Pre-development Arboricultural Survey and Report

Land at 5 Bacons Lane, Highgate London N6 8BL

A report to: Simon Fraser RIBA.

Date: 2nd October 2024

Report No: WAS 227/2024 REV A

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Table of Contents

Report Verification 3

Disclaimer 3

Validity of Data 3

Introduction and Scope of Report 4

Arboricultural Impact Assessment 5

Tree Protection Measures 6

Tree Grading Categories 7

References 9

Declaration 9

Addendum 1 – Tree Protection Informatives 10

Protecting Root Zone of Trees - BS 5837:2012 section 6.2 Figs. 2 & 3 10

The Root Protection Area (RPA) 10

Key Points 10

Excavation within Root Protection Area of trees 10

Site Hoarding 11

Ground Protection System Specification 11

Acts of parliament 11

Addendum 2 – Tree Works 13

Addendum 3 – Tree Survey Data 14

Addendum 4 – Tree Survey Plan & Site Plans 15

Addendum 5 – Picture Gallery 16

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Report Verification

This study has been undertaken in accordance with British Standard 5837:2012 “Trees in relation to design, demolition and construction - Recommendations”.

Disclaimer

The contents of this report are the responsibility of Wassells Arboricultural Services Ltd. It should be noted that, whilst every effort is made to meet the client’s brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Wassells Arboricultural Services Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees and groups on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such, following any significant meteorological event or changes in the growing environment of the trees they should be reassessed by a suitably qualified and experienced arboriculturist.

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Introduction and Scope of Report

This document has been produced to provide a detailed survey of trees that are within, surrounding and near to the land described within the report and that may be impacted by the proposed development.

The scope of this report follows the recommendations and guidance described within ***BS 5837: 2012 Trees in Relation to Design, Demolition and Construction – Recommendations*** which sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.

The report will assess the quality, amenity and landscape value of all surveyed trees as described by the tree category system within BS 5837 (see section below).

The protection of all trees to be retained and where they are likely to be affected by the proposed development construction activities shall need to be described in a site specific AMS once final plan is agreed and consent is given.

The report will also indicate, where necessary, the likely impact the proposals may have on those trees in the future.

The report will also recommend any required tree works to enable access and also to mitigate potential damage from construction activity and for the future well-being of the trees concerned.

This is intended to support the planning application for development of this site.

The tree survey for the site can be found in Addendum 3 below

Abbreviations:

RPA = root protection area

CEZ = construction exclusion zone

CWA = construction working area (including materials storage)

AMS = arboricultural method statement

AS = Arboricultural supervision

TPO = Tree Preservation Order

CA = Conservation Area

BNG = biodiversity net gain

CG = container grown

Arboricultural Impact Assessment

Proximity of Proposed Development to existing Trees

The proposed development of the site is to demolish the existing two-storey house with a single-storey annexe and replace with a new house designed to be fit for purpose and meet the current building regulations.'

There is only 1 tree that could potentially be impacted by the proposal and that is Bay tree T001.

This tree is of poor quality and not worthy of being a material constraint on development of the site. It is recommended for removal and replacement with 2 new native trees post construction of the new development. Carpinus betulus 'Frans Fontayne'** is recommended as an upright growing form of the common Hornbeam that is suitable for this location next to the access lane.

In order to support BNG it is recommended that 3 further tree plantings(flowering Crab Apple and Cherry) in the rear garden can be carried along the back wall with Highgate Cemetery as part of a landscaping scheme for the site, post construction.

The previous report for this site in 2017 showed an Apple tree next to the Bay, but that has died and been removed in the intervening period.

There are several trees in the rear gardens of adjacent properties, but these are far enough away to not be impacted by the proposal.

The trees within the curtilage of the site can be seen on the tree survey plan in addendum 4 and should be read in conjunction with the BS 5837 data in addendum 5.

