

SURVEY DATE: 12/07/2023

INDIVIDUAL TREES

Ref	Species	On/off site	Height (m)	No. of stems	Est. diam?	Calc. / actual stem dia. (mm)	Crown radii (m) N-E-S-W	Average crown height (m)	1st branch ht (m)	1st branch dir.	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)	RPA m ²
T1	Oak (English)	On	12.0	1	None	640.0	7.0-7.0-7.0-8.0	4.0	0.5	E	EM	None	Epicormic growth flailed and maintained at base of stem; ditch to the west. No significant defects noted.	Good	Good	40	B1	7.7	185.0
T2	Oak (English)	On	12.0	3	None	530.0	6.0-6.0-6.0-6.0	4.0	0.5	N	EM	None	Epicormic growth flailed and maintained at base of stem; ditch to the west. Phoenix regeneration from main stem to the north;	Good	Good	40	B1	6.4	127.0
T3	Oak (English)	On	12.0	2	Yes	850.0	8.0-8.0-7.0-8.0	5.0	0.5	E	M	None	Twin stem; epicormic growth flailed and maintained at base of stem; ditch to the	Good	Good	40	B1	10.2	327.0
T4	Oak (English)	On	12.0	1	Yes	500.0	7.0-7.0-7.0-7.0	4.0	0.5	E	EM	None	Epicormic growth flailed and maintained at base of stem; ditch to the west. No	Good	Good	40	B1	6.0	113.0
T5	Oak (English)	On	12.0	2	Yes	810.0	7.0-8.0-7.0-8.0	4.0	0.5	N	M	None	Twin stem from base; ditch to the west. No significant defects noted.	Good	Good	40	B1	9.7	297.0
T6	Hawthorn	Off	5.0	1	Yes	210.0	1.0-1.0-1.0-1.0	4.0	0.5	N	M	None	Offsite hawthorn; ditch to the east.	Good	Good	40	C1	2.5	20.0
T7	Willow (Crack)	On	11.0	2	Yes	560.0	7.0-8.0-7.0-8.0	4.0	0.5	N	M	None	Twin stem from 0.5m; ditch to the west.	Good	Fair	40	C1	6.7	142.0
T8	Oak (English)	On	5.0	1	Yes	100.0	1.5-1.5-1.5-1.5	1.0	1.0	E	SM	None	Small tree located in middle of pond; base under water at time of inspection.	Good	Good	40	C1	1.3	5.0
T9	Oak (English)	Off	9.0	1	Yes	400.0	6.0-6.0-7.0-6.0	5.0	4.0	W	EM	None	Single stem with slightly stunted form; likely due to exposed location. Ditch to the east.	Good	Good	40	B1	4.8	72.0
T10	Oak (English)	Off	9.0	1	Yes	330.0	5.0-4.0-6.0-5.0	4.0	2.0	N	EM	None	Epicormic growth flailed on field side; excessive amount of growths on main stem.	Fair	Good	40	C1	3.9	49.0
T11	Oak (English)	Off	8.0	2	Yes	220.0	4.0-3.0-3.0-3.0	3.0	1.0	N	SM	None	Epicormic growth flailed on field side. Ditch to the east and west.	Good	Good	40	C1	2.6	22.0
T12	Oak (English)	Off	7.0	1	Yes	220.0	4.0-3.0-5.0-4.0	2.0	1.0	E	EM	None	Crown flailed on field side up to 4m. Ditch to the east and west.	Good	Good	40	C1	2.6	22.0
T13	Oak (English)	Off	14.0	1	Yes	650.0	6.0-7.0-7.0-6.0	2.0	0.5	E	M	None	Minor deadwood; exposed location. Ditch to the east and west. Typical for age and	Good	Good	40	B1	7.8	191.0

