



Senior Director:

Julian Forbes-Laird

BA(Hons), Dip.GR.Stud, MICFor, MRSB, MRICS, MEWI, Dip.Arb.(RFS)



SHINFIELD SOUTHERN ALLOTMENTS



BASELINE TREE SURVEY TO BS5837:2012



Prepared for: University of Reading

FLAC Instruction ref: CC38-1035

Issued: September 2024

Technical Director

Patrick Stileman

BSc(Hons), MICFor, MRICS, RC.Arbor.A, CUEW, Dip.Arb.(RFS)

Operations Director

Andrew Colebrook

MICFor, MRICS, M.Arbor.A, Dip.Arb.(RFS)

Senior Associate Director

Ben Abbatt

BA(Hons), MICFor, MRICS, RC.Arbor.A, CEnv, Dip.Arb.(RFS)

The Old Rectory
Park Lane • Blunham
Bedford • MK44 3NJ
T 44 (0)1767 641648
E enquiries@flac.uk.com
www.flac.uk.com

KEY TO TREE SURVEY DATA SCHEDULE

Note

This survey has been undertaken in compliance with BS5837:2012; it is not intended to be a tree safety survey. Any notes offered on structural integrity of trees are incidental, though where trees are considered to be in immediately hazardous condition (identified by red font in the *Structural condition & Notes* column, see below), our recommendations given for immediate intervention should be put in hand by the owner / site manager as soon as can be arranged.

Trees are dynamic living organisms capable of achieving considerable size and structural complexity. They are exposed to and can become damaged by the elements and by human activity, and have co-evolved with decay-causing organisms that can degrade and sometimes destroy their structural integrity. Due to genetic characteristics and local microenvironmental factors this integrity can be innately uncertain. The laws and forces of nature dictate a natural failure rate even among trees that are healthy and structurally sound. By their very nature, therefore, trees cannot be considered entirely hazard-free.

Tree surveys and / or tree inspections are, inherently, only a snapshot in time of the physiological and structural condition of the trees concerned.

Unless otherwise stated in our reporting material, all such surveys and inspections are undertaken from ground level and no internal inspections or tests have been undertaken. Any structural defects present might be not be visible, for example being masked by vegetation, whether the tree's foliage, plants growing round the base of the tree, or climbing plants growing on the stem and into the crown.

Unless otherwise states, the survey data should be considered time-limited **for planning purposes** to a maximum of three years (absent revisions of BS5837, which render pre-existing data obsolete).

FLAC Ref. No.

Tree numbers per relevant FLAC dwg

In line with the advice of BS5837:2012, where trees occur as a cohesive group feature (prefixed TG for tree group or WG for woodland group), they are assessed as such

Size data for TG or WG are given as mean figures for trees at roughly the 80 percentile of the population concerned. Trees in the 90-100 percentile range for the group are identified on the TSP

Trees within TG / WG boundaries that have more than one stem and which are sub-dominant within the TG / WG (i.e. <80 percentile) are subsumed within the TG / WG data; dominant multi-stemmed trees (i.e. >80 percentile) within TG / WG boundaries are listed as individual trees

TG / WG outlines follow the mapping base (typically either topographical survey or geo-rectified aerial imagery)

Hedges (domestic) are recorded prefixed H and are always excluded from the provisions of the Hedgerows Regulations 1997

Hedgerows (rural) are recorded prefixed HR and possibly fall within the provisions of the Hedgerows Regulations 1997

All numbering starts from x001 **for each type of vegetation**, where x identifies the surveyor (9000 series = JFL). Thus:

9000	Individual tree
TG9000	Tree group
WG9000	Woodland group
H9000	Domestic hedge
HR9000	Rural hedgerow

The addition of the FLAC instruction ref. ahead of the tree number provides a unique, non-repeated reference number for the particular tree in question

Any trees omitted from the topo survey are listed on the referenced plan, though their positions are only shown indicatively. Off-site trees are included where deemed relevant, though their positions are also shown indicatively if omitted from the topo base

TPO Ref.

