



Marcus Foster Arboricultural Design & Consultancy

BA (Hons) | ND Arb | Techcert (AA) | MArborA

Arboricultural Survey **Impact Assessment & Method Statement** **Report (BS5837:2012)**

Site

Holmewood School
London
N10 3TD

Client

LXA

Date of Report:

August 2023

Report Reference:

AIA/MF/0130/23

Report Prepared by:

Marcus Foster
BA (Hons) ND Arb. TechCert (AA) MArborA



Marcus Foster
Arboricultural Design & Consultancy
Tel: + 44 (0) 7812 024 070
mail@marcus-foster.com
www.marcus-foster.com

Contents

1. Instructions
2. Introduction
3. Survey methodology
4. Survey Limitations
5. Tree Survey Summary
6. Arboricultural Impact Assessment
7. Arboricultural Method Statement
8. Communication Monitoring & Compliance
9. Tree Works Schedule

Appendices

- A: Tree Survey*
- B: Tree Survey Plans: T001-T003*
- C: Photographs*
- D: References*

1.0 Instructions

1.1 This report has been commissioned by LXA to survey, assess and provide an Arboricultural Impact Assessment and Method Statement for the trees sited within close proximity of proposed development works at Holmewood School, London, N10 3TD.

2.0 Introduction

2.1 A site visit was conducted on 6th July 2023 to survey and assess the trees. The weather at the time of inspection was bright and mild with trees in mid summer mode.

2.2 The tree survey, report and recommendations have been compiled for the 58 no. trees and 2 no. groups (T1-T60) surveyed within close proximity of the subject site where deemed relevant.

2.3 The details of the subject trees are set out in the Tree Survey Schedule in *Appendix A*. The trees were surveyed on the date and time shown above and the tree survey assessment information for the tree describing size, condition and surroundings are found within this appendix.

2.4 The trees located within the site are shown in site plans T001-T003, *Appendix B*, and these correspond to the tree survey results table, *Appendix A*. Photographs of the trees can also be found in *Appendix C*.

2.5 This report and the opinions within it have been produced by Marcus Foster, a qualified arboriculturist and Professional Member of the Arboricultural Association with over 20 years experience and holding a National Diploma in Arboriculture, the Arboricultural Association's Technicians Certificate, Professional Tree Inspection Certificate (LANTRA) as well as a degree in History and Society. Work experience within the industry includes work as a Contracts Manager for an Arboricultural Association Approved Company, a Local Authority Tree Preservation Officer and an independent Arboricultural Consultant. As a consultant many of projects undertaken are in the inner London Boroughs of Islington, Hackney, Westminster, Camden, Southwark and RBKC, making Marcus Foster familiar with the most recent requirements of development and constraints on urban trees.

3.0 Survey Details and Scope

3.1 The site survey included the 58 no. trees and 2 no. groups (T1-T60) as shown in the survey, *Appendix A*, and also highlighted on the site plans, *Appendix B*.

3.2 The trees and group were surveyed from ground level from within their site location. The diameter of the trunks have been measured using a DBH tape at 1.5m height. The height of the trees have been estimated.

3.3 The following information was recorded for each tree and is shown in the Tree Schedule included in *Appendix A*:

- Number: an identity number which cross-references locations shown on the plan in *Appendix A* with the schedule in *Appendix B*.
- Species: listed by common names
- Tree Height: height in metres (m)
- Tree Spread: spread in metres (m)
- Stem diameter: measured in millimetres (mm) and taken at 1.5m above ground level
 - o (e) denotes estimated diameter due to off site location
- Age Class: Y (young); EM (early-mature); M (mature); OM (over-mature)
- Vigour: G (good); F (fair); P (poor); D (dead)
- Structural Condition: G (good); F (fair); P (poor); D (dead)
- General Condition Specific comments relating to each tree
- Estimated Remaining Contribution (years)
- BS5837 Category Grading
- Protection Distance m2 Area (where applicable – BS5827: 2012)
- Protection Distance Radius (where applicable – BS5827: 2012)

3.4 Information recorded in the tree survey, *Appendix A* is expanded in the report findings and preliminary recommendations have been made in *Section 5*.

3.5 Findings as shown within *Appendix A* and assessed within *Section 5* are also highlighted within *Appendix B* which incorporates the Tree Constraints Plan (TCP) - drawing T002 addressing areas where mitigation is required. The Tree Protection Plan (TPP) - drawing T003 provides outline tree protection measures.

4.0 Survey Limitations

4.1 No soil excavations have been carried out.

4.2 This report only considers the trees and conditions at the time of inspection. As the inspection was only visual no guarantee can be given concerning the condition of the wood at present in any of the trees inspected and furthermore that no future problems or deficiencies may arise.

4.3 The survey has been undertaken as a survey of the trees without prior influence of the development and implicating factors.

4.4 No invasive tools were used during this site survey.

4.5 It should be noted that vegetation including shrubs within this / the neighbouring sites have not been included in the survey as none were within close or relevant proximity .

4.6 The survey has been undertaken from within the site only.

4.7 No additional documentation unrelated to the property or development has been referred to for the trees or the property for the compilation of this report.

5.0 Tree Survey Summary

5.1 The trees have been surveyed in accordance with BS5837: 2012 'Recommendations for trees in relation to construction' (BS5837: 2012) and have been rated as follows:

Category 'A' trees

Trees of high quality with an estimated remaining life expectancy of at least 40 years. Trees have been categorised as 'A' trees for one of the following reasons:

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'A' category trees have a **green** outline as denoted within the site plan key / survey.

N/A

Category 'B' trees

Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Trees have been categorised as 'B' trees for one of the following reasons

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'B' category trees have a **blue** outline as denoted within the site plan key.

T1, T2, T3, T7, T11, T16, T17, T18, T26, T28, T29, T37, T38, T42, T43, T44, T45, T51, T53, T58, T59

Category 'C' trees

Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Trees have been categorised as 'C' trees for one of the following reasons

- Arboricultural qualities - unremarkable trees of very limited merit
- Mainly landscape qualities
- Trees with no material conservation or cultural value

Within the Site Plan (Appendix B) those trees rated as 'C' category trees have a **grey** outline as denoted within the site plan key.

T4, T6, T8, T9, T10, T13, G14, T15, T19, G20, T21, T22, T24, T25, T27, T30, T31, T32, T34, T35, T36, T39, T40, T41, T46, T47, T49, T50, T52, T54, T55, T57, T60

Category 'U' trees

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. Within the Site Plan (Appendix B) those trees rated as 'U' category trees have a **red** outline as denoted within the site plan key.

T5, T12, T23, T33, T48, T56

5.2 The trees have been surveyed taking into account condition, general health and form without the development process influencing the survey. In addition they have also been surveyed taking account of amenity value that is offered in relation to both the landscape and surrounding buildings and streetscape. This report outlines the impact that the proposed development will have on the overall treescape and landscape; it provides recommendations to ensure that long-term amenity value for the area is retained.

5.3 The report has been written with close reference to the British Standard Guidance, British Standard 5837: 2012 'Recommendations for trees in relation to construction' (BS5837: 2012), which addresses the juxtaposition between trees and structures. The Arboricultural Impact Assessment highlights areas where the trees will require protection which should be addressed within the Arboricultural Method Statement (AMS) and/or Tree Protection Plan (TPP) specific to the site and proposed scheme, and corroborating with all construction and landscape method statements as relevant.