***tree size recommended to be 14/16 at 3-4 metres high, CG*

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Tree Protection Measures

- None required for this site

Arboricultural Supervision (AS)

- None required for this site

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Tree Grading Categories

Ref: Grading Category as per BS 5837:2012 Section 4.5 Table 1 & Table 2
Tree Survey Schedule in Addendum3 below for description of trees categorized.

****The grading categories are based on the following criteria:**

A= those trees of high quality and value suitable for retention for longer than 10years and worthy of being a material constraint to development

B= those trees of moderate quality and value suitable for retention for longer than 10years and worthy of being a material constraint to development

C= those trees of low quality and not worthy of being a material constraint to development

U=trees of such a condition that they cannot realistically be retained as living trees in the context of the current land use

NG = not graded. Those trees not considered to be in any of the above categories

***Acknowledged source: Barrell Tree Consultancy* – www.TreeAZ.com**

Categories A, B and C have further sub-categories (not qualified in BS and not utilized in this report) with regards to the reasons for tree retention as follows:

1: Mainly arboricultural qualities.
2: Mainly landscape qualities.
3: Mainly cultural values, including conservation.

Trees categorized within this report:

1 Category A trees = none

2 Category B trees = none

3 Category C trees = T001

4 Category U trees = none

5 NG = none

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Age Categories and Distribution

Those trees assessed as being young (Y) in age can generally be considered to have significant growth potential. Whilst these specimens are not likely to make a substantial contribution to the landscape character of the site at present they will, if retained, provide succession for the eventual removal of mature or over- mature trees because of declining physiological or structural condition.

Semi mature trees (SM) will generally make a significant contribution to the landscape character and appearance of the site and their retention will provide more immediate succession. These trees will also have significant growth potential.

Mature trees (M) are not considered to have significant future growth potential and have generally reached their maximum expected size for the location. These trees will generally make the highest contribution to the landscape contribution of the site. However, a tree stock over dominated by mature trees will require careful management to ensure that continuation of canopy cover can be achieved.

Over-mature trees (OM) do not have the potential to increase in size and may in fact reduce in size as their crowns begin to break up. These trees will often make a significant contribution to the landscape character of the site and are likely to have ecological value. However, the retention of these trees within new development must be carefully planned as they are approaching the end of their useful life expectancy, and they will often have structural defects. Where over-mature trees are to be retained in new development it is essential that access is available for their eventual removal.

Veteran trees (V) are those that show features of biological, cultural or aesthetic value that are characteristic of an individual surviving beyond the typical age range for the species. These trees have negligible potential to increase in size. Veteran trees are usually of a high ecological value, and they will require sensitive management where they are to be retained in new development. As such it is again essential that they are in areas where access is available to undertake management operations and where there is a reduced risk of harm occurring from failure of the trees.

References

1. BS 5837:2012 Trees in Relation to Design, Demolition and Construction – Recommendations
2. Barrell Tree Consultancy – BS5837 – Advanced Tree Assessment for Planning
3. BS3998:2010 Tree Work – Recommendations
4. NJUG Volume 4 Issue2 2007 – Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.
5. NHBC Standards – Section 4.2 Building Near Trees
6. British Geological Survey – London & the Thames Valley
7. Principles of Tree Hazard Assessment – Lonsdale 2001
8. Diagnosis of Ill Health in Trees – Stouts & Winter 2004
9. Tree Roots in the Built Environment: Chapter 9 – Roberts, Jackson & Smith 2006
10. The Body Language of Trees – Mattheck 2015
11. Tree Survey Plan – Addendum 5
12. Existing and proposed plans – Simon Fraser RIBA

Declaration

This Tree Survey, Impact Assessment and provisional tree protection measures have been written and checked by Richard Wassell of Wassells Arboricultural Services Ltd. and are provided without prejudice as an objective and professional assessment of the trees described.

