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Arboricultural Impact Assessment

RIBA Stage 3

The Avondale Drive Estate, London

A Report To: London Borough of Hillingdon
Report Number: RT-MME-183589-02 Rev C
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Report Verification

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Declaration of Compliance

This study has been undertaken in accordance with British Standard 5837:*2012 'Trees in Relation to Design, Demolition and Construction – Recommendations'.*

Disclaimer

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

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

Validity of Data

The findings of this study are valid for a period of 18 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees, groups, and hedgerows on site and to inform a review of the conclusions and recommendations made.

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

This Arboricultural Impact Assessment has been produced following a review of a proposed development layout for the site based on data provided by the client. Should the development proposals change, this report will need to be updated to assess the impact of the amended development.

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1. Introduction

1.1 Project Background

This Arboricultural Impact Assessment was commissioned by London Borough of Hillingdon to accompany the S73 application for The Avondale Drive Estate, London. An updated survey of the trees on site and within influencing distance of the boundaries was undertaken on the 16th November 2024 as part of a Preliminary Arboricultural Assessment to aid design and avoid unnecessary tree removal.

This Arboricultural Impact Assessment has been carried out in accordance with British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendations'*[1] (hereafter referred to as BS5837).

The purpose of this report is to:

- Review the relationship between the proposed development and the existing trees and hedgerows identified during the Preliminary Arboricultural Assessment.
- Review and quantify the trees most likely to be impacted by a development proposal and to highlight potential options to reduce the impact.
- Provide a Tree Retention Plan to determine trees and hedgerows to be retained and removed in the context of the proposed development.
- Identify mitigation to offset any tree or hedgerow loss as part of the development proposals.
- Identify all areas where specific working methods are required to ensure protection of retained trees and hedgerows as part of an Arboricultural Method Statement.

It should be noted that development on the site was granted outline planning permission in 2022. This permission was granted based on a previous report (Middlemarch Report RT-MME-154569-02 REV B).

Tree retention and removal on site has stayed mostly similar between the two reports, with an additional category A London plane tree (T26) and a category B cherry tree (T23) being retained in the currently proposed plan.

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

1.2 Site Description, Drawings and Appendices

Attribute	Description
Location	The Avondale Drive Estate, London
National Grid Reference	TQ 10682 80344
Topography	Flat, built-up residential area.
Tree Cover	Individual trees or groups of trees in an urban setting

Table 1.1: Summary of Site and Surroundings

1.3 Results of Preliminary Arboricultural Assessment

The Preliminary Arboricultural Assessment report (prepared by Middlemarch environmental Ltd and supplied separately) identified 15 individual trees and 2 groups of trees as detailed in Appendix A Tree Schedule and Table 4.1 below.

BS5837:2012 Category	Tree/ Group/ Woodland/ Hedgerow Reference
U	T33.
A	T25, T26.
B	T1, T2, T4, T20, T23, T24, T27, T28, T31, T32, G2, G3.
C	T3, T5, T29.

Table 1.2: Summary of Trees, Groups and Hedgerows in BS5837:2012 Categories

Retention Category U: A silver birch (T33) was identified as unsuitable for retention (Retention Category U) during the survey. This tree had mostly died back with minimal live growth present in the crown and was considered unlikely to survive another year.

Retention Category A: The highest value trees recorded during the survey were two London planes (T25 & T26) which were located in the eastern portion of the site. T25 was located within a narrow planting strip towards the centre of the site and T26 located within a walled planting pit adjacent to the northern boundary. Both trees were in good condition and were assessed as being of high retention value (Retention Category A).

Retention Category B: Nine individual trees and two groups of trees recorded during the survey were considered to be of moderate retention value (Retention Category B). These comprised a variety of species including Norway Maple, silver Birch, field maple, ash, wild cherry, alder and whitebeam. These specimens were typically in good condition, however, many exhibited minor defects which prevented them from being considered as high retention value.

Retention Category C: The remaining three trees recorded during the survey were in fair condition and exhibited defects which limited their future potential and as such, were assessed as being of low retention value (Retention Category C).

1.4 Development Proposals

The proposed development of the site follows the previously consented planning application., which states: "OUTLINE permission (with all matters reserved) for residential floorspace (Class C3) including demolition of all existing buildings and structures; erection of new buildings; new pedestrian and vehicular accesses; associated amenity space, open space, landscaping; car and cycle parking spaces; plant, refuse storage, servicing area and other works incidental to the proposed development; and FULL planning permission for Block A comprising 30 residential units (Class C3); new pedestrian access; associated amenity space and landscaping; cycle parking, refuse storage, and other associated infrastructure."

This report accompanies a section 73 application to vary the extant Hybrid Planning Permission.

1.5 Documentation Provided and Relevant Planning Conditions on Extent Outline Permission

Documentation Provided

This assessment is based upon the information provided by the client in addition to information collected by Middlemarch during the Preliminary Arboricultural Assessment, as detailed below.

