



LIGHTWOODS
Green Ltd
Independent Arboricultural Advice
Planning and Development Services
TPO advice
Safety Surveys
Tree management
Subsidence investigation

**Tree Survey & Arboricultural Implications Assessment
Tree Retention & Removal Plan
Revision A**

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Stanton Under Bardon

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1. INTRODUCTION

- 1.1 Brief:** I am instructed to carry out an arboricultural assessment of the development at Main Road, Stanton Under Bardon and to provide arboricultural advice in accordance with BS5837:2012 *Trees in relation to design, demolition & construction – Recommendations* (hereafter BS5837).
- 1.2 Qualifications and experience:** I have based this report on our site observations and the provided information, and I have come to conclusions in the light of my experience. Observations or comments on structural engineering and the law are made from an arboricultural perspective. Specialist professional advice should be sought to clarify such observations.
- 1.3 Scope of this report:** This report includes an assessment of the trees in relation to potential development in order to:
1. Record principle attributes (species and stem diameter).
 2. Determine their quality and value.
 3. Identify their remaining contribution and retention grading.
 4. Demonstrate the arboricultural impact of the proposals.
 5. Show the tree retention & removal balance against the proposed layout on the Tree Retention & Removal Plan
- 1.4 Purpose of the report:** The data collected and plotted is used to inform the layout and assist in the identification of a defensible level of tree retention/removal based on tree quality. As a subsequent action the tree survey data is utilised to detail the arboricultural impact of the proposed layout and prepare the tree protection measures.
- 1.5 Caveats:** 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 micro environmental 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).

2 BS5837:2012 - THE ITERATIVE PROCESS

2.1 Trees and the planning system – BS5837 Annex B

2.1.1 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.

2.1.2 The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term “minimum detail” is intended to reflect information that local authorities are expected to seek, whilst the term “additional information” identifies further details that might reasonably be sought, especially where any construction is proposed within the Root Protection Area (RPA - see section 3.2).

2.1.3 Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions) Tree retention/removal plan (finalized) Retained trees and RPAs shown on proposed layout Strategic hard and soft landscape design, including species and location of new tree planting Arboricultural impact assessment	Existing and proposed finished levels Tree protection plan Arboricultural method statement – heads of terms Details for all special engineering within the RPA and other relevant construction details
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method Dimensioned tree protection plan Arboricultural method statement – detailed Schedule of works to retained trees, e.g. access facilitation pruning Detailed hard and soft landscape design	Arboricultural site monitoring schedule Tree and landscape management plan Post-construction remedial works Landscape maintenance schedule

3 TREE SURVEY

3.1 Tree survey methodology

3.1.1 A tree survey was carried out compliant with BS5837. The collected data is included below and the pertinent information has been previously presented in table form and graphically as the Tree Constraints Plan. (See Tree Survey & Preliminary Constraints Advice, ref. no. LG31-1019 dated 21 June 2021).

3.1.2 Trees are categorised in accordance with the cascade chart in Table 1 of BS5837:2012. The purpose of the categorisation process is to differentiate the quality and value of the existing tree stock so that informed decisions can be made on the retention or removal of trees.

3.1.3 The tree categories are summarised thus:

Category U: Trees lost within the short term for reasons of physiology or poor structural integrity.

Category A: Trees of particularly high quality in arboricultural, landscape or cultural/conservation terms

Category B: Moderate quality trees downgraded from the high category because of significant defects, groups with a collective value through numbers rather than individual tree quality or trees with identifiable cultural or conservation values.

Category C: Trees with low value in arboricultural, landscape or cultural/conservation terms. Also includes young trees with a stem diameter of less than 150mm.

For trees in categories A – C subcategories 1, 2 & 3 are given to reflect arboricultural, landscape and cultural values respectively.

