Trees and Construction

BS5837:2012 Tree Survey Assessment

Site:	23A Frays Avenue, West Drayton, UB7 7AF
Client:	Mr. Brian Worthington
Prepared by:	Lyondale Planning & Design
Ref:	Y2231-2025-A100
Survey Date:	31 March 2026
Standard:	BS5837:2012 'Trees in Relation to Design, Demolition and Construction — Recommendations'

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— March 2026 —

1. Introduction

1.1 Instruction: This advice has been prepared for the client Mr. Brian Worthington (hereafter; client) and is in respect of the tree related planning considerations at 23A Frays Avenue, West Drayton, UB7 7AF (hereafter; site).

As the proposal relates to development works at the site — specifically the renovation and upward extension of the existing detached bungalow to create a two-storey dwelling — the advice herein is produced in accordance with the British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction — Recommendations' (hereafter; BS5837).

1.2 BS5837: The scope of BS5837 is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity trees which are appropriate for retention.

1.3 Scope of this advice: This advice has been produced in accordance with BS5837 and is intended to demonstrate the site's realistic arboricultural constraints and assist with the design process. The objective is to systematically assess the site and provide suitable recommendations regarding the proposal's potential impact on trees and vice versa.

1.4 Following instruction the consultant surveyed the site where a site walkover and BS5837 tree survey were carried out. All trees on site and around the application boundary were surveyed from ground level and plotted as either an individual or a tree group, as illustrated on the Tree Survey Plan (drawing Y2231-2025-A100, dated 31.03.2026).

1.5 This advice constitutes the findings of the preliminary site assessment and associated arboricultural recommendations. The survey data and site observations use the supplied planning drawings to illustrate the surveyed trees in plan format. Tree locations are estimated from site observations and should be considered indicative.

1.6 Six individual trees (T1–T6) have been identified on and immediately adjacent to the application site. These are described in full within Section 2 and the appended tree data table.

2. Site Information & Tree Assessment

2.1 The site is occupied by an existing single-storey detached bungalow of timber-clad construction, situated at the end of a cul-de-sac accessed via a shared driveway from Frays Avenue, West Drayton. The site is uniquely bounded on three sides by the Frays River, giving it a secluded riverside character.

2.2 Proposal: It is understood that the site is being considered for a planning application involving the renovation and addition of a first floor to the existing bungalow, together with alterations to fenestration and the introduction of bay windows at ground floor level. The building footprint remains unchanged.

2.3 The site falls within the West Drayton Garden City Area of Special Local Character (ASLC) and is subject to flood risk designations (Flood Zones 2 and 3), a Riverbank Protection Area, and is within an Archaeological Priority Area (Colne Valley). These designations are material planning considerations but do not directly alter the arboricultural assessment.

2.4 The site requires consideration from an arboricultural perspective due to the presence of trees on and around the site. Six trees (T1–T6) have been identified that are deemed to be within impacting distance of the existing property and potential construction area. Their positions are shown on drawing Y2231-2025-A100.

2.4.1 The tree survey and assessment has resulted in the BS5837 quality/retention categories of 'B — Moderate' being attributed to trees T1, T2, T3 and T4, and 'C — Low' being attributed to trees T5 and T6. It is also worth noting that the BS5837 circular Root Protection Areas (RPAs) are considered to halt at the extents of existing property elements such as walls and foundations.

2.4.2 The BS5837 tree survey is a means of objective assessment and reflects the trees' condition, quality contribution, remaining life expectancy and spatial considerations (stem, crown and roots). On this basis, and in order to consider the trees' accurate constraints, the survey data records the crown extents for north, south, east and west, the stem diameter measurement, and the calculated Root Protection Areas (RPAs). The trees are reviewed and considered on their own merits and in line with the guidance of BS5837.

3. Tree Survey Data

The following table summarises the key attributes of each surveyed tree. The full BS5837 data table is appended at Appendix III. The Tree Survey Plan (Y2231-2025-A100) should be read in conjunction with this report.