SURVEY DATE: 12/07/2023

Ref	Species	On/off site	Height (m)	No. of stems	Est diam?	Calc. / actual stem dia. (mm)	Crown radii (m) N-E-S-W	Average crown height (m)	1st branch ht (m)	1st branch dir.	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)	RPA m ²
T14	Oak (English)	Off	20.0	1	Yes	1200.0	11.0-11.0-11.0-1	6.0	2.0	N	M	None	Hollowing of stem allowing light to be seen	Good	Good	40	A3	14.4	651.0
T15	Maple (Field)	On	8.0	3	Yes	370.0	3.0-4.0-3.0-3.0	2.0	0.5	E	EM	None	Located within hedgerow.	Good	Good	40	C1	4.4	62.0
T16	Oak (English)	On	5.0	2	None	130.0	1.0-2.0-1.0-2.0	0.5	0.5	N	SM	None	Twin stem on edge of hedgerow, field side previously flailed.	Good	Fair	40	C1	1.6	8.0
T17	Oak (English)	Off	5.0	1	Yes	200.0	4.0-3.0-5.0-3.0	2.0	1.0	E	EM	None	Flailed on both field and drive side up to 3m. Ditch to the east and west.	Good	Good	40	C1	2.4	18.0
T18	Ash (Common)	Off	13.0	4	Yes	610.0	6.0-6.0-6.0-6.0	4.0	0.5	S	EM	None	Crown lifted over drive; multi-stem from	Good	Good	40	C1	7.3	168.0
T19	Oak (English)	Off	16.0	4	Yes	630.0	7.0-6.0-7.0-6.0	4.0	0.5	S	EM	None	Crown lifted over drive; multi-stem from	Good	Good	40	B1	7.6	180.0
T20	Ash (Common)	On	10.0	1	Yes	550.0	4.0-4.0-4.0-4.0	3.0	3.0	N	M	None	Inonotus hispidus in upper crown; reduced vitality; 75% remaining.	Fair	Fair	40	C1	6.6	137.0
T21	Ash (Common)	On	12.0	1	Yes	600.0	6.0-6.0-6.0-6.0	4.0	2.0	N	M	None	Ivy clad; no leaf cover remaining in crown.	Poor	Fair	None	U1	7.2	163.0
T22	Oak (English)	Off	11.0	1	Yes	550.0	6.0-6.0-6.0-6.0	3.0	2.0	N	M	None	Located within boundary hedgerow.	Good	Good	40	B1	6.6	137.0
T23	Oak (English)	On	12.0	1	Yes	1000.0	7.0-6.0-7.0-6.0	3.0	2.0	N	M	None	Located within boundary hedgerow. Ivy along stem; some minor limbs lost but recovering well.	Good	Good	40	A1	12.0	452.0
T24	Oak (English)	On	9.0	1	Yes	650.0	5.0-5.0-5.0-6.0	4.0	2.0	N	M	None	Located within boundary hedgerow. Slightly reduced vitality in crown. Historic	Good	Good	40	B1	7.8	191.0
T25	Ash (Common)	Off	11.0	1	Yes	700.0	4.0-4.0-4.0-4.0	3.0	3.0	N	M	None	Historic limb failure at one of main forks.	Good	Fair	40	B1	8.4	222.0
T26	Oak (English)	On	9.0	1	Yes	400.0	4.0-4.0-4.0-4.0	3.0	3.0	N	M	None	Located within boundary hedgerow.	Fair	Good	40	B1	4.8	72.0
T27	Ash (Common)	On	14.0	1	Yes	900.0	7.0-7.0-7.0-7.0	4.0	2.0	N	M	None	Ivy clad stem with epicormic growth. Slightly reduced vitality; 90% of leaf cover remained.	Good	Good	40	B1	10.8	366.0
T28	Ash (Common)	On	14.0	1	Yes	900.0	8.0-8.0-8.0-7.0	3.0	3.0	N	M	None	Ivy clad stem with epicormic growth.	Good	Good	40	B1	10.8	366.0

SURVEY DATE: 12/07/2023

Ref	Species	On/off site	Height (m)	No. of stems	Est diam?	Calc. / actual stem dia. (mm)	Crown radii (m) N-E-S-W	Average crown height (m)	1st branch ht (m)	1st branch dir.	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)	RPA m ²
T29	Willow (Goat)	On	6.0	10	None	280.0	4.0-3.0-3.0-3.0	3.0	1.0	N	EM	None	Part of boundary.	Good	Good	40	C2	3.3	35.0
T30	Oak (English)	On	11.0	1	Yes	750.0	8.0-8.0-8.0-8.0	3.0	4.0	N	M	None	At corner of two fields; end of hedgerow. Ivy clad throughout stem and crown.	Good	Good	40	A1	9.0	254.0
T31	Oak (English)	On	14.0	1	Yes	750.0	7.0-8.0-7.0-8.0	3.0	4.0	N	M	None	Boundary tree; along road and field. Ivy clad throughout stem and crown.	Good	Good	40	A1	9.0	254.0
T32	Ash (Common)	Off	6.0	1	Yes	400.0	5.0-7.0-5.0-5.0	0.5	4.0	E	M	None	Part of boundary group. Ash in severe decline; branch resting onto floor and extends into field. Unable to inspect base.	Poor	Fair	<10	U1	4.8	72.0
T33	Ash (Common)	Off	12.0	1	Yes	700.0	8.0-7.0-6.0-6.0	8.0	4.0	N	M	None	Part of boundary group. Ash with c. 40% Well distributed crown.	Fair	Good	20	C1	8.4	222.0
T34	Ash (Common)	On	9.0	1	None	280.0	3.0-3.0-3.0-3.0	2.0	1.0	N	EM	None		Good	Good	40	B1	3.3	35.0
T35	Willow (Goat)	On	9.0	10	None	510.0	4.0-4.0-4.0-4.0	2.0	1.0	N	EM	None	Located on bank of boundary ditch c. 0.5m deep; ditch to the north. Flailed on field side up to 3m from ground level.	Good	Good	40	B2	6.1	118.0
T36	Willow (Goat)	On	7.0	7	None	500.0	4.0-4.0-3.0-4.0	1.0	1.0	N	EM	None	Located on bank of boundary ditch c. 0.5m	Good	Good	40	B2	6.0	113.0
T37	Ash (Common)	Off	6.0	1	None	220.0	3.0-4.0-3.0-3.0	1.0	1.0	N	EM	None	Located on bank of boundary ditch c. 0.5m	Good	Good	40	B1	2.6	22.0
T38	Ash (Common)	Off	8.0	1	None	210.0	3.0-5.0-4.0-3.0	1.0	1.0	N	EM	None	Located on bank of boundary ditch c. 0.5m	Good	Good	40	B1	2.5	20.0
T39	Willow	On	3.0	6	None	220.0	2.0-2.0-2.0-2.0	1.0	1.0	N	SM	None	Ditch to the north.	Good	Good	40	C1	2.6	22.0
T40	Willow (Goat)	On	7.0	8	None	620.0	4.0-4.0-4.0-4.0	1.0	1.0	N	EM	None	Located on bank of boundary ditch c. 0.5m	Good	Good	40	B2	7.4	174.0
T41	Hawthorn	Off	4.0	1	None	200.0	3.0-2.0-2.0-2.0	0.5	1.0	N	EM	None	Part of boundary; ditch to the south.	Good	Good	40	C2	2.4	18.0
T42	Hawthorn	Off	4.0	6	None	220.0	2.5-2.0-2.5-2.0	1.0	1.0	N	SM	None	Shrub sized within scrub.	Good	Good	40	C2	2.6	22.0
T43	Willow (Goat)	Off	4.0	6	None	220.0	2.5-2.0-2.5-2.0	1.0	1.0	N	SM	None	Shrub sized within scrub.	Good	Good	40	C2	2.6	22.0

