



DUCKWORTHS
ARBORICULTURE

BS:5837 ARBORICULTURAL
SURVEY

13 LIME AVENUE
CAMBERLEY
SURREY
GU15 2BS

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Ref: SCD 05192/2019

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2. INTRODUCTION

2.1 AUTHORSHIP

- 2.1.1 This Arboricultural survey of trees growing on and adjacent to 13 Lime Avenue has been prepared by Sarah Duckworth, Arboricultural Consultant resident in and working from Marlborough, Wiltshire.
- 2.1.2 I have over 15 years' experience working in the field of Arboriculture and for the past 13 years I have worked as a Local Authority Tree Officer both directly and independently providing contracted support. Since 2010 I have worked as a private consultant carrying out a range of Arboricultural Reports and Assessments for private clients.
- 2.1.3 I hold the Royal Forestry Society's Professional Diploma (Level 6) for which I received the Lockhart Garrett Award commendation in 2009.
- 2.1.4 I also hold the Arboricultural Association's Technicians Certificate (with Distinction) and am a LANTRA qualified Professional Tree Inspector. I am a Professional Member of both the Arboricultural Association and the Consulting Arborist Society (CAS).

2.2 INSTRUCTION

- 2.2.1 I have been asked by Norris Hope-Ross to survey the trees directly adjacent to property so that the arboricultural impact of the proposed redevelopment of the site can be ascertained.
- 2.2.2 The trees have been surveyed in accordance with BS:5837 'Trees in Relation to Design, Demolition and Construction' The location of the trees and their identified root protection areas are provided on a Tree Plan.

2.3 SCOPE

- 2.3.1 The British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction' is designed to assist those concerned with trees in relation to construction to form balanced judgments. This report does not therefore seek to put arguments for or against development but provides a means of assessing the trees which will may be affected during development.
- 2.3.2 The Tree Plan which accompanies this report is illustrative and should only be used for dealing with tree issues only.
- 2.3.3 The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

2.4 PLANNING CONSTRAINTS

- 2.4.1 I have confirmed on the Surrey Heath Borough Council that the property is not subject to a Tree Preservation Order not is the property within a Conservation Area .

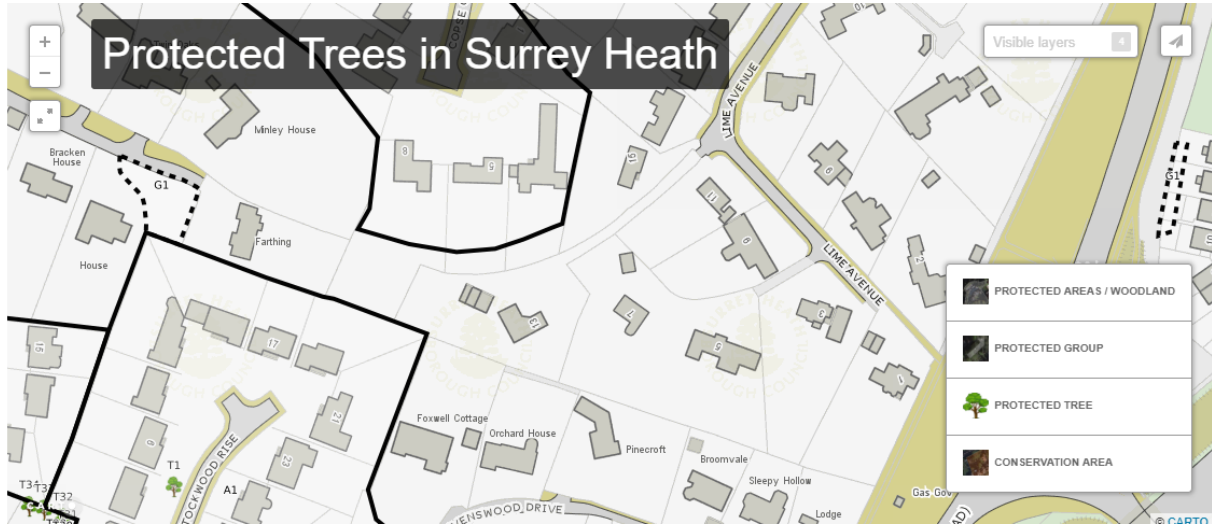


Figure 1 - Extract from the Surrey Heath Protected Tree Map

2.5 DOCUMENTS

- 2.5.1 I have been provided with an Ordnance Survey Plan of the site. This plan did not show the location of the trees on site. The trees have been plotted by eye, their position measured against fixed objects and features within the site.
- 2.5.2 As such, the position of the trees within the tree plan, should not be taken as exact but is considered to be a fair representation of their positions in relation to the site and the proposed development.