Author	Document	Drawing Number	Date
PRP	Site Plan Ground Level GA	AVD-PRP-ZZ-00-DR-A-10010 P10.	12/09/25

Table 1.3: Documentation Provided

Relevant Planning Conditions

The extent planning permission includes the following tree related planning conditions:

Condition 15: ***"****Further detail of Biodiversity Net Gain to include how this contributes to the estate wide achievement of Biodiversity Net Gain within the development hereby permitted.*

Reason: To ensure that the proposed development will preserve and enhance the visual amenities of the locality and provide adequate facilities in compliance with policies DMHB 11, DMHB 12, DMHB 14, DMEI 1 and DMT 2 of the Hillingdon Local Plan Part 2 (2020) and Policy G5 of the London Plan (2021)."

Condition 17: *"No site clearance or construction work shall take place for each relevant development phase, until the details have been submitted to, and approved in writing by, the Local Planning Authority with respect to:*

1. A method statement outlining the sequence of development on the site including demolition, building works and tree protection measures.

2. Detailed drawings showing the position and type of fencing to protect the entire root areas/crown spread of trees, hedges and other vegetation to be retained shall be submitted to the Local Planning Authority for approval. No site clearance works or development shall be commenced until these drawings have been approved and the fencing has been erected in accordance with the details approved. Unless otherwise agreed in writing by the Local Planning Authority. Such fencing should be a minimum height of 1.5 metres.

Thereafter, the development shall be implemented in accordance with the approved details.

The fencing shall be retained in position until development is completed.

The area within the approved protective fencing shall remain undisturbed during the course of the works and in particular in these areas:

2.a There shall be no changes in ground levels;

2.b No materials or plant shall be stored;

2.c No buildings or temporary buildings shall be erected or stationed.

2.d No materials or waste shall be burnt; and.

2.e No drain runs or other trenches shall be dug or otherwise created, without the prior written consent of the Local Planning Authority.

3. Where the arboricultural method statement recommends that the tree protection measures for a site will be monitored and supervised by an arboricultural consultant at key stages of the development, records of the site inspections / meetings shall be submitted to the Local Planning Authority.

Reason: To ensure that trees and other vegetation can and will be retained on site and not damaged during construction work and to ensure that the development conforms with policy DMHB 14 of the Hillingdon Local Plan Part 2 (2020)"

2. Assessment Methodology

2.1 Tree Categorisation

Trees assessed as retention category A, B or C are a material consideration in the planning process and provide future value to the new site use, however, the prioritisation for tree retention should be based upon the guidance contained within BS5837, and follows this order:

Retention Category A

Trees of high quality should be given the highest priority when deciding which trees should be retained and incorporated into proposed development layouts. These trees offer the opportunity to significantly contribute to the future of the site in arboricultural and landscape terms, and their loss should be avoided unless there is overriding justification to remove them.

Retention Category B

Moderate quality trees should be retained and incorporated into development proposals as they offer the potential to provide medium to long term benefits to the site. These trees are typically found to have remediable defects that are likely to improve over time. The removal of Category B trees should generally be avoided unless there is overriding justification to remove them.

Retention Category C

When considering which Retention Category C trees to retain in the new development, priority should be given to those trees that have been included within this category solely due to their young age and limited proportions (stem diameters of less than 150 mm at 1.5 m above ground level). These young specimens offer future potential as established tree cover but could be removed and replaced or translocated to areas away from potential development to avoid their loss. The remaining trees in this category would provide only temporary or transient landscape benefits until new tree planting becomes established and therefore, should not constrain the development of a site.

Retention Category U

Trees found unsuitable for retention. These trees have limited, transient retention value due to their poor current condition. In most circumstances, such specimens will not be considered for retention within new development unless they offer wildlife habitat potential and are situated in areas with limited access.

2.2 Root Protection Area (RPA)

To avoid damage to the roots or rooting environment of retained trees, the RPA has been calculated for each of the Category A, B and C trees in accordance with Section 4.6 of BS5837. BS5837 recommends this as the minimum area around a tree that contains sufficient roots and rooting volume to maintain viable tree vigour and structure. Where groups of trees have been assessed, the Root Protection Area has been shown based on the maximum sized tree stem in each group.

Protection of the roots and soil structure within the RPAs of retained trees should be treated as a priority. These figures have been calculated utilising the formulas within Section 4.6 and Annex D of BS5837.

2.3 Impact Review

In line with the guidance within BS 5837, we are to evaluate the direct and indirect effects of the proposed design, and where necessary recommend mitigation.

Below ground impacts (those which can affect the roots within the RPA) or above ground impacts (those which affect branches and crowns) shall be expressed as a percentage of RPA or crown volume lost by the installation of a new structure, and an overall impact assigned qualitatively, such as *Low*, *Medium* or *High*.

The species type, age class and physiological condition will also be taken into consideration when assessing the impact, as certain species or those in later life stages will be much less tolerant to changes in their rooting area, or significant pruning.

As an example, it is observed and generally accepted that around 90% of all tree roots are found within the upper 600mm of the soil, therefore even shallow excavations can lead to an extensive damage to or loss of structural and conductive roots which could lead to tree instability, death or decline.

