David Clarke Chartered Landscape Architect and Consultant Arboriculturist Limited

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ARBORICULTUAL REPORT:

ARBORICULTURAL IMPACT ASSESSMENT and

ARBORICULTURAL METHOD STATEMENT

In relation to a Planning Application

at:

139 Fortess Road, Camden, NW5 2HR

Compiled by: David Clarke BSc (Hons) Land Man, PD ARB (RFS), CMLI, M Arbor A

May 2024

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1.0 Instruction

- 1.1 I have been instructed by my client Dr Gita Hakhamaneshi to provide an appraisal of the likely impact to, and implications for trees on, or adjacent to, `139 Fortess Road, Camden, NW5 2HR' in relation to a planning application on the site.
- 1.2 The application is for `Erection of an extension to the rear of the existing building'.

2.0 Introduction

2.1 Qualifications and Experience

2.1.1 I am David Clarke, I have a Bachelor of Science Honours Degree in Landscape Management from Reading University and I am a Chartered Landscape Architect and Chartered Member of the Chartered Landscape Institute (1998). I hold the Professional Diploma in Arboriculture (RFS) (2012) and I am a Professional Member of the Arboricultural Association. I have 32 years' experience of working in both the private and public sector in relation to arboricultural and landscape issues.

2.2 Scope of this Report

- 2.2.1 This Arboricultural Impact Assessment and Arboricultural Method Statement form the Arboricultural Report for the Planning Application. They should be read in conjunction with:
 - Tree Protection Plan TPP/139FRC/010 A and
 - Arboricultural Survey (Appendix A).

The Arboricultural Report is aimed at identifying and addressing those matters concerning trees in relation to the proposed planning application. It will clarify these issues:

- The principles and procedures to be applied to achieve a harmonious and sustainable relationship between retained trees and structures.
- The species, size, position and condition of those trees within the area of the proposed development where trees may potentially have some significance to the proposed development. The full survey schedule is set out in Appendix A.

- The impact of the proposed development upon these trees (and vice versa) including those trees to be removed due to the proposed development.
- Any measures that are required to protect retained trees during the proposed works.
- 2.2.2 The trees have been assessed (see Arboricultural Survey Appendix A) as set out in BS BS5837: 2012 `Trees in relation to design, demolition and construction. Recommendations.' An Arboricultural Survey was undertaken by myself in May 2024 in relation to this planning application.
- 2.2.3 Tree numbers within the text (T1-T3 and G1-G2) relate to numbers designated as part of the Arboricultural Survey unless otherwise stated. The trees are plotted on Tree Protection Plan
 TPP/139FRC/010 A which accompanies the planning application.
- 2.2.4 BS 5837: 2012 `Trees in relation to design, demolition and construction. Recommendations' provides recommendations for the assessment of trees on development sites and suggests four categories into which trees should be placed for assessment purposes. These categories have been used as part of the assessment of trees within this report.

2.3 <u>Relevant Background Information</u>

- 2.3.1 It has been confirmed that a London Plane (Platanus x hispanica) within this report is protected by a Tree Preservation Order (TPO). The online mapping service provided by London Borough of Camden confirms that the site is not located within a Conservation Area.
- 2.3.2 It is recommended that this information on protected trees be confirmed by anyone proposing to undertake any (future) works to trees both inside and outside the application site. This should be undertaken in writing with the Local Planning Authority (LPA) before proceeding with any tree works unless works within this report are agreed as part of a Planning Approval.

2.4 Documents and Information Provided

2.4.1 All plans within this report are based upon drawings supplied by Alan Cox Associates Architects Ltd.

2.4.2 This document has been prepared in accordance with guidance set out in British Standard BS 5837: 2012 `Trees in relation to design, demolition and construction. Recommendations' (BS 5837:2012).

3.0 Report Limitations

- 3.1 The report is for the sole use of the client and its reproduction or use by anyone else is prohibited unless written consent is given by the author.
- 3.2 The report observations are to be considered as correct at the time of inspection only. Trees are a growing, living organism, and are readily affected by many environmental factors. As such their condition and circumstances can change in a very short period of time. Therefore this report should be construed as valid for an absolute maximum of 12 months from the date of the Arboricultural Survey provided all factors remain unchanged.
- 3.3 This is an arboricultural report and as such no reliance should be given to comments relating to buildings, engineering, soils or other unrelated matters. The inspection of trees was undertaken from ground level and they were not climbed. No samples of wood, roots, soils or fungus were taken for analysis. Observations of the trees were confined to what was visible from within the site and surrounding public places. A full hazard risk assessment of the trees was not undertaken.
- 3.4 The presence of TPOs, a Conservation Area, or other designations, may affect the use of the site and the management of trees on the site. These designations can be served on the application, or adjacent, sites at any time. The landowner, or his representatives, should therefore satisfy themselves as to the presence (or absence) of these designations prior to:
 - Undertaking any works to trees on, or adjacent to, the site. Where necessary written permission from the Local Authority will be required prior to undertaking tree works.
 - Undertaking any of the works specified in this Arboricultural Report before planning permission is granted.

