



Edenwood, Swan Lane, Edenbridge

**Arboricultural Impact Assessment and
Method Statement**

September 2021



Client	Mr and Mrs Haley
Job name	Edenwood, Swan Lane, Edenbridge
Report title	Arboricultural Impact Assessment and Method Statement
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	Name	Position	Date
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1 Introduction

1.1 Site Description

Edenwood, Swan Lane, Edenbridge (the "site") is situated approximately a mile north of the centre of Edenbridge. The site comprises a single detached dwelling set within a large garden. The site is bound to the north, east, south and west by residential dwellings.

The majority of the trees within the survey area are protected by tree preservation order (TPO).

1.2 Proposed Works

The construction of an extension on the eastern flank of the existing dwelling, linked with an overhead covered walkway to a car port with a room within the roof space, are proposed. Works that are likely to affect retained trees include excavations for foundations.

1.3 Aims of Study

To inform a planning application, Canopy Consultancy has been commissioned by Mr and Mrs Haley to undertake a tree survey of the site, in accordance with British Standard (BS) 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations".

The aim of this report is to present the results of the survey, including a Tree Survey Schedule (TSS), an Arboricultural Impact Assessment (AIA), and an Arboricultural Method Statement (AMS). A Tree Protection Plan (TPP) has also been produced and accompanies this report as a separate drawing.

This report in no way constitutes a health and safety survey report. Where concerns for tree health and safety exist, the necessary and appropriate tree inspections should be carried out.

2 Methodology

The trees were inspected from ground level by consultant arboriculturist Neil Taylor on 24th May 2021 and measurements taken in accordance with the recommendations set out in the BS 5837:2012. Canopy spreads were measured and plotted to the four compass points. Where direct access was not possible measurements have been estimated. The surveyed trees are colour coded on the accompanying tree survey drawing according to their relevant BS category.

The tree data collected is used to enable the current canopy spread of the surveyed trees and the Root Protection Area (RPA) to be plotted on the accompanying TPP. The RPA is defined by the formula in paragraph 4.6 from the BS 5837:2012 and may be refined by taking into account current on-site constraints to root activity such as buildings, earthworks and hard paving.

On 2nd June 2021, an exploratory trench was carefully excavated by hand with the use of an air-spade three metres from the eastern flank of the dwelling to a depth of 600mm in order to determine the extent and depth of rooting activity from the adjacent trees. The trench was 6.3 metres in length.

3 Results

3.1 The Trees

The detailed results of the tree survey are provided in the TSS, in Appendix 1. In summary, the trees are in a good condition and provide a degree of amenity to the local area.

3.2 Root Survey Results

During the exploratory air-spade excavation work, it was noted that the soil within the trench had been disturbed before as it contained large lumps of concrete. The location of the trench is shown in Figure 1.

