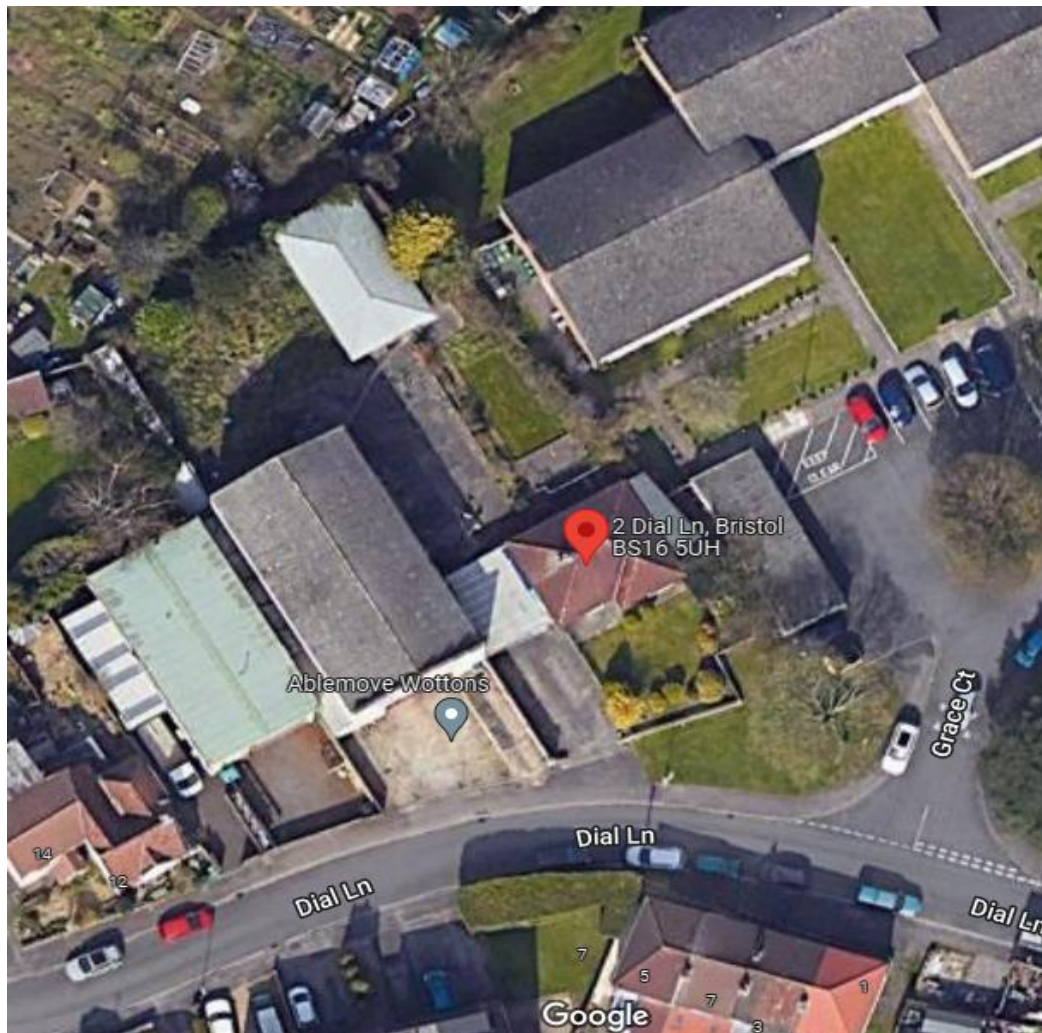


Land at 2 Dial Lane, Downend

Arboricultural Report containing:

- Arboricultural constraints
- Arboricultural impact assessment (AIA)



On behalf of
Acorn Property Group

Prepared by:
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Arboricultural Consultant
November 2022