4.0 Brief Description of the Application Site and the Proposed Development

4.1 The application site forms part of the rear garden of 139 Fortess Road. The current building operates as a Dentist premises. To the immediate rear of the building is a patio (decking) which is used for both storage and a seating area. It is not clear what is under the decking but an area of concrete was visible adjacent to the building. Beyond the decking is a Shed and a small storage structure. These block (easy) access the main garden area. This main area contains another shed - which is covered in vegetation – developing trees and scrub and an established, mature London Plane. Ivy forms the predominant ground cover and is growing into the crown of the Plane. The Plane is growing on a small mound or bank to the rear of the site.



Photograph A – Looking towards the rear of the existing garden. Showing the existing shed and patio within the site.



Photograph B – Looking through the rear garden area. Showing ground ivy along with the establishing trees and scrub here.

4.2 The application is for `Erection of an extension to the rear of the existing building'.

5.0 General principles for protection of trees during development

- 5.1 It is equally important to ensure the protection of trees both above and below ground.Guidance is provided in BS 5837: 2012 as to the protection of trees, before, during and after development.
- 5.2 The Arboricultural Impact Assessment will set out the potential impact of the proposals on trees and vice-versa. There is a need to protect trees and provide an Arboricultural Method Statement where proposals will impinge, or impact on the Root Protection Areas (RPAs) of retained trees. Root Protection Areas (RPAs) are a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to

maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. These are set out as Construction Exclusion Zones and have been calculated as part of the Arboricultural Survey.

- 5.3 The RPA for each tree is initially plotted as a circle centered on the base of the stem. Where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area will be produced. These factors include the morphology and disposition of the roots, when known to be influenced by past or existing site conditions such as the presence of roads and structures and site topography. Modifications to the shape of the RPA within this report reflect a soundly based arboricultural assessment of likely root distribution. The RPA may change its shape but not reduce its area whilst still providing adequate protection for the root system.
- 5.4 Proposals may impinge on RPAs but these should be minimal and construction techniques such as specialized foundation designs should be considered to reduce the impact of development. The proposals will relate specifically to the site conditions and each individual tree and its category within the BS 5837 grading system.



Photograph C – Showing the trunk position of the London Plane (T1) to the rear of the garden, the small mound or bank around the tree and the ivy which is growing on the ground and to the trunk of the tree.

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6.0 Arboricultural Impact Assessment (AIA)

- 6.1 As stated above British Standard recommendations (BS5837: 2012) provides a formula for calculating the Root Protection Area (RPA) recommended to protect existing trees that are to be retained. The shape of the root protection area and its exact location will depend upon arboricultural considerations but the area will normally be represented on a plan as a circle. The purpose of the RPA is to prevent physical damage to tree roots and to prevent damage to the soil structure in which they live by soil compaction, changes in soil levels or prevention of gas exchange to living roots.
- 6.2 These RPAs are shown on the Tree Plans (TPP/139FRC/010 A) which also form part of the Arboricultural Method Statement. Where incursion within the RPA of a retained tree is necessary as part of the construction process then a methodology will be in place to prevent, or reduce to an insignificant level, damage to trees.
- 6.3 Below I have discussed the significance of the trees and the constraints that they are likely to pose to the proposed development (and vice-versa). Together with the Arboricultural Survey the AIA sets out any tree works required in order to facilitate the development as well as identifying works to trees (including removal) that should be undertaken as part of the management of trees on the site.

6.4 <u>Summary of Tree Impact Assessment</u>

6.5 There are 3 no. individual trees and 2 no. groups of trees which form the basis for this report and which could potentially be affected by the proposal.

6.6 <u>Trees recommended for removal for Arboricultural Reasons</u>

Of the trees within this report none are recommended for removal irrespective of this Planning Application. However, as set out in the Arboricultural Survey trees within the site should be monitored regularly as part of a tree risk assessment. This monitoring would guide the future management and/or retention of these trees.

6.7 <u>Schedule of trees recommended for removal for Arboricultural Reasons</u>

<u>Tree</u>	<u>Species</u>	<u>BS</u>	Reason for recommended removal
<u>No.</u>	(Common Name <u>)</u>	Category	

None

6.8 <u>Trees removed due to the application</u>

Of the trees within this report none will need to be removed as part of the implementation of the development.

6.9 Schedule of trees removed due to the application

<u>Tree</u>	<u>Species</u>	<u>BS</u>	Reason for removal
<u>No.</u>	(Common Name)	Category	

None

6.10 Trees potentially affected by the application

Site access will take place outside the RPAs of trees. The removal of existing sheds and a storage unit, the erection of the proposed extension, the installation of hardstanding and construction activity will take place within or adjacent to the RPAs or canopy spreads of retained trees. Pre-development tree works will be undertaken to create a harmonious relationship between the extension and London Plane (T1).

