

Arboricultural Survey - BS5837:2012

**Mihaly Szalontay** 

9-11 Belsize Grove London NW3 4UU

19 December 2023

Anthony Jones BSc (Hons) TechArborA



# Table of Contents

| 1   | Introduction  |    |
|-----|---|----|
| 2   | Survey  |    |
| 3   | BS 5837:2012 - Scope  | 7  |
| 4   | Methodology   |    |
| 5   | Definitions   |    |
| 6   | Recommendations   | 10 |
| 7   | Limitations   | 10 |
| 8   | Appendices  | 11 |
| Арр | pendix 1: Table 1 Cascade chart for tree quality assessment |    |
| Арр | pendix 2: Tree Schedule                                     |    |
| Арр | pendix 3: Tree Constraints Plan                             | 19 |
| 9   | Document Production Record                                  |    |

# 1 Introduction

Arbtech Consulting Limited (Arbtech) received written instruction on 21 November 2023 from Mihaly Szalontay to attend 9-11 Belsize Grove, London, NW3 4UU to undertake an arboricultural survey to BS5837:2012 guidance to assess trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees and Tree Constraints Plan.

I am Anthony Jones, an Arboricultural Consultant for Arbtech Consulting Ltd. I have worked within the arboricultural industry for over 8 years, I have qualifications including a BSc Hons in Environmental Resource Management, Level 4 certificate in arboriculture, and a LANTRA professional tee inspection certificate. I am an ISA certified arborist and technician member of the Arboricultural Association.

The advice below and appended is underwritten by our Professional Indemnity insurance for the business practice of Arboricultural Consultancy in the sum of one million Pounds Sterling in each and every claim.

| Document                   | Reference No.  |
|----------------------------|----------------|
| Survey base drawing        | 9-11BG SH01-1  |
| LPA pre-app comments       | N/A            |
| British Standard 5837:2012 | "BS5837"       |
| Tree Survey Schedule       | Arbtech TS 01  |
| Tree Constraints Plan      | Arbtech TCP 01 |

#### Table 1: Documents referred to.

# 2 Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Anthony Jones on 27 November 2023.

During the survey, I categorised the trees using "Table 1 – Cascade chart for tree quality assessment" of the BS5837:2012 (see Appendix 1).

A total of 16no. individual trees were surveyed. Details for each are provided in the Schedule of Trees (Appendix 2).

Multiple other small trees and shrubs occupy the site, none of which meet the minimum diameter requirements to be considered for this survey.

#### Table 2: Documents upon which this tree survey has been based.

| Document            | Originator         | Reference Number | Title                                     |
|---------------------|--------------------|------------------|---|
| Survey base drawing | Dartlet Design Ltd | 9-11BG SH01-1    | Proposed Garden Plan with Garden Pavilion |

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and advanced decay detection equipment, were not employed, though may form part of the survey's management recommendations. Measurements were taken using specialist tapes, lasers, and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of tree's condition relative to their present context (*i.e. not in relation to the proposed development*).

Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

#### Site Description

The site is situated in an urban residential area in Belsize Park, Northwest London. The site comprises 3 distinct level changes with an approx. 4-5 m evaluation away from residential building. Note that the site is currently under construction and many proposed features have been built or are under construction.

Arboriculture | Ecology | Topographic







Figure 1: OS Map showing the site location (Bing Maps).

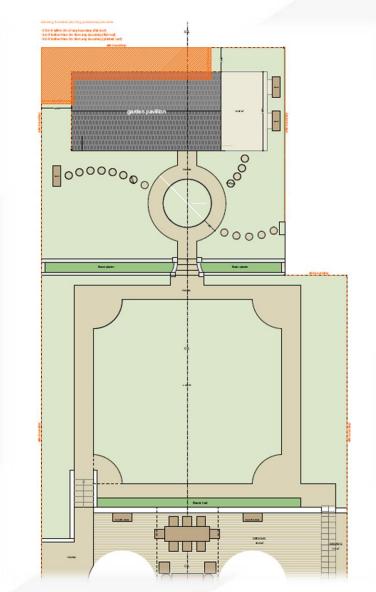


**Figure 2**: Aerial Image of the site with approximate red line boundary denoting area surveyed (Google Earth).



#### **Proposed Scheme**

The proposed scheme for the site is to install a garden pavilion, retaining walls and new stone pathways.



**Figure 3**: Proposed Garden Plan with Garden Pavilion, drawing number: 9-11BG SH01-1 (Dartel Design Ltd).

It is likely that arboricultural impacts can be addressed with arboricultural methodology or minor amendments to the proposal.

# 3 BS 5837:2012 - Scope

This standard recognises that there can be problems for development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees in relation to construction to form balanced judgements. It does not set out to put arguments for or against development or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.

