TYBALDS ESTATE
CAMDEN
LONDON

ARBORICULTURAL METHOD STATEMENT

A Report to: The London Borough of Camden

Report No: RT-MME-154667-03 Rev A

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Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
Tel: 01676 525 880
E-mail: admin@middlemarch-environmental.com Web: www.middlemarch-environmental.com

REPORT VERIFICATION

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

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	18/06/2021	Ben Jones MSc Dip Arb Tech.Arbor.A (Arboricultural Consultant)	Duncan Smith BSc (Hons) MArborA (Arboricultural Manager)	Tom Docker CEcol MCIEEM (Managing Director)
Rev A	23/06/2021	Ben Jones MSc Dip Arb Tech.Arbor.A (Arboricultural Consultant)	Duncan Smith BSc (Hons) MArborA (Arboricultural Manager)	Tom Docker CEcol MCIEEM (Managing Director)

DISCLAIMER

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

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

VALIDITY OF DATA

The findings of this study are based upon the survey data produced as part of the Preliminary Arboricultural Assessment which is valid for a period of 12 months from the date of survey. If a planning application has not been submitted by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees and hedgerows on site to inform a review of the conclusions and recommendations made.

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

This Arboricultural Method Statement has been produced following a review of a proposed development layout for the site based on data provided by the client. Should the development proposals change, this report will need to be updated to ensure all practices described herein are relevant and suitable for the provision of tree protection.

CONTENTS

1. INTRODUCTION

1.1 PROJECT BACKGROUND

Middlemarch Environmental Ltd were commissioned by The London Borough of Camden to provide an Arboricultural Method Statement as part of an approved detailed planning application for residential development at Tybalds Estate, Camden, London, WC1N 3PF.

Planning Consent in respect of a detailed application for residential purposes (application reference 2013/1014/P) was granted, subject to condition, on the 13th May 2014. Middlemarch Environmental Ltd has previously prepared an Arboricultural Survey (Report Number RT-MME-111457B-02) and Arboricultural Impact Assessment (Report Number 113218) to provide information necessary for the discharge of relevant planning conditions.

As the findings of these reports were over 12 months old, and considered to be outdated, Middlemarch Environmental Ltd was instructed to prepare updated Arboricultural Assessments for the approved development.

An updated survey of the trees on site and within influencing distance of the boundaries was undertaken on the 8th of April 2021 as part of a Preliminary Arboricultural Assessment (PAA) (RT-MME-154667-01) which was produced to identify the existing trees and hedgerows on the site to aid design and avoid unnecessary tree removal.

An Arboricultural Impact Assessment (AIA) (RT-MME-154667-02) was undertaken in accordance with British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendations'* (hereafter referred to as BS5837). BS5837 sets out a structured assessment methodology to assist in determining which trees would be considered suitable or unsuitable for retention in the context of the proposed development. The Impact Assessment detailed the potential impacts that the proposed development will have upon the site's existing tree stock and set out recommendations for the subsequent mitigation or avoidance of impact.

This Arboricultural Method Statement (AMS) confirms the mitigation measures and sets out the method of impact avoidance outlined in the AIA in accordance with BS5837:2012.

This statement further details the specific measures to be adopted to ensure the protection of retained trees during the approved development as agreed within the planning consent for the site (Town and Country Planning Act 1990). Once approved, by the Local Authority Arboricultural Officer, the methods of work described herein will be a requirement of all relevant contractors associated with the development proposals.

1.2 SITE DESCRIPTION

The site under consideration, hereinafter referred to as the study area, comprises the land and buildings which together form the Tybalds Estate; a post-war housing estate located in the Bloomsbury area of central London. The site, which extends to approximately 1.58 ha in size, is located in central London at Ordnance Survey Grid Reference TQ 305 818.

The study area is located within the administrative district of the London Borough of Camden, within the Holborn and Covent Garden Ward, and it is bounded by properties on Great Ormond Street to the north, Orde Hall Street to the east, buildings off Theobalds Road to the south and Boswell Street and Old Gloucester Street to the west. Tree cover across the site was generally found to be of relatively good quality and is located amongst areas of amenity grassland and shrub beds, between the various buildings within the site boundary.

The location of the trees surveyed can be found on Middlemarch Environmental Ltd Tree Survey Plan (C154667-01-01 Rev B). The Tree Retention Plan (C154667-02-01 Rev A), attached to this report shows those trees proposed to be removed as part of an approved planning application. Confirmation of the proposed tree removal should be sought from the Project Arboriculturist or Local Authority prior to undertaking any tree felling or tree work.

1.3 DEVELOPMENT PROPOSALS

The proposed development of the site includes the construction of new residential buildings and renovation works to the existing buildings, with associated access, landscaping, and facilities.

The proposed development has been designed so that safe and healthy existing trees are retained wherever possible and that those trees to be retained are not significantly impacted upon by the development.

1.4 DOCUMENTATION PROVIDED

This assessment is based upon the information provided by the client in addition to information collected by Middlemarch Environmental Ltd during the Preliminary Arboricultural Assessment and Arboricultural Impact Assessment. The documents and drawings considered are detailed within Table1.1 below.

Table 1.1: Documentation Provided

Author	Document	Drawing Number	Date
Matthew Lloyd Architects LLP	SITE LOCATION PLAN	X-001	Jun-21
Matthew Lloyd Architects LLP	EXISTING SITE PLAN	X-010	Apr-21
Matthew Lloyd Architects LLP	PROPOSED MASTERPLAN - LANDSCAPE	X-102	Apr-21
Matthew Lloyd Architects LLP	PROPOSED MASTERPLAN – colour	X-116	Jun-21
MK Surveys	Topographical and Utility Survey – Sheet 1	17033-1	May-12
MK Surveys	Topographical and Utility Survey – Sheet 2	17033-2	May-12

2. METHODOLOGY

2.1 DESK STUDY

Consultation with the Local Planning Authority was undertaken to identify if any of the trees present within or near the site are protected by Tree Preservation Orders (TPOs) or if the site is situated within a Conservation Area.

An online search using the Multi Agency Geographic Information for the Countryside (*MAGIC)* website for statutory conservation sites was also undertaken (where appropriate) to determine the presence of Ancient Woodland within 15.0 metres of the site boundary.

