Arboricultural Method Statement

for planning & development purposes

Aviation House
Harmondsworth Lane, West Drayton
London
UB7 0LQ

June 2024

230929-PD-13

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Author	Lee Davies
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1 INTRODUCTORY INFORMATION

Instruction

1.1 This *Arboricultural Method Statement* ('the AMS') has been instructed by *Landon Education Ltd* ('the Client'), to discharge *Condition 9 and 10a* of planning reference *2157/APP/2023/3068*, with regard to tree protection matters at *Aviation House* ('the Site').

1.2 *Condition 9* requires details of the initial tree survey undertaken in accordance with BS5837, specified tree removals and retention, and full details of tree protection for all areas of the development.

1.3 *Condition 10a* requires details of arboricultural monitoring during development, which we have been instructed to provide.

Figure 1: *Showing the area discussed in this AMS within the indicative line and sourced from Google Earth (note: this is not the red line plan of the Site).*

Report methodology and guidance

1.4 This AMS has been provided to assist all parties involved in the planning process and has been prepared following a survey of the trees and other vegetation in accordance with *British Standard 5837 - Trees in relation to design demolition and construction - Recommendations*[1] (i.e., 'BS5837').

1 - BSI. (2012) British Standard 5837: Trees in relation to design, demolition and construction - Recommendations. UK: British Standards Institution.

1.5 BS5837 also refers to *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Volume 4; Issue 2)* document[2] (i.e., 'NJUG'). It is a normative reference, to be used in circumstances relating to the installation of services. Therefore, this AMS refers to this guidance, in the instances where it is necessary to do so.

Limitations

1.6 This AMS is not an *Arboricultural Impact Assessment* ('AIA'). Therefore, it does not cover the effects of tree loss and mitigation. This AMS instead covers the methods of work within proximity to retained trees (i.e., it is an instructive document). However, it is considered that the tree and shrub removal required will not have a significant negative impact on the visual character of the local area, as is provided by trees.

1.7 This AMS does not provide information and guidance, relating to the management of trees in the context of health and safety. Any specified tree works pertain strictly to the development process, unless otherwise stated within this AMS.

Planning law and duties

1.8 There are various relevant statutes that must be considered and adhered to as part of this AMS. These include but may not be limited to the following statutes.

Town and Country Planning Act 1990

1.9 The *Town and Country Planning Act 1990* requires development to be undertaken in accordance with its stipulations. Where a decision notice exists, the development must be undertaken in accordance with its details, including those details discharged by way of condition, restricted by way of limitation, or amended through a non-material amendment (*Section 96A*) or minor amendment (*Section 73*). Any failure to adhere may result in enforcement action (*Sections 171A* and *187A*) including a stop notice (*Section 183*). Where trees are legally protected (e.g., by way of *Conservation Area* designation or a *Tree Preservation Order*), *Part VIII Chapter I* of this Act also applies and to which all relevant works must adhere.

Natural Environment and Rural Communities Act 2006

1.10 The *Natural Environment and Rural Communities Act 2006* at *Section 40* confirms that all statutory undertakers have a duty to protect biodiversity - this includes trees. Statutory undertakers cannot operate without appropriate consideration of trees, in the context of development activities. In normal circumstances, statutory undertakers will demonstrate compliance with the recommendations of the NJUG document.

2 - NJUG. (2007) Volume 4: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees - Issue 2. UK: National Joint Utilities Group.

Town and Country Planning (Tree Preservation)(England) Regulations 2012

1.11 The *Town and Country Planning (Tree Preservation)(England) Regulations 2012* applies further restriction on trees protected by statute. Tree works consented as part of a full planning application are considered an exception under *Regulation 14(vii)*, though any amended and additional tree works must be separately approved as an addition to those works covered by the existing planning consent.

Relevant plans and documents

Appendices

1.12 The appendices of this AMS include:

- Appendix A (plans);
- Appendix B (schedules); and
- Appendix C onwards (additional relevant items referred to within this AMS).

External documents

1.13 This AMS has been prepared, with reference to the following supplied documents and information:

- *SUMO-14086 Topographic*;
- *SUMO-14086 Roof Plan*;
- *SUMO-14086 Ground Floor*;
- *SUMO-14086 First Floor*;
- *SUMO-14086 Elevations*; and
- *230929-TMA-XX-DR-L-4100-P01 Hard Landscape Plan.*

1.14 This AMS must also be read as part of the entire document and drawing package for works at the Site, which includes but is not necessarily limited to the architectural, engineering, and landscape details.

Definitions

1.15 The following particular terms and abbreviations may be used within this AMS. These terms are defined by BS5837 as follows, unless not in italics:

- ***Arboricultural clerk of works*** **('arboriculturist')** - *person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction*".

- ***Construction Exclusion Zone*** **('CEZ')** - "*area based on the root protection area from which access is prohibited for the duration of a project*" (used within this AMS interchangeably with *Tree Protection Zone* or *TPZ*).
- **Local Planning Authority ('LPA')** - the planning department of the borough, district, or metropolitan council.
- ***Root Protection Area*** **('RPA')** - "*layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority*".
- ***Tree Protection Plan*** **('TPP')** - "*scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures*".

2 SEQUENCING AND MONITORING

Variations

2.1 It is the responsibility of the Site Manager to ensure that the protocols of this AMS are complied with. Any variation of any degree from any of the specified details within this AMS can only be instructed by the Site Manager, following prior consultation and agreement with the arboriculturist (i.e., retrospective agreement is not acceptable).

2.2 In the event of an emergency, human health and safety will be the main priority. Works to remedy the situation that may affect trees will require the Site Manager to report in writing to the arboriculturist, immediately before any action is taken. If there is no time to report (e.g., if the situation is imminently life threatening), the Site Manager must inform the arboriculturist of the details immediately following the situation.

Sequencing

2.3 The sequence of operations followed as part of the development process are, in nominal sequential order:

- Tree removal as specified in this Report;
- installation of tree protection barriers in accordance with the demolition TPP at Appendix A;
- demolition of the existing building;
- installation of tree protection barriers in accordance with the construction TPP at Appendix A;
- construction of the new building and hard landscaping works;
- removal of tree protection barriers; and
- soft landscaping works.

2.4 Each individual phase of work is associated with a particular TPP (that are located at Appendix A). Subsequently, prior to the commencement of each phase, the associated protection measures of the relevant TPP must first be installed (and thereafter complied with).

2.5 Considering the phased nature of works at the Site, it may be the case that phases overlap or are otherwise combined. In all such cases, the arboriculturist will be contacted at least 5 working days in advance of any overlap occurring (i.e., transition from one phase to another), in order to provide a specification as regards the acceptable alteration of protection measures.

Responsibilities

2.6 The Site Manager will ultimately be responsible for the protection of all retained trees over the duration of works. Whenever appropriate (e.g., where there is any desired degree for clarification), the Site Manager will consult the arboriculturist for advice and/or clarification, though the arboriculturist is not responsible for ensuring that operations on Site comply with the details of this AMS.

2.7 Each operative working at the Site will be informed of the details of this AMS and their individual responsibilities in the context of their role, prior to them undertaking any works (i.e., as part of their initial induction process).

2.8 At least 1no. copy of this AMS will be printed out by the Site Manager and kept at the Site in an appropriate location where any and all operatives are able to access it at any time. As a minimum, the written elements of this AMS will be printed as A4 and all plans at their individual specified sizes in full colour.

Arboricultural monitoring

Schedule of monitoring

2.9 At this stage, a project programme is not available and therefore the duration of the project is not confirmed. Therefore, the below list of points at which the arboriculturist will attend Site has been developed in the absence of this information (i.e., some assumptions may have been made).