SURVEY DATE: 12/07/2023

GROUPS OF TREES

Ref	Species	On/off site	Height range (m)	No. of trees	Est. diam?	Max stem diam (mm)	Av. crown radius (m)	Av. low crown height (m)	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
G1	Goat willow	On	5-7	20	None	300.0	3.0	1.0	EM	None	Multi stemmed tree group alongside access road to farm. Flailed up to 4m on field side.	Good	Good	40+	C2	G1
G2	Hawthorn; English oak	On	6-11	6	None	280.0	2.0	1.0	EM	None	Scrub group along field boundary with semi-mature English oak at rear of group.	Good	Good	40+	C2	G2
G3	Hawthorn	On	4-6	4	None	80.0	1.5	0.5	EM	None	Scrub group along field boundary within English oak understorey.	Good	Fair	20+	C2	G3
G4	Hawthorn	On	4-6	5	None	70.0	1.0	0.5	EM	None	Scrub group; some historic reductions in height; located along field boundary within English oak understorey.	Good	Good	40+	C2	G4
G5	Hawthorn; English oak; gorse	On	1.5-5	5	None	100.0	1.5	0.5	EM	None	Semi-mature oak and hedgerow species; located along field boundary within English oak understorey.	Good	Fair	40+	C2	G5
G6	Crack willow; ash	On	11-12	2	Yes	400.0	7.0	4.0	EM	None	Ash intertwined with crack willow. Willow collapsed at base; four stems. Ash showing minor signs of ash dieback.	Good	Fair	40+	C2	G6
G7	English oak; hawthorn; gorse	On	3-16	20	Yes	900.0	5.0	3.0	M	None	Mix of on/offsite trees. Three mature oaks connected by small scrub species and semi-mature oak(s).	Good	Good	40+	B2	G7
G8	Elder	On	4	3	None	110.0	1.0	0.5	M	None	Scrub elder group on edge of pond.	Good	Good	10+	C2	G8
G9	English oak; hawthorn	On	8-11	2	Yes	300.0	3.0	0.5	EM	None	Combined crown between oak and hawthorn	Good	Good	40+	C2	G9
G10	Hawthorn; English oak; gorse	Off	1.5-3	10	None	80.0	1.5	0.5	EM	None	Majority of group offsite. Scrub located along field boundary, flailed on field side at parts.	Fair	Fair	40+	C2	G10
G11	Crack willow	On	5-12	10	Yes	250.0	4.0	0.5	EM	None	Four stem willow surrounded by saplings; large wound at base of main stem; torn branches in crown.	Good	Fair	40+	C2	G11
G12	Hawthorn	On	1.5-5	20	None	80.0	1.5	0.5	EM	None	Hedgerow left outgrown of mixed heights; likely not maintained due to high voltage power lines nearby.	Good	Good	20+	C2	G12
G13	Goat willow; oak	On	5-7	6	None	350.0	3.0	1.0	EM	None	Multi stemmed tree group alongside access road to farm; some reduced vitality. Flailed up to 4m from ground level on both sides.	Fair	Good	40+	C2	G13
G14	English oak; ash	On	13-16	2	Yes	270.0	5.0	4.0	EM	None	Two trees; cohesive crown. Ash in decline; 30% leaf cover remaining.	Fair	Good	20+	C2	G14
G15	Hawthorn; elder	On	5-7	15	None	200.0	3.0	1.0	EM	None	Outgrown boundary group.	Good	Good	40+	C2	G15

SURVEY DATE: 12/07/2023

Ref	Species	On/off site	Height range (m)	No. of trees	Est. diam?	Max stem diam (mm)	Average crown radius (m)	Av. low crown height (m)	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
G16	Ash; hawthorn; elder	On	6-9	150	None	250.0	3.0	0.5	M	None	Linear boundary group; acting as a screen for nearby property.	Good	Good	40+	B2	G16
G17	English oak; ash	On	10-13	2	None	800.0	8.0	4.0	M	None	Ivy clad; shared crown between trees. Ash in slight decline but group overall in good condition.	Good	Good	40+	B2	G17
G18	Goat willow; crack willow; ash; hawthorn	On	8-13	150	None	700.0	6.0	3.0	M	None	Water filled ditch within tree group. Mature trees follow ditch along field boundary. Majority of ash in good condition. Predominantly ash.	Good	Good	40+	A2	G18
G19	Goat willow; crack willow; ash; hawthorn	On	8-13	100	None	700.0	6.0	3.0	M	None	Water filled ditch within tree group. Mature trees follow ditch along field boundary. Majority of ash in good condition.	Good	Good	40+	A2	G19
G20	Ash; hawthorn	On	3-7	4	Yes	120.0	2.5	1.0	EM	None	Slightly dispersed group. Ditch to the north. Flailed on field side.	Good	Good	40+	C2	G20
G21	Hawthorn; English oak; ash; willow	On	4-7	10	Yes	150.0	3.0	0.5	M	None	Boundary group.	Good	Good	40+	B2	G21
G22	Hawthorn; goat willow	On	3-5	5	Yes	130.0	3.0	1.0	EM	None	Ditch to the north. Historically flailed on field side.	Good	Good	40+	C2	G22
G23	Willow	On	3-5	4	None	100.0	3.0	1.0	EM	None	Multi stemmed tree group. Ditch to the north.	Good	Good	40+	C2	G23