Where there is overriding justification to site new development within the RPA or canopy spread of a retained tree, it must be constructed in such a way that impact or damage of the tree root system or crown will be avoided as far as practicable. Mitigating impacts shall follow the preferred hierarchy of **Avoid, Minimise,** or **Compensate.**

Hierarchy	Example activities
Avoid	• By amending the design to relocate a structure so it is completely outside of the RPA.
Minimise	• Re-routing a footpath to reduce its encroachment on the RPA as far as possible, or utilising “no-dig” solutions to avoid direct root loss.
Compensate	• Soil remediation works improve the rest of the RPA as needed. • The tree is lost, but new planting is carried out nearby.

This Arboricultural Impact Assessment aims to highlight these and suggest lower impact solutions, such as avoiding the tree entirely, or specific working or construction methods, where considered practicable.

2.4 Tree Retention Plan

Initial review of the overlaid proposed detail has highlighted conflicts with some trees. Where these conflicts are either substantial and are and not reasonably remediable, or affect small trees, those trees are assumed to removed and their loss is recorded for compensatory planting.

The Tree Retention Plan (Appendix C) identifies which trees and hedgerows are to be retained and incorporated as part of the site development and which are to be removed.

3. Statutory Protection

3.1 Tree Preservation Order and Conservation Area Protection

A desk-based study was undertaken to identify if any of the trees present within or near the site are affected by statutory constraints as detailed below.

Statutory Constraint	Present ✓ ✗	Source	Details
TPO	✗	Hillingdon London GIS map	None present
Conservation Area	✗	Hillingdon London GIS map	None present
Ancient Woodland	✗	Multi Agency Geographical Information for the Countryside (MAGIC)	Not present

Table 3.1: Summary of Statutory Constraints that Affect the Site

No protected trees were found to be on or within 15 metres of the site boundary.

3.2 Protected Species

Bats

Mature trees often contain cavities, hollows, peeling bark or woodpecker holes which provide potential roosting locations for bats. Bats and the places they use for shelter or protection (i.e. roosts) receive European protection under The Conservation of Habitats and Species Regulations 2017 (Habitats Regulations 2017)[2]. They receive further legal protection under the Wildlife and Countryside Act (WCA) 1981[3], as amended. Consequently, causing damage to a bat roost constitutes an offence.

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

Birds

Trees offer potential habitat for nesting birds which are protected under the Wildlife and Countryside Act WCA 1981 (as amended). Some species (listed in Schedule 1 of the WCA) are

[2] HM Government – The National Archives (2017) [online] *The Conservation of Habitats and Species Regulations 2017*. Available at: https://www.legislation.gov.uk/uksi/2017/1012/contents/made

[3] HM Government – The National Archives 2017. *Wildlife and Countryside Act 1981*. [online] Available at: http://www.legislation.gov.uk/ukpga/1981/69/contents

protected by special penalties. This legislation makes it an offence to intentionally or recklessly damage or destroy an active bird nest or part thereof.

As the trees on, and adjacent, to the site provide potential habitat for nesting birds all tree work should ideally be completed outside the nesting bird season (Generally March to September).

If this is not possible then the vegetation should be subject to a nesting bird inspection by a suitably experienced ecologist prior to commencement of works. If any active nests are identified then the vegetation, and a defined buffer zone, will need to remain in place until the young have naturally fledged.

4. Arboricultural Impact Assessment

4.1 Introduction

This section of the report details the potential impacts that the proposed development may have upon the site's tree stock. The assessment has been based upon the documents detailed in Table 1.1 with reference to the results of the Preliminary Arboricultural Assessment.

4.2 Tree Retention and Removal

The trees to be removed are detailed below and are identified on the Tree Retention Plan. All trees, groups and hedgerows not featured within the table below, are to be retained within the proposed development.

Tree/ Tree Group / Hedgerow Reference	Species	Retention Category	Reason for Removal
T2	Silver birch	B	In proposed building footprint.
T3	Ash	C	In proposed building footprint.
T4	Field maple	B	In proposed building footprint.
T5	Field maple	C	In proposed building footprint.
T24	Wild cherry	B	In proposed building footprint.
T25	London plane	A	In proposed building footprint.
T28	Whitebeam	B	In proposed building footprint.

Table 4.1: Tree Removal

1 tree identified for removal (T25) was considered high value (Retention Category A). New tree planting to compensate this loss will need to offer sufficient benefits to the site and wider landscape to ensure those trees are suitably mitigated.

5 trees identified for removal (T2, T4, T24 and T28) were of moderate value (Retention Category B) and suitable new tree planting will therefore be required to offer an adequate level of mitigation for this loss.

Trees T3 and T5 were considered to be of lower value (Retention Category C). Although their removal should not have a large impact on the arboricultural value of the site, new tree planting is recommended to offset their loss.