2.2 SURVEY SCOPE

To determine the status of the trees and hedgerows within the site, a full arboricultural survey has been undertaken, assessing the species and status of all trees and hedgerows present. This survey has been carried out in accordance with British Standard 5837:2012 '*Trees in Relation to Design, Demolition and Construction – Recommendations'*.

All trees and hedgerows have been assigned a unique reference number. Individual trees above 75 mm in diameter (at 1.5 m above ground level) have had their position plotted to the Tree Survey Plan. Trees, and hedgerows were visually assessed and a schedule prepared listing:

- Tree number,
- Species,
- Tree height,
- Stem diameter at 1.5 m above ground level (or in accordance with Annex C of BS5837:2012),
- Crown spread (cardinal points where necessary),
- Minimum crown clearance,
- Age class,
- Condition and;
- Preliminary management recommendations (where required).

Measurements for tree height, minimum crown clearance and crown spread were taken to an accuracy of 0.5 m. Stem diameter measurements were recorded to the nearest 10 mm. Any specific observations or management recommendations were also noted. All observations and measurements are included in Appendix A Tree Schedule.

Trees and hedgerows were assessed and assigned one of the following categories:

- **Category U:** Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
- **Category 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.
- **Category C:** Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm.

Categories A, B and C have further sub-categories with regards to the reasons for tree retention:

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

N.B. Certain category U trees may possess existing or potential conservation value which make them desirable to preserve in the context of wildlife habitat (e.g. areas with limited public access).

2.3 ROOT PROTECTION AREA (RPA)

In order to avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees in accordance with section 4.6 of BS5837. This is a minimum area around a tree which is deemed to contain sufficient roots and rooting volume to maintain the tree's viability. Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree stem in each group and so may exceed the Root Protection Area required for some of the individual specimens within the group. Further detailed inspection of the individual trees forming a group may be required where development impacts upon individual trees forming the combined group.

Protection of the roots and soil structure within the RPA should be treated as a priority. These figures have been calculated utilising the formulas within Section 4.6 and Annex D of British Standard 5837:2012.

2.4 TREE SCHEDULE

Appendix A details the individual trees and groups found during the assessment and includes the relevant information for each at the time of inspection. General observations of any structural and physiological condition and the presence of any decay or physical defects have also been included. Preliminary management recommendations have also been recorded where appropriate.

2.5 ASSESSMENT LIMITATIONS

This survey has been undertaken in accordance with BS5837 recommendations only. Trees under 75mm in diameter and the specific location of species within a hedgerow have not been identified in accordance with the guidance. It may therefore be necessary during detailed design to undertake further assessment and accurate positioning of juvenile trees or woody species within hedgerows and tree groups to assist structural calculations for foundation design of structures in accordance with current building regulations and NHBC Chapter 4.2 *Building near Trees*.

The exact position of individual trees or species included as part of a tree group, hedgerow or woodland should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.

2.6 CONDITIONS OF TREE SURVEY

The survey was completed by a suitably qualified and experienced Arboriculturist from ground level only and from within the boundary of the site. Aerial tree inspections or the internal condition of the stem/s or branches was not undertaken at this stage. Evaluation of tree condition given within this assessment applies to the date of survey and cannot be assumed to remain unchanged. It may be necessary to review these within 12 months, in accordance with sound arboricultural practice.

2.7 TREE SURVEY PLAN

The Tree Survey Plan seeks to act as a design tool that shows potential opportunities for inclusion of the existing trees across the site as well as the above and below ground constraints which should be considered during the design process.

2.8 TREE RETENTION PLAN

The Tree Retention Plan identifies which trees are to be retained and incorporated as part of the site development and which are to be removed. The positions of trees and hedgerows and their current crown spread that are to be removed have been shown on the Tree Retention Plan with a dashed outline.

2.9 TREE PROTECTION PLAN

The Tree Protection Plan attached to this report identifies only those trees that are to be retained and incorporated as part of the site development. The Tree Protection Plan identifies the various protection measures required to prevent damage to trees that are to provide long term benefits to the completed site. The Tree Protection Plan also identifies the various working elements of a construction site to confirm any potential impacts are minimised.

All survey data is based on a topographical survey where possible, supplied by the client. Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree locations through a topographical survey of the site is recommended to ensure future design accuracy.

3. STATUTORY PROTECTION

3.1 TREE PRESERVATION ORDER AND CONSERVATION AREA DESIGNATIONS

No direct consultation with the Local Planning Authority, The London Borough of Camden, has taken place, however, it is understood having used the online search facility on the website for the Local Planning Authority, that several trees included within this survey are within the Bloomsbury Conservation Area. Therefore, statutory constraints would apply to the development in respect of trees. There are no Tree Preservation Orders that would apply to trees present on, or in close proximity to the site. Prior to any tree works being undertaken, confirmation of the online information should be sought from the Local Authority.

The table below details which trees are included in the Conservation Area.

Middlemarch Tree No	Conservation Area
T17, T18, T21, T22, T25, T26, T27, T29, T30, T31, T32, T50, T57, OSG1	Bloomsbury Conservation Area

Reference to the Multi Agency Geographic Information for the Countryside (MAGIC) website indicates that Ancient Woodland has not been recorded within 15.0 metres of the survey area.

3.2 PROTECTED SPECIES

Bats
Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017). They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981, as amended. Consequently, causing damage to a bat roost constitutes an offence.

Generally, should the presence of a bat roost be suspected whilst completing works on any trees on site then an appropriately licensed bat worker should be consulted for advice.

Birds
Trees and hedgerows offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act WCA 1981 (as amended). Some species (listed in Schedule 1 of the WCA) are protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).
If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.

4. RESULTS SUMMARY

4.1 PRELIMINARY ARBORICULTURAL ASSESSMENT

Sixty-seven individual trees and one group of trees were surveyed as part of the Preliminary Arboricultural Assessment. Trees assessed during the survey are listed as individual trees and groups of trees in the Tree Schedule (Appendix A) in accordance with BS5837:2012 recommendations. Table 4.1 below provides a summary of the survey results in terms of categorisation.

