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NORTH-WEST BICESTER—

RICS

-TREE SURVEY TO BS5837:2012

EXPERT WITNESS INSTITUTE

- PRELIMINARY RECOMMENDATIONS FOR TREE RETENTION

Prepared for: Firethorn Bicester Ltd

FLAC Instruction ref: CC40-1025

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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 *x*001 **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:

Common name	*Botanical name*	*Provenance*	*Notes*
Alder	Alnus glutinosa	Native	
Apple	Malus domestica	Native	
Ash	Fraxinus excelsior	Native	
Aspen	Populus tremula	Exotic	
Beech	Fagus sylvatica	Native	
Blackthorn	Prunus spinosa	Native	
Common lime	Tilia x europaea	Native	
Crack willow	Salix fragilis	Native	
Cypress	Cupressus sp.	Exotic	
Elder	Sambucus nigra	Native	
Elm	Ulmus procera	Native	
Field maple	Acer campestre	Native	
Gean	Prunus avium	Native	
Goat willow	Salix caprea	Native	
Grey poplar	Populus x canescens	Exotic	
Hawthorn	Crataegus monogyna	Native	
Hazel	Corylus avellana	Native	
Hornbeam	Carpinus betulus	Native	
Horse chestnut	Aesculus hippocastanum	Naturalised	
Norway maple	Acer platanoides	Exotic	
Paperbark birch	Betula papyrifera	Exotic	
Pear	Pyrus communis	Native	
Pedunculate oak	Quercus robur	Native	
Rowan	Sorbus aucuparia	Native	
Scots pine	Pinus sylvestris	Native	
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 m^2

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. 1^{st} 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 m^2, capped to a maximum of $707m^2$ (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 m^2, capped to a maximum of $707m^2$

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

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') –

Grade	*Summary meaning*	*Ident. colour spot on TSP*
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 *For tree groups (TG), woodlands (WG) & hedgerows (HR)* – 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 *Tree Count* 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 m^2

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 *NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see [BS5837:2012]* ***4.5.7****.*			
	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