It should be noted that in the consented proposal of 2022, the category A tree T26 and the category B tree T23 were proposed to be removed, the revised parameter plans and illustrative masterplan allow for these trees to be retained. As such, the retained tree value in the latest proposals is higher than what was retained in the approved 2022 plan.

N.B: Details of Biodiversity Net Gain will be required to be submitted for the development as required by Condition 19 of the hybrid planning consent (see Section 1.5 of this report).

4.3 Works within Root Protection Areas (RPA)

Some aspects of the proposed development will require works within the RPAs of retained trees as detailed below.

Tree/ Tree Group/ Hedgerow Reference	Species	Retention Category	Proposed Works
T23	Wild cherry	B	Footpath proposed within RPA.
T26	London plane	A	Building and footpath proposed within RPA.
T31	Norway maple	B	Footpath proposed within RPA.
T32	Norway maple	B	Footpath proposed within RPA
G3	Wellingtonia Turkish hazel Ash	B	Building proposed within RPA

Table 4.2: Works in RPAs

The construction of new buildings will require foundation construction within the RPA of tree T26 and group G3. When allowing for 2.50 metre working space clearance around the proposed building approximately 6% of tree T26's RPA and 15% of G3's RPA will be affected. No-dig foundations are unlikely to be of significant value in this instance for the added cost and complexity they would provide. Temporary tree protection fencing, and ground protection measures as detailed on the Tree Protection Plan, will be required during the works to prevent soil compaction.

Tree T20 was located outside of the site boundary, with the outer RPA partially within the site. The building closest to this tree is already completed. It can therefore be assumed the RPA of the tree has already been disturbed, and due to the marginal RPA encroachment onto site, the impact is not considered to be significant.

It should be noted that the RPA's affected by works to construct the roadways around the buildings are for the most part already hard-surfaced and root development from the surrounding trees in the affected areas may have been restricted. The potential for significant impact upon the trees as a result of the proposed works is therefore unlikely, however, further investigation may be required to inform decision-making.

It is also recommended that any new hard surfacing within the RPA of T23, T26, T29, T31, T32 G1 and G2 will be constructed using a no-dig cellular confinement system under supervision of the Project Arboriculturist. The cellular confinement system should be specified by an engineer appropriate for the expected load and ground conditions.

4.4 Utilities within RPAs

Installation of new subterranean utilities can have considerable impacts on tree roots, particularly where a route intersects tangentially across an RPA close to the stem and the depth is substantial, the entire RPA outside of the intersection can be considered lost.

No information on service routes had been provided at the time of writing. An assessment of impacts can be carried out once details and locations of service runs are known. Until then, it is assumed that no additional trees are removed and any new subterranean service routes or soakaways shall avoid entering the RPA of any retained tree or group. Where such structures and routes must enter the RPA then mitigative measures may need to be adopted which may include sensitive excavation by hand or air-spade to allow installation around roots, or thrust boring techniques.

4.5 Trees and Foundations

Any structures built on the site should comply with current building regulations and NHBC Chapter 4.2 - *Building near Trees* (2025)[4]. Foundation depths for buildings near or adjacent to trees should consider the potential size of the trees at maturity and their subsequent water demand. The soil types throughout the site should be fully investigated and appropriate measures taken. If trees are removed across the site, the potential for soil heave should be assessed and foundations designed accordingly.

This survey has been undertaken in accordance with BS5837 and further assessment in accordance with current building regulations will be required to inform foundation design.

4.6 Tree Pruning

The following tree pruning will be necessary to enable the proposed development to clear retained trees.

Tree Reference	Species	BS5837 Category	Required Pruning or Access Facilitation Works.
T26	London plane	A	Up to 2.5 metres pruning required to west and south side of canopy to provide construction access.
T32	Norway maple	B	Pruning back of north crown by up to 2 metres to facilitate construction of new building

Table 5.5: Trees Requiring Pruning or Other Access Facilitation Works.

All tree work shall conform to BS3998:2010 and be completed prior to the installation of the tree protection measures and site occupation by demolition or construction contractors.

Pruning of mature trees should only be undertaken where essential, to prevent open wounds that allow the ingress of decay and provide opportunity for fungal spores to infect the tree. Pruning works should ideally be undertaken during the winter months when the tree is dormant or during the summer months when the tree is fully active. Autumn pruning (when fungal spores are abundant in the surrounding atmosphere) should be avoided if possible. Juvenile trees should be formatively pruned in their early years to reduce the presence of potential defects into maturity that would reduce their lifespan.

All tree pruning works should be detailed as part of an Arboricultural Method Statement and completed in accordance with the current best practice guidance set out within BS3998:2010 *"Tree*

[4] National House Building Council. (2025). *NHBC Standards 2025: Chapter 4.2 - Building Near Trees*. NHBC, Milton Keynes.

Work – Recommendations"[5] by suitably competent, qualified, and insured arboricultural contractors. The extent of pruning should be identified to contractors in a pre-commencement site meeting as part of enabling works.