### 4 Methodology

The methodology used to assess the trees was the British Standard 5837:2012 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality, suitable for retention and justifying protection. And which trees are low or poor quality, either undesirable or unsuitable to retain and protect.

The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands, for their quality and value within the existing context in a transparent, understandable, and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.

The proposed drawing has been used as the survey base plan as it was the best representation of the site at the time of survey.

Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP).

Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.

The quality and value of each tree or group of trees have been recorded by allocating it to one of the four categories: A, B, C, or U (highest to lowest quality, respectively). The categories are differentiated on the tree survey plan by colour or by suffixing the category adjacent to the tree identification number on the TCP.

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The survey schedule lists all the trees or groups of trees. The following information is also provided:

- a) reference number (to be recorded on the tree survey plan);
- b) species (common or scientific names);
- c) height in meters (m);
- d) stem diameter in millimetres (mm) at 1.5m above adjacent ground level or immediately above the root flare for multi-stemmed trees;
- e) branch spread in meters taken at the four cardinal compass points;
- f) height of crown clearance above adjacent ground level in meters (m);
- g) age class (newly planted, young, semi-mature, early mature, mature, over mature);
- h) physiological condition (e.g. good, fair, poor, decline and dead);
- i) structural condition (e.g. good, fair, poor or not visible);
- j) comment about the tree, its location and preliminary management recommendations, including further investigation of suspected defects that require more detailed assessment and potential for wildlife habitat;
- k) The retention category referring to the quality and useful contribution in years; U = <10yrs; A = >40yrs; B = >20yrs; C = >10yrs. The retention subcategory referring to the type of amenity; 1 = Arboricultural; 2 = Landscape; 3 = Cultural including conservation (see Appendix 1 Cascade chart for tree quality assessment).

# 5 Definitions

#### Arboriculturist

An arboriculturist (or arboricultural consultant) is a person who has, through relevant education, training, and experience, gained recognized qualifications and expertise in the field of trees in relation to construction.

#### Tree Survey

A tree survey should be undertaken by an arboriculturist and should record information about the trees on a site independently of and prior to any specific design for development. As a subsequent task, and with reference to a design or potential design, the results of the survey should be included in the preparation of a tree constraints plan, which should be used to assist with site layout design.

#### Tree Constraints Plan

A TCP is plan, typically delivered as an AutoCAD drawing (.DWG file format), prepared by an arboriculturist for the purposes of layout design showing the root protection area and representing the effect that the mature height and spread of retained trees will have on layouts through shade, dominance, etc.

#### **Root Protection Area**

An RPA is a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree, shown in plan form in m<sup>2</sup>.

#### Construction Exclusion Zone (also termed Tree Protection Zone)

A construction exclusion or tree protection zone is an area based on the RPA (in m<sup>2</sup>), identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

#### Arboricultural Impact Assessment (AIA)

This is a study, undertaken by an arboriculturist, to identify, evaluate and possibly mitigate the extent of direct and indirect impacts on existing trees that may arise as a result of the implementation of any site layout proposal.

#### Tree Protection Plan (TPP)

A TPP is plan, typically delivered as an AutoCAD drawing (.DWG file format), prepared by an arboriculturist showing the finalized layout proposals, tree retention and tree and landscape protection measures detailed within the arboricultural method statement, which can be shown graphically.

#### Arboricultural Method Statement (AMS)

This is a methodology for the implementation of any aspect of development that has the potential to result in loss of or damage to a tree. The AMS is likely to include details of an on-site tree protection monitoring regime.

# 6 Recommendations

With the benefit of making an assessment of your planning proposals, we make the following recommendation to ensure that there are no irrevocable issues to the proposed retained trees and so that no conditions relating to arboriculture are attached to any planning consent secured; obtain an arboricultural report to include:

- a) An arboricultural impact assessment (AIA).
- b) An arboricultural method statement (AMS).
- c) A tree protection plan drawing (TPP).

#### 7 Limitations

Trees were inspected from using visual observation from ground level only. Trees were not climbed or inspected below ground level. Inaccessible trees will have best estimates made about the location, physical dimensions, and characteristics. Trees have been grouped where BS5837 guides us that it is expedient to do so. Trees have been excluded from the survey if they are found by us to be sufficiently far away from the proposed developable area or if they are outside of the red line boundary plan showing the expectations of our client for the extent of the survey. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order ("TPO"), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.



# 8 Appendices

The following documents were released to the Client as appendices to this report:

- Survey Schedule (.PDF)
- Tree Constraints Plan drawing (.DWG & .PDF)

If you require clarification of the information contained herein, please do not hesitate to contact us via 01244 661170.