3.2 Findings of the survey

3.2.1 In the course of the tree survey we identified 32 individual trees, 2 tree groups and 4 hedgerows. Of these it was found that they fell into the following quality and value grades:

QV Category	Description	No. of trees	%	No. of groups	%	No. of hedges	%
U	Trees lost in the short term (<10 yrs)	2	6.3	0	0	0	0
A	Trees of particularly <u>high</u> quality	0	0.0	0	0	0	0
B	Trees of <u>moderate</u> quality	11	34.4	1	50	3	75
C	Trees of <u>low</u> quality	19	59.4	1	50	1	25
		32	100	2	100	4	100

3.3 Tree Survey Schedules

3.3.1 Explanatory Notes for Individual Trees

- **ID no.:** Trees are recorded using a site-specific unique identification number. This identification number is used for all references throughout the report and associated plans
- **Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. In some instances, it may be difficult to quickly and accurately identify a particular tree without further detailed investigations. Where there is some doubt of the precise species of tree, it is indicate it with a '?' after the name in order to avoid delay in the production of the report.
- **Estimated dimensions:** Estimated dimensions are marked *.
- **Height:** Height is to the nearest metre.
- **Stem diameter(s):** This is measured at 1.5m above ground level and recorded in millimetres. Trees with low crowns are measured just above the root flare. For trees with multiple stems see 3.2.2 in main text.
- **NSWE:** The branch spread is measured in metres at the four cardinal points of the compass to derive an accurate representation of the crown.
- **Ht 1st branch:** Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early-Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:
 - Good:** Generally in healthy condition
 - Fair:** Condition satisfactory though below mean species performance
 - Poor:** Tree in decline
 - Dead:** Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for intervention (e.g. tree surgery, felling, etc) prior to any development and / or as a result of development. Hazardous trees are highlighted within the survey schedule.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling Unsuitable for retention

10+ Short-term longevity only: replacement planting generally appropriate

20+ Mid-term longevity

40+ Good longevity

- **QV Grade:** Quality & Value grade classification according to BS5837

U - Unsuitable for retention

A - High retention priority

B - Moderate retention priority

C - Low retention priority

+subcategories 1, 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

- **Proposal:** Preliminary judgement on defensible tree retention / removal balance.

RET - Trees preferably retained

REM - Trees defensibly removed to facilitate development

U - Trees identified to be unsuitable for retention

3.3.2 Tree Survey Data for Individual Trees

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
1	Sycamore	11	280 260	3.4	3.9	3.1	3.4	1.6 - SW	2.4	EM	F	Twin stems from low 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
2	Ash	9.1	170	1.5	1.5	1.5	1.5	4.8 - E	5.5	EM	D	Standing dead tree	Fell to as low as reasonably practicable	<10	U	U
3	Sycamore	9.9	240 160 150	2.2	2.8	3	3.2	1.9 - S	1.2	EM	F	Multiple stems from ground level with included unions where stems meet. Contorted lower stems are covered with ivy. No observed dieback or disease	No action required at time of survey	20+	C1	RET

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
4	Sycamore	11.3	310	3.8	3.5	3.2	3.4	3.8 - S	2.6	EM	F	Ivy covered lower stem. Small shooting growth at base starting to form secondary stem. No observed dieback or disease	No action required at time of survey	20+	B1	RET
5	Sycamore	5.8	160	1.8	1.5	1.5	2.2	2.7 - S	2.8	EM	F	Ivy covered lower stem and crown. Heavily suppressed crown due to adjacent trees. No observed dieback or disease	No action required at time of survey	10+	C1	RET
6	Field maple	8.9	200	2	1.5	1.2	2	3.5 - E	3	EM	P	Advanced dieback through crown on contorted lower stem.	Fell to as low as reasonably practicable	<10	U	U
7	Sycamore	9	180 180 150	2.2	1.5	2	2.2	1.9 - S	2.2	EM	F	Multiple stems from ground level with tight forks where stems meet. Ivy covered lower stem. Historic pruning has left large degrading wounds in lower crown	No action required at time of survey	10+	C1	RET
8	Ash	13.2	450 220	4.3	5.5	3.6	4.8	2.1 - S	2.3	M	F	Twin stems from 1m with tight forks where stems meet. Skewed crown towards E due to historic pruning above road. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	B1	RET
9	Ash	14	460	4.1	3.3	3.2	5.5	3.2 - NE	2.5	M	F	Inclined stem to NE is covered with ivy. Crown skewed heavily due to pruning above road. Ash dieback evident with general thinning of foliage throughout. Moderate deadwood present in lower crown.	Remove to facilitate development	10+	C1	REM
10	Field maple	6.2	180	2.2	1.6	1.8	1.5	1.6 - SE	2.8	EM	F	Single stem becomes twin leader from 1.6m. Suppressed crown due to adjacent trees. No observed dieback or disease	Remove to facilitate development	20+	C1	REM
11	Ash	11.5	380	4.2	3.6	3.5	5.2	2.9 - SE	2.6	M	P	Significant signs of ash dieback through crown with sparse foliage widespread. No basal or stem decay evident	Remove to facilitate development	10+	C1	REM