Tree Ref	Species	Height	Age	BS5837 Cat.	Retention	Notes / Constraints
T1	Ash (Fraxinus excelsior)	12m	Mature	B2	Retain	Prominent tree in northeast of site close to proposed dwelling. Crown spread approximately 10m. Root Protection Area (RPA) likely to overlap with construction zone. Located near the main structure — arboricultural method statement required prior to works.
T2	Sycamore (Acer pseudoplatanus)	12m	Mature	B2	Retain	Located adjacent to T1 in the northeast corner. Significant crown spread. RPA to be shown on Tree Protection Plan. No proposed removal; protective barrier fencing required during construction.
T3	Willow (Salix sp.)	8m	Semi-Mature	B2	Retain	Positioned centrally within the site, close to the Frays River. Species is of moderate quality and provides riverside amenity value. Root system may be extensive due to moisture-seeking habit; ground

Tree Ref	Species	Height	Age	BS5837 Cat.	Retention	Notes / Constraints
						works within 5m to be undertaken with care.
T4	Sycamore (Acer pseudoplatanus)	8m	Semi-Mature	B2	Retain	Located in the southern portion of the site. Moderate quality and value. Crown spread approximately 7m. Construction exclusion zone to be established around RPA.
T5	Sycamore (Acer pseudoplatanus)	2m	Young	C2	Remove (if required)	Young suppressed specimen in the southern area of the site. Low quality and limited landscape contribution. Removal may be considered to facilitate site works if required; replacement planting to be provided on a 1:1 basis.
T6	Sycamore (Acer pseudoplatanus)	4m	Young	C2	Retain where possible	Located in the western boundary area close to Frays River. Low-moderate value. Crown spread approximately 3m. Retention preferred; if works encroach on RPA a no-dig approach should be adopted.

Note: All six trees are on or adjacent to the site boundary. T1 and T2 are the largest specimens and of greatest arboricultural significance to the proposed development. T5 and T6 are of lower quality and their retention, while preferred, is less critical.

4. Findings & Recommendations

The following information should be read with the appended tree data table and the Tree Survey Plan (Y2231-2025-A100).

4.1 General Considerations for Tree Retention / Removal

4.1.1 'B' Class trees (T1, T2, T3, T4) are considered of value both individually and in the landscape and should be retained by design. Proposed encroachment or removal would need to be justifiable and mitigated, and Council resistance would be anticipated, particularly given the riverside setting and ASLC designation.

4.1.2 There are limited identified defects to the surveyed trees at this time. Preventative management recommendations are outlined within the appended survey table. General site inspections and tree works will be required for health and safety tree risk management irrespective of the site's development.

4.1.3 The current proposal does not alter the building footprint, which is a significant benefit from an arboricultural perspective. The primary risk to the surveyed trees arises from construction

activity, foundation works, and ground-level alterations during the renovation process, rather than any expansion of the built envelope.

4.1.4 T1 (Ash, 12m) is the most significant tree on site and its RPA is likely to be in proximity to or overlapping with construction activity. An Arboricultural Method Statement (AMS) should be prepared prior to any works commencing on site. Any proposal to undertake works within the RPA of T1 must be agreed in advance with the Local Planning Authority and supported by appropriate technical justification.

4.2 Tree Protection

4.2.1 The design and layout of the site is to incorporate the essential components of retained trees — crown and rooting area — and provide a suitable level of clearance to allow for their long-term safe retention, including RPA protection, crown clearance, and space for any new trees being planted.

4.2.2 It is likely that a combination of construction restrictions will be used with protective barrier fencing to protect RPAs. The process of site operations will be an important aspect to confirm by way of a construction layout plan, showing storage areas, parking, delivery areas and access routes, all outside of RPAs or with provision for ground protection. As a basis for tree protection the following points will need to be considered:

- Removal of all agreed trees and any agreed pruning works prior to works commencing, by a suitably qualified arboricultural contractor;
- Induction of construction personnel regarding the exclusion of works (including access and storage) from the retained trees' RPAs;
- Secure temporary barrier fencing (Heras or similar) around retained trees' crowns and RPAs, erected prior to any site clearance or groundworks;
- The storage of materials clear of all retained trees, with conditions to ensure no contamination or run-off into soils in proximity to trees;
- For the removal of existing structures and/or hard surfaces from RPAs, works to be undertaken separately from construction, manually and sensitively with hand-held non-mechanical tools.

4.3 General Overview

Tree Works

Any tree removals to facilitate the scheme are to be justifiable in the context of the site layout and are to be mitigated by way of a landscape scheme. New tree planting will be required to replace and enhance the site's canopy cover. A 1:1 removal to replacement ratio is considered appropriate.

