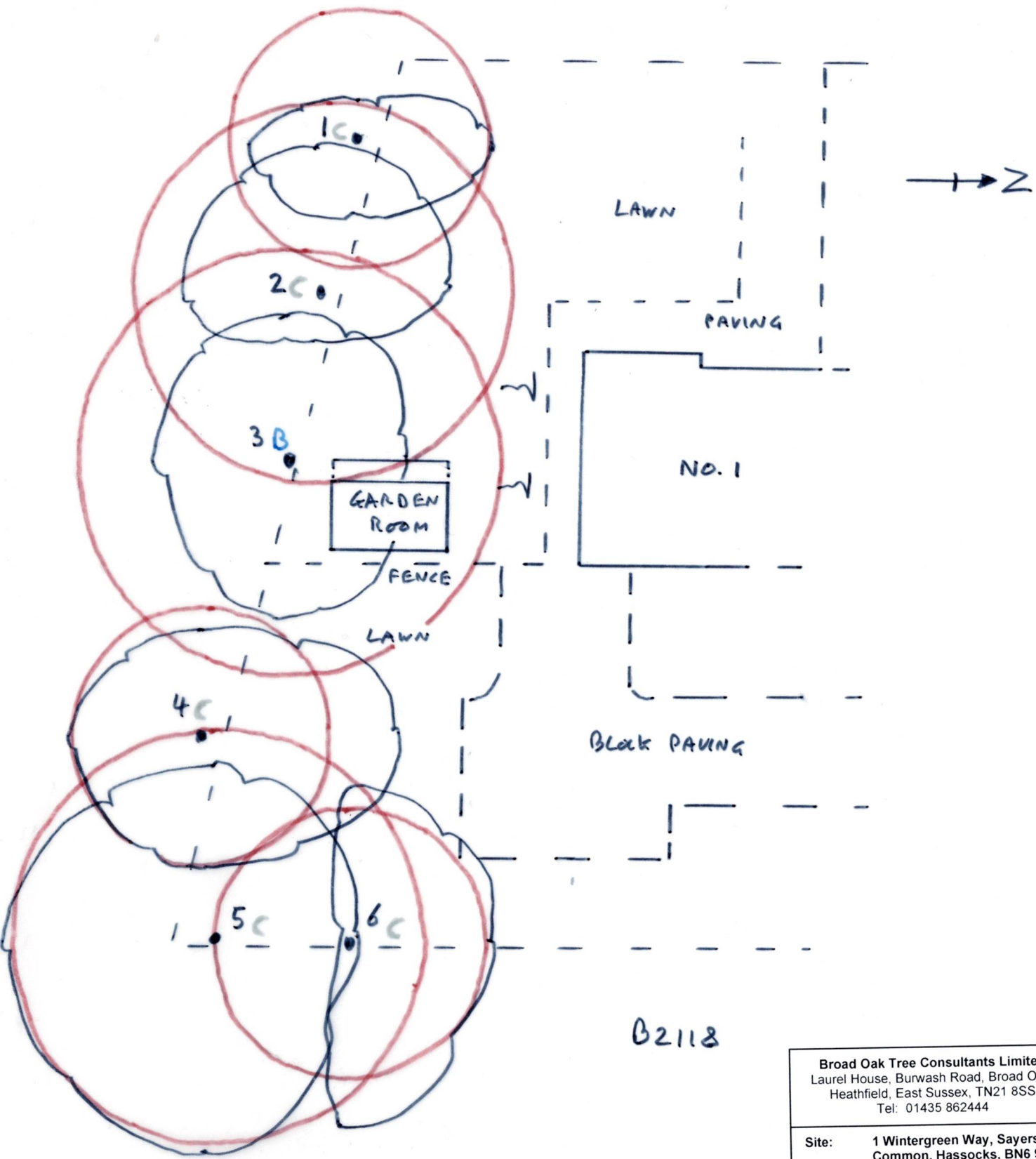
Height	in metres (estimated where ground uneven or access restricted).
Stem count	number of stems
Stem diameter	in mm. at 1.5m. above ground level.
Branch spread	radial spread in metres at four main compass points (estimated where no access).
Age class	Young - Y Semi Mature - SM Mature - M Over mature - 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