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
12	Field maple	8.5	200 190	2.2	2.3	2.6	2.9	1.6 - SW	2.1	EM	F	Twin stems from ground level with included unions where stems meet. Ivy covered lower stem and crown. No observed dieback or disease and no sign of obvious decay	Remove to facilitate development	20+	C1	REM
13	Apple	4.8	280	1.9	2.6	3	3.2	2.3 - E	1.9	M	F	Inclined/contorted lower stem due to proximity and pruning relating to adjacent overhead powerlines. Ivy covered lower stem and crown. No observed dieback or disease	Remove to facilitate development	10+	C1	REM
14	Ash	13.2	520 260	7.1	4.9	5	5.2	2.1 - NE	2.3	M	F	Twin stems from 1.2m with included unions where stems meet. Ivy covered lower stem and crown. Sparse foliage is sign of ash dieback infection. No basal or stem decay evident	Remove to facilitate development	10+	C1	REM
15	Field maple	7.4	250	0.5	3.2	2.8	3	2.3 - S	2.8	M	F	Ivy covered lower stem and crown. Heavily skewed crown due to adjacent larger trees. No observed dieback or disease	Remove to facilitate development	10+	C1	REM
16	Field maple	11.2	380 360 360	3.5	4.2	3.8	3.8	1.9 - S	1.8	M	F	Multiple stems from ground level. Ivy covered lower stem and crown. Contorted lower stems. No observed dieback or disease and no sign of obvious decay	Remove to facilitate development	20+	C1	REM
17	Field maple	10	340 320 300	4.1	3.5	2.2	3.8	1.5 - E	2	M	F	Multiple stems from ground level. Ivy covered lower stem and crown. Contorted lower stems. No observed dieback or disease and no sign of obvious decay	Remove to facilitate development	20+	C1	REM

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
18	Ash	13	420	5.2	3.1	3.4	4	2.6 - SE	3.5	M	F	Heavily inclined lower stem but no sign of rootplate movement. Ivy covered lower stem and crown. Ash dieback beginning to take hold in crown. No basal or stem decay apparent	Remove to facilitate development	10+	C1	REM
19	Elm	10.6	280 180	4	3.5	3.5	3.8	1.9 - SE	1.9	M	F	Twin stems from 1.2m with included unions where stems meet. Inclined stem above road. No observed dieback or disease	Remove to facilitate development	20+	C1	REM
20	Ash	12	330	3.8	3.5	4.2	4	4.1 - S	3.9	EM	F	Minor symptoms of decline relating to ash dieback evident in outer crown. No sign of basal or stem decay	Remove to facilitate development	10+	C1	REM
21	Ash	19	1120	8	7.5	7	8	2.1 - W	2.5	M	G	Single stem bifurcates at 2.1m with included unions where stems meet. Full healthy crown throughout with no sign of dieback or decline. TPO 1999	No action required at time of survey	20+	B1	RET
22	Common lime	4.3	150 120	2.3	2.4	2.2	1.9	1.2 - W	0.8	SM	F	Twin stems from near ground level. No observed dieback or disease and no sign of obvious decay	No action required at time of survey	20+	C1	RET
23	Gean	7.2	240 230 230	4	3.8	3.5	4.8	1.7 - E	1.9	EM	F	Multiple stems from 1.4m 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
24	Sycamore	5.8	110 80 75	2	1.8	1.5	1.6	1.5 - N	1.8	SM	F	Multiple stems from ground level with tight forks where stems meet. No observed dieback or disease	No action required at time of survey	20+	C1	RET
25	Ash	13.4	560	7.2	6	6.1	6.8	2.6 - SW	2.2	M	F	Ivy covered lower stem and crown. Somewhat sparse crown, but no significant dieback present.	No action required at time of survey	20+	B1	RET
26	Sycamore	7	250	2	3.6	2.5	3.3	1.9 - S	1.6	EM	F	Skewed crown due to adjacent larger tree. No observed dieback or disease	No action required at time of survey	20+	C1	RET