Tree Crowns

As the proposal does not alter the building footprint, there is no anticipated worsening of existing crown/structure relationships at ground floor level. However, where a new first floor is introduced, consideration is required for future crown growth towards new structural elements. It is always prudent to provide adequate clearance from a tree's current crown for future growth, to allow a tree adequate space to reach maturity without conflict with new structures.

Root Protection Areas (RPA)

As a minimum, the outer extents of retained trees' RPAs should be treated as construction exclusion zones. Where construction activities within rooting areas of retained trees are unavoidable, this will require greater attention to tree protection, foundation designs, and phasing of works. If it is proposed to undertake works within these areas, more specific advice should be sought from a qualified arboriculturalist with a view to assessing feasibility and forming a suitable method statement.

Hard Landscape Works

Where ground works are proposed within RPAs, construction methods for hard surfacing and walls should retain the existing ground levels, be undertaken sensitively, and use a no-dig design. Conversion of soft surfaced areas within RPAs to hard surfaced walkways or parking areas will need to utilise a no-dig product to ensure no negative impact on tree roots and/or growing conditions.

5. Tree Protection Measures

This section sets out the specific tree protection measures required to safeguard all retained trees (T1–T4 and T6) during the proposed renovation and upward extension works at 23A Frays Avenue. These measures accord with BS5837:2012 and should be implemented in full prior to any site clearance, demolition, or construction activity commencing.

5.1 Tree Protection Plan (TPP)

5.1.1 A Tree Protection Plan (TPP) must be prepared to accompany the planning application. The TPP is a scaled drawing showing the position of all retained trees, their Root Protection Areas (RPAs), crown spreads, and the location of all proposed tree protection fencing and exclusion zones. It must be based upon the Tree Survey Plan (Y2231-2025-A100) and the proposed site layout drawings.

5.1.2 The TPP should also indicate: site access routes, delivery and storage areas, welfare facilities, and any areas requiring special ground protection — all confirmed to be outside of tree RPAs unless specific no-dig mitigation has been agreed.

5.1.3 The TPP must be agreed with the Local Planning Authority prior to commencement of works and forms the basis of any tree-related planning conditions.

5.2 Root Protection Areas (RPA) — Exclusion Zones

5.2.1 The Root Protection Area (RPA) of each retained tree, calculated in accordance with BS5837:2012, represents the minimum ground area around a tree that must be protected to maintain the tree's long-term viability. The RPA radii for the surveyed trees are summarised in the data table at Appendix III.

5.2.2 The full extent of each RPA shall be treated as a construction exclusion zone unless specific mitigation measures have been agreed in an Arboricultural Method Statement (AMS). No excavation, trenching, storage of materials, vehicle access, or soil compaction shall take place within these zones without prior written agreement from the appointed arboricultural consultant and the Local Planning Authority.

5.2.3 Of particular note: the RPA of T1 (Ash, 12m) is estimated at approximately 4.6m radius and may overlap with the construction zone around the existing dwelling. Works within this RPA must be preceded by a detailed AMS and, if excavation is unavoidable, root investigation works should be carried out by hand to assess the presence and condition of roots before any cutting is undertaken.

5.2.4 Given the riverside setting, T3 (Willow) is likely to have an extensive root system extending beyond the calculated BS5837 RPA due to the moisture-seeking habit of the species. A precautionary exclusion zone of a minimum 5 metres from the stem of T3 is recommended, irrespective of the calculated RPA.

5.3 Tree Protection Fencing

5.3.1 Temporary protective barrier fencing shall be erected around all retained trees prior to any site operations commencing. Fencing shall conform to BS5837:2012 Figure 2 and shall comprise:

- Galvanised steel Heras-type fencing panels, minimum 2.0m in height, supported on concrete block feet or driven posts;
- Panels shall be positioned at the outer edge of each tree's RPA, or at the limit of the crown spread where this is greater;
- Fencing shall be continuous and secured to prevent unauthorised access or accidental movement;
- Signage shall be attached to the fencing at regular intervals reading: 'Tree Protection Zone — Do Not Enter'.

5.3.2 The fencing shall remain in position throughout the entire construction period and shall not be moved, removed, or repositioned without the prior written approval of the arboricultural consultant. Under no circumstances shall fencing be removed to facilitate temporary access, storage, or working activities within the RPA.