5.4 The report specifies precautions which shall be taken when working close to retained trees. Important terms include:

Root Protection Area (RPA)

The area defined as requiring protection from development from retained trees within BS5837 (2012). Using a calculation provided within BS5837 a radius distance is provided based on a measurement of the main stem taken at 1.5m height.

Construction Exclusion Zone (CEZ)

This is the RPA where no construction activity should occur and damage is prevented by either installing fencing to restrict access or installing ground protection that allows limited access above the ground, while protecting the rooting environment below.

Due to site constraints and the encroaching nature of development for an area within the RPA outside the CEZ where works are proposed, works must be carried out with care to minimise any impact on the tree rooting environment.

Tree Protection Plan (TPP)

The document which defines the extent and methodology of tree protection for the entire development process. This should be referred to AT ALL TIMES by the principal contractor and shall ensure safe protection of all retained trees on site.

Precautionary Area

An area where works must be undertaken with direct consultation with methodology as specified within the AMS report and / or scheme of Arboricultural supervision

6.0 Arboricultural Impact Assessment

Site Overview

6.1 The 58 no. trees and 2 no. groups (T1-T60) located within close proximity of the proposed works are sited within the following sites:

Holmewood School, 8a Muswell Hill: T1, T2, T5-T13 & T15-T60
Lawrence Court, Springfield Avenue: T14
Grove Lodge, 8 Muswell Hill: T3, T4

6.2 The property is sited within the London Borough of Haringey. The following statutory checks have been made in relation to the trees at the site and their status within the Local Planning Authority, London Borough of Haringey:

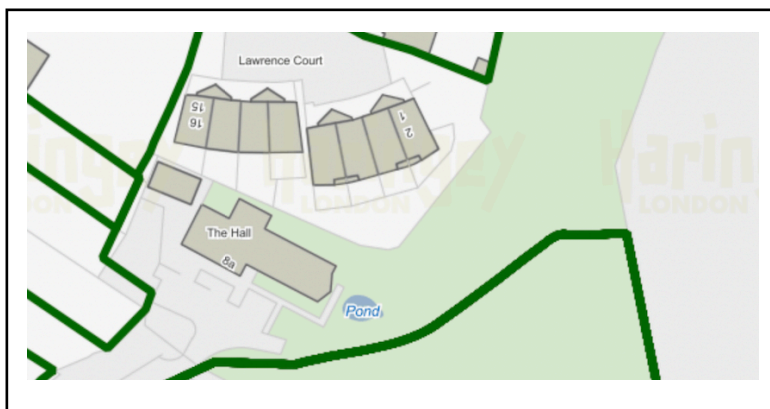
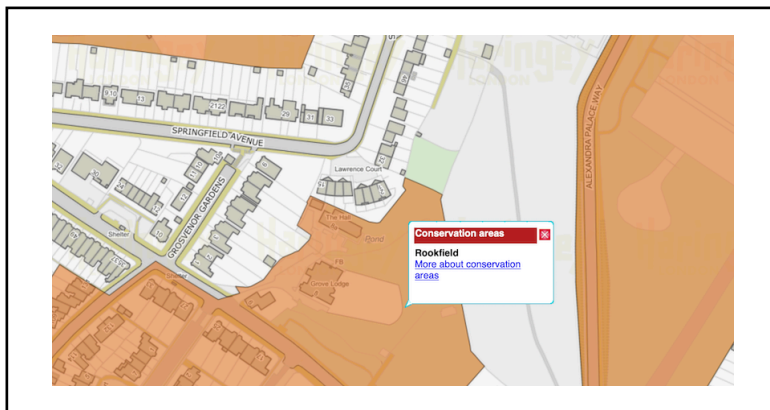
CONSERVATION AREA STATUS

Rookfield Conservation Area

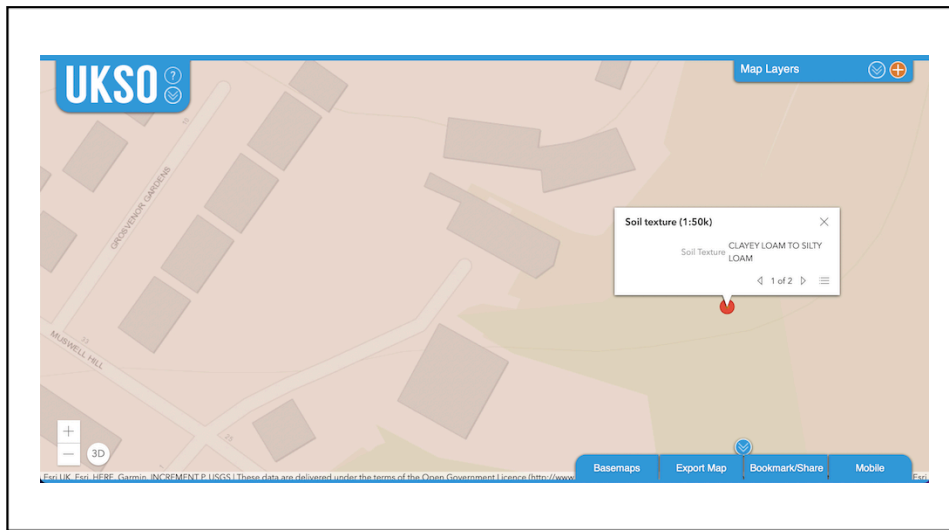
TREE PRESERVATION ORDER (TPO) STATUS

N/A

6.3 Confirmation of statutory protection is shown below:



6.4 The underlying soil to this area is classified as 'clayey loam to silty loam' within the UK Soil Observatory - www.ukso.org - a medium to heavy soil mix:



Extract from www.ukso.org - July23

6.5 The presence of a clay element within the soil is significant in terms of both tree protection and foundation design. Clay soils can experience substantial volume changes when vegetation extracts moisture from the ground they are also prone to compaction when wet; the soil is deemed as being of medium to heavy texture with less susceptibility to compaction and volumetric change. Any foundations should also be designed in accordance with the recommendations contained within NHBC Chapter 4.2 (National House Building Council, 2010) and should account for the possibility of both subsidence and heave.

6.6 The site comprises grounds within the existing school and woodland including young to semi mature trees and early / mature trees.

6.7 For the purposes of this report, reference has been made to the following plans for the proposed development:

LXA
LXA-1940-MH-050-Site Plan - Proposed Cabins

Ultimate Log Cabins
*EGCG LXA Holmewood School N10 3TD Forest Classroom
v230810.pdf*

6.8 The development proposal is for timber garden / woodland structure within the woodland area of the site.

6.9 The summary of arboricultural impact which shall be assessed is as follows:

- Retention of all trees
- Potential damage to tree roots from construction of proposed garden building structure within close proximity of the RPA of retained trees
- Potential damage to tree roots from construction of proposed garden building structure with associated foundations within close proximity of the RPA of retained trees
- Potential compaction and damage of the retained trees in relation to the development and landscape process
- Potential damage to canopies of the retained trees surrounding the site during development and landscape process
- The use of and storage of materials and chemicals on site within close proximity of the trees

6.10 The trees and the impact from the proposed development are evaluated within this section to determine overall arboricultural impact from the proposed development. Where trees are retained the Root Protection Area (RPA) for each tree is evaluated in relation to proposed development works. The following is assessed within this section:

- (i) Where tree protection measures are deemed appropriate these are highlighted
- (ii) No mitigation for tree loss is relevant due to retention of all trees

