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Arboricultural Impact Assessment

RIBA Stage 3

Austin Road/Crown Close, Hayes Town Centre Estate, London Borough of Hillingdon

A Report To: London Borough of Hillingdon
Report Number: RT-MME-183284-02 Rev C
Date: November 2025

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Report Verification

Report Version	Date	Completed by:	Checked & Approved by:
Final	27-10-2025	Christian Daems BSc (Hons) MArborA Arboricultural Consultant	Stefan Harrison BSc (Hons) MArborA Principal Arboricultural Consultant
Rev A	30-10-2025	Christian Daems BSc (Hons) MArborA Arboricultural Consultant	Stefan Harrison BSc (Hons) MArborA Principal Arboricultural Consultant
Rev B	03-11-2025	Christian Daems BSc (Hons) MArborA Arboricultural Consultant	Stefan Harrison BSc (Hons) MArborA Principal Arboricultural Consultant
Rev C	06-11-2025	Christian Daems BSc (Hons) MArborA Arboricultural Consultant	Stefan Harrison BSc (Hons) MArborA Principal Arboricultural Consultant

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.

Contents

1. Introduction

1.1 Project Background

This Arboricultural Impact Assessment was commissioned by London Borough of Hillingdon and accompanies a Section 73 application to vary the extant Hybrid Planning Permission ('HPP) (ref. 76550/APP/2023/2931) for the regeneration of the Austin Road Estate, Hayes, London, UB3 3DN ("the Site"), a variation to the original hybrid application (ref. 76550/APP/2021/4499). An updated survey of the trees on site and within influencing distance of the boundaries was undertaken on the 24th of September 2025 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 revised 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-154568-02 REV B, December 2021).

Tree retention and removal on site has stayed similar between the two reports, an additional 3 category B trees are being retained in the current plan which were originally proposed for removal.

[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
National Grid Reference	TQ09928 79742
Topography	Flat, highly urbanised survey area.
Tree Cover	Planted trees, many likely original landscaping trees.
Appendices	Appendix A: Tree Schedule Appendix B: Tree Survey Plan – C183284-01-01 Appendix C: Tree Retention Plan – C183284-02-01

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 34 individual trees, 4 groups of trees and 2 hedgerows as detailed in the Tree Schedule (Appendix A) and Table 1.2 below.

BS5837:2012 Category	Tree/ Group/ Woodland/ Hedgerow Reference
U	T16, T20, T37
A	T1, T2, T3, T4, T6, T7
B	T8, T9, T11, T12, T13, T14, T23, T24, T35, T36, T38, T39
C	T5, T10, T15, T17, T18, T19, T21, T22, T25, T32, T33, T34, T40, G1, G2, G3, G4, H1, H3

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

Tree cover reflects the history of the area, with most of the larger trees likely planted as landscaping for the estate. The biggest arboricultural value was found in the southeast corner of the site. Six large silver maples were growing along Silverdale Road. These trees were pollarded approximately 10 years ago and have developed healthy crowns. They were the largest trees found on site and were found to be of high value. They were therefore attributed Category A.

A variety of category B trees were found. Some larger robinia and silver maple, T11, T12, T13 and T14 were found in a small area of public greenspace/play area in the southwest of the site. Some more larger trees were found in raised 'planters' between the various houses of the estate, providing amenity value for residents. This included trees T35, T36, T38 and T39. All these were found to be of moderate value, and attributed a category B.

Most of the remaining trees were considered to have a lower arboricultural value, and attributed a category C. This included various smaller garden trees, but also the large conifers in along Austin Road. It should be noted that due to the highly urban area, even small trees can provide good amenity value to local residents and provide benefits for wildlife and the urban climate.

All surveyed hedgerows were considered to be of low arboricultural value. It should be noted that these did provide screening, and that a lack of maintenance has made them look outgrown and unmanaged.

Three trees were found to be in such a poor state that they were considered unsuitable for retention and attributed Category U.

1.4 Development Proposals

The extant consent is a hybrid planning permission, with a detailed element (phase 1) comprising 80 homes and outline element (previous phases 2, 3 and 5) with all matters reserved. Phase 1 is now complete on site, with handover anticipated in January 2026.

