

Broad Oak Tree Consultants Limited

Laurel House, Burwash Road, Broad Oak, Heathfield, East Sussex TN21 8SS Tel: 01435 862444 broadoaktrees@btconnect.com



REPORT ON INSPECTION OF TREES

AT

LAND TO REAR OF DELCROFT
WOODCHURCH ROAD
SHADOXHURST
ASHFORD
KENT

BY

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

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- 2. TREE CONSTRAINTS PLAN, DRAWING NO. J54.64/01
- 3. TABLE OF BS CALCULATED ROOT PROTECTION AREAS (RPAs)

1. INTRODUCTION

- 1.1 Broad Oak Tree Consultants Ltd. received instructions from fdc Group to undertake an inspection of trees located at the site referred to as Land to rear of Delcroft, Woodchurch Road, Shadoxhurst, Ashford, Kent. The purpose of the inspection was to produce a base inventory of the tree stock, advise on any safety issues, calculate BS root protection areas and produce a Tree Constraints Plan that can be used for advising potential redevelopment layouts.
- 1.2 The trees were inspected in March 2018 by Tim Laddiman, BSc.(Hons) M.I.C.For. M.Arbor.A., Chartered Arboriculturist and Principal Consultant of Broad Oak Tree Consultants Ltd.
- 1.3 At the time of reporting it is not known whether any trees on the site are covered by statutory protection such as Tree Preservation Orders or Conservation Area regulations. Before any tree works recommended in this report are undertaken, checks should be made with the local Council. Checks with the local Council have not been undertaken unless specifically requested as such enquiries can result in Tree Preservation Orders being placed where none previously existed.

2. GENERAL SITE DESCRIPTION

- 2.1 The site comprises the grounds of "Delcroft", a detached bungalow located on the north side of Woodchurch Road, and part of a large level field to the north of the garden. The site also includes a triangular area of scrub and developing trees to the east of the garden and south/south-east of the field.
- 2.2 The field to the east, south and south-west is bordered by gardens to residential properties. The field itself is relatively level, down to grass and currently grazed by sheep.
- 2.3 The majority of the trees are either located in the adjoining residential gardens, in the area of scrub and in the rear garden of Delcroft.

3. SCOPE OF TREE SURVEY

- 3.1 All trees and shrubs of 75mm diameter or more at 1.5m above ground level were included in the survey. 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 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 T37 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J55.07/01 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 37 individual trees and small groups were inspected, ranging from young self seeded Oaks of less than ten years of age, through to mature Oaks of circa 120+ years of age (T1, T36). Most of the trees associated with the gardens to the south, including that of Delcroft, and on the triangle of scrub land are less than 70 years of age with many of less than 35 years of age.

- 6.2 Within the triangle area of scrub the older trees are along the eastern boundary and T9 with numerous self seeded much younger Oaks present. To the south dense clusters of Field Maple and Thorn have developed, possibly from a hedgeline origin.
- 6.3 The trees scattered along the eastern boundary of the field in adjoining gardens appear to be remnants of a hedgeline, incorporated into gardens with most of the trees having been pruned or pollarded in the past.
- 6.4 Several Willow and Hawthorn north of the garden of Delcroft were noted to be in a poor condition and the Oak T9 would require further detailed investigations to determine the extent of internal decay, if it were considered for retention.
- 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
Α	-	-
В	1, G7, 8, 10, 11, 25, 28, 32, 34, 36	10
B/U	9	1
С	2, 3, 4, G5, 6, 12, G13, 14, 15, 16, 17, 18, 19, G20, G21, G22, 23, 24, 26, G30, 31, 33, G35, 37	24
U	27, 29	2
	TOTAL	37

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 B/U

Trees that would be included in category B 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.

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 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 redevelopment proposals.