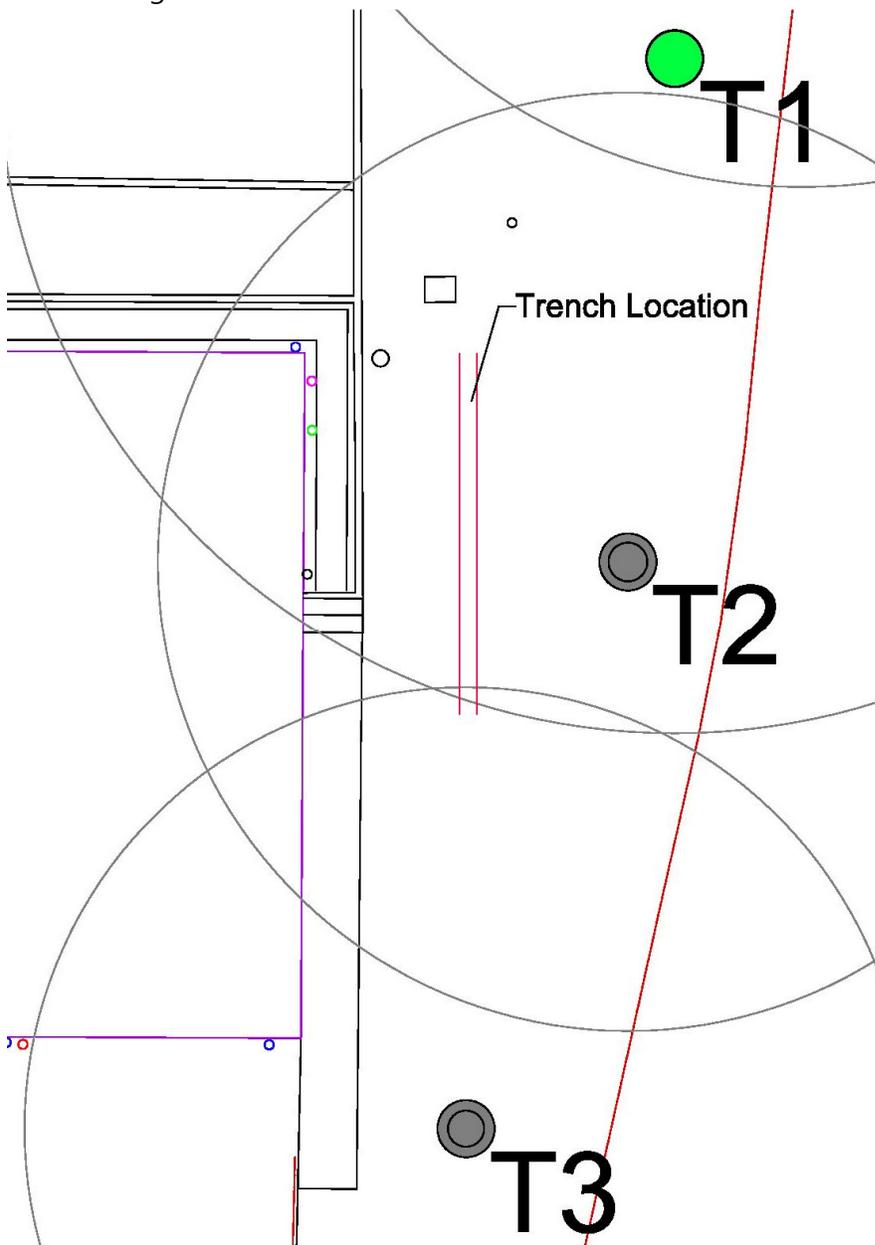


Figure 1: Trench Location

No significant roots were found within the trench. Photographs of the trench are shown below.



Photograph 1: Entire trench viewed from the south



Photograph 2: Depth of Trench

3.3 Analysis

The exploratory revealed no roots and large lumps of concrete. It is likely that when the existing dwelling was built, excavations to level the site went beyond the building footprint and the area backfilled thereafter. Any roots that may have been present would have been severed at the time. The area between the trench and the existing dwelling can be used for construction without any detriment to the health of the existing trees.

4 Arboricultural Impact Assessment (AIA)

4.1 Methodology

The AIA uses the information obtained in the tree survey to identify areas where the proposed construction may be at odds with accepted standards, in terms of a tree's requirements for space in which to maintain existing roots and shoots, and space for future growth.

The quality and relative importance of each tree is illustrated as a coloured polygon. The colour used relates to the BS categories as follows: A - green, B - blue, C - grey and U - red (see accompanying drawing reference 21-1239-TPP). In general the design process will try to retain A and B category trees. Proposed construction will therefore normally be excluded from the RPA of A and B category trees. Red trees are discounted as they are recommended for removal.

Details of the trees surveyed are given in the TSS (Appendix 1). The juxtaposition of the proposed development in relation to existing tree locations are shown on the accompanying TPP drawing, reference 21-1239-TPP.

The AIA considers existing site conditions and the effect that they may have on the development of the surveyed trees root systems. Hard structures such as building and paved roads and paths can influence the root activity of trees by reducing the availability of both moisture and nutrients.

4.2 Assessment

Refer to the accompanying TPP, drawing, reference 21-1239-TPP, for the relationship between the proposed development and the trees on and adjacent to the site.

- The following trees will be removed to enable the proposed development:

G1 to enable the construction of a store

- The following trees will require pruning prior to the construction of the proposed development:

T1 remove epicormic growth to a height of 5 metres

T2 reduce west facing laterals under 10 metres in height by 2 metres

- The following tree will be affected by the removal of the existing shed from within the RPA:

T1

The existing structure is to be removed in accordance with the methodology outlined in Section 5.2 below.

- The following trees could be affected by the construction of an extension within the RPA:

T1 – T3

The root survey revealed that no roots were present within the footprint of the proposed extension. As such, the impact of the proposed extension will be negligible.

- The following trees will be affected by construction of a car port within the RPA:

T1 and T4

The car port is to be an open sided structure on pad foundations and the concrete slab is to be cast on top of the existing level. Excavations for the pad foundations will be carried out in accordance with the methodology outlined in Section 5.3 below.

- The following trees will be affected by construction of a store within the RPA:

T1 and T4

The store is to be a lightweight structure on a concrete slab that will be cast on top of the existing level. No excavations will be necessary.

5 Arboricultural Method Statement (AMS)

5.1 Methodology

The AMS provides the means by which retained trees and hedges can be protected throughout the development. The contractor will be issued this document at the tender stage so will be aware of the constraints it will place on the demolition and construction phases.

The movement of demolition and construction machinery in close proximity to trees may cause compaction of the soil which affects the tree's ability to absorb moisture and nutrients. The RPAs of retained trees and hedges will be protected by a tree protection barrier as described in paragraph 5.5 below and shown on the accompanying TPP, drawing, reference 21-1239-TPP.

5.2 Demolition within the RPA of Retained Trees

Demolition of Existing Structures

The removal of the existing structures within the RPA will be carried out by hand. Where possible, the foundations will be left in situ.