2.10 Attendance by the arboriculturist will occur at the following specific points, to ensure that the relevant activities as outlined within the details of this AMS are complied with. These points are:

- a pre-commencement meeting at Site with at least the Site Manager;
- to oversee construction of a no-dig footpath within the RPAs of T13, G26, G27, T28, T29, and T33;
- to oversee excavation and any necessary root pruning within the RPA of T13 for the construction of a bin store and bike store;
- to oversee removal of existing hard surfaces within the RPAs of T16, T17, and G26; and
- to oversee installation of service runs if they will pass through the RPAs of existing trees (to be agreed with the arboriculturist).

Recording of monitoring

2.11 It will be the responsibility of the Site Manager to ensure that the arboriculturist is given at least 5no. working days' prior notification of any works on Site that have been identified within this Report as requiring oversight, so that this can be completed by the arboriculturist. Should the arboriculturist be required on Site further to these specified times, the same principle of at least 5no. days' notice applies.

2.12 Should the arboriculturist not be able to attend at 5no. days' notice, the next earliest opportunity agreeable to all parties will be the point at which the arboriculturist attends Site.

2.13 Following each Site visit, a written summary report that details the findings (and any actions) will be submitted by the arboriculturist to the Client, Site Manager, and LPA tree officer, in addition to other consultants and/or organisations to the extent that is required. This summary report will be issued within 5no. working days, unless otherwise agreed in advance with the LPA tree officer.

3 TREE SURGERY WORKS

3.1 Only the tree works specified within this AMS may be undertaken, subject to this AMS itself being formally approved by the LPA.

3.2 The specified tree removals include S36, a section of G27, and a section of S21, as shown on the tree removal and retention plans in Appendix A.

Wildlife and habitat responsibilities

Statutory duties

3.3 All tree works will be undertaken in full accordance with the requirements of the *Wildlife and Countryside Act 1981* (as amended), *The Conservation of Habitats and Species Regulations 2017*, and *The Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019*. These regulations make it an offence to, for example:

- intentionally or deliberately kill, injure, or capture protected species;
- deliberately disturb protected species;
- damage, destroy, or obstruct access to a structure used for shelter or protection by a protected species;
- take, damage, disturb, or destroy the nest of any bird either in use or being built;
- take or destroy the egg of any wild bird; and
- damage, destroy, or obstruct access to any bat roosts.

Contractor duties

3.4 An appropriately qualified and experienced arboricultural contractor must be instructed to undertake the works that are specified within this AMS. It is not acceptable for a non-arboricultural contractor to undertake any of the specified works.

3.5 It is the responsibility of the Site Manager to ensure that the appointed arboricultural contractor completes the works in a manner that ensures that no protected species are harmed during working operations. Should there be any degree of concern, regarding compliance with statutory requirements, the relevant works must cease and a professional ecologist consulted before the works re-commence.

4 TREE PROTECTION MEASURES

Barrier protection

4.1 Barrier protection will be installed at the locations highlighted on the TPPs at Appendix A and to the specifications provided below. All barriers will be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained trees. Barriers shall be maintained to ensure that they remain rigid and complete.

Fence-type

4.2 Barriers will consist of 2m-tall welded mesh panels on rubber or concrete feet (see *Figiure 2* below). Fencing panels will be joined together using a minimum of 2no. anti-tamper couplers. The panels will be supported on the tree side by stabiliser struts, which are attached to a base plate that is secured with ground pins. Where the use of ground pins is not possible, the stabiliser struts will be mounted on a block tray.

Signage

4.3 Clear and visible signs will be fixed to every third panel on its outward-facing side (or otherwise no more than every 6m apart if panels are not specified) and will state as follows: *Tree Protection Area - no access permitted. Any incursion into this area must be with the agreement of the arboriculturist*. An example is provided on the TPP(s) appended to this AMS.

4.4 If less than 3no. connected panels are present in any particular area, at least 1no. sign will be fixed in an appropriate position on the panels.

Figure 3 **Examples of above-ground stabilizing systems**

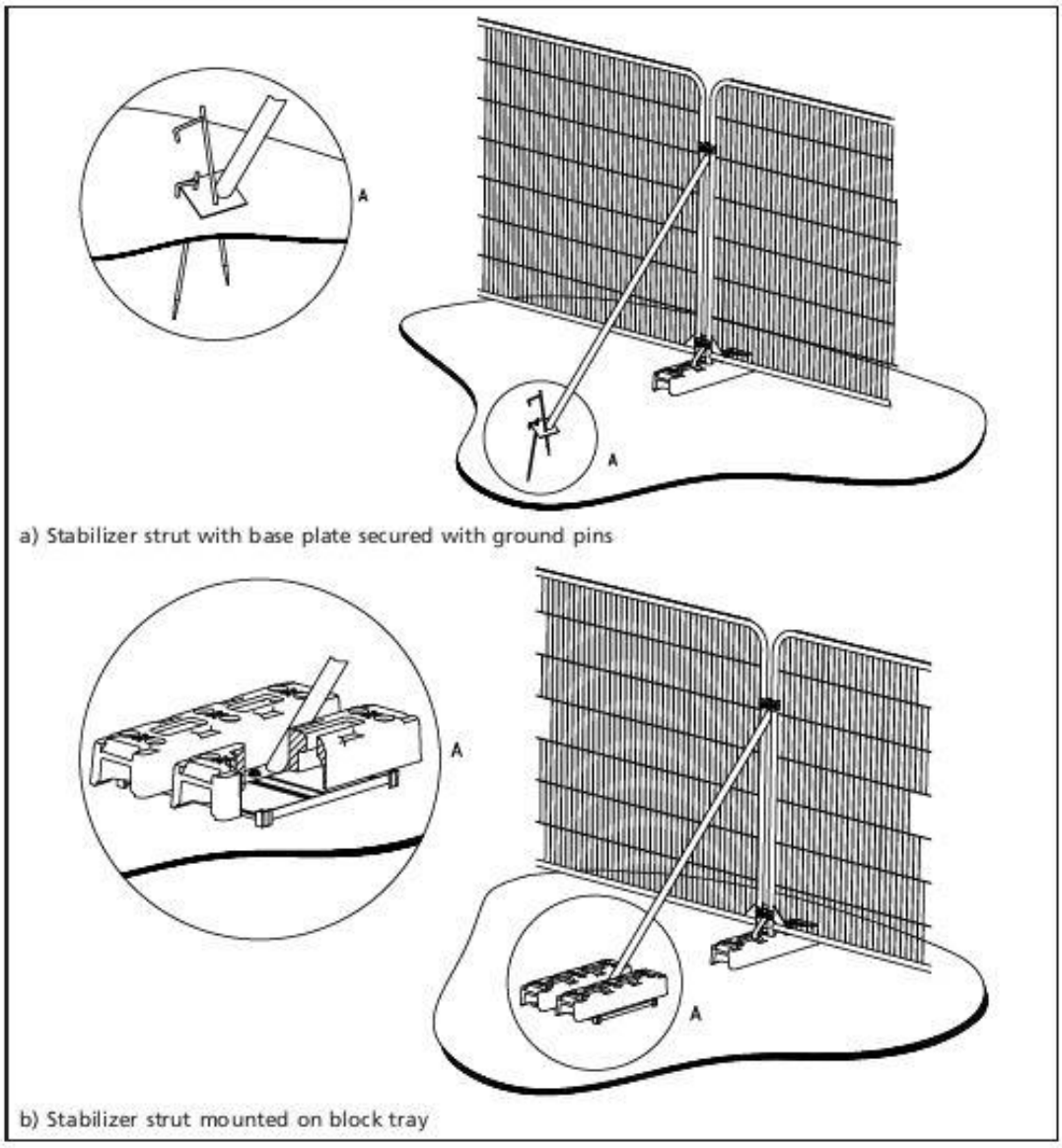


***Figure 2**: BS5837 - Protective fencing, above-ground stabilizing system. Image sourced from BS5837: Trees in relation to design, demolition and construction - Recommendations.*

Additional precautions

4.5 No alteration, removal or repositioning of the tree protection measures will take place without the prior approval of the arboriculturist. It will be the Site Manager's responsibility to ensure that all operatives are made aware of this requirement.