The proposed Section 73 amendments comprise the following key changes to the outline area:

- An increase in the maximum number of homes by 62 units, including 31 more affordable homes and more houses/duplexes and family sized homes.
- Blocks in Phases 2 and 3 to be joined to create a safer and more coherent street pattern, larger podium amenity space and more efficient podium parking/ servicing areas.
- A reduction of on-street and off-street parking to create more and improved green spaces.
- An improvement to scale of street, with 2-3 storey houses proposed on both sides of Austin Road to create a mews style streetscape.

The above changes are captured in the revised parameter plans submitted with this application and the proposed amendments to scheme fixes contained within several planning conditions.

A revised Illustrative Masterplan is also included with the DAS Addendum submitted with this s73, and this provides the base layer for the Tree Retention Plan included at Appendix C of this AIA. The masterplan is indicative representing the “design intent” and a demonstration of how future reserved matters applications could come forward holistically in accordance with the Parameter Plans.

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	HTC-PRP-ZZ-00-DR-A-10050 - Site Plan Ground Level GA - P11	September 2025

Table 1.3: Documentation Provided

Relevant Planning Conditions

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

Condition 18: *“No site clearance or construction work of any relevant phase of the development hereby approved shall take place 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 within the relevant development phase 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.

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)"

Condition 19: *"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)."

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
Tree Preservation Order (TPO)	✗	London Borough of Hillingdon	None present
Conservation Area	✗	London Borough of Hillingdon	None present
Ancient Woodland	✗	Multi Agency Geographical Information for the Countryside (MAGIC)	None present
Ancient Trees	✗	The Woodland Trust's ancient tree inventory	None recorded

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.

[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

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 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/ Group/ Hedgerow Reference	Species	Retention Category	Full or Partial Removal	Reason for Removal
T10	Juniper	C	Full	Within development footprint.
T14	Robinia	C	Full	Within development footprint.
T17	Holly	C	Full	Within development footprint.
T18	Whitebeam	C	Full	Within development footprint.
T19	Silver birch	C	Full	Within development footprint.
T20	Silver birch	U	Full	Within development footprint.
T21	Bay laurel	C	Full	Within development footprint.
T22	Apple	C	Full	Within development footprint.
T23	Sycamore	B	Full	Within development footprint.
T24	Silver birch	B	Full	Within development footprint.
T25	Sycamore	C	Full	Within development footprint.
T32	Leyland cypress	C	Full	Offsite tree removed to facilitate development.
T34	Norway Maple	C	Full	Within development footprint.
T33	Leyland cypress	C	Full	Offsite tree removed to facilitate development.
T35	Norway maple	B	Full	Within development footprint.
T36	Wild cherry	B	Full	Within development footprint.
T37	Wild cherry	U	Full	Within development footprint.
T38	Maple	B	Full	Within development footprint.
T39	Maple	B	Full	Within development footprint.
T40	Wild cherry	C	Full	Within development footprint.
G1	Hornbeam	C	Full	Within development footprint.

Tree/ Group/ Hedgerow Reference	Species	Retention Category	Full or Partial Removal	Reason for Removal
G2	Leyland cypress	C	Full	Offsite tree group removed to facilitate development
G3	Leyland cypress	C	Full	Offsite tree group removed to facilitate development
G4	Leyland cypress	C	Full	Offsite tree group removed to facilitate development
H1	Leyland cypress	C	Full	Within development footprint.

Table 4.1: Trees, Groups and Hedgerows to be Removed

A total of 17 trees, 4 groups of trees and 1 hedgerow are to be removed to allow the proposed development to be constructed. This removal will have an impact on the arboricultural and visual amenity of the site and surrounding area, however, due to the location of the trees, their loss cannot realistically be avoided. Trees to be removed are mostly located inside the current estate, and along the eastern and western boundary of the site. However, in the south east and south west of the site, various trees with high amenity value are to be retained in the proposed development. Six high value Category A, two medium value Category B and one low value Category C tree are retained in front of the industrial building along Silverdale Road. Three Category B trees are being retained in the corner of Crown Close.