8. SUMMARY

- 8.1 A total of 37 individual trees and small groups were inspected, ranging from circa ten to 120+ years of age and representing old hedge components, self seeded clusters and residential plantings. Native species are dominant with Oak the main canopy tree and Hawthorn and Field Maple the main shrub/smaller tree components.
- 8.2 Overall tree health is variable with most of the trees in the residential gardens having been pruned or pollarded in the past.
- 8.3 The Tree Constraints Plan produced provides guidance on the potential influence above and below ground elements of trees could have on any redevelopment proposals. Account should also be taken of future growth potential and shading by the trees.

9. INFORMATIVES

- 9.1 Instructing a firm to perform tree work or felling should only be carried out once it has been established that the tree is not covered by a Tree Preservation Order or stands within a Conservation Area. In either case it would be necessary to obtain local authority consent if the tree is covered. Heavy fines are imposed for transgression of TPOs.
- 9.2 Any tree work should be carried out by a competent tree surgeon to comply with BS3998:2010 "Tree Work Recommendations".
- 9.3 All trees recommended for felling or 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.

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

Middle aged - MA
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
	become unviable after removal of other R by pruning) Trees that are dead or are showing sign		DARK RED	
		propriate (e.g. R category tree used as a bat roost: instal	ation of bat box in nearby tree.)	
	TREE	S TO BE CONSIDERED FOR RETENTION		
		Criteria - Subcategories		
Category and definition	Mainly arboricultural values	2. Mainly landscape values	Mainly cultural values, including conservation	Identification on plan
I nose of high quality and value: In such a condition as to be able to make a substantial construction (a minimum of 40 years is	groups, or of formal or semi-formal	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 woodpasture)	LIGHT GREEN
contribution (a minimum of 20 years is	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 semiformal 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		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 a stem diameter of less than 150mm shou	not be retained where they would impose a significant or ld be considered for relocation	onstraint on development, young trees with	