6.11 These potential impacts are set out and evaluated below and measures to prevent, or reduce, the effects of the proposals on these trees are set out in the Arboricultural Method Statement. The impact on retained trees from this development will not be significant as long as the proposals set out in this report are followed.

6.12 Schedule of trees potentially affected by the application

<u>Tree</u>	<u>Species</u>	<u>BS</u>	Reason for potential impact
<u>No.</u>	(Common Name)	<u>Category</u>	
T1	London Plane	B1	 Construction of extension within 2% of asymmetrical RPA. Installation of hardstanding (patio) within 2% of asymmetrical RPA. Construction Activity (pedestrian movements and/or the erection of scaffolding) within RPA and canopy spread. Pre-development tree works to prune the canopy away from the proposed extension.

6.13 Assessment of potential impacts on retained trees

6.14 Assessment of Distribution of Roots of Trees

As set out above the RPAs have been calculated as part of the Arboricultural Survey. The shape of the RPA and its exact location will depend upon arboricultural considerations but the area will normally be represented on a plan as a circle. Pre-existing site conditions – such as building footprints, hard surfacing and changes in levels - or other factors may indicate that rooting has occurred asymmetrically.

- 6.15 With regard to some of the trees within this report there are potential restrictions on their root activity. This relates to:
 - Buildings and ancillary structures London Plane (T1), Sycamore (T3) and G1;
 - A variety of surfaces within the rear garden areas around the trees London Plane (T1) and Sycamore (T3);

The exact construction of all the elements within and adjacent to the site are unknown but some fundamental principles will apply:

- 6.16 The capping of the soils by the buildings and hardstanding will reduce the availability of resources (such as water) to potential root activity and reduce gaseous exchange between the soils and the atmosphere. Factors such as soil compaction during the construction of the buildings and the hardstanding and the physical presence of foundations and hardstanding would also significantly reduce or prevent rooting activity in these areas. However, a full assessment of all the hardstanding and ancillary structures in the area was not possible as the garden areas were not fully accessible. They may have some permeability which would encourage root growth beneath these areas.
- 6.17 For the purposes of this report, it is therefore assumed that the presence of the buildings will have prevented root activity here. Asymmetrical RPAs are shown where trees are potentially affected by these elements. Circular RPAs are shown where trees are located adjacent to hardstanding or ancillary structures within the site or there are no visible restrictions on root growth as root activity could have occurred here. This represents the `worse-case' scenario in relation to these trees.
- 6.18 The exact distribution of roots could only be confirmed by undertaking further site investigations such as trial trenches. In relation to the site development and the potential impact on trees it is considered that this is currently not required.

6.19 Site Access

During the site development access will be from the frontage of the existing property. This will be outside the RPAs of trees within this report. Therefore, no Ground Protection Measures are proposed to protect these trees as part of this element of the development.

6.20 Demolition

Existing ancillary structures (sheds) and a storage unit will be removed to accommodate the proposed extension. Uncontrolled removal of these structures could lead to soil compaction in tree rooting zones or physical damage to trees which could adversely affect their long-term health and viability. To prevent unnecessary tree loss this phase of the project will be undertaken in a controlled manner as set out in the Arboricultural Method Statement.

6.21 <u>Removal of Hard Standing within RPAs</u>

No areas of hardstanding will need to be removed within the RPAs of trees.

6.22 Installation of Hard Standing within RPAs

An patio may be installed to the rear of the proposed extension within the RPA of London Plane (T1). The exact size of the patio is not known at this stage but for the purposes of this report it is indicated as being 2.0 m (depth) x 4.0 m (width) and would take place at over 9.0 m from the trunk of the tree. This would be an incursion of 2% of the RPA. This incursion is considered to be minor and insignificant to the long-term viability of this tree. As set out in BS 5837:2012 there are soil volumes contiguous with the RPA which the tree can exploit and which will mitigate for these incursions. However, if required by the LPA a `no dig' surface such as decking could be used so as to avoid any excavation within the RPA of this tree.

6.23 The specification and installation methodologies will prioritise the protection of the existing rooting areas of retained trees. These areas will be protected by fencing or Ground Protection Measures until this element of the works is to be undertaken. All relevant works should be supervised by an Arboriculturist.

6.24 Construction within RPAs

The proposed extension will take place within 2% of the RPA of London Plane (T1). As set out in `Tree Root Damage to Buildings – Volume 1' (Biddle) `...even a large tree will have few roots over 20 mm in diameter at a distance of 3.0 m from the tree'. Given that T1 is over 9.0 m from the extension it is therefore assumed that there will be no roots over 20 mm in the area of the proposed construction. As set out in BS 5837:2012 there are soil volumes

contiguous with the RPA which the tree can exploit and which will mitigate for these incursions. This incursion is therefore considered to be minor and insignificant to the long-term viability of this tree and the use of standard construction techniques is considered to be acceptable in this instance. Care will be undertaken during the construction phase and this will include the use of Tree Protection Fencing and Ground Protection Measures to protect the rooting areas of retained trees.