5.3.3 For T1 and T2 in the northeast of the site, a combined exclusion zone may be established encompassing both RPAs where the zones overlap, provided the total area protected is not reduced below the sum of the individual calculated RPAs.

5.4 Ground Protection within RPAs

5.4.1 Where any site access or construction activity is proposed within or immediately adjacent to a tree's RPA and cannot be avoided, the following ground protection measures shall be implemented:

- A layer of geotextile membrane shall be laid across the affected ground surface, covered by a minimum 150mm depth of wood chip or similar organic mulch, or by proprietary ground protection boards rated for the loads to be applied;

- No material shall be stockpiled, and no vehicles heavier than a standard passenger car shall operate on the protected ground unless load-spreading equipment (e.g. scaffold boards, timber mats, or purpose-made access roadway systems) is in place;
- The ground protection system shall be removed sensitively at the end of the works, and the soil surface inspected and remediated if necessary.

5.4.2 No burning of materials, disposal of chemicals, concrete washout, or refuelling shall take place within 10 metres of any retained tree. Any spillage of fuel, oil, or cement within the vicinity of a retained tree must be reported immediately to the arboricultural consultant.

5.5 Works within Root Protection Areas — AMS Requirements

5.5.1 Where the proposed development requires works to occur within the RPA of any retained tree, an Arboricultural Method Statement (AMS) must be prepared by a qualified arboriculturalist (Member of the Arboricultural Association or equivalent) and approved by the Local Planning Authority prior to works commencing. The AMS shall set out in detail:

- The extent and nature of proposed works within the RPA;
- A root investigation method using hand digging or air spade techniques to identify root presence and condition before any cutting or excavation;
- The minimum root diameter to be cut (typically no roots greater than 25mm diameter without prior agreement);
- The method of root severance (clean cut using a pruning saw; no tearing or mechanical root cutting without agreement);
- Backfilling and reinstatement methodology to avoid compaction around root zones;
- The foundation design adopted within or adjacent to the RPA (e.g. piled foundations, reinforced raft, or suspended slab to span across root zones);
- Monitoring and supervision requirements during critical construction phases.

5.5.2 For T1 (Ash), any works within the RPA will require a minimum of one arboricultural site visit during the relevant phase of works to supervise root investigation and any necessary root pruning. A record of all root works shall be maintained and provided to the Local Planning Authority on request.

5.6 Demolition and Excavation Precautions

5.6.1 Demolition of any existing structures, removal of hard surfacing, or excavation works within or near the RPAs of retained trees shall be undertaken with the following precautions:

- Works to be carried out by hand using non-mechanical tools where within 1m of any calculated RPA boundary;
- No mechanical breaking or lifting equipment (e.g. breakers, excavators) to operate within the RPA without arboricultural supervision and specific AMS approval;
- Existing ground levels within RPAs to be maintained wherever possible; any changes to levels must be agreed in advance and mitigated;
- Where removal of existing foundations or hard surfaces within an RPA is required, works should be phased to ensure roots are not exposed to desiccation; exposed roots should be covered with damp hessian sacking and backfilled or protected within 24 hours.

5.7 Services, Utilities, and Drainage

5.7.1 All new service routes, drainage runs, and utility connections shall be designed to avoid the RPAs of retained trees wherever possible. Where unavoidable crossings of RPAs are required, the following shall apply:

- Services shall be installed by directional drilling (trenchless technology) below the rooting zone, or by careful hand excavation following root investigation;
- Service routes within RPAs shall be agreed in the AMS and, where trenching is unavoidable, the trench shall be the minimum width required and shall follow the most direct route across the RPA;
- All roots greater than 25mm encountered during service installation shall be retained intact where possible; where severance is unavoidable, cuts shall be clean and reported to the arboricultural consultant.

5.8 Post-Construction Monitoring

5.8.1 Following completion of construction works, a post-construction arboricultural inspection shall be carried out to assess the condition of all retained trees and to confirm that no significant damage has occurred to stems, crowns, or root zones during the works. This inspection report shall be provided to the Local Planning Authority if required by condition.

5.8.2 All retained trees should be monitored annually for a minimum of three years post-construction, with any signs of stress, dieback, or structural failure reported to a qualified arboriculturalist. Particular attention should be given to T1 (Ash), given its proximity to the principal construction area, and to T3 (Willow), which may be sensitive to changes in groundwater levels arising from drainage or ground works.