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	- 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 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							
T1	Common Oak	9	1	400	5	3	4	1.5	Y	2+	Poor	10-20	C1	Decayed base to N. Crowded. Thin crown.	
T2	Common Oak	10	Multi	600	5	2	c5	5.5	Y	3+	Fair	20-40	C2	Multi stemmed from ground level and at under 1.3m. Crowded to E. Lower canopy cut back.	
T3	Common Oak	12	Multi	670	4.5	6	c5	5.5	Y	4+	Fair	20-40	B2	Three stems at under 1.1m. Crown cut back to N. Fine dieback and deadwood.	
T4	Common Oak	11	1	400	7.5	5	c5	4	Y	4+	Fair	20-40	C2	Slight lean to E. Deadwood.	
T5	Common Oak	10	1	650	5.5	8	c8	6.5	Y	2+	Fair	10-20	C1	Multi stemmed at under 3.5m. Crown mainly to E. Basal wounding to W. Deadwood.	
T6	Common Oak	9	1	420	5.5	7	0	6	Y	1.5+	Fair	10-20	C1	Basal wounding. Extensive dieback. Contorted stem. Crown mainly to E.	

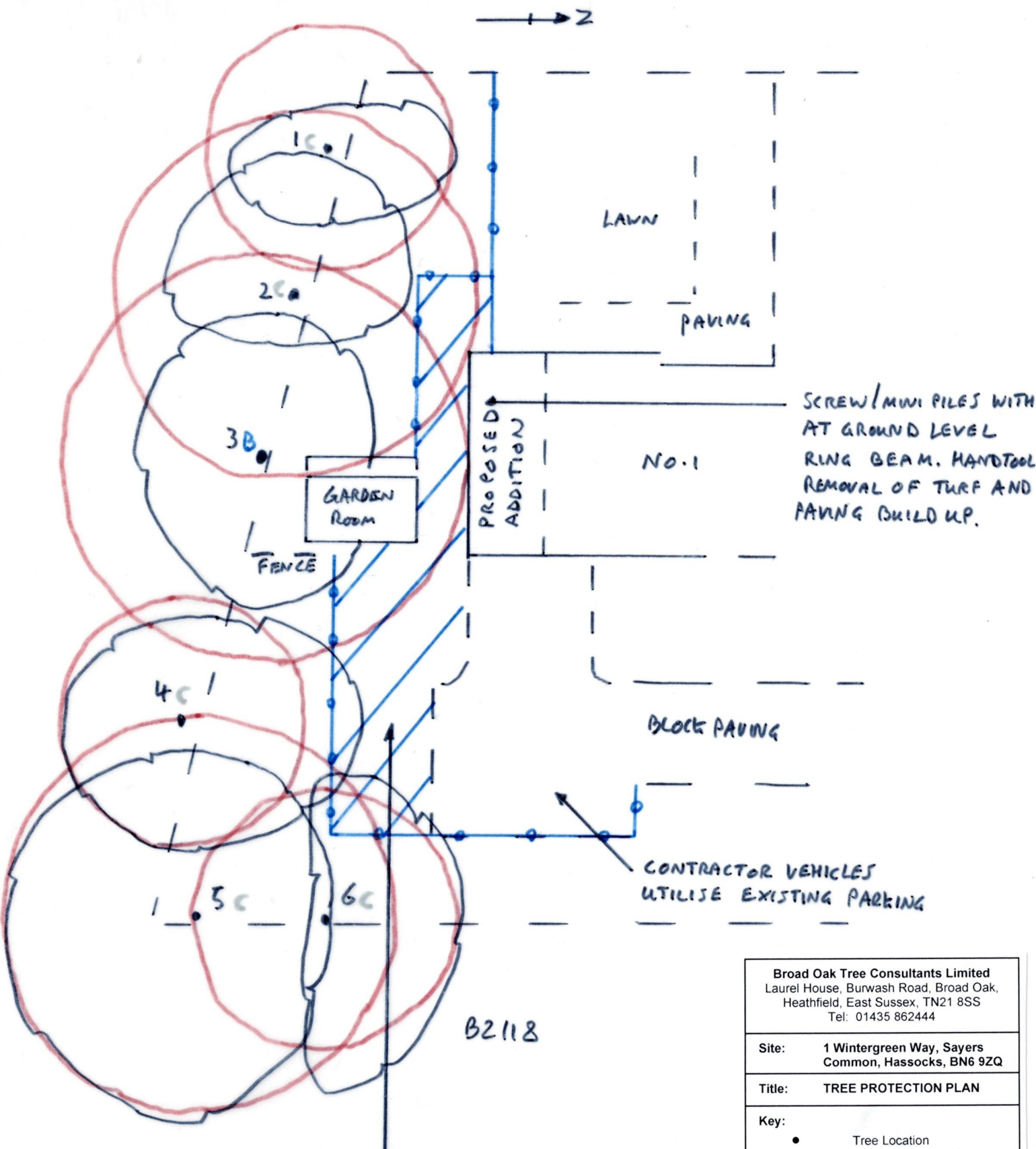
APPENDIX 2



0 1m 5m 10m
SCALE AT A4

Broad Oak Tree Consultants Limited Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex, TN21 8SS Tel: 01435 862444	
Site:	1 Wintergreen Way, Sayers Common, Hassocks, BN6 9ZQ
Title:	TREE CONSTRAINTS PLAN
Key:	● Tree Location 1-6 Tree 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	
Scale: 1:200 @ A4 Date: 29.08.2024	
DRAWING NO.: J65.92/01	

APPENDIX 3



GROUND PROTECTION
FOR TEMPORARY
INERT MATERIALS
STORAGE

Broad Oak Tree Consultants Limited Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex, TN21 8SS Tel: 01435 862444	
Site:	1 Wintergreen Way, Sayers Common, Hassocks, BN6 9ZQ
Title:	TREE PROTECTION PLAN
Key:	• Tree Location 1-6 Tree 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	
Protective Fencing Ground Protection Measures	
Scale: 1:200 @ A4 Date: 29.08.2024	
DRAWING NO.: J65.92/02	