Table 4.1: Summary of Trees, Groups and Hedgerows in BS5837:2012 Categories

BS5837:2012 Category	Tree/ Group/ Hedgerow Reference	Frequency		
		T	G	H
A	T16, T29, T30, T31, T32	5		
B	T5, T11, T12, T15, T17, T18, T21, T27, T33, T35, T39, T40, T44, T47, T50	15		
C	T1, T2, T3, T4, T6, T7, T8, T9, T10, T22, T25, T26, T36, T37, T38, T41, T42, T43, T45, T46, T48, T49, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, OSG1	47	1	

Key:

T: Trees
G: Groups
H: Hedgerows

The most significant trees recorded during the survey were a line of individual London plane trees (*Platanus x hispanica*), which were located adjacent to the eastern boundary of the site near to Boswell Street, and a single sugar maple (*Acer saccharum*) tree, which was located in the north-eastern corner of the assessment area.

In addition to the London plane and sugar maple trees, which were generally considered to have a moderate to high retention value, a number of Swedish whitebeam (*Sorbus intermedia*), rowan (*Sorbus aucuparia*), narrow leaved ash (*Fraxinus oxycarpa* 'Raywood'), common lime (*Tilia x europaea*), cherry (*Prunus* sp.), Chanticleer pear (*Pyrus calleryana* 'Chanticleer'), apple (*Malus* sp.), false acacia (*Robinia pseudoacacia*), sycamore (*Acer pseudoplatanus*), box elder (*Acer negundo*), small-leaved lime (*Tilia cordata*), Norway maple 'Crimson King' (*Acer platanoides* 'Crimson King'), and Crimean lime (*Tilia* × *euchlora*) trees were also present within the site. These specimens were less significant in the local landscape and many exhibited decay, poor pruning, and crown dieback, which has limited their likely future potential, and as such these specimens were typically considered to be of a low retention value.

4.2 ARBORICULTURAL IMPACT ASSESSMENT

The proposed development has been designed so that all existing trees are retained. Pruning works that are required to facilitate the proposed development are detailed in Section 5.2 below.

Before any tree works are undertaken confirmation of the agreed pruning and confirmation of the presence of any statutory constraints should be sought from the Local Authority. All tree works are to be completed by suitably qualified and insured arboricultural in accordance with BS3998:2010 *'Tree Work – Recommendations'*.

5. ARBORICULTURAL METHOD STATEMENT

5.1 INTRODUCTION

The following sections of this report detail the specific measures to be adopted to ensure the protection of retained trees during the proposed development and should be read in conjunction with the Tree Survey Plan, Tree Retention Plan and Tree Protection Plan. This document also details the specific pruning requirements for the site and identifies the correct method of working near trees in accordance with BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'*.

The site contractor must ensure that they read and understand all the following sections prior to commencement of any onsite works.

5.2 TREE PRUNING

Pruning of mature trees should only be undertaken where essential, to prevent open wounds that allow the ingress of decay and fungal spores that have the potential to infect the tree. Temporary tying back of branches while works are completed should be the preferred approach and avoids the need to prune trees. However, any pruning work required should ideally be undertaken during the winter and summer months and pruning during autumn (when fungal spores are abundant) should be avoided if possible.

Juvenile trees should be formatively pruned in their early years to reduce the presence of potential defects into maturity that would reduce their lifespan in accordance with BS3998:2010 *Tree work – Recommendations* & BS8545:2014 *Trees: from nursery to independence in the landscape- Recommendations*.

All tree work should be completed prior to the installation of the tree protection measures detailed in this report and before site occupation unless delayed, to coincide with the seasons or to allow nesting birds to fledge in accordance with the Wildlife and Countryside Act WCA 1981 (as amended).

Pruning works that are required to facilitate the proposed development are detailed in Table 5.1 below.

Table 5.1: Tree Pruning

Tree/ Group Reference	Species	Retention Category	Pruning Requirements
T15	Sugar maple	B	Lateral reduction of western crown spread to 6.0 m from main stem to minimise potential conflicts with works to construct new entrance porch.
T16	Sugar maple	A	
T18	Sycamore	B1	Crown raise southern canopy to 6m over proposed development
OSG1	Mixed species	C	

The extent of pruning required will be identified in a pre-commencement site meeting involving the Project Arboriculturist, Site Manager and Contractors. All tree pruning works should be completed in accordance with the current best practice guidance set out within BS3998:2010 *'Tree Work – Recommendations'* by suitably qualified and insured arboricultural contractors.

5.3 CONSTRUCTION EXCLUSION ZONE

The Construction Exclusion Zone (CEZ) is the area considered necessary to ensure that the tree roots and canopy are protected from damage during the construction processes. The extent of the CEZ is based upon guidance within BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'*, and encompasses the Root Protection Area (RPA) and or tree canopy (whichever is the greatest).

The Construction Exclusion Zones are always to be afforded protection and no works that cause compaction of the soil or severance of tree roots, except where undertaken in accordance with the guidance provided within this document, will be undertaken within any exclusion zone.

The exclusion zones are to be defined on site throughout the course of the development using protective barriers based upon guidance within BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'*.

5.4 PROTECTIVE BARRIERS

Protective barriers will be erected prior to the commencement of any site works (e.g., before any materials or machinery are brought on site or the stripping of topsoil commences) and signs will be installed on the protective barriers to inform site contractors of the importance of the tree protection measures in accordance with the Conditions agreed as part of the planning consent for the site (Town and Country Planning Act 1990).

The protective barriers are to be constructed in accordance with the specification detailed in BS5837:2012 *'Trees in relation to design, demolition and construction – Recommendations'*. Fencing should be erected prior to site occupation and inspected by the Project Arboriculturist to ensure they are complete, robust, and sufficiently protect the CEZ for the retained trees present on site. Any variation to the specification of the protective barrier will be agreed with the Local Planning Authority Arboricultural Officer.

The proposed location of the protective barriers is identified on the Tree Protection Plan attached to this Arboricultural Method Statement. The Local Planning Authority will be notified in writing once this inspection has been undertaken (if required).

The barriers will remain in place until completion of the construction phase of the development. Barriers will only be removed in agreement with the Project Arboriculturist or Local Planning Authority once the main construction works have been completed and prior to soft landscaping works. Other than works detailed within this method statement or approved in writing by the Local Planning Authority no works, including storage or dumping of materials, shall take place within the Construction Exclusion Zone as defined by the protective barrier.

5.5 PERMANENT AND TEMPORARY GROUND PROTECTION MEASURES

There are no areas within the site where the installation of temporary ground protection measures require installation within the RPAs of retained trees. If the need for temporary access within the exclusion zone or the RPAs of a retained tree is identified, then such access will only be gained after consultation with Project Arboriculturist and/or the Local Planning Authority (see contact details).