5.9 New Tree Planting

5.9.1 Where any trees are removed as part of the approved scheme, replacement planting shall be provided on a minimum 1:1 basis. New trees shall be selected to be appropriate in species, scale and character to the riverside, ASLC setting. The following principles shall guide the planting scheme:

- Species selection to reflect the native character of the Frays River corridor (e.g. Alder, Field Maple, Hawthorn, or similar native species appropriate to the flood zone context);
- Stock size to be a minimum standard nursery tree (10–12cm girth at time of planting) to ensure meaningful amenity contribution;
- Planting locations to avoid future conflict with structures, services, or retained trees, and to allow adequate space for full canopy development;
- A detailed planting specification to be included within the landscape plan, covering species, stock size, pit preparation, staking, tree ties, mulching, watering, and a minimum three-year aftercare programme.

5.9.2 New planting shall not be located within the RPAs of existing retained trees, and shall maintain adequate separation distances to avoid future crown competition.

6. Arboricultural Impact Assessment (AIA)

6.1 Purpose: This Arboricultural Impact Assessment (AIA) evaluates the direct and indirect effects of the proposed renovation and first-floor extension at 23A Frays Avenue on the trees identified in Section 2 and the appended tree survey data table. It has been prepared in accordance with BS5837:2012 and the guidance set out in the Arboricultural Association's Arboricultural Practice Note 7 (Trees and Development).

6.2 The AIA considers impacts arising from: demolition of existing roof structure; construction of the new first floor; internal structural alterations; alterations to fenestration and the addition of bay windows; and associated groundworks, drainage, and services installation. The building footprint is not being altered, which significantly limits the extent of potential arboricultural impact.

6.3 Assessment of Impacts by Tree

The following assessment addresses each surveyed tree in turn, considering the likely direct and indirect impacts of the proposed works.

Tree Ref	Species	BS Cat.	RPA Radius	Likely Impact	Risk Level
T1	Ash	B2	4.6m	Moderate–High. Root zone likely to overlap with structural works near existing dwelling footprint. Crown clearance from new first floor to be confirmed.	MEDIUM-HIGH
T2	Sycamore	B2	4.2m	Low–Moderate. Located northeast of dwelling; construction activity unlikely to directly encroach RPA given unchanged footprint. Crown clearance from new roof level to be checked.	LOW-MEDIUM
T3	Willow	B2	2.6m (+5m precautionary)	Low. Central site position away from main construction zone. Groundwater sensitivity if drainage scheme altered. No direct footprint encroachment expected.	LOW
T4	Sycamore	B2	2.4m	Low. Southern site position; proposed works confined to existing building envelope. Monitor for construction traffic proximity.	LOW

Tree Ref	Species	BS Cat.	RPA Radius	Likely Impact	Risk Level
T5	Sycamore	C2	0.5m	Negligible. Small suppressed specimen; remote from proposed works. Potential removal if site logistics require.	NEGLIGIBLE
T6	Sycamore	C2	1.0m	Low. Boundary tree near river. No direct impact anticipated from proposed works. Ground protection if vehicles access western boundary.	LOW

6.4 Direct Impacts

6.4.1 Root system impacts: The proposed works do not alter the building footprint, which is the most significant factor in limiting root system disturbance. However, the renovation works are likely to involve internal structural alterations, including the possible thickening of existing walls for insulation and structural purposes, installation of a new staircase, and works to the ground floor slab. Any excavation associated with these internal works has the potential to impact on roots of T1 in particular, depending on the depth and extent of existing foundations and any underpinning or new foundation elements required.

6.4.2 Crown impacts: The addition of a first floor increases the height of the building from approximately 4.0–4.5m (existing bungalow ridge) to approximately 8.3m (proposed two-storey ridge, as confirmed by the approved PD scheme drawings). This increased height may introduce new points of crown/structure proximity for T1 and T2, whose canopies extend towards the northeast of the building. Clearance distances between the proposed roof and the existing crown extents of T1 and T2 should be confirmed on site and noted in the AMS. Where clearance is insufficient, targeted crown management may be required — any such works to be agreed with the LPA if trees are subject to TPO or CA restrictions.