4.6 No level changes of any kind (i.e., no upward or downward level changes) are permitted within RPAs, unless otherwise confirmed within this AMS.

4.7 Any liquid materials spilled on Site will be immediately cleared up. If liquid, fuel, or cement products are spilled within 2m of RPAs (i.e., an additional 2m zone beyond the plotted RPAs), the Site Manager will immediately report the incident to the arboriculturist so that appropriate action can be taken.

4.8 The Site Manager will immediately report any damage to trees, hedges or shrubs to the arboriculturist (whether caused by construction activities or from any other cause - e.g., wind).

5 ACCESS AND LOGISTICS

Site access

5.1 The existing means of access into and out of the Site will be used, throughout the process of works.

5.2 Should any new access points be established, these must not be within the RPAs or crown spreads of any nearby trees, nor will they involve the re-positioning of barrier protection.

Compound area and welfare facilities

5.3 The compound area and associated welfare facilities will be located outside of the RPAs and crown spreads of trees, and will not involve the re-positioning of barrier protection.

Internal traffic routeing

5.4 The movement of pedestrians and vehicles throughout the Site will at all times adhere to the specifications of this AMS that includes the TPPs at Appendix A.

5.5 Specifically, this requires that movement is planned in accordance with the position of barrier protection elements and the load-bearing capacities of surfaces within RPAs.

5.6 Should the internal movement of traffic require alterations to barrier positions and/or exceed the load-bearing capacity of the surfaces within RPAs, appropriate alterations to the tree protection measures will need to be agreed in advance with the arboriculturist.

Temporary services

5.7 If required, any temporary services located within RPAs will need to be installed above the existing ground level (e.g., from temporary generators installed upon existing surfaces). In the event that this is not possible, the arboriculturist will need to provide a precise performance specification, based on the context of the situation.

6 DEMOLITION ACTIVITIES

Hard standing and surfaces

6.1 The removal of existing hard standing and surfaces is required within the RPAs of retained trees T16, T17, and G26 as highlighted on the demolition and construction TPPs at Appendix A.

- All working operations with tree RPAs are required to be carried out under the observation of the arboriculturist.
- Prior to works commencing, trial holes will be excavated using hand-held tools within the RPAs of the trees concerned to establish depth of the existing hard surface material. The results from these trial holes will inform how working operations will be undertaken and whether machinery is permitted.
- The use of machinery to fracture and remove waste material will only be permitted if approved by the supervising arboricultural clerk or works and under the careful guidance of a banksman.
- Works will commence at the point closest to the tree and operate backwards until outside the designated RPA to avoid moving over exposed ground.
- Working from either outside the designated RPA or from an area of existing hard standing or temporary ground protection, the upper surface layer of hard standing will be fractured into small sections.
- Broken material will be manually lifted and removed to a designated storage area located outside the RPA of retained trees.
- The removal of the subbase material where required will be undertaken in a careful manner, ensuring that no excavation works occur beyond the depth of the built material and into the soil layer below.
- Any roots exposed due the removal of hard standing will be covered with a layer of topsoil and the area irrigated to prevent root desiccation from occurring.
- If new hard surfacing will not be installed immediately following removal of existing surfacing and subbase material, temporary ground protection or tree protection barriers will be installed to safeguard the exposed rooting area of the tree until the new hard surface material is installed.

Buildings and foundations

6.2 The removal of building foundations is required within the RPAs of retained trees in G26 as highlighted on the demolition TPP at Appendix A.

- All working operations with tree RPAs are required to be carried out under the observation of the arboricultural clerk of works.
- The use of plant machinery to fracture and remove footings within RPAs will only be permitted under observation of the arboriculturist and under the careful guidance of a banksman.
- Working from within the demolished building footprint from an area of existing hard standing or temporary ground protection, mechanical breakers will be used to fracture the upper surface and building footings into small sections.
- Broken material will be manually lifted and removed, or pulled back using a excavator under supervision where appropriate, to a designated storage area located outside the RPAs of retained trees.
- The removal of the subbase and building footings will be undertaken in a careful manner, ensuring that no excavation works occur beyond the depth of the built material and into the soil layer below.
- Any roots exposed due the removal of hard standing will be covered with a layer of topsoil and the area irrigated to prevent root desiccation from occurring.

7 CONSTRUCTION ACTIVITIES

Hard standing and surfaces

7.1 Construction will involve the introduction of new hard surfacing within the RPAs of T13, G26, G27, T28, T29, and T33.

- All areas of hard surfacing within these RPAs will require the use of cellular confinement systems to create no-dig or minimal impact pedestrian footpath. All works to create these new hard surfaces must be overseen by the arboriculturist.
- The surface scrape for the no-dig footpath may be undertaken using a rubber tracked mini excavator and sharp edged (not toothed) grading bucket to scrape back 50mm depth of surface vegetation.
- Any excavations required along the footpath edge will be undertaken by hand and under the observation of the arboriculturist to uncover any surface roots.
- All roots 25mm in diameter of over will be retained and the edging cut to bridge these roots.
- Roots below 25mm in diameter may be pruned back to the edge of the working area where necessary, under the observation of the arboriculturist.
- The cellular confinement system will then be stretched out over a geo textile membrane, pinned and filled with clean angular stone with no fines, as per the manufacturers instructions.
- The surfacing materials will be added and protection measures pushed back to the edge of the new hard surfacing.

7.2 Level changes to install the footpath adjacent to G27 will require so excavation and potential pruning of roots over 25mm in diameter. These works will be undertaken under the observation of the arboriculturist, who will document the root pruning undertaken and specify any mitigation crown pruning or tree removal that is required. Where tree removal is undertaken, a replacement tree will be planted in the same location following stump removal.

Foundations and ground works

7.3 The new building will be constructed in approximately the same location as the existing building. Therefore, it is not expected that special methods of foundation construction will be required adjacent to retained trees (i.e., G26).

Scaffolding and superstructure

7.4 It is considered that there is sufficient space between G26 and the new building for the installation of scaffolding, due to the previous management of the trees adjacent to the existing building.

***Figure 3**: Looking west between the existing building and G26.*

Light structures

Bin and bike stores

7.5 The construction of the bin and bike stores within the RPA of T13 will observe the following methodology:

- Excavation will be carried out manually using appropriate hand tools or using an air lance to expose tree roots.
- No machinery will be permitted into the working area unless agreed by the arboriculturist.
- All excavated spoil will be manually removed from the area or placed on temporary ground protection.
- All roots will be pruned under the observation of the arboriculturist where deemed essential to complete these works.
- Root pruning will only be carried out using sharp, sterile tools suitable to the size of the root to be cut. Where possible roots will be pruned cleanly back to a side branch or junction.

- Where concrete is to be used, the excavated hole will be sleeved using 1000-gauge PVC sheeting to prevent concrete leaching into the surrounding soil.

8 SERVICES, DRAINAGE AND UTILITIES

General technical details

8.1 Works to install new services must appropriately consider the technical guidelines as detailed at section 7 of BS 5837, and sections 3-5 of the NJUG guidance. Any queries pertaining to these works must be raised with the arboriculturist, prior to the works being undertaken.

New services and drainage - general

8.2 Where new service routes are located outside of CEZs and RPAs, as shown on the TPP, the works to install new services can be undertaken without any special considerations to protect adjacent trees.

8.3 Should these works encroach into areas of specified ground protection or require the re-positioning of barrier protection, it will be necessary for the arboriculturist to be contacted and for alterations to be agreed, prior to the works being undertaken.

8.4 The arboriculturist must be given at least 5 working days' notice prior to any excavation for new services within the RPAs of retained trees.

9 SOFT LANDSCAPING ACTIVITIES

General principles

9.1 The Site Manager is ultimately responsible for the protection of all retained trees over the duration of soft landscaping works, even in a situation where a sub-contractor is instructed to undertake these landscaping works.