The highest quality trees located on site were the silver maple trees T1, T2, T3, T4, T6 and T7. These trees can all be retained based on the revised illustrative masterplan. New landscaping is proposed in that area, and with the backdrop of the canal, and retained moderate value trees T8 and T9 will give a strong green space in the southeast of the site.

The trees situated at the southern end of Crown Close (T11, T12 and T13) were individually considered to be moderate quality (Retention Category B) during the assessment but collectively provide visual amenity to the site as well as the wider public realm within the hard urban landscape. Trees T11, T12 and T13 were considered particularly valuable in terms of their contribution to the visual amenity of Crown Close. These trees are proposed to be retained, providing arboricultural value for the proposed development and the wider area.

It should be noted that in the consented proposal of 2022, trees T11, T12 and T13 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.

Trees T35, T36, T37, T38, T39 and T40, which are proposed for removal were located within raised planting pits amongst the mezzanine levels of the existing residential complex and thus, their retention would not be possible as part of the detailed development. It should be noted that T37 was considered unsuitable to retain, irrespective of the current s73 application.

It was noted that the conifers located beyond the eastern boundary and within gardens of residential properties off Little Road were presenting a significant constraint to development, were of limited quality and significance and many trees were either in declining condition or had died since the initial tree survey. The RPAs for these offsite trees are likely to be a lot smaller than the indicative RPAs shown on the Tree Survey Plan due to the presence of a brick boundary wall and consolidated hardstanding forming Austin Road. The canopies of the trees,

however, overhang the boundary into the site by up to 6 metres in places which results in significant influence over the site along the boundary. It should be noted that as the trees within G2, G3 & G4 are situated outside of the site ownership boundary permission from their owners will be required in order to remove them.

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
T1	Silver maple	A	New roadway and landscaping proposed within RPA.
T2	Silver maple	A	Roadway proposed within RPA.
T3	Silver maple	A	Roadway proposed within RPA.
T4	Silver maple	A	Roadway proposed within RPA.
T6	Silver maple	A	Roadway proposed within RPA.
T7	Silver maple	A	New roadway and landscaping proposed within RPA.
T8	Silver maple	B	Landscaping proposed within RPA.
T9	Silver maple	B	Landscaping proposed within RPA.
T11	Robinia	B	Roadway and parking proposed within RPA.
T12	Robinia	B	Roadway and parking proposed within RPA.
T13	Robinia	B	Roadway proposed within RPA.

Table 5.2: Works in RPAs

It should be noted that the RPA's affected by works to construct the roadways around the retained trees 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.

All works within the RPA of retained trees should be detailed as part of an Arboricultural Method Statement.

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 to bypass roots entirely.

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

All trees retained are outside the proposed development. It is therefore not foreseen that any tree pruning will be necessary.

This is based on the currently available information, is not exhaustive and will potentially change when further elements of the development are finalised. Consequently, a final specification of 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 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

As part of the development proposals, an adequate quantity of tree planting has been demonstrated. Approximately 130 trees will be planted in phases 2 and 3, which this report relates to.

Another 18 trees are to be planted as part of phase 1 of the project. (which is currently under construction and outside the scope of this report.) 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.

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

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

[5] British Standards Institution. (2010). *British Standard 3998:2010, Tree Work – Recommendations*. British Standards Institution, London.

largest proportion of natural sunlight. BRE[6] 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.

[6] 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 is likely to impact the visual amenity of the local area as a result of the proposed tree removal. However, it should be noted that when compared to the extant outline permission, the revised proposals include the retention of 3 additional trees (T11, T12 and T13) in the corner of Crown Close, providing mature tree value for the proposed development. Additionally, most removed trees are of low retention value, and two significant tree groups will be retained. The loss of trees will also be offset by the planting of 176 new trees. Of these, circa 153 will be planted on the ground floor, and circa 23 on the podium level.