Arboricultural Impact Assessment

6.11 The trees and shrubs surveyed are of the following species:

Acer pseudoplatanus (Sycamore)
Aesculus hippocastanum (Horse chestnut)
Fraxinus excelsior (Ash)
Olea europaea (Olive)
Malus sylvestris (Crab apple)
Carpinus betulus (Carpinus betulus)
Taxus baccata (Yew)
Crataegus monogyna (Hawthorn)
Salix alba (White willow)
Prunus spp (Plum)
Quercus robur (English oak)

6.12 The trees surveyed have the following attributes

- (i) Trees T1-T21 surround existing school buildings, being selectively managed and mainly being Sycamore, Horse Chestnut and Ash with occasional ornamentals; trees being both within and off site
- (ii) Trees T22-T60 within enclosed woodland style area
- (iii) Tree T37, a mature to over-mature Oak tree with excellent biodiversity attributes being sited on the western boundary within woodland area
- (iv) Trees T38 & T41-T45 comprising 6 no mature Horse chestnut trees being sited on the western boundary within woodland area; low wall retainer to east not deemed a significant enough feature to modify the RPA of these tree. Where this RPA has been not been modified¹ the RPA of these mature trees incurs in area above the wall
- (v) Ash trees exhibiting early signs of Ash dieback within the majority of crowns which limits lifespan of the trees

6.13 Summary photographs of the trees are shown within *Appendix C* with full findings within the Tree Survey Schedule - *Appendix A*.

¹ The British Standard (paragraph 4.6.2) it states that RPA's should reflect the morphology and disposition of the roots where historic site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced, often with agreement from the Local Authority and using all available historical information of the site and specific tree / area. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution by a qualified arboriculturist

6.14 For the woodland area the potential impacts for individual trees are as follows:

- Ground works within RPA of T37, T43, T44, T45, T51, T59
- Final landscape works (minor) selectively within RPA of T22-T60
- Future occupancy of structure
- Site infrastructure including storage of materials, chemicals, site welfare within RPA of trees within close proximity of proposed works

6.15 For the development there is incursion to the RPA of retained trees as follows for the log cabin buildings:

CABIN 1

T43-T45 - incursion to eastern RPA

T51 - incursion to south eastern RPA

CABIN 2

T37- incursion to eastern RPA

T59 - incursion to south eastern RPA

6.16 There shall also be the following works associated with the cabins

- (i) Pathways laid to each cabin which shall replace existing informal bark mulch / groundcover pathways - comprising the following methodology: Pressure-treated timber edges along the existing pathways, to add a layer of crushed limestone, allowing for safer access
- (ii) Electricity (via armoured cable) to each cabin via route along southern boundary
- (iii) Minor crown lifting of low crowns overhanging cabin 1

6.17 Protection of all trees highlighted for retention is justified based on the following:

- (i) Limited RPA incursion for retained trees. The incursion shall be for an area subject to selective groundworks only
- (ii) Application of tree protection measures incorporating
 - Precautionary Area for trees T37, T43, T44, T45, T51, T59 where ground works are required
 - Ground protection for T37, T43, T44, T45, T51, T59
 - Limited impact of works based on pre-fabricated lightweight timber structure
 - Hand dug or air spade technique for installation of electric cable

(iii) Limited extent of landscape works with pathways to be of a permeable nature and laid above ground level, not requiring excavations

(iv) Minor extent of tree works required for crown lifting over Cabin 1 structure all specified in accordance with BS3998 (2010)

6.18 In relation to future occupancy it is clear that the site shall not be detrimentally impacted from the shading of those trees retained due to historic existence of trees and the garden building with its limited size.

6.19 The following tree protection measures shall be applied as specified within Section 6, AMS and the TPP which shall mitigate against any potential damage ensuring all trees remain protected:

(i) GROUND PROTECTION

Ground protection for RPA area exposed to construction works shall be implemented as shown within the AMS & TPP

(ii) PRECAUTIONARY AREA

For the precautionary area / RPA of trees T37, T43, T44, T45, T51, T59 as outlined within the AMS (Section 7 of this report) & TPP a Precautionary Area shall be applied to protect trees from the development process

(iii) PROTECTION FROM SITE STORAGE, INFRASTRUCTURE & WELFARE

Site storage, mixing of chemicals and site welfare shall be sited outside of the RPA of retained trees

(iv) PROTECTION OF TREES DURING INSTALLATION OF UTILITIES

As set out within AMS

6.20 It is noted that there is no access required for vehicles or heavy machinery within the site and therefore tree protection measures have been applied relative to this construction methodology.

6.21 Due to the location of existing trees and historic management and that included within facilitative tree works) there shall be no impact to crowns of trees for the construction of proposed structure. Additionally these shall be no impact in relation to future occupancy due to woodland siting of the cabin for woodland effect / interactive education.

Summary of Arboricultural Impact

6.22 The proposed development has very limited arboricultural impact by virtue of the proposed structure including all ground works associated being outside of the RPA of retained trees. Those works taking place require mitigation via tree protection measures as follows

Tree Protection applicable to the following trees:

All trees within the site

Mitigation applicable for the removal of the following trees:

None applicable

6.23 The tree protection measures shall limit arboricultural impact to ensure that the removal of existing structure and construction of proposed does not detrimentally impact the health and / or structural integrity of the trees therefore preserving the amenity value and canopy cover within the subject site.

6.24 In summary the arboricultural impact as outlined within the TCP, drawing T002 requires tree protection measures as set out within the AMS & drawing T003 - Tree Protection Plan (TPP):

- (i) GROUND PROTECTION
- (ii) PRECAUTIONARY AREA
- (iii) PROTECTION FROM SITE INFRASTRUCTURE / BUILDING OF LOG CABINS

6.25 For the implementation of the proposed structure works these are justified by very limited extent of works and applied tree protection measures

7.0 Arboricultural Method Statement

The following tree protection measures require close adherence AT ALL TIMES as outlined within this report. The measures are outlined within Tree Protection Plan (TPP) - drawing T003.

7.1 Tree Works

7.1.1 Tree works are required as outlined within Tree Works Schedule - Section 9 - to be carried out at pre-commencement stage.

7.2 Tree Protection Fencing

7.2.1 None is required due to the lightweight form of the work

7.3 Ground Protection

7.3.1 For ground protection this shall be installed prior to enabling works at pre-commencement of development. The following must be adhered to:

- Implementation of 75mm bark mulch layer overlapped with minimum 15mm plyboard surface or load bearing ground protection boards to provide ground protection for development process
- No storage of spoil within this area
- No storage of chemicals within this area

7.3.2 Where applied, ground protection shall be removed for final landscapes works within the RPA of retained trees.

7.4 Site Welfare & Site Office

7.4.1 Site welfare must be located outside of the RPA of retained trees. Strict adherence to this area must be made to this area and any amendment would require written consent from the tree officer.

7.5 Storage of Construction site related materials, plant and spoil

7.5.1 A designated storage area must be located outside of the RPA of retained trees as shown within the TPP. Strict adherence to this area must be made to this area and any amendment would require written consent from the tree officer.

7.6 Precautionary Area

7.6.1 For the 'Precautionary Area' / incursion within RPA of retained trees the Precautionary Area denoted within the TPP highlight where the following works are required:

(i) Below ground foundations described within Construction

Methodology as:

300mm pile foundation approximately 500mm into ground and 40mm above ground with 100mm x 100mm pressure treated timber frame for the cabin to be placed.

7.6.2 The application of selective foundations shall require very limited extent of excavations. Within BS5837 (2012) the Standard makes provision for undertaking excavations in RPAs, explaining that all excavation must be carried out carefully using spades, forks and trowels, It is important not to damage the bark and wood of any roots. For this area, these tools should be used with no machinery used for the preliminary works.

