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TREE SURVEY REPORT

**In accordance with British Standard 5837 2005 'Trees in Relation to
Construction – Recommendations'**

Site

Warren Wood Manor, Hornbeam Lane, Essendon

Client

Coutts & Co

Prepared by

Patrick Stileman BSc(Hons), MICFor, Dip. Arb (RFS), M.Arbor.A

Date

27th June 2011

Job reference:

DS19051101

1 INTRODUCTION

1.1 I am Patrick Stileman, Director of Patrick Stileman Ltd. I am acting on instruction of the client, Coutts & Co. I have qualifications and experience in arboricultural consultancy, and I have given details of this in Appendix 1.

1.2 **Background:**

1.2.1 I have been informed by the agent, Tim Northey of Savills, that planning consent has been granted for the construction of a new country house using Hornbeam Lane as the vehicular access to the new dwelling. Tim Northey has told me that issues with access have necessitated this to be re-designed, and it is now proposed that a driveway shall come off the B158 and shall pass through fields and a woodland area.

1.3 **Brief:**

1.3.1 Patrick Stileman Ltd is instructed by Tim Northey on behalf of the client to undertake a survey of the trees within the woodland area and adjacent to the B158 road in accordance with British Standard 5837 (2005) '*Trees in Relation to Construction – Recommendations*' (hereafter referred to as BS5837). We are to carry out an appraisal of trees which have been included on the topographic survey provided to us and any other significant trees not included on the survey.

1.3.2 Based on the data collected in the tree survey we are to show constraints posed by trees at a preliminary level by means of a Tree Constraints Plan.

1.3.3 The purpose of the information provided at this stage is to give advice regarding the principal tree constraints in relation to development in order to assist in establishing the driveway route, through the woodland area in particular, which will have the lowest arboricultural impact.

1.4 **Caveats:**

1.4.1 I surveyed trees at a preliminary level only. The survey must not be substituted for a tree risk assessment report. Detailed inspection including decay mapping, aerial inspections, root or soil analysis etc was not undertaken. In cases where I consider that further investigation is required I note this in the preliminary management recommendations column of the tree survey data. At this site I have recommended further inspections for Trees 2, 3 and 6.

1.4.2 This Tree Survey Report comprises Stage 1 of a five stage arboricultural process relating to planning. Stage 2 is the arboricultural input required during layout design taking account of arboricultural features and constraints; Stage 3 is the preparation of supporting documentation, in the form of an Arboricultural

Implication Assessment (when the layout is to our satisfaction); Stage 4 is the preparation of an Arboricultural Method Statement specifying how trees will be physically protected during the development process; and Stage 5 is the implementation, supervision and on-going monitoring of the works during development.

1.5 **Survey date:** Trees were surveyed by me, Patrick Stileman, on 14th June 2011.

2 TREE SURVEY

2.1 **Tree identification:** Individual trees have been allocated a number, and groups of trees have been allocated a number prefixed by the letter G. Their locations are shown on the Tree Survey Plans dated 27th June 2011, reference DS19051101.01 and DS19051101.01A (the latter showing a larger scale of the woodland area). Data pertaining to each tree or group of trees is included in the Tree Survey Data on Pages 7-19 of this report.

2.2 **Tree data:** In carrying out the survey I assessed the following for each tree and group of trees:

- Dimensions (height, crown spread and stem diameter).
- Height above ground level of the lowest crown base.
- Structural defects of significance and general condition. Assessment of the value that the tree provides from a wider landscaping perspective.
- An assessment of the likely remaining useful contribution in years.

Based on the above information, I have allocated a grade (A, B, C, R) indicating the quality and value for each tree or tree group (in accordance with BS5837), to be taken into account when planning any future development.

3 STATUTORY PROTECTION

3.1 I am unaware at this stage if trees included in the survey are protected by a Tree Preservation Order (TPO) or by virtue of being located within a Conservation Area. Trees at this site are not exempt from felling license requirements set out in the Forestry Act 1967.