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

6. Appendices

The following documents are attached below:

Appendix A: Tree Schedule

Appendix B: Tree Survey Plan – C183284-01-01

Appendix C: Tree Retention Plan – C183284-02-01

Appendix A

Tree Schedule

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Appendix A - Tree Schedule

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

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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

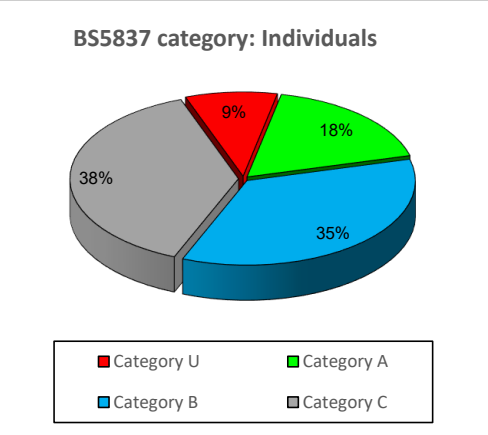
Category U - Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

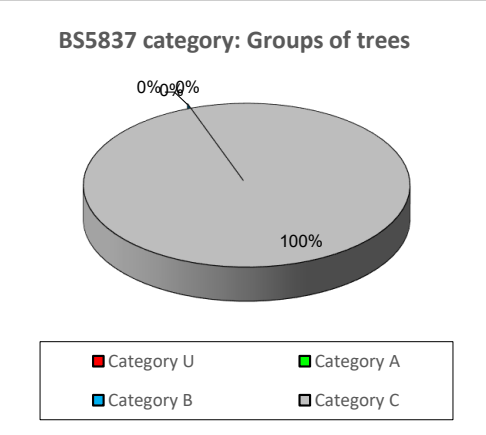
Category A - Trees of high quality with an estimated remaining life expectancy of at least 40 years.

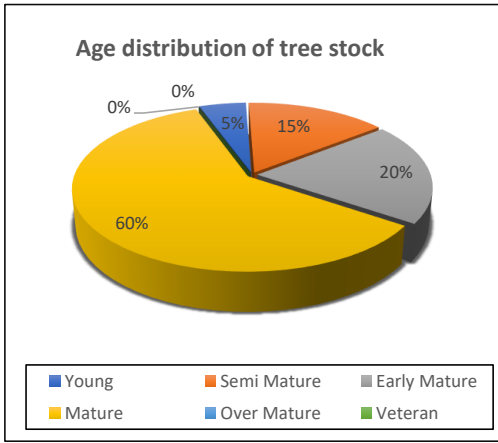
Category B - Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.

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	T16, T20, T37	3		0
Category A	T1, T2, T3, T4, T6, T7	6		0
Category B	T8, T9, T11, T12, T13, T14, T23, T24, T35, T36, T38, T39	12		0
Category C	T5, T10, T15, T17, T18, T19, T21, T22, T25, T32, T33, T34, T40	13	G1, G2, G3, G4	4
	Total	34	**Total**	4

	Hedgerows	Totals	Woodlands	Totals
Category U		0		0
Category A		0		0
Category B		0		0
Category C	H1, H3	2		0
	Total	2	**Total**	0