7.6.3 For this area the following shall apply:

- All works within Precautionary Area highlighted within 'Toolbox Talk'
- With all below ground level works for determining suitable locations for selective foundations for this area undertaken by hand, the severance of any larger roots encountered up to 25mm diameter should then be undertaken by the supervising arboricultural consultant to ensure clean severance
- The supervising arboriculturist shall provide guidance and consultation during this stage of the ground works AT ALL TIMES

7.6.4 For undertaking excavations within the precautionary area guidance is applicable

- The severance of any tree roots encountered larger than 25mm in diameter MUST NOT occur without prior consultation with the Local Authority Tree Officer or appointed Arboricultural Consultant.
- If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

7.6.5 The following tools shall be applicable for such works:



7.7 Ground Works Methodology

7.7.1 For the precautionary areas / RPA of retained trees in relation to proposed structural works within the RPA of retained trees the following methodology with tree protection measures shall be applied at all times:

GROUND WORKS SEQUENCE

PRECAUTIONARY WORKS AREA IDENTIFIED

A Precautionary area is an area where tree protection for excavations and Ground supporting post works require implementation within RPA



All works within precautionary area highlighted within 'Toolbox Talk'



Initial hand dug locations of proposed scaffold post locations to be undertaken in accordance with AMS tree protection measures to ensure no severance of major roots.



The exact location of each pile / post location and evidence of no tree root damage must then be documented

7.8 Installation of utility services

7.8.1 - Trenching for the installation of underground services severs any tree roots present and can have a detrimental impact on the structural integrity of affected trees. Therefore, where the installation of utility services within the RPA of trees is required the consulting arboriculturist and Local Authority the following details must be adhered to:

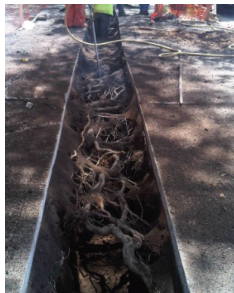
Electric cable installed via

(i) Hand dug excavations adhering to all tree protection guidelines set out within *Section 7.6.4*

OR

(ii) Air Spade technique

Where Air spade techniques are deemed appropriate these must be operated by qualified contractors with all work and findings documented. Air spades utilise a two-tool air compressor and hand-held lance to dislodge soil, using highly pressurised jets of air. This allows trenches to be excavated without causing the significant root damage associated with the use of conventional digging techniques such as, spade or excavator buckets. Example imagery is shown below:



Example imagery of air spade use for implementing utilities beneath root plate (existing)

Reputable companies providing this service include as follows (list not exhaustive):

<https://www.ruskins.co.uk/airspade>

<http://www.dfclark.co.uk/bionomique-service/air-spade-investigation-and-remediation/>

7.8.2 Further reference can be made to National Joint Utilities Group (Volume 4, Issue 2) for guidance but any approach must be approved by both the consulting arboriculturist and Local Authority tree officer.

7.9 Final Hard Landscape Works

7.9.1 For final landscaping works the following must apply where this will be required to be carried out within the RPA of retained trees from the crushed limestone pathways

- No reduction in levels of the underlying soil surface will occur during final landscaping works within the RPA of retained trees
- Close adherence with detailed root protection specifications (Precautionary Area - Section 7.6) as outlined within this report
- No compaction of soils for establishing level base
- No soakaway within RPA of retained trees

7.10 Fires

7.10.1 There must UNDER NO CIRCUMSTANCES be fires within this site.

8.0 Communication, Monitoring and Compliance

In ensuring that all Tree Protections Specifications as highlighted within this method statement are fully adhered to at all times, it is important to set out for the long term of the development, communication details for key individuals and tasks that require monitoring. The key individuals are:

SUPERVISING ARBORICULTURIST

Name - Marcus Foster *Arboricultural Design & Consultancy*

Contact - Marcus Foster

Mobile Telephone - 078 1202 4070

Email - mail@marcus-foster.com

In addition the Local Authority - Haringey Council - must be notified of all supervision site meetings as specified within this report and shall have open access to the site throughout the development

LONDON BOROUGH OF HARINGEY - TREE OFFICER

Name - Tree Officer - Planning

Telephone - /

Contact - Daniel Monk

Email - daniel.monk@haringey.gov.uk

9.0 Tree Works Schedule

9.1 Tree works are required as confirmed below, to be undertaken in accordance with BS3998 (2010): Tree Work Recommendations:

TREE WORKS SCHEDULE: Holmewood School, London, N10 3TD				
Tree No.	Common Name	BS5837 Category	Tree Works	Reasons for works
T42	Horse chestnut	B	Crown lift low growth to west to 4m height by pruning sub 25mm branch diameters to lift over subject site	To facilitate development
T43	Horse chestnut	B	Crown lift low growth to west to 4m height by pruning sub 25mm branch diameters to lift over subject site	To facilitate development
T44	Horse chestnut	B	Crown lift low growth to west to 4m height by pruning sub 25mm branch diameters to lift over subject site	To facilitate development
T45	Horse chestnut	B	Crown lift low growth to west to 4m height by pruning sub 25mm branch diameters to lift over subject site	To facilitate development

NOTE: Wildlife & Habitat Protection Guidelines

The tree work specifications included within this report do not provide an exemption from the requirements to comply with the Wildlife and Countryside Act 1981, the Habitats Regulations 1994 and the Countryside and Rights of Way Act 2000, or any acts offering protection to wildlife. Of particular note is the protection offered to bats, birds and their nests, whilst being built or in use. It must be noted that failure to comply with the Acts may result in a criminal prosecution.

Appendices

Appendix A

Tree Survey Schedule (BS5837:2012)

Colour Key: BS5837: 2012 (see Section 5)

	Category A
	Category B
	Category C
	Category U

Tree Survey Key: BS5837: 2012

- Number: an identity number which cross-references locations shown on the plan in Appendix A with the schedule in Appendix B.
- Species: listed by common names
- Tree Height: height in metres (m)
- Tree Spread: spread in metres (m)
- Stem diameter: measured in millimetres (mm) and taken at 1.5m above ground level
 - o (e) denotes estimated diameter due to off site location
- Age Class: Y (young); EM (early-mature); M (mature); OM (over-mature)
- Vigour: G (good); F (fair); P (poor); D (dead)
- Structural Condition: G (good); F (fair); P (poor); D (dead)
- General Condition Specific comments relating to each tree
- Estimated Remaining Contribution (years)
- BS5837 Category Grading
- Protection Distance m2 Area (where applicable – BS5827: 2012)
- Protection Distance Radius (where applicable – BS5827: 2012)