5.3 Construction within the RPA of Retained Trees

All tree protection measures, as illustrated on the accompanying TPP drawing, reference 21-21-1239, will be installed and signed off by the named arboricultural supervisor prior to the contractor arriving on site.

Pad Foundations:

Excavations for the pad foundations of the car port are to be carried out by hand under the supervision of a suitably qualified arboriculturist. Roots with a diameter of less than 25mm will be pruned back to the edge of the trench. If roots with a diameter of 25mm or more are uncovered, they will be protected using plastic conduit pipe of a sufficient diameter, cut down one side to enable it to be opened and placed around the root. The pad foundation will then be cast around the root.

Once the piles have been installed, the ground protection measures can be removed to enable the pouring of the new slab foundation.

No materials or spoil is to be stored within the RPA of a retained tree.

In order to avoid damage to the retained trees the tree surgery and felling work identified in the accompanying tree survey schedule will be carried out prior to the occupation of the site by the building contractor. The work will be carried out in accordance with BS 3998:2010.

5.4 Services

The location of any new underground services is not known at this stage. Any new underground services will need to be excavated by hand under the supervision of a suitably qualified arboriculturist. Any roots encountered with a diameter of 25mm or more will be retained and the service threaded underneath.

5.5 Tree Protection

All trees that are to be retained on the site will be protected by the use of a tree protection barrier erected in the location shown on the accompanying TPP, drawing number 21-1239-TPP. The fence will consist of "Heras" type panels or similar braced at appropriate intervals and secured to keep in place. The tree protection barrier will be erected prior to the occupation of the site by the building contractor and will only be removed once the construction phase is complete.

Where additional ground protection is required within the site, the ground will be protected by Tufftrack or similar proprietary ground protection fit for purpose on a compressible layer (e.g. 100mm layer of woodchip over a geotextile membrane). The ground protection will remain in place until the completion of the proposed development.

5.6 Site Monitoring and Supervision

The process of reporting to the client and LPA/Tree Officer will be by emailing the draft checklist form at Appendix 2. As the contractor has not been appointed yet, the detailed schedule of works has not been produced. As such, a draft monitoring schedule has been produced at this stage to demonstrate how the project will be supervised throughout its lifespan. Once a contractor has been appointed, the draft monitoring schedule can be finalised with more detail and timings. It can then be submitted as a condition of planning approval.

6 Conclusion

Canopy Consultancy was commissioned by Mr and Mrs Haley to carry out a tree survey at the site. The results of the survey indicate that the trees within the survey area contribute to the amenity of the local area.

One group of trees will be removed to enable the proposed development.

Through the specified construction methodologies and tree protection measures, it will be possible to minimise the impact of the proposed development on the retained trees.

Overall, there are no known overriding arboricultural constraints which would prevent the proposed development from going ahead, subject to the protection measures and construction methodologies specified within this report being correctly implemented.

7 Appendices

Appendix 1: Tree Survey Schedule

Project:				BS 5837 2012 Trees in relation to design, demolition and construction-recommendations							Surveyed by		NAT		
Ref:											Weather		Clear		
Date:											Tagged		No		
Client:				Mr and Mrs Haley											
				Canopy Spread											
Tree No.	Species	Height (m)	DBH (mm)	N	E	S	W	Stems	Height of crown clearance	Age class	Physiological condition problems/comments	Structural condition	Preliminary management recommendations	Estimated remaining contribution years	BS category
T1	oak (Quercus robur)	16	980	9	10	5	6	1	4	M	Good - minor stem lesion at base	Good	None	40+	A2
T2	oak (Quercus robur)	10	680	4	8	4	5	1	5	MA	Fair - suppressed. Low vitality	Good	None	20-40	C1
T3	oak (Quercus robur)	10	640	5	7	6	4	1	4	MA	Fair - suppressed. Low vitality	Good	None	20-40	C1
T4	oak (Quercus robur)	14	800	5	7	4	4	1	6	M	Good - off site	Good	None	40+	B2
T5	oak (Quercus robur)	15	680	6	4	4	6	1	2	MA	Good	Good	None	40+	A2
G1	Leyland cypress	Up to 3	Varied						Y	Good - boundary group	Good	None	40+	C1	

Appendix 2: Programme of Site Monitoring

Edenwood, Swan Lane, Edenbridge
Site Monitoring Form

To be completed by the named arboriculturist and emailed to the client and tree officer at the completion of each operation.

Arboriculturist.....

Client.....

Project Manager.....

Tree Officer.....

(The above to be filled in with names and contact numbers)

OPERATION	TIMING	DATE	COMMENTS
Pre-commencement meeting or contact with project/site manager.	Before any works or pre-works on site, including storage of materials		
Spot check of tree protection measures	Before demolition begins		
Supervision of excavations for pad foundations	During ground works		
Completion of development	Once all construction activity has been completed		