4.7 New Tree Planting

Mitigation to suitably compensate for this loss of high-quality tree cover (such as T25) will need to be significant and should include new extra heavy standard London Plane trees planted in prominent positions, such that they attempt to recreate the value of those trees lost. The purpose and function of the new tree planting should be carefully considered so that key objectives from a wildlife habitat and landscape perspective can also be achieved. In total, approximately 48 trees are to be planted as mitigation planting.

4.8 Shading

The shade from trees can be considered both a constraint and opportunity and therefore its effect upon the new development should be fully considered to ensure a harmonious and sustainable relationship can be achieved. Where residential development is proposed, the position and orientation of new buildings in relation to existing trees, primary living areas should receive the largest proportion of natural sunlight. BRE[7] guidelines recommend *"at least half of the garden or open space should receive at least two hours sunlight on March 21 (Spring Equinox)"*.

4.9 Tree Protection Measures

In addition to the measures above, this assessment assumes that all retained trees will be protected by temporary barriers or ground protection measures throughout the development.

These protective measures will be installed to exclude all ground either within the RPA or crown spread (whichever is greater) and therefore these areas will not be available for access for development works, or for the storage of plant, materials or spoil or for the placement of welfare units.

The design, specification and location of all tree protection measures will be detailed in a future Arboricultural Method Statement.

[5] British Standards Institution. (2010). *British Standard 3998:2010, Tree Work – Recommendations*. British Standards Institution, London.
[7] Littlefair P. (2011). *Site layout planning for daylight and sunlight: a guide to good practice* (BR 209). British Research Establishment, Watford.

5. Conclusion

5.1 Summary of Impacts

As per the extant permission, the proposed revised development of the site has the potential to have an impact on the arboricultural value of the site. However, it is deemed that the losses are unavoidable in the plan. Compared to the 2022 consented plans, an additional category A (T26) and an additional category B tree (T23) are retained, forming additional mature arboricultural value for the site.

The proposed works will require the removal of some trees, including 1 high value category A and 4 moderate value category B trees. The loss of trees will also be offset by the planting of circa 48 new trees.

As noted in Section 1.5 of this report the existing planning permission includes a number of tree related planning conditions, including the provision of an Arboricultural Method Statement, which if replicated on the new decision notice will ensure that retained trees are suitably protected during construction and the new trees to be planted are appropriate and will be maintained.

In relation to this development the Arboricultural Method Statement will address the following:

Action	Required
Tree Surgery	✓
Site set up and logistics	✓
Building demolition and removal of hard surfaces within RPAs	✓
Working space to construct new buildings within RPAs	✓
Installation of utilities within RPAs	✓
Site access, material storage contractor's parking and site compound location	✓
Protective barrier and ground protection location and specification	✓
Pre-commencement site meeting	✓
Arboricultural Clerk of Works supervision	✓
Audit timetable	✓

6. Appendices

The following documents are attached below:

Appendix A: Tree Schedule

Appendix B: Tree Survey Plan - C180959-01-01

Appendix C: Tree Retention Plan - C183589-02-01

Appendix A

Tree Schedule

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Appendix A - Tree Schedule

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

Structural Condition

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

Quality Assessment of Retention Category

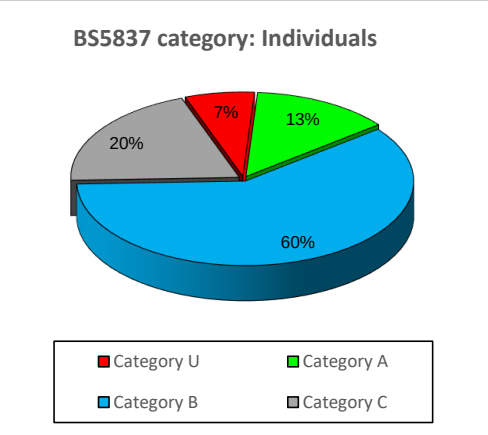
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

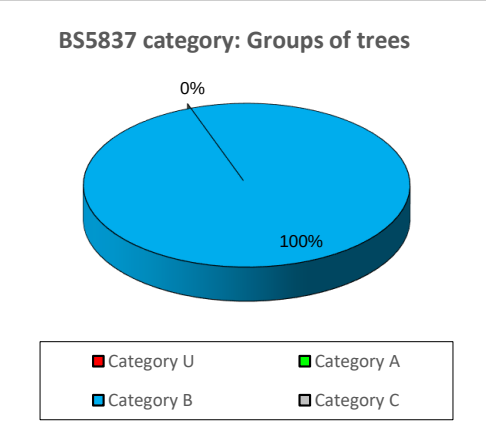
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.