9.2 At least 1no. copy of this AMS will be printed out by the Site Manager and provided to any landscaping sub-contractor so that any and all operatives are able to access it at any time. As a minimum, the relevant written elements of this AMS will be printed as A4 and all plans as the size that they have been prepared at.

Removal of tree protection measures

9.3 Immediately prior to the commencement of soft landscaping operations, tree protection measures of all specified types only within the areas directly affected by the commencing landscaping operations will be manually removed.

9.4 It must however be assumed that these areas that were previously protected remain as areas where all working activities need to be carefully undertaken, which is the basis of the following principles outlined within the following sub-sections.

9.5 If there is any degree of uncertainty over the extent to which tree protection measures will be removed, the arboriculturist will be immediately contacted so that an appropriate specification is provided. Until such a specification is provided, the tree protection measures will remain in place and will not be disturbed.

Operating machinery and the use of tools

9.6 No vehicles or plant will be positioned or used within RPAs. All works within RPAs will therefore be limited to pedestrian activities. In turn, only hand tools will be used within RPAs.

Soil level management

9.7 Unless it is otherwise confirmed within this AMS, works to implement the soft landscaping specifications will not involve the alterations of soil levels in either direction (i.e., upwards and downwards) within RPAs. This includes restrictions on temporary level changes (e.g., where an area is excavated and back-filled). Works effectively therefore are limited to existing formation levels only (i.e., replacing sub-bases and surface treatments).

Tree and vegetation planting

9.8 Where trees or other forms of vegetation are to be planted within RPAs, the following principles of work will at all times apply:

- planting pits of any and all sizes will be excavated manually;
- all roots greater than 25mm in diameter (and of a smaller diameter at all possible times) will be retained - if necessary, the pit will be moved to a new position (e.g., if the presence of roots prohibits planting);
- pits will only be kept 'open' for a maximum time period of 120 minutes, in all instances where roots are uncovered and are retained; and
- immediately after the tree or other vegetation item is planted, the pit will be backfilled so that the finished level is the same as prior to the excavation of the pit.

10 APPENDICES CONTENTS

APPENDIX A

- 230929-P-10 Tree Survey
- 230929-P-11 Existing Layout and Tree Works
- 230929-P-12 Proposed Layout and Tree Works
- 230929-P-13 TPP Demolition
- 230929-P-14 TPP Construction

APPENDIX B

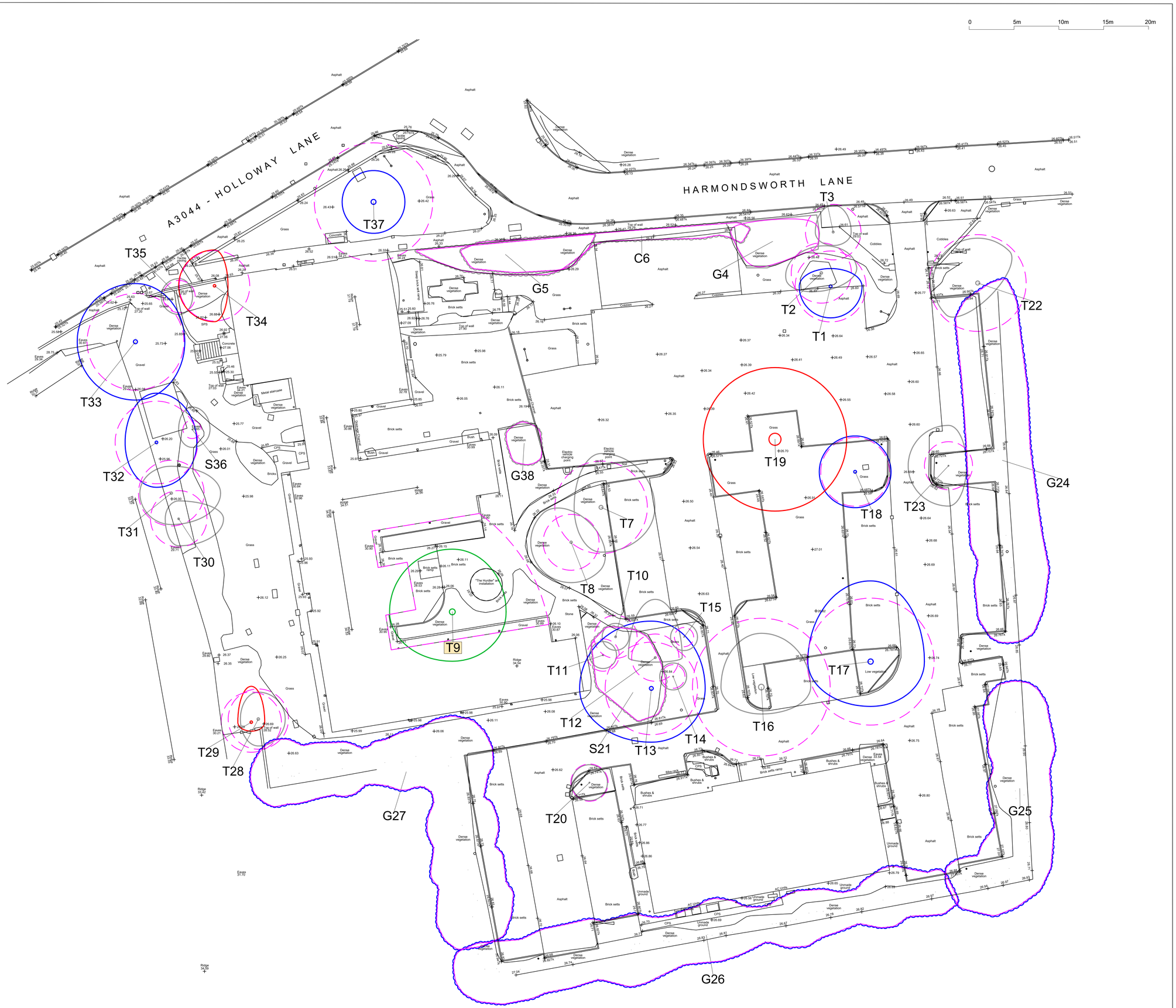
- 230929-PD-10 Tree Schedule

APPENDIX C

- Tree Protection Area Sign

APPENDIX A

- 230929-P-10 Tree Survey
- 230929-P-11 Existing Layout and Tree Works
- 230929-P-12 Proposed Layout and Tree Works
- 230929-P-13 TPP Demolition
- 230929-P-14 TPP Construction



BS 5837:2012 TREE RETENTION CATEGORIES

NORTH

Canopy spread (m)

Tree Stem

T1 — Unique tree identification number

Root Protection Area (RPA)

Group canopy extents shown in their retrospective retention category.

G2 — Unique group identification number

Root Protection Area (RPA)

Category A
Trees and groups of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees and groups of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees and groups of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

T33 — The RPAs of affected trees and tree groups have been amended, due to the presence of adjacent influencing factors (e.g., buried structures).