Tree No	Species	Height (m)	Crown Clearance (m)	No. of Stems	Stem Dia. (mm)	Crown Radius				Age Class	Structure	Vigour	RPA (m)	RPA Radius (m)	Cat	Comments
						N	E	S	W							
T1	Silver maple	17.0	3.0	1	720	4.0	4.0	5.0	5.0	M	F	G	238	8.7	A 1	Pollarded form Pruning wounds observed Epicormic growth on the main stem Epicormic growth observed in the crown Minor deadwood in the crown
T2	Silver maple	16.0	3.0	1	500	4.0	3.0	3.0	5.0	M	F	G	113	6.0	A 1	Pollarded form Minor deadwood in the crown
T3	Silver maple	17.0	2.5	1	550	4.0	4.0	4.0	4.0	M	F	G	137	6.6	A 1	Pollarded form Minor deadwood in the crown Epicormic growth observed in the crown Branch stubs observed
T4	Silver maple	17.0	2.0	1	600	7.0	4.0	5.0	5.0	M	F	G	163	7.2	A 1	Pollarded form Minor deadwood in the crown Branch stubs observed Epicormic growth on the main stem
T5	Silver birch	7.0	2.0	1	180	2.0	2.0	3.0	3.0	SM	F	F	18	2.4	C 1	Minor deadwood in the crown Branch stubs observed Pruning wounds observed
T6	Silver maple	12.0	4.0	1	620	4.5	3.0	5.0	5.0	M	F	G	177	7.5	A 1	Pollarded form Minor deadwood in the crown Branch stubs observed
T7	Silver maple	12.0	2.0	1	820	7.0	3.5	4.0	7.5	M	F	G	308	9.9	A 1	Branch stubs observed Branch socket cavity observed Minor deadwood in the crown
T8	Norway maple	13.0	4.0	1	360	3.5	3.5	3.5	3.5	M	F	G	64	4.5	B 1	Branch stubs observed Branch socket cavity observed
T9	Norway maple	13.0	5.0	1	340	6.0	4.0	5.0	3.5	M	F	G	55	4.2	B 1	Major deadwood in the crown Minor deadwood in the crown
T10	Juniper	8.0	0.0	2	120 100	0.5	0.5	0.5	0.5	EM	F	F	14	2.1	C 1	Branch stubs observed
T11	Silver maple	14.0	2.5	1	730	6.0	9.0	9.0	7.0	M	F	G	255	9.0	B 1	Pruning wound through pollarding responding well Pollarded form Branch stubs observed
T12	Silver maple	14.0	3.0	1	710	5.0	5.0	7.0	8.0	M	F	G	238	8.7	B 1	Pruning wound through pollarding responding well Pollarded form Epicormic growth observed in the crown Minor deadwood in the crown
T13	Silver maple	16.0	3.0	1	730	9.0	9.0	2.0	7.0	M	F	G	255	9.0	B 1	Pruning wound through pollarding responding well Pollarded 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							
T14	Robinia False acacias	17.0	3.0	1	410	3.5	3.5	3.5	3.5	EM	F	G	81	5.1	B 1	Typical crown form Minor deadwood in the crown No obvious defects observed
T15	Honey locust	5.0	2.0	1	110	2.5	0.5	1.5	2.5	Y	F	G	7	1.5	C 1	No obvious defects observed Typical crown form
T16	Honey locust	6.0	2.0	1	130	2.5	2.5	2.0	3.5	SM	F	G	10	1.8	U 1	Dead.
T17	Holly	6.0	2.0	1	150	1.0	1.0	1.0	1.0	SM	F	G	10	1.8	C 1	
T18	Whitebeam	5.0	1.5	1	170	2.5	2.5	2.5	2.5	EM	F	F	14	2.1	C 1	Branch stubs observed Pruning wounds observed Typical crown form
T19	Silver birch	11.0	2.0	1	250	3.5	3.5	3.5	3.5	EM	P	G	28	3.0	C 1	Branch stubs observed Minor deadwood in the crown
T20	Silver birch	8.0	2.0	1	340	2.5	2.5	2.5	2.5	M	P	P	55	4.2	U	
T21	Bay laurel	7.0		1	190	3.0	3.0	3.0	3.0	M	F	G	18	2.4	C 1	Branch stubs observed Pruning wounds observed Limited inspection due to access
T22	Apple	3.0	0.0	1	150	2.5	2.5	2.5	2.5	SM	P	F	10	1.8	C 1	Limited inspection due to access
T23	Sycamore	12.0	2.0	1	290	3.0	3.0	3.0	3.0	EM	F	G	41	3.6	B 1	Minor deadwood in the crown No obvious defects observed Typical crown form
T24	Silver birch	12.0	2.0	1	340	3.5	3.5	3.5	3.5	M	F	G	55	4.2	B 1	Branch stubs observed Typical crown form No obvious defects observed
T25	Sycamore	6.0	2.0	6	200	2.5	2.5	2.5	2.5	SM	P	G	18	2.4	C 1	Branch stubs observed Minor deadwood in the crown