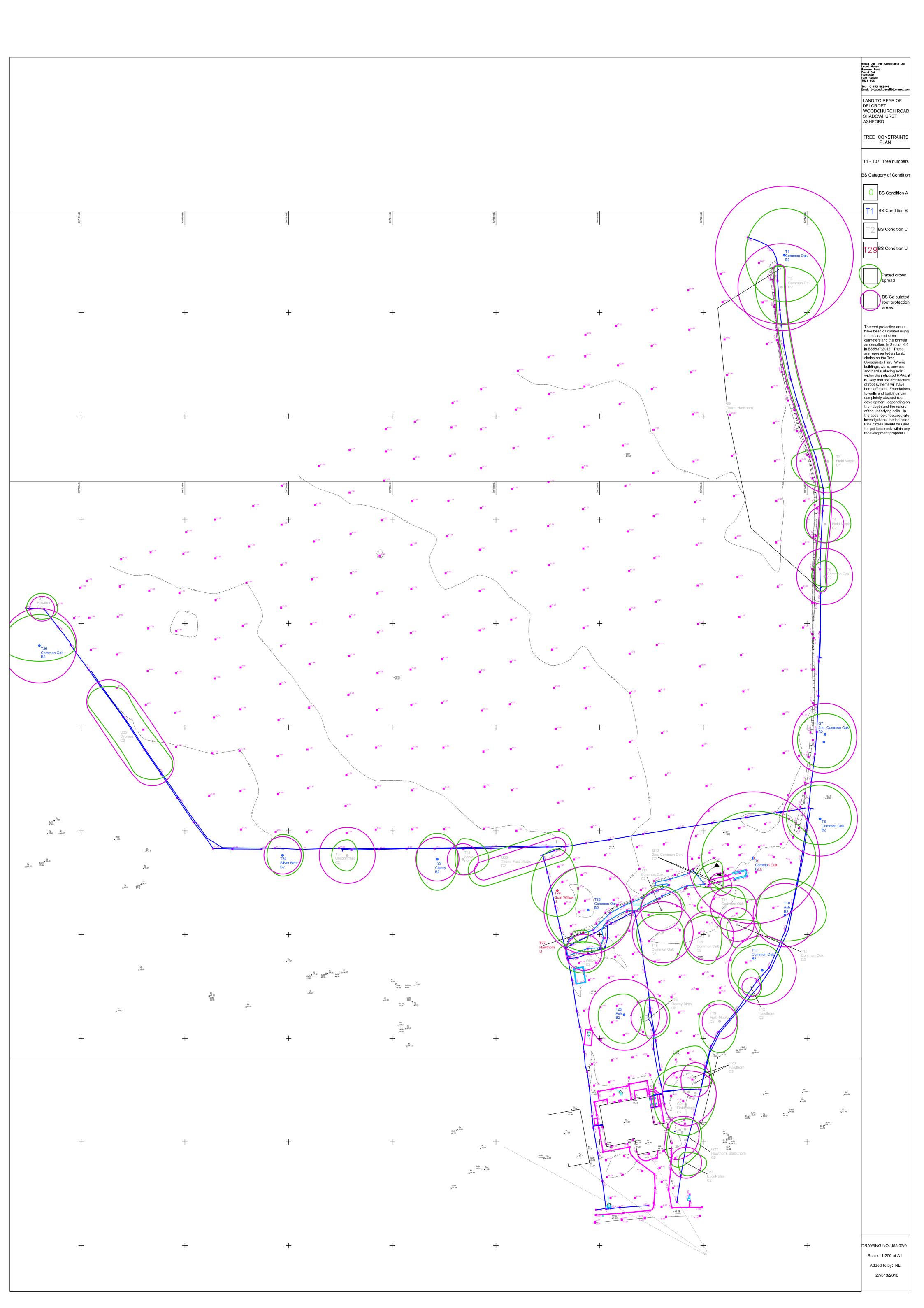
Tree ref.		Height	Stem	Stem diameter or equivalent		ranch sp			Age	Ht. of crown clearance	Physiological	Estimated remaining contribution	Category		Preliminary management
no.	Species Common Oak	(m.)	Count 2	(mm.)	N 9	E 8	s 9	w 7.5	class	(m.) 3+	condition	(years)	grading B2	Twin stemmed at 1m. Dominant stem becomes three stems from under 4m. Deadwood.	recommendations
2	Common Oak	16	1	c700	4	c7	7	5	MA	3+	Unconfirmed	20-40	C2	Crowded to N. by T1. Hornbeam growing into lower stem to W. Located in adjoining garden therefore no basal inspection.	
3	Field Maple	10	1	c500	2.5	c1	5	7	MA	4+	Unconfirmed	10-20	C1	Heavily ivy clad. Located in adjoining garden therefore no basal inspection. Dieback in crown.	
4	Field Maple	9	1	c300	5	c5	3.5	4	MA	2+	Unconfirmed	20-40	C2	Heavily ivy clad. Located in adjoining garden therefore no basal inspection.	
G 5	Thorn, Hawthorn	<2	Multi	<100	<1	<1	<1	<1	MA	0+	Good	40+	C2	Variable height and maintenance hedge.	
6	Common Oak	5	2	c450	3	2.5	2	2.5	MA	1+	Unconfirmed	20-40	C2	Twin stemmed from ground level. Heavily pollarded in last year or two. Located in adjoining garden therefore no basal inspection.	
G7	2no. Common Oak	<11	1	<500	<4	< 5	<5	< 5	MA	1.5+	Unconfirmed	20-40	B2	Both pollarded at circa 5m in past 15 years. Located in adjoining garden therefore no basal inspection.	

