

79 The Promenade Cheltenham Gloucestershire GL50 1PJ

T: 01242 250822

E: mhp@mhpdesign.com

ARBORICULTURAL SURVEY AND STATEMENT

OAKLEY FARM, CHELTENHAM

OUTLINE PLANNING
APPLICATION FOR
RESIDENTIAL
DEVELOPMENT AND
ASSOCIATED
INFRASTUCTURE



Report Record	
Project number:	18017
Project name:	Arboricultural Survey, Impact Assessment and Protection Plan
	Oakley Farm, Cheltenham
Client:	Robert Hitchins Limited and successors in title

Report status				
Issue number:	Report status:	Date:	Prepared by:	Checked by:
V1	First Issue	17.10.19	MR	BD&MR



1	INTRODUCTION	3
2	ARBORICULTURAL SURVEY	7
3	TREE SURVEY AND CONSTRAINTS PLAN	8
4	ARBORICULTURAL STATEMENT	11
6	CONCLUSION	12
APP	PENDIX 1 – TREE SURVEY SCHEDULE	13
	PENDIX 2 – TREE SURVEY AND CONSTRAINTS PLAN WITH GREEN INFRASTRUCTURE	
PAR	AMETERS	14



1 INTRODUCTION

1.1 Introduction

1.1.1 My name is Matt Reid. I am a chartered arboriculturist with relevant industry experience dating from 1998. I hold the Level 6 Diploma in Arboriculture (ABC Awards) as well as other technical and trade level qualifications. I am a professional member of the Arboricultural Association and of the Institute of Chartered Foresters.

1.2 Background

1.2.1 Outline planning permission is sought for new residential development and associated infrastructure on land at Oakley Farm, Cheltenham; hereafter referred to as 'the site'.

1.3 Site details

- 1.3.1 The site consists of agricultural pastureland containing numerous large trees, tree groups and hedgerows.
- 1.3.2 The site slopes northwards from its southern boundary with the 'Harp Hill' road towards an area of new residential development beyond the northern boundary.
- 1.3.3 There are derelict farm buildings located to the central northern part of the site. There is also an associated rarely used access track that connects the old farm buildings with nearby Priors Road to the east. There are no other obvious structures on the site.
- 1.3.4 For location purposes, the site can be located using the following information:

Nearby postcode: GL52 5GJ

OS Grid reference: SO 96938 22425

1.4 Instruction and scope

1.4.1 I am instructed by Robert Hitchins Limited to visit the site and to carry out an assessment of arboricultural features in accordance with British Standards (BS) 5837:2012 'Trees in Relation to Design Demolition and Construction –



Recommendations'.

- 1.4.2 I am to prepare the following information in relation to the outline planning application:
 - Tree survey in accordance with BS5837:2012
 - Tree constraints advice
 - Arboricultural Statement relating to feasibility of the principle of the proposed development.

1.5 Limitations

- 1.5.1 My survey and assessment relates only to the scope of my instruction. It does not assess the following factors:
 - Risk of harm caused by trees
 - Potential for woody vegetation-related ground subsidence and/or heave.
- 1.5.2 In some instances, I have been unable to access or clearly observe the bases of trees due to, for example, the presence of dense vegetation or built structures. Where this is the case, I have made my best endeavours to accurately estimate dimensions and tree condition.
- 1.5.3 Trees are living organisms and self-supporting dynamic structures. Their physiological and structural condition can change rapidly in response to a wide range of biotic/abiotic factors. As such, the observations and recommendations within this document are limited to a timeframe of 24 months from the date of my site visit.

1.6 Statutory tree protection

Tree Preservation Orders and Conservation Areas

1.6.1 Two Tree Preservation Orders (TPOs) have been served in relation to the site by Cheltenham Borough Council.

V1 17.10.19 4 | P a g e \\NAS\Store\PROJECT FILES\18 JOBS\18017 OAKLEY FARM CHELTENHAM\DOCUMENTS\REPORTS\AIA\Main application\18017_OAKLEY FARM,CHELTENHAM_TS



- The larger TPO is titled 'Oakley Farm, Priors Road TPO 764' (Reference 18/00764/TREEPO) and was confirmed with modifications following constructive dialogue between myself and council Tree Officers. This TPO protects numerous individual trees and one group of trees.
- A smaller TPO titled 'Oakley Farm 2 TPO 765' (Reference 19/00765/TREEPO)
 has also been served to protect one further single oak tree that had been
 omitted from the original larger Order.
- 1.6.2 The site is not located within a conservation area.
- 1.6.3 Notwithstanding specific exemptions (including the granting of full planning permission) and in general terms, TPO status makes it an offence to cut down, uproot, top or lop, wilfully damage or wilfully destroy relevant trees or woodlands without a formal application for tree works being approved by the relevant Local Planning Authority (LPA)
- 1.6.4 Penalties for contravention of a TPO status 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 is the matter is determined by the Crown Court.

Timber volume

- 1.6.5 Notwithstanding various exemptions (including the grant of full planning permission) the Forestry Act 1967 limits felling of volumes of timber in any calendar quarter to 5 cubic metres (m³) unless a Felling Licence has been issued by the Forestry Commission.
- 1.6.6 Any felling carried out beyond this threshold is an offence that may result in prosecution and/or issue of a Restocking Notice.

Ancient woodland

- 1.6.7 I have consulted DEFRAs Magic Map¹ application. This confirms that the site and the land adjacent to it has not been designated as Ancient Woodland.
- 1.6.8 Ancient Woodland is broadly defined as land that has been continuously wooded

V1 17.10.19 5 | P a g e \\NAS\store\PROJECT FILES\18 JOBS\18017 OAKLEY FARM CHELTENHAM\DOCUMENTS\REPORTS\AIA\Main application\18017_OAKLEY FARM,CHELTENHAM_TS

¹ https://magic.defra.gov.uk/magicmap.aspx



since 1600AD. As such, it constitutes irreplaceable habitat and is afforded a high level of protection by the National Planning Policy Framework (NPPF).