Yours Sincerely,

Anthony Jones BSc (hons), Cert Arb Lv4 (ABC), TechArborA. Arboricultural Consultant 07821 657075 anthonyjones@arbtech.co.uk



# Appendix 1: Table 1 Cascade chart for tree quality assessment



9-11 Belsize Grove – Arbtech TSR 01

Page | 12 of 21



#### BS5837:2012 Trees in relation to design, demolition and construction – Recommendations

Cascade chart for tree quality assessment - Table 1 - (reproduced with permission of BSI Global)

| Category and Definition  | c  | riteria including sub-categories where appropria  | te)  | Identification<br>on Plan |  |  |  |  |  |  |
|--|--|---|--|---------------------------|--|--|--|--|--|--|
| Category U (Trees unsuitable for<br>retention - See notes).<br>Those in such a condition that they<br>cannot realistically be retained as<br>living trees in the context of the<br>current land use for longer than 10<br>years. | <ul> <li>Trees that have 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).</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.</li> <li>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.</li> <li><i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.</i></li> </ul> |   |  |                           |  |  |  |  |  |  |
| Trees considered for retention   | 1) Mainly arboricultural qualities   | 2) Mainly landscape qualities   | 3) Mainly cultural values (including conservation)   |                           |  |  |  |  |  |  |
| <b>Category A</b><br><b>Trees of high quality</b> with an<br>estimated remaining life<br>expectancy of at least 40 years.  | Trees that are particularly good examples of<br>their species, especially if rare or unusual; or<br>those that are essential components of<br>groups or formal or semi-formal<br>arboricultural features (e.g. the dominate<br>and/or principal trees within an avenue).   | Trees, groups, or woodlands of particular<br>visual importance as arboricultural and/or<br>landscape features.  | Trees, groups or woodlands of significant<br>conservation, historical, commemorative or<br>other value (e.g. veteran trees or wood-<br>pasture). | Light green               |  |  |  |  |  |  |
| Category B<br>Trees of moderate quality with an<br>estimated remaining life<br>expectancy of at least 20 years.  | Trees that might be included in category A,<br>but are downgraded because of impaired<br>condition (e.g. presence of significant though<br>remedial defects, including unsympathetic<br>management and storm damage), such that<br>they are unlikely to be suitable for retention<br>of beyond 40 years; or trees lacking the<br>special quality necessary to merit the<br>category 'A' designation.   | Trees present in numbers, usually growing as<br>groups or woodlands, such that they attract a<br>higher collective rating than they might as<br>individuals; or trees occurring as collectives<br>but situated so as to make little visual<br>contribution to the wider locality. | Trees with material conservation or other cultural value.  | Mid blue                  |  |  |  |  |  |  |
| Category C<br>Trees of low quality with an<br>estimated remaining expectancy of<br>at least 10 years, or young trees<br>with a stem diameter below<br>150mm.   | Unremarkable trees of very limited merit or<br>such impaired condition that they do not<br>qualify in higher categories.   | Trees present in groups or woodlands, but<br>without this conferring on them significantly<br>greater collective landscape value; and/or<br>trees offering low or only<br>temporary/transient landscape value.  | Trees with no material conservation or other cultural value.   | Grey                      |  |  |  |  |  |  |

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Ecology - Protected Species - Licensing - Arboriculture - Biodiversity Net Gain - Land/Topographical Survey



# Appendix 2: Tree Schedule

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| BS5837:2012 Tree Su | irvev |
|---------------------|-------|
|---------------------|-------|

# Arbtech Consulting Ltd

Client: Mihaly Szalontay Project: 9-11 Belsize Grove, London, NW3 4UU Survey Date: 27/11/2023 Surveyor: Anthony Jones