				Stem	Br	anch sp	oread (i	m.)		Ht. of		Estimated			
Tree ref. no.	Species	Height (m.)	Stem Count	diameter or equivalent (mm.)	N	Е	s	w	Age class	crown clearance (m.)	Physiological condition	remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
8	Common Oak	12	1	c600	6.5	с6	5	6.5	MA	1.5+	Unconfirmed	20-40	B2	Located in adjoining garden therefore no basal inspection. Minor deadwood.	
9	Common Oak	15	1	1060	9	12	8	10	M	1.5+	Fair	20-40	B/U2	Internal hollowing behind buttress' at base. Extensive deadwood.	Recommend Picus assessment.
10	Ash	18	1	510	7	с8	5	5.5	M	2+	Fair	20-40	B2	Central stem curved to E/NE. Old occluded 1.8m wound to W. from ground level. Deadwood. Secondary offshoot to S.	
11	Common Oak	12	1	c550	5	c4	5	6	MA	5 +	Fair	20-40	B2	Rising crown from 5m. Part ivy clad. Deadwood. Lower stem swelling at 70cm - appears to be a graft line or possible indicator of internal decay.	
12	Hawthorn	5	1	c150	3.5	c2	2.5	2.5	MA	0+	Fair	20-40	C2	Heavily ivy clad. Overtopped.	
G13	2no. Common Oak	<7	1/2	<160	4	0	0.5	5	Y	1.8+	Fair	20-40	C2	S. stem twin stemmed at ground level. Both suppressed and curved to W.	
14	Common Oak	11	1	370	4	2.5	2	7	Y	2.3+	Good	40+	C2	Crowded. Stem lean to W. Deadwood.	
15	Common Oak	12	1	270	1	4.5	4.5	2	Υ	1.3+	Good	40+	C2	Crowded to N. and W.	
16	Common Oak	12	1	400	4	2.5	5.5	5	Υ	1.8+	Good	40+	C2	Minor deadwood.	
17	Common Oak	11	1	330	4.5	4.5	0.5	4	Υ	1+	Good	40+	C2	Crowded to E.	
18	Common Oak	11	Multi	490	3.5	4	6.5	5	Υ	0.7+	Good	40+	C2	Crowded to N. Multi stemmed at 1.4m.	

				Stem	Ri	ranch sp	oread (r	n I		Ht. of		Estimated			
Tree ref. no.	Species	Height (m.)	Stem Count	diameter or equivalent (mm.)	N	E	s	<i>,</i> W	Age class	crown clearance (m.)	Physiological condition	remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
19	Field Maple	7	2	280	4	c3.5	6	4	Y	0.5+	Fair	20-40	C2	Twin stemmed near ground level. Stems curved to S.	
G20	Hawthorn	<7	1/Multi	<230	6	3	1	6	MA	0+	Variable	10-40	C2	Cluster of stems originally topped at circa 1.8m. Ivy clad. Crowded. Stems curved to N. and W.	
G21	Field Maple	<10	1/Multi	<340	5	4	6	6	Y	1.2+	Variable	10-40	C2	Crowded group of stems. Ivy clad therefore no basal inspection.	
G22	Hawthorn, Blackthorn	<7	Multi	<210	2	3	4	2	MA	1.3+	Poor	10-20	C2	Crowded. Poor form. Ivy clad.	
23	Eucalyptus	10	1	c250	2	c4	2.5	1.5	Y	0+	Good	40+	C2	Located in adjoining garden therefore no basal inspection.	
24	Downy Birch	13	1	290	4	4	4	1	Y	2+	Fair	20-40	C2	Crowded to W. Multi stemmed at 2.2m. Deadwood.	
25	Ash	16	Multi	570	4	3.5	5.5	5	Y	2+	Fair	20-40	B2	Six stems from ground level. Part ivy clad.	
26	Willow	8	Multi	290	2	4	4	5	Y	1+	Fair	20-40	C2	Three stems from under 1m. Crowded to N.	
27	Hawthorn	4	Multi	170	0.5	1	2	2	MA	0.5+	Poor	<10	U	Overtopped. Dieback. Multi stemmed from ground level.	
28	Common Oak	12	1	710	8.5	8.5	8	8	MA	1+	Good	40+	B2		
29	Goat Willow	7	Multi	450	8	4	5	5	M	0+	Poor	<10	U	Multi stemmed near ground level. Stems bowed to N. and W. Deadwood and decay in stems. Weak unions.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Bi N	anch sp	oread (i	m.) W	Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
G30	Thorn, Field Maple	<7	Multi	<150	<3	<3	<3	<3	Y	0+	Variable	20-40	C2	Overgrown hedgeline.	
31	Apple	5	Multi	c250	4	5	3	1.5	M	1.5+	Unconfirmed	20-40		Multi stemmed from under 1m. Pruned in past. Located in adjoining garden therefore no basal inspection.	
32	Cherry	8	Multi	c350	5	4	c6	c4	MA	1.3+	Unconfirmed	20-40	B2	Multi stemmed from under 1m. Located in adjoining garden therefore no basal inspection.	
33	Unconfirmed	7	Multi	c450	3	2	3	3	MA	2+	Unconfirmed	20-40	C2	Pollarded at circa 5m in past few years. Twin stemmed. Located in adjoining garden therefore no basal inspection.	
34	Silver Birch	9	1	c300	4	4	4	3	MA	2+	Unconfirmed	20-40	B2	Located in adjoining garden therefore no basal inspection.	
G35	Cypress	<11	1/Multi	<350	<3	<4	<3	<4	MA	0+	Unconfirmed	20-40	C2	Overgrown variable height screen in adjoining garden.	
36	Common Oak	13	1	c600	6	7	3	c7	M	3+	Unconfirmed	20-40	B2	Crowded to S. Crown reduced in past. Located in adjoining garden therefore no basal inspection.	
37	Hawthorn	6	Multi	c200	3	3	2	3	М	2+	Unconfirmed	20-40	C2	Multi stemmed near ground level.	