4 TREE CONSTRAINTS PLAN

- 4.1 Based on the information obtained by the tree survey, I have prepared two tree constraints plans (TCPs) dated 27th June 2011, reference DS19051101.02 and DS19051101.02A (the latter showing a larger scale of the woodland area).
- 4.2 On the TCPs I have used different colours indicating tree crowns to distinguish between trees which could be removed for reasons of sound arboricultural management (red); trees of relatively low quality which could defensibly be removed in order to facilitate development (blue); and trees with a higher retention priority which should be regarded as a constraint to development in the first instance (green).
- 4.3 Table 1 of BS5837 states that '*C category trees will usually not be retained where they would impose a significant constraint on development*'. Should their retention impose significant constraints to the design layout then removal can be justified. If C grade trees can be retained without placing significant constraints on the layout then consideration should be given for this. In certain situations constraints posed by better quality trees (B and A grade) are disproportionate to their value; in these cases their removal can sometimes be justified in order to promote good urban design, usually on the basis that mitigation is provided elsewhere on the site in the form of high quality new planting.
- 4.4 The TCP shows the position of the Root Protection Area (RPA) for trees as broken pink lines. BS5837 (Section 2.5) defines the RPA as a '*layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m sq*'. The RPA represents the **minimum** area around each tree in which the ground should remain largely undisturbed. The RPA is an area based on a circle with a radial distance of 12x the stem diameter at 1.5 metres in the case of single-stemmed trees, or 10x the stem diameter just above the root flare in the case of multi-stemmed trees. In situations where the site conditions clearly prevent consistent rooting around the tree I modify the shape of the RPA to take this into account. At Warren Wood Manor I have modified the shape of the RPA for Trees 1-6 to take account of the road adjacent which provides a poor rooting environment, and for Tree 43 which is a high quality historic hedgerow tree whose stem diameter cannot easily be measured. Refer also to specific notes on the TCPs.
- 4.5 At the design stage (Stage 2 – see Section 1.3.2), further detailed advice regarding driveway layout and design parameters should be given by the arboriculturalist.

5 BRIEF WOODLAND DESCRIPTION

- 5.1 The woodland at this site is a relatively young secondary woodland comprising trees of mixed, predominantly broadleaf species. The high forest trees are dominated by black Italian poplars which are apparently planted trees of generally the same mature age (50 – 70 years, I assess) and of variable condition. Several of the poplars have suffered from structural failure.
- 5.2 Pedunculate oak and sycamore are the principal early-mature sub canopy trees which are developing throughout, though several other tree species are also present.
- 5.3 Adjacent to the northern and southern woodland boundaries there is a ditch and bank along which hornbeams, which were historically managed as hedgerow trees by laying, have become re-established as multi-stemmed trees with wide spreading crowns.
- 5.4 The shrub layer is dominated by Rhododendron (*R. ponticum*) which is impenetrable in areas and has apparently suppressed the development of other vegetation. Where the woodland floor is exposed, the vegetation is dominated by nettles.

6 KEY TO TREE SURVEY DATA

- 6.1 **Tree no:** Tree numbers as shown on the Tree Survey Plan. Where trees form a coherent group, they have been assessed as a group, and are shown in the survey and on the plan prefixed with the letter G.
- 6.2 **Species:** These are listed in the schedule by their common name. The botanical names of the principal species present are as follows (listed in chronological order as they appear in the survey):

Cedar of Lebanon: *Cedrus libani*
Corsican pine: *Pinus nigra* subsp. *laricio*
Atlas cedar: *Cedrus atlantica*
Pedunculate oak: *Quercus robur*
Silver birch: *Betula pendula*
Holly: *Ilex aquifolium*
Downy birch: *Betula pubescens*
Hornbeam: *Carpinus betulus*
Sycamore: *Acer pseudoplatanus*
Norway spruce: *Picea abies*
Ash: *Fraxinus excelsior*

Hawthorn: *Crataegus monogyna*
Black Italian poplar: *Populus x canadensis* 'Serotina'
Western red cedar: *Thuja plicata*
Hazel: *Corylus avellana*
Rowan: *Sorbus aucuparia*
Grey poplar: *Populus x canescens*
Crack willow: *Salix fragilis*
Turkey oak: *Quercus cerris*
Elder: *Sambucus nigra*
English elm: *Ulmus procera*
Common lime: *Tilia x europaea*
Horse chestnut: *Aesculus hippocastanum*
Small leaved lime: *Tilia cordata*

- 6.3 **Age class:** An assessment of the relative life stages of the tree where Y = young, MA = middle -aged, M = mature, OM = over-mature, V = veteran.
- 6.4 **Ht. (m):** The height of the tree is measured or estimated to the nearest metre.
- 6.5 **Crown base:** The height above ground level and orientation of the lowest permanent crown base (excluding basal, and small epicormic growth)
- 6.6 **Stems:** This indicates whether a tree is single or multi-stemmed. Trees with more than one stem below 1.5 metres are defined as multi-stemmed, and shown as m. Trees with a single stem are shown as s.
- 6.7 **Crown spread est. (m) – NSWE:** Radial crown spread measured or estimated in metres, listed for north, south, west and east.
- 6.8 **Dia. @ 1.5m (mm):** Stem diameter measured at 1.5m above ground level, given in millimetres. Where access to the stem for measurement purposes was not possible, an estimated size is given with (est) shown. For multi-stemmed trees, stem diameter is taken immediately above root flare. For tree groups, either a size range or the maximum noted size is given.
- 6.9 **Condition & Observations:** Tree condition summary, shown as GOOD, FAIR, POOR or DEAD. Principal observations are also recorded.
- 6.10 **Preliminary management recommendations:** Work required to trees for reasons of sound arboricultural management only, **not for development facilitation**. This is not to be taken as a list of tree work required prior to development activity, but provides management recommendations for trees in their current context. This may include the further investigation of suspected

defects. Where trees are located in neighbouring property, this is usually not applicable.