Signed: R.J. Wassell Date: 02.10.MMXXIV

Richard Wassell. Director

CHort MCIHort MArborA NDArb (RFS) Kew Diploma NEBOSHlevel3

Arboricultural ASSOCIATION Professional Member

Chartered Institute of Horticulture

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Addendum 1 – Tree Protection Informatives

Protecting Root Zone of Trees - BS 5837:2012 section 6.2 Figs. 2 & 3

The Root Protection Area (RPA)

This is the area surrounding a tree that is deemed to contain enough roots and rooting volume to maintain the tree's viability in the future. The root system is typically concentrated in the uppermost 600 – 1200mm of the soil and is not necessarily symmetrical around the tree, being dependent on several factors such as water, nutrients, oxygen, soil penetrability and physical obstructions such as existing foundations or changes in level (terracing).

The RPA is a design layout tool that is deemed to be a minimum area around a tree where the protection of roots and soil structure are treated as a priority. This area is envisaged as and portrayed with a circle around each tree but where there appears to be restrictions to root growth the circle is reshaped to reflect more accurately the likely distribution of the rooting area of the tree concerned.

Key Points

1. AVOID building works within the RPA if possible but if not then carefully consider the following: where the RPA is likely to be severely affected because of site design constraints then felling and planting replacement(s) trees in a more suitable location on the site will need to be considered.
2. Where possible do not use strip foundations within the RPA, if necessary, consider using a trenching saw or excavate by hand to avoid 'shatter damage' to the root system.
3. Consider using piling techniques for foundations @ maximum 350 mm diameter with ground beams on or above the surface of the root zone.
4. Unless unavoidable, do not exceed entering the root zone by more than one fifth of RPA radius.
5. Do not trench tangentially across the root zone for footings and services unless it cannot be avoided.
6. Consider 'no dig' techniques for services installation, with radial service lines being preferable to tangential across the root zone. Where this is undertaken then boring must be carried out below 600mm deep.
7. Any hard surfacing, paths and roads need to have the same considerations for the RPA and as in the above points. Where possible paths and hard surfacing (patios etc.) need to be surface constructed (cellular) and semi-porous to allow water penetration and gaseous exchange into the root system of trees.

Excavation within Root Protection Area of trees

Where trees are to be retained then any proposed foundation, underground services work and hard surfacing such as roads/paths falling within the RPA of trees that are to be retained shall

be kept as far away from tree stems as possible (SEE NOTE 1 ABOVE). Where any such works are necessary within the RPA there will be a requirement to dig carefully by hand and ensure any roots encountered of maximum 25mm in diameter shall be exposed and correctly pruned back by a competent Arborist. Where larger roots are encountered of above 25mm in diameter then advice from the Arboricultural Supervisor (AS) for the site must be sought prior to any work being undertaken.

Any roots exposed/ pruned back as part of the above operation shall NOT be left exposed to drying out. All roots exposed/pruned shall be either covered with damp Hessian sacking prior to backfill or backfilled/covered immediately with a suitable open and free draining compost/loam.

Site Hoarding

Site hoarding shall be no closer than 1.5 metres away from the stem of retained trees and consist of 20mm plywood sheets supported by minimum 100mm square posts and 100 x 50mm rails with posts at 2.5 metre centres.

Post holes for site hoarding that are required within the RPA of nearby trees shall be dug by hand and are to be a maximum of 300 x 300mm and 450mm deep

Ground Protection System Specification

- Level area of RPA concerned by blinding with sharp sand at maximum depth of 50mm.
- Lay geo-textile membrane such as 'Terram' to cover area concerned.
- Cover geo-textile with maximum of 100mm MOT Type 1 sub-base
- Retain MOT type 1 with edge restraint such as 30 x 100mm edging board pegged every 2 metres to prevent migration of the sub-base

Acts of parliament

Wildlife and Countryside Act 1981, the Countryside and Rights of Way Act 2000, the Conservation (Natural Habitats etc.) Regulations 1994 or any Acts offering protection to wildlife and trees/hedges (TPO, TCA)

All birds (except those listed in schedule 2 of the Wildlife and Countryside Act 1981), their nests and eggs are protected by law. It is an offence to intentionally or recklessly kill, injure or take any wild bird, or damage, destroy or intentionally disturb the nest of any wild bird whilst it is in use or being built. For this reason, tree work should not be undertaken during the nesting season (broadly March to August) unless a survey for nesting birds confirms their absence. Should you require any further information on nesting birds, please contact Natural England.

