ARBORICULTURAL SURVEY REPORT

TREE SURVEY SCHEDULE & TREE CONSTRAINTS PLAN

64 Henwood Green Road
Pembury, Tunbridge Wells
Kent TN2 4LN

Client: Walbax Ltd

October 2023

Abi St Aubyn

MICFor MArborA DipARB L6 (ABC) MEng(Hons)

Ref: StA 3152 AS Henwood Green Road Rev -

Contents

1. Introduction

1.1. Scope of report

1.1.1 St Aubyn Tree Consultancy Ltd are instructed to carry out a survey of 64 Henwood Green Road, Pembury, Tunbridge Wells, Kent TN2 4LN, to provide the baseline tree constraints information to inform a planning application.

1.1.2 This report provides information about the site and the trees growing within and immediately adjacent to it. It includes a tree survey schedule, a table of root protection areas (RPAs) and a tree constraints plan.

1.1.3 This report complies with the planning policies of Tunbridge Wells Borough Council and with the recommendations of British Standard BS 5837: 2012, *Trees in relation to design, demolition and construction – Recommendations* (the British Standard).

1.2. Site description

1.2.1 The site is an 'L' shaped plot of land on the eastern side of Henwood Green Road. The eastern boundary abuts Henwood Green, the southern boundaries, the residential rear gardens of Nos. 54, 54A, 60, 62 & 62 Henwood Green Road. The northern boundary abuts Pepinburgh House.

1.2.2 The site comprises a detached dwelling with garage and a large garden.

1.2.3 The levels of the site increase towards the south.

1.2.4 A check of an online soil information resource[1] revealed the soils to be slightly acid loamy and clay soils with impeded drainage.

1.3. Information provided

1.3.1 The following plan was used to aid the preparation of this report:

- Topo ref: Rigour Survey RS-2382

[1]CRANFIELD SOIL AND AGRIFOOD INSTITUTE. (2021) Soil descriptions. [Online] Available from: www.landis.org.uk/soilscapes/ [Accessed: 13th September 2023]

1.4. Statutory protection

1.4.1 From information on Tunbridge Wells Borough Council's website, no trees within the boundaries of the site are shown to be the subject of a Tree Preservation Order (TPO).

1.4.2 The site is not in a Conservation Area.

1.5. Other designations

1.5.1 A check of 'MAGIC'[2] map showed that there are no areas of ancient semi-natural woodland (ASNW) within or adjacent to the site. Ancient semi-natural woodland is any area that's been continuously wooded since at least 1600 AD.

1.5.2 The site is outside of the High Weald area of outstanding natural beauty (AONB). However the boundary of the High Weald AONB abuts part of the eastern boundary of the site.

1.6. Limitations

1.6.1 This arboricultural survey report has been prepared as a design tool for a proposed development and planning application. This survey does not constitute a condition and safety survey.

1.6.2 The locations of trees are based on the topographical plan provided. Additional trees omitted from the topographical survey have been plotted using measurements taken on site where necessary.

1.6.3 The condition of trees can change significantly within short periods of time due to natural events or people led activities. If there are no changes within the site, this report is valid for a period of 2 years.

[2] The DEFRA MAGIC map website provides authoritative geographic information about the natural environment across government: www.magic.defra.gov.uk

2. Tree survey

2.1. Findings

2.1.1 The trees on the site were surveyed on 24th July 2023 by Abi St Aubyn. Information about the survey methodology and the tree data recorded can be found at **Appendix 1** .

2.1.2 The root protection areas (RPAs) table and the tree constraints plan can be found at **Appendix 2** & **Appendix 3** .

2.1.3 A total of 33 individual trees, 3 groups, 4 hedges and 1 woodland were surveyed. A summary of their British Standard categorisation is provided at **Table 1** below.

Tree category	Individual tree	Group	Hedge	Woodland
A	-	-	-	-
B	6	-	-	1
C	27	2	4	-
U	-	1	-	-
Totals	33	3	4	1

Table 1: Tree categorisation summary

2.1.4 The key arboricultural feature of the site is the off-site woodland growing adjacent to the eastern boundary – this is a mixed native woodland with mature Oak and Ash.

3. Next Stages

3.1. Arboricultural impact assessment

3.1.1 This survey report provides the baseline arboricultural information to explain the arboricultural constraints at the site. The next stage is an iterative process - the emerging design is overlaid with the baseline arboricultural information. The direct and indirect arboricultural impacts of the evolving proposed design are assessed and where necessary mitigation measures are recommended. This is an informal impact assessment stage that informs the design process.