DISCLAIMER: This is an independently produced Arboricultural Report. I have no connection with any of the parties involved in this site or application that could influence or bias the opinions expressed in this report.

2.6 CONTACTS

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3. SURVEY

3.1 APPRAISAL

- 3.1.1 Trees were surveyed on Tuesday 8th January 2019 from the garden of 13 Lime Avenue only. The weather conditions were dry and clear. Visibility was good.
- 3.1.2 The tree survey identified 29 individual trees and 8 groups of trees growing within or adjacent to the build site which were relevant to this planning application. The trees on site were assessed for their quality and benefits within the context of the proposed development and categorised in accordance with the recommendations in the BS:5837:2012.
- 3.1.3 Soil samples were not taken. As the trees are offsite, the bases of the trees were not visible, and their diameters have been estimated.
- 3.1.4 Trees are dynamic living organisms subject to change, whose health and condition can be subject to significant change influenced by internal and external factors. The assessment of trees in this report are based on the condition assessed at the time of inspection and are valid for 12 months.
- 3.1.5 If the condition of the trees evidently changes or the trees are subject to extreme weather conditions before this date; further inspection may be required. No tree is ever absolutely safe due to the unpredictable laws and forces of nature.

3.2 KEY

| | | |
|--|---|--|
| Ref: | T1 = Tree 1 A1 = Area 1 | G1 = Group 1 W1 = Woodland 1 |
| Species: | Common name (Botanical name) | |
| Height: | Measured with a clinometer (m) where possible or estimated when part of a group | |
| Stem: | Stem diameter taken at 1.5m with girth tape or rule and recorded in millimeters | |
| Branch spread: | Paced measurements at compass points or with a laser measure. | |
| Crown clearance: | Existing height above ground level of canopy and / or first significant branch direction of growth in metres e.g. 2.4 (N) where relevant. | |
| Epics: | Lower canopy created by epicormic growth. | |
| Age Class: | Newly planted - 3 years following planting Young - Tree well established but with juvenile crown form Young Mature - Tree in first third of usual life expectancy for species Mature - Tree in second third of usual life expectancy for species Over Mature - Tree in final third of usual life expectancy for species / exhibiting signs of crown retrenchment & senescence Veteran - Older than usual for species or with historical/ cultural / ecological value | |
| General Observations: | Made with reference to physiological condition (health, vigour) and structural condition, noting evidence of decay, structural weakness and physical defect and preliminary management recommendations. | |
| Estimated Remaining Contribution: | Estimated in years - less than 10, 10-20, 20-40, 40+ | |
| BS: 5837:2012 category rating: | In accordance with the guidelines of the British Standard. | |
| |  Category 'A' tree (Green) |  Category 'C' tree (Grey) |
| |  Category 'B' tree (Blue) |  Category 'U' tree – Fell (Red) |
| RPA Area | BS:5837 (2012) Root Protection Area calculation in square metres | |
| RPA Radius | BS:5837 (2012) Root Protection Area calculation circle radius in metres. | |
| (e) | Estimated where access is not available to measure. | |
| (FEA) | Feathered form | |
| (Ave) | Average – usually in the case of multi-stem trees. | |

4. BS:5837 (2012) TABLE 1: CASCADE CHART FOR TREE QUALITY ASSESSMENT

Table 1 Cascade chart for tree quality assessment

| Category and definition | Criteria (including subcategories where appropriate) | | | Identification on plan |
|---|--|---|---|------------------------|
| Trees unsuitable for retention (see Note) | | | | |
| Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years | <ul style="list-style-type: none"> Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7.</i></p> | | | See Table 2 |
| | 1 Mainly arboricultural qualities | 2 Mainly landscape qualities | 3 Mainly cultural values, including conservation | |
| Trees to be considered for retention | | | | |
| Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years | Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue) | Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features | Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture) | See Table 2 |
| Category B Trees of moderate quality with an estimated remaining life expectancy of at least 20 years | Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation | Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality | Trees with material conservation or other cultural value | See Table 2 |
| Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm | Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories | Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits | Trees with no material conservation or other cultural value | See Table 2 |