Permanent ground protection will be installed as part of the carriageway and footway construction as the route passes through the Root Protection Areas of retained trees. All ground protection installed must be capable of supporting the expected loads in accordance with Structural Engineers recommendations and avoid compaction and damage to the soil.

Ground protection measures to be installed within the RPAs of retained trees are detailed in Table 5.2 below.

Table 5.2: Ground Protection Measures to be Installed on Site

Tree/ Group Reference	Species	Retention Category	Temporary Ground Protection Measures	Permanent Ground Protection Measures
T18	Sycamore	B	-	✓
OSG1	Mixed species	C	-	✓

The installation of permanent ground protection measures on site shall be completed under supervision of the Project Arboriculturist.

5.6 Access Details

Pedestrian and construction traffic will access the site via the existing road and footpath network. Tree protection barriers will be installed adjacent to the proposed access point to protect nearby trees from potential impact damage and to prevent vehicles from accidentally encroaching onto areas of unprotected ground.

5.7 Site Compound, Materials Storage and Contractors' Car Parking

At time of writing, the location of the site compound had not been formally identified, however, sufficient space is present within the site to accommodate the site compound outside of Construction Exclusion Zones and its establishment is unlikely to result if harm to retained trees.

Materials storage and contractor's car parking is to be provided within the site compound and will therefore not cause harm to retained trees. Should the demand for car parking exceed the available area alternative offsite parking arrangements will be made.

The location of the site compound, materials storage area and contractor's car parking are shown on the Tree Protection Plan, found in Section 7 of this report.

5.8 Infrastructure Requirements

New underground services will primarily be located within the proposed carriageway or footway, outside of Root Protection Areas of retained trees. Connections will be made into existing services outside of the Construction Exclusion Zones surrounding retained trees.

If any underground services are to be installed within the RPA of a retained tree, then the Project Arboriculturist will be consulted. The methodology for the installation, maintenance or removal of any services within a RPA will be in accordance with NJUG Volume 4 *'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'*. This will include hand-dug "broken" trenches to ensure that maximum protection is given to tree roots.

5.9 Demolition, Hard Surface Removal & Removal of Structures

There are no existing buildings, structures or hard surfaces present on site that require demolition or removal within the Construction Exclusion Zone defined by protective fencing, or within the Root Protection Areas (RPAs) of retained trees.

5.10 New Hard Surfaces

No new hard surfaces are to be constructed within the RPA of any retained tree.

5.11 Site Gradients

No alterations of soil level will take place within the Construction Exclusion Zones as defined by the protective barriers to prevent damage to retained trees.

If site gradient alterations within the RPA of any retained tree are required, then the Project Arboriculturist will be consulted for advice.

5.12 Construction of Structures within the RPA/Construction Exclusion Zone

The following details will be adhered to for the construction of new foundations for the proposed Eastern and Western Mews dwellings within the Root Protection Areas of retained trees.

Exploratory Works with RPAs
The construction of the Western and Eastern Mews buildings will require foundation construction within the RPA of the off-site Sycamore tree, T18 and an off-site tree group, OSG1. The presence of existing

hardstanding in the areas affected by proposed foundation construction has potentially restricted root development, minimizing likely impacts upon long-term health of retained trees.

In order to confirm the extent of root activity in the affected area, and by extension the need for specific working methodologies, exploratory works will need to be undertaken. Two options are available for these exploratory works:

- Ground Penetrating Root Radar
- Excavation of trial pits.

The former option would be carried out by a suitably qualified professional under supervision of the Project Arboriculturist.

An appropriate methodology for the latter option is detailed below.

Trial Pit Excavation within RPAs
The excavation of exploratory trial pits will be carried out under supervision of the Project Arboriculturist and according to the following methodology:

1. Locations for proposed trial pits will be marked out on-site following consultation between the site manager and Project Arboriculturist.

2. Initial breaking out of existing hardstanding will be undertaken using an excavator mounted breaker or handheld pneumatic tools. The exposed subbase will be removed using a suitable excavator bucket with no teeth.

3. Any minor roots (i.e. <25 mm in diameter) uncovered through breaking out of existing hardstanding shall be pruned back to beyond the boundary of the trial pit excavation, making clean cuts with suitably sharp tools such as secateurs. Should major roots (i.e. >25 mm in diameter) be uncovered during the break-out operation, excavation works shall cease and the trial pit be relocated to avoid rooting activity.

4. Trial pits will be excavated to 1.0 m x 1.0 m x 1.0 m dimensions using hand-held tools. Roots uncovered during these works shall be covered with damp hessian to prevent desiccation and tied back to the edges of the excavation to minimise potential damage.

5. Upon reaching the required depth, the trial pit will be inspected by the Project Arboriculturist to determine the extent of rooting activity within the area affected by proposed foundation construction and whether specific working methodologies will be required.

6. Works will not be carried out if the ambient air temperature is below +4ºC

Construction of Piled Foundations within RPAs (if required)
In the event that significant rooting activity is identified as a result of trial pit excavation, the following methodology shall be adopted for the installation of foundations within the RPAs of retained trees:

Foundations for the approved dwellings constructed within the RPA of T18 and OSG1 will comprise sleeved concrete piles with suitable heave protection to avoid damage to the root system of the tree. Pile caps located on top of the piles will then support a reinforced concrete slab, cast in situ, above existing ground level using a suitable former to ensure minimum sufficient clearance of 100mm is maintained.

The works in this area shall be supervised by the Project Arboriculturist and completed in accordance with the following methodology:

1. The footprint and pile locations for the proposed Eastern and Western Mews dwellings shall be marked out on site by the Site Engineer.

2. The proposed pile location will be excavated mechanically under supervision of the Project Arboriculturist to a depth of 1 m below existing ground level to establish whether roots are present. Where roots of less than 25 mm in diameter are encountered, they should be pruned back to the

edge of the pile hole using sharp, clean tools. Where roots of greater than 25 mm in diameter are encountered, the proposed foundation location should be adjusted, through design, to avoid the roots present.