Ancient/Veteran and Notable Trees

- 1.6.9 I have consulted the Woodland Trust's online Ancient Tree Inventory² (ATI) to determine whether any trees have been highlighted by any interested party as potentially having Ancient, Veteran or Notable special status. This search confirms that no trees on the site are identified by the ATI as having this special status.
- 1.6.10 Like ancient woodland, ancient and veteran trees constitute irreplaceable habitats and as such are also afforded a high level of protection by the NPPF.

1.7 Wildlife

- 1.7.1 No site works must be carried out before a suitably detailed inspection of relevant trees has been carried out to determine the presence of bat roosts and/or bird nests.
- 1.7.2 The Arboricultural Association publishes useful advice in relation to trees and nesting birds³.
- 1.7.3 Helpful advice with regards to bats and tree work is published by the UK Government⁴, the Arboricultural Association⁵ and The Bat Conservation Trust⁶.

V1 17.10.19
6 | P a g e \\NAS\Store\PROJECT FILES\18 JOBS\18017 OAKLEY FARM CHELTENHAM\DOCUMENTS\REPORTS\AIA\Main application\18017_OAKLEY FARM,CHELTENHAM_TS

² https://ati.woodlandtrust.org.uk/

³ https://www.trees.org.uk/Help-Advice/Public/When-is-the-bird-nest-season

⁴ https://www.gov.uk/guidance/bats-protection-surveys-and-licences

⁵ https://www.trees.org.uk/Help-Advice/Public/Bats-and-trees-Who-does-what-where

⁶ http://www.bats.org.uk/data/files/publications/Bats Trees.pdf



2 ARBORICULTURAL SURVEY

2.1 Site visit

2.1.1 I visited the site on 26th and 30th December 2018.

2.2 Findings

- 2.2.1 My findings are set out within the survey schedule at **Appendix 1**.
- 2.2.2 A Tree Survey and Constraints Plan represents these findings and also identifies the above and below ground constraints that are posed by the relevant arboricultural features. Refer to Section 3 for further information.
- 2.2.3 The key arboricultural features associated with the site can be summarised as:
 - Numerous large, and occasionally very large, individual oak trees that are located within open farmland and within hedgerows, mainly in the northeastern quadrant of the site.
 - An area of mature trees surrounding a small incised valley that is orientated from south-east to north-west within the central part of the site.
 - A small number of unmanaged hedgerows
 - Several older trees that display some characteristics that are consistent with 'veteran status' (see 3.5)



3 TREE SURVEY AND CONSTRAINTS PLAN

3.1 General

3.1.1 The constraints posed by the surveyed arboricultural features on site are shown on the Tree Survey and Constraints Plan at **Appendix 2**. This plan also shows the green infrastructure parameters that have been set in relation to the planning proposals.

3.2 Tree Quality Assessment

3.2.1 Surveyed trees are represented on the Plan using colour coding to indicate their quality and thereby suitability for retention. The quality assessment is as follows:

Quality grade	Definition
А	Green. High quality with estimated remaining life expectancy of at least 40 years.
В	Blue. Moderate quality with estimated remaining life expectancy of at least 20 years
С	Grey. Low quality with estimated remaining life expectancy of at least 10 years
U	Red. Unsuitable for retention. Cannot realistically be retained for longer than 10 years

3.2.2 Each quality grade is further defined by a number 1, 2, or 3 which identify arboricultural, landscape and heritage/conservation values respectively.

3.3 **Below Ground Constraints**

3.3.1 In accordance with BS5837:2012, below ground constraints, or Root Protection Areas (RPAs), for the surveyed trees are plotted onto the Tree Survey and Constraints Plan.



These are represented as a circle with a broken red line centred on the base of each tree stem with a radius of 12 times stem diameter (measured at 1.5m above ground level.

- 3.3.2 BS5837:2012, 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".
- 3.3.3 Root systems can be damaged in several ways:
 - Root severance
 - Soil compaction
 - Contamination by spilled materials eg cement/diesel.

3.4 Above Ground Constraints

- 3.4.1 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, perceived fear of tree failure during strong winds and so on. If not adequately considered, above ground constraints can lead to repeated future requests to fell or heavily prune retained and protected trees.
- 3.4.2 Above ground 'shade' constraints are represented on the Plan by a radial "shade" area extending a distance equivalent to the height of the tree in a north-west direction through to an easterly direction. Aspects of the design that require reasonable daylighting should be situated so as not to be dominated by these areas.
- 3.4.3 The above ground parts of trees can be damaged in several ways:
 - Impact damage through contact with construction site plant
 - Inappropriate pruning



Other factors, for example, heat damage caused by bonfires.

3.5 Veteran/Ancient trees or Ancient Woodland

- 3.5.1 Paragraph 175 of the National Planning Policy Framework (NPPF) affords great weight to the importance of veteran and ancient trees, stating, "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".
- 3.5.2 Veteran and ancient trees are therefore key constraints within the planning process and as such must be afforded significant consideration as part of design processes.
- 3.5.3 Standing advice regarding development in relation to veteran trees is published by the Forestry Commission and Natural England⁷. In very broad summary, this advice recommends *avoiding* damage through suitable design work and *mitigating* against damage by establishment of buffer zones (15 times trunk diameter) around vereran/ancient trees. As a last resort, a strategic package of suitable *compensation* measures should be implemented.
- 3.5.4 Veteran Tree Buffers (VTB) are represented on the plan in the same way as root protection areas.