5. SURVEY DATA

| Ref: | Species | Height (m) | Dia. at 1.5m (mm) | Canopy | | | | Crown Clearance | Life-stage | General Observations & Recommendations | Remaining Contribution | BS:5837 Category | RPA Radius | RPA Area |
|------|--|------------|-------------------|--------|-----|-----|-----|-----------------|------------|---|------------------------|------------------|------------|----------|
| | | | | N | E | S | W | | | | | | | |
| T1 | Oak (<i>Quercus robur</i>) | 4.5 | 170 | 1.5 | 2 | 1.9 | 1 | 2 | Y | Offsite, topped. Long stem wound. | 10-20 | C1 | 2 | 13 |
| T2 | Rowan (<i>Sorbus sp.</i>) | 4.5 | 70 | 2 | 1.5 | 1.5 | 1 | 2 | Y | Hedgerow tree. Root decay. | 10-20 | C1 | 0.8 | 2.2 |
| G3 | Mixed hedge group with Lawson Cypress, Prunus, Beech, Holly | 2 | 140 | 0.5 | 0.5 | 0.5 | 0.5 | FEA | M | Offsite, boundary hedge. | 20-40 | C2 | 1.7 | 9 |
| G4 | Rhododendron and Holly. | 3 | Multi-stem | 0.5 | 0.5 | 0.5 | 0.5 | FEA | M | Screening value. | 20-40 | C2 | 1.2 | 4.5 |
| T5 | Rowan (<i>Sorbus sp.</i>) | 6.5 | 160, 110 | 2 | 3 | 1.6 | 2.2 | 2.5 | M | Growing through boundary fence. | 10-20 | C1 | 2.3 | 17.1 |
| T6 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 640(e) | 5 | 6.5 | 5.3 | 3 | 4 | M | Offsite. Condition fair. | 40+ | B2 | 7.7 | 185 |
| T7 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 690 | 4 | 2.5 | 1.8 | 3 | 4 | M | Offsite. Condition fair. | 40+ | B2 | 8.3 | 215 |
| T8 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 710 | 3 | 3 | 5 | 5 | 8 | M | Offsite. Wire fence occluded into base. Twin stem from 6m. | 40+ | B2 | 8.5 | 228 |
| T9 | Lawson Cypress (<i>Chamaecyparis lawsoniana</i>) | 16 | 540 | 2.6 | 2.6 | 2.6 | 2.6 | 3.5 | M | Growing on far side of fence. Wire mesh at base. | 20-40 | C2 | 6.5 | 132 |
| G10 | Oak (<i>Quercus robur</i>) Pine (<i>Pinus sylvestris</i>) | 18-20 | 660 | 3.5 | 3 | 8.6 | 2.5 | 6 | M | Manhole cover 3.1m from base. Shared growth point. Offsite. | 40+ | B2 | 7.9 | 197 |
| T11 | Oak (<i>Quercus robur</i>) | 18-20 | 300 | 5 | 5 | 1 | 5 | 8 | M | Deadwood and branch loss in canopy. | 20-40 | B1 | 3.6 | 41 |
| T12 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 300 | 5 | 5 | 5 | 1 | 8 | M | Condition fair. | 20-40 | B2 | 3.6 | 41 |
| T13 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 290 | 5 | 3 | 1.5 | 2.5 | 9 | OM | Poor foliage, canopy in decline. | 10-20 | C1 | 3.5 | 38 |
| T14 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 390 | 3 | 2 | 3 | 3 | 8.6 | M | Condition fair | 40+ | B2 | 4.7 | 69 |
| T15 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 390 | 3 | 2 | 3 | 3 | 8.5 | M | Condition fair | 40+ | B2 | 5 | 80 |
| T16 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 420 | 1 | 2 | 8.6 | 6 | 8.5 | M | Condition fair | 40+ | B2 | 4.6 | 650 |
| T17 | Silver birch (<i>Betula pendula</i>) | 18-20 | 380 | 3.5 | 2 | 4 | 3 | 7.5 | M | Condition fair | 40+ | B2 | 2.5 | 20 |
| T18 | Scots Pine (<i>Pinus sylvestris</i>) | 17 | 430 | 3 | 0 | 1.5 | 5 | 8 | M | Condition fair | 40+ | B2 | 5.2 | 84 |