BS5837:2012 TREE SURVEY SITE: Holmewood School, London, N10 3TD SURVEY DATE: 6th July 2023														
Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T1	Sycamore	16	M/s 420	6 5 4 5	M	F	F	B1	20+	Multi-stem at base. Previously reduced	6	6	55.42	4.2
T2	Horse chestnut	14	540	4 4 4 6	EM	F	G	B1	20+	Columnar; absent crown to north. Bleeding canker at base to west	5	3	131.93	5.5
T3	Horse chestnut	15	600 (e)	6 5 5 5	EM	F	G	B1	20+	Off site. Previously reduced. Crown lifted over site	5	5	162.22	7.2
T4	Sycamore	10	200	2 1 1 3	SM	F	F	C1	10+	Adjacent to entrance. Crown dominant to west	5	5	18.1	2.4
T5	Sycamore	10	310	3 2 3 4	SM	P	F	U	Less than 5 years	Decay at base with staining. One-sided crown to west	/	/	/	/
T6	Sycamore	12	300	2 5 4 3	SM	F	F	C1	10+	Damage to main stem to 2m height. One-sided crown to south	5	5	40.72	3.60
T7	Sycamore	14	m/s 420	5 5 5 5	EM	F	G	B1	20+	Multi-stemmed at base. 3 no. stems - crown lifted over car parking area	5	5	55.42	4.2
T8	Sycamore	13	220	3 3 3 3	SM	F	F	C1	10+	Ivy clad to 4m height. Poor union at 5m height	5	5	21.9	2.6
T9	Ash	12	280	4 3 3 6	SM	F	F	C1	10+	Crown dominant off site. Ivy to 4m height	4	3	35.47	3.4
T10	Olive	4	m/s 80	3 2 2 2	SM	F	G	C1	10+	Suppressed; ornamental form	2	2	2.01	1.0
T11	Ash	14	380	4 4 4 4	SM	F	G	B1	20+	Developing form; selectively managed	4	2	65.33	4.6

Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T12	Crab apple	5	110	1 1 1 1	SM	D	D	U	Less than 5 years	Tree is largely dead	/	/	/	/
T13	Ash	10	M/s 300 (e)	5 4 4 5	SM	F	F	C1	10+	Excessively ivy clad to 7m height. Unable to inspect	4	4	28.28	3.0
G14	Sycamore	12	M/s 300 (e)	6 6 6 6	SM	F	F	C2	10+	Off site grouping. Overhang to site up to 4m branch lengths at 4-10m height	3	4	28.28	3.0
T15	Sycamore	12	250 (e)	3 4 3 1	SM	F	F	C1	10+	Columnar; limited form. Excessively ivy clad to 6m height	4	4	28.28	3.0
T16	Sycamore	14	M/s 300 (e)	4 4 4 6	EM	F	G	B1	20+	Multi-stemmed. Crown growing over existing building. Excessively ivy clad to 7m height.	4	4	28.28	3.0
T17	Sycamore	14	M/s 300 (e)	4 4 3 5	EM	F	G	B1	20+	Multi-stemmed. Crown growing over existing building. Excessively ivy clad to 7m height.	4	4	28.28	3.0
T18	Sycamore	14	300 (e)	3 5 4 6	EM	F	G	B1	20+	Excessively ivy clad. Southern most tree of grouping	4	4	28.28	3.0
T19	Sycamore	14	350 (e)	5 5 4 4	EM	F	F	C1	10+	Excessively ivy clad to 6m height. Low vigour throughout	7	6	55.42	4.2
G20	Cherry laurel / Goat willow	6	m/s 80	4 3 4 3	SM	F	F	C2	10+	Off site boundary grouping. Sycamore to south is dead	1	1	/	1.0
T21	Sycamore	14	200	3 3 3 3	SM	F	F	C1	10+	Columnar - boundary location	4	4	18.1	2.4
T22	Sycamore	12	380	4 4 4 4	EM	F	F	C1	10+	Absence of lower crown. Lean to east. Deadwood throughout	8	8	65.33	4.6

Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T23	Hawthorn	12	460	2 2 2 2	M	P	P	U	Less than 5 years	Tree is largely dead - previously heavily reduced	/	/	/	/
T24	Hornbeam	12	380	5 5 5 2	SM	F	F	C1	10+	Sweep and lean to east; previously suppressed	5	5	65.33	4.6
T25	Purple plum	6	T/s 180	3 3 3 3	EM	F	F	C1	10+	Suppressed ornamental tree	2	2	10.18	1.8
T26	Sycamore	15	400	4 4 4 4	SM	G	F	B1	20+	Crown lifted; developing form - previously ivy clad	7	7	72.39	4.8
T27	Ash	15	520	4 4 6 5	EM	F	F	C1	10+	Major deadwood. Open crown sections within upper crown	3	5	122.35	6.2
T28	Yew	7	220	3 3 3 3	SM	F	F	B1	20+	Developing form; currently understorey form	2	2	21.9	2.6
T29	Ash	16	350	4 5 5 4	SM	F	F	B1	20+	Developing form. Ivy to 5m height. Crown lifted	6	6	55.42	4.2
T30	Ash	10	190	2 2 2 2	Y	P	F	C1	10+	Columnar. Cavity at 6m height. Limited lifespan	6	6	10.18	2.1
T31	Ash	16	400	3 4 4 3	SM	F	F	C1	10+	Excessively ivy clad to 9m height. Dead sections. Ash dieback evident	7	7	72.39	4.8
T32	Damson	6	160	2 2 3 2	EM	F	F	C1	10+	Ornamental; understory with excessive ivy	3	3	11.59	1.9
T33	Ash	10	120	3 2 2 3	Y	F	P	U	Less than 5 years	Ash dieback - limited lifespan	/	/	/	/

Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T34	Ash	10	160	2 2 2 2	Y	F	F	C1	10+	Young; developing form. Minor deadwood	4	4	11.59	1.9
T35	Ash	10	200	4 3 2 2	Y	F	F	C1	10+	Lean to north east. Ivy clad to 6m height	4	4	18.1	2.4
T36	Sycamore	12	220	4 2 2 7	SM	F	F	C1	10+	Columnar; absent eastern crown	5	5	21.9	2.6
T37	English oak	14	1180	7 4 7 6	M	F	F	B1	20+	Even buttress roots at base; ingress of main stem to fencing to west. Reduced form. Minor deadwood	5	5	629.99	14.2
T38	Horse chestnut	12	460	4 4 5 4	EM	F	G	B1	20+	Excessive ivy to 8m height. Low growth developing.	2.5	2	95.74	5.5
T39	Ash	7	140	1 2 3 1	Y	P	F	C1	10+	Boundary location; suppressed. Growing off site due to adjacent Chestnut	3	3	8.9	1.7
T40	Ash	7	120	1 1 3 1	Y	P	F	C1	10+	Boundary location; suppressed. Growing off site due to adjacent Chestnut	3	3	6.5	1.4
T41	Horse chestnut	9	480	4 4 4 5	EM	F	F	C1	10+	Heavily reduced form; pollarded at 8m. Excessively ivy clad	5	5	104.24	5.8
T42	Horse chestnut	15	740	6 5 6 6	M	F	G	B1	20+	Excessively ivy clad to 10m height. Limb failure at 4m to east - large open cavity	4	4	247.76	8.9
T43	Horse chestnut	14	820	5 4 6 4	M	F	G	B1	20+	Lean to south. Congested union at 4m height. Fractured limb at 6m to north. Retaining wall (500mm height) at 4m distance to north	4	1	304.23	9.8
T44	Horse chestnut	14	780	7 4 6 4	M	V		B1	20+	Union at 3-5m generally sound. Spreading form for lower canopy. Ash debris on root plate to south Retaining wall (500mm height) at 4m distance to north	4	2	275.27	9.4

Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T45	Horse chestnut	14	790	7 5 6 4	M	F	G	B1	20+	Union at 3-5m generally sound. Spreading form for lower canopy. Ash debris on root plate to south Retaining wall (500mm height) at 4m distance to north. Low growth developed off site	4	3	282.37	9.5
T46	Ash	16	T/s 400	4 5 5 3	EM	F	P	C1	10+	Twin-stemmed at base. Tight main union . Excessively ivy clad. Ash dieback developing	5	5	72.39	4.8
T47	Ash	8	M/s 200	3 5 3 2	Y	F	P	C1	10+	Developing form. Leans to east from previous suppression (T42). Crown mainly growing off site	3	3	12.57	2.0
T48	Ash	10	750 (e)	1 2 1 1	M	P	F	U	Less than 5 years	Pollarded at 8m height. Lapsed 2 years. Ash dieback - limited lifespan for heavy pollard	/	/	/	/
T49	Ash	7	180	2 2 2 2	Y	F	F	C1	10+	Young. Developing form. Ash dieback - early stages	3	3	14.66	2.2
T50	Ash	6	160	2 2 2 2	Y	F	F	C1	10+	Young. Developing form. Ash dieback - early stages	3	3	11.58	1.9
T51	Sycamore	12	390	3 3 3 3	SM	F	F	B1	20+	Excessive ivy to to 6m height. Stand alone tree following pollarding of T48	5	5	68.82	4.7
T52	Elder	5	120	4 2 1 2	EM	F	F	C1	10+	Large shrub / small tree - limited form	2	2	6.5	1.4
T53	Sycamore	14	230	3 4 3 2	SM	F	G	B1	20+	Excessive ivy to to 6m height. Developing form	5	5	23.93	2.7
T54	Ash	15	T/s 540	6 4 6 6	EM	F	F	C1	10+	Twin-stemmed at base; dominant east lean. Ivy to 6m height. Ash dieback with deadwood. Cavity at 9m to west	5	5	131.93	5.4
T55	White willow	6	M/s 100	4 4 4 4	SM	F	F	C1	10+	Low spreading form ; no overhang to woodland pathway	1	1	/	1.0

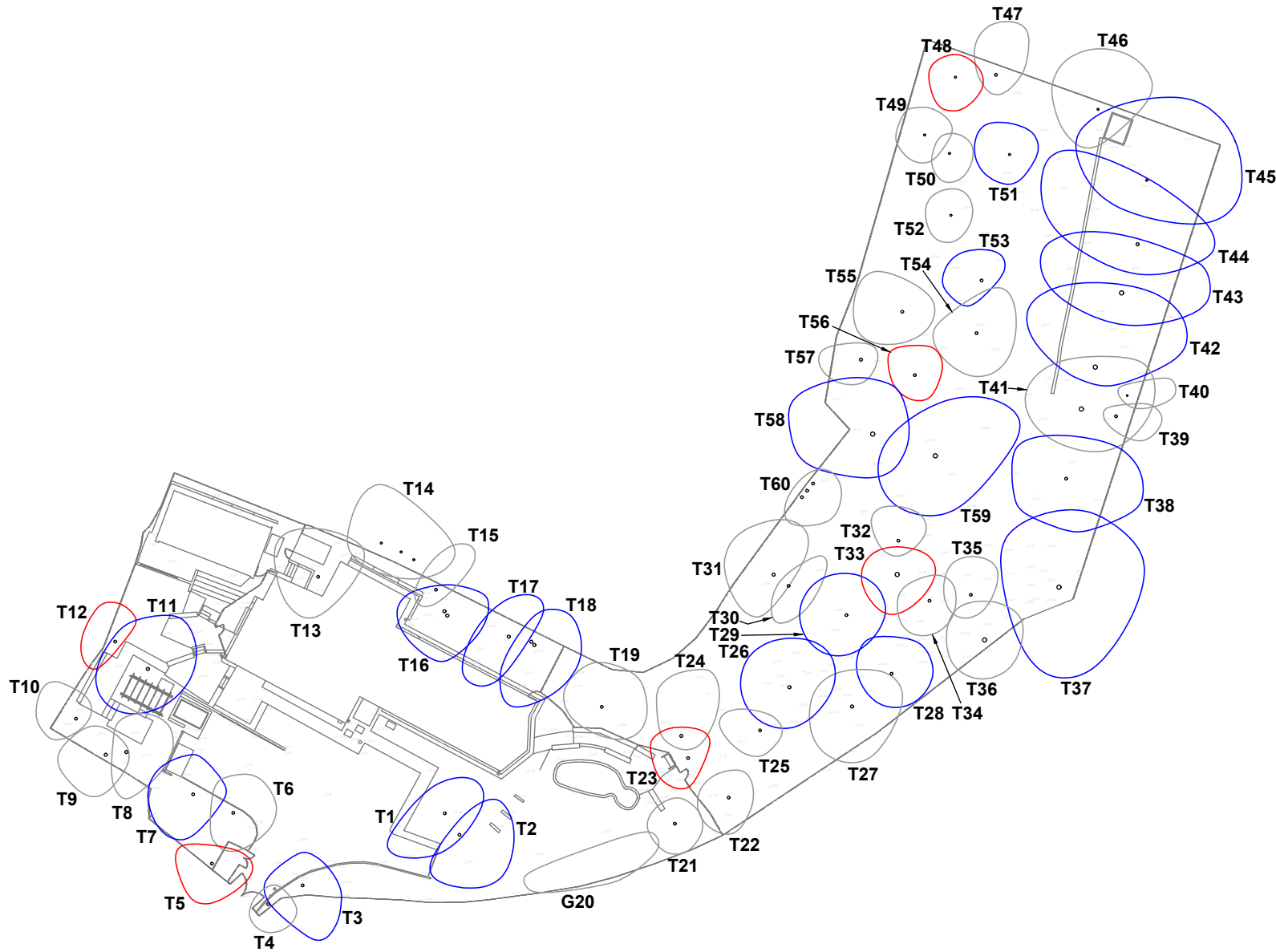
Tree No	Species	Height (m)	DBH (mm)	Spread (m) N/E/S/W	Age	Structural Condition	Vitality	BS5837 (2012) Rating	Remaining Contribution (years)	Comments / Structural Condition	First branch height (m)	First canopy height (m)	Root Protection Area (RPA) m2	Root Protection Area (RPA) Radius (m)
T56	Sycamore	9	200	2 3 2 2	Y	P	F	U	Less than 5 years	Pollarded at 3m height - 2 no. stems lapsed with limited form	/	/	/	/
T57	Ash	10	210	3 4 2 1	Y	F	F	C1	10+	Developing form; boundary location	3	3	19.95	2.5
T58	Sycamore	15	560	8 5 4 6	EM	F	G	B1	20+	Ivy previously severed. Crown dominant to north off site - naturally crown lifted	5	4	141.89	6.7
T59	Ash	15	T/s 400	4 5 4 6	EM	F	G	B1	20+	Ivy excessive to 5m; obscuring union. Dominant west leader. Ash dieback early stages	5	4	72.39	4.8
T60	Hawthorn	6	M/s 150	2 4 2 4	SM	F	F	C1	10+	Ornamental; boundary screening form	2	2	10.18	1.8

Appendix B

Existing Tree Survey (T001)
Tree Constraints Plan (T002)
Tree Protection Plan (T003)
(BS5837:2012)

Colour Key: BS5837: 2012 (see Section 3.6)

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



KEY

	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	TREES REMOVED
	RPA
	RPA INCURSION
	SHADING ARC

BS5837 (2012) Tree Survey Notes

1. In accordance with BS5837(2012) this drawing is a colour coded schedule and should not be read in black and white
2. If received electronically it is the recipients responsibility to print this drawing to correct scale. Only written dimensions should be used where not printed to scale.
3. This drawing should be read in conjunction with all other relevant drawings and specifications
4. Marcus Foster Arboricultural Design & Consultancy accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided
5. Off site trees have been plotted based on site visit survey and locations are not based upon topographical survey