Statutory protection listing for individual trees, TG and WG

ATTENTION: SEE NOTE IMMEDIATELY BELOW

Note

This column is only completed in cases where FLAC has been instructed to undertake a TPO search and correlation to FLAC reference numbers. The absence of data in this column **must not** be taken to indicate that the trees concerned are not under TPO protection. Statutory protection may also arise from the trees' location within a Conservation Area. Further statutory control over tree removal may be conferred by the Forestry Act 1967

Species

Tree species as listed in the schedule by common name. Species present are [LIST ADAPTED TO REFLECT SURVEY FINDINGS]:

<i>Common name</i>	<i>Botanical name</i>	<i>Provenance</i>	<i>Notes</i>
Black Italian poplar	Populus x canadensis 'Serotina'	Exotic	
Blackthorn	Prunus spinosa	Native	
Elm	Ulmus procera	Native	
Gean	Prunus avium	Native	
Goat willow	Salix caprea	Native	
Hawthorn	Crataegus monogyna	Native	
Horse chestnut	Aesculus hippocastanum	Naturalised	
Sycamore	Acer pseudoplatanus	Naturalised	

Tree Count

For trees assessed as groups (ident. prefix TG), number of trees present, according to:

2-10 trees	Accurate count
11-50 trees	Close estimate
51-100 trees	Estimate

Area m²

For trees assessed as woodland (ident. prefix WG), existing area in square metres within survey envelope, derived from CAD interrogation of the completed tree survey plan

Ht. (m)

Tree height in metres

Either:

Crown Spread

For individual trees, measured radial crown spread in metres, listed for each of the four cardinal points

Or:

MRCS

For trees assessed as groups or woodland, an estimated mean radial crown spread in metres for trees at the 80 percentile size

Note

For trees assessed as woodland, sample measurements for canopy overhang beyond woodland boundary (i.e. hedgerow, fence, ditch etc.) are given on the tree survey plan

Or:

Mean Width

Mean width in metres of hedge or hedgerow

Length

Approximate length in metres of hedge or hedgerow

Ht. 1st Br.

For individual trees and trees assessed as groups or woodland, height in metres above ground of attachment point of first significant branch (cardinal point may be given indicating growing direction)

Ht. Can.

For individual trees and trees assessed as groups or woodland, mean height in metres of lower extent of tree canopy above ground

Stem Count

For individual trees, number of stems present below 1.5m AGL. Stem count affects diameter entry as follows:

Where the stem count is 1 the diameter should be entered into the 1 column under Stem Dia.

Where the stem count is up to 5 each stem dia. should be listed

Where the stem count exceeds 5, the mean stem diameter should be entered in the 1 column

Either:

Stem Dia. (mm)

Stem diameter(s) at 1.5m above ground level (see measurement system in BS5837:2012 Annex C), given in millimetres

Where entered 1:

Single measured stem diameter

Where entered 2-5:

Multiple measured stem diameters, listed per stem

Where entered >5:

For trees with more than five stems, diameter is listed as an estimated mean

Where the diameter entry for trees with 1 or 2-5 stems appears in italics, this indicates that it was estimated by the surveyor (for example, due to the presence of ivy on the stem)

It is our practice to round up when estimating stem diameters

Or:

Specimen Stem Dia.

For trees assessed as groups or woodland, stem diameter in millimetres at 1.5m above ground level for 80 percentile member of TG or WG. Trees with larger diameters are identified on the TSP

Or:

Mean Stem Dia.

Mean stem diameter in millimetres above the basal flare of hedge or hedgerow component plants

Either:

RPA Rad.

Radius in metres of the notionally circular Root Protection Area, based on 12x stem diameter (example for single stemmed trees), capped to 15m radial to stem centre

Note

Where trees are identified as being *notable* (i.e. very large trees that have yet to attain veteran status), FLAC removes the cap such that the RPA is simply 12x stem diameter

Or:

Specimen RPA Rad.