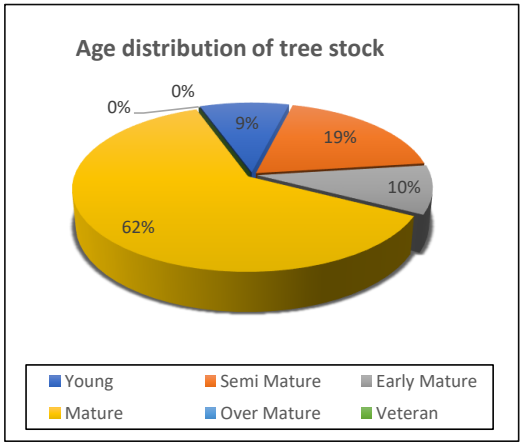
Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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

Sub-categories: (i) - Mainly arboricultural value
(ii) - Mainly landscape value
(iii) - Mainly cultural or conservation value







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Appendix A - Summary

	Individual Trees	Totals	Tree Groups	Totals
Category U	T33	1		0
Category A	T25, T26	2		0
Category B	T2, T4, T20, T23, T24, T27, T28, T31, T32	9	G2, G3	2
Category C	T3, T5, T29	3		0
	Total	15	**Total**	2

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

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T2	Silver birch	10.0	2.0	1	370	4.0	4.0	5.0	5.0	M	F	G	64	4.5	B 1	Pruning wounds observed Minor deadwood in the crown Typical crown form Light ivy on stem
T3	Ash	10.0	3.0	1	500	2.5	3.5	5.0	5.0	EM	P	G	113	6.0	C 1	Branch stubs observed Minor deadwood in the crown
T4	Field maple	7.0	1.8	1	310	2.0	3.0	3.5	3.0	M	F	G	48	3.9	B 1	Typical crown form Minor deadwood in the crown
T5	Field maple	11.0	2.0	4	300 290 220 110	2.0	3.5	3.5	2.0	M	F	G	113	6.0	C 1	Pruning wounds observed Branch stubs observed
T20	Sycamore	14.0	2.0	1	600	6.0	6.0	6.0	6.0	M	G	G	163	7.2	B 1	Branch stubs observed Limited inspection due to access Minor deadwood in the crown Typical crown form
T23	Wild cherry	11.0	4.0	1	510	4.0	4.0	4.0	4.0	M	F	G	124	6.3	B 1	Branch stubs observed Pruning wounds observed
T24	Wild cherry	11.0	3.0	1	600	7.0	6.0	5.0	4.0	M	F	G	163	7.2	B 1	Branch stubs observed Minor deadwood in the crown Pruning wounds observed
T25	London plane	14.0	4.0	1	650	7.0	6.0	6.0	7.0	M	G	G	191	7.8	A 1	Pruning wounds observed Typical crown form No obvious defects observed light ivy on stem
T26	London plane	16.0	2.0	1	520	5.0	5.0	5.0	5.0	M	G	G	124	6.3	A 1	Branch stubs observed
T27	Alder	11.0	1.8	1	220	3.0	4.0	5.0	2.0	SM	F	G	23	2.7	B 1	Branch stubs observed Typical crown form No obvious defects observed
T28	Whitebeam	6.0	2.0	1	440	4.0	3.0	3.0	3.0	M	F	G	92	5.4	B 1	Branch stubs observed Typical crown form
T29	Norway maple	13.0	5.0	1	560	4.0	5.0	6.0	5.0	M	P	F	150	6.9	C 1	Branch stubs observed Pruning wound through pollarding responding well
T31	Norway maple	14.0	2.0	1	540	5.0	6.0	8.0	4.5	M	G	G	137	6.6	B 1	Branch stubs observed Branch socket cavity observed Pruning wounds observed Typical crown form

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T32	Norway maple	13.0	3.0	1	600	7.0	5.0	7.0	7.0	M	F	G	163	7.2	B 1	Branch stubs observed Pruning wounds observed Minor deadwood in the crown Typical crown form
T33	Silver birch	10.0	1.5	1	180	0.5	1.0	4.5	2.0	SM	F	P	18	2.4	U	Tree dying off Fungal bracket on stem Felling recommended

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
G2	Ash Sycamore Yew Hornbeam Elder Hawthorn	9.0	2.5	-	200	3.0	3.0	3.0	3.0	SM EM Y	G	G	18	2.4	B 2	Group is located off site but overhangs the study area Ivy suppressing a number of trees Branch stubs observed
G3	Wellingtonia Turkish hazel Ash	14.0	2.0	-	500	3.0	3.0	3.0	3.0	SM Y	F	G	113	6.0	B 2	Group is located off site but overhangs the study area Branch stubs observed Typical crown forms