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	Leyland cypress	13.0	5.0	1	600	7.0	7.0	7.0	7.0	M	P	P	163	7.2	C 1	Branch stubs observed Apical dieback Minor deadwood in the crown
T33	Leyland cypress	13.0	3.0	1	600	6.0	6.0	6.0	6.0	M	P	P	163	7.2	C 1	Branch stubs observed Apical dieback Lateral dieback Minor deadwood in the crown Major deadwood in the crown
T34	Norway maple	14.0	2.0	2	320 330	5.0	5.0	5.0	5.0	EM	F	F	102	5.7	C 1	Lateral dieback Branch stubs observed
T35	Norway maple	17.0	4.0	1	450	6.0	7.0	5.0	4.5	M	G	G	92	5.4	B 1	Branch stubs observed Minor deadwood in the crown No obvious defects observed Pruning wounds observed
T36	Wild cherry	6.0	2.0	1	310	2.0	4.0	5.0	5.0	M	F	G	48	3.9	B 1	Branch stubs observed Minor deadwood in the crown
T37	Wild cherry	6.0	2.0	1	290	3.0	3.0	3.0	3.0	EM	P	F	41	3.6	U	Branch stubs observed Pruning wounds observed
T38	Maple	14.0	4.0	1	450	4.5	4.5	4.5	4.5	M	F	G	92	5.4	B 1	Branch stubs observed Minor deadwood in the crown Typical crown form
T39	Maple	15.0	4.0	1	410	4.0	4.0	4.0	4.0	M	F	G	81	5.1	B 1	Branch stubs observed No obvious defects observed Minor deadwood in the crown Typical crown form
T40	Wild cherry	7.0	2.0	1	300	4.0	4.0	4.0	4.0	M	F	F	41	3.6	C 1	Branch stubs observed Minor deadwood in the crown 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							
G1	Hornbeam	3.0	2.0	-	50	0.5	0.5	0.5	0.5	Y	G	G	3	0.9	C 2	
G2	Leyland cypress	16.0	4.5	-	300	3.5	3.5	3.5	3.5	M	F	G	41	3.6	C 2	
G3	Leyland cypress	11.0	2.5	-	300	5.0	5.0	5.0	5.0	M	F,P	F,P	41	3.6	C 2	Branch stubs observed Dead and dying trees present Typical crown forms Group is sparse in areas Group is located off site but overhangs the study area Ivy suppressing a number of trees
G4	Leyland cypress	15.0	2.5	-	520	2.0	6.0	6.0	7.0	M EM	F	F	124	6.3	C 2	Branch stubs observed Typical crown forms Minor deadwood in the crowns

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							
H1	Leyland cypress	7.0	0.0	-	170	1.5	1.5	1.5	1.5	SM	F	F	14	2.1	C 2	Managed
H3	Cotoneaster	4.0	1.5	-	140	2.0	2.0	2.0	2.0	M	P	F	10	1.8	C 2	Unmanaged Outgrown hedgerow

Appendix B

Tree Survey Plan

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509800
509900
510000
179800
179700
179600
T25 (C)
T24 (B)
T23 (B)
H1 (C)
G1 (C)
T22 (C)
T21 (C)
T20 (U)
T19 (C)
T18 (C)
T16 (U)
T15 (C)
T17 (C)
T13 (B)
T12 (B)
T14 (B)
T10 (C)
T11 (B)
T40 (C)
T38 (B)
H3 (C)
T39 (B)
G2 (C)
T37 (U)
T35 (B)
G3 (C)
T32 (C)
T36 (B)
T33 (C)
G4 (C)
T34 (C)
T9 (B)
T8 (B)
T7 (A)
T6 (A)
T5 (C)
T4 (A)
T3 (A)
T2 (A)
T1 (A)
0
25
50 m

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

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.