3. Once final pile positions have been established, a suitable pile mat should be prepared for each pile in accordance with advice from a suitably qualified Structural Engineer using a cellular confinement system to prevent the need to excavate soil and to spread the load from the rig. The cellular confinement system will also provide suitable ground protection and shall be installed leaving gaps for pile installation at the pile locations.

4. The piles shall then be installed. The piles should be of minimum practical diameter for the expected loadings. Helical screw piles should be used in preference to concrete where appropriate. Should the use of concrete piles be necessary they will be sleeved to avoid concrete leaching into the surrounding soil and heave protection will be applied as required. All works to install the piles shall be undertaken from the pile mat or area of ground protection.

5. The pile mat / ground protection measures shall be removed under supervision of the Project Arboriculturist once the piles and pile caps have been installed. A biodegradable void former will then be placed on top of the existing ground level to provide a minimum 100mm clearance and the reinforced concrete slab will then be cast. / The foundation beams shall then be installed. Pre-cast beams should be used where possible. If beams are to be cast on site an impermeable membrane should first be installed to prevent concrete leaching into surrounding soils. The floor slab shall then be cast. All plant required for this shall operate from land outside of the RPAs of retained trees.

6. Once the floor slab has been cast water should be used to flush out the void former material to ensure a ventilated air space beneath the floor slab is provided.

All works to construct new foundations within the RPAs of retained trees shall be carried out under supervision of the Project Arboriculturist.

5.13 Soft Landscaping

All soft landscaping within the exclusion zone will be undertaken by hand and in accordance with BS8545:2012 *Trees: from nursery to independence in the landscape- Recommendations*.

A 500 mm radius from any tree stem will remain uncovered by turf or other planting to allow penetration of water and air into the soil. A propriety mulch will be applied to a depth of 50mm to 100mm to inhibit weed and growth, reduce groundwater evaporation during the drier months, resist and mitigate soil compaction, reduce maintenance requirements and act as a slow-release fertilizer.

5.14 Use of Herbicides

Any herbicide used during the development works shall be systemic, spot applied, and mixed according to manufacturers' recommendations.

5.15 On Site Monitoring Regime & Contact Details

All operations will be monitored by the main contractor. The main contractor will ensure that all works within this document are followed (this will be built into the contract specification).

If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice. The Project Arboriculturist for the development is:

Name: Duncan Smith
Position: Arboricultural Manager
Company: Middlemarch Environmental Ltd
Address: Triumph House, Birmingham Road, Coventry, CV5 9AZ
Telephone: 01676 525 880
Mobile: 07827 850 972

Induction and Personnel Awareness
Details of tree protection and methods of working around trees will be included within site inductions to new members of site staff. A copy of this document and the related Tree Protection Plan will be kept on site and referred to by operatives working near retained trees.

Monitoring/Audits
A pre-commencement site meeting will be arranged between the contractor, Project Arboriculturist, and any other interested party. During this meeting, all outstanding items will be finalised, and these will be communicated to the Local Planning Authority upon request.

An inspection audit will be undertaken by the Project Arboriculturist once the protective measures have been installed to ensure they provide the level of protection required for retained trees. Feedback will be provided to the Local Planning Authority Arboricultural Officer on completion of this visit and monthly audits of the tree protection measures will be undertaken by the Project Arboriculturist to ensure they remain in position and fit for purpose.

Works Requiring Arboricultural Supervision
The following aspects of the development will be completed under supervision of the Project Arboriculturist:

- Installation of temporary ground protection measures for the provision of working space within the RPAs of T15 and T16.
- Excavation of exploratory trial pits within the RPAs of T18 and OSG1 to determine the extent of rooting activity within the footprint of proposed Eastern and Western Mews buildings.
- Construction of piled foundations (if required) for the proposed Eastern and Western Mews buildings within the RPAs of T18 and OSG1.

5.16 USE OF SUBCONTRACTORS

The Principal Contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site. If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice.

5.17 RESPONSIBILITIES

It will be the responsibility of the Principal Contractor to ensure that the planning conditions attached to the planning consent are always adhered to and that a monitoring regime regarding tree protection is adopted on site.

The Principal Contractor will be responsible for contacting the Local Planning Authority should any issues are raised related to the trees on site.

If pruning works to trees beyond the agreed scope within this Method Statement are required at any time, then permission must be sought from the Local Planning Authority prior to commencement. All works must be carried out in accordance with BS3998:2010 *Tree Work - Recommendations*.

The Principal Contractor will ensure the build sequence is appropriate to ensure that no damage occurs to retained trees during the construction processes. Protective measures will remain in position until completion of the construction phase of development and will only be removed to allow the commencement of soft landscaping works.

The protection measures and signs will always be maintained in position and checked daily by a designated person on site under the responsibility of the Principal Contractor.

5.18 GENERAL PRECAUTIONS

No materials that are likely to have an adverse effect on tree health such as fuel oil, bitumen or cement will be stored or discharged within 10 m of any retained tree.

6. REFERENCES AND BIBLIOGRAPHY

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

British Standards Institution. (2010). *British Standard 3998:2010, Trees work– Recommendations.* British Standards Institution, London.

British Standards Institution. (2014). *British Standard* 8545:2012 *Trees: from nursery to independence in the landscape- Recommendations, London.*

Littlefair P. (2011). *Site layout planning for daylight and sunlight: a guide to good practice* (BR 209). British Research Establishment, Watford.

National House Building Council. (2020). *NHBC Standards 2020: Chapter 4.2 - Building Near Trees*. NHBC, Milton Keynes.