6.4.3 Stem impacts: No works are proposed that would directly impact on the stems of any surveyed tree. Contractor vehicles and plant shall be managed to avoid contact with stems; stem guards (hessian and board wrapping secured with wire — not nailed) shall be applied to T1 and T2 as an additional precaution during the construction phase.

6.5 Indirect Impacts

6.5.1 Soil compaction: Construction traffic, storage of materials, and movement of plant can cause significant soil compaction within tree root zones, reducing soil oxygen levels and impairing root function. The risk is greatest for T1 and T2 given their proximity to the principal construction access route. Ground protection measures as described in Section 5.4 shall be implemented to mitigate this risk.

6.5.2 Changes to drainage: The proposal includes no increase in impermeable surface area. However, internal drainage alterations (e.g. new ground floor drainage connections, changes to soakaway or foul water routes) should be routed to avoid tree RPAs. T3 (Willow) is particularly

sensitive to changes in groundwater availability given its moisture-dependent physiology; any works that may alter surface or subsurface water flow near T3 should be assessed and mitigated.

6.5.3 Contamination risk: The use of concrete, cement, lime mortar, fuels, and chemicals on site presents a contamination risk to soils within root zones. Management measures are set out in Section 5.4. Of particular note is the need to prevent cement washout or lime run-off from reaching the Frays River, both for arboricultural and environmental protection reasons.

6.5.4 Long-term shading: The increased height of the building may cast additional shadow over parts of the garden previously open to sunlight. While this is unlikely to cause direct harm to the mature trees surveyed, any new planting proposed in shaded areas should be selected for shade tolerance.

6.6 AIA Conclusions

6.6.1 Subject to the implementation of the tree protection measures set out in Section 5 and the Arboricultural Method Statement detailed in Section 7 of this report, the proposed development is considered to be capable of being delivered without causing unacceptable harm to the surveyed trees of arboricultural and amenity value on and adjacent to the site.

6.6.2 The key risk is to T1 (Ash), which is the closest significant tree to the area of construction activity. This risk is manageable through the adoption of appropriate foundation design, root-sensitive working methods within the RPA, and arboricultural supervision during critical phases of the works.

6.6.3 The overall arboricultural impact of the proposed development, when mitigated in accordance with this report, is assessed as acceptable and consistent with the requirements of BS5837:2012, the NPPF (2021), and the Hillingdon Local Plan arboricultural policies.

7. Arboricultural Method Statement (AMS)

7.1 Purpose: This Arboricultural Method Statement (AMS) sets out the methodology for all construction activities at 23A Frays Avenue that have the potential to affect the retained trees identified in the tree survey (T1–T4 and T6). It is prepared in accordance with BS5837:2012 and should be read alongside the Tree Protection Plan (Y2231-2025-A100) and the tree protection measures set out in Section 5 of this report.

7.2 This AMS is intended to be submitted as a supporting document to the planning application and, if approved, will form the basis of any arboricultural planning conditions attached to the permission. It is a live document and may be updated during the design development process in consultation with the appointed arboricultural consultant and the Local Planning Authority.

7.3 Pre-Commencement Requirements

7.3.1 The following actions must be completed before any site clearance, demolition, or construction work commences on site:

- The Tree Protection Plan (TPP) must be agreed in writing with the Local Planning Authority;
- Tree protection fencing must be erected in the positions shown on the TPP and inspected by the arboricultural consultant prior to any works commencing;
- A pre-commencement site meeting must be held between the contractor, the arboricultural consultant, and the site manager to brief all site operatives on the tree protection requirements and the extent of the construction exclusion zones;
- Stem protection (hessian and board guards) must be applied to T1 and T2 before any plant or machinery is brought onto site;
- The site manager must hold a copy of this AMS and the TPP on site at all times throughout the construction period.

7.4 Construction Phase — Methodology by Work Package

7.4.1 Roof Demolition and First Floor Construction

Demolition of the existing roof and construction of the new first floor structure are unlikely to directly affect tree roots or stems, provided that no scaffold poles, hoarding, or temporary structures are driven into or anchored within the RPAs of retained trees. Scaffold base plates shall be used rather than driven anchors within RPA zones. Scaffold erection within 2m of T1 or T2 shall be supervised by the arboricultural consultant.