6.11 **Retention span:** Estimated remaining contribution based on species, condition & context. The following longevity bands are used: 0-5; 5-10; 10-20; 20-40; 40+

6.12 **Grade:** Quality & Value classification according to BS 5837:2005, where:

6.12.1 R = Trees in such a condition that they are unlikely to have any useful retention span beyond 10 years, and/or in their current context should be removed for reasons of sound arboricultural management. These are shown on the Tree Survey Plan as dark red.

6.12.2 A = Trees of the highest quality and value, and in such a condition that they are likely to make a useful contribution for 40 years or more. These trees are shown on the Tree Survey Plan as light green.


6.12.3 B = Trees of moderate to high quality and value, and in such a condition that they are likely to make a useful contribution for 20 years or more. These trees are shown on the Tree Survey Plan as mid blue.

6.12.4 C = Trees of low quality and value, or of no particular merit, and in such a condition that they are likely to make a useful contribution for 10 years or more. These trees are shown on the Tree Survey Plan as grey. Trees graded C should not pose a constraint to development.

6.12.5 Trees of notable value are graded as Category A or Category B. These trees are divided further into sub-categories. Sub-category 1 is allocated where it has been assessed that the tree has significant arboricultural value. Sub-category 2 is allocated where it is assessed that the tree has significant landscaping value. Sub-category 3 is allocated where it is assessed that the tree has significant cultural or conservation value.

6.12.6 Trees may be allocated more than one sub-category. All sub-categories carry equal weight, with for example an A3 tree being of the same importance and priority as an A1 tree.

5.12.7 I do not allocate sub-categories to Category C trees, because by definition none of the sub-categories are applicable to them


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TREE SURVEY DATA

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
1	Cedar of Lebanon	M	14	3m S	s	4	8	5	7	1200 est	DEAD. Decayed stem potential hazard of road adjacent.	Remove to leave 6 metre standing stem, retained for ecological reasons	0	R
2	Corsican pine	M	24	3m W	s	9	5	7	7	948	GOOD – FAIR. Large, prominent tree on road frontage. Stems have tight, potentially weak unions. Steel cables attached to webbing straps have been installed as support.	Climbing inspection to check cables and straps. Replace if required	20-40	B2
3	Corsican pine	M	23	3m E	s	7	5	8	10	937	GOOD - FAIR. Prominent tree on road frontage. Twin-stemmed from 6 metres with potentially weak union. Steel cable attached to webbing straps has been installed between members.	Climbing inspection to check cable and straps. Replace if required	20-40	B2
4	Atlas Cedar	M	22	3m E	s	9	9	8	9	1210	FAIR. Large, prominent tree. Crown decline on south side.	No action required at time of survey	20-40	B2
5	Atlas Cedar	M	23	1m E	s	9	15	10	11	1185	GOOD. Prominent tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	A2
6	Corsican pine	M	24	8m E	s	7	7	8	6	1100 est	FAIR. Prominent tree on road frontage. Long end-loaded lateral limb on west side. Small <i>Phaeolus schweinitzii</i> fruiting body at base between buttress on west side. Base appears sound.	Carry out detailed inspection, including soil excavation to examine condition of buttress roots, and decay detection. Install brace to limb on west side.	20-40 (provisional)	B2 (provisional)
7	Pedunculate oak	V	24	5m E	s	10	11	12	12	1320	GOOD. Large, very old tree with features of ecological value including dead wood. Old longitudinal lightning wound and shattered limb ends. Important tree of veteran status.	No action required at time of survey	40+	A3

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
8	Silver birch	MA	13	8m N	s	3	1	3	2	150 est	POOR. Low vitality. Slender stem. Short retention span.	No action required at time of survey	5-10	R
9	Holly	MA	7	1m S	m	4	3	6	3	450 est GL	POOR. Multi-stemmed from ground level. Tight unions. Hazard of collapse.	Remove for reasons of sound arboricultural management	0-5	R
10	Downy birch	M	18	5m W	s	5	1	5	2	350 est	POOR. Tall tree with relatively slender stem and low vitality.	No action required at time of survey	10-20	C
11	Silver birch	M	20	4m N	s	6	3	1	7	500 est	FAIR. Crown asymmetry to east. Tree of moderate quality and value.	No action required at time of survey	20-40	B1
12	Hornbeam	MA	14	3m S	s	3	5	5	4	193	GOOD. Relatively young tree with high future potential.	No action required at time of survey	40+	B1
12A	Sycamore	MA	19	10m W	s	6	4	5	5	398	FAIR – POOR. Twin-stemmed from 8 metres. Tight union developing which could become hazardous with time and limit retention span.	No action required at time of survey	10-20	C
13	Norway spruce	MA	16	3m W	s	2	3	3	1	265	FAIR. Small, suppressed tree of relatively low significance.	No action required at time of survey	20-40	C
14	Norway spruce	M	20	5m W	s	3	4	4	2	494	GOOD. Large, dominant tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
15	Sycamore	MA	18	3m W	s	5	2	3	3	300 est	FAIR. Small, suppressed tree of relatively low significance.	No action required at time of survey	20-40	C
16	Ash	MA	22	12m N	m	3	4	3	3	500 est GL	FAIR. Located off-site in adjacent property. Twin-stemmed from ground level. Tall, slender tree.	No action required at time of survey	20-40	B1
17	Norway spruce	MA	17	4m W	s	1	2	3	1	272	FAIR – POOR. Slender, suppressed tree. Crown predominantly at top only.	No action required at time of survey	10-20	C
18	Norway spruce	MA	18	13m E	s	2	2	1	2	265	FAIR – POOR. Slender, suppressed tree. Crown predominantly at top only.	No action required at time of survey	10-20	C