FLAC

NORTH-WEST BICESTER - TREE SURVEY DATA

Data for individual trees

FLAC Ref. No.	TPO Ref	Species	Ht.	Crown Spread (m)				Ht. 1st Br.	Ht. Can.	Stem Count	Stem Dia. (mm)					RPA Rad.	RPA Area	Life Stage	Phys. Condition	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
			(m)	N	S	W	E	(m)	(m)		1 / mean	2	3	4	5	(m)	(m2)	Y-SM-EM-M-OM	G-F-P-D			<10, 10+ 20+, >40	U-A-B-C	
7001		Field maple	3.8	2	4.2	3	2.1	1.6 - S	0.4	1	*340*					4.08	52	OM	P	Extensive lower stem decay. Partially failed at base, leaning towards SW.	Fell to as low as reasonably practicable	<10	U	RET
7002		Field maple	6	3.8	3.6	3.7	3.5	0.4 - N	0.8	3	320	320	300			6.52	133	M	F	Overgrown hedgerow tree. Multiple stems from 1m with included unions where stems meet. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7003		Pedunculate oak	8.2	4.4	4.5	4	4.3	1.8 - S	1	1	430					5.16	84	M	F	Overgrown hedgerow tree. Slightly inclined stem towards SW, but no signs of recent rootplate movement. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7004		Norway maple	10.3	4.3	4.5	4.6	4.2	1.1 - N	1.1	1	*360*					4.32	59	M	F	Ivy covered lower stem and crown. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7005		Horse chestnut	18.2	8	7.2	8.5	8	2.2 - W	0.3	1	1230					14.76	684	M	G	Very stout lower stem becomes multiple leader from 2.5-3m with tight forks where stems meet. Historic storm damage has left open decaying stub in lower E crown, No dieback, disease, decline or basal decay evident. Very prominent landscape tree	No action required at time of survey	>40	A1	RET
7006		Horse chestnut	18.8	8.2	12	6.7	9.8	1.5 - S	0.8	1	1430					15.00	707	M	G	NOTABLE TREE - Very stout lower stem becomes multiple leader from 1.5m with tight forks where stems meet. Stem inclined to SE slightly, but no sign of rootplate movement. Very large limb in lower S crown showing signs of subsiding. Exudate on lower stem indicates pseudomonas infection, but no other symptoms present. Prolific epicormic growth on lower and central portions of stem. No basal decay evident	No action required at time of survey	>40	A3	RET
7007		Field maple	8.5	3.5	4	3.8	4.2	1.9 - S	0.8	1	510					6.12	118	M	F	Overgrown hedgerow tree. Significant dieback in upper crown with major deadwood present. No basal decay evident	Stabilise dead wood according to occupancy levels beneath the crown.	10+	C1	RET
7008		Pedunculate oak	13.8	6.8	6	7	6.2	2 - E	0.5	1	740					8.88	248	M	F	Upright stem with full healthy crown. major deadwood in central crown. Possible lightning strike damage evident. No basal or stem decay and no decline or dievack.	Stabilise dead wood according to occupancy levels beneath the crown.	>40	B1	RET
7009		Ash	8.4	2.8	2.2	2.7	2.6	1.8 - W	1.4	1	200					2.40	18	EM	F	Evidence of early ash dieback disease evident in upper crown. No basal decay evident	No action required at time of survey	10+	C1	RET
7010		Ash	8.6	3	2.8	2.8	2.6	2.7 - N	1.6	1	210					2.52	20	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7011		Ash	14.2	6.2	5.6	6.8	6.5	2.6 - N	1.5	2	*480*	*460*				7.98	200	M	F	Twin stems from ground level with tight forks where stems meet. Ivy covered lower stem. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7012		Ash	6.5	2.4	2.5	2.7	2.5	2.8 - N	2.3	1	180					2.16	15	SM	F	Tree growing out of boundary fence. No apparent significant defect	No action required at time of survey	20+	C1	RET
7013		Elder	4.2	2.2	2.5	1.8	2.2	1.6 - E	1.7	2	160	140				2.56	21	M	P	Decline and dieback throughout criwn	Fell to as low as reasonably practicable	<10	U	**U**