APPENDIX 4

BS5837:2012: FENCING SPECIFICATIONS

Figure 2 Default specification for protective barrier

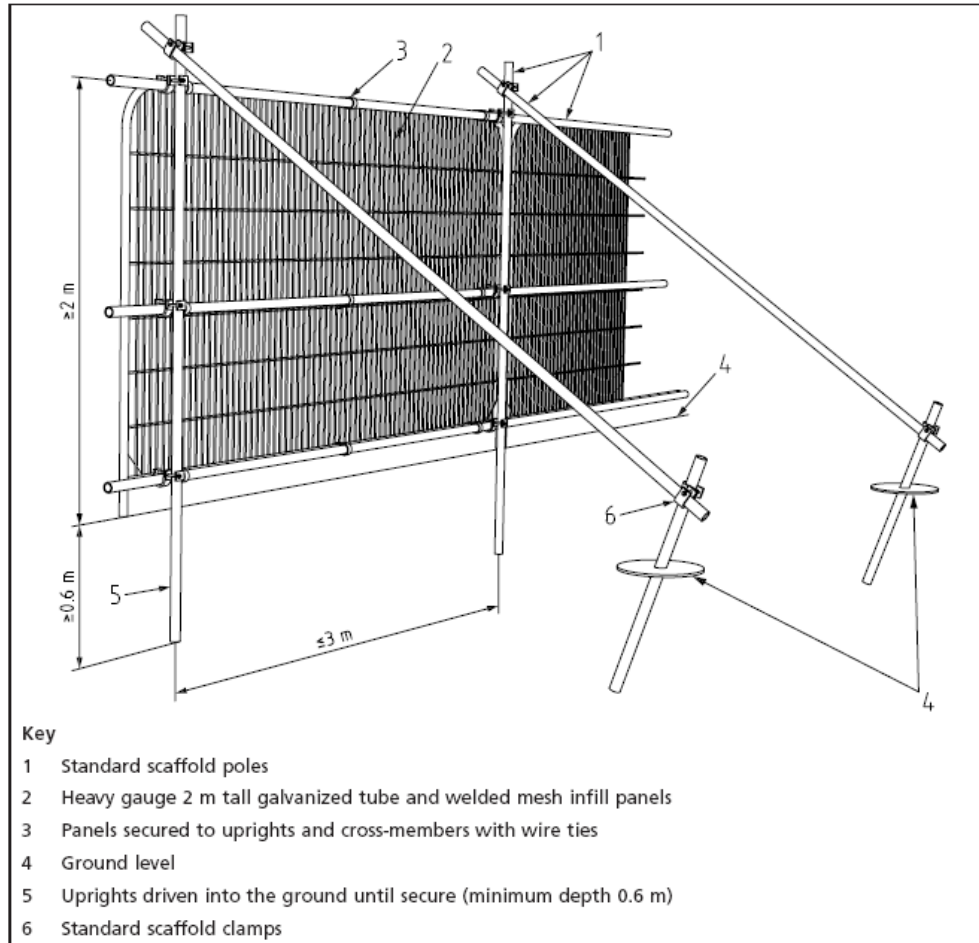
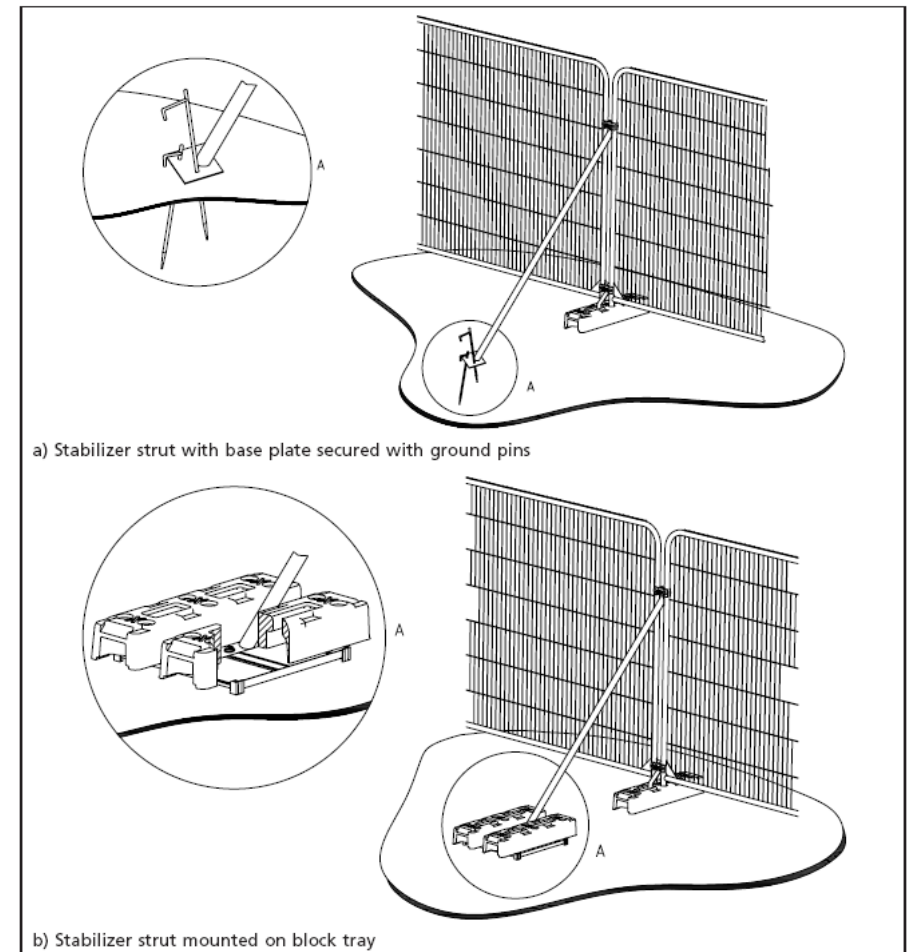


Figure 3 Examples of above-ground stabilizing systems



EXAMPLE OF FENCING SIGNAGE