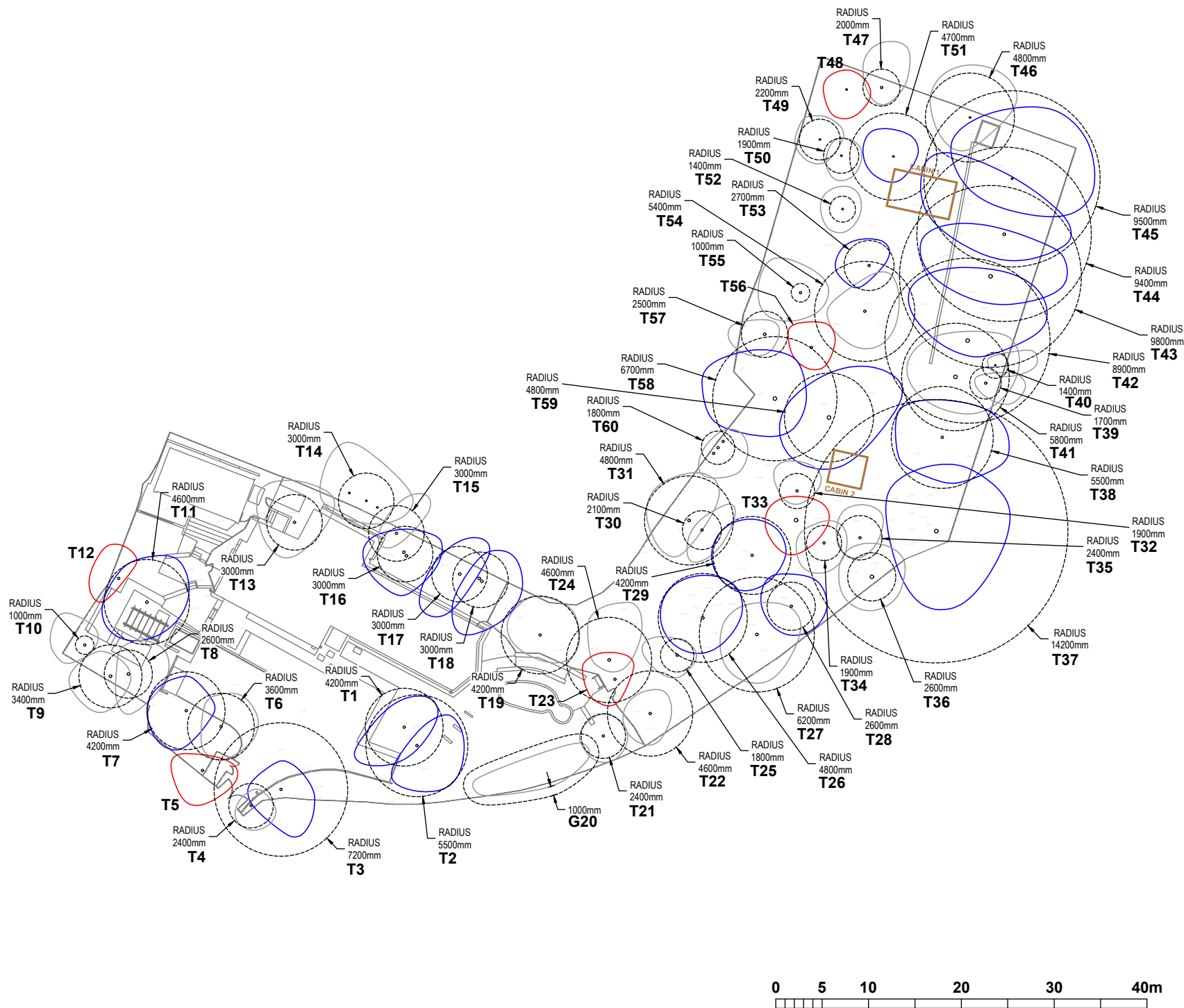
NOTE: Tree survey locations based on previous undertaken topographical surveys for design issue and additional GIS mapping has not been undertaken for the purposes of this survey. All off site trees where not plotted within topographic survey information are plotted using on site survey tools from within the site only.

Revisions

Rev.	Date	Checked
1	17.07.2023	MF
SITE: Holmewood School, London, N10 3TD		
CLIENT: LXA		
DWG TITLE: Existing Tree Survey Plan		
SCALE: 1:400 @ A3	DATE: JUL 2023	
JOB NO: AIA/MF/0130/23	DWG NO: T001	



T: 0781 2024070
mail@marcus-foster.com
www.marcus-foster.com
Marcus Foster
TREE CONSULTANCY



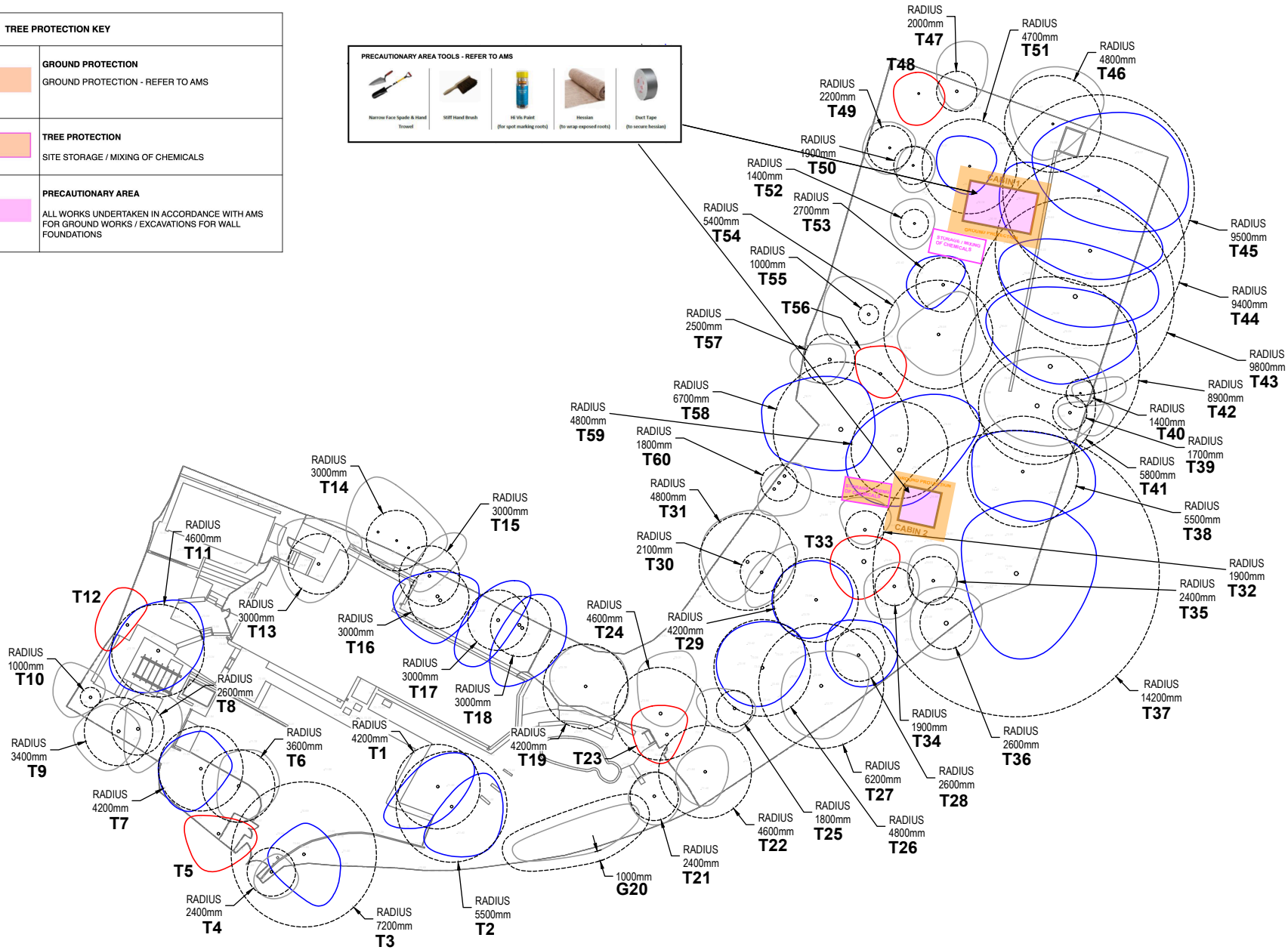
	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	TREES REMOVED
	RPA
	RPA INCURSION
	SHADING ARC