_

⁷ https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences



4 ARBORICULTURAL STATEMENT

4.1 Green Infrastructure (GI) Parameters and Arboricultural Constraints

- 4.1.1 Defined GI parameters broadly show that the northern two-thirds of the site shall be allocated for built development whilst the southern third of the site is to include green infrastructure and a highway corridor flexibility zone.
- 4.1.2 Overlay with the Tree Survey and Constraints Plan shows that there are various significant trees, tree groups and hedges within the built development parameters area and the highway corridor flexibility zone. However, there is also considerable space between many of the trees and on this basis I can infer that a considered design process with appropriate arboricultural input can achieve a sustainable and harmonious relationship between new built form and existing trees.
- 4.1.3 In due course, as detailed proposals come forward, I anticipate that further details setting out tree protection measures will be required in order demonstrate with enough clarity that the proposals can be achieved without harm being caused to significant trees.

4.2 GI enhancement

- 4.2.1 In my view, the retention of a substantial and green infrastructure buffer at the south of the site presents considerable scope for new woodland planting. In addition, sustainable tree planting can also be incorporated into detailed proposals for built development.
- 4.2.2 On this basis, provided that the existing trees are retained appropriately, I think that it is reasonable to anticipate a net gain of tree canopy cover (with associated positive GI function) on the site as the new trees establish and mature.



6 CONCLUSION

- 6.1.1 I conclude that the outline development proposals are feasible from an arboricultural perspective for the following key reasons:
 - Overlay of surveyed arboricultural constraints with defined green infrastructure parameters demonstrates that substantial parts of the site are not influenced by trees.
 - As detailed proposals come forward, suitable tree protection measures can be
 put in place to ensure that construction works do not result in significant
 harm to retained trees.
 - New tree planting can be incorporated into the proposals that will, over time substantially enhance the arboricultural qualities of the site and give rise to a high level of positive impact over time.



APPENDIX 1 – TREE SURVEY SCHEDULE



TREES

Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	w	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T1	Common ash	18	-	790	#	7	-	10	-	8	-	8	#	5	S	4	М	None	Hedgerow tree. Dense ivy on trunk and in central crown. Moderate amounts of minor deadwood	Good	Good	20+	B1	9	282	None
Т2	Common ash	18	#	600	#	8	-	9	-	4	1	6	#	3	NE	4	М	None	Hedgerow tree. Dense ivy on trunk and in central crown. Southern section of crown suppressed by adjacent ash.	Fair	Good	20+	B1	7	163	None
Т3	English oak	13	#	430	-	5	-	7	-	9	-	5	-	3	SE	4	EM	None	Good potential to enhance the site into the future. Crown form slightly suppressed on west side due to adjacent ash.	Good	Good	20+	B1	5	84	None
T4	Common ash	18	#	420	-	6	-	6	-	7	-	5	-	5	S	7	EM	None	Typical for species and age	Good	Good	20+	B1	5	80	None
Т5	English oak	18	-	1060	-	11	-	12	-	12	-	10	#	6	S	4	М	None	With spreading form. Moderate amounts of deadwood.	Good	Good	40+	A2	13	508	TPO T37
Т6	Common ash	14	#	260	#	4	#	3	#	5	#	3	-	5	N	5	SM	None	Trunk divides into three at 5m. Low quality.	Fair	Good	10+	C1	3	31	None
Т7	English oak	8	-	700	-	0.5	#	0.5	#	0.5	#	0.5	#	Na	Na	Na	Dead	None	Dead monolith. Habitat value potential.	Fair	Dead	Na	Na	8	222	None
Т8	Common ash	14	#	270	#	5	#	3	#	4	#	2	#	5	E	4	EM	None	Tall, thin form.	Fair	Good	10+	C1	3	33	None
Т9	English oak	19	#	820	-	7.5	-	8	-	9	#	8.5	-	5	SE	4	М	None	Substantial die back throughout crown. Major deadwood present. Tree has limited potential to enhance site from a visual amenity perspective.	Poor	Poor	10+	C1	10	304	None
T10	Weeping willow	16	#	580	-	4	-	7	-	9	-	6	#	5	S	2	EM	None	Reasonably prominent tree. Crown form suppressed to north by adjacent tree group.	Fair	Good	20+	B1	7	152	None
T11	Common ash	11	#	350	#	4	-	5	#	4	#	4	#	3	E	4	EM	None	Ivy on trunk and lower stem. Set in dense scrubby hedgerow. Many leaders from 5m. Possibly previously topped.	Fair	Good	10+	C1	4	55	None
T12	Common ash	10	#	400	#	5	-	4	#	4	#	4	#	3	NE	3	EM	None	Hedgerow tree. Develops twin leaders at 2m. Standing dead hawthorn trunk adjacent to south.	Good	Good	10+	C1	5	72	None
T13	Field maple	7	#	260	#	4	#	4	#	5	#	4	#	2	SE	2	EM	None	Reasonable tree with unmanaged climbing rose throughout crown.	Fair	Good	20+	B1	3	31	None



Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	w	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T14	English oak	19	-	1140	-	8	#	10	#	8	#	11	-	2	w	3	ОМ	None	Thin crown density probably associated with root damage to construct barn to south. Crown dieback, cavities associated with branch loss on south side, moderate amounts of deadwood. A potential veteran requiring management intervention to retrench crown.	Fair	Fair	20+	В3	14	588	TPO T1
T15	Common ash	16	#	490	-	5	#	7	#	7	#	6	#	4	E	2	EM	None	Reasonable condition and form.	Good	Good	20+	B1	6	109	None
T16	Common ash	15	-	520	-	4	-	7.5		7	-	7	-	4	S	4	EM	None	Small amounts possible bacterial canker on eastern side of trunk.	Good	Good	20+	B1	6	122	None
T17	English oak	13	#	770	-	6	-	5	-	6	-	5	#	3	SW	4	М	None	Substantial crown dieback. Upper crown dead with woodpecker damage on central stem. Poor condition likely to be associated with root damage caused during construction of adjacent barn. Ganoderma resinaceum brackets at base on north side. Remainder of crown seems capable of growing on. Management intervention required if tree is to be retained.	Poor	Fair	10+	C1	9	268	None
T18	English oak	23	-	1070	-	10	-	11	-	11	-	7	-	5	E	3	ОМ	Veteran	Large, landscape feature tree. Crown retrenchment at some extremities, moderate amounts of deadwood, numerous cavities throughout limb and branch structure. Inonotus dryadeus decay fungi at base on east side. Large cavity at base on south side. Proactive management required to further retrench crown.	Fair	Fair	40+	А3	16	804	TPO T4
T19	English oak	22	#	1020	-	5	#	9	-	11	-	8	-	5	NW	5	М	None	Large prominent tree on northern boundary	Good	Good	40+	A2	12	470	TPO T3
T20	English oak	19	-	1140	-	14	-	12	-	12	-	12	-	4	N	4	М	None	Large prominent landscape feature tree. No significant defects.	Good	Good	40+	A2	14	588	TPO T5
T21	English oak	14	-	760	-	5	-	8	-	7	-	7	-	3	w	2	М	None	Top has died back leaving a dead stump. Old abiotic wounds on trunk. In reasonable condition despite damage. Decay at base on west side.	Fair	Fair	20+	В3	9	261	TPO T1 (TPO 765)



Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	W	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T22	English oak	16	#	890	1	9	-	7	-	11	-	12	-	6	NW	4	М	None	Moderate to large amounts of deadwood. Thin foliage density overall. Further inspection merited to determine viability if retained.	Fair	Fair	20+	B1	11	358	None
T23	English oak	20	-	1170	-	12	-	10	-	12	-	11	-	3	N	4	М	None	Prominent landscape tree. Typical for species and age. Moderate to large amounts of deadwood throughout crown.	Good	Good	40+	A2	14	619	TPO T8
T24	English oak	20	#	970	-	9	-	10	-	9	-	8	-	3	S	3	М	None	Reasonably prominent tree. Upper crown dieback. Moderate amounts of deadwood.	Fair	Fair	20+	B1	12	425	TPO T9
T25	English oak	19	#	700	#	10	-	9	-	14	-	9	-	2	S	3	М	None	Prominent landscape feature tree. Large hazard beam extending from 2m to south over ditch area.	Good	Good	40+	A2	8	222	TPO T10
T26	English oak	20	#	850	#	8	-	8	-	9	#	10	-	2	N	3	М	None	Prominent landscape feature tree on edge of old ditch. Unable to access base due to scrub growth.	Good	Good	40+	A2	10	327	TPO T13
T27	English oak	19	#	1090	-	12	#	9	#	9	#	7	-	2	S	3	М	None	Prominent landscape tree with canopy closure with adjacent oak. Moderate amounts of deadwood including one large dead hanger in northern part of crown.	Good	Good	40+	A2	13	537	TPO T14
T28	English oak	23	#	1200	#	11	-	9	-	10	-	11	-	3	NW	3	М	Veteran	Area of localised crown retrenchment, deadwood present in moderate amounts- some of large dimensions. Cavity in trunk at estimated 10m on north side. Sufficient size to achieve veteran status. Has some ancient characteristics.	Good	Good	40+	А3	18	1017	TPO T12
T29	Common ash	13	#	600	#	10	-	8	#	8	-	8	-	1	Е	4	М	None	Three stemmed from base. Within hedgerow.	Fair	Good	10+	C1	7	163	None
T30	English oak	13	#	780	#	8	-	8	#	9	-	9	-	3	N	4	EM	None	Hedgerow tree in reasonable condition	Good	Good	20+	B1	9	275	TPO T16
T31	Common ash	7	#	450	#	4	-	4	#	2	#	3	#	2	N	1	EM	None	Stunted hedgerow tree with dense ivy throughout. Set within dense bramble.	Fair	Fair	10+	C1	5	92	None
T32	Common ash	8	#	282	#	3	-	3	#	4	#	3	-	2	SE	2	EM	None	Smaller hedgerow tree set within dense blackthorn with some sapling ash.	Fair	Good	10+	C1	3	36	None
Т33	Hornbeam	8	#	200	#	4	#	4	#	5	#	3	#	3	N	2	SM	None	Trunk divides into four leaders at 3m height. Small amounts of branch loss damage.	Fair	Good	10+	C1	2	18	None



Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	w	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
Т34	Field maple	8	#	450	#	3	#	4	#	4	#	3	#	2	E	2	М	None	Two stems remaining from a large old coppice stool within the hedgerow. Substantial decay in bases of both stems on north side. Recommend coppice to ground level as part of hedgerows management.	Poor	Fair	<10	U	5	92	None
T35	English oak	19	#	1130	-	10	-	10	-	10	#	11	-	2	SW	3	ОМ	Veteran	Old pollard hedgerow tree. Signs of crown retrenchment. Moderate to large amounts of deadwood throughout. Requires retrenchment pruning and further inspection when in leaf to better assess vitality.	Fair	Good	40+	A2	17	907	TPO T17
Т36	Common ash	15	#	300	-	5	#	2	#	4	#	5	#	5	N	3	EM	None	Hedgerow tree. Dense ivy on lower stem. Form suppressed to east by adjacent oak.	Fair	Good	10+	C1	4	41	None
Т37	English oak	20	#	1500	#	9	-	9	-	9	#	11	-	3	N	3	М	Aged/ ancient	Very large old hedgerow pollard with trunk decay, fungi brackets, localised crown retrenchment and cavity formation.	Fair	Fair	40+	А3	23	1661	TPO T18
T38	English oak	24	#	1200	#	10	#	8	#	13	#	11	#	4	S	4	М	None	Large tree surrounded by dense bramble which prevented access to trunk. Some localised crown retrenchment. Potentially a veteran but seemingly without many ancient characteristics	Good	Good	40+	A2	14	651	TPO T7
T39	English oak	20	#	600	#	4	-	11	-	10	-	8	#	4	SE	4	М	None	Crown form limited by adjacent former oak tree now collapsed. Located at head of small, possibly incised valley.	Fair	Good	20+	B1	7	163	TPO T34
T40	Common ash	19	#	810	-	4	#	11	1	12	-	9	-	3	E	4	М	None	Asymmetric crown form. Situated at head of small valley.	Fair	Fair	10+	C1	10	297	TPO T33
T41	Sycamore	12	#	460	#	3	#	4	#	9	#	5	#	3	S	3	EM	None	Twin stemmed from base	Fair	Fair	10+	C1	6	96	None
T42	English oak	18	#	600	#	8	#	8	#	9	#	9	#	2	W	3	ОМ	None	Substantial crown dieback. Unable to access trunk due to bramble. Large amounts of deadwood throughout. In decline, but of value for retention in terms of wild life habitat	Fair	Poor	<10	U	7	163	None
T43	English oak	16	#	650	#	1	#	6	-	8	#	6	-	5	NW	5	М	None	Has previously experienced whole stem failure at half height. Cavity at base on north side and associated trunk hollowing. Of habitat value if retained.	Poor	Poor	<10	U	8	191	None
T44	Common ash	8	#	420	#	0.5	#	4	#	10	#	3	#	3	S	3	EM	None	Leaning woodland edge tree with bacterial canker on lower trunk.	Fair	Fair	10+	C1	5	80	None



Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	W	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T45	English oak	23	#	1450	-	8	#	11	#	15	-	14	#	3	NW	4	М	None	Very large tree with some crown retrenchment in localised areas. Moderate amounts of deadwood. Minor cavities at base of tree. Of veteran size but without ancient features. Not yet of veteran status.	Fair	Good	40+	A2	17	951	TPO T30
T46	English oak	20	#	850	#	9	#	9	#	11	-	9	-	4	S	4	М	None	Prominent landscape tree. Dense scrub prevented access to trunk.	Good	Good	40+	A2	10	327	TPO T35
T47	English oak	15	#	700	#	8	#	7	#	8	#	8	#	3	E	2	М	None	Crown form slightly suppressed to north by adjacent ash.	Good	Good	40+	A2	8	222	TPO G1
T48	English oak	20	#	850	#	6	-	8	#	9	-	10	-	3	E	2	М	None	Southernmost tree in compact group of three oak. Some occluding cavities. No significant defects.	Good	Good	20+	B1	10	327	TPO G1
T49	English oak	21	#	600	#	4	-	5	#	4	-	6	-	2	w	2	М	None	Central and tallest tree in linear group of three oak.	Good	Good	20+	B1	7	163	TPO G1
T50	English oak	20	#	800	#	10	-	8	#	3	-	13	-	2	w	2	М	None	Northernmost tree in group of three oak. Moderate amounts of deadwood.	Good	Good	20+	B1	10	289	TPO G1
T51	English oak	28	-	1390	-	12	#	14	#	13	-	14	-	4	SE	4	М	None	Very large tree. No significant defects	Good	Good	20+	A2	17	874	TPO G1
T52	Common ash	6	#	630	-	3	#	5	#	3	#	3	#	2	E	2	ОМ	Veteran	Small tree with numerous decay pockets and substantial trunk decay.	Poor	Fair	40+	А3	9	254	TPO G1
T53	Sycamore	15	#	720	-	10	#	10	-	4	#	5	#	3	NW	2	М	None	Crown form suppressed to south by adjacent oak	Fair	Good	20+	B1	9	234	TPO G1
T54	Common ash	17	#	320	#	6	#	5	#	7	#	5	#	2	NW	2	EM	None	Trunk divides into three from 4m.	Fair	Good	20+	B1	4	46	None
T55	Common ash	18	-	720	#	8	-	8	#	9	#	9	-	3	SW	4	М	None	Lone tree with trunk next to site boundary brick wall.	Good	Good	20+	B1	9	234	TPO T19
T56	Common ash	17	#	360	#	9	-	6	-	8	-	5	#	0.5	N	3	EM	None	Unmanaged hedgerow tree. Large limb extending from near ground level on north side.	Fair	Good	20+	B1	4	59	None
T57	Common ash	14	#	450	#	6	#	7	#	6	#	6	#	1	SE	3	EM	None	Unmanaged hedgerow tree.	Fair	Good	20+	B1	5	92	None
T58	English oak	22	-	1312	#	9	-	11	-	9	-	8	-	3	w	4	М	None	Twin stemmed at base. Southern stem contains significant major deadwood.	Fair	Good	40+	A2	16	778	TPO T28 & T29
T59	Field maple	10	#	280	#	3	#	4	#	4	#	3	#	2	S	2	EM	None	Hedgerow tree. Typical for species and age.	Fair	Good	10+	C1	3	35	None
T60	English oak	16	#	450	#	8	#	8	#	5	#	7	#	4	E	4	EM	None	Good potential to mature to enhance the site. Hedgerow tree.	Fair	Good	20+	B1	5	92	TPO T36
T61	Common ash	9	#	260	#	5	#	4	#	4	#	4	#	3	SW	2	EM	None	Good potential to mature to enhance the site. Hedgerow tree.	Fair	Good	20+	B1	3	31	None



Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	w	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T62	Common ash	15	#	300	#	4	#	3	#	4	#	3	#	5	N	5	EM	None	Unremarkable self-set tree in hedgerow	Fair	Good	10+	C1	4	41	None
T63	English oak	21	#	1500	#	5.5	-	10	-	13	-	13	#	7	N	7	М	Veteran	Beyond boundary fence. Possibly offsite. Very large and prominent tree beside road. Originally pollarded at 7m and subsequently crown reduced. Well established regeneration from all such pruning points. Unable to assess base. Numerous old large pruning wounds on trunk.	Fair	Good	40+	А3	23	1661	TPO T25
T64	English oak	10	#	650	#	6	#	5	#	1	#	4	#	4	N	5	М	None	Possibly Offsite tree. Heavily pruned by topping.	Poor	Fair	10+	C1	8	191	None
T65	English oak	7	#	600	#	3	#	2	#	2	#	2	#	3	N	3	М	None	Possibly Offsite tree. Heavily pruned by topping.	Poor	Fair	10+	C1	7	163	None
T66	Field maple	10	#	500	#	6	#	9	#	4	#	4	#	3	N	3	М	None	Hedgerow tree deriving from originally laid hedgerow.	Fair	Good	20+	B1	6	113	None
T67	Sycamore	15	#	500	#	7	#	2	#	5	#	5	#	2	N	3	М	None	One sided crown form . Moderate amounts of deadwood	Fair	Fair	10+	В3	6	113	None
T68	English oak	13	-	900	#	10	-	9	-	1.5	#	0.5	#	10	NE	4	ОМ	Veteran	Previously topped with complete dieback of upper part of monolith. Crown consists of two branches emerging from a truncated limb at 10m. Basal cavities on north side of trunk.	Poor	Fair	40+	А3	14	615	TPO T26
T69	Common ash	10	#	400	#	6	#	4	#	5	#	4	#	3	E	3	EM	None	Dense ivy throughout. Stressed in appearance	Fair	Fair	10+	C1	5	72	None
Т70	Common ash	13	#	450	#	6	#	6	#	7	#	5	#	4	SE	4	EM	None	Offsite tree. Previously crown reduced with substantial amounts of regeneration	Fair	Good	10+	C1	5	92	None
T71	Common lime	14	#	480	#	7	#	6	#	5	#	6	#	4	S	5	EM	None	Offsite. Twin stemmed. Treehouse at 3m.	Fair	Good	20+	B1	6	104	None
T72	English oak	20	-	1150	-	8	-	8	-	12	-	10	-	5	N	2	ОМ	Veteran	Crown retrenchment, major deadwood, No significant defects.	Fair	Good	40+	А3	17	907	TPO T27
T73	Common ash	10	#	350	#	4	#	4	#	5	#	3	#	3	NE	2	EM	None	Offsite. Twin stemmed from base.	Fair	Good	10+	C1	4	55	None
T74	Field maple	7	#	350	#	3	#	2.5	#	3	#	3	#	2	S	2	EM	None	Hedgerow standard tree. Compact form	Fair	Good	10+	C1	4	55	None
T75	Field maple	9	#	300	#	4	#	3	#	3	#	4	#	2	W	3	EM	None	Hedgerow standard tree. Ivy on stem.	Good	Good	20+	B1	4	41	None
T76	Field maple	7	#	280	#	3	#	3	#	2.5	#	2.5	#	2	SE	3	EM	None	Hedgerow standard tree. Congested lower branch unions with trunk.	Fair	Good	10+	C1	3	35	None
T77	Common ash	9	#	350	#	5	#	4	#	4	#	5	#	3	S	3	EM	None	Hedgerow standard tree. Ivy on trunk	Good	Good	10+	C1	4	55	None



Oakley Farm – Tree Survey Schedule

Ref	Common name	Height (m)	Est	Stem dia (mm)	Est	N	Est	E	Est	S	Est	w	Est	Estimated first branch height (m)	1st branch direction	Estimated canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA / VTB radius (m)	RPA / VTB area (m2)	ТРО
T78	Common ash	8	#	300	#	3	#	3	#	3.5	#	3	#	3	S	3	EM	None	Hedgerow standard tree. Slightly stressed in appearance	Fair	Fair	10+	C1	4	41	None
T79	Common ash	8	#	350	#	5	#	4	#	3	#	4	#	1.5	N	2	EM	None	Previously topped at 1.5m with regeneration	Fair	Good	10+	C1	4	55	None
T80	English oak	13	#	450	#	6	#	6	#	5	#	6	#	3	N	3	EM	None	Dense ivy throughout crown.	Fair	Good	20+	B1	5	92	None
T81	Common ash	16		500	#	3	-	7	-	6	#	6.5	-	5	W	3	М	None	Previously heavily crown reduced with substantial regeneration.	Fair	Good	10+	C1	6	113	None