| নি | arbtech |
|----|---------|
|----|---------|

#### 3 Well House Barns Chester Road Bretton Cheshire CH4 0DH Phone: 01244661170

| Tree and Tag No           |    | Hght<br>(m) |     | Stems 0   |           | Crow       |                  |                 | RP        | Phys      | Structural<br>Condition   |                | Preliminary Recommendations   | Cat<br>ERC |
|---------------------------|----|-------------|-----|-----------|-----------|------------|------------------|-----------------|-----------|-----------|---------------------------|----------------|---|------------|
| Species                   |    |             | No  | Ø<br>(mm) |           |            | Clear Age<br>(m) | A (m²)<br>R (m) | Condition |           |                           | Survey Comment |   |            |
| T01                       |    |             | 1   |           |           |            |                  |                 |           |           |                           |                |   |            |
| Common Hawthorn           |    | 6           | 1   | 190       | Ν         | 2.5        | 2                | SM              | A: 16.3   | Fair      | C: Fair                   |                |   | C.1        |
| Crataegus monogyna        |    |             |     |           | E<br>S    | 2<br>2.5   | 1<br>1           |                 | R: 2.27   |           | S: Good<br>B: Not visible |                | ocated on SW boundary within property line. Historic<br>Ig consistent with height reduction 4m from ground level                                      | 10+ yr     |
|                           |    |             |     |           | W         | 2          | 2                |                 |           |           |                           |                | m regrowth. Ivy covered basal area.   |            |
| Т02                       |    |             |     |           |           |            |                  |                 |           |           |                           |                |   |            |
| Silver Birch              |    | 9           | 1   | 400       | Ν         | 2          | 3                | М               | A: 72.4   | Fair      | C: Fair                   |                |   | C.1        |
| Betula pendula            |    |             |     |           | Е         | 3.5        | 2.5              |                 | R: 4.8    |           | S: Good                   | Tree lo        | ocated on SW boundary within property line. Historic  | 10+ yr     |
|                           |    |             |     |           | S         | 4          | 1.5              |                 |           |           | B: Fair                   | prunin         | g consistent with heavy height reduction/ topping at 8m   |            |
|                           |    |             |     |           | W         | 3          | 1.5              |                 |           |           |                           | 30- 25         | pround level, leaving multiple decaying pruning wounds<br>Omm diameter and 1m regrowth. Substantial burl<br>h on main stem at 1.5m from ground level. |            |
| Т03                       |    |             |     |           |           |            |                  |                 |           |           |                           |                |   |            |
| Myrobalan Plum 'Nigra'    |    | 8           | 6   | 490 (I    | Eq) N     | 3.5        | 2.5              | М               | A: 108.6  | Fair      | C: Fair                   |                |   | <b>B.1</b> |
| Prunus cerasifera 'Nigra' |    |             |     |           | Е         | 4.5        | 1.5              |                 | R: 5.87   |           | S: Fair                   | Tree lo        | ocated on SW boundary within property line next to  | 20+ yr     |
|                           |    |             |     |           | S         | 5          | 1                |                 |           |           | B: Fair                   | retaini        | ng wall and hard surface area. Historic pruning   |            |
|                           |    |             |     |           | W         | 5          | 1.5              |                 |           |           |                           |                | tent with stem removal at base of tree leaving an<br>netrical crown. A number of dead hangers are present in<br>y.                                    |            |
| T04                       |    |             |     |           |           |            |                  |                 |           |           |                           |                |   |            |
| Robinia                   |    | 4.5         | 1   | 140       | Ν         | 0.5        | 2                | SM              | A: 8.9    | Fair      | C: Good                   |                |   | C.1        |
| Robinia pseudoacacia      |    |             |     |           | E         | 0.5        | 2                |                 | R: 1.68   |           | S: Fair                   | Tree lo        | ocated on SW boundary within property line.   | 10+ yr     |
|                           |    |             |     |           | S<br>W    | 2.5<br>3.5 | 3<br>3           |                 |           |           | B: Fair                   |                | netrical crown with naturally occurring lean into   |            |
|                           |    |             |     |           | vv        | 3.5        | 3                |                 |           |           |                           | neight         | pouring property.   |            |
| Age Classifications:      | N  | Newly plan  | ted |           | ly Mature | )          | c                | ondit           |           |           |                           | Stems:         | Ø Diameter  |            |
|                           | Y  | Young       |     | M Mat     |           |            |                  |                 | S         |           |                           | 500            | (Eq) Equivalent stem diameter using BS5837:2012 def   | inition    |
|                           | SM | Semi-matu   | re  | OM Ove    | er Mature |            |                  |                 | В         | Basal are | а                         | ERC:           | Estimated Remaining Contributio   |            |