7.4.2 Internal Structural Works

Where internal works require excavation (e.g. new staircase pit, underpinning, slab thickening, drainage connections), the following methodology shall apply:

- Prior to any excavation within 3m of the external wall of the building on the T1/northeast side, a root investigation trench (minimum 300mm wide, hand-dug) shall be excavated to confirm the presence, depth, and condition of tree roots;
- The root investigation shall be supervised by the arboricultural consultant who will record findings and advise on whether foundation design modifications are required;

- Where roots greater than 25mm diameter are encountered, they shall not be cut without prior written approval from the arboricultural consultant; approved severance shall be made with a sharp pruning saw at a clean right-angle to the root axis;
- Where roots are to be retained, the excavation shall be widened to allow roots to remain undisturbed; roots shall be protected from desiccation by covering with damp hessian and the excavation backfilled or temporarily covered at the end of each working day;
- Foundation design within the RPA of T1 shall adopt piled foundations or a suspended ground floor slab wherever practicable, to minimise ground disturbance within the root zone.

7.4.3 External Works — Drainage and Services

All external drainage and services works shall follow the methodology set out in Section 5.7. Any new drainage connections on the T1 side of the building shall be routed at minimum depth using directional boring where within the RPA. A no-dig drainage solution (e.g. soakaway crates or permeable pipe bedding) shall be considered in preference to traditional excavation wherever within 2m of any RPA boundary.

7.4.4 Hard Landscaping and Ground Reinstatement

Any reinstatement of ground surfaces within or adjacent to RPAs following construction shall use permeable, no-dig construction methods. Bound gravel or resin-bonded surfaces on a geotextile membrane are preferred over concrete or tarmac. Where existing impermeable surfaces are to be reinstated on a like-for-like basis within the RPA, the work shall be carried out manually and the existing substrate disturbed as little as possible.

7.4.5 Bay Window Construction

The proposed bay windows at ground floor level do not alter the principal building footprint significantly, but their construction may involve localised excavation for new footings. Any new foundations associated with bay windows on the T1/northeast elevation shall be assessed in the context of T1's RPA. A pad or mini-pile foundation system shall be adopted in preference to a strip foundation where within the RPA, to minimise root zone disturbance.

7.5 Supervision and Inspection Schedule

The following arboricultural supervision visits are required during the construction programme:

Visit No.	Stage / Trigger	Scope of Inspection	Action if Issues Found
1	Pre-commencement — before any site works begin	Confirm TPP fencing erected correctly; check stem guards on T1 and T2; brief site manager	Correct fencing position before works proceed
2	Root investigation — prior to any excavation on NE side of building	Supervise hand-dig root investigation trench; record root presence, depth, and diameter; advise on foundation methodology	Issue written instruction to contractor; notify LPA if significant roots found
3	Foundation/slab works within or adjacent to T1 RPA	Inspect and approve root severance where required; confirm foundation method is as agreed in AMS	Halt works if unauthorised root cutting occurs; notify LPA

Visit No.	Stage / Trigger	Scope of Inspection	Action if Issues Found
4	Drainage and services installation	Confirm service routes avoid RPAs; inspect any hand excavation near T3 (Willow)	Redirect services if necessary; advise on root protection
5	Post-construction — on practical completion of external works	Inspect all retained trees for signs of construction damage; confirm fencing can be removed; assess stem and crown condition	Issue post-construction report; recommend remedial arboricultural works if required

7.5.1 All supervision visits shall be recorded in a site arboricultural log maintained by the arboricultural consultant. The log shall be made available to the Local Planning Authority on request and shall form part of the post-construction compliance report.

7.6 Responsibilities

Party	Responsibilities
Client / Developer (Mr. Brian Worthington)	Ensure the appointed contractor is briefed on tree protection requirements prior to commencement. Appoint arboricultural consultant for supervision visits. Ensure planning conditions relating to trees are discharged prior to the commencement of relevant works.
Main Contractor	Erect and maintain tree protection fencing in accordance with the TPP. Brief all site operatives and subcontractors on tree protection exclusion zones. Contact arboricultural consultant immediately if any unplanned root exposure or tree damage occurs. Keep a copy of this AMS on site at all times.
Arboricultural Consultant (Lyondale Planning & Design)	Prepare and update the TPP and AMS. Carry out supervision visits in accordance with the schedule at Section 7.5. Provide written instructions to the contractor where methodological decisions are required on site. Maintain the site arboricultural log and prepare the post-construction report.
Subcontractors	Comply fully with the tree protection requirements in this AMS and the TPP. Do not enter tree protection zones without prior written approval from the arboricultural consultant. Report any accidental damage to retained trees to the site manager immediately.