7014		Rowan	4.5	2.8	2.5	2.8	2.4	1.6 - W	1.6	1	150					1.80	10	EM	F	3rd party tree. No apparent significant defect	No action required at time of survey	20+	B1	RET
7015		Hawthorn	5	2	2.3	3.4	2.8	0.5 - W	0.3	4	110	90	90	80		2.24	16	M	F	3rd party tree. Multiple stems from 0.8m with included unions where stems meet. No observed dieback or disease	No action required at time of survey	20+	C1	RET
7016		Common lime	8.4	3.8	3.5	3.5	3.7	2.3 - W	0.6	1	*360*					4.32	59	M	F	Ivy covered lower stem. Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7017		Field maple	9.8	4.5	4.3	4	4.5	1.6 - S	0.8	1	480					5.76	104	M	F	Single lower stem becomes multiple leader with congested central crown from 1.6m with tight forks where stems meet. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7018		Pedunculate oak	8	3.8	4	4.2	4.3	1.9 - S	1.7	1	370					4.44	62	M	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	>40	B1	RET
7019		Hawthorn	4.8	4.2	3.5	2.8	2.5	0.7 - S	1	5	300	280	250	170	120	6.29	124	M	P	Significant decline and discolouration of foliage evident through W and upper crown	No action required at time of survey	10+	C1	RET
7020		Hawthorn	4	3.1	2.5	2.6	2.4	0.8 - W	1.4	1	*320*					3.84	46	M	P	Dieback through upper crown and general sparse foliage. Ivy covered lower stem and crown	No action required at time of survey	10+	C1	RET
7021		Hawthorn	3.2	1.2	2.8	2.6	2.5	1.3 - S	0.5	1	*260*					3.12	31	M	P	Dieback through upper crown and general sparse foliage. Stem has significant stem decay at 2.2m	Fell to as low as reasonably practicable	<10	U	**U**
7022		Pedunculate oak	11.1	4.6	4.5	5	3.7	2 - W	1.5	1	400					4.80	72	M	G	Upright stem with full healthy crown. Midw in central crown. No apparent significant defect	No action required at time of survey	>40	B1	RET
7023		Common lime	8.9	3	3.2	3.1	3.6	1.9 - W	1.2	1	280					3.36	35	M	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7024		Beech	6	2.2	1.8	2	2.7	1.4 - W	1.3	1	190					2.28	16	EM	F	Somewhat wind-sculpted tree. Very minor apical dieback on windward side of tree.	No action required at time of survey	20+	B1	RET
7025		Field maple	7.6	3.2	3	2.8	3.6	1.7 - W	1.8	1	250					3.00	28	EM	G	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7026		Common lime	3.8	2.1	2	1.8	2.4	1.1 - W	1.2	1	160					1.92	12	EM	F	Multiple leaders from 1.6m. No observed dieback or disease	No action required at time of survey	20+	B1	RET
7027		Pedunculate oak	3.2	2	1.8	2.6	2.4	1.3 - E	1	1	150					1.80	10	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	C1	RET
7028		Pedunculate oak	4.7	3.4	3.2	3	3.3	1.5 - N	1.5	1	190					2.28	16	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7029		Common lime	7.3	2.7	3	2.8	2.7	1.6 - S	1.5	1	220					2.64	22	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7030		Field maple	8.6	4	4.2	3.6	4.6	1.6 - E	1.3	1	280					3.36	35	M	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7031		Common lime	9.5	3.6	3.8	3.7	4	1.8 - N	0.6	1	440					5.28	88	M	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7032		Field maple	8.4	4.2	4.6	4.3	4.4	0.5 - N	1.5	1	*420*					5.04	80	M	F	Single main stem with multiple lateral branches now growing vertically to form congested central crown. Bark wounds on lower stem, but only superficial decay associated.	No action required at time of survey	20+	B1	RET
7033		Horse chestnut	12.1	5.8	6	6.2	6.4	2.4 - W	1.4	1	700					8.40	222	M	G	Stout lower stem with relatively short crown above. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET

FLAC Ref. No.	TPO Ref	Species	Ht.	Crown Spread (m)				Ht. 1st Br.	Ht. Can.	Stem Count	Stem Dia. (mm)					RPA Rad.	RPA Area	Life Stage	Phys. Condition	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
			(m)	N	S	W	E	(m)	(m)		1 / mean	2	3	4	5	(m)	(m2)	Y-SM-EM-M-OM	G-F-P-D			<10, 10+ 20+, >40	U-A-B-C	
7034		Field maple	10	4.8	5	4.6	4.5	1.6 - E	1.5	1	440					5.28	88	M	G	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7035		Horse chestnut	11.2	5.2	6	6.5	6.4	1.7 - S	1.6	1	610					7.32	168	M	F	Somewhat sparse foliage through crown. Leaf miner moth infestation evident. moderate deadwood in central crown. No basal or stem decay observed.	No action required at time of survey	10+	C1	RET
7036		Pedunculate oak	9.5	5.2	4.8	4	4.2	1.8 - N	1.5	1	350					4.20	55	M	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	>40	B1	RET
7037		Ash	15.2	7.1	6.5	6.7	6.5	2.2 - N	1.8	2	620	*240*				7.98	200	M	F	Twin stems from ground level with tight forks where stems meet. Ivy covered lower stem. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7038		Ash	14.3	4.5	4.8	6	3.1	2.5 - N	2.8	1	*520*					6.24	122	M	F	Ivy covered lower stem and crown. Skewed and asymmetrical criwn. Somewhat sparse foliage. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	C1	RET
7039		Common lime	7.1	3	2.8	3	3.2	1.2 - N	0.2	1	*320*					3.84	46	M	F	Ivy covered lower stem and crown. No observed dieback or disease and no sign of obvious decay	Sever ivy at base of tree	20+	B1	RET
7040		Horse chestnut	5.8	2.8	2.6	2.7	3.2	1.8 - S	1.6	1	*240*					2.88	26	EM	F	Ivy covered lower stem and crown. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7041		Common lime	5.6	2.8	2.5	3	3.1	1.9 - N	1.6	1	*230*					2.76	24	EM	P	Sparse crown with apical dieback to W	No action required at time of survey	10+	C1	RET
7042		Field maple	6.1	2.8	2.7	2.8	3	2.1 - S	2.1	1	*250*					3.00	28	EM	F	Ivy covered lower stem. No observed dieback or disease and no sign of obvious decay	Sever ivy at base of tree	20+	B1	RET
7043		Pedunculate oak	5.2	3	2.2	3.2	3	1.7 - W	1.6	1	*230*					2.76	24	EM	F	Ivy covered lower stem and crown. No observed dieback or disease and no sign of obvious decay	Sever ivy at base of tree	20+	B1	RET
7044		Ash	6.7	2.5	2.4	2.2	2.8	1.7 - W	2.1	1	200					2.40	18	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
7045		Horse chestnut	4.6	3	2.8	3.2	3	2.1 - S	2	1	*250*					3.00	28	EM	F	Ivy covered lower stem and crown. Congested central crown. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7046		Field maple	6.8	3.5	2.8	3.2	2.6	1.4 - N	1.9	1	*250*					3.00	28	EM	F	Ivy covered lower stem and crown. Epicormic growth on lower stem stimulated by animal browsing. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
7047		Goat willow	8.2	4.8	4.2	3.8	4.3	0.5 - E	1	2	*350*	*320*				5.70	102	M	P	Cannot fully assess base of tree due to dense ruderal growth around tree. Twin stems from ground level with tight forks where stems meet. Dieback through upper crown, with sparse foliage elsewhere.	No action required at time of survey	10+	C1	**REM**
7048		Goat willow	5.1	3.2	2.5	2.6	2.5	0.8 - N	0.3	3	150	130	110			2.73	23	SM	F	Cannot fully assess base of tree due to dense ruderal growth around tree. Multiple stems from ground level with tight forks where stems meet. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	C1	**REM**