| Tree and Tag No         |    | Hght         | 9  | Stems    |            | Crow      | /n           |       | RP              | Dhye              | Structural     |         | Preliminary Recommendations   | Cat        |
|-------------------------|----|--------------|----|----------|------------|-----------|--------------|-------|-----------------|-------------------|----------------|---------|---|------------|
| Species                 |    | (m)          | No | Ø<br>(mi |            | ead<br>n) | Clear<br>(m) | Age   | A (m²)<br>R (m) | Phys<br>Condition | Condition      |         | Survey Comment  | ERC        |
| T05                     |    |              |    |          |            |           |              |       |                 |                   |                |         |   |            |
| Holm Oak                |    | 9.5          | 2  | 188      | (Eq) N     | 3.5       | 2            | SM    | A: 16           | Good              | C: Good        |         |   | C.1        |
| Quercus ilex            |    |              |    |          | Е          | 3         | 1.5          |       | R: 2.25         |                   | S: Good        | Trool   | ocated next to recently installed garden pavillion. Historic  | 10+ yrs    |
|                         |    |              |    |          | S          | 3         | 1            |       |                 |                   | B: Good        |         | ig consistent with crown lifting on west side of canopy   |            |
|                         |    |              |    |          | W          | 3.5       | 3            |       |                 |                   |                |         | 3m from ground level.   |            |
| Т06                     |    |              |    |          |            |           |              |       |                 |                   |                |         |   |            |
| Common Horse Chestnut   |    | 11           | 1  | 610      | Ν          | 3.5       | 4            | Μ     | A: 168.4        | Fair              | C: Fair        |         |   | <b>B.1</b> |
| Aesculus hippocastanum  |    |              |    |          | E          | 5         | 4            |       | R: 7.32         |                   | S: Good        | Tree la | ocated on NW boundary within property line next to  | 20+ yrs    |
|                         |    |              |    |          | S          | 5         | 4            |       |                 |                   | B: Good        | recent  | ly installed garden pavilion. Historic pruning consistent   |            |
|                         |    |              |    |          | W          | 4         | 4.5          |       |                 |                   |                |         | ollarding/ height reduction at 7m from ground level<br>m regrowth and removal of epicormic growth.          |            |
| Т07                     |    |              |    |          |            |           |              |       |                 |                   |                |         | Estimated Me  | easuremen  |
| Mimosa or Silver Wattle |    | 6            | 1  | 150      | Ν          | 4         | 2            | SM    | A: 10.2         | Good              | C: Good        |         |   | C.1        |
| Acacia Spp.             |    |              |    |          | E          | 1         | 2            |       | R: 1.8          |                   | S: Not visible | Tree la | ocated in neighbouring property. No access,   | 10+ yrs    |
|                         |    |              |    |          | S          | 3         | 2            |       |                 |                   | B: Not visible |         | irements estimated. No significant features observed.   | - / -      |
|                         |    |              |    |          | W          | 4.5       | 2            |       |                 |                   |                |         | -<br>-  |            |
| Т08                     |    |              |    |          |            |           |              |       |                 |                   |                |         |   |            |
| Common Horse Chestnut   |    | 10.5         | 1  | 650      | Ν          | 3         | 5            | Μ     | A: 191.2        | Poor              | C: Fair        |         |   | U          |
| Aesculus hippocastanum  |    |              |    |          | E          | 4         | 4            |       | R: 7.8          |                   | S: Poor        | Tree lo | ocated on NW boundary within property line next to  | <10 yrs    |
|                         |    |              |    |          | S          | 4         | 4            |       |                 |                   | B: Fair        | recent  | ly installed garden pavilion. Large lateral 2m  |            |
|                         |    |              |    |          | W          | 2.5       | 4            |       |                 |                   |                |         | vood decay wound on NE side of stem, sounding   |            |
|                         |    |              |    |          |            |           |              |       |                 |                   |                |         | er- indicates hollowing up to 3m from ground level. Ivy<br>ed stem and canopy, growing up to 8m from ground |            |
|                         |    |              |    |          |            |           |              |       |                 |                   |                |         | Historic pruning consistent with pollarding at 7m from  |            |
|                         |    |              |    |          |            |           |              |       |                 |                   |                | ground  | d level with 3.5m regrowth.   |            |
| Т09                     |    |              |    |          |            |           |              |       |                 |                   |                |         |   |            |
| Common Hawthorn         |    | 5            | 2  | 136      | (Eq) N     | 1         |              |       | A: 8.4          | Good              | C: Good        |         |   | C.1        |
| Crataegus monogyna      |    |              |    |          | E          | 1         | 2            |       | R: 1.63         |                   | S: Good        | Tree lo | ocated on NE boundary within property line. Ivy covered   | 10+ yrs    |
|                         |    |              |    |          | S          | 2         | 2            |       |                 |                   | B: Good        | stem.   | , , , , ,   |            |
|                         |    |              |    |          | W          | 1.5       | 3            |       |                 |                   |                |         |   |            |
|                         |    |              |    |          |            |           |              |       |                 |                   |                |         |   |            |
| Age Classifications:    | N  | Newly plante | ed | EM E     | Early Matu | re        |              | Condi | tion: C         | Crown             |                | Stems:  | Ø Diameter  |            |
|                         | Y  | Young        |    | M N      | /lature    |           |              |       | S               | Stem              |                |         | (Eq) Equivalent stem diameter using BS5837:2012 de  | finition   |
|                         | SM | Semi-mature  | е  | OM C     | Over Matur | е         |              |       | В               | Basal area        | а              | ERC:    | Estimated Remaining Contributio   |            |
| Page 2                  |    |              |    |          |            |           |              |       | Tree            | linder            |                |         | 28 Nove   | ember 202  |