You are advised that trees have the potential to support roosting bats. Bats and their roosts are.

legally protected. It is an offence to disturb or harm a bat, or damage, destroy or obstruct any

place used by bats for shelter, whether they are present or not. Trees should be inspected before any works commence and if the presence of bats is suspected works must cease and advice sought from The Bat Conservation Trust.

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Addendum 2 – Tree Works

Schedule of Tree Works

1. All proposed tree removal and tree pruning works are described in the management recommendations of the ***BS 5837 Report below***

2. Tree work to be carried out to the following standards and guidelines:

   - BS 3998:2010 Recommendations for Tree Work

   - Tree pruning cuts will be conducted using the 'Natural Target Pruning' technique as defined by: *BS 3998:2010 section 7.2.5 and Fig. 2 The Pruning of Trees, Shrubs and Conifers: George E. Brown & Tony Kirkham – 2nd edition revised & enlarged 2004 and Section 3.1.27 of The Arboricultural Association Specification for Tree Works June 2008.*

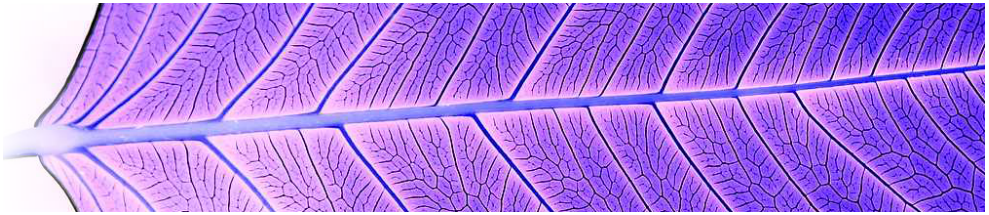
   - Crown clean involves removal of dead, diseased & dying wood from tree crown, thinning of overcrowded crown, and removal of Ivy and all epicormic growth within crown including stem & basal epicormic growth

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

Addendum 3 – Tree Survey Data

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

BS5837 Survey Data



Ref.	Species	Measurements	General Observations	Category	Recommendations
T001	Bay tree (Laurus nobilis)	Height (m): 6 3 stems, avg.(mm): 200 Spread (m): 3N, 3E, 3S, 3W Life Stage: Early Mature	Basal growth Bark congestion. Inclusive bark. Additional Comments: This tree does not merit retention due to poor structural condition and large basal suckering/shoots.	C2 RPA Radius: 4.2m. Area: 55 sq m.	Pre construction: Remove tree and replace with more suitable new planting of 2 trees such as Carpinus betulus 'Frans Fontayne' for upright growth and to support BNG (native planting) During construction: No action required. Post construction: No action required.

Addendum 4 – Tree Survey Plan & Site Plans

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk

5 BACONS LANE
1223-pp-050 existing site & location plan

Page size: A3

1 : 200

0 5 m 10 m

N

BS 5837

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

BACON'S LANE
(PRIVATE ROAD)

T001

EXISTING SINGLE
STOREY ANNEXE
(UNREFURBISHED)

EXISTING REFURBISHED
TWO-STOREY HOUSE

TERRACE

EXISTING
GARAGE

NO. 4

GARDEN

Addendum 5 – Picture Gallery

Office: 32B Elizabeth Avenue, Islington London N1 3BJ
Tel: 07860 445380
Email: office@wassells.co.uk
www.wassells.co.uk