N

Project	Austin Road/Crown Close, Hayes Town Centre Estate
Drawing	Tree Survey Plan
Client	London Borough of Hillingdon
Drawing Number	C183284-01-01
Revision	00
Scale @ A3	1:1,000
Date	October 2025
Approved By	CD
Drawn By	AW

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Triumph House, Birmingham Road, Allesley, Coventry CV5 9AZ
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C183284-01-01

Appendix C

Tree Removal and Retention Plan

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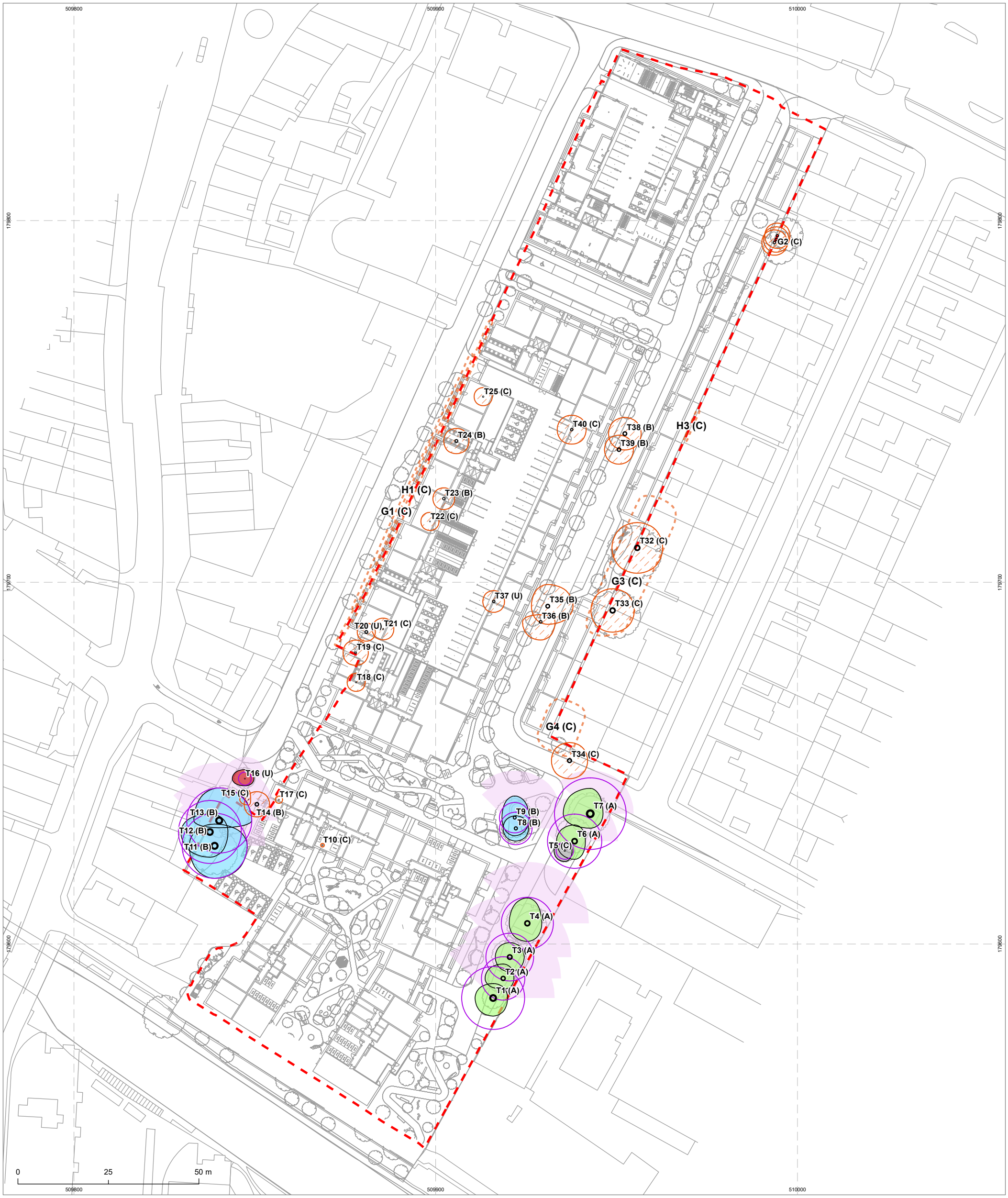

Legend

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

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.
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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.

N

Project	Austin Road/Crown Close, Hayes Town Centre Estate
Drawing	Tree Retention Plan
Client	London Borough of Hillingdon
Drawing Number	C183284-02-01
Revision	00
Scale @ A3	1:1,000
Date	October 2025
Approved By	CD
Drawn By	KB

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