ID No.	Species	Ht.	Dia. (mm)	N	S	W	E	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
27	Elm	6.5	350 90 90 75	3.8	4	3.8	3.5	0.5 - W	1.7	M	F	Basal shoots have become secondary stems. Largest stem has large tear wound on lower trunk, but no sign of significant decay. No observed dieback or disease	No action required at time of survey	10+	C1	RET
28	Ash	8.5	300	3.2	4.2	3.1	3.8	2.4 - S	2.6	EM	F	Upright stem with full healthy crown. No apparent significant defect	No action required at time of survey	20+	B1	RET
29	Ash	11.5	420	5	5.5	5.2	6	2.8 - N	2.4	M	F	Upright stem at edge of water filled ditch. Somewhat sparse foliage through crown. No observed dieback or disease	No action required at time of survey	20+	B1	RET
30	Ash	13	480	5.6	5.8	4.5	5.5	4.6 - SE	3.8	M	F	Upright stem at edge of water filled ditch. Somewhat sparse foliage through crown. No observed dieback or disease	No action required at time of survey	20+	B1	RET
31	Ash	17.2	820	7.2	6.5	7.5	9	2.5 - W	2.2	M	F	Historic failure at 3-6 on main stem has left very large decaying wound and somewhat lopsided crown. Crown to W appears to be starting to subside. No basal decay evident	Reinspect annually to determine if decay and/or subsiding limbs are becoming a hazard	20+	B3	RET
32	Ash	16.5	850	6.5	8	7	8.2	1.9 - SE	0.6	M	F	3rd party tree shows historic stem/branch failures have left large decaying wounds. Inonotus hispidus fungal fruiting bodies on main stem at c.6m. No basal decay observed	No action required at time of survey	20+	B3	RET

3.3.3 Explanatory Notes for Tree groups

- ID no.:** Unique tree group reference number.
- Species:** The species identification is based on visual observations and the common English name of what the tree appeared to be is listed. The species listed represent the main components and there may be other minor species not listed.

- **Estimated dimensions:** Estimated dimensions are marked *.
- **Count:** Number of trees recorded within groups or woodlands. Accurate count for less than 20 trees, estimated number for 20+ trees.
- **Height:** Height is to the nearest metre.
- **Stem diameter(s):** Stem diameter at 1.5m above ground level for 80 percentile member of TG. Trees with larger diameters are identified on the plan at Appendix 3.
- **MRCS:** An estimated mean radial crown spread for trees at the 80 percentile size.
- **Ht 1st branch:** Height above ground in metres of attachment point of first significant branch (cardinal point may be given indicating direction of lowest branch).
- **Crown Clearance:** Height of the crown above ground level at the lowest point.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature, Over Mature and Veteran.
- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the tree summarised into:
 - Good:** Generally in healthy condition
 - Fair:** Condition satisfactory though below mean species performance
 - Poor:** Tree in decline
 - Dead:** Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the tree based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for intervention (e.g. tree surgery, felling, etc) prior to any development. Immediately hazardous trees will be notified to the client separately.
- **Ret. Span:** An estimate of the remaining contribution span that the tree or group of trees is expected to have, based on species, condition and context. The following longevity bands are used, categorised accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling Unsuitable for retention
 - 10+ Short-term longevity only: replacement planting generally appropriate
 - 20+ Mid-term longevity
 - 40+ Good longevity
- **QV Grade:** Quality & Value grade classification according to BS5837:2012
 - U** - Unsuitable for retention
 - A** - High retention priority
 - B** - Moderate retention priority
 - C** - Low retention priority

+subcategories 2 & 3 reflecting arboricultural, landscape and cultural values respectively.

- **Proposal:** Preliminary judgement on defensible tree retention / removal balance.

RET - Groups and Woodlands preferably retained

PRET - Signifies partial retention (see Tree Retention & Removal Plan)

REM - Groups and Woodlands defensibly removed to facilitate development

U - Groups and Woodlands identified to be unsuitable for retention

3.3.4 Tree Survey Data for Tree Groups

ID No.	Count	Species	Ht.	Dia. (mm)	MCRS	Ht. 1 st br.	Cr. Clr.	Life Stage	Phys. Cond	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
TG1	3	Silver birch	12	300	3	2 - S	2.2	EM	F	3rd party trees. No apparent significant defect	No action required at time of survey	20+	B2	RET
TG2	5	Flowering cherry	3	65	1	1.5 - E	1.6	Y	F	Row of young planted trees. No apparent significant defect	No action required at time of survey	20+	C2	RET

3.3.5 Explanatory Notes for Hedges

- **ID no.:** Unique hedge reference number.
- **Species:** The species identification is based on visual observations and the common English name of what the trees appear to be is listed. The species listed represent the main components and there may be other minor species not listed. Unless the composition of species is even an estimate of the percentages of each species is given.
- **Estimated dimensions:** Estimated dimensions are marked *.
- **Height:** Height is to the nearest metre.
- **Mean diameter:** Stem diameter, generally at ground level, for 80-percentile member of the hedge.
- **Mean width:** An estimated mean width for each hedge.
- **Life Stage:** Assessed as Young, Semi-Mature, Early Mature, Mature & Over Mature.