| Tree and Tag No                                 |              | 11-4-4                               | 9  | Stems                         |                  |                          |                  |       | RP                  | Dhara             | Characteria I                               | Preliminary Recommendations  | Cat                   |
|---|--------------|--------------------------------------|----|-------------------------------|------------------|--------------------------|------------------|-------|---------------------|-------------------|---|--|-----------------------|
| Species   |              | Hght<br>(m)                          | No | Ø<br>(mm)                     | Sprea<br>(m)     |                          | Clear<br>(m)     | Age   | A (m²)<br>R (m)     | Phys<br>Condition | Structural<br>Condition                     |  | Cat<br>ERC            |
| Т10   |              |                                      |    |                               |                  |                          |                  |       |                     |                   |   |  |                       |
| Common Horse Chestnut<br>Aesculus hippocastanum |              | 8                                    | 1  | 680                           | N<br>E           | 3<br>2                   | 4<br>2           | М     | A: 209.2<br>R: 8.16 | Poor              | C: Fair<br>S: Poor                          |  | <b>U</b>              |
|   |              |                                      |    |                               | S<br>W           | 3<br>2.5                 | 3                |       |                     |                   | B: Fair                                     | Tree located on NW boundary in neighbouring property.<br>Complete heartwood decay up to 4m from ground level/ at<br>crown break. Historic pruning consistent with pollarding/<br>topping at 7m from ground level with 1m regrowth.   | <10 yrs               |
| T11   |              |                                      |    |                               |                  |                          |                  |       |                     |                   |   |  |                       |
| Sycamore  |              | 15                                   | 1  | 450                           | Ν                | 5                        | 3                | М     | A: 91.6             | Good              | C: Good                                     |  | <b>B.1</b>            |
| Acer pseudoplatanus                             |              |                                      |    |                               | E<br>S<br>W      | 4<br>4<br>4              | 4<br>4<br>5      |       | R: 5.39             |                   | S: Fair<br>B: Good                          | Tree located in neighbouring property. Damage to bark/<br>cambium layer on south side of stem. 200mm decay wound on<br>SW side of stem at 4m from ground level. Historic pruning<br>consistent with crown lifting up to 4m from ground level.  | 20+ yrs               |
| T12   |              |                                      |    |                               |                  |                          |                  |       |                     |                   |   |  |                       |
| Common Ash                                      |              | 19                                   | 1  | 1110                          | Ν                | 9                        | 4                | М     | A: 557.5            | Fair              | C: Good                                     |  | <b>B.1</b>            |
| Fraxinus excelsior                              |              |                                      |    |                               | E<br>S<br>W      | 10<br>14<br>10           | 3<br>5<br>10     |       | R: 13.32            |                   | S: Fair<br>B: Fair                          | Tree located in neighbouring property. Large canopy that<br>spans across 3 property boundaries. 600mm decay wound at<br>base of tree with degraded saprophytic fungal fruiting bodies<br>present. Sounding hammer- indicates hollowing on SE side of<br>stem up to 3m from ground level. 50-200 mm deadwood<br>throughout crown. Historic pruning consistent with crown<br>lifting up to 6m from ground level, and selective pruning<br>throughout canopy, leaving pruning wounds 50-400mm<br>diameter, most of which have almost completely occluded. | 20+ yrs               |
| T13   |              |                                      |    |                               |                  |                          |                  |       |                     |                   |   |  |                       |
| Common or Black Elder<br>Sambucas nigra         |              | 4                                    | 1  | 120                           | N<br>E<br>S<br>W | 0.5<br>0.5<br>0.5<br>0.5 | 2<br>2<br>2<br>2 |       | A: 6.5<br>R: 1.43   | Fair              | C: Fair<br>S: Not visible<br>B: Not visible | Tree located in heidhdouring property. Tvy covered stem.   | C.2<br>10+ yrs        |
| T14   |              |                                      |    |                               |                  |                          |                  |       |                     |                   |   |  |                       |
| Common or Black Elder<br><i>Sambucas nigra</i>  |              | 5                                    | 1  | 140                           | N<br>E<br>S<br>W | 4<br>2<br>1<br>2         | 2<br>1<br>2<br>1 |       | A: 8.9<br>R: 1.68   | Fair              | C: Fair<br>S: Not visible<br>B: Not visible | ree localed in heidhdouring droderly. Tyy covered slem.  | <b>C.2</b><br>10+ yrs |
| Age Classifications:                            | N<br>Y<br>SM | Newly plante<br>Young<br>Semi-mature |    | EM Early<br>M Matu<br>OM Over |                  |                          | (                | Condi | tion: C<br>S<br>B   | Stem              | a   | Stems:       Ø       Diameter         (Eq)       Equivalent stem diameter using BS5837:2012 define         ERC:       Estimated Remaining Contributio  | iition                |
| Page 3  |              |                                      |    |                               |                  |                          |                  |       | Tree                | linder            |   | 28 Novem   | ber 2023              |