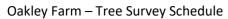
GROUPS

Ref	Common names of woody species present	Estimated average trunk diameter at 1.5m (mm)	Estimated minimum & maximum heights (m)	Estimated average height (m)	Estimated average canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius from canopy edge (m)	ТРО
G1	Lawson cypress, crack willow	280	5-10	9	3	EM	None	Outgrown former garden ornamental trees.	Fair	Good	10+	C2	As shown on plan	None
G2	Common ash, English elm	160	4	13	3	EM	None	Outgrown section at end of hedgerow	Fair	Good	10+	C2	As shown on plan	None
G3	Hawthorn	400	5-6	5	2	М	None	Possible hedgerow remnants. Dense ivy on eastern tree which leans over agricultural building.	Fair	Fair	10+	C2	As shown on plan	None
G4	Apple	300	6-6	5	3	EM	None	Garden fruit trees. Previously topped with associated regeneration.	Fair	Good	10+	C2	As shown on plan	None
G5	Ash, pyracantha	250	2-7	1	4	EM	None	Self set trees and shrubs at edge of site. Potential to grow and exert overbearing effect on neighbouring properties to the north.	Fair	Good	10+	C2	As shown on plan	None
G6	Hawthorn, blackthorn	75	3-5	4	2	SM	None	Dense unmanaged scrub	Poor	Good	10+	C2	As shown on plan	None
G7	Lawson cypress	380	10-16	14	4	EM	None	Linear tree group. Useful for screening. Previously topped with considerable regeneration. Further management required to retain in context of development. Not viable for long term retention.	Fair	Fair	10+	C2	As shown on plan	None
G8	Weeping willow	450	7-13	11	4	EM	None	Three weeping willow trees of differing sizes. Eastern tree largest, western the smallest. All have been previously topped. Group also includes an ivy clad mature hawthorn at western end.	Fair	Good	10+	C2	As shown on plan	None
G9	Leyland Cypress, hazel, hawthorn	550	6-18	17	5	EM	None	Dominated by two cypress trees with canopy closure on northern boundary. Smaller trees are beside access track. Cypresses are unsustainable and should be felled.	Fair	Good	10+	C2	As shown on plan	None



Oakley Farm – Tree Survey Schedule

Ouki	ey Farm – Tree Survey Sche	uuie												•
Ref	Common names of woody species present	Estimated average trunk diameter at 1.5m (mm)	Estimated minimum & maximum heights (m)	Estimated average height (m)	Estimated average canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius from canopy edge (m)	TPO
G10	Hawthorn, ash, viburnum, elder,	100	3-5	4	2	SM	None	Scrub vegetation of minimal merit in term of proposed land use.	Poor	Good	10+	C2	As shown on plan	None
G11	Ash	60	4-6	5	2	SM	None	Self set ash trees beside boundary chain link fence. Many are offsite.	Poor	Good	10+	C2	As shown on plan	None
G12	Ash, goat willow, hawthorn	300	4-19	14	3	EM	None	Informal group at head of small valley. Unmanaged.	Fair	Good	20+	B2	As shown on plan	None
G13	Field maple, beech, ash	320	9-12	10	3	EM	None	Unmanaged hedgerow trees.	Fair	Good	10+	C2	As shown on plan	None
G14	Common ash	400	13-15	14	12	EM	None	Effectively an outgrown area of hedgerow. Largest tree located upslope to the south	Fair	Good	20+	B2	As shown on plan	None
G15	English oak	650	16-17	16	14	М	None	Possibly offsite. Prominent roadside group of two trees.	Good	Good	40+	A2	As shown on plan	TPO T21 & T22
G16	Common ash, field maple	250	8-10	8	3	SM	None	Outgrown section of hedgerow.	Fair	Good	10+	C2	As shown on plan	None
G17	Sycamore, ash	450	13-18	14	4	EM	None	Outgrown section of hedgerow.	Fair	Good	10+	C2	As shown on plan	None
G18	Leyland cypress, birch, common ash	400	16-20	12	4	EM	None	Offsite trees with potential for future growth.	Fair	Fair	10+	C2	As shown on plan	None
G19	Leyland Cypress	260	4	4	3	EM	None	Incongruous screen. Previously topped. Outgrowing location.	Fair	Good	10+	C2	As shown on plan	None
G20	Hawthorn	250	5-7	7	4	EM	None	Unmanaged with very dense ivy.	Poor	Fair	10+	C2	As shown on plan	None
G21	Aspen	240	4-14	12	3	EM	None	Linear group on both sides of chain link boundary fence. Potential to rapidly outgrow the setting.	Poor	Good	10+	C2	As shown on plan	None
G22	Ash, cherry	260	7-9	8	3	EM	None	Offsite trees in private garden	Fair	Good	10+	C2	As shown on plan	None





Ref	Common names of woody species present	Estimated minimum & maximum heights (m)	Estimated average height (m)	Estimated average lateral spread (m)	Estimated average canopy height (m)	Life stage	Special status	General observations & management recommendations	Struct. cond.	Phys. cond.	ULE	Quality grading	RPA radius from canopy edge (m)
H1	Ash, hawthorn,	2-4	4	3	1	EM	None	Low quality hedge. Unmanaged with high proportion of gaps.	Poor	Fair	10+	C2	As shown on plan
H2	Elder, hawthorn, blackthorn, goat willow	1-3	2	2	0	М	None	Low quality hedge containing large amounts of bramble. Eastern end not managed. Remainder recently trimmed.	Fair	Good	10+	C2	As shown on plan
НЗ	Blackthorn, hawthorn	2-3	3	3	0.5	М	None	Unmanaged with blackthorn spreading outwards especially in the southern extent. Would benefit from proactive management.	Fair	Good	10+	C2	As shown on plan
H4	Blackthorn, yew, ash, holly, hawthorn,	3-4	3	3	0	М	None	Unmanaged line of scrub following line of old ditch. Various recent selective medium sized tree felling along overall length.	Poor	Good	10+	C2	As shown on plan
H5	Hazel, blackthorn, elder, ash, field maple,	2-3	2.5	2	0	М	None	Previously maintained by flailing. Currently becoming outgrown.	Fair	Good	20+	B2	As shown on plan
Н6	Blackthorn, hawthorn, ash, holly,	3-5	4	3	0	М	None	Well established. Lacking management.	Fair	Good	20+	B2	As shown on plan
H7	Hawthorn, hazel, goat willow, blackthorn, holly,	2-4	2.5	2	0	М	None	Well established but unmanaged with areas of bramble-filled gaps especially at southern extent. Recent medium sized tree felling has been carried out.	Fair	Good	20+	B2	As shown on plan
Н8	Hazel, blackthorn, elder, ash, field maple,	2-2.5	2.5	2	0	М	None	Previously maintained by flailing. Currently becoming outgrown.	Fair	Good	20+	B2	As shown on plan
Н9	Hawthorn, hazel, ash	4-5	4	4	0.5	М	None	Unmanaged and outgrown. Beside road. Would benefit from proactive management	Fair	Good	20+	B2	As shown on plan
H10	Blackthorn, hawthorn, sycamore, field maple, cherry,	2-5	2.5	2	0.5	EM	None	Unmanaged with significant proportion of bramble-filled gaps. Contains some smaller hedgerow standard trees. Adjacent to public right of way?	Poor	Good	10+	C2	As shown on plan
H11	Blackthorn, ash, elm, hawthorn	2-3	2	2	0	EM	None	Previously managed by flailing	Fair	Good	10+	C2	As shown on plan