HEDGEROWS

Ref	Species	On/off site	Average Height (m)	Average Width (m)	Average Stem Diameter (mm)	Average Canopy Height	Life stage	General observations	Health & Vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
H1	Hawthorn; English oak	On	4.0	2	60	0.5	M	Linear boundary hedgerow; flailed on field side maintaining distance from nearby low voltage power-line. Predominantly hawthorn; several semi-mature oak at rear of hedgerow. Ditch to the south and north.	Good	Good	40+	C2	0.8
H2	Hawthorn; blackthorn; English oak; gorse; bramble	On	2.0	1	100	0.5	M	Linear boundary hedgerow; maintained; evidence of hedge laying. Predominantly hawthorn. Ditch to the west.	Good	Good	40+	C2	1.3
H3	Hawthorn; blackthorn	On	2.0	1	50	0.5	M	Unmanaged hedgerow along field boundary; located in understorey of nearby oak.	Good	Good	20+	C2	0.6
H4	Hawthorn	On	2.0	1	50	0.5	M	Scrub-like hedgerow; located in understorey of nearby oaks.	Good	Good	20+	C2	0.6

SURVEY DATE: 12/07/2023

Ref	Species	On/off site	Average Height (m)	Average Width (m)	Average Stem Diameter (mm)	Average Canopy Height	Life stage	General observations	Health & Vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
H5	Hawthorn; bramble; gorse	On	2.0	1	60	0.5	M	Linear boundary hedgerow; maintained. Predominantly hawthorn.	Good	Good	40+	C2	0.8
H6	Hawthorn; blackthorn; English oak; gorse; bramble	On	2.0	1	100	0.5	M	Linear boundary hedgerow; maintained; evidence of hedge laying. Predominantly hawthorn. Ditch to the west.	Good	Good	40+	C2	1.3
H7	Gorse	Off	2.0	1	50	0.5	M	Incomplete hedgerow between two oaks; maintained on field side. Offsite gorse behind. Ditch to the east.	Good	Good	20+	C2	0.6
H8	Gorse; hawthorn	Off	2.0	1	50	0.5	M	Maintained hedgerow. Predominantly gorse. Ditch to the east and west.	Good	Good	20+	C2	0.6
H9	Hawthorn; bramble; fern	Off	2.0	1	50	0.5	M	Maintained hedgerow. Ditch to the east and west.	Good	Good	20+	C2	0.6
H10	Hawthorn	Off	1.5	1	50	0.5	M	Maintained hedgerow. Ditch to the east and west.	Good	Good	40+	C2	0.6
H11	Hawthorn	Off	1.5	1	50	0.5	M	Maintained hedgerow. Ditch to the east and west.	Good	Good	40+	C2	0.6
H12	Hawthorn; ash; holly; field maple; bramble	On	2.0	1	110	0.5	M	Linear boundary hedgerow alongside highways; maintained. Predominantly hawthorn.	Good	Good	40+	C2	1.3
H13	Hawthorn ; blackthorn;	On	2.0	1	100	0.5	EM	Linear boundary hedgerow; historically managed. Predominantly hawthorn.	Good	Good	40+	C2	1.3
H14	Hawthorn; blackthorn; elder	On	3.0	1.5	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H15	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west and east.	Good	Good	40+	C2	1.0
H16	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west.	Good	Good	40+	C2	1.0
H17	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west and east.	Good	Good	40+	C2	1.0
H18	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west and east.	Good	Good	40+	C2	1.0
H19	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Boundary hedgerow with 4 gaps between trees approximately 1m wide; maintained height and sides. Ditch to the west and east.	Good	Good	40+	C2	1.0
H20	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Hedge close to power line poles is slightly outgrown. Ditch to the west.	Good	Good	40+	C2	1.0
H21	Hawthorn; blackthorn; elder	On	2.5	1.5	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1