Data for trees assessed as groups (TG)

FLAC Ref. No.	TPO Ref	Species	Tree Count	Ht. (m)	MRCS (m)	Ht. 1st 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	Proposal	No. of trees retained	Trees retained %
TG7001		Field maple, pedunculate oak, ash,	40	9.5	3	1.4 - E	1	200	2.40	18	EM	F	Dense cluster of planted trees. Ash showing minor signs of ash dieback, but no other significant issues observed	No action required at time of survey	20+	B2	RET	40	100.0
TG7002		Field maple, grey poplar	20	8.5	3.5	1.2 - S	1.2	230	2.76	24	EM	F	Dense cluster of planted trees just beyond boundary of site. No apparent significant defect	No action required at time of survey	20+	B2	RET	20	100.0
TG7003		Elder	6	5	3.5	0.3 - S	0.3	220	2.64	22	M	F	Compact small group of trees forming single canopy. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B2	RET	6	100.0
TG7004		Hawthorn, elder	3	3	2	0.3 - E	0.1	85	1.02	3	M	F	Scattering of trees which appear to be last remnants of hedgerow. No observed dieback or disease	No action required at time of survey	10+	C2	REM	0	0.0
TG7005		Crack willow, common alder, aspen, grey poplar, ash, field maple	40	13.5	4.5	1 - W	1.5	350	4.20	55	M	F	Row of trees along edge of ditch at boundary of site. Most trees appear to be overgrown hedgerow trees with multiple stems from near ground level. Several trees showing signs of subsiding limbs and failing basal unions. Ivy dominates lower crowns of several trees.	Remove/reduce subsiding or failing limbs/stems. Replant any gaps created to maintain visual barrier.	20+	C2	RET	40	100.0
TG7006		Crack willow	3	4.5	3	0.4 - N	0.2	*650*	7.80	191	OM	P	Rough row of trees all having had crowns removed to leave decaying stumps with prolific and extensive covering of shoot regrowth. All foliage appears healthy, but structure of stumps unable to maintain tall crown	No action required at time of survey	10+	C2	RET	3	100.0
TG7007		Apple, pear, hawthorn	4	6	2.5	0.8 - N	1.2	120	1.44	7	M	F	Cluster of orchard trees on 3rd party land just beyond boundary fence. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	C2	RET	4	100.0
TG7008		Paperbark birch	2	7.5	3.5	1.8 - E	1.6	190	2.28	16	EM	F	Pair of 3rd party trees in garden. No apparent significant defect	No action required at time of survey	20+	B2	RET	2	100.0
TG7009		Ash, sycamore, horse chestnut, cypress spp.	14	16.5	6	1.7 - S	2.5	500	6.00	113	M	F	Row of trees along boundary fence line/culvert edge. No apparent significant defect	No action required at time of survey	20+	B2	RET	14	100.0

Data for trees assessed as woodland (WG)

FLAC Ref. No.	TPO Ref	Species	Area (m^2)	Ht. (m)	MRCS (m)	Ht. 1st 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	Proposal	Area retained (m^2)	Area retained %
WG7001		Field maple, ash, hawthorn, elder	6670	10	3.5	0.5 - E	1	280	3.36	35	M	F	Scrubby woodland cantered around dry hollows/ponds. Dense low level thicket like vegetation throughout. Few dead or dying trees present. No systemic issues observed	No action required at time of survey	20+	B3	RET	6670	100.0
WG7002		Ash, field maple, blackthorn, elder, hawthorn, Scots pine, pedunculate oak, hornbeam, Norway maple, hazel, gean,	19565	13	4.5	1.5 - E	1	360	4.32	59	M	F	Generally very densely vegetated woodland with distinct scrubby regions around the Southern, Western and Eastern edges. Taller and more mature trees present towards the centre of the group and within the Northern third of the feature. Informal bike track within Northern section of group. Ground flora is minimal, but patches of more significant vegetation are found sporadically through area. My systemic issues observed with mature trees or denser understorey trees. Woodland bank and ditch bounds the group along the Southern edge. Good mix of maturity and size of trees through area of group.	No action required at time of survey	>40	A3	RET	19565	100.0