Content

- 1.0 Instructions/Scope
- 2.0 Survey methodology
- 3.0 Report limitations
- 4.0 Legal duty
- 5.0 Site and Tree assessment
- 6.0 Arboricultural constraints
- 7.0 Arboricultural impact assessment (AIA)
- 8.0 Contact details
- 9.0 References
- 10.0 Appendices
 - Tree schedule sheet
 - Tree constraints plan (TCP)
 - Arboricultural impact assessment plan (AIA)

1.0 Instructions/Scope

- 1.1 Silverback Arboricultural Consultancy have been instructed to compile an arboricultural report containing tree survey, tree constraints plan, arboricultural impact assessment regarding trees growing within a plot of land at 2 Dial Lane, Downend. This report is intended to accompany a planning application relating to the construction of 9 new residential dwellings on the site. This document has been produced to demonstrate that the implications of the proposed development to the existing trees has been fully considered during the detailed design process.
- 1.2 Recommendations for the safeguarding of trees in close proximity to development are set out in, BS5837:2012 Trees in relation to design, demolition and construction – Recommendations. We have therefore carried out the assessment of the trees in accordance with that document.
- 1.3 Specifically, this report and the accompanying information are supplied to:
- Identify the constraints that trees on and adjacent to the site present to the development of the site, to inform the site design process.
 - Present information regarding the above ground constraints (crown spreads) and below ground constraints (Root Protection Areas – RPAs), in a Tree Schedule and on a Tree Constraints Plan.
 - Assess the impact of the proposed development on the trees on or adjacent to the site, and the impact that retained trees will have on the site post development.
 - Identify trees to be removed, trees to be retained and specify measures necessary to protect retained trees during the construction phases of the development.
 - Recommend necessary remedial tree works to be undertaken to trees that will be retained prior to commencement of the construction phases of the development.
- 1.4 This report is based on a ground level assessment of the trees. Except where stated, all dimensions are estimated. We were not presented with any information on the soil type and no soil samples have been taken. An arboricultural consultant visited the site on Thursday 10th November 2022. The weather was mild and overcast.



1.5 Documents Provided

- Topographic survey dwg N° 5090_ESL
- Proposed site layout dwg N° 5090_PSL

2.0 Survey Methodology

2.1 The survey includes tree and shrubs with a stem diameter over 75mm at 1.5m height, located within the area shown on the plan included in this report.

2.2 All inspections were made from ground level with the use of binoculars, sounding hammer and metal probe where necessary, using the Visual Tree Assessment method (Mattheck & Breloer 1994). The presence and condition of bark and stem wounds, cavities, decay, fungal fruiting bodies and any structural defects that could affect the structural integrity of the trees have been noted.

2.3 Tree numbers have been noted on the plan. The following details were recorded for each tree and are included in the tree schedule sheets accompanying this report:

Number: an identity number for each tree, prefixed with a 'T' which cross references locations shown on the plan with the tree survey sheets. Where a number of trees, normally of the same species, are located close together and are similar in character and requirements, they have been treated as a Group under a single Number, prefixed with a 'G'

Species: common name and botanical name in *italics*

Tree Height: approximate height in metres

Stem Diameter: diameter measured in millimetres, taken at 1.5m above ground. Where the tree is multi-stemmed the diameter is calculated in accordance with BS5837:2012

(# estimated dimensions for off-site or inaccessible trees)

Crown spread: approximate spread in metres taken at the four main compass points N, E, S, W

Crown clearance: approximate height from ground to lowest part of canopy

Age class: Young, Semi-Mature, Early Mature, Mature, Over-Mature, Veteran

Structural condition: Good, Fair, Poor

Physiological condition: Good, Fair, Poor, Dead

Observations : observations noted during tree inspections

Preliminary recommendations; recommended action to ensure the health and safety of the tree.

Remaining contribution (years): <10, 10+, 20+, 40+



BS Cat- category grading in accordance with BS 5837:2012

- 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 trees with a stem diameter below 150mm
- U** - trees 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.