For trees assessed as groups or woodland, radius in metres of the notionally circular Root Protection Area based on specimen diameter for TG or WG 80 percentile tree

Either:

Conversion of RPA radius to an area, given in m², capped to a maximum of 707m² (in line with BS5837:2012), except for *notable* trees

Or:

Specimen RPA Area

For trees assessed as groups or woodland, conversion of specimen RPA radius to an area, given in m², capped to a maximum of 707m²

Note

RPA for hedges or hedgerows is to be taken as 3m from the centreline, half the height or 2m beyond existing width, whichever is the greater

Life Stage

Life stage assessment according into:

Y	Young
SM	Semi-mature
EM	Early mature
M	Mature
OM	Over-mature
V	Veteran

Note

The V coding for veteran trees has been included due to the specific protection that such trees enjoy under the NPPF.

Phys. Condition

An assessment of the **physiological** condition (i.e. health/vitality) status of the tree summarised according to:

GOOD	Generally in healthy condition
FAIR	Condition satisfactory though below mean species performance
POOR	Tree in decline/retrenching
DEAD	Self explanatory

Structural condition & Notes

Notes on the apparent structural integrity of the tree based on visual tree assessment, including notes on form, taper, forking habit, storm damage, decay fungi, pests, etc. plus other pertinent observations

Management recommendations

Preliminary recommendations for intervention (e.g. tree surgery, felling, etc) in relation to existing context

Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practical. Where the recommendation is for further investigation, including removal of ivy and reinspection, the given retention span and quality/value grade (see below) should be treated as provisional

Notes

This is **not** intended to comprise a specification for tree work: further advice should be sought prior to implementation

Change in land use (target value) requires further assessment

Ret. Span

Estimated remaining retention span based on species, condition & context divided into the following bands (relates to quality and value grade achievable as stated):

Years Best QV grade

<10	U
10+	C
20+	B
>40	A

QV Grade

Quality & Value grade classification according to BS5837:2012 (see attached extract from BS5837:2012 'Table 1 - Cascade Chart for Tree Quality Assessment') –

<i>Grade</i>	<i>Summary meaning</i>	<i>Ident. colour spot on TSP</i>
U	Trees that are unretainable in viable condition	Dark red
A	High quality & value and consequent high retention priority	Light green
B	Moderate quality and value (moderate priority for retention)	Mid-blue
C	Low quality and value (generally considered to be sacrificial)	Grey

Note

Trees present which we consider to be **exceptional** specimens are identified by the suffix * after the A grade, e.g. A1*

Proposal

This column identifies:

1. Pre-planning (Arboricultural Stages 1, Tree Survey, & 2, Design):
Our initial view of a defensible tree retention / removal balance
2. Planning submission (Arboricultural Stage 3):
The actual tree retention / removal balance as proposed

The following codes are used:

RET	1. Trees preferably retained 2. Trees that would be retained
PRET	<i>For tree groups (TG), woodlands (WG) & hedgerows (HR)</i> – signifies partial retention (see below)
REM	1. Trees defensibly removed to facilitate development 2. Trees that would be removed
U	Trees identified to be unsuitable for retention

No. of trees retained

For tree groups only

Number of trees retained out of the total recorded for the group. Outcomes are as follows:

Survey grade U	Number of trees for retention defaults to 0 (can be amended by manual override)
Proposal code RET	Number of trees for retention defaults to total from <i>Tree Count</i> data field
Proposal code PRET	No. of trees for retention requires manual input following interrogation of relevant plans
Proposal code REM	Number of trees for retention defaults to 0

Trees retained %

For tree groups only

Percentage of pre-existing TG tree count that would be retained, based on an auto-sum derived from inputs into the preceding column

Area retained m²

For woodlands only

Area, in square metres, of woodland (WG) proposed for retention. Outcomes are as follows:

Survey grade U	Area for retention defaults to 0 (can be amended by manual override)
Proposal code RET	Area for retention defaults to existing area
Proposal code PRET	Area for retention requires manual input following interrogation of relevant plans
Proposal code REM	Area for retention defaults to 0

Area retained %

For woodlands only

Percentage of pre-existing WG area that would be retained, based on an auto-sum derived from inputs into the preceding column

Length retained m

For hedgerows only

Length, in metres, of hedgerow (HR) proposed for retention. Outcomes are as follows:

Survey grade U	Length for retention defaults to 0 (can be amended by manual override)
Proposal code RET	Length for retention defaults to existing length
Proposal code PRET	Length for retention requires manual input following interrogation of relevant plans
Proposal code REM	Length for retention defaults to 0

Length retained %

For hedgerows only

Percentage of pre-existing HR length that would be retained, based on an auto-sum derived from inputs into the preceding column

BS5837:2012 Table 1 – Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	- Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) - Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline - Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012] 4.5.7.</i>			
	1 Mainly arboricultural qualities	2 Mainly landscape qualities	3 Mainly cultural values, including conservation	
Trees to be considered for retention				
Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	
Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	
Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	

FLAC Note

The original contents of the column *Identification on plan* have been replaced by FLAC in the version above; spot colours to RGB codes given in BS5837:2012 Table 2

SHINFIELD SOUTHERN ALLOTMENTS : TREE SURVEY DATA TABLE

Data for individual trees

FLAC Ref. No.	TPO Ref	Species	Ht. (m)	Crown Spread (m)				Ht. 1 st Rr. (m)	Ht. Can. (m)	Stem Count	Stem Dia. (mm)					RPA Rad. (m)	RPA Area (m2)	Life Stage Y-SM-EM-M-OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
				N	S	W	E				1 / mean	2	3	4	5								
3001		Pedunculate oak	12	5	7	8	8	2 W	1	1	670					8.04	203	M	F	Collapsed co-dominant north element leaves compromised stem with wound from ground level to 2 metres exposing heartwood. Decay will likely enter root buttresses because damage pre-disposes suitable conditions for dysfunction. Remaining crown satisfactory physiologically and tree can be retained within the current low occupancy context but not suitable for retention if failure radius occupancy increases.	No action required at time of survey	10+	C1
3002		Pedunculate oak	12	7	6	8	8	2 E	2	1	680					8.16	209	M	F	Ivy covered lower stem and crown impedes assessment. Small amount of apical dieback evident in upper crown. Scattered dead wood < 150mm diameter. Ditch to north side of stem. No apparent significant defects observed.	Sever ivy at base of tree	>40	B1
3003		Gean	12	8	5.5	5	6	2 SE	1	1	430					5.16	84	M	F	Twin stems from 1.4m with tight forks where stems meet. Thinning structure. Foliage thin, shot-holing contributes to lacklustre appearance. Tree of low arboricultural merit.	No action required at time of survey	10+	C1
3004		Black Italian poplar	21	7	10	2	10	2 E	2	1	755					9.06	258	M	F	Slight stem incline to east. Principal branch structure and unions in satisfactory condition. Crown bias to south and east, heavily asymmetrical crown form. Loss of companion shelter to south-west. Concern regarding safety if occupancy increases within failure radius.	No action required at time of survey	10+	C1
3005		Black Italian poplar	21	8	5	9	4	1 W	1	1	670					8.04	203	M	F	Asymmetrical crown due to competition from larger tree to south. Crown form swept to north. Significant basal shoot growth at west. Loss of companion shelter by collapse of former companion to south. Broken limb in north-east crown ca. 9 metres. Concern regarding safety if occupancy increases within failure radius.	No action required at time of survey	10+	C1
3007		Sycamore	12	5	6	5	6	1 S	1	2	350	250				5.17	84	M	F	Twin stems from ground level with satisfactory union. Principal branch structure and unions in satisfactory condition.	No action required at time of survey	>40	B1
3009		Black Italian poplar	29	8	15	13	14	1.5 - E	2	1	1500					15.00	707	M	F	Stem diameter measurement at ca. 1 metre due to form. Very large lower stem with major limbs/leaders growing from 1.5-5m. Ivy covered lower stem impedes assessment. Scattered dead wood in crown. Concern regarding safety if occupancy increases within failure radius due to age, size, form and species traits.	No action required at time of survey	10+	C1
3010		Black Italian poplar	26	4	6	6	8	10 W	9	1	690					8.28	215	M	F	Drawn-up specimen due to close companion shelter by dominant poplars. Horse chestnut limb is causing significant abrasion wounding at 4 metres west. Concern regarding safety if occupancy increases within failure radius due to age, size, form and species traits.	No action required at time of survey	10+	C1
3011		Black Italian poplar	29	3	11	13	14	1.7 S	4	1	1150					13.80	598	M	F	Ivy covered lower stem and crown. Historic failure of central leader has left large decaying tear wound at ca. 8 metres. Two large scaffold limbs are both very heavily asymmetrical and at increased risk of collapse. Poor overall structural form. Concern regarding safety if occupancy increases within failure radius due to age, size, form and species traits.	No action required at time of survey	10+	C1
3012		Black Italian poplar	30	4	6	13	14	1.3 NE	5	1	1050					12.60	499	M	F	Dense ivy impedes assessment ground level to above co-dominant union at 8 metres. Very long over-extended limb to east from 1.3 metres north-east, appears vulnerable to fracture. Sub-optimal form due to close companion shelter. Concern regarding safety if occupancy increases within failure radius due to age, size, form and species traits.	No action required at time of survey	10+	C1
3013		Black Italian poplar	30	9	6	11	15	1.9 - W	2	1	1350					15.00	707	M	F	Dense ivy impedes assessment ground level to 8 metres. Very long over-extended limbs forming wide crown and appearing vulnerable to fracture. North crown absent low to mid-crown structure due to former large poplar nearby to north, now removed. Past large limb failures evident. Concern regarding safety if occupancy increases within failure radius due to age, size, form and species traits.	No action required at time of survey	10+	C1
3019		Goat willow	4.5	3	3	3	3	1 N	0.5	3	140	120	120			2.64	22	SM	F	Scrubby multi-stemmed tree in shallow deprssion. Low arboricultural merit. Has developed since original surveys, plotted indicatively.	No action required at time of survey	>40	C1