rev	date	description	drawn by
-	-	-	-

Base Drawing: SUMO-14086 Topographic

Title
BS 5837 Tree Survey Plan

Client
Landon Education Ltd

Project
Aviation House, Harmondsworth Lane,
West Drayton, London, UB7 0LQ

Date	Drawn by	Authorised	Scale
02/11/2023	HR	LD	1:200@A1

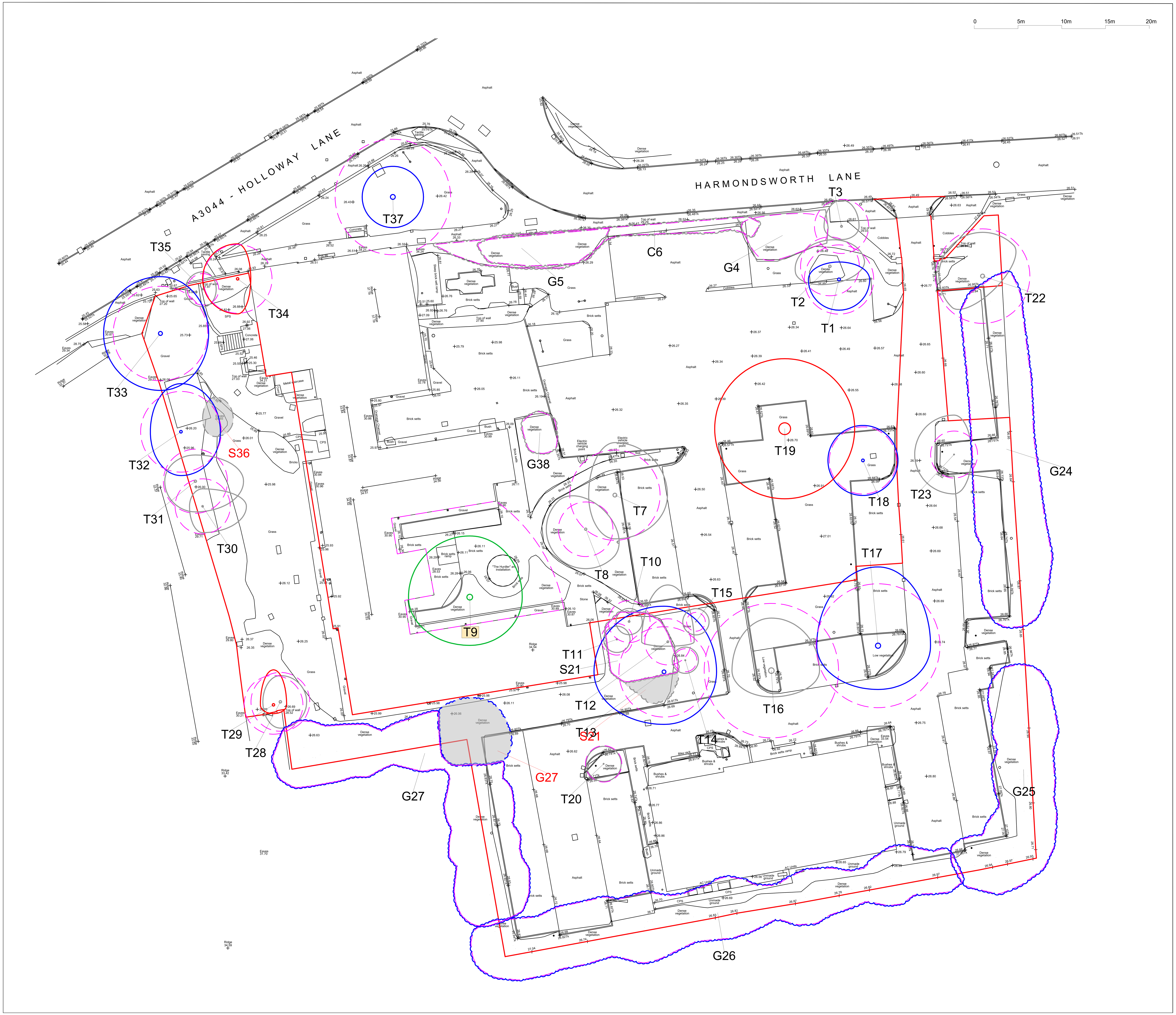
Drawing No	Rev
230929-P-10	-

The Barn, FeltimoresPark, Chalk Lane,Harlow, Essex CM17 0PF

0845 094 3268 | info@tma-consultants.co.uk

www.timmoyaassociates.co.uk

arboriculture ecology landscape innovation



BS 5837:2012 TREE RETENTION CATEGORIES

NORTH

- Canopy spread (m)
- Tree Stem
- T1 — Unique tree identification number
- Root Protection Area (RPA)

- Group canopy extents shown in their retrospective retention category.
- G2 — Unique group identification number
- Root Protection Area (RPA)

Category A
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-	-	-	-

Base Drawing: SUMO-14086 Topographic

Title
Existing Layout and Tree Works Plan

Client
Landon Education Ltd

Project
Aviation House, Harmondsworth Lane,
West Drayton, London, UB7 0LQ

Date	Drawn by	Authorised	Scale
02/11/2023	HR	LD	1:200@A1

Drawing No	Rev
230929-P-11	-

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0845 094 3268 | info@tma-consultants.co.uk
www.timmoyaassociates.co.uk

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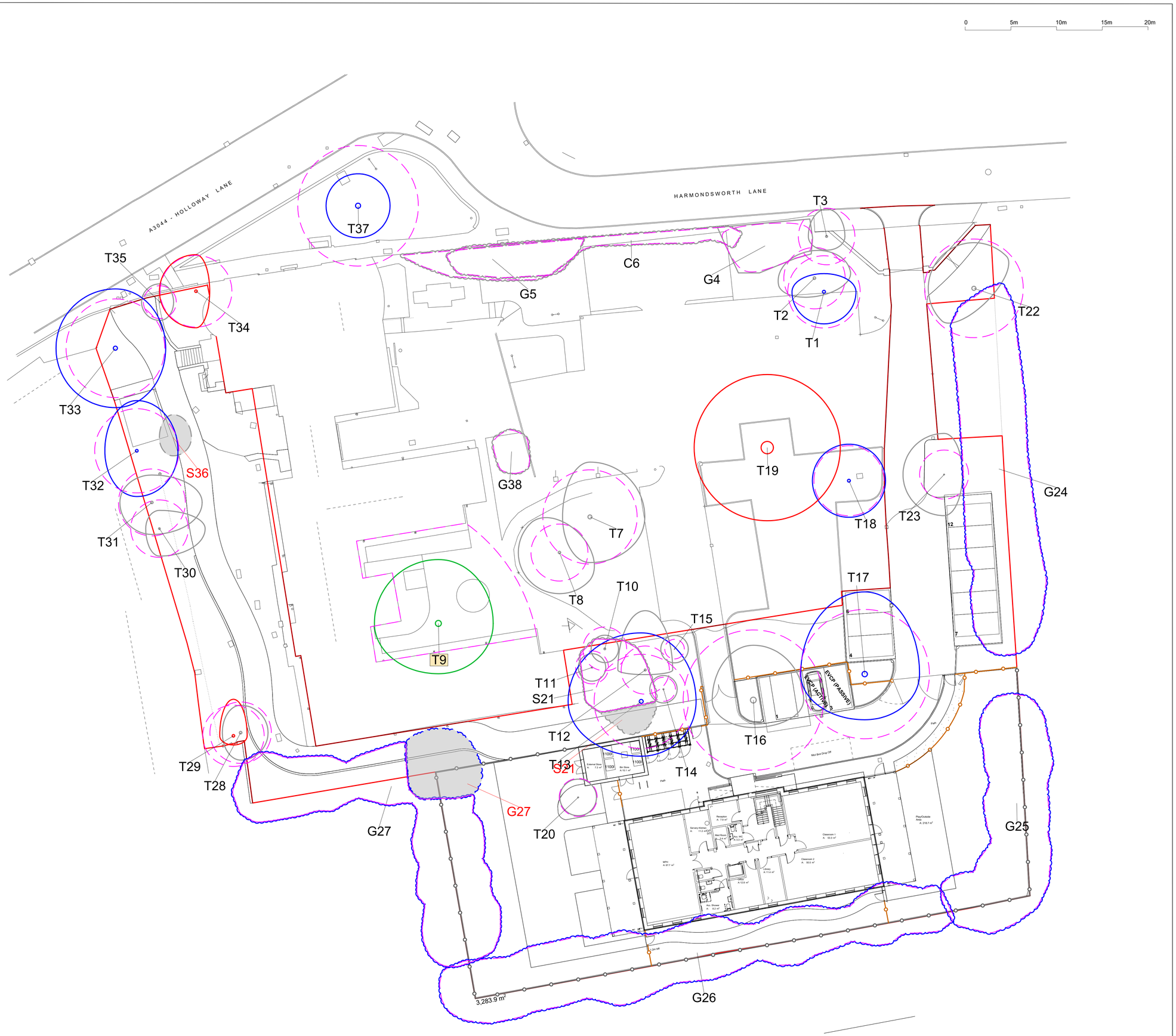