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
19	Downy birch	MA	16	3m W	s	3	2	1	1	182	FAIR. Small suppressed tree of relatively low significance. Small secondary stem from ground level.	No action required at time of survey	20-40	C
20	Norway spruce	MA	19	8m N	s	2	2	2	2	260	FAIR – POOR. Slender, suppressed tree. Crown predominantly at top only.	No action required at time of survey	10-20	C
21	Pedunculate oak	Y	13	10m N	s	2	0	1	1	183	DEAD.	No action required at time of survey	0	R
22	Sycamore	MA	19	6m N	s	5	5	3	4	305	FAIR. Reasonable crown structure – slight asymmetry from competition.	No action required at time of survey	40+	B1
23	Pedunculate oak	Y	17	10m S	s	3	3	4	3	278	FAIR. Slender form from competition. Potential to develop into good quality high forest tree if others removed.	No action required at time of survey	40+	B1
24	Norway spruce	MA	20	12m W	s	3	2	3	2	333	FAIR. Slender, suppressed tree. Crown predominantly at top only.	No action required at time of survey	10-20	C
25	Norway spruce	MA	19	8m N	s	4	1	3	2	252	FAIR. Slender, suppressed tree. Crown predominantly at top only.	No action required at time of survey	10-20	C
26	Hawthorn	M	12	3m E	m	3	2	2	3	300 est GL	POOR. Suppressed tree of low vitality.	No action required at time of survey	10-20	C
27	Downy birch	M	19	3m N	s	6	6	4	4	650 est	POOR. Prominent tree on woodland edge. Low vitality. Significant buttress and basal decay on north side. Short retention span.	Remove for reasons of sound arboricultural management	0-5	R
28	Pedunculate oak	MA	21	12m W	s	5	6	6	6	450 est	GOOD. No defects seen of apparent structural significance. Relatively slender form, but dominant and developing into good quality high forest tree.	No action required at time of survey	40+	B1
29	Pedunculate oak	MA	21	12m W	s	5	5	5	6	415	GOOD. No defects seen of apparent structural significance. Relatively slender form, but dominant and developing into good quality high forest tree.	No action required at time of survey	40+	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
30	Downy birch	MA	15	6m S	s	4	3	5	2	250 est	FAIR. Slender, suppressed tree of relatively low significance.	No action required at time of survey	10-20	C
31	Pedunculate oak	Y	13	6m W	s	3	1	6	1	200 est	POOR. Suppressed, distorted tree with low future potential.	No action required at time of survey	20-40	C
32	Pedunculate oak	Y	16	13m W	s	3	1	5	0	318	POOR. Suppressed, distorted tree with low future potential.	No action required at time of survey	20-40	C
33	Black Italian Poplar	M	20	11m N	s	5	2	6	1	508	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
34	Black Italian Poplar	M	23	10m N	s	8	3	7	4	645	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
35	Norway spruce	MA	11	4m W	s	1	3	3	3	200 est	POOR. Distorted, suppressed tree with low vitality.	No action required at time of survey	10-20	C
36	Pedunculate oak	Y	14	11m N	s	4	1	4	3	250 est	POOR. Suppressed, distorted tree with low future potential.	No action required at time of survey	10-20	C
37	Black Italian Poplar	M	23	8m S	s	11	7	8	8	700 est	GOOD. Dominant woodland tree. No defects seen of apparent structural significance. Dense rhododendron prevented access to stem.	No action required at time of survey	20-40	B1
38	Black Italian Poplar	M	25	11m N	s	9	8	5	8	744	GOOD. Dominant woodland tree. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
39	Black Italian Poplar	M	24	15m E	s	8	2	3	6	568	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
40	Pedunculate oak	Y	11	3m W	s	6	3	4	4	150 est	FAIR. Suppressed, distorted tree. Potential to develop if space is created by removal of companions.	No action required at time of survey	40+	C
41	Sycamore	MA	14	3m S	s	6	2	3	3	300 est	FAIR. Suppressed distorted tree of relatively low significance.	No action required at time of survey	20-40	C
42	Sycamore	MA	19	3m N	s	8	6	8	7	503	GOOD. Dominant high forest tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
43	Hornbeam	M	18	2m N	m	8	6	6	6	1000 est GL	GOOD. 3 trees have fused to form single canopy unit. Positioned on bank adjacent to ditch. Principal stems close to and parallel with ground from past hedge laying. Old boundary tree forming highly interesting arboricultural feature.	No action required at time of survey	40+	A3
44	Hornbeam	MA	18	2m S	s	10	4	4	5	321	GOOD. Boundary tree growing on ditch. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
45	Hornbeam	MA	12	1m N	s	6	4	7	2	200 est	GOOD. Connected to and probably same tree as T46.	No action required at time of survey	40+	A3
46	Hornbeam	M	17	1m S	m	9	8	8	8	1200 est GL	GOOD. 2 trees have fused to form single canopy unit. On bank adjacent to ditch. Re-grown from past hedgerow management. Highly interesting arboricultural feature.	No action required at time of survey	40+	A3
47	Pedunculate oak	MA	22	13m W	s	6	7	8	4	542	GOOD. Slight crown asymmetry. Dominant woodland tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
48	Norway spruce	MA	18	6m S	s	3	3	3	3	310	FAIR. Suppressed tree with relatively low vitality.	No action required at time of survey	10-20	C
49	Norway spruce	MA	19	9m E	s	2	2	2	3	316	FAIR. Slender tree with relatively low vitality.	No action required at time of survey	20-40	C
50	Norway spruce	MA	19	6m S	s	1	3	1	3	267	FAIR. Slender tree with relatively low vitality.	No action required at time of survey	20-40	C
51	Pedunculate oak	MA	22	13m N	s	5	5	3	5	366	GOOD. Slender tree with high crown base. Potential to develop as high quality tree.	No action required at time of survey	40+	B1
52	Pedunculate oak	MA	14	9m S	s	1	6	2	4	250 est	FAIR. Slender, distorted tree with relatively poor form.	No action required at time of survey	20-40	C