6.25 Construction Activity

Uncontrolled construction activity could lead to direct or indirect damage to trees - both above and below ground. Therefore, Tree Protection Fencing is proposed within the Arboricultural Method Statement to restrict and control construction activity, contain the development footprint and protect retained trees during the works.

6.26 The movements of pedestrians and/or the erection of scaffolding will take place within the RPA of T1 during the site development. Ground Protection Measures are proposed to protect the underlying soil profiles and any roots that may be present.

6.27 Canopy Spreads and Presence of Trees

The canopies of the majority of the trees are outside the footprint of the proposed extension. However, the canopy of London Plane (T1) will be to the footprint of the extension. It is therefore proposed to prune the canopy of this tree by 2.0-3.0 m to the eastern aspect to leave a canopy spread of 11.0-12.0 m to this aspect. The canopy may be crown lifted by up to 1.0 m – if required to leave the canopy to 2.5-3.0 m above the garden area. These works are considered to be minor and insignificant within the existing structure and condition of this tree.

- 6.28 As set out in the Arboricultural Survey differential pruning has occurred to this tree leaving it one sided or unbalanced to the south and west. It is therefore recommended that a co-ordinated pruning regime is implemented with the neighbouring properties that manages the tree as a whole rather than individual pruning regimes over the different surrounding garden areas. This regime should seek to create a more balanced and even crown to the tree. These works would require written permission from the LPA due to the protected nature of T1.
- 6.29 All proposed pruning works would follow guidance set out in the relevant British Standard (BS 3998:2010 - `Tree work - Recommendations') and will be carried out by a qualified tree surgeon/arboricultural contractor to ensure that the health, amenity and viability of the trees is maintained. All Arboricultural works should also comply with relevant bio-security

measures – such as those set out in the Arboricultural Associations position statement `Biosecurity in Arboriculture and Urban Forestry'. Initial tree works are specified in the Arboricultural Method Statement.

6.29 Shading

The retained trees within this report are located to the site boundaries and there will be a separation between their canopies and the proposed extension. Good light penetration will be allowed to the site. The use of the extension does not require high light levels. Trees will not be dominant to the proposals and will not have a detrimental impact on the site or its users. There will therefore be no future pressure to prune or fell trees through shading issues.

6.30 <u>Levels</u>

No ground level changes are currently proposed or should take place within the RPAs of retained trees except any discussed and assessed within this report.

6.31 Herbicides and Pesticides

The use of herbicides and pesticides is not proposed within the RPAs of retained trees as part of this application. Should this change then chemicals will be specified which will not have an impact on retained trees.

6.32 Utility Routes

The exact location of services is not confirmed at this stage. However, it is assumed that existing service runs from 139 Fortess Road will be used and upgraded and extended as required. Given the general position of trees to the site boundaries all new services should be able to be located outside the RPAs of retained trees. Early design coordination and discussions should be initiated to ensure that the proposed utility layout does not have a negative impact on trees to be retained. These should be undertaken well in advance of construction work commencing on site. If required specialised techniques will be used. The situation regarding utility routes will need to be confirmed as part of conditions for a Planning Approval.

6.33 Temporary Site Buildings and Storage of Materials and Plant

Poor placement of temporary site buildings (including latrines), contractors parking, materials and plant can lead to direct damage to retained trees or indirect damage such as through the compaction of soils. The layout and operation of the site has therefore been considered and planned at this early stage to reduce or prevent any potential and significant damage to retained trees. This includes the erection of Tree Protective Fencing as set out above and in the Arboricultural Method Statement.

6.34 Erection of Boundary Treatments

No new boundary treatments are currently proposed as part of the development

6.35 End Use of the Proposal

The proposals will be used as part of the current Dentists premises at the end of the project.

7.0 <u>Recommendations</u>

- 7.1 All tree works pruning should be undertaken prior to the start of the site development so as to avoid any conflict between trees and contractors during the implementation of the project. Remove all vegetation not being retained as part of the project.
- 7.2 Existing trees can be easily damaged directly through root severance and, inadvertently, through soil compaction which disrupts the soil structure causing asphyxiation of roots and subsequent root dysfunction. Spillage of toxic materials can cause root death. Protection for retained trees is essential to ensure they are not affected by the development.
- 7.3 Specifications for the protection of trees are proposed in the Arboricultural Method Statement. These include the use of Tree Protection Fencing and should be implemented to prevent, or limit, any significant damage to the roots of trees. Protective fencing should be erected as shown on the Tree Protection Plans.
- 7.4 The phasing of the operations should follow that set out in the Arboricultural Method Statement to ensure that the protection of trees is prioritised.
- 7.5 The location and siting of all utilities should be outside of the RPAs of retained trees as enforced on site. If incursions within RPAs are unavoidable then specialised installation techniques will need to be agreed with an Arboriculturist before proceeding. Therefore, initiate early design coordination and discussions to ensure that the proposed utility layout does not have a negative impact on trees to be retained. These should be undertaken well in advance of construction work commencing on site.