NJUG Volume 4 *'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'*

7. DRAWINGS & APPENDICES

Drawing Number C154667-01-01-Rev B – Tree Survey Plan

Drawing Number C154667-02-01 Rev A – Tree Retention Plan

Drawing Number C154667-03-01 Rev A – Tree Protection Plan

Appendix A: Tree Schedule

Appendix B: Tree Protection Fencing Sign

C154667-03-01-RevA

Legend

- Tree location and stem diamter
- Category A
- Category B
- Category C
- Current canopy - tree to be retained
- Root Protection Area
- Indicative tree shadow
- Exploratory trial pits
- Tree stem box
- Construction of new foundations uner specific working methodology (subject to findings of trial pit excavation)
- Existing fence retained for tree protection
- Tree protection barrier BS5837:2012
- Site access
- Site boundary
- Proposed site layout
- # Tree pruning works required

T - Tree
G - Tree group

Note: tree locations are approximate, based on combined field observations and aerial imagery

The original of this drawing was produced in colour - a monochrome copy should not be relied upon

NOTES
All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturalist. Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule. Drawing has been produced in colour and is based on digital informaton in .dwg format, aerial images and/or GPS location where appropriate. A monochrome copy should not be relied upon. The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken. Further survey work would be required for calculating foundation depths.
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturalist should works commence 12 months after the date of this survey.
SOME TREES MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

N

Project	Tybalds Estate, Camden, London
Drawing	Tree Protection Plan
Client	The London Borough of Camden
Drawing Number: C154667-03-01-RevA	Revision: 00
Scale @ A3: 1:1000	Date: June 2021
Approved By: BJ	Drawn By: VO/CD

MIDDLEMARCH ENVIRONMENTAL
Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
T:01676 525880 F:01676 521400
E:admin@middlemarch-environmental.com

Appendix A - Tree Schedule

<table>
<tr><th>Measurements</th><th>Age Class</th><th>Overall Condition</th><th>Root Protection Area (RPA)</th></tr>
<tr><td>Height - estimated from ground level (m).</td><td>YNG: Young trees up to ten years of age.</td><td>G - Good: Trees with only a few minor defects and in good overall health needing little, if any attention.</td><td rowspan="4">• The RPA column gives the required area (m²).
• The RPA Radius column gives the radius (m) of an equivalent circle.
• The RPA is calculated using the formulae described in paragraph 4.6.1 of British Standard 5837: 2012 and is indicative of the required rooting area in order for a tree to be retained.</td></tr>
<tr><td>Stem Dia. - Diameter measured (mm) in accordance with Annex C of the BS5837.</td><td>SM: Semi-mature, trees less than 1/3 life expectancy.</td><td>F - Fair: Trees with minor, but rectifiable, defects or in the early stages of stress from which it may recover.</td></tr>
<tr><td>Crown - crown spread estimated radially from the main stem (m).</td><td>EM: Early mature, trees 1/3 – 2/3 life expectancy.</td><td>P - Poor: Trees with major structural and/or physiological defects such that it is unlikely the tree will recover in the long term.</td></tr>
<tr><td rowspan="2">Abbreviations
Est - Estimated stem diameter
Avg - Average stem diameter
Max - Maximum stem diameter</td><td>M: Mature trees, over 2/3 life expectancy.</td><td>D - Dead: Trees no longer alive. This could also apply to trees that are dying and unlikely to recover.</td></tr>
<tr><td>OM: Over mature, declining or moribund trees of low vigour.</td><td colspan="2" rowspan="2">In the assessment, of the BS category, particular consideration has been given to the following
• The health, vigour and condition of each tree
• The presence of any structural defects in each tree and its future life expectancy
• The size and form of each tree and its suitability within the context of a proposed development
• The location of each tree relative to existing site features e.g. its screening value or landscape features
• Age class
• Life expectancy</td></tr>
<tr><td></td><td>V: Veteran, tree possessing certain attributes relating to veteran trees.</td></tr>
</table>

Structural Condition
The following has been considered when inspecting structural condition: • The presence of fungal fruiting bodies around the base of the tree or on the stem, as they could possibly indicate the presence of possible internal decay. • Soil cracks and any heaving of the soil around the base. • Any abrupt bends in branches and limbs resulting from past pruning. • Tight or weak 'V' shaped forks and co-dominant stems. • Hazard beam formations and other such biomechanical related defects (as described by Claus Mattheck, Body Language of Trees HMSO Research for Amenity Trees No. 4 1994). • Cavities as a result of limb losses or past pruning. • Broken branches or storm damage. • Canker formations. • Loose or flaking bark. • Damage to roots. • Basal, stem or branch / limb cavities. • Crown die-back or abnormal foliage size and colour. • Any changes to the timing of normal leaf flush and leaf fall patterns.

Quality Assessment of Retention Category
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
Category 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.
Category 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.
Sub-categories: (i) - Mainly arboricultural value (ii) - Mainly landscape value (iii) - Mainly cultural or conservation value

Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U		0		0
Category A	T16, T29, T30, T31, T31	5		0
Category B	T5, T11, T12, T15, T17, T18, T21, T27, T33, T35, T39, T40, T44, T47, T50	15		0
Category C	T1, T2, T3, T4, T6, T7, T8, T9, T10, T22, T25, T26, T36, T37, T38, T41, T42, T43, T45, T46, T48, T49, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75	47	OSG1	1
	Total	67	**Total**	1

	Hedgerows	Totals	Woodlands	Totals
Category U		0		0
Category A		0		0
Category B		0		0
Category C		0		0
	Total	0	**Total**	0

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T1	Chanticleer pear	10.0	2.0	1	210	2.5	2.0	2.0	2.0	SM	G	G	20.0	2.5	C1	Previous pruning wounds observed. Branch stubs. Included union. Minor deadwood. Several minor bark wounds on main stem.
T2	Swedish whitebeam	8.0	2.0	1	380	3.0	4.5	2.5	3.0	EM	F	G	65.3	4.6	C1	Area of decay at 1 m at old bark wound with adaptative growth, occluding slowly. Previous pruning wounds observed. Included unions.
T3	Rowan	4.5	2.0	1	**60**	1.0	1.0	1.0	1.0	Y	G	G	1.6	0.7	C1	Recently planted.
T4	Swedish whitebeam	7.0	1.5	1	380	4.0	2.5	4.0	4.0	EM	G	F	65.3	4.6	C1	Minor crown die-back throughout crown. Previous pruning wounds observed. Branch socket cavities.
T5	Swedish whitebeam	7.0	3.5	1	350	3.0	3.5	3.0	2.5	EM	G	G	55.4	4.2	B1	Minor deadwood. Included union. Crossing branches to south. Minor damage to exposed roots.
T6	Apple	5.0	3.0	1	335	1.0	1.0	1.0	1.0	EM	G	F	50.8	4.0	C1	Recently pollarded at 4 m. No regrowth present.
T7	Apple	4.0	2.0	1	230	1.0	1.0	1.0	1.0	EM	G	F	23.9	2.8	C1	Recently pollarded at 3 m. No regrowth present.
T8	Swedish whitebeam	8.0	5.0	1	270	1.5	2.5	2.0	3.5	EM	G	G	33.0	3.2	C1	Part of linear group. Open branch socket cavity wound at 3 m.
T9	Swedish whitebeam	7.5	2.5	1	240	2.0	3.0	2.0	4.0	EM	G	G	26.1	2.9	C1	Part of linear group. Minor crown die-back.
T10	Swedish whitebeam	7.5	4.0	1	170	1.5	2.0	1.5	2.0	Y	G	F	13.1	2.0	C1	Part of linear group. Minor crown die-back.
T11	London plane	19.0	3.0	1	610	6.5	4.0	7.0	8.0	M	G	F	168.4	7.3	B1	Soil compaction. Recently pollarded. Branch stubs. Previous pruning wounds observed. Superficial bark damage to northern buttress root.
T12	London plane	19.0	5.0	1	680	6.5	7.0	7.0	3.0	M	G	F	209.2	8.2	B1	Soil compaction. Exposed roots. Recently pollarded. Previous pruning wounds observed.
T13	London plane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T14	London plane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T15	Sugar maple	12.0	3.0	1	530	7.0	8.0	8.0	7.0	M	F	F	127.1	6.4	B1	Small cavity at 1 m, nearly occluded. Minor deadwood. Suspected decay in swollen stem from ground level to 1m.
T16	Sugar maple	18.0	3.0	1	620	7.0	7.0	7.0	7.0	M	G	G	173.9	7.4	A1	Soil compaction. Minor deadwood.
T17	False acacia	21.0	2.0	1	510	4.5	4.0	2.5	4.0	M	G	F	117.7	6.1	B1	Epicormic growth on trunk and crown. Branches touching building to south. Recently pollarded. Exposed roots.