BS 5837:2012 TREE RETENTION CATEGORIES

NORTH

Canopy spread (m)
Tree Stem
T1 — Unique tree identification number
Root Protection Area (RPA)

Group canopy extents shown in their retrospective retention category.
G2 — Unique group identification number
Root Protection Area (RPA)

Category A
Trees and groups of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees and groups of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees and groups of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

T33 The RPAs of affected trees and tree groups have been amended, due to the presence of adjacent influencing factors (e.g., buried structures).

rev	date	description	drawn by
-	-	-	-

Base Drawing: 745-CDA-ZZ-ZZ-DR-A-10-0101-REV 04-PROPOSED BLOCK PLAN

Title
Propoed Layout and Tree Works Plan

Client
Landon Education Ltd

Project
Aviation House, Harmondsworth Lane, West Drayton, London, UB7 0LQ

Date	Drawn by	Authorised	Scale
02/11/2023	HR	LD	1:200@A1

Drawing No	Rev
230929-P-12	-

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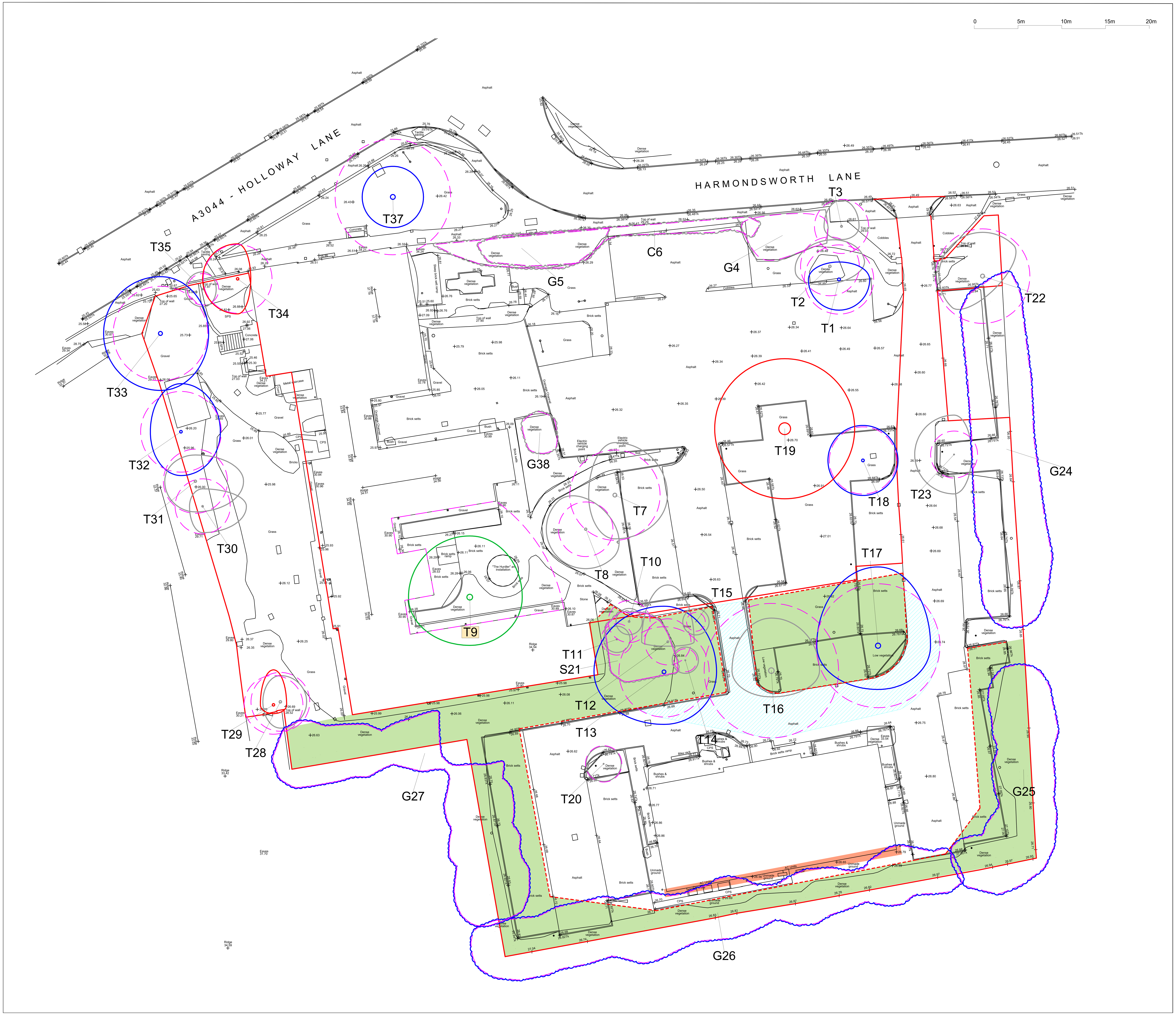

BS 5837:2012 TREE RETENTION CATEGORIES

NORTH

- Canopy spread (m)
- Tree Stem
- Unique tree identification number (T1)
- Root Protection Area (RPA)

- Group canopy extents shown in their retrospective retention category.
- Unique group identification number (G2)
- Root Protection Area (RPA)

Category A
Trees and groups of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees and groups of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees and groups of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

T33 — The RPAs of affected trees and tree groups have been amended, due to the presence of adjacent influencing factors (e.g., buried structures).

Installation of protective tree barriers to form CEZs prior to construction works commencing on Site.

Existing hard surfaces to be retained during building demolition, to provide a suitable alternative to ground protection. Refer to the main Report for details of resurfacing in these areas.

Building foundations to be removed under observation of the arboriculturist and in accordance with the details in the main Report.

rev	date	description	drawn by
-	-	-	-

Base Drawing: 745-CDA-ZZ-ZZ-DR-A-10-0101-REV 04-PROPOSED BLOCK PLAN

Title
Tree Protection Plan - Demolition

Client
Landon Education Ltd

Project
Aviation House, Harmondsworth Lane, West Drayton, London, UB7 0LQ

Date	Drawn by	Authorised	Scale
02/11/2023	HR	LD	1:200@A1

Drawing No	Rev
230929-P-13	-

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The Barn, FeltimoresPark, Chalk Lane,Harlow, Essex CM17 0PF

0845 094 3268 | info@tma-consultants.co.uk

www.timmoyaassociates.co.uk

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BS 5837:2012 TREE RETENTION CATEGORIES

NORTH

Canopy spread (m)
Tree Stem
T1 Unique tree identification number
Root Protection Area (RPA)

Group canopy extents shown in their retrospective retention category.
G2 Unique group identification number
Root Protection Area (RPA)

Category A
Trees and groups of high quality with an estimated remaining life expectancy of at least 40 years.

Category B
Trees and groups of moderate quality with an estimated remaining life expectancy of at least 20 years.

Category C
Trees and groups of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm.

Category U
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer that 10 years.

BS5837 Root Protection Areas
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work.

T33 The RPAs of affected trees and tree groups have been amended, due to the presence of adjacent influencing factors (e.g., buried structures).

Installation of protective tree barriers to form CEZs prior to construction works commencing on Site.

Footpath to be installed using a no-dig method of construction and under the observation of the arboriculturist.

Excavation and any necessary root pruning in this area to be undertaken under the observation of the arboriculturist.