SURVEY DATE: 12/07/2023

Ref	Species	On/off site	Average Height (m)	Average Width (m)	Average Stem Diameter (mm)	Average Canopy Height	Life stage	General observations	Health & Vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
H22	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west.	Good	Good	40+	C2	1.0
H23	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west.	Good	Good	40+	C2	1.0
H24	Hawthorn; blackthorn	Off	2.5	1.5	80	0.5	EM	Linear boundary hedgerow; maintained. Ditch to the west.	Good	Good	40+	C2	1.0
H25	Hawthorn; blackthorn; elder	On	2.5	1.5	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H26	Hawthorn; blackthorn; elder	On	2.5	1.5	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H27	Hawthorn; blackthorn; elder; oak	On	2.5	1.5	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H28	Hawthorn; blackthorn; elder;	On	2.0	1	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H29	Hawthorn; blackthorn; elder;	On	2.0	1	90	0.5	EM	Linear boundary hedgerow with minimum management.	Good	Good	40+	C2	1.1
H30	Hawthorn; blackthorn; elder; ash	On	2.0	1	90	0.5	EM	Linear boundary hedgerow with bramble and other shrub species mixed in. Minimal management.	Good	Good	40+	C2	1.1
H31	Hawthorn; elder; horse chestnut; blackthorn	On	2.0	1	90	0.5	EM	Linear boundary hedgerow with bramble and other shrub species mixed in. Minimal management.	Good	Good	40+	C2	1.1
H32	Hawthorn; fern; elder; horse chestnut	On	2.5	1.5	90	0.5	EM	Linear boundary hedgerow with bramble and other shrub species mixed in. Minimal management.	Good	Good	40+	C2	1.1
H33	Hawthorn	On	2.5	1.5	100	0.5	EM	Linear boundary hedgerow; historically managed; currently overgrown.	Good	Good	40+	C2	1.3
H34	Hawthorn; sycamore; elder	On	3.0	2	100	0.5	EM	Linear boundary hedgerow; historically managed; currently overgrown.	Good	Good	40+	C2	1.3
H35	Hawthorn	On	2.0	1	60	0.5	EM	Linear boundary hedgerow with limited species diversity.	Good	Good	40+	C2	0.8
H36	Hawthorn; oak; blackthorn	On	2.0	1.5	100	0.5	EM	Linear boundary hedgerow; historically managed; currently overgrown. Some areas grown quicker than others.	Good	Good	40+	C2	1.3

SURVEY DATE: 12/07/2023

WOODLANDS

Ref	Species	On/off site	Height range (m)	No. of trees	Est. diam?	Max stem diam (mm)	Av. crown radius (m)	Av. low crown height (m)	Life stage	Special importance	General observations	Health & vitality	Structural condition	Estimated remaining contribution (Years)	BS 5837 Category	RPA radius (m)
W1	English oak; goat willow; hawthorn; blackthorn; silver birch; ash; field maple; wild cherry; elder	Off	5-15	250	No	300.0	3.0	1.0	SM	None	Semi mature planted woodland; evenly spaced trees.	Good	Good	40+	B2	3.6
W2	Ash; crack willow; hawthorn	On	8-13	150	No	600.0	5.0	1.0	M	None	Predominantly mature ash and crack willow.	Good	Good	40+	A2	7.2
W3	English oak; holly; elder	Off	4-17	250	No	670.0	4.0	4.0	EM	None	Larger oaks on edge of woodland; smaller/straighter oaks towards centre. Holly outlines the majority of the edge adjacent to highways.	Good	Good	40+	B2	8.0

- The tree survey was carried out with reference to the methodology set out in BS 5837:2012 'Trees in relation to design, demolition and construction – Recommendations'.
- Trees were surveyed individually or as groups where it was considered that they had grown together to form cohesive arboricultural features either aerodynamically (trees that provide companion shelter), visually (e.g. avenues or screens) or culturally (including for biodiversity). However, where it was considered that there was an arboricultural need to differentiate between attributes trees within groups and/or woodlands were also surveyed as individuals.
- The full tree survey findings are recorded in the following tree survey schedule.
- Within the tree survey schedule, each surveyed TREE (T), GROUP (G), HEDGEROW (H), WOODLAND (W) or SHRUB MASS on or adjacent to the site is given a reference number which refers to its position on the tree survey and constraints plan.
- TREE SPECIES are listed by common name.

The **DIMENSIONS** taken are:

- STEM-No. indicates the number of main stems (i.e. whether the trunk divides at or below 1.5m; (used in the calculation of root protection area (RPA)) "m-s" = Multi-stemmed.
- STEM DIAMETER (measured in millimetres), obtained from the girth measured at approx. 1.5m. For trees with 2 to 5 sub-stems, a notional figure is derived from the sum of their cross-sectional areas. For multi-stemmed trees, the notional diameter may be estimated on the basis of the average stem size x the number of stems. Note: a notional diameter may be estimated where measurement is not possible.
- HEIGHT (measured in metres), recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- The CROWN SPREAD, taken at the four cardinal points to derive an accurate representation of the tree crown, recorded up to the nearest half metre for dimensions up to 10m and to up the nearest whole metre for dimensions over 10m.
- CROWN CLEARANCES, expressed both as the existing height above ground level of the first significant branch along with its direction of growth (e.g., 2.5m-N) and also in terms of the overall crown e.g., the average height of the crown above ground level. Measurements are recorded to the nearest half metre for dimensions up to 10m and to the nearest whole metre for dimensions over 10m.
- ESTIMATES: where any measurement has had to be estimated, e.g., due to inaccessibility, this is indicated by a "##" suffix to the measurement as shown in the Tree Survey Schedule.

LIFE STAGE is defined as follows:

- Y Young: Normally stake dependent, establishing trees. Should be growing fast, usually primarily increasing in height more than spread but as yet making a limited impact upon the landscape.
- SM Semi-mature: Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact on the local landscape and environment. Semi-mature are still capable of being transplanted without preparation, up to 300mm girth and not yet sexually mature.

- EM Early-mature: Not yet having reached 75% of expected mature size. Established young trees, normally of good vigour and still increasing in height but beginning to spread laterally. Beginning to make an impact on the local landscape and environment.
- M Mature: Well-established trees, still growing with some vigour but tending to fill out and increase spread. Bark may be beginning to crack and fissure. In the middle half of their safe, useful life expectancies.
- LM Late-mature: In full maturity but possibly beyond mature and in a state of natural decline. Still retaining some vigour but any growth is slowing.
- A Ancient: A tree that has passed beyond maturity and is old/aged compared with other trees of the same species. Typically having a very wide trunk and a small canopy.