- **Phys. condition:** An assessment of the physiological condition (i.e. health/vitality) status of the hedge summarised into:
 - Good:** Generally in healthy condition
 - Fair:** Condition satisfactory though below mean species performance
 - Poor:** Tree in decline
 - Dead:** Self-explanatory
- **Structural condition & Notes:** Notes on the structural integrity of the hedge based on visual tree assessment, including damage, decay fungi, pests, etc as appropriate, plus other pertinent observations
- **Management recommendations:** Recommendations for intervention (e.g. Trimming, laying, felling, etc) prior to any development.
- **Ret. Span:** An estimate of the remaining contribution span that the hedge is expected to have, based on species, condition and context. The following longevity bands are used, categorized accordingly:
 - <10 Tree is dead, dying, has a severe structural defect, or will become exposed following inevitable loss of companion shelter. Possibly requires sanitation felling. Unsuitable for retention
 - 10+ Short-term longevity only: replacement planting generally appropriate
 - 20+ Mid-term longevity
 - 40+ Good longevity
- **QV Grade:** Quality & Value grade classification according to BS5837: 2012
 - U** - Unsuitable for retention
 - A** - High retention priority
 - B** - Moderate retention priority
 - C** - Low retention priority +subcategories 2 & 3 reflecting arboricultural, landscape and cultural values respectively.
- **Proposal:** Preliminary judgement on defensible tree retention / removal balance.
 - RET** - Hedges preferably retained
 - PRET** - Signifies partial retention (see Tree Retention & Removal Plan)
 - REM** - Hedges defensibly removed to facilitate development
 - U** - Hedges identified to be unsuitable for retention

3.3.6 Tree Survey Data for Hedges

ID. No.	Species	Ht.	Mean Dia.	Mean radius	Life Stage	Phys. Cond.	Structural condition & Notes	Management recommendations	Ret. Span	QV Grade	Proposal
H1	Hawthorn, field maple, ash, elm	1.8	70	1	M	F	Occasional thin patches of foliage present along otherwise well maintained feature. No observed dieback or disease	Remove approx. 38m at north east end to facilitate development	20+	B2	PRET
H2	Hawthorn, apple, sycamore, blackthorn, ash, field maple	3	70	1.5	M	F	Variation in height along length relating to species mix and differing management. Much shorter at W end for approximately 10% of length. No sign of dieback or decline at any point along length	No action required at time of survey	20+	B3	RET
H3	Hawthorn, holly, elm, blackthorn,	1.8	75	1	M	F	Several sparse areas along length and areas dominated by ruderals. Evidence of historic laying management evident.	No action required at time of survey	10+	C2	RET
H4	Hawthorn, elder, blackthorn	4.5	160	2.5	M	F	Somewhat overgrown, but healthy feature. No sign of recent management. No observed dieback or disease	No action required at time of survey	20+	B2	RET

4 ARBORICULTURAL IMPACT ASSESSMENT

4.1 Tree retention and removal

4.1.1 The tree survey was provided at the beginning of our involvement with the project and, together with the Tree Constraints Plan, has been used by the design team to plan, refine and amend the layout to minimize the arboricultural impact wherever possible. However it is inevitable that some tree loss will occur, for, as identified in BS5837, trees are only one factor in the competing needs of development.