Appendix B

Tree Survey Plan

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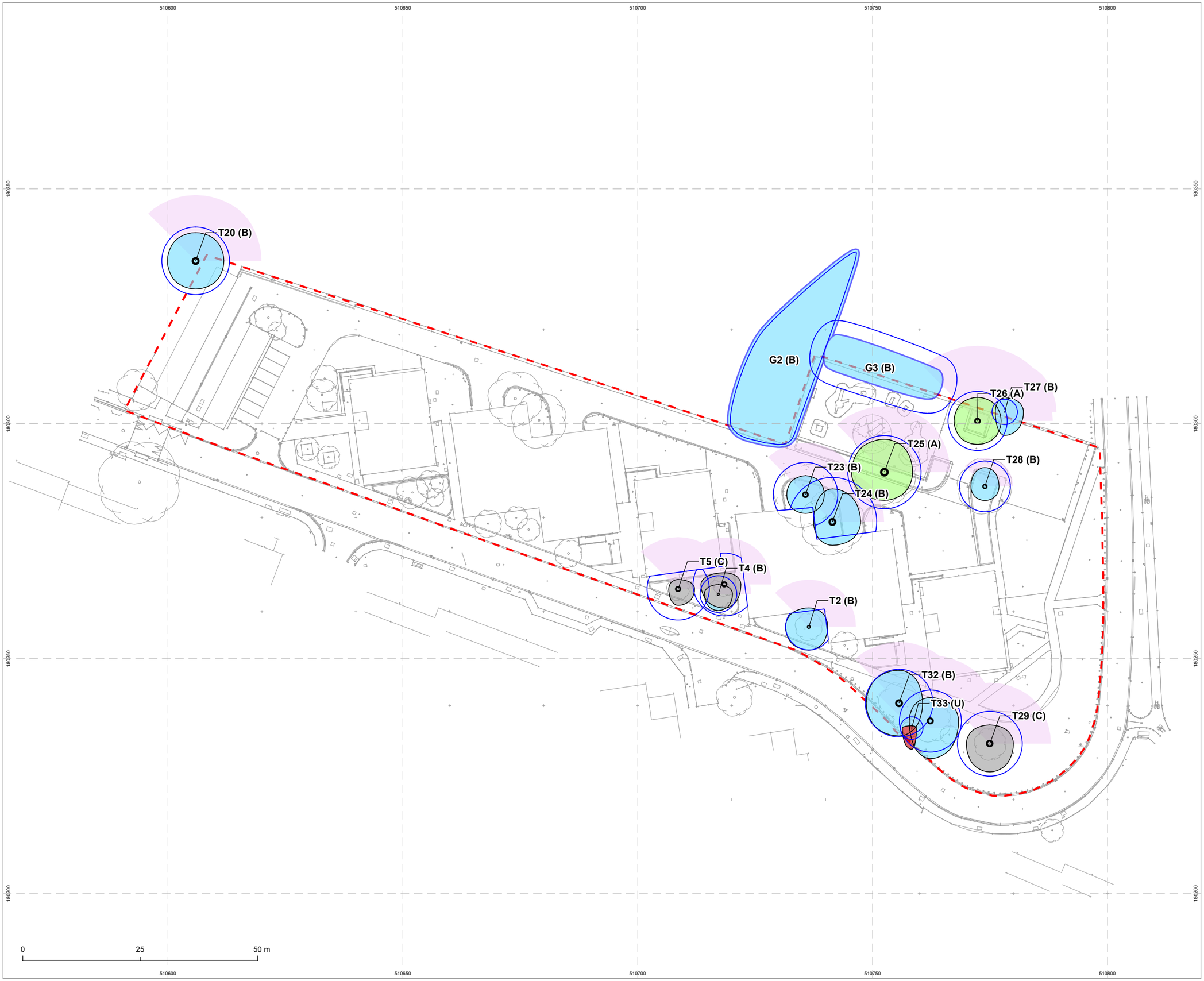

C180959-01-01

Legend

- Tree location and stem diameter
- Category A
- Category B
- Category C
- Category U
- Current canopy extent
- Root Protection Area
- Indicative tree shadow
- Site boundary

N

NOTES
All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist.
Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.
The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) havenbeen shown on the Tree Survey Plan.
All survey data is based on a topographical survey where possible, supplied by the client.
Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.
Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements.
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey.
TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

Project
The Avondale Drive Estate, London

Drawing
Tree Survey Plan

Client
Higgins Partnerships

Drawing Number	Revision
C180959-01-01	00
Scale @ A3	**Date**
1:750	November 2024
Approved By	**Drawn By**
SH	AW