Replacement of existing hard surfacing to be undertaken in accordance with the performance principles specified in the main Report.

rev	date	description	drawn by
-	-	-	-

Base Drawing: 745-CDA-ZZ-ZZ-DR-A-10-0101-REV 04-PROPOSED BLOCK PLAN

Title
Tree Protection Plan - Construction

Client
Landon Education Ltd

Project
Aviation House, Harmondsworth Lane, West Drayton, London, UB7 0LQ

Date	Drawn by	Authorised	Scale
02/11/2023	HR	LD	1:200@A1

Drawing No	Rev
230929-P-14	-

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APPENDIX B

- 230929-PD-10 Tree Schedule

230929-PD-10-Tree Schedule (BS5837)

TIM MOYA ASSOCIATES

230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T1	1	Fagus sylvatica (Common Beech)	12.0	33	1	2.0		3.5		3.5		3.5		2.5		Early Mature	Structural condition Good. Physiological condition Good. Access to inspect base - Restricted / obscured. Ivy or climbing plant.	31/10/2023	49.3	4.0	20-40	B2
Tree T2	1	Acer platanoides (Norway Maple)	10.0	28	1	3.0		4.0		2.0		4.0		2.0		Early Mature	Structural condition Fair. Physiological condition Good. Competition - Adjacent trees. Ivy or climbing plant.	31/10/2023	35.5	3.4	10-20	C2
Tree T3	1	Prunus cerasifera 'Atropurpurea' (Cherry Plum (Myrobalan))	7.0	25 COM	2	3.0		2.0		1.5		2.0		1.7		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Fork - Weak with included bark. Ivy or climbing plant. Stems - Co-dominant. Location estimated - not plotted on Topographical Survey.	31/10/2023	30.1	3.1	10-20	C1/C2
Group G4	3	Thuja plicata (Western Red Cedar)	5.0	1 AVE	20									0.0		Semi Mature	Structural condition Fair. Physiological condition Fair.	31/10/2023	-	0.5	10-20	C2
	1	Cornus sp. (Dogwood sp.)																				
Group G5	5	Thuja plicata (Western Red Cedar)	7.0	15 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Hedgerow - Neglected / overgrown. Dimensions - Height, spread and stem diameter estimated as an average for the group.	31/10/2023	-	1.8	10-20	C2
Climber C6	1	Wisteria sp. (Weigela sp.)	5.0	15 COM	10									0.0		Early Mature	Structural condition Fair. Physiological condition Fair.	31/10/2023	-	1.9	10-20	C2

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T7		Cerasus avium (Wild Cherry)	10.0	43	1	6.0		6.0		5.0		3.0		2.0		Early Mature	Structural condition Poor. Physiological condition Good. Access to inspect base - Restricted / obscured. Decay / structural defect - Open cavity / cavities. Decay / structural defect - Bole. Fork - Weak with included bark. Ivy or climbing plant.	31/10/2023	83.6	5.2	0-10	C1
Tree T8	1	Betula pendula (Silver Birch)	10.0	26	1		3.0		4.5		4.5		4.5	2.0		Mature	Structural condition Fair. Physiological condition Poor. Die-back - Mid crown. Die-back - Upper crown. Deadwood - Minor.	31/10/2023	30.6	3.1	0-10	C1
Tree T9	1	Cedrus deodara (Deodar)	18.0	66	1	7.0		6.0		5.5		7.0		5.5		Mature	Structural condition Fair. Physiological condition Good. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Branch - Broken. Branch - Suspended. Ivy or climbing plant.	31/10/2023	197.1	7.9	20-40	A2
Tree T10	1	Picea pungens (Colorado Spruce)	11.0	20	1	1.5		1.5		1.5		1.5		1.0		Semi Mature	Structural condition Fair. Physiological condition Poor. Die-back - Throughout crown. Decline - Suspected.	31/10/2023	18.1	2.4	0-10	C1
Tree T11	1	Chamaecyparis sp. (False Cypress)	4.0	15	1	1.5		1.5		1.5		1.5		0.0		Young	Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Base / stems obscured - Vegetation. Suppressed crown - Minor.	31/10/2023	10.2	1.8	10-20	C2
Tree T12	1	Cerasus avium (Wild Cherry)	4.0	22	1	6.5		3.0		0.5		3.0		2.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Suppressed crown - Major. Unbalanced crown - Major.	31/10/2023	21.9	2.6	10-20	C1
Tree T13	1	Fraxinus excelsior (Ash)	15.0	43	1	7.5		6.0		6.0		8.0		2.0		Mature	Structural condition Good. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Deadwood - Minor. Epicormic growth - Crown. Ivy or climbing plant.	31/10/2023	83.6	5.2	20-40	B1/B2

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T14	1	Cerasus avium (Wild Cherry)	3.0	11	1	1.5		1.5		1.5		1.5		0.0		Young	Structural condition Fair. Physiological condition Poor. Die-back - Throughout crown. Suppressed crown - Major.	31/10/2023	5.5	1.3	0-10	C1
Tree T15	1	Magnolia sp. (Magnolia sp.)	3.0	8 COM	5	1.5		1.5		1.5		1.5		0.0		Young	Structural condition Good. Physiological condition Fair. Die-back - Upper crown.	31/10/2023	3.6	1.1	0-10	C1
Tree T16	1	Liriodendron tulipifera (Tulip Tree)	15.0	64	1	6.0		5.5		3.0		4.5		2.5		Mature	Structural condition Poor. Physiological condition Poor. Access to inspect base - Restricted / obscured. Die-back - Throughout crown. Deadwood - Major. Epicormic growth - Crown. Ivy or climbing plant. It may be possible to retain this tree. However, some significant arboricultural works are required to remove large dead stems.	31/10/2023	185.3	7.7	10-20	C1
Tree T17	1	Liriodendron tulipifera (Tulip Tree)	13.0	59	1	9.0		6.0		5.0		7.0		5.0		Mature	Structural condition Good. Physiological condition Fair. Access to inspect base - Restricted / obscured. Arboricultural work - Historic. Die-back - Upper crown. Deadwood - Minor. Fork - Weak with included bark. Ivy or climbing plant. Stems - Co-dominant.	31/10/2023	157.5	7.1	20-40	B1/B2
Tree T18	1	Picea pungens (Colorado Spruce)	12.0	32	1	4.0		4.0		4.0		4.0		1.6		Early Mature	Structural condition Fair. Physiological condition Good. Leaning trunk - Minor.	31/10/2023	46.3	3.8	20-40	B1/B2
Tree T19	1	Cedrus sp. (Cedar)	18.0			8.0		8.0		8.0		8.0		0.0		Late Mature	Physiological condition Dead. Large dead tree	31/10/2023			0-10	U
Tree T20	1	Magnolia sp. (Magnolia sp.)	3.0	17 COM	3	2.0		2.0		2.0		2.0		0.0		Young	Structural condition Good. Physiological condition Good. Ivy or climbing plant.	31/10/2023	13.6	2.1	10-20	C1

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

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230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Shrub S21	1	Ligustrum sp. (Privet sp.)	1.5	10 AVE	1									0.0		Semi Mature	Structural condition Fair. Physiological condition Fair.	31/10/2023	-	1.2	10-20	C2
	1	Juniperus sp. (Juniper sp.)																				
	2	Ilex sp. (Holly sp.)																				
	1	Hebe sp.																				
	1	Acer campestre (Field Maple)																				
Tree T22	1	Cedrus deodara (Deodar)	10.0	45	1		5.0		2.0		5.0		5.0	5.0		Mature	Structural condition Poor. Physiological condition Fair. Access to inspect base - Restricted / obscured. Arboricultural work - Historic. Base / stems obscured - Vegetation. Ivy or climbing plant. Poor past pruning.	31/10/2023	91.6	5.4	10-20	C1
Tree T23	1	Corylus avellana (Common Hazel)	6.0	22 COM	5	4.5		2.0		4.5		4.5		2.0		Mature	Structural condition Fair. Physiological condition Fair. Deadwood - Major. Ivy or climbing plant.	31/10/2023	22.6	2.7	20-40	C1
Group G24	2	Sambucus nigra (Elder)	15.0	45 AVE	0									0.0		Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Deadwood - Major. Deadwood - Minor. Ivy or climbing plant. Individual trees not inspected Dimensions - Height, spread and stem diameter estimated as an average for the group.	31/10/2023	-		10-20	B2
	11	Cupressocyparis leylandii (Leyland Cypress)																				