| Tree and Tag No                         |        | Usht                                 | Stems |          |                       | Crow                 |                  |        |                    | Dhue              | Chrysternal                   | Preliminary Recommendations   |
|---|--------|--------------------------------------|-------|----------|-----------------------|----------------------|------------------|--------|--------------------|-------------------|-------------------------------|---|
| Species                                 |        | Hght<br>(m)                          | No    | Ø<br>(mm |                       | read<br>m)           | Clear<br>(m)     | Age    | A (m²)<br>R (m)    | Phys<br>Condition | Structural<br>Condition       | Preliminary Recommendations         C           Survey Comment         E  |
| Г15                                     |        |                                      |       |          |                       |                      |                  |        |                    |                   |                               |   |
| Common or Black Elder<br>Sambucas nigra |        | 4                                    | 1     | 100      | N<br>E<br>S<br>W      | 0.5<br>3<br>1<br>1   | 2<br>2<br>1<br>2 | EM     | A: 4.5<br>R: 1.19  | Fair              | C: Good<br>S: Good<br>B: Good | Tree located in neighbouring property. No notable features 104 observed.  |
| Г16                                     |        |                                      |       |          |                       |                      |                  |        |                    |                   |                               |   |
| Bay<br><i>Laurus nobilis</i>            |        | 8.5                                  | 3     | 201 (    | (Eq) N<br>E<br>S<br>W | 2.5<br>4.5<br>3<br>3 |                  | SM     | A: 18.4<br>R: 2.42 | Fair              | C: Good<br>S: Fair<br>B: Fair | C<br>Tree located next to recently install retaining wall. A recent<br>level change of approx. 300mm around base of tree evident.<br>Historic pruning consistent with crown lifting up to 2m leaving<br>multiple pruning stub wounds. |
|   |        |                                      |       |          |                       |                      |                  |        |                    |                   |                               |   |
|   |        |                                      |       |          |                       |                      |                  |        |                    |                   |                               |   |
|   |        |                                      |       |          |                       |                      |                  |        |                    |                   |                               |   |
| Age Classifications:                    | N<br>Y | Newly plante<br>Young<br>Semi-mature |       |          | rly Matu<br>iture     |                      | C                | onditi | ion: C<br>S        |                   |                               | Stems: Ø Diameter<br>(Eq) Equivalent stem diameter using BS5837:2012 definition   |

Ecology - Protected Species - Licensing - Arboriculture - Biodiversity Net Gain - Land/Topographical Survey



# Appendix 3: Tree Constraints Plan

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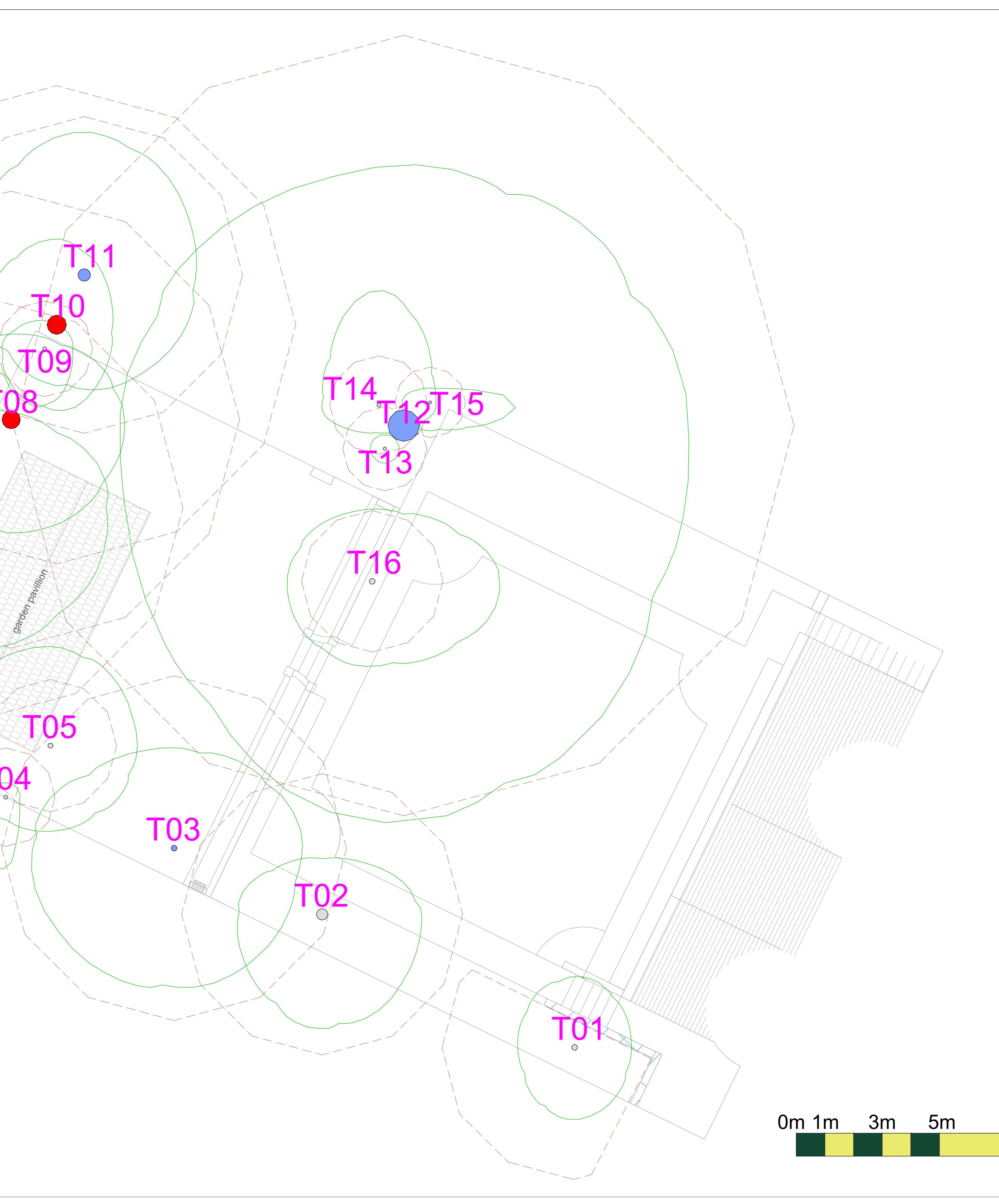
9-11 Belsize Grove – Arbtech TSR 01