APPENDIX 2



APPENDIX 3

TABLE OF BS CALCULATED ROOT PROTECTION AREAS (RPAs) $$\operatorname{AT}$$

LAND TO REAR OF DELCROFT, WOODCHURCH ROAD, SHADOXHURST, ASHFORD, TN26

		BS	Stem diameter or calculated equivalent	BS calc. radial equiv. root protection area	BS calc. total RPA
Tree no.	Species	Category	(mm.)	(m.)	(m²)
1	Common Oak	B2	1110	13.3	556
2	Common Oak	C2	c.700	c.8.4	c.222
3	Field Maple	C1	c.500	c.6	c.113
4	Field Maple	C2	c.300	c.3.6	c.41
G5	Thorn, Hawthorn	C2	<100	<1.2	<5
6	Common Oak	C2	c.450	c.5.4	c.92
G7	2no. Common Oak	B2	<500	<6	<113
8	Common Oak	B2	c.600	c.7.2	c.163
9	Common Oak	B/U2	1060	12.7	507
10	Ash	B2	510	6.1	117
11	Common Oak	B2	c.550	c.6.6	c.137
12	Hawthorn	C2	c.150	c.1.8	c.10
G13	2no. Common Oak	C2	<160	<1.9	<11
14	Common Oak	C2	370	4.4	61
15	Common Oak	C2	270	3.2	32
16	Common Oak	C2	400	4.8	72
17	Common Oak	C2	330	4	50
18	Common Oak	C2	490	5.9	109
19	Field Maple	C2	280	3.4	36
G20	Hawthorn	C2	<230	<2.8	<25
G21	Field Maple	C2	<340	<4.1	<53
	Hawthorn,				
G22	Blackthorn	C2	<210	<2.5	<20
23	Eucalyptus	C2	c.250	c.3	c.28
24	Downy Birch	C2	290	3.5	38
25	Ash Willow	B2	570	6.8	145
26		C2	290	3.5	38
27	Hawthorn	U	710	- 0 F	- 227
28	Common Oak	B2	710	8.5	227
29	Goat Willow Thorn, Field Maple	U C2	- <150	- <1.8	- <10
G30 31		C2		<1.8 c.3	
32	Apple Cherry	B2	c.250		c.28
33	Unconfirmed	C2	c.350 c.450	c.4.2	c.55 c.92
33	Silver Birch	B2	c.450	c.5.4 c.3.6	c.41
G35	Cypress	C2	<350	<4.2	<55
36	Common Oak	B2	c.600	c.7.2	c.163
37	Hawthorn	C2	c.200	c.2.4	c.18