4.1.2 The tree survey schedules in the previous section of this report, together with the Tree Retention and Removal Plan at Appendix 1, detail the tree retention and removal balance. Below is presented a summary of this information:

Individual trees

QV Category	Count of trees to be retained	Count of trees to be removed
A	N/A	N/A
B	11	0
C	16	3
U	0	2

Tree groups

QV Category	Count of trees to be retained	Count of trees to be removed
A	N/A	N/A
B	1	0
C	1	0
U	N/A	N/A

4.1.6 The tree and group ID numbers to be removed are as follows:

ID No.	QV Category	Notes
Tree 2	U	Unsuitable for retention
Tree 6	U	Unsuitable for retention
Tree 9	C	To facilitate highways works for visibility splay
Tree 10	C	To facilitate highways works for visibility splay
Tree 11	C	To facilitate highways works for visibility splay
Tree 12	C	To facilitate highways works for visibility splay
Tree 13	C	To facilitate highways works for visibility splay
Tree 14	C	To facilitate highways works for visibility splay
Tree 15	C	To facilitate highways works for visibility splay
Tree 16	C	To facilitate highways works for visibility splay

ID No.	QV Category	Notes
Tree 17	C	To facilitate highways works for visibility splay
Tree 18	C	To facilitate highways works for visibility splay
Tree 19	C	Obstructs 2.4m x 72m visibility splay
Tree 20	C	Obstructs 2.4m x 72m visibility splay
H1	B	Remove approximately 38m from northeast end to facilitate site access provision

4.1.7 The tree losses are all as a result of the facilitation works for highways (with the exception of the two trees that are unsuitable for retention). And these are exclusively the trees along Main Road, where the existing levels are not compatible with the visibility splays for the site access. The proposed works includes a retaining wall and level changes to ensure the visibility splays are not obstructed, without which the site cannot be developed.

4.1.8 In total 12 individual trees will be removed for these works and, as can be seen in the table above, all are of low quality and value. Trees are one of a number of factors for consideration in development and the implications of a proposal is balanced against tree quality. Certain trees maybe of such importance and sensitivity as to be major constraints on development or to justify its substantial modification (ref BS5837 5.1.1), but that is patently not the case in this situation where only low quality trees are impacted.

4.2 Pruning works to facilitate development

4.2.1 No pruning works to retention trees have been identified as necessary for the implementation of the, albeit outline, proposal. That is not to say that no pruning works will be required but should any be found to be necessary these are likely to be minor in extent, such as crown lifts from visibility splays.

4.3 Construction in root protection areas

4.3.1 There are no proposed works in the RPAs of retention trees.

4.4 Trees under Statutory Protection

4.4.1 The site contains a single tree under statutory protection

4.4.2 I carried out a search using the Hinkley & Bosworth Borough Council website on the 7th November 2022. The Borough Council of Hinkley and Bosworth Land adjacent to The Old Thatched Inn, Main Street, Stanton-under-Bardon Tree Preservation Order 1999 applies to tree 21 in the survey schedule. This tree will be retained and is unaffected by the proposals.

4.4.3 The site is not within a conservation area.

4.5 Tree protection during construction.

- 4.5.1 In review of the layout supplied it appears that the level of tree retention is deliverable, assuming tree protection is applied. Trees can be irreparably and unwittingly damaged in a few minutes during construction. Accordingly, it is expected that reserved matters will be attached to a planning consent the require retained trees to be protected throughout the development process in accordance with BS5837.
- 4.5.2 The tree protection measures would typically include tree protection fencing and, if appropriate, ground protection to prevent harm to the crowns and RPAs of retention trees. There may also be a requirement for site supervision for construction operations in proximity to retained trees.

4.6 Arboricultural Sustainability

- 4.6.1 The proposal includes indicative new tree planting of around 50 new trees. This will be a substantial gain in tree numbers balanced against the loss of 14 trees. The Ecological Assessment provided by Tyler Grange (ref. no. 13791_R04c_MR_CW) includes a biodiversity net gain assessment demonstrating that the proposed development will result in an 84% gain in hedgerow units.

5 Conclusion

- 5.1.1 The arboricultural impact of the proposal is considered to be arboriculturally acceptable; there is unavoidable tree loss to provide site access, and that loss is exclusively of low quality trees.
- 5.1.2 Substantial new planting is indicated which would provide a considerable increase in tree cover on the site to the benefit of both end-users and the wider area.