7.6 An Arboriculturist should be the main contact with the Local Authority Tree Officer and notify them of the proposed schedule prior to work commencing on site. Where necessary Arboricultural Supervision of the site should be undertaken on a schedule to be agreed with the site owner.



Photograph D – Showing London Plane (T1).

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ARBORICULTURAL METHOD STATEMENT

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May 2024

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8.0 <u>General</u>

8.1 This document sets out the methodologies for proposed works that affect trees on, and adjacent to, the site. These follow the granting of Planning Permission by the Local Planning Authority. Compliance with this (and subsequent) method statement(s) will be a requirement of all relevant contracts associated with the development proposals. Copies of this document will be available for inspection on site. The developer will inform the local planning authority if the arboricultural consultant is replaced. This method statement should be read in conjunction with Tree Protection Plans (TPP/139FRC/010 A).

9.0 Phasing of the Works

- **9.1** The works are proposed to be undertaken in the following phases:
 - Pre-Development Works

Confirm exiting welfare facilities within the building will be used during the development phase. Confirm that storage areas can be accommodated outside the Construction Exclusion Zones or on Ground Protection Measures prior to start of the site development.

- Confirm operation of the development site with relevant contractors and thereby ensure that proposed tree protection measures are suitable and `fit for purpose'. If required modify proposed measures whilst still ensuring the protection of trees.
- Undertake pre-development tree works: pruning of London Plane (T1). Remove any vegetation not being retained as part of the site development.
- Initiate early design coordination and discussions to ensure that the proposed utility layout does not have a negative impact on trees to be retained. These should be undertaken well in advance of construction work commencing on site. To confirm and agree layout and specification for utility runs with project Arboriculturist.

Development Phase

Confirm Tree Protection Fencing is in place and `fit for purpose' prior to the start of the Development Phase. Lay Ground Protection Measures as set out on the Tree Protection Plan.

- Confirm temporary site structures and storage areas are outside the Construction Exclusion Zones.
- Commence Development Phase.
- Undertake regular monitoring of the Tree Protection Measures to ensure they remain fit for the purpose of preventing unnecessary damage to trees. Should any unforeseen damage occur then this should be reported to the Local Planning Authority. Remedial tree surgery should be undertaken at the earliest opportunity as approved by a competent and qualified Arboriculturist.
- Completion of Development Phase and removal of any temporary site structures and stored materials.
- Removal of Tree Protection Fencing and any temporary Ground Protection Measures.
- It is advisable to carry out a further tree survey to identify any remedial trees surgery that may be required following the completion of the development. This will include any changes in the condition of the trees that may have occurred from the original survey.
- 9.2 It is noted that some phases of the work may overlap. For instance, some landscaping of the site may occur whilst Tree Protection Measures are still in place.

10.0 <u>Construction Site Access</u>

10.1 During the site development access will be from the frontage of the existing property. This will be outside the RPAs of trees within this report. Therefore, no Ground Protection Measures are proposed to protect these trees as part of this element of the development.

11.0 Pre-Development Tree Works

(i) Selective Pruning and Crown Lifting – London Plane (T1)
 It is proposed to prune the canopy of this tree by 2.0-3.0 m to the eastern aspect to leave a canopy spread of 11.0-12.0 to this aspect. This will create a harmonious

relationship to the proposed extension. The canopy make be crown lifted by up to 1.0 m to 2.5-3.0 m above the garden area. These works will be undertaken before the start of the Development Phase to avoid any potential conflict with contractors during the site development. These canopy spreads will be maintained in the future.

- 11.2 Pruning of this tree will involve the removal of secondary branches or branch shortening rather than removal of branches back to the main stem. The amount of material to be removed and the diameter(s) of the pruning cut(s) will be the minimum required for the purpose. If a stem or branch is to be shortened, the cut will be made distal to a union or group of unions where one or more healthy lateral branches bear enough foliage to sustain the parent stem or branch. If there is only one such union near the intended cut, the lateral branch will have as large a diameter as possible (i.e. at least one-third and preferably more than half that of the removed portion). Final pruning cuts should be made to avoid injury of the wood and bark of the parent stem or branch above the cut. This will help avoid colonization by decay organisms and pathogens. If a branch collar is visible, the final cut should be just outside it. The timing of the work, and its impact on habitat and wildlife, should be determined and form part of the proposed work schedule.
- 11.3 As set out in the Arboricultural Survey differential pruning has occurred to this tree leaving it one sided or unbalanced to the south and west. It is therefore recommended that a co-ordinated pruning regime is implemented with the neighbouring properties that manages the tree as a whole rather than individual pruning regimes over the different surrounding garden areas. This regime should seek to create a more balanced and even crown to the tree. These works would require written permission from the LPA due to the protected nature of T1.
- 11.4 All proposed pruning works would follow guidance set out in the relevant British Standard (BS 3998:2010 - `Tree work - Recommendations') and will be carried out by a qualified tree surgeon/arboricultural contractor to ensure that the health, amenity and viability of the trees is maintained. All Arboricultural works should also comply with relevant bio-security measures – such as those set out in the Arboricultural Associations position statement `Biosecurity in Arboriculture and Urban Forestry'.