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
53	Western red cedar	M	18	1m N	m	4	6	3	4	1200 est GL	GOOD. Prominent tree on woodland edge. Twin-stemmed from 1 metre. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
54	Downy birch	M	19	6m N	m	7	1	1	3	600 est GL	FAIR. Twin-stemmed from 0.5 metres. Stems slender and partially suppressed. Distorted crown.	No action required at time of survey	20-40	C
55	Downy birch	M	16	7m N	s	4	4	2	5	305	POOR. Suppressed, sub-canopy tree.	No action required at time of survey	20-40	C
56	Sycamore	Y	13	3m S	s	5	4	7	1	183	FAIR. Crown distortion from competition. Small tree of relatively low significance.	No action required at time of survey	40+	C
57	Sycamore	Y	14	3m S	s	3	4	3	4	207	FAIR. Crown distortion from competition. Small tree of relatively low significance.	No action required at time of survey	40+	C
58	Black Italian Poplar	M	23	10m W	s	6	4	4	5	500 est	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
59	Black Italian Poplar	M	25	14m N	s	7	4	6	6	650 est	GOOD. Dominant woodland tree. No defects seen of apparent structural significance. Dense rhododendron prevented access to stem.	No action required at time of survey	20-40	B1
60	Black Italian Poplar	M	23	9m N	s	7	7	4	5	600 est	POOR. Principal stem lost. Stem decay visible at 10 metres. Short retention span.	No action required at time of survey	10-20	C
61	Black Italian Poplar	M	23	13m E	s	7	4	5	5	582	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
62	Sycamore	MA	13	2m N	s	6	5	5	6	218	POOR. Small, suppressed under-storey tree of relatively low significance.	No action required at time of survey	20-40	C
63	Black Italian Poplar	M	22	12m N	s	3	2	1	4	250 est	POOR. Highly slender, suppressed tree. Short retention span.	No action required at time of survey	10-20	C
64	Sycamore	MA	14	6m E	s	2	6	3	6	218	POOR. Small, suppressed under-storey tree of relatively low significance.	No action required at time of survey	20-40	C