3.1.2 This impact assessment takes account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees. Such activities might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services, and the location and dimensions of all proposed excavations or changes in ground level, including any that might arise from the implementation of the recommended mitigation measures. In addition to the impact of the permanent works, the buildability of the scheme in terms of access, adequate working space and space for storage of materials also needs to be considered.

3.1.3 Once the design has been finalised a formal impact assessment report, tree removals plan, arboricultural method statement and tree protection plan will be required to accompany the planning application.

Appendix 1 Tree survey methodology and schedule

Tree survey methodology

The site was surveyed by Tom Wawman *CertArbL4(ABC)* and Abi St Aubyn on Tuesday 4th October *MArborA DipArb L6 (ABC) MEng(Hons)*. Weather conditions on the date of the survey were clear, dry and bright. Trees were in partial leaf.

The trees within and adjacent to the site were surveyed using Visual Tree Assessment[3] and following the recommendations of the British Standard[4].

The survey information was recorded using *Axciscape* tree survey software. Heights and radial crown spreads were measured using a laser distometer or where inaccessible, these were estimated. Trunk diameters were measured using a diameter tape or where inaccessible, these were estimated.

Other tools used if needed were a nylon headed hammer to tap trunks to detect the difference in sound in degraded wood/cavities and a large screwdriver to determine the depth of cavities, within reach from ground level.

The assessment of the categories (A, B, C & U) for trees was carried out in accordance with the British Standard[4].

[3]Visual Tree Assessment (VTA) is a tree survey methodology established by Mattheck & Breloer, outlined within the *Principles of Tree Hazard Assessment and Management* by Lonsdale, where external above ground visual signs of decay and of growth-related defects are recorded from ground level.

[4]BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations* (the British Standard). The survey methodology follows the British Standard apart from sub-categories have not been included and the first significant branch and direction of growth have been omitted. These adjustments are because the British Standard is nearly 10 years old and overdue a review, and in practice the omitted information is very rarely used to inform the design process or tree protection measures. However, if in a particular case this information is relevant, it will be included in the comments. Also, an additional category of 'collection' is used for new tree planting of a similar age, to supplement the recommended individual, group, woodland and hedge categories.

Tree survey schedule key

No	Sequential reference number. Individual trees are recorded as T, groups as G, woodlands as W and hedges as H.
Species	Common tree name.
Height	Measured/estimated in metres as access allows.
Trunk diameter	Measured/estimated in millimetres as access allows.
Crown clearance	Height between the existing ground level, estimated in metres.
Radial crown spread	Either an average or at four cardinal points. Measured/estimated as access allows.
Life stage	Young, semi-mature, early-mature, mature, over-mature and ancient.
Physiology	Good, average, below average, poor, dead.
Structure	Good, average, below average, hazardous, dead.
Landscape value	High, moderate, low.
Lifespan	<10 years, 10+ years, 20+ years, 40+ years
Comments	Presence of any decay and/or physical defects, and/or preliminary management recommendations. Whether a tree is considered to be a veteran tree[5], irrespective of its age.
Category	**A** – trees of high quality with an estimated remaining life expectancy of at least 40 years **B** – trees of moderate quality with an estimated remaining life expectancy of at least 20 years **C** – trees of low quality with an estimated remaining life expectancy of at least 10 years, or young tree with a stem diameter below 150mm **U** – trees unsuitable for retention due to their condition

[5] Whist veteran trees typically provide a range of niche habitats, they are especially valuable if ancient, due to their scarcity and high habitat value for associated species of fungi, lichens and saproxylic invertebrates, including some which are rare or endangered and occur only where such trees have been continuously present for centuries. These trees, where present, will be of high value, category 'A'.