BS Sub Cat - sub-category grading in accordance with BS 5837:2012

- 1- Mainly arboricultural qualities
 - 2- Mainly landscape qualities
 - 3- Mainly cultural values including conservation
- RPA – Root Protection Area** - measured in metres from the centre of the tree stem

2.4 Presentation of the Data Collected

- Data collected regarding individual trees and groups of trees are presented in the Tree Schedule table in appendix 1 in accordance with BS5837:2012 Trees in Relation to Construction – Recommendations.
- The data significant to the proposed site layout is also presented on the Tree Constraints Plan (Drawing Number 221117-DL-TCP-NB) (appendix 2) and Arboricultural Impact Assessment Plan (Drawing Number 221117-DL-AIA-NB (appendix 3).
- All other relevant data are presented within the main body of this report.
- Trees have been allocated an individual tree number. This tree number is used to identify individual trees and/or groups of trees throughout this report, within the Tree Schedule and on all plans presented in the appendices of this report.

3.0 Report Limitations

- 3.1 Trees are living, dynamic organisms that can be affected by external conditions. It is therefore not possible to state with any certainty that a tree is safe.
- 3.2 No internal decay devices, or other invasive tools to assess tree condition, were used. No soil excavation or root inspection was undertaken.

- 3.3 This report has not considered the effect that trees or vegetation may have on the structural integrity of adjacent buildings or structures.
- 3.4 The survey contained within this report is not a tree safety inspection. It has been carried out in order to inform the planning process. Where clear and obvious hazards have been observed, these have been addressed in the recommendations contained within the tree schedule sheets (appendix 1). A full assessment of the levels of risk posed by trees would be informed by considering site use together with hazards present within the aerial parts of a tree(s). Changes in site use are likely to occur during, and result from, the proposed development. In the light of these changes, regular tree risk assessments are advised.
- 3.5 Tree condition can change rapidly, the recommendations contained within this report are based on the condition of the tree at the time they were inspected. Any amendments to the design or position of the proposed development will invalidate this report.
- 3.6 While this appraisal is not a tree risk assessment it nonetheless takes into account observed structural defects of the inspected trees in order to inform conclusions with regard to their retentive worth.

4.0 Legal duty

- 4.1 It is the responsibility of the tree owner to ensure that their tree(s) is in a safe and stable condition, including the effects of root activity, through duty of care in the *Occupiers Liability Act (1957 & 1984)*.
- 4.2 The Wildlife and Countryside Act, 1981 makes it an offence to disturb a nesting bird or recklessly endanger a bat or its roost. Professional advice should be sought, where relevant, before undertaking any recommended works.
- 4.3 Searches of South Gloucestershire Council website showed there are no Tree Preservation Orders or other statutory constraints covering the trees on the site.

5.0 Tree and Site Assessment (to be read in conjunction with the survey schedule sheets)

- 5.1 The proposed development is for the construction of 9 new residential houses on the site including a driveway and 16 additional car parking spaces. The area proposed for development currently comprises of 4 buildings including a dwelling and commercial depot area. Most of the site is covered in hardstanding. There are two Lawson Cypress trees at the north end of the site considered structurally and physiologically fair.
- 5.2 Two trees were surveyed. The trees were categorized **C**. The trees were assessed and categorized in accordance with the Cascading Chart of Tree Quality Assessment contained within BS5837:2012.

6.0 Arboricultural Constraints

- 6.1 Trees have a widely spreading, shallow root system. In most cases, the majority of tree roots are situated within the top 600 mm of soil although some roots may extend down to 2m. Small feeder roots can also be expected to extend beyond the outer edge of the canopy. Roots can therefore be easily damaged by construction activity.
- 6.2 Constraints on the design of the development are presented in the Tree Schedule Sheets (appendix 1) Tree Constraints Plan (appendix 2) and the Arboricultural Impact Assessment Plan (appendix 3). These constraints are also considered in the main body of the report below and recommended remedial works and mitigating measures.
- 6.3 The Tree Constraints Plan (TCP), (appendix 2), shows the Root Protection Areas (RPAs) for the individual trees identified in the tree schedule tables. This represents the minimum area in m² which ideally, should be left undisturbed around each tree were it to be retained. The TCP/ AIA also shows a representation of the crown spread of each tree measured in four cardinal directions. The RPA has been calculated in accordance with Section 4.6 of BS5837:2012 Trees in relation to design, demolition and construction – Recommendations.
- 6.4 Trees Identified for Retention and Removal.**
- It is proposed to remove all surveyed trees to facilitate the proposed development.