12.0 Tree Protective Fencing

- 12.1 Root Protection Areas (RPAs) are the minimum areas (in m²) which should be left undisturbed around each retained tree as Construction Exclusion Zones. These areas have been calculated as part of the Arboricultural Survey. The protective distances where possible will be enforced by the use of robust protective fencing as outlined in BS 5837: 2012. The fencing will be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the trees.
- 12.2 In this instance it is proposed to use the following methods:
 - Existing boundary fencing.
 - 2.0 m high metal mesh panels will be used to prevent access to the majority of the rear garden. Examples would include Heras fencing (See Photograph E below). The panels will be joined together using a minimum of two anti-tamper couplers to prevent access except for maintenance operations. The distance between the fence couplers will be at least 1.0 m and they will be uniform throughout the fence. Where space does not allow for a full panel to be erected then panels may overlap each other to fill a gap. The panels should be supported on the inner side by stabilizer struts, which should normally be attached to rubber blocks. Where required the site the panels will be staked and secured in place so that they do not move during the development process.
- 12.3 The exact composition of the soil is unknown. Clay soil, for instance, compacts very easily when wet, so it is essential that fenced areas remain undisturbed before and during construction to prevent root asphyxiation.
- 12.4 Laminated site warning signs will be attached to the fencing. These signs will state:

CONSTRUCTION EXCLUSION ZONE - NO ACCESS

No storage of materials or use of machinery should take place within this area. These fences should remain intact unless under instruction from the site foreman following consultation with an Arborist.'

12.5 Existing fencing will be retained as stated. Additional Tree Protection Fencing will be erected to protect retained trees before any pedestrians enter the site in connection with the Development Phase (see Tree Protection Plan). Fencing will not be removed or relocated - except to allow for grounds maintenance operations – until the development is complete.



Photograph E – Example of Heras Tree Protective Fencing

13.0 Ground Protection Measures

- 13.1 Pedestrian movements and/or the erection of scaffolding will occur within the RPA of London Plane (T1). Materials – as set out below - will be introduced to protect the roots of this tree. These will be retained and maintained during the duration of the site development.
- 13.2 The structure of any protection measures will be designed to avoid localised compaction, by evenly distributing the carried weight over the Ground Protection Materials. They will cater for the `worse-case' scenario:

- 13.3 (i) For pedestrian use either concrete laid on a suitable geo-textile layer or inter-linked ground protection boards placed on top of a compression-resistant layer (150 mm depth of woodchip), laid onto a geotextile membrane will be used.
 - (ii) <u>Erection of Scaffolding</u>
 A single thickness of scaffold boards placed on top of a driven scaffold frame, so as to form a suspended walkway, will be used.
- 13.4 The position of Ground Protection Measures is shown on the Tree Protection Plans. These measures will only be removed once the relevant part of the Construction Phase is complete.

14.0 Demolition

- 14.1 The removal of the existing shed and a storage unit will be within the RPA of London Plane (T1). The methodology and information provided here is specifically in relation to the protection and retention of trees during this phase of the works.
- 14.2 Existing hard standing areas will be left in place until all demolition works are complete. This will ensure contractors have good access around the site and will protect the RPAs of retained trees.
- 14.3 These are relatively small, prefabricated structures. All stored materials will be removed from within the structures, and they will then be dismantled in sections. Removal of any bases will be undertaken to existing construction depths and no deeper.
- 14.4 All materials will be removed from site unless to be used within the proposed construction of the extension.

15.0 Installation of Hardstanding

15.1 A patio will be constructed within 2% of the RPA of London Plane (T1). This is considered to be a minor and insignificant incursion to the long-term viability of this tree. However, if required by the LPA a specialised construction techniques could be proposed. In this instance timber or composite decking is proposed.

15.2 The existing understorey planting and small shrubs will be removed (or scraped) using hand held tools. No additional excavation will occur. The soil surface may be lightly firmed to create a stable surface.

16.0 Site Organisation and Storage of Materials and Plant

- 16.1 During the proposed construction works attention will be paid to the protection and well being of retained trees. The site will be organised in such a manner so as to minimise the effects of the construction work on trees. This will include defining and containing the development footprint with Tree Protection Fencing.
- 16.2 All materials and plant to be used during, or generated by, the Development Phase will be stored outside the enforced tree protection areas. The operation of the site will be undertaken within the constraints imposed by the protection of trees. Where necessary materials will be brought to site in loads which are applicable to that phase of the works. This would help to minimise the development footprint within the site.
- 16.3 All toxic substances such as oils, bitumen's and residues from concrete mixing will be retained by effective catchment areas. No toxic material will be discharged within 10 m of a tree stem. No fires will be lit within 10 m of a tree stem.
- 16.4 All access onto and from the site will be via the Designated Access Route which is through the existing building.