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	Proposal	Length retained (m)	Percentage retained %
HR7001	Field maple, hawthorn, ash, elder	4.5	3.5	205	170	M	F	Healthy, thick foliage throughout feature. No significant gaps along length. Lowest 3m shows recent management, but height varies along length as taller field maple and ash are routinely present along feature. Dense ivy growth through lower areas. No observed dieback or disease	No action required at time of survey	20+	B2	RET	205	100.0
HR7002	Field maple, hawthorn, ash, pedunculate oak,	4	3	360	180	M	F	Healthy, thick foliage throughout feature. No significant gaps along length. Lowest 3m shows recent management, but height varies along length as taller field maple and ash are routinely present along feature. Dense ivy growth through lower areas. Some sparse lower areas present where overgrown trees have become more dominant in feature. No observed dieback or disease	No action required at time of survey	20+	B2	RET	360	100.0
HR7003	Elm, blackthorn, field maple, crab apple, hawthorn, ash	4	4	330	100	M	F	Dense foliage along length, primarily of blackthorn and field maple. Majority of elm in group is either dead or dying. Three particularly poor areas of elm are shown on plan.	Fell dead/dying elm within highlighted areas	20+	C2	RET	330	100.0
HR7004	Blackthorn, hawthorn	2	1.8	120	60	EM	F	Relatively young hedgerow. No observed dieback or disease	No action required at time of survey	20+	C2	RET	120	100.0
HR7005	Hazel, elm, field maple, hawthorn, ash, elder,	7.5	4.5	120	200	M	F	Heavily overgrown feature with little in the way of recent management evident. Density of foliage and height varies along length. Elm is declining in general throughout feature.	Remove dead/dying elm.	20+	B3	RET	120	100.0
HR7006	Elder, blackthorn, elm, hawthorn	4.5	4	180	160	M	F	Somewhat undermanaged, but healthy, feature. Occasional dead/dying stem. No systemic dieback or decline present.	Fell dead/dying stems	20+	B3	RET	180	100.0
HR7007	Elm, elder, hawthorn	3.8	3	105	140	M	P	Gaps along length with sparse foliage and dead/elm throughout.	Fell dead/dying elm. Replant gaps with suitable native broadleaf species	<10	U	RET	105	100.0
HR7008	Hawthorn, elder	3.5	3	60	150	M	P	Dieback evident throughout feature, particularly in elder.	No action required at time of survey	10+	C2	RET	60	100.0
HR7009	Hawthorn, elder, blackthorn	4.5	3	35	120	M	F	Short section of unmanaged hedge with a few declining trees showing dieback.	Fell dead/dying trees. Replant gaps with suitable native broadleaf species	10+	C2	RET	35	100.0
HR7010	Hawthorn, blackthorn, elm, Norway maple, ash, field maple,	2.5	2.5	180	75	EM	F	Sporadic feature with multiple gaps along length, particularly towards N end if feature. Dievack/decline with majority of elm.	Fell declining trees. Replant gaps with suitable native broadleaf species	10+	C2	RET	180	100.0
HR7011	Apple, elder, hawthorn, sycamore	5	3.5	25	180	OM	P	Remnant of longer feature. All trees remaining are either declining or heavily dominated by ivy.	No action required at time of survey	10+	C2	RET	25	100.0
HR7012	Hawthorn, elder, blackthorn, ash	2.2	2	125	65	M	F	Generally well maintained feature, but several gaps and incomplete section along length, particularly towards S half of feature. No observed dieback or disease	Replant gaps with suitable native broadleaf species	20+	C2	RET	125	100.0
HR7013	Hawthorn, elder, field maple	2.6	2	45	70	M	F	Well maintained, thick and healthy short section of hedge along roadside. No observed dieback or disease	No action required at time of survey	20+	B2	RET	45	100.0
HR7014	Hawthorn, elder, blackthorn	2.8	2.5	165	90	M	F	Well maintained, thick and healthy feature generally. Small sparse areas beside trees growing from hedge and towards W end. No observed dieback or disease	Replant gaps with suitable native broadleaf species	20+	B2	RET	165	100.0

FLAC

Client
Fenthurn Booster Ltd

Instruction
NW Booster

Instruction ref
FLAC 4000

Dwg title
Tree Survey, Arboricultural Removal

Dwg no.
NW-0003.01

Date
28.06.22

Scale
Plan shown 1:5.5K @ A1
Plot shows 1:500 @ A1

Key

Quality & value grades:

Category A: High

Category B: Moderate

Category C: Low

Category U: Unsustainable

Trees for retention

Trees for removal to facilitate development

Trees for removal for arboricultural reasons

Indicative tree root protection area (RPA) (retention trees only)

Notes

Do not scale off dwg - refer to tree survey data schedule for crown spreads etc

Tree / woodland group outlines follow the topo survey or aerial imagery, as applicable

All tree positions are indicative unless a topo survey has been provided to FLAC

Any trees omitted from topo survey are located indicatively

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

Notes on potential habitat features are for guidance only; ecological assessment is recommended