6.4.1 Mitigation

It is proposed to mitigate for the loss of these trees by the implementation of a landscaping scheme including replacement trees and shrubs to enhance that landscape and visual amenity of the site. The details and specification for the proposed landscaping will be in accordance with South Gloucestershire Council replacement planting policy.

6.4.2 Replacement trees

It is intended to plant 4x replacement trees in the final landscaping scheme. The replacement trees will be native species planted as heavy standards with a girth of 12-14cm at 1m, approximately 3.5m tall. These trees will be sourced from a local tree nursery as root-balled trees.

7.1 Programme of Works

- Arboricultural works
- Construction of proposed development
- Replacement tree planting after development

7.2 The removal of the trees will be undertaken to facilitate the construction of the new dwelling. The proposed tree works will be undertaken by a professional arboriculturist in accordance with the recommendations contained in BS3998:2010. Tree work-recommendations.

8.0 Contact Details

8.1 Arboricultural Consultant

Chris Wright

Silverback Arboricultural Consultancy

E-mail: chris@silverbackarb.co.uk

8.2 Local Authority Tree Officer

Lea Bending

Arboricultural Officer

South Gloucestershire Council

E-mail: lea.bending@southglos.gov.uk

9.0 References

Mattheck, C. and Breloer, H. (1995). The Body Language of Trees: A handbook for failure analysis. Research for Amenity Trees **4**. HMSO, London.

British Standard 5837:2012 - Trees in relation to design, demolition and construction – Recommendations. British Standards Institution, London

British Standard 3998:2010 - Tree Work Recommendations. British Standards Institution, London

10.0 Appendices

- Tree schedule sheets
- Tree constraints plan
- Arboricultural impact assessment (AIA)

Deb Randall BSc

Arboricultural Consultant

Silverback Arboricultural Consultancy

18th November 2022

Arboricultural Survey Dial Lane, Downend

Tree Number	Common name	Botanical name	Height (m)	Number of stems	Calculated stem diameter (mm)	Crown Spread (m)				Crown Clearance (m)	Life Stage	Structural Condition	Physiological Condition	Observations	Preliminary Recommendations	Remaining contribution (yrs)	BS Category	Root Protection Area Radius (m) Area m ²
						N	E	S	W									
T01	Lawson Cypress	<i>Chamaecyparis lawsoniana</i>	8	2	200	3	3	3	3	1	Mature	Fair	Fair	Twin stemmed from base Previously topped at 6m Forming single canopy with adjacent tree	No action required at the time of inspection.	20-40 Years	C2	Radius: 2.4m. Area: 18 sq m.
T02	Lawson Cypress	<i>Chamaecyparis lawsoniana</i>	8	1	200	3	3	3	3	1	Mature	Fair	Fair	Previously topped at 6m Forming single canopy with adjacent tree	No action required at the time of inspection.	20-40 Years	C2	Radius: 2.4m. Area: 18 sq m.



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Site: Dial Lane, Downend	
Drawing Title: Tree Constraints Plan	1:200 @ A3
Drawing Number: 221117-DL-TCP-NB	Nov 2022

Key:

- Category A
- Category B
- Category C
- Category U

13 — Crown Spread
13 — Tree Number
13 — Root Protection Area

NOTE: Tree/group numbers marked have approximate locations.



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Site: Dial Lane, Downend

Drawing Title: Arboricultural Impact Assessment 1:200 @ A3

Drawing Number: 221117-DL-AIA-NB Nov 2022

Key:

- Category A
- Category B
- Category C
- Category U

13 Crown Spread
13 Tree Number
13 Root Protection Area

13 Proposed Tree for Removal

NOTE: Tree/group numbers marked have approximate locations.