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T18	Sycamore	15.0	3.0	1	600	6.0	8.5	7.5	9.0	M	G	G	162.9	7.2	B1	Unable to inspect stem from base up to 3.0m due to no access. Poor pruning.
T19	Apple	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T20	Sycamore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T21	Box elder	16.0	2.5	1	550	6.0	3.0	2.0	5.5	M	G	G	136.9	6.6	B1	Trunk leans significantly to the west. Multiple old pruning wounds. Pollarded in past. Branch socket cavities.
T22	Norway maple 'Crimson King'	10.0	4.0	1	250	4.5	4.0	3.0	3.5	SM	F	F	28.3	3.0	C1	Growing in elevated planter. Minor crown die-back. Old pruning wounds. Branch stubs. Minor deadwood.
T23	Chinese tree privet	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T24	Narrow-leaved ash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T25	Cherry	7.0	2.0	1	230	3.0	2.5	2.5	3.0	SM	G	G	23.9	2.8	C1	Pruning wounds observed.
T26	Narrow-leaved ash	5.0	2.0	1	80	1.5	1.5	1.5	1.5	Y	G	G	2.9	1.0	C1	Recently planted.
T27	Narrow-leaved ash	14.0	7.0	1	350	4.5	3.5	4.5	5.0	EM	G	G	55.4	4.2	B1	Bark wound on west side at 1.5 m (150 x 50 mm), occluding well. Multiple old pruning wounds occluding well. Poor form.
T28	Narrow-leaved ash	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T29	London plane	24.0	3.0	1	980	7.5	12.5	6.5	5.0	M	F	G	434.5	11.8	A1,2	Part of linear group. Old pruning wounds. Minor deadwood. Branch socket cavities.
T30	London plane	24.0	3.0	1	800	3.5	11.5	10.0	5.0	M	F	G	289.6	9.6	A1,2	Part of linear group. Old pruning wounds. Minor deadwood. Branch socket cavities. Lifting tarmac at base.
T31	London plane	23.0	4.0	1	765	8.0	13.0	3.0	6.0	M	F	G	264.8	9.2	A1,2	Part of linear group. Old pruning wounds. Branch stubs. Epicormic growth in crown. Branch socket cavities.
T32	London plane	23.0	5.0	1	800	6.5	12.0	8.5	5.0	M	G	G	289.6	9.6	A1,2	Part of linear group. Old pruning wounds. Branch stubs. Epicormic growth in crown. Branch socket cavities. Lifting tarmac at base.

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T33	London plane	14.0	4.0	1	490	4.0	4.0	3.0	4.5	EM	G	G	108.6	5.9	B1	Recently pollarded. Exposed roots.
T34	Swedish whitebeam	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Tree has been removed.
T35	Common lime	15.0	4.0	1	420	6.0	6.0	4.0	5.0	EM	G	G	79.8	5.0	B1	Part of linear group. Minor cavity at old pruning wound at 4.5 m. Minor deadwood. Epicormic growth on stem.
T36	Small-leaved lime	14.0	4.0	1	230	2.0	7.0	4.0	4.0	EM	F	F	23.9	2.8	C1	Part of linear group. Minor crown die-back. Minor deadwood. Branch stubs. Epicormic growth on stem.
T37	Small-leaved lime	14.0	3.0	1	250	3.0	4.0	6.0	5.0	EM	G	F	28.3	3.0	C1	Part of linear group. Old pruning wounds. Minor deadwood.
T38	Common lime	9.0	2.5	1	140	3.0	1.0	2.5	4.0	SM	G	F	8.9	1.7	C1	Part of linear group. Suppressed form. Old pruning wounds. Epicormic growth on stem. Unable to fully inspect due to access restrictions.
T39	Common lime	15.0	4.0	1	350	5.0	5.0	4.0	4.0	EM	G	G	55.4	4.2	B1	Part of linear group. Minor deadwood. Epicormic growth on stem. Unable to fully inspect due to access restrictions.
T40	Common lime	15.0	2.0	1	420	4.0	3.5	4.0	3.0	EM	G	F	79.8	5.0	B1	Part of linear group. Recently pollarded. Old pruning wounds. Minor deadwood. Unable to fully inspect due to access restrictions.
T41	Cherry	4.0	1.0	1	50	0.5	0.5	0.5	0.5	Y	G	G	1.1	0.6	C1	Recently planted. Unable to fully inspect due to access restrictions.
T42	Cherry	7.0	2.5	1	150	3.0	2.0	3.0	3.0	Y	F	F	10.2	1.8	C1	Old pruning wounds. Sparse crown. Unable to fully inspect due to access restrictions.
T43	Cherry	5.0	3.0	1	170	2.5	2.5	3.5	2.5	EM	P	F	13.1	2.0	C1	Old pruning wounds. Unable to fully inspect due to access restrictions.
T44	Crimean lime	14.0	2.0	1	330	5.0	4.0	4.0	4.0	EM	G	G	49.3	4.0	B1	Part of linear group. Old pruning wounds. Minor deadwood. Roots lifting paving stones.
T45	Swedish whitebeam	5.5	2.5	1	240	4.0	3.0	3.5	2.0	EM	G	G	26.1	2.9	C1	Part of linear group. Old pruning wounds. Branch socket cavities. Many small bark wounds on stem from base to 2m.
T46	Swedish whitebeam	5.0	2.5	1	250	4.0	2.5	4.0	4.0	EM	G	G	28.3	3.0	C1	Part of linear group. Old pruning wounds. Many small bark wounds on stem from base to 2m.