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
65	Black Italian Poplar	M	24	8m S	s	3	7	3	7	564	FAIR. Located off-site. Dominant woodland tree. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
66	Black Italian Poplar	M	24	15m E	s	0	4	1	4	550 est	POOR. Slender, leaning tree, stem swelling from bacterial canker. Short retention span.	No action required at time of survey	10-20	C
67	Black Italian Poplar	M	23	16m S	s	0	8	0	5	550 est	POOR. Slender, leaning tree, stem swelling from bacterial canker. Short retention span.	No action required at time of survey	10-20	C
68	Black Italian Poplar	M	24	15m N	s	5	6	4	6	570	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
69	Black Italian Poplar	M	20	15m S	s	2	3	2	3	452	POOR. Low vitality with crown die-back. Narrow crown. Relatively short retention span.	No action required at time of survey	10-20	C
70	Black Italian Poplar	M	24	16m N	s	3	5	1	9	575	POOR. Leaning tree with crown die-back. Relatively short retention span.	No action required at time of survey	10-20	C
71	Black Italian Poplar	M	17	12m N	s	2	0	0	2	550 est	POOR. Principal stem broken and decayed. Secondary growth only remains.	No action required at time of survey	5-10	R
72	Black Italian Poplar	M	20	7m W	s	6	4	5	3	528	FAIR. Principal stem broken and lost. Twin-stemmed from 5 metres at fracture point. Likely decaying cavity at stem union.	No action required at time of survey	10-20	C
73	Black Italian Poplar	M	15	7m E	s	4	1	2	3	400 est	POOR. Principal stem broken out at 5 metres leaving secondary growth only remaining.	No action required at time of survey	5-10	R
74	Black Italian Poplar	M	25	9m W	s	5	6	8	7	723	GOOD. Dominant woodland tree. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
75	Black Italian Poplar	M	22	8m N	s	4	4	5	5	604	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
76	Black Italian Poplar	M	24	14m N	s	5	3	6	6	603	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
77	Pedunculate oak	Y	9	4m S	s	4	4	3	5	218	FAIR. Sub-canopy tree suppressed and distorted from competition. Unlikely to develop into high quality specimen.	No action required at time of survey	40+	C
78	Pedunculate oak	Y	10	6m W	s	5	2	4	4	197	POOR. Sub-canopy tree suppressed and distorted from competition. Unlikely to develop into high quality specimen.	No action required at time of survey	40+	C
79	Black Italian Poplar	M	20	14m N	s	3	2	4	3	420	DEAD. Crown appears fragile.	No action required at time of survey	0	R
80	Downy birch	M	17	6m E	s	4	4	3	4	327	FAIR. Slightly suppressed from competition. Tree of moderate quality and value.	No action required at time of survey	20-40	B1
81	Pedunculate oak	MA	16	7m S	s	4	5	2	5	274	FAIR. Suppressed sub-canopy tree could develop into good specimen if others removed.	No action required at time of survey	40+	B1
82	Pedunculate oak	MA	18	5m E	s	4	6	6	5	361	GOOD. Relatively narrow crown. Reasonably good form and potential to develop as dominant tree.	No action required at time of survey	40+	B1
83	Sycamore	MA	18	3m W	s	5	4	5	2	290	FAIR. Crown asymmetry from competition. Tree of moderate quality and value.	No action required at time of survey	40+	B1
84	Hazel	M	9	1m E	m	5	5	5	6	600 est GL	FAIR. Under-storey tree close to boundary of moderate quality and value.	No action required at time of survey	40+	B2
85	Black Italian Poplar	M	21	10m E	s	2	5	4	6	495	POOR. Slender crown with low vitality and die-back.	No action required at time of survey	10-20	C
86	Downy birch	M	19	6m S	s	6	4	5	3	400 est	GOOD. Located close to boundary. Reasonable form. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
87	Yew	MA	7	1m E	m	3	5	4	4	550 est GL	FAIR. Multi-stemmed sub-canopy tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	B2

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
88	Downy birch	M	18	8m W	s	7	0	5	4	328	FAIR. Pronounced crown distortion north. Limited retention span.	No action required at time of survey	10-20	C
89	Downy birch	M	20	5m S	s	3	3	6	2	344	GOOD. Slightly distorted form from competition. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
90	Pedunculate oak	MA	20	8m E	s	5	4	5	6	390	GOOD. Relatively narrow crown. Reasonably good form and potential to develop as dominant tree.	No action required at time of survey	40+	B1
91	Sycamore	M	20	7m S	s	6	6	7	5	700 est	GOOD. Prominent tree close to boundary. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
92	Sycamore	MA	12	3m W	s	3	3	3	3	218	FAIR. Suppressed sub-canopy.	No action required at time of survey	40+	C
93	Black Italian Poplar	M	19	9m N	s	5	6	4	3	514	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
94	Black Italian Poplar	M	24	7m N	s	5	8	5	5	617	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
95	Sycamore	MA	12	4m W	s	3	3	5	2	258	FAIR. Suppressed sub-canopy tree. Rabbit tunnels at base appear to have made root plate unstable.	No action required at time of survey	10-20	C
96	Sycamore	MA	15	4m W	s	6	4	6	2	315	FAIR. Suppressed sub-canopy tree with crown distortion from competition.	No action required at time of survey	20-40	C
97	Black Italian Poplar	M	25	15m W	s	5	5	8	2	579	FAIR. Slender tree with high crown base. Relatively low vitality. Long, potentially vulnerable lateral limb to west over boundary.	Shorten long limb on west side by 30%	10-20	C
98	Sycamore	MA	15	8m N	m	3	2	3	4	320 GL	FAIR. Twin-stemmed from 1.2 metres with tight union developing. Suppressed sub-canopy tree.	No action required at time of survey	10-20	C
99	Sycamore	MA	17	9m S	s	2	4	1	4	270	FAIR. Slender, suppressed, sub-canopy tree with distorted crown shape.	No action required at time of survey	20-40	C