MIDDLEMARCH
Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
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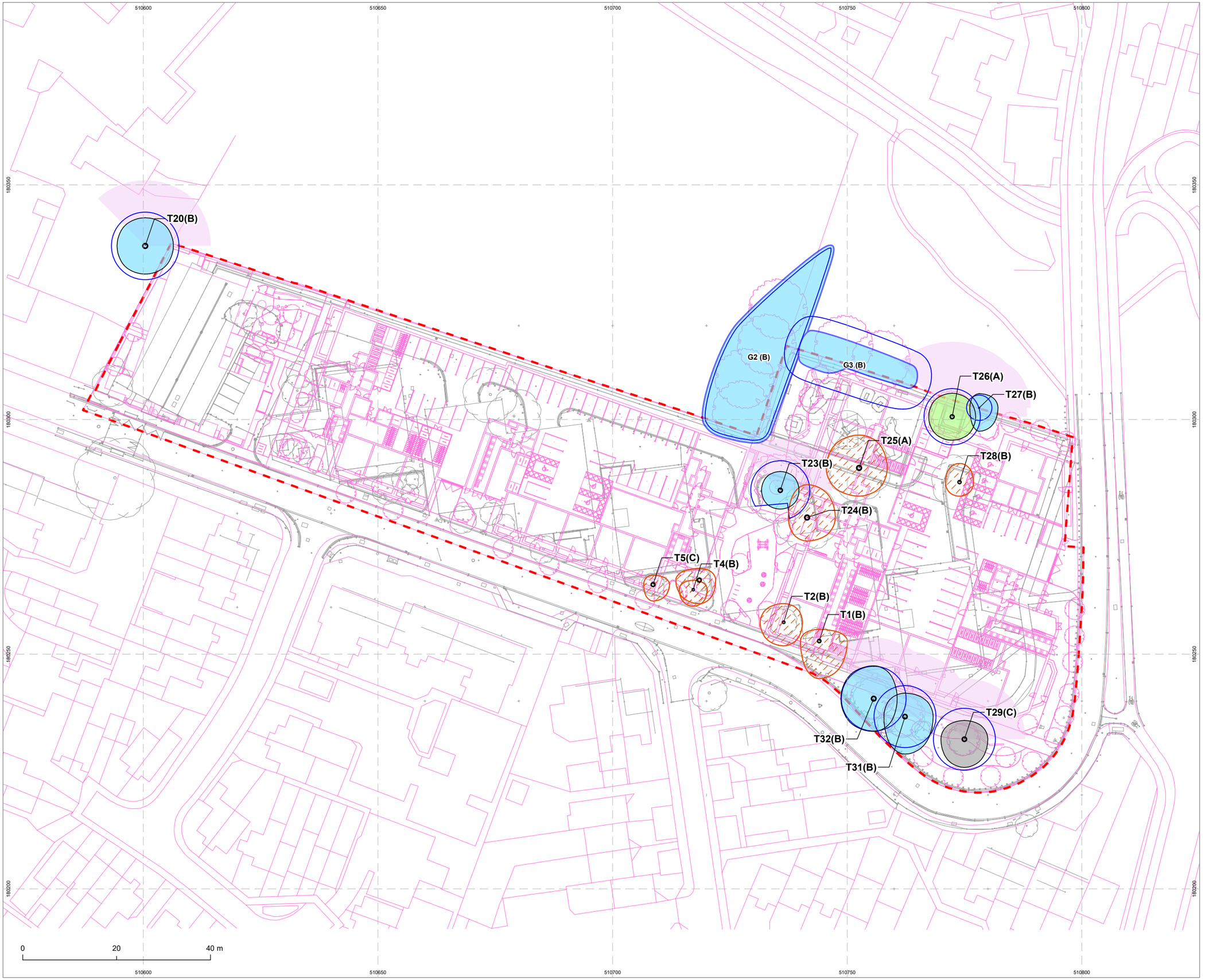
Appendix C

Tree Removal and Retention Plan

MIDDLEMARCH



C183589-02-01

Legend

- Tree location and stem diameter
- Category A
- Category B
- Category C
- Category U
- Tree to be removed
- Tree group to be removed
- Current canopy - tree to be removed
- Current canopy - tree to be retained
- Root Protection Area
- Indicative tree shadow
- Proposed layout
- Site boundary

N

NOTES
All dimensions to be verified on site. Do not scale this drawing, use figured dimensions only. All discrepancies to be clarified with Project Arboriculturist.
Drawing to be read in conjunction with Preliminary Arboricultural Assessment and Tree Schedule.
The positions of trees and their current crown spread, root protection area and shade pattern (where appropriate) havenbeen shown on the Tree Survey Plan.
All survey data is based on a topographical survey where possible, supplied by the client.
Where topographical information has not identified tree positions or Ordnance Survey mapping has been utilised, trees have been positioned using GPS and aerial photography to provide approximate locations in relation to existing surrounding features. Further confirmation of tree and hedgerow locations through a topographical survey of the site is recommended to ensure future design accuracy.
The original of this drawing was produced in colour - a monochrome copy should not be relied upon.
The exact position of individual trees or species included as part of a tree group, woodland or hedgerow should be checked and verified on site prior to any decisions for foundation design, tree operations or construction activity being undertaken.
Further survey work would be required for calculating foundation depths in accordance with current Building Regulations requirements.
Trees are living organisms that change over time, the condition of all trees illustrated herein, are to be checked by the Project Arboriculturist should works commence 12 months after the date of this survey.
TREES INCLUDED DURING THE ASSESSMENT MAY BE SUBJECT TO STATUTORY CONSTRAINTS. IT IS THEREFORE ADVISED THAT NO WORKS SHOULD BE UNDERTAKEN TO ANY TREES ILLUSTRATED HEREIN WITHOUT FIRST OBTAINING THE RELEVANT AUTHORISATION TO DO SO UNLESS AGREED AS PER THE APPROVED PLANS THROUGH PLANNING CONSENT.

Project
The Avondale Drive Estate, London

Drawing
Tree Retention Plan

Client
London Borough of Hillingdon

Drawing Number	Revision
C183589-02-01	00
Scale @ A3	**Date**
1:750	October 2025
Approved By	**Drawn By**
CD	BD

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