Data for trees assessed as groups (TG)

FLAC Ref. No.	TPO Ref	Species	Tree Count	Ht. (m)	MRCS (m)	Ht. 1 st Br. (m)	Ht. Can. (m)	Specimen Stem Dia. (mm)	Specimen RPA Rad. (m)	Specimen RPA Area (m2)	Life Stage Y-SM-EM-M- OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
TG3001		Sycamore	4	11	6	1.5 E	1.2	370	4.44	62	M	F	Crescent of trees north of poplars with some associated crown asymmetry. Formerly a group of five trees but north tree dead. of trees along edge of rough ground. Most have twin stems from near ground level. Satisfactory overall condition.	No action required at time of survey.	>40	B2
TG3003		Horse chestnut	3	13	6.5	1.7 W	1	570	6.84	147	M	F	Cluster of trees under canopy of adjacent larger poplars. Ivy covered lower stems and crowns. No apparent significant defects observed. With consideration of over-bearing nature of poplars form of chestnuts is satisfactory.	No action required at time of survey.	>40	B2

Data for hedgerows (HR)

FLAC Ref. No.	Species	Ht. (m)	Mean Width (m)	Length (m)	Mean Stem Dia. (mm)	Life Stage Y-SM-EM-M- OM	Phys. Condition G-F-P-D	Structural condition & Notes	Management recommendations	Ret. Span <10, 10+ 20+, >40	QV Grade U-A-B-C
HR3001	Blackthorn, elm, hawthorn	3.5	4	128	100	M	F	Somewhat undermanaged feature with a few sparser areas along length. Elm appear healthy at time of survey	No action required at time of survey	20+	B3

Client
University of Reading

Instruction
Shinfield Southern Allotments

Instruction ref.
CC38-1035

Dwg title
Tree Survey Plan

Dwg no.
38-1035.01-D

Date
12.09.24

Scale
1:500 @ A1

Quality & value grades:

Category A High

Category B Moderate

Category C Low

Category U Unretainable

 Tree crowns

 **Notional tree root protection area - RPA**

The Old Rectory, Park Lane, Blunham
BEDFORD, MK44 3NJ
T 44(0)1767 641648
enquiries@flac.uk.com
www.flac.uk.com