17.0 Landscape Proposals

17.1 Any landscaping will avoid soil re-grading and unnecessary disturbance within the RPAs of retained trees. Any ground works, such as planting of trees or shrubs or the spreading of top soil, within the RPAs of retained trees will be undertaken using hand held tools.

18.0 <u>Conclusion</u>

18.1 The application is for `Erection of an extension to the rear of the existing building'.

- 18.2 Of the trees within this report none are recommended for removal irrespective of this Planning Application. However, trees within the site should be monitored regularly as part of a tree risk assessment. This monitoring would guide the future management and/or retention of these trees.
- 18.3 Of the trees within this report none will need to be removed as part of the implementation of the development.
- 18.4 There will be incursions within, or adjacent to the RPAs and canopy spreads of trees as part of the development of the site. These include for erection of the extension, construction activity and the installation of hardstanding. Overall, the incursions within the RPAs have been assessed within the Arboricultural Impact Assessment to either have a minimal and insignificant impact on retained trees or can be reduced to an insignificant level through the use of relevant construction techniques. These are set out within the Arboricultural Method Statement. These will ensure that the development will be completed without having any undue impact on retained trees.
- 18.5 Retained trees will be protected during the site development. This report sets out how retained trees are an important part of the development of the site and how protection and retention of trees will be achieved. The effect on retained trees from the proposals will be minimal given the proposed site layout and conditions and providing that the Arboricultural Method Statement is implemented.
- 18.6 The development is therefore acceptable in arboricultural terms and should receive planning consent.

Appendix A Arboricultural Survey 139 Fortess Road, Camden, NW5 2HR

1.0 Introduction

- 1.1 I visited the application site in May 2024 to inspect relevant trees in relation to a Planning Application on the site. These trees are within the area of the proposed development and may potentially have some significance to the proposed development. The survey includes the species, size, position and condition of these trees. A full list and description of Survey Terms is given below. The position of these trees has been noted on the accompanying Tree Protection Plans.
- 1.2 This survey has been prepared following guidance set out in BS 5837: 2012 `Trees in relation to design, demolition and construction. Recommendations'. It seeks to offer guidance in relation to planning application discussions or designs for the site. As suggested by BS5837: 2012 all trees with a stem diameter of less than 75 mm at 1.5 m above ground level were excluded from the survey.

2.0 Description of Survey Terms

- 2.1 **Tree Reference Number** is the number allocated as part of this Arboricultural Survey. This may be different from other surveys undertaken on the site and the tree may, or may not, be tagged on site.
- 2.2 **Height** of the tree is measured in metres to the centre of the crown or the highest point of the tree. There is a tolerance of plus or minus 1.0 m.
- 2.3 Crown Spread is taken at compass points N, E, S and W from the centre of the tree stem. This is to the nearest 0.5 m. Where tree canopies spread off-site then estimations (est) have been made. With regard to groups the average canopy spread is given. Where individuals within the group are significantly different from this these are shown on the plan and the maximum spread stated within the report.
- 2.4 **Stem Diameters** are taken at 1.5 m above ground level unless otherwise stated. Where measurements of trunk diameter are not possible then estimations (est) have been made. This may be due to ivy on the trunk or where trees are not on the application site. The annotation ms refers to multi-stemmed trees.

- 2.5 Root Protection Areas (RPAs) are calculated from stem diameter measurements as set out in BS5837: 2012 `Trees in relation to design, demolition and construction. Recommendations'. RPAs are the areas (in m²) around each retained tree which contain sufficient rooting volume to ensure the survival of the tree. The area will normally be represented on a plan as a circle or polygon. If shown as a circle the Radius of Root Protection Area Zone is included.
- 2.6 Age Class A young tree (Y) is within its first 1/3rd of life expectancy. A middle aged tree (MA) is within its second 1/3rd of life expectancy and a mature tree (M) is within its final third of life expectancy. An Over Mature tree (OM) is beyond its average life expectancy and a Veteran (V) is usually beyond the typical age range for the species but of biological, cultural or aesthetic value.
- 2.7 Physiological and Structural Condition Trees in a Good Physiological or Structural Condition have no visible problems or significant defects. Those in a Fair Condition have remedial symptoms or defects or where these symptoms or defects are not remedial but will not affect the Estimate Remaining Useful Contribution and those in a Poor Condition have defects which are not remedial and removal of the tree should be considered.
- 2.8 Comments give a description of the tree including its general form, description of any physical defects, disease or decay and other appropriate details based on the health, vitality and overall structural integrity. It also includes the environment in which the tree is growing.
 Recommendations for the management of the tree or group will be given where required. Any proposals for removal of trees will need to be agreed with the tree owner.
- 2.9 A tree of good form has a shape that is typical of the species or has amenity in its own right. A tree with moderate form has been affected by its environment and is not typical of the species and has limited amenity value on its own right though it may have a collective amenity with adjacent trees. A tree with poor form has low quality and may also have structural defects which will affect its long term retention. Canopy height above ground level is given where this is applicable.
- 2.10 **Estimated Remaining Useful Contribution** is the estimated number of years that the tree will continue to make a safe and useful contribution to its surroundings, taking into account its current age, physiological and structural condition and its current location or environment. This assumes that there will be no changes within its immediate environment.
- 2.11 **Category Grading** trees have been categorised in accordance with the cascade chart set out within BS5837: 2012 `Trees in relation to design, demolition and construction. Recommendations'.
- 2.12 The trees inspected as part of this report were inspected from the ground only. No samples were taken for analysis. Observations were confined to what was visible from within the site and surrounding public places. A full hazard risk assessment of the trees was not undertaken.