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TREE SURVEY SCHEDULE 64 HENWOOD GREEN ROAD OCTOBER 2023

No.	Species	Height (m)	Trunk Dia. (mm)	Crown Clear-ance (m)	Radial Crown Spread (m)				Life Stage	Physi-ology	Struct-ure	Land-scape Value	Life-span	Comments	Cate-gory
					N	E	S	W							
T1	Cherry	6	210 &150	2	2	2	4	3	Semi-mature	Average	Average	Low	40+	One of a row of three Cherry trees growing adjacent to the access driveway.	C
T2	Cherry	6	175	2	2	2	4	2	Semi-mature	Average	Average	Low	40+	One of a row of three Cherry trees growing adjacent to the access driveway.	C
T3	Cherry	8	380	1.5	2	5	5	2	Semi-mature	Average	Average	Low	40+	One of a row of three Cherry trees growing adjacent to the access driveway.	C
H4	Holm Oak	3	20	0	0.5	0.5	0.5	0.5	Young	Average	Average	Low	40+	Evergreen boundary hedge.	C
T5	Cherry Laurel	8	250	2	4	3	2	4	Mature	Average	Average	Low	40+	Historically crown lifted.	C
T6	Apple	7	225	2	3	3	1	3	Semi-mature	Below average	Average	Low	20+	Below average leaf density; previously crown reduced on S side of crown.	C
T7	Hazel	9	190 & 290	2	6	5	1	1	Early-mature	Average	Below average	Low	40+	Twin-stemmed from 1m with sucker growth at base.	C
T8	Silver Birch	5.5	120	1.5	2	2	2	2	Young	Average	Average	Low	40+	Historically crown lifted; small, young tree.	C
T9	Cherry Plum	6	80 x5	0.5	1	1	1	1	Young	Average	Average	Low	40+	Regularly shaped; small young tree	C
T10	Portuguese Laurel	5	170	0	1	1	1	1	Young	Average	Average	Low	40+	Well maintained shrub.	C
T11	Dogwood	5	60 x10	0	1.5	1.5	1.5	1.5	Young	Average	Average	Low	40+	Well maintained shrub.	C
T12	Lilac	4	50 x10	0	1	1	1	1	Young	Average	Average	Low	40+	Shrub.	C
T13	Mock Orange	4	50 x10	1	1	1	1	1	Young	Average	Average	Low	40+	Shrub.	C
G14	Mixed Species	2	50	0	1	1	1	1	Young	Average	Average	Low	40+	Mix of small shrubs including Cypress & Buddleia.	C
H15	Holm Oak	3	20	0	0.5	0.5	0.5	1	Young	Average	Average	Low	40+	Off-site; boundary hedge.	C
G16	Mixed Species	11	300	2	4	4	4	1	Semi-mature	Average	Average	Low	40+	Mixed species including Cherry Laurel, Rowan & Ash; closely grown.	C

No.	Species	Height (m)	Trunk Dia. (mm)	Crown Clear-ance (m)	Radial Crown Spread (m)				Life Stage	Physi-ology	Struct-ure	Land-scape Value	Life-span	Comments	Cate-gory
					N	E	S	W							
H17	Privet	3.5	50	0	0.5	0.5	0.5	1	Young	Average	Average	Low	40+	Ornamental boundary hedge; overgrown with ivy.	C
T18	Hawthorn	7	105	2	2	2	2	1	Young	Average	Average	Low	40+	Previously pruned at a height of 3m and has regrown to 7m.	C
T19	Holly	7.5	160	2	3	3	3	1	Semi-mature	Average	Average	Low	40+	Previously pruned at a height of 6m and has regrown to 7.5m.	C
T20	Apple	5	295	2	4	8	3	1	Early-mature	Average	Below average	Low	20+	Crown reduced on SW side; multiple unoccluded pruning wounds with decay.	C
T21	Apple	5	255	2	4	4	3	1	Semi-mature	Average	Average	Low	40+	Reduced on SW side of crown.	C
T22	Hazel	7	100 x7	2	3	3	3	1	Young	Average	Average	Low	40+	Off-site; Hazel coppice.	C
T23	Rowan	11	300, 150 & 100	2.5	3	3	2	1	Mature	Average	Average	Low	40+	Off-site; supressed on S side by adjacent trees.	C
T24	Apple	7	180 & 150	2.5	1.5	2	2.5	1	Young	Average	Average	Low	40+	Off-site; ivy on trunk and growing up into crown.	C
T25	Leyland Cypress	18	750	2	4	4	4	1	Mature	Average	Average	Moderate	40+	Off-site; no access to base of tree; large tree growing in neighbouring garden.	B
H26	Leyland Cypress	19.5	600	2	5	5	5	1	Mature	Average	Average	Low	40+	Off-site; no access to bases of trees; overgrown unmanaged conifer hedge with great growth potential.	C
T27	Apple	6	225	2	3	2	3	1	Semi-mature	Average	Average	Low	40+	Small fruit tree; historically crown lifted.	C
T28	Sweet Gum	14	300	2	5	5	5	1	Early-mature	Average	Average	Moderate	40+	Off-site; attractive specimen tree; no access to base; growing in neighbouring residential garden.	B