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T47	Crimean lime	15.0	2.0	1	330	4.0	5.0	5.0	4.0	EM	G	G	49.3	4.0	B1	Part of linear group. Old pruning wounds. Minor deadwood.
T48	Rowan	8.0	2.0	1	150	2.5	2.0	2.0	1.5	SM	G	G	10.2	1.8	C1	Old pruning wounds. Included unions. Branch stubs.
T49	Rowan	8.0	2.0	1	140	3.0	2.0	2.5	2.5	SM	G	G	8.9	1.7	C1	Old pruning wounds. Included unions. Branch stubs.
T50	London plane	17.0	3.5	1	510	5.0	6.0	6.0	5.5	M	G	G	117.7	6.1	B1	Previously pollarded. Old pruning wounds. Branch stubs. Minor deadwood. Growing in elevated brick planter.
T51	Goat willow	5.5	1.0	1	270	3.0	4.5	2.5	4.0	SM	F	F	33.0	3.2	C1	Old pruning wounds. Branch stubs. Trunk leans significantly to north.
T52	Southern evergreen magnolia	7.5	4.0	1	200	4.0	1.5	3.0	3.5	SM	G	F	18.1	2.4	C1	Old pruning wounds. Minor deadwood.
T53	Silver birch	9.0	3.5	1	200	4.0	3.0	2.0	3.0	EM	F	G	18.1	2.4	C1	Old pruning wounds. Branch stubs.
T54	Pear	5.0	2.0	1	60	0.5	0.5	0.5	0.5	Y	F	F	1.6	0.7	C1	Recently planted. Bark wound from ground level to 1.4m on main stem.
T55	Silver birch	6.0	2.0	1	50	1.0	1.0	1.0	1.0	Y	G	G	1.1	0.6	C1	Recently planted.
T56	Cherry	7.0	2.5	1	160	3.0	3.0	3.0	3.0	SM	G	G	11.6	1.9	C1	No obvious defects.
T57	Rowan	6.0	2.0	1	100	2.5	2.5	2.5	2.5	Y	G	G	4.5	1.2	C1	Branch stubs. Minor deadwood.
T58	Olive	5.5	1.5	3	100, 80, 80	2.5	2.5	2.5	2.5	SM	G	G	7.2	1.5	C1	Old pruning wounds.
T59	Olive	5.5	1.5	1	100	1.5	1.0	2.5	2.5	SM	G	G	4.5	1.2	C1	Old pruning wounds. Epicormic growth on stem.
T60	Hornbeam	6.0	2.0	1	110	1.5	1.5	1.5	1.5	Y	G	G	5.5	1.3	C1	No obvious defects.
T61	Hornbeam	4.5	1.5	1	40	0.5	0.5	0.5	0.5	Y	G	G	0.7	0.5	C1	Recently planted tree.
T62	Bay	5.0	1.5	3	100, 50, 40	2.5	1.0	1.0	1.0	Y	F	G	4.4	1.2	C1	Included unions. Old pruning wounds. Branch stubs. Surrounded by Mahonia & Privet shrubs.
T63	Tibetan cherry	10.0	3.0	1	190	2.0	2.0	2.0	2.0	SM	G	G	16.3	2.3	C1	Soil compaction. Included unions.
T64	Pride of India	6.0	2.0	1	60	1.0	1.0	1.0	1.0	Y	G	G	1.6	0.7	C1	Recently planted tree.
T65	Sweetgum	8.0	2.0	1	120	1.5	1.5	1.5	1.5	SM	G	G	6.5	1.4	C1	Minor deadwood.
T66	Amelanchier	6.0	2.5	1	90	1.5	1.5	1.5	1.5	Y	G	G	3.7	1.1	C1	No obvious defects.
T67	Tibetan cherry	10.0	3.0	1	160	2.0	2.0	2.0	2.0	SM	G	G	11.6	1.9	C1	Soil compaction. Included unions.

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T68	Sweetgum	8.0	2.0	1	120	1.5	1.5	1.5	1.5	SM	G	G	6.5	1.4	C1	Minor deadwood.
T69	Hornbeam	5.0	1.0	1	60	0.5	0.5	0.5	0.5	Y	G	G	1.6	0.7	C1	Recently planted tree.
T70	Hornbeam	4.5	2.0	1	80	1.0	1.0	1.0	1.0	Y	G	G	2.9	1.0	C1	Recently planted tree.
T71	Hornbeam	4.5	2.0	1	60	1.0	1.0	1.0	1.0	Y	G	G	1.6	0.7	C1	Recently planted tree.
T72	Hornbeam	4.5	2.0	1	70	1.0	1.0	1.0	1.0	Y	G	G	2.2	0.8	C1	Recently planted tree.
T73	Field maple	4.0	2.0	1	50	0.5	0.5	0.5	0.5	Y	G	G	1.1	0.6	C1	Recently planted tree.
T74	Field maple	4.0	2.0	1	50	0.5	0.5	0.5	0.5	Y	G	G	1.1	0.6	C1	Recently planted tree.
T75	Sea buckthorn	5.0	1.5	1	50	0.5	0.5	0.5	0.5	Y	G	G	1.1	0.6	C1	Recently planted tree.
OSG1	Walnut, Ash	13.0	4.0	1	300	4.0	4.0	6.0	4.0	SM	F	F	40.7	3.6	C1	Located in elevated garden beyond retaining wall. No access for inspection, all measurements are indicative only.
H1	Lawson cypress	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Hedge has been removed.
H2	Lawson cypress	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Hedge has been removed.