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
100	Black Italian Poplar	M	27	15m S	s	0	5	6	4	455	FAIR. Highly slender tree with limited likely retention span.	No action required at time of survey	10-20	C
101	Black Italian Poplar	M	27	10m S	s	5	6	4	6	602	GOOD. Dominant woodland tree. No defects seen of apparent structural significance.	No action required at time of survey	20-40	B1
102	Black Italian Poplar	M	26	12m S	s	5	3	4	6	470	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
103	Black Italian Poplar	M	24	11m S	s	2	7	3	6	503	POOR. Stem has broken at 8 metres with multiple leaders now developing on weak structure.	No action required at time of survey	10-20	C
104	Black Italian Poplar	M	19	10m S	s	2	8	9	2	560	POOR. Stem has broken at 7 metres with multiple leaders now developing on weak structure.	No action required at time of survey	10-20	C
105	Sycamore	MA	14	3m W	s	2	6	7	1	241	FAIR. Slender, suppressed, sub-canopy tree with distorted crown shape.	No action required at time of survey	20-40	C
106	Holly	M	8	1m N	m	4	3	7	4	550 est GL	POOR. Twin-stemmed from ground level. Bark substantially removed by browsing mammals. Pronounced lean to west.	No action required at time of survey	10-20	C
107	Hornbeam	M	11	2m E	m	3	5	6	6	600 est GL	FAIR. Suppressed tree. Twin-stemmed from 0.5 metres. Cavity at base on south side.	No action required at time of survey	10-20	C
108	Sycamore	MA	15	8m N	s	3	2	3	1	237	FAIR. Slender tree drawn up from competition. Distorted crown from competition.	No action required at time of survey	20-40	C
109	Sycamore	MA	19	10m N	m	3	5	4	4	600 est GL	POOR. Slender, drawn up tree. Twin-stemmed from 1 metre – tight union between members likely to limit retention span.	No action required at time of survey	10-20	C
110	Hornbeam	M	10	2m N	m	6	6	7	5	430 GL	FAIR. Re-grown from past coppice management at 1metre. Under-storey tree of moderate quality and value.	No action required at time of survey	40+	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
111	Pedunculate oak	MA	19	7m S	s	5	7	6	4	505	GOOD. Prominent high canopy tree. Some crown distortion from competition. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
112	Ash	M	22	11m S	s	3	7	8	3	468	GOOD. Prominent high canopy tree. Some crown distortion from competition. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
113	Pedunculate oak	MA	19	6m S	s	3	5	3	5	440	GOOD. Slight suppression from crown competition. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1
114	Sycamore	Y	15	1m N	s	3	6	5	6	228	FAIR. Small sub-canopy tree slightly suppressed by competition.	No action required at time of survey	40+	B1
115	Black Italian Poplar	M	25	17m S	s	2	5	4	5	578	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
116	Black Italian Poplar	M	25	10m S	s	3	5	4	8	637	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
117	Black Italian Poplar	M	15	7m W	s	3	4	4	7	387	POOR. Broken stem at 6 metres. Re-growth growing from decayed stub.	No action required at time of survey	5-10	R
118	Ash	Y	16	2m W	s	2	5	3	4	163	FAIR. Slender tree with crown distortion from competition.	No action required at time of survey	20-40	C
119	Black Italian Poplar	M	16	12m S	s	2	2	2	3	362	POOR. Broken stem at 8 metres. Re-growth growing from decayed stub.	No action required at time of survey	5-10	R
120	Black Italian Poplar	M	24	12m W	s	3	4	4	5	511	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
121	Sycamore	Y	16	1m W	s	3	4	4	3	200	FAIR. Slender tree with crown distortion from competition.	No action required at time of survey	20-40	C
122	Hornbeam	MA	15	1m S	s	4	8	4	9	227	FAIR. Under-storey tree with reasonably good form and no defects seen of apparent structural significance.	No action required at time of survey	40+	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
123	Hornbeam	MA	10	1m W	s	7	3	7	1	190	FAIR. Under-storey tree with moderate lean to the west.	No action required at time of survey	40+	B1
124	Black Italian Poplar	M	24	13m E	s	3	6	3	5	408	POOR. Twin-stemmed from 10 metres. Union is weak and is likely to fail with time.	No action required at time of survey	10-20	C
125	Black Italian Poplar	M	24	12m W	s	0	6	7	3	595	POOR. Distorted crown. Significant stem decay at 11 metres. Stem collapse foreseeable.	No action required at time of survey	5-10	R
126	Sycamore	Y	14	3m W	s	2	7	6	3	210	FAIR. Under-storey tree with reasonable form and future potential.	No action required at time of survey	40+	B1
127	Black Italian Poplar	M	16	5m W	s	1	2	1	4	400 est	POOR. Stem has split from 7 metres to ground level to leave hollow shell and secondary re-growth only.	No action required at time of survey	5-10	R
128	Rowan	M	13	4m S	m	2	4	4	4	500 est GL	FAIR. Twin-stemmed from ground level. Under-storey tree of moderate quality and value.	No action required at time of survey	20-40	B1
129	Black Italian Poplar	M	24	11m S	s	6	4	5	6	525	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
130	Black Italian Poplar	M	25	4m W	s	4	6	4	4	714	POOR. Past major stem failure at 7 metres on north side has left large decaying wound likely to lead to further limb failure. Tree located off-site.	No action required at time of survey	5-10	R
131	Black Italian Poplar	M	25	7m E	s	7	6	8	4	709	FAIR. Crown distortion from competition. Dominant woodland tree.	No action required at time of survey	20-40	B1
132	Grey Poplar	M	20	8m E	s	2	10	5	1	403	POOR. Kinked stem with pronounced crown asymmetry to south. Short likely retention span.	No action required at time of survey	10-20	C
133	Pedunculate oak	MA	15	2m E	s	3	7	8	6	543	GOOD. Crown asymmetry from competition. No defects seen of apparent structural significance.	No action required at time of survey	40+	B1