No.	Species	Height (m)	Trunk Dia. (mm)	Crown Clear-ance (m)	Radial Crown Spread (m)				Life Stage	Physi-ology	Struct-ure	Land-scape Value	Life-span	Comments	Cate-gory
					N	E	S	W							
G29	Ash	19	400	2	5	5	5	1	Early-mature	Average	Below average	Low	<10	Group of three closely grown Ash trees with large strip wounds on trunks, likely to be attributed to historic bonfire damage; unoccluded wounds and of short term potential only due to the threat of Ash dieback; unlikely to survive as viable specimens for more than 10 years.	U
T30	Hawthorn	7	150 & 150	2	2	2	2	1	Young	Average	Average	Low	40+	Off-site; no access to base; dense ivy on trunk and up into crown.	C
T31	Oak	21	720	2	3	9	9	1	Mature	Average	Average	Moderate	40+	Large tree growing on NE boundary; historically crown lifted and crown is suppressed on the N side by the adjacent tree.	B
T32	Ash	22	900 & 700	3	8	8	9	1	Mature	Below average	Average	Moderate	10+	Dominant tree growing on eastern boundary; twin-stemmed from base; ivy on trunk; early signs of Ash dieback in crown; of short term potential due to Ash dieback.	C
T33	Oak	17	350	2	6	5	5	1	Early-mature	Average	Average	Moderate	40+	Off-site; no access to base; woodland edge tree; historically crown lifted over site.	B
T34	Hawthorn	12	150 x3	2	3	3	3	1	Semi-mature	Average	Average	Low	40+	Off-site; no access to base; woodland edge tree.	C
T35	Oak	14	350	2.5	6	6	6	1	Semi-mature	Average	Average	Moderate	40+	Off-site; no access to base; woodland edge tree.	B
T36	Field Maple	14	280 & 160	2	5	4	5	1	Early-mature	Average	Average	Low	40+	Twin-stemmed from base; lower crown historically reduced on site side.	C

No.	Species	Height (m)	Trunk Dia. (mm)	Crown Clear-ance (m)	Radial Crown Spread (m)				Life Stage	Physi-ology	Struct-ure	Land-scape Value	Life-span	Comments	Cate-gory
					N	E	S	W							
T37	Goat Willow	12	250	3	4.5	4.5	4.5	1	Young	Average	Average	Low	40+	Off-site; no access to base of tree; historically crown reduced to a height of 4.5m, since regrown to 12m.	C
T38	Hawthorn	11	260	3	2.5	2.5	2.5	1	Young	Average	Average	Low	40+	Dense ivy on trunk and in crown; woodland edge tree.	C
T39	Hawthorn	8	100 x7	1.5	4	4	4	1	Young	Average	Average	Low	40+	Dense ivy on trunk and in crown; supressed by adjacent trees.	C
T40	Oak	20	800	8	9	9	9	1	Mature	Average	Average	Moderate	40+	Off-site; no access; large woodland tree.	B
W41	Mixed Species	15	300	0	4	4	4	1	Early-mature	Average	Average	Moderate	40+	Off-site; mixed native woodland growing adjacent to the E boundary; species include Oak, Hawthorn, Goat Willow, Field Maple, Holly and Silver Birch.	B

Appendix 2 Table of root protection areas

The root protection area (RPA) table

The root protection area (RPA) of a tree is a layout design tool which shows 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 is treated as a priority.

The British Standard provides calculations for both single and multi-stemmed trees, which are based on mathematical formulae using the trunk diameter of a tree.

For single stem trees, the RPA, is calculated as an area equivalent to a circle with a radius 12 times the stem diameter. This is capped at a circle of 15m diameter or 707m^2. For trees with 2-5 stems and 5+ stems more complex calculations are required in accordance with the methodology recommended within the British Standard.

The RPA radius and nominal RPA area for each tree are provided in the following table.

The root protection areas (RPA) for all trees are initially plotted on the tree constraints plan (**Appendix 3**) as a circle centred on the base of the stem/s. Where pre-existing site conditions (road, building foundations etc) or other factors (for example trenching) indicate that rooting has occurred asymmetrically, the standard circle has been modified to reflect the more likely root distribution. Although the shape of the RPA may have been modified, no change has been made to any of the overall areas of RPAs of on-site trees, up to a maximum distance of a 15m from the stem. Beyond this, marginal decreases in RPAs might result if there are no other areas suitable for rooting within the 15m radius.

The trees' RPAs are shown on the tree constraints plan in the colour of their corresponding categories.