PHYSIOLOGICAL CONDITION (HEALTH & VITALITY):

Essentially a snapshot of the general health of the tree based upon its general appearance, its apparent vigour and the presence or absence of symptoms associated with poor health, physiological stress etc. (fungal infections may be recorded here but decay giving rise to structural weakness would be recorded under 'Structural Condition' – see next parameter):

- Good: No significant health issues.
- Fair: Indications of slight stress or minor disease (e.g., the presence of minor dieback/deadwood or epicormic shoot growth).
- Poor: Significant stress or disease noted; larger areas of dieback than above.
- Dead: (or Moribund).

STRUCTURAL CONDITION:

Features affecting the structural stability of the tree include decay, significant deadwood, root-plate instability or significant damage to structural roots, weak forks (e.g. those where bark is included between the members) etc. Classified as:

- Good: No obvious structural defects: basically sound.
- Fair: Minor, potential or incipient defects.
- Poor: Significant feature(s) likely to lead to actual failure in the medium- to long-term.
- Dead: (or Moribund).

ESTIMATED REMAINING CONTRIBUTION:

An estimate of the length of time in years that a tree might be expected to continue to make a useful contribution to the locality at an acceptable level of risk (based on an assumption of continued routine maintenance):

- Less than 10 years
- 10+ years
- 20+ years
- 40+ years

SPECIAL IMPORTANCE:

Trees that are particularly notable as high-value trees such as ancient trees/woodland or veteran trees. Such trees may be regarded as the principal arboricultural features of a site and pose a significant constraint to potential development.

An ancient tree is one that has passed beyond maturity and is very old compared with other trees of the same species. Very few trees reach the ancient life stage.

Veteran trees are often very old but not necessarily so; they may be regarded as 'survivors' that have developed some of the characteristic features of an ancient tree but have not necessarily lived as long. All ancient trees are veterans but not all veteran trees are ancient.

Ancient woodland is an area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland (ASNW), plantations on ancient woodland sites (PAWS) and ancient replanted woodland (ARW).

QUALITY CATEGORY:

Trees are classed as category U, A, B or C, based on criteria given in BS 5837:2012; summary definitions as follows (see BS 5837 for further details). Categories A, B and C are further characterised by the use of sub-categories, which attempt to identify what aspect of the tree is the main source of its perceived value. These are:

- (1) arboricultural qualities
- (2) landscape qualities, and
- (3) cultural, historic or ecological/conservation qualities.

Examples of these qualities for each of the three categories are given below, although these are indicative only.

Note: This is NOT a health and safety classification; the classification does not take into account any requirement for remedial tree care or ongoing maintenance apart from that which may affect the trees' general suitability for retention.

CATEGORY A: HIGH QUALITY:

Trees or groups whose retention should be given a particularly high priority within the design process. Normally with an expected useful life expectancy of at least 40 years.

- A1: Notably fine specimens; rare or unusual specimens; essential component trees within groups, semi-formal or formal plantings (e.g., dominant trees within an avenue etc.).
- A2: Trees, groups or woodlands of particular visual importance as landscape features.
- A3: Trees, groups or woodlands of particular significance by virtue of their conservation, historical, commemorative or other value (e.g., veteran trees or wood pasture).

CATEGORY B: MODERATE QUALITY:

Trees or groups of some importance with a likely useful life expectancy in excess of 20 years. Their retention would be desirable; selective removal of certain individuals may be acceptable but only after full consideration of all alternative courses of action.

- B1: Fair quality but not exceptional; good specimens showing some impairment (e.g., remediable defects, minor storm damage or poor past management).
- B2: Acceptable trees situated such as to have little visual impact within the wider locality. Also the number of trees, perhaps in groups or woodlands, whose value as landscape features is greater collectively than would warrant as individuals (such that the selective removal of an individual would not impact greatly upon the trees' overall, collective value).
- B3: Trees, groups or woodlands with clearly identifiable conservation or other cultural benefits.

CATEGORY C: LOW QUALITY:

Trees or groups of rather low quality, although potentially capable of retention for at least approx. 10 years. Also small trees with stems below 150mm diameter.

Potentially retainable, but not of sufficient value to be regarded as a significant planning constraint.

C1: Unremarkable trees of very limited merit or significantly impaired condition.

C2: Trees offering only low- or short-term landscape benefits; also secondary specimens within groups or woodlands whose loss would not significantly diminish their landscape value.

C3: Trees with extremely limited conservation or other cultural benefits.

CATEGORY U:

Trees likely to prove to be unsuitable for retention for longer than 10 years should any significant increase in site usage arise as a result of development. E.g., dead or moribund trees; those at risk of collapse or in terminal decline; trees that will be left unstable by other essential works such as the removal of nearby category U trees; trees infected by pathogens that could materially affect other trees; low-quality trees that are suppressing better specimens. (Category U trees may have conservation values that it might be desirable to preserve. This category may also include trees that should be removed irrespective of any development proposals.)

ROOT PROTECTION AREA (RPA):

These are normally represented as a circle centred on the base of each tree stem with a radius of 12 times the stem diameter, measured at 1.5m above ground level. The shape of the RPA may be altered where site conditions dictate that there are sound reasons to do so.

VETERAN OR ANCIENT TREE BUFFER (VTB/ATB)

In line with the Standing Advice produced by the Forestry Commission and Natural England, this is a buffer zone (in metres) around an ancient or veteran tree that should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's stem diameter.