Tree No.	Species	Age Class	Ht. est. (m)	Crown base	Stems	Crown spread est. (m)				Dia. 1.5m (mm)	Condition & Observations	Preliminary management recommendations	Ret span (yrs)	Grade
						N	S	W	E					
134	Crack willow	M	5	0m S	s	-	-	-	-	750 est	POOR. Stem is fractured at 1 metre and tree has collapsed into field. Re-growth developing.	Remove for reasons of sound arboricultural management	5-10	R
135	Crack willow	M	4	0m S	s	-	-	-	-		DEAD. Fallen tree.	Remove for reasons of sound arboricultural management	5-10	R
136	Turkey Oak	M	20	3m E	s	8	8	8	8	850 est	GOOD. High quality hedgerow tree. No defects seen of apparent structural significance.	No action required at time of survey	40+	A1
G1	Elder, elm, hawthorn hedge	MA	3	0m S	m	2	2	2	2	150 est GL max	Unmanaged hedgerow along road frontage appears relatively recent. Good density throughout with no gaps.	No action required at time of survey	40+	B2
G2	Common lime, horse chestnut, small leaved lime	M	16-22	1m E	s	6	6	6	6	900 est max	GOOD. Linear group of trees adjacent to site boundary. Trees assessed from site only.	No action required at time of survey	40+	B2
G3	Hornbeam	MA-M	12-18	1m E	m	9	9	9	9	900 GL est max	GOOD. Multi-stemmed from past hedgerow management. Continuous tree screen.	No action required at time of survey	40+	B2
G4	Hornbeam x6	M	14	0m S	m	4	7	5	5	900 est max	GOOD. Linear tree group on boundary comprising 6 trees which have developed from past hedgerow management. High quality linear group on boundary.	No action required at time of survey	40+	A3

APPENDIX 1

Qualifications and experience of Patrick Stileman BSc(Hons), MICFor, Dip.Arb(RFS), M.Arbor.A

I am Patrick Stileman, director of Patrick Stileman Ltd Arboricultural Consultancy.

My qualifications in arboriculture are as follows:

National Certificate in Arboriculture *Nch(arb)*

The Arboricultural Associations Technicians Certificate *Tech.Cert (Arbor.A)*

The Royal Forestry Society's Professional Diploma in Arboriculture *Dip.Arb(RFS)*

In addition to the qualifications listed above which are specific to the field of arboriculture, I also hold an honours degree in Environmental Science *BSc(Hons)*.

I hold chartered status, being a Chartered Arboriculturist and professional member of the Institute of Chartered Foresters *MICFor*.

I am a registered consultant with the Arboricultural Association. I am a member of the Arboricultural Associations Media and Communications Committee.

I am a member of the Royal Forestry Society.

I have been working within the arboricultural industry since 1994 and have been carrying out consultancy work since 2001. I am frequently instructed by professionals to provide advice and assistance relating to trees and the planning process, and I have a wide client base in this field including developers, architects, planning consultants, and Local Planning Authorities. I am experienced with providing an arboricultural input at planning appeals at written representation, informal hearing and public local inquiry.

I am frequently instructed to assist with tree risk assessments, and to provide guidance relating to tree safety. Past clients for this work include Local Authorities, (notably St Albans District Council, Dacorum Borough Council, Wycombe District Council, Woking District Council, Hertfordshire and Surrey County Councils), schools, housing associations and private individuals.

Other areas of my work have involved the provision of advice in relation to alleged tree related damage to buildings for domestic clients and Hertfordshire County Council; tree planting schemes; and advice relating to the general management of trees.

Prior to running my current consulting practice, I was a partner in an arboricultural contracting business in which I was involved with the practical aspect of organising, and execution of contract tree work.