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

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230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Group G25	9	Fraxinus excelsior (Ash)	17.0	30 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Ivy or climbing plant. Largest stem approx. - 40m diameter	31/10/2023	-	3.6	20-40	B2
	11	Acer campestre (Field Maple)																				
Group G26	5	Crataegus monogyna (Common Hawthorn/Quick/May)	16.0	20 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant. Dimensions - Height, spread and stem diameter estimated as an average for the group. Species mix as seen, tree numbers indicative of species ratio. Unable to inspect closely - Dense ivy/climbing plant and undergrowth. No overt indications of physiological decline or structural decay observed. Largest stem approx. - 30cm diameter	31/10/2023	-	2.4	20-40	B2
	15	Fraxinus excelsior (Ash)																				
	15	Acer campestre (Field Maple)																				
Group G27	12	Fraxinus excelsior (Ash)	16.0	20 AVE	1									0.0		Early Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Crown conflict - Structure / boundary / wire / tree. Ivy or climbing plant. Dimensions - Height, spread and stem diameter estimated as an average for the group. Species mix as seen, tree numbers indicative of species ratio. Unable to inspect closely - Dense ivy/climbing plant and undergrowth. No overt indications of physiological decline or structural decay observed. 1no. dead tree at southern end of group. Largest stem approx. - 35cm diameter	31/10/2023	-	2.4	20-40	B2
	6	Crataegus monogyna (Common Hawthorn/Quick/May)																				
	12	Acer campestre (Field Maple)																				

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Tree T28	1	Betula pendula (Silver Birch)	12.0	28	1	3.0		3.0		3.0		2.0		4.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Ivy or climbing plant. Crown - Sparse foliage density, small leaf size.	31/10/2023	35.5	3.4	10-20	C1
Tree T29	1	Betula pendula (Silver Birch)	12.0	28	1	4.0		1.5		1.0		1.5		5.0		Mature	Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Base / stems obscured - Vegetation. Die-back - Throughout crown. Decline - Evident / observed. Deadwood - Major. Ivy or climbing plant.	31/10/2023	35.5	3.4	0-10	U
Tree T30	1	Ligustrum lucidum (Glossy Privet/Chinese Privet)	6.0	26 COM	3	2.0		5.0		3.0		1.5		2.0		Early Mature	Structural condition Fair. Physiological condition Good. Leaning trunk - Major. Root plate movement - Historic (suspected stablised).	31/10/2023	31.2	3.1	10-20	C2
Tree T31	1	Ligustrum lucidum (Glossy Privet/Chinese Privet)	6.0	30 COM	2	3.0		5.5		3.5		3.5		2.0		Early Mature	Structural condition Poor. Physiological condition Fair. Third stem 25cm in diameter is dead	31/10/2023	42.2	3.7	10-20	C2
Tree T32	1	Ligustrum lucidum (Glossy Privet/Chinese Privet)	6.0	38 COM	2	5.5		4.5		5.0		3.5		2.0		Early Mature	Structural condition Poor. Physiological condition Fair.	31/10/2023	66.8	4.6	10-20	B2
Tree T33	1	Betula pendula (Silver Birch)	17.0	45	1	6.5		5.5		6.5		6.5		2.0		Mature	Structural condition Good. Physiological condition Fair. Deadwood - Minor.	31/10/2023	91.6	5.4	10-20	B2
Tree T34	1	Acer pseudoplatanus (Sycamore)	14.0	32 COM	2	4.0		1.5		4.0		4.0		2.0		Semi Mature	Structural condition Fair. Physiological condition Good. Crown conflict - Structure / boundary / wire / tree. Structural impact - Evident / observed.	31/10/2023	48.5	3.9	10-20	U
Tree T35	1	Magnolia sp. (Magnolia sp.)	4.0	15	1	2.0		1.5		2.0		2.0		0.0		Semi Mature	Structural condition Fair. Physiological condition Good. Structural impact - Potential. Suppressed crown - Minor. Location estimated - not plotted on Topographical Survey.	31/10/2023	10.2	1.8	10-20	C1

Stem **green** Estimated value

Stem **AVE** Average stem diameter for tree groups

Stem **COM** Combined stem diameter in accordance with BS5837

L.B. Height of lowest branch attachment (m) - where relevant

TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

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230929 - Aviation House, Harmondsworth Lane

Tree ID	No.	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m) N	NE	E	SE	S	SW	W	NW	Crown clearance (m)	L.B. (m)	Life stage	Condition Notes	Survey date	RPA (m^2)	RPR (m)	Life expectancy (yrs)	BS Category
Shrub S36	1	Buddleja sp. (Buddleja)	3.0	8 COM	8	2.5		2.0		2.0		1.5		0.0		Semi Mature	Structural condition Fair. Physiological condition Fair. Location estimated - not plotted on Topographical Survey.	31/10/2023	3.3	1.0	10-20	C1
Tree T37	1	Tilia x vulgaris (Common Lime)	10.0	55	1	3.5		3.5		3.5		3.5		2.0		Mature	Structural condition Fair. Physiological condition Good. Arboricultural work - Historic. Bark wound - Major. Cavity - Historic loss of co-dominant stem, showing good callus growth. Location - Off-Site	31/10/2023	136.8	6.6	20-40	B2
Group G38	1	Crataegus monogyna (Common Hawthorn/Quick/May)	3.0	10 AVE	1									0.0		Semi Mature	Structural condition Good. Physiological condition Good. Formally maintained	31/10/2023	-	1.2	20-40	C2
	1	Corylus sp. (Hazel sp.)																				
	1	Acer campestre (Field Maple)																				

Stem **green** Estimated value
Stem **AVE** Average stem diameter for tree groups
Stem **COM** Combined stem diameter in accordance with BS5837
L.B. Height of lowest branch attachment (m) - where relevant
TPO **orange** Tree Preservation Order - in the absence of this being specified, it does not necessarily mean there is an absence of a Tree Preservation Order

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Summary table with retention category

	Climber	Group	Shrub	Tree	Total
A2	0	0	0	1	1
B1/B2	0	0	0	3	3
B2	0	4	0	4	8
C1	0	0	1	12	13
C1/C2	0	0	0	1	1
C2	1	3	1	4	9
U	0	0	0	3	3
Total	1	7	2	28	38

Summary table with life stage

	Climber	Group	Shrub	Tree	Total
Early Mature	1	4	0	7	12
Late Mature	0	0	0	1	1
Mature	0	1	0	12	13
Semi Mature	0	2	2	4	8
Young	0	0	0	4	4
Total	1	7	2	28	38

Table 1 of BS5837 (2012) **Cascade chart for tree quality assessment**

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
Trees unsuitable for retention (see note)				
Category U Those 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	* Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) * Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline * Trees infected with pathogens of significance to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7			**RED**
	1 Mainly arboricultural qualities	**2 Mainly landscape qualities**	**3 Mainly cultural values, including conservation**	
Trees to be considered for retention				
Category A **Trees of high quality** with an estimated remaining life expectancy of at least 40 years	Tree that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue).	Trees, groups or woodlands of particular visual importance as arboricutural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture).	**GREEN**
Category B **Trees of moderate quality** with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	**BLUE**
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	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value.	**GREY**

APPENDIX C

- Tree Protection Area Sign

TREE PROTECTION AREA

KEEP OUT!

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL CONSULTANT

TIM MOYA ASSOCIATES

0845 094 3268
info@tma-consultants.co.uk

TMA Environmental Consultants

2 The Stables, Cannons Mill Lane, Bishop's Stortford CM23 2BN

0845 094 3268 | info@tma-consultant.co.uk | www.tma-consultants.co.uk