Tree Schedule

Tree Ref No.	Species Common Name (Scientific Name)	Height (m)	Stem Diameter (mm) Root Protection Area (m ²)	Radius of Root Protection Area zone (m)	Branch Spread (m)	Age Class	Physiological/ structural Condition	Comments • Preliminary Management Recommendations within Current Environment	Estimated Remaining Useful Contribution (years)	Category Grading
Τ1	London Plane (Platanus x hispanica)	16	1200 est 651.5	14.4	N - 9.0 E - 14.0 S - 6.0 W - 4.5 all est	MA	Fair-Good/Fair- Good	 Tree growing to the rear of the garden on a small mound or bank. Covered in ivy – full inspection of tree not possible. Differential management with different pruning regimes occurring where the branches spread over adjacent gardens. The canopy is one-sided or unbalanced to the south and west. Moderate form. Co-joined and crossing or rubbing branches in the crown are a potential point of structural weakness or entry point for pathogens. Some dead wood present. Canopy to below 1.8 m above ground level at the lowest point over application site. Monitor condition of tree and manage accordingly. Recommend that a co-ordinated pruning regime is implemented that manages the tree as a whole rather than individual pruning regimes over the different surrounding garden areas. This regime should seek to create a more balanced and even crown to the tree. Remove co-joined or crossing or rubbing branches where this will not affect the structural integrity of the tree. 	20+	В1
T2	Cherry (Prunus spp)	8	150 est 10.2	1.8	N - 4.0 E - 4.0 S - 4.0 W - 4.0 all est	Y	Fair/Fair	Offsite tree – full inspection of tree not possible. Canopy suppressed by presence of adjacent larger trees. • No preliminary management recommendations at time of survey.	10+	C1

Τ3	Sycamore (Acer pseudoplatanus)	15	550 est (2 x 300 mm and 1 x 350 mm diameter stems) 136.9	6.6	N - 5.5 E - 4.0 S - 5.5 W - 5.5 all est	MA	Fair-Good/Fair	 Multi-stem, offsite tree – full inspection of tree not possible. Ivy into the crown of the tree. Monitor condition of tree and manage accordingly. 	10+	C1
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Tree Ref No.	Species Common Name (Latin Name)	Height (m) range	Stem Diameter (mm) Root Protection Area (m²) <i>Radius of Root Protection Area</i> <i>zone (m)</i>	Branch Spread - general (max) (m)	Age Class (general)	Physiological/ Structural Condition (general)	Comments (general) • Preliminary Management Recommendations	Estimated Remaining Useful Contribution (years)	Category Grading
G1	2 no. Lime (Tilia spp)	12	400 max est 72.4 4.8	N - 4.5 (5.5) E - 3.0 (4.0) S - 2.5 (4.0) W - 4.0 (5.0) all est	MA-M	Fair- Good/Fair- Good	Offsite trees growing to the rear of the adjacent garden. Full inspection of trees not possible. Shed located adjacent to trees. Previously pruned – including differential pruning where the canopies overhang different garden areas. The pruning has left the canopies unbalanced. • Monitor condition of trees and manage accordingly. Undertake pruning on a regular cycle to maintain the structural integrity of the prune points	10+	C2
G2	2 no. Sycamore (Acer pseudoplatanus)	13-14	300 – 400 est 40.7 – 72.4 36 – 4.8	N - 3.0 (4.0) E - 3.0 (4.0) S - 3.0 (5.0) W - 3.0 (4.0) all est	MA-M	Fair- Good/Fair- Good	 Offsite trees growing to the side boundary of the adjacent garden. Full inspection of trees not possible. Previously reduced. Covered in ivy. Monitor condition of trees and manage accordingly. Undertake pruning on a regular cycle to maintain the structural integrity of the prune points. 	10+	C2