ANCIENT WOODLAND BUFFER (FOR ASNW, PAWS OR ARW)

In line with the Standing Advice produced by the Forestry Commission and Natural England, this is a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, a larger buffer zone may be required.

THE IMPORTANCE OF TREES

Wider benefits:

There is a growing body of evidence that trees bring a wide range of benefits to the places where people live.

Some economic benefits of trees include:

- Trees can increase property values
- As trees grow larger, the lift they give to property values grows proportionately
- They can improve the environmental performance of buildings by reducing heating and cooling costs, thereby cutting bills
- Mature landscapes with trees can be worth more as development sites
- Trees create a positive perception of a place for potential property buyers
- Urban trees improve the health of local populations, reducing healthcare costs

Some social benefits of trees include:

- Trees help create a sense of place and local identity
- They benefit communities by increasing pride in the local area
- They can create focal points and landmarks
- They have a positive impact on people's physical and mental health
- They can have a positive impact on crime reduction

Some environmental benefits of trees include:

- Urban trees reduce the 'urban heat island effect' of localised temperature extremes
- They provide shade, making streets and buildings cooler in summer
- They help remove dust and particulates from the air
- They help to reduce traffic noise by absorbing and deflecting sound
- They help to reduce wind speeds
- By providing food and shelter for wildlife, they help increase biodiversity
- They can reduce the **effects** of flash flooding by slowing the rate at which rainfall reaches the ground
- They can help remediate contaminated soil

On new development sites:

Trees bring many benefits to new development. Where retained successfully they can form important and sustainable elements of green infrastructure, contribute to urban cooling and reduce energy demands in buildings. Their importance is acknowledged in relation to adaptation to the effects of climate change. Other benefits brought by trees include:

- Increasing property values
- Visual amenity
- Softening, complementing and adding maturity to built form
- Displaying seasonal change
- Increasing wildlife opportunities in built-up areas
- Contributing to screening and shade
- Reducing wind speed and turbulence

NATIONAL PLANNING POLICY

The National Planning Policy Framework 2021 (NPPF paragraph 180) states that, when determining planning applications, local planning authorities should apply the following principle:

c) 'development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists.'

In this respect, the following definitions apply:

'Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS)', and

'Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life stage.'

Note: Further information from the National Planning Policy Guidance Suite and Standing Advice is provided in the design guidance section.

Other paragraphs of the NPPF 2021 of relevance to this report are:

Paragraph 131: *'Trees make an important contribution to the character and quality of urban environments, and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible. Applicants and local planning authorities*

should work with highways officers and tree officers to ensure that the right trees are planted in the right places, and solutions are found that are compatible with highways standards and the needs of different users.'

Paragraph 174: *'Planning policies and decisions should contribute to and enhance the natural and local environment by:*

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.'

STATUTORY CONTROLS

Statutory tree protection

Works to trees that are covered by Tree Preservation Orders (TPOs) or are within a Conservation Area (CA) require permission or consent from the Local Planning Authority. Where information is available on any Statutory designations such as this they are identified within the summary table in Section 1 and on the Tree Survey and Constraints Plan in Section 2.

Notwithstanding specific exceptions and in general terms, a TPO prevents the cutting down, uprooting, topping, lopping, wilful damage or wilful destruction of protected trees or woodlands without the prior written consent of the LPA.

Penalties for contravention of a TPO tend to reflect the extent of damage caused but can, in the event of a tree being destroyed, result in a fine of up to £20,000 if convicted in a Magistrates' Court, or an unlimited fine if the matter is determined by the Crown Court.

Similarly, and again notwithstanding specific exceptions, it is an offence to carry out any works to a tree in a Conservation Area with a trunk diameter greater than 75mm diameter at 1.5 height without having first provided the LPA with 6 weeks written notification of intent to carry out the works.

On many non-residential sites (excluding specific exemptions) there is also a statutory restriction relating to tree felling that relates to quantities of timber that can be removed within set time periods. In basic terms, it is an offence to remove more than 5 cubic metres of timber in any one calendar quarter without having first obtained a felling licence from the Forestry Commission.

Any proposed tree works that are planned to be carried out on-site must be carried out in accordance with the statutory controls outlined.

Statutory Wildlife Protection

Although preliminary visual checks from ground level of likely wildlife habitats are made at the time of surveying, detailed ecological assessments of wildlife habitats are not made by the arboriculturist and fall outside of the scope of this report.

Trees that contain holes, splits, cracks and cavities could potentially provide a habitat for protected species such as bats in addition to birds and small mammals. It is advised that in some instances specialist ecological advice may be required. This may result in tree works being carried out following a detailed climbing inspection of the tree to ensure that protected species or their nests/roosts are not disturbed. If any are found, the site manager, site owner or consulting arboriculturist should be informed and appropriate action taken as recommended by the appointed Ecologist or the relevant Statutory Nature Conservation Organisation (SNCO): Natural England, Scottish Natural Heritage or Natural Resources Wales.

It is advised that tree/hedgerow works are carried out with the understanding that birds will generally nest in trees, hedges and shrubs between March and August. This time period only indicates likely nesting times and as such diligence is required when undertaking tree works at all times.

Irrespective of the time of year and other than any actions approved under General Licence, it is an offence to intentionally kill, injure or take any wild bird or to intentionally take, damage or destroy the nest or eggs of any wild bird. Ideally, tree operations should be avoided during the likely bird nesting period. However, any tree works should always only be carried out following a preliminary visual check of the vegetation.