Assessment criteria	Description
Reference number on plan	T: Tree, G: Group, W: Woodland, H: Hedgerow. This reference is recorded on the Tree Survey and Constraints Plan against the relevant survey item.
Common name (Scientific name)	Common names: normal type. Scientific names where required: italic type in brackets
Heights	Unit: metres (m). Recorded to the nearest half metre for heights upto 10m and to the nearest whole metre for heights above 10m.
Stem diameter	Unit: millimetres (mm). Rounded to the nearest 10mm. Single and multi-stemmed trees are measured at 1.5m above highest ground level or otherwise as in accordance with Annex C, BS5837:2012.
Estimates	Measured tree dimensions are identified by an '-' in the adjacent 'Estimate' column. Where dimensions have been estimated (offsite, or otherwise inaccessible survey items) this is clearly identified by a '#' in the adjacent 'Estimate' column.
Crown spread	Unit: metres (m). Directions refer to the four compass points (north, east, south, west). Dimensions are rounded-up to the nearest half metre for heights up to 10m and to the nearest whole metre for heights above 10m.
Estimated average lateral spread	Unit: metres (m). For hedgerows only. An estimate of the average width between branch tips.
Crown clearance height	Unit: metres (m). The existing height above ground level of: • First significant branch and the compass direction of its growth: North (N), North-east (NE), East (E), South-east (SE) etc. • Canopy (height between branch tips and ground level).
Life stage	Y – young (stake dependent), SM - Semi-Mature (still capable of being transplanted without preparation, up to 30cm girth and not yet sexually mature), EM – Early Mature (not yet having reached 75% of expected mature size), M – Mature (anything else up to normal life expectancy for the species), OM – Over Mature (anything beyond mature and in natural decline), V – Veteran, A - Ancient (any tree displaying characteristics described by the Ancient Tree Forum and referenced by Natural England).
Special status	 None Veteran: any tree judged to meet criteria as defined by the Ancient Tree Forum Ancient: any tree judged to meet criteria as defined by the Ancient Tree Forum1
General observations and preliminary management recommendations	General observations are recorded in relation to a survey item's structural and/or physiological condition (eg the presence of any decay and physical defect) and /or any preliminary management recommendations that may be appropriate.
Structural condition	 Good: without any observable significant biomechnical structural weaknesses Fair: with minor biomechanical structural flaws. Some remedial action may be required Poor:with significant biomechanical weaknesses requiring intervention particularly where risk management is required.
Physiological condition	 Good: no indications of impaired physiological function and in optimum condition for age and species Fair: with indicators of reduced vitality. Some intervention may be required Poor: with significantly impaired physiological function for age and species
Remaining contribution	Useful life expectancy, or the length of time a tree's is estimated to be able to make a useful contribution, is expressed in years as: <10, 10+, 20+, 40+.
Quality grading	Assessed in accordance with Table 1, BS5837:2012. Colours relate to depiction on the Tree Constraints Plan. • Category A (Green) Trees of high quality with an estimated remaining life expectancy of 40 years • Category B (Blue) Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. • Category C (Grey) Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm. • Category U (Red) Unsuitable for retention. Trees in such a poor condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years. Note - A, B and C trees are also given a sub-category of 1, 2 or 3 which reflects their arboricultural, landscape or cultural and conservation values respectively. Each subcategory has an equal weight, for example an A1 tree has the same retention priority as an A3 tree. More than one sub-category may be applied to a survey item as appropriate.
RPA / VTB radius	Root Protection Area (RPA): a layout design tool. Unit: metres (m). Radial distance from tree centre to define a circle that indicates on the Tree Survey Plan the minimum rooting area required to maintain tree's viability. Calculated in accordance with Annex D, BS5837:2012 Veteran Tree Buffer (VTB): radial area around a veteran tree that must be maintained as undisturbed. Calculated in accordance with Forestry Commission and Natural England Standing Advice. ²
RPA area	Unit: square metres (m²). The area of the RPA radius circle described above. Applies only to individual trees.

¹ LONSDALE, D. (Ed). Ancient and other veteran trees: further guidance on management. The Tree Council. London. 2013. ² https://www.gov.uk/guidance/ancient-woodland-and-veteran-trees-protection-surveys-licences#ancient-and-veteran-trees



APPENDIX 2 – TREE SURVEY AND CONSTRAINTS PLAN WITH GREEN INFRASTRUCTURE PARAMETERS