| Ref: | Species | Height (m) | Dia. at 1.5m (mm) | Canopy | | | | Crown Clearance | Life-stage | General Observations & Recommendations | Remaining Contribution | BS:5837 Category | RPA Radius | RPA Area |
|------|--|------------|-------------------|--------|-----|-----|-----|-----------------|------------|--|------------------------|------------------|------------|----------|
| | | | | N | E | S | W | | | | | | | |
| T19 | Holly (<i>Ilex aquifolium.</i>) | 6 | 200 | 3 | 3 | 3 | 3 | FEA | M | Low amenity small tree. | 10-20 | C2 | 2.4 | 18 |
| T20 | Yew (<i>Pinus sylvestris</i>) | 9 | 260 | 5 | 4.3 | 4 | 2.5 | 1.2 | M | Tight fork, poor vitality. | 20-40 | B2 | 3.1 | 31 |
| T21 | Oak (<i>Quercus robur</i>) | 15 | 500 | 7 | 8.5 | 5.3 | 6 | 7 | M | Deadwood in canopy. | 20-40 | B2 | 6 | 113 |
| T22 | Beech (<i>Fagus sylvatica</i>) | 16 | 490 | 4.5 | 4.3 | 5 | 3 | 3.5 | M | Offsite growing on raised bank. | 40+ | B2 | 5.9 | 109 |
| T23 | Oak (<i>Quercus robur</i>) | 8.5 | 310 | 2 | 2.3 | 4.3 | 2.5 | 4 | M | Poor form, lost leader resulting in dog-legged stem. | 20-40 | C1 | 3.7 | 44 |
| T24 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 680 | 6 | 3 | 3 | 6 | 10 | M | Fluted lower trunk, kinked stem. Possible historic fence inclusion around lower trunk. | 40+ | B2 | 8.2 | 209 |
| T25 | Oak (<i>Quercus robur</i>) | 18-20 | 340 | 3 | 4 | 4 | 3 | 5 | M | Offsite tree, base obscured. | 40+ | B2 | 4.1 | 52 |
| T26 | Silver birch (<i>Betula pendula</i>) | 18-20 | 350(e) | 2 | 6.8 | 3 | 4 | 6 | M | Offsite twin stem, no access to base. | 20-40 | B2 | 4.2 | 55.4 |
| T27 | Sycamore (<i>Acer</i>) | 18-20 | 350(e) | 4 | 3 | 4.5 | 4.5 | 5 | M | Offsite, no access to base. | 40+ | B2 | 4.2 | 55.4 |
| G28 | Cherry Laurel (<i>Prunus Otto Luyken</i>) | 4 | <100 | 1 | 1 | 1 | 1 | FEA | M | Offsite boundary hedge. | 20-40 | C3 | 1.2 | 4.5 |
| T29 | Laburnum (<i>Laburnum x Vossii</i>) | 6 | 230@1m | 4.1 | 3.5 | 1.7 | 2 | 2 | M | Multi-stem from 1.2m. Tight forks. Suckering from base. Root damage. | 20-40 | C2 | 2.8 | 24 |
| T30 | Scots Pine (<i>Pinus sylvestris</i>) | 18-20 | 510 | 3.5 | 1 | 3.5 | 5 | 6 | M | Asymmetrical canopy. | 40+ | B2 | 6.1 | 118 |
| T31 | Sycamore (<i>Acer</i>) | 16 | 250 | 5.7 | 6 | 1 | 3 | 5 | M | Offsite. Branches entwined around T30. | 40+ | B2 | 3 | 28.3 |
| T32 | Oak (<i>Quercus robur</i>) | 18 | 470(e) | 5 | 6 | 8 | 8 | 6 | M | Offsite. Condition fair. Stem swept south. | 40+ | B2 | 5.6 | 100 |
| T33 | <i>Rhododendron ponticum</i> | 4 | <100 | 2.3 | 2.3 | 2.3 | 2.3 | FEA | M | Offsite boundary group. | 20-40 | C3 | 1.2 | 4.5 |
| T34 | 2x Silver birch (<i>Betula pendula</i>) | 18 | 360 280(e) | 3.5 | 3.5 | 3.5 | 3.5 | 4 | M | Offsite group. | 20-40 | B2 | 5.5 | 94 |
| G35 | 4x Silver birch (<i>Betula pendula</i>) | 16 | 200 | 1 | 3 | 5 | 7.5 | 5.5 | M | Slender trees in linear group growing offsite. | 10-20 | B2 | 2.6 | 22 |
| T36 | Lawson Cypress (<i>Chamaecyparis lawsoniana</i>) | 17 | 530 | 3.8 | 3.8 | 3.8 | 3.8 | 2 | M | Failed twin stem, offsite. Large tear out wound on lower trunk and pruning cut from large side | 10-20 | C1 | 6.4 | 127 |
| T37 | Maple (<i>Acer sp.</i>) | 13 | 250 | 3.5 | 3.5 | 1 | 3.5 | 5.5 | YM | Offsite, young slender specimen. | 40+ | C3 | 3 | 28 |