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No.	Species	Cate-gory	RPA Radius	RPA Area
T1	Cherry	C	3.1m	30.19m²
T2	Cherry	C	2.1m	13.86m²
T3	Cherry	C	4.56m	65.33m²
H4	Holm Oak	C	0.24m	0.18m²
T5	Cherry Laurel	C	3m	28.28m²
T6	Apple	C	2.7m	22.91m²
T7	Hazel	C	4.16m	54.37m²
T8	Silver Birch	C	1.44m	6.52m²
T9	Cherry Plum	C	2.15m	14.52m²
T10	Portuguese Laurel	C	2.04m	13.08m²
T11	Dogwood	C	2.28m	16.33m²
T12	Lilac	C	1.9m	11.34m²
T13	Mock Orange	C	1.9m	11.34m²
G14	Mixed Species	C	0.6m	1.13m²
H15	Holm Oak	C	0.24m	0.18m²
G16	Mixed Species	C	3.6m	40.72m²
H17	Privet	C	0.6m	1.13m²
T18	Hawthorn	C	1.26m	4.99m²
T19	Holly	C	1.92m	11.58m²
T20	Apple	C	3.54m	39.37m²
T21	Apple	C	3.06m	29.42m²
T22	Hazel	C	3.18m	31.77m²
T23	Rowan	C	4.2m	55.42m²
T24	Apple	C	2.81m	24.81m²
T25	Leyland Cypress	B	9m	254.5m²
H26	Leyland Cypress	C	7.2m	162.88m²
T27	Apple	C	2.7m	22.91m²
T28	Sweet Gum	B	3.6m	40.72m²
G29	Ash	U	4.8m	72.39m²
T30	Hawthorn	C	2.54m	20.27m²
T31	Oak	B	8.64m	234.55m²
T32	Ash	C	13.68m	588m²
T33	Oak	B	4.2m	55.42m²
T34	Hawthorn	C	3.12m	30.59m²
T35	Oak	B	4.2m	55.42m²
T36	Field Maple	C	3.86m	46.81m²
T37	Goat Willow	C	3m	28.28m²
T38	Hawthorn	C	3.12m	30.59m²
T39	Hawthorn	C	3.18m	31.77m²
T40	Oak	B	9.6m	289.57m²
W41	Mixed Species	B	3.6m	40.72m²

Appendix 3 Tree constraints plan

Key:

- Tree canopy - all categories
- T1 — Tree (T), group (G), hedge (H) or woodland (W) number
- RPA of a category 'B' tree - moderate quality
- RPA of a category 'C' tree - low quality
- RPA of a category 'U' tree - tree that cannot realistically be retained due to its condition

Notes:

1. *This drawing is based on topographical survey ref: Rigour Survey RS-2382. Some additional trees have been plotted by measurements taken on site.*
2. *Please check if there are any Tree Preservation Orders (TPOs) or if Conservation Area protection applies to trees before carrying out trees works - TPOs might have been made after the date of this drawing, or the online planning mapping service might not have been up to date at the date of this drawing.*
3. *The shape of root protection areas (RPAs) have been modified where pre-existing site conditions (road, building foundations ect) or other factors (trenching) indicate that rooting is likely to be asymmetrical. For on site trees, no change to the overall area of each RPA has been made up to a maximum distance of 15m from the trunk. Beyond this, marginal decreases in the areas of RPAs might result if there are no other areas suitable for rooting within the 15m radius.*
4. *This drawing was originally produced in colour.*
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PEPINBURGH HOUSE
NO. 66
NO. 64
NO. 62
NO. 60
NO. 58
NO. 56
NO. 54A
HENWOOD GREEN ROAD

T1 T2 T3 Cherry
H4 Holm Oak
T4 Apple
T6
T5 Cherry Laurel
T7 Hazel
H17 Privet
T8 Silver Birch
T9 Cherry Plum
T10 Portuguese Laurel
T11 Dogwood
H15 Holm Oak
G14 Mixed Species
T12 Lilac
T13 Mock Orange
G16 Mixed Species
T38 Hawthorn
T39 Hawthorn
T40 Oak
W41 Mixed Species
T37 Goat Willow
T36 Field Maple
T35 Oak
T33 Oak
T34 Hawthorn
T32 Ash
T31 Oak
T30 Hawthorn
G29 Ash
T19 Holly
T18 Hawthorn
T20 Apple
T21 Apple
T22 Hazel
T27 Apple
T23 Rowan
T24 Apple
T28 Sweet Gum
H26 Leyland Cypress
T25 Leyland Cypress

N

0 1 2 3 4 5 6 7 8 9 10 15 20
1:200 scale in m

REV	Description	Date
0	Preliminary issue	04.10.2023

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Client
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Project
64 HENWOOD GREEN ROAD
Title
TREE CONSTRAINTS PLAN
Scale
1:200 @ A0
Date
OCT 2023
Drawn by
AStA
Drawing Number
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