Drawn to N unless otherwise indicated

CAUTION: THIS DRAWING IS INTENDED TO BE READ IN COLOUR

OPPORTUNITY TO REINSTATE HEDGEROW ON HISTORIC ALIGNMENT

LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS POINT SELECTION

OPPORTUNITY FOR INFILL PLANTING TO LINK WOODLANDS WHILST LEAVING SUFFICIENT GLADE AREA FOR GOOD SOLAR ACCESS

DEAD ELM CLUSTERS PROVIDE NATURAL WEAK-POINTS IN HEDGEROW FOR ACCESS LOCATIONS

LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS POINT SELECTION

LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS POINT SELECTION

POTENTIAL SUDS FEATURE TO AVOID ROOT PROTECTION AREAS FOR T005 & T006

OPPORTUNITY TO POPULATE HERITAGE BUFFER WITH NEW WOODLAND OR NEW TRADITIONAL ORCHARD

FLAC

Client
Firethorn Bicester Ltd

Instruction
NW Bicester

Instruction ref.
CC40-1025

Dwg title
Tree Survey, Retention/ Removal

Dwg no.
40-1025.01

Date
28.08.20

Scale
Overview 1:1.5K @ A1
Plot sheets 1:500 @ A0

Key

Quality & value grades:

Category A — High
Category B — Moderate
Category C — Low
Category U — Unretainable

Trees for retention

Trees for removal to facilitate development

Trees for removal for arboricultural reasons

Indicative tree root protection area (retention trees only)

Dendron House
Barford Road, Blunham
BEDFORD, MK44 3ND
T 44(0)1767 641648 / F 44(0)1767 660330
enquiries@flac.uk.com
www.flac.uk.com

Notes

Do not scale off dwg - refer to tree survey data schedule for crown spreads etc

Tree / woodland group outlines follow the topo survey or aerial imagery, as applicable

All tree positions are indicative unless a topo survey has been provided to FLAC

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Drawn to N unless otherwise indicated

CAUTION: THIS DRAWING IS INTENDED TO BE READ IN COLOUR

0m 10m 20m 30m 40m 50m

OPPORTUNITY TO REINSTATE HEDGEROW ON HISTORIC ALIGNMENT

OPPORTUNITY FOR INFILL PLANTING TO LINK WOODLANDS WHILST LEAVING SUFFICIENT GLADE AREA FOR GOOD SOLAR ACCESS

LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS-POINT SELECTION

HR7002

HR2003

HR7003

7004

HR3001

HR7002

7002

HR7001

7001

MA Ash - 480mm Ø

W37001

Field Maple - 420mm Ø

Field Maple - 460mm Ø

Field Maple - 460mm Ø

CAUTION: THIS DRAWING IS INTENDED TO BE READ IN COLOUR

5m 10m 20m 30m 40m 50m

HR7002
TG7001
7005
HR7003
HR7002
LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS-POINT SELECTION
7002
Area of Dead Elm
Area of Dead Elm
Field Maple - 420mm Ø
Field Maple - 460mm Ø
Field Maple - 460mm Ø
HR7003
DEAD ELM CLUSTERS PROVIDE NATURAL WEAK-POINTS IN HEDGEROW FOR ACCESS LOCATIONS
Area of Dead Elm
LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS-POINT SELECTION
TG7004
P. Oak - 760mm Ø
WG7002
HR7004
Field Maple - 42mm Ø
Field Maple - 520mm Ø
LOW-QUALITY HEDGEROW OFFERS NO CONSTRAINT ON ACCESS-POINT SELECTION
Ash - 860mm Ø
HR7004
7007
HR7006
POTENTIAL SUDS FEATURE TO AVOID ROOT PROTECTION AREAS FOR 7005 & 7006
7006
7004
HR7008
7005
TG7003
HR7005
7008
HR7007
Grey Poplar - 460mm Ø
TG7002