This completes my advice to date

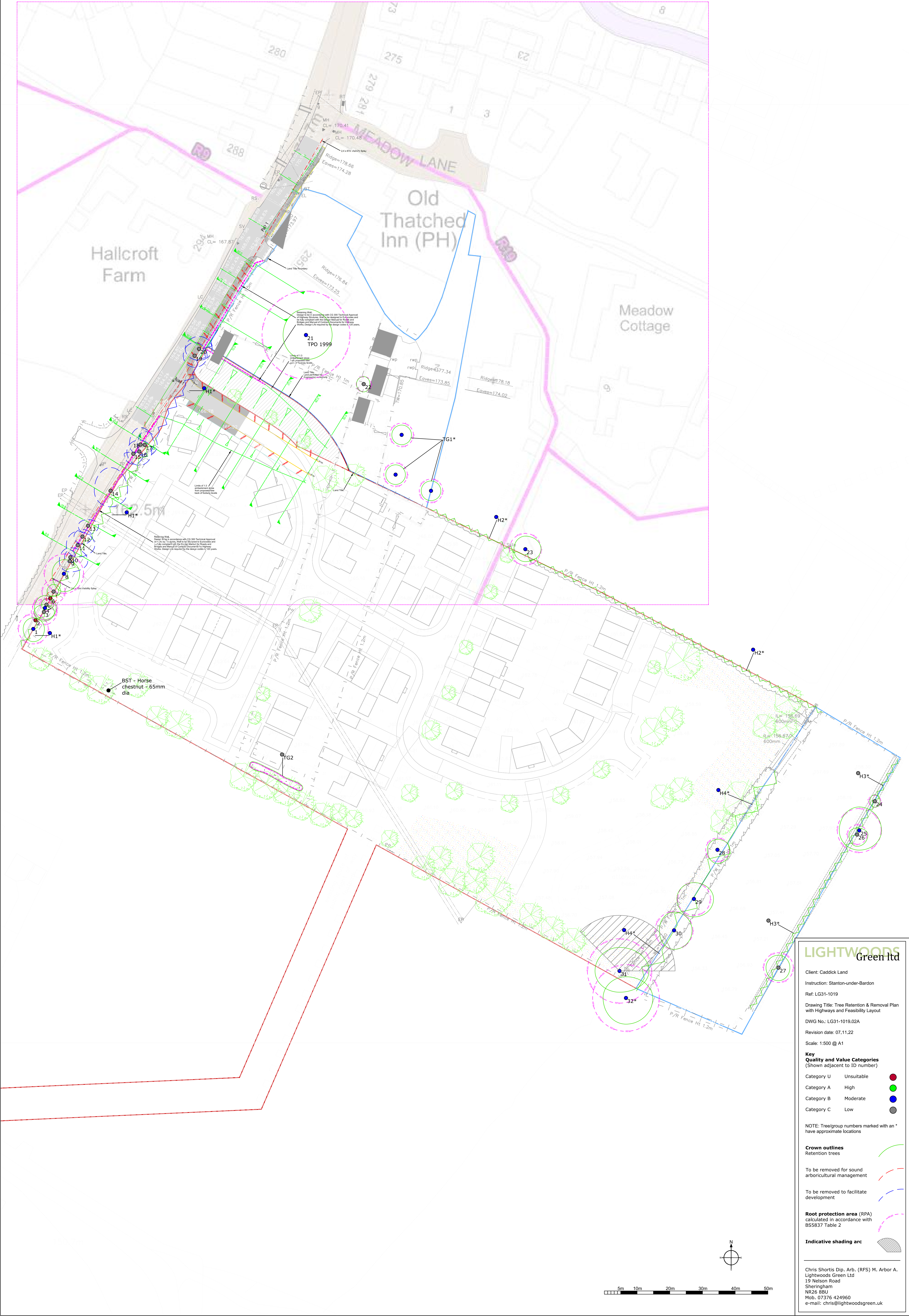
Chris Shortis

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APPENDIX 1

TREE RETENTION & REMOVAL PLAN.

Note this plan consists of a single sheet and is scaled for printing at A1. It is intended to be read in colour.



LIGHTWOODS
Green Ltd

Client: Caddick Land
Instruction: Stanton-under-Bardon
Ref: LG31-1019
Drawing Title: Tree Retention & Removal Plan with Highways and Feasibility Layout
DWG No.: LG31-1019.02A
Revision date: 07.11.22
Scale: 1:500 @ A1

Key
Quality and Value Categories
(Shown adjacent to ID number)

Category U	Unsuitable	●
Category A	High	●
Category B	Moderate	●
Category C	Low	●

NOTE: Tree/group numbers marked with an * have approximate locations

Crown outlines
Retention trees

To be removed for sound arboricultural management

To be removed to facilitate development

Root protection area (RPA)
calculated in accordance with BS5837 Table 2

Indicative shading arc

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