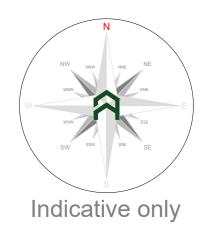
Page | 19 of 21

Note: The notionally circular RPA for T1 has been amended to consider the boundary wall and associated level changes to be barriers to root development. The prescribed area for the RPA has been maintained.

 $T \cap 7$ 

16





# Tree Categories

Trees are categorised in accordance with the cascade chart in Table 1 of the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction - Recommendations' ategory 'U' - Trees in such condition that they cannot realistically be retained as living trees in context of the current land use for longer than 10 years. egory 'A' - Trees of high quality with an estimated remaining

life expectancy of at least 40 years. Category 'B' - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. gory '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.

# Root Protection Area

In order to avoid damage to the roots or rooting environment of retained trees, the Root Protection Areas (RPAs) should be plotted around each of the category A, B and  $\bigcirc$  trees. This is a minimum area in m<sup>2</sup> which should be left undisturbed around each retained

The RPA is calculated using the British Standard BS 5837:2012 'Trees in relation to design, demolition and construction -Recommendations.

The calculated RPA is capped to 707m<sup>2</sup>, which is the equivalent to a circle with a radius of 15m. Where there appears to be restrictions to root growth the root protection area is reshaped to more accurately reflect the likely distribution of the roots.

# Tree Survey Report Please refer to Arbtech Consulting Ltd. Tree Survey Report and Tree Schedule for full details on all surveyed trees, hedgerows and

major shrub groups. All trees were surveyed and categorised in accordance with the guidance as set out in the British Standard BS5837:2012 Tree in relation to design, demolition and construction -Recommendations.

We make the following recommendation to ensure that no conditions relating to arboriculture are attached to any planning consent secured: obtain and arboricultural report to include:
a) An arboricultural impact assessment (AIA);
b) An arboricultural method statement (AMS); and
c) A tree protection plan (TPP).

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Unit 3, Well House Barns, Chester, CH4 0DH https://arbtech.co.uk, 01244 661170

9-11 Belsize Grove London NW3 4UU Mihaly Szalontay Tree Constraints Plan Based on: 9-11BG SH01-1 Rev: Drawing No: Arbtech TCP 01 --Scale: Drawn: Nov 2023 1:50 @ A0 A0J Tree Canopies: Trunks: Category 'U' trees: Category 'B' trees: 
 Category 'C' trees:
 Potential not barriers:

 All dimensions should be checked on site. No dimensions are to be scaled from this drawing. Please notify us of any discrepancies found. Arbtech Consulting Ltd. cannot be held responsible for inaccuracies in the base drawing in which this plan is based.

 This drawing is designed to reflect the principles of the layout or design only, and relates only to the protection of retained trees.

 This drawing is not to be read as a definitive part of the engineering or construction designs or method statement. An architect or structural engineer should be contacted over any matters of construction, detailing to respecification and for any standards or regulatory requirements relating to proposed structures, hard surfacing or underground services.

 This drawing was produced in colour - a monochrome copy should not be relied upon.

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# 9 Document Production Record

| Document<br>number | Editor        | Signature | Position                     | lssue<br>number | Date     |
|--------------------|---------------|-----------|------------------------------|-----------------|----------|
| Arbtech TSR 01     | Anthony Jones | lan.      | Arboricultural<br>Consultant | 01              | 19/12/23 |

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