For information, the Wildlife and Countryside Act 1981 (as amended), The Countryside and Rights of Way Act 2000 (as amended) and the Conservation of Habitat and Species Regulations 2010, form the basis of the statutory legislation for flora and fauna in England and Wales. A different legislative framework applies in Scotland and Northern Ireland.

Any proposed tree works that are planned to be carried out on site must be carried out in accordance with any relevant statutory controls, outlined above.

DESIGN GUIDANCE

Approach

The approach adopts the guidelines set out in the British Standard BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations. The process is broken down to coordinate with the key elements within both the RIBA Plan of Work (2013) and British Standard 5837:2012 as set out in the table below:

Information Stage	RIBA Stage	BS 5837:2012
Stage A – Tree Survey	2: Concept	4: Feasibility
Stage B – Arboricultural Impact Assessment	3: Developed design	5: Proposals
Stage C – Arboricultural Method Statement	4: Technical design	6: Technical Design
Stage D – Arboricultural Site Supervision	5: Construction	7: Demolition and construction

A hierarchical approach is adopted to achieve optimum use of the site and location of built structures. This is set out below:

Avoid

The starting point of Site layout design should be to avoid the RPA of retained trees and provide suitable clearance from above ground constraints [tree canopies]. Where possible building lines should be at least 2m outside the RPA to provide working space for construction. However, protection measures can be taken if such clearance is not achievable.

Mitigate

Where intrusion within the RPA is unavoidable then its impact on the tree can be mitigated by specialist measures:

Foundations that avoid trenching e.g., screw piles, suspended floor slabs or casting at ground level for lightweight structures such as bin and cycle stores.

Limited use may be made for parking, drives or hard surfaces within the root protection areas, subject to advice from a qualified arboriculturist. Cellular confinement systems that enable hard surfaces to be built above existing soil levels are acceptable methods subject to site-specific soil conditions.

Service runs that cannot be routed outside the RPA(s) can be installed by, for example, thrust boring, directional drilling, air excavation or hand digging. These operations often require supervision by the project arboriculturist.

Compensate

Replacement planting can ensure the continuity of tree cover where tree removal is unavoidable or desirable. Off-site provision may be considered in some circumstances but this will require negotiation with the local planning authority.

Considerations:

For proposed residential developments, consideration must be given to numerous factors relating to future tree growth and orientation.

Tree constraints

Root Protection Areas:

With reference to BS 5837:2012, a root protection area (RPA) is defined as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure should be treated as a priority”. **“The default position [when considering design layout in relation to RPAs] should be that structures are located outside the RPAs of trees to be retained”**.

BS 5837:2012 states (4.6.2) that, “where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced.” The BS goes on to state that, “modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution,” and that any deviation from the original circular plot should take into account:

- Morphology and disposition of roots;
- topography and drainage;
- soil type and structure;
- the likely tolerance of the tree to root damage/disturbance.

Additional buffer zones beyond the RPA:

The following text is taken from the Standing Advice produced by the Forestry Commission and Natural England as included in the National Planning Policy Guidance:

‘A buffer zone’s purpose is to protect ancient woodland and individual ancient or veteran trees. The size and type of buffer zone should vary depending on the scale, type and impact of the development’.

Ancient woodland buffer:

‘For ancient woodlands, you should have a buffer zone of at least 15 metres to avoid root damage. Where assessment shows other impacts are likely to extend beyond this distance, you’re likely to need a larger buffer zone. For example, the effect of air pollution from development that results in a significant increase in traffic’.

Ancient and veteran tree buffer:

'A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter'.

Above ground:

Above ground constraints posed by trees describe the capacity for trees to have an overbearing or dominating effect on new developments; usually post-occupancy. Typical above ground constraints include a number or combination of inconveniences including shading, branch spread, movement of trees during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated requests to fell or heavily prune retained and protected trees.

Shade:

Adverse shading and blocked views from windows raise concerns for incoming residents, which may lead to pressure to fell or remove trees in the future. Wherever possible it is advisable to arrange fenestration away from tree canopies to lessen the conflict or increase window size to accommodate ambient light.

Conversely, appropriately designed development can use existing or new trees to create necessary and welcome shade and screening.

As part of the adopted approach the above considerations and constraints are assessed cumulatively to provide clear and site-specific advice on the areas of a site most suitable for the location of development.

Dependent on the site and nature of the proposed development, the Tree Survey and Constraints Plans may show the following:

Recommended Developable area - an advisory area defined to minimise arboricultural impacts using standard approaches to construction. Restricting proposed development to this area will limit the risk of harm to retained trees and of the Local Planning Authority objecting to the proposed development. It may be possible to propose development outside of this area but specific 'low impact' construction techniques may need to be recommended.

Recommended Buffer to development - similar to the Recommend Developable Area but defined as a line marking a suitable buffer to retained trees. More commonly used on large sites or sites where the presence of trees is localised.

Tree Opportunities

Depending on the scale of developments existing trees can often provide opportunities to enhance the existing arboricultural resource of a site by bringing it into good management or by putting in place remedial measures e.g., soil amelioration.

Appropriately designed new tree planting is extremely important in maintaining healthy and sustainable tree populations. For the reasons highlighted, new trees can bring many benefits to new developments. It is critical to the establishment of new tree planting that the locations, species and specification of new trees are appropriate. Subsequently, the sourcing of high-quality stock, suitable planting and the provision of post-planting maintenance are essential to allow new trees to establish and mature over time.