- BS5837 (2012) Tree Survey Notes**
- In accordance with BS5837(2012) this drawing is a colour coded schedule and should not be read in black and white
 - If received electronically it is the recipients responsibility to print this drawing to correct scale. Only written dimensions should be used where not printed to scale.
 - This drawing should be read in conjunction with all other relevant drawings and specifications
 - Marcus Foster Arboricultural Design & Consultancy accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided
 - Off site trees have been plotted based on site visit survey and locations are not based upon topographical survey

NOTE: Tree survey locations based on previous undertaken topographical surveys for design issue and additional GIS mapping has not been undertaken for the purposes of this survey. All off site trees where not plotted within topographic survey information are plotted using on site survey tools from within the site only.

Revisions			
Rev.	Date		Checked
1	17.07.2023	ISSUED FOR INFORMATION	MF
SITE		Holmewood School, London, N10 3TD	
CLIENT		LXA	
DWG TITLE		Tree Constraints Plan	
SCALE		DATE	
1:400 @ A3		JUL 2023	
JOB NO		DWG NO.	
AIA/MF/0130/23		T002	
			
T: 0781 2024070 mail@marcus-foster.com www.marcus-foster.com Marcus Foster TREE CONSULTANCY			

TREE PROTECTION KEY	
	GROUND PROTECTION GROUND PROTECTION - REFER TO AMS
	TREE PROTECTION SITE STORAGE / MIXING OF CHEMICALS
	PRECAUTIONARY AREA ALL WORKS UNDERTAKEN IN ACCORDANCE WITH AMS FOR GROUND WORKS / EXCAVATIONS FOR WALL FOUNDATIONS



	CATEGORY A
	CATEGORY B
	CATEGORY C
	CATEGORY U
	TREES REMOVED
	RPA
	RPA INCURSION
	SHADING ARC

BS5837 (2012) Tree Survey Notes

- In accordance with BS5837(2012) this drawing is a colour coded schedule and should not be read in black and white
- If received electronically it is the recipients responsibility to print this drawing to correct scale. Only written dimensions should be used where not printed to scale.
- This drawing should be read in conjunction with all other relevant drawings and specifications
- Marcus Foster Arboricultural Design & Consultancy accepts no liability for any use of this document other than by its client and only for the purposes for which it was prepared and provided
- Off site trees have been plotted based on site visit survey and locations are not based upon topographical survey

NOTE: Tree survey locations based on previous undertaken topographical surveys for design issue and additional GIS mapping has not been undertaken for the purposes of this survey. All off site trees where not plotted within topographic survey information are plotted using on site survey tools from within the site only.

Revisions		
Rev.	Date	Checked
1	17.07.2023	MF
SITE: Holmewood School, London, N10 3TD		
CLIENT: LXA		
DWG TITLE: Tree Protection Plan		
SCALE: 1:400 @ A3	DATE: JUL 2023	
JOB NO: AIA/MF/0130/23	DWG NO: T003	



Appendix C: **Tree Survey Photographs**

Site Photographs for:
Holmewood School, London, N10 3TD
July 2023_MFoster



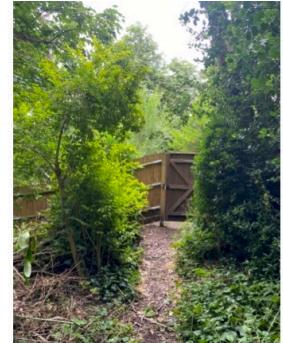
Trees T1-T6 viewed to west



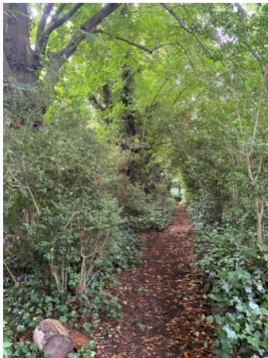
Tree T3 viewed to west - off site to south



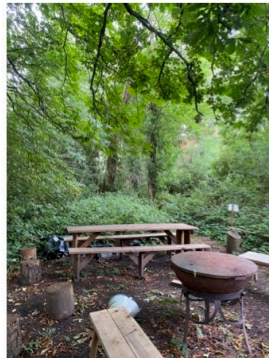
Tree T3 - T5 viewed to south



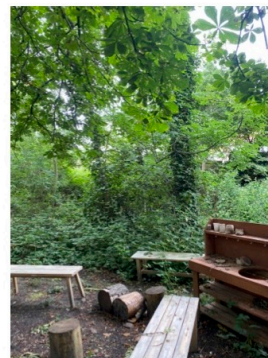
Entrance to woods / forest viewed to south



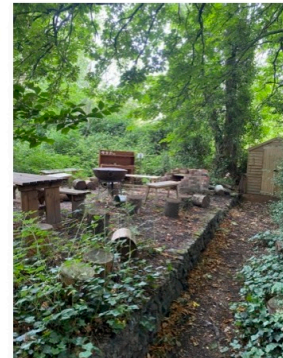
Trees T41-T45 viewed to west



Trees T41-T45 / woodland eastern boundary viewed to east



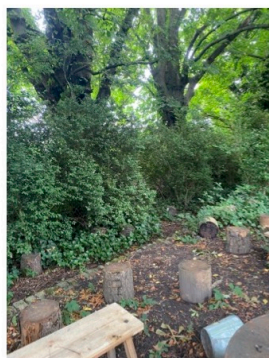
Trees T50-T56 within woodland area viewed to south



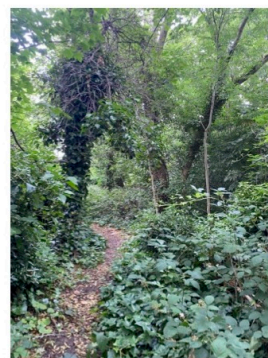
Tree T46 within woodland area viewed to south



Tree T45 within woodland area viewed to south



Tree T41-T45 within woodland area viewed to south



Woodland area viewed to south



Woodland area viewed to north

Appendix D: References

1. BS5837: British Standard: Trees in relation to construction - Recommendations, British Standard (2012)
2. Principles of Tree Hazard Assessment and Management, Lonsdale, D. (Department for Transport, Local Government and the Regions, 1999)
3. The Body Language of Trees, Mattheck, C. and Breloer, H. (HMSO, 1994)
4. Trees in Britain, Philips, R. (Pan Books, 1978).
5. Diagnosis of Ill Health in Trees, Strouts, R. and Winter, (TSO, 1994)
6. National Planning Policy Framework February 2019 Ministry of Housing, Communities and Local Government
7. NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2), (November 2007)

PREPARED BY MARCUS FOSTER MArborA
END OF REPORT _ Page 34/34