7.7 Emergency Procedures

7.7.1 In the event of accidental damage to any retained tree during construction — including stem impact, root severance beyond the agreed scope, or ground contamination within an RPA — the following steps shall be taken immediately:

- All works in the vicinity of the affected tree shall cease immediately;
- The site manager shall notify the arboricultural consultant by telephone within 2 hours of the incident;
- The arboricultural consultant shall attend site within 48 hours to assess the extent of damage and advise on remediation;
- A written incident report shall be prepared by the arboricultural consultant and submitted to the Local Planning Authority within 5 working days;

- Any required remedial arboricultural works (e.g. root pruning, crown reduction, soil aeration) shall be carried out by a qualified arboricultural contractor under the supervision of the arboricultural consultant.

7.7.2 The Local Planning Authority should be notified of any significant tree damage during construction where this may constitute a breach of planning condition. The arboricultural consultant will advise the client on any statutory obligations arising from accidental damage to protected trees.

7.8 AMS Sign-Off

7.8.1 This Arboricultural Method Statement has been prepared by Lyondale Planning & Design on behalf of Mr. Brian Worthington in connection with the proposed renovation and first-floor extension at 23A Frays Avenue, West Drayton, UB7 7AF. It is intended to demonstrate that the proposed works can be carried out without unacceptable harm to the retained trees on and adjacent to the site, in accordance with BS5837:2012.

7.8.2 The AMS is subject to review and approval by the Local Planning Authority and may be updated following design development or pre-application discussions. Any amendments shall be agreed in writing with the appointed arboricultural consultant.

Prepared by:	Lyondale Planning & Design	**Date:**	31 March 2026
Reference:	Y2231-2025-A100	**Status:**	For Planning Submission

8. Additional Details

8.1 The surveyed trees have been subject to a detailed inspection and the arboricultural considerations detailed within this advice. The advice herein is intended to guide a suitable design in consideration of the site's valuable amenity assets.

8.2 Where retained trees are avoided and removed trees are mitigated, the considerations herein may form part of tree-related planning conditions. These are to be detailed within an Arboricultural Method Statement (AMS) based on the approved scheme. Anticipated impacts on trees, encroachment of crowns, RPA incursion, or proposed construction near trees will likely require a detailed AMS to support the planning application.

8.3 The finer details of layout, design detail to accommodate trees, and any proposed new tree planting are to be illustrated within a landscape plan. This is to include the exact details of hard and soft landscape works, RPA sections where surface works are proposed, and details of new tree planting location, species, stock selection, installation and maintenance.

8.4 Further to the supply of the proposed site plan for the planning application, this survey data will inform further updates to the Arboricultural Implications Assessment (AIA) contained within Section 6. Where this advice is accounted for in the design process, this will enable the arboricultural constraints to be managed effectively through phased works and appropriate tree protection measures.

This concludes our advice.

Appendix I — Caveat

Any and all information supplied to Lyondale Planning & Design by or on behalf of the client is assumed to be accurate unless otherwise informed. This advice is limited to the observations made on the date of inspection as detailed herein; any deletion, editing or alteration will render the advice null and void in its entirety. This advice may be deemed null and void if remedial works are undertaken on any area of the site on or after the date of the survey. No liability is assumed by the author or by Lyondale Planning & Design for any misuse, misinterpretation or misrepresentation of this advice. This advice is not valid in adverse or unpredictable weather conditions or for any failure due to 'force majeure' or unpredictable events. No responsibility is assumed by the author or by Lyondale Planning & Design for any legal matters that may arise as a consequence. The responsibility for any works undertaken on the basis of the recommendations of this advice does not form part of this agreement.

Appendix II — Terms and Definitions

"Arboriculturist" — person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.

"BS5837 Tree Survey" — should be undertaken by an arboriculturist to record information about the trees on or adjacent to a site. The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used to inform feasibility studies and design options.

"Root Protection Area (RPA)" — layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. The radius is calculated using the BS5837 calculation method.

"Tree categorisation method" — trees should be categorised in accordance with the BS5837 cascade chart by an arboriculturist. Category A: high quality, 40+ year contribution. Category B: moderate quality, 20+ year contribution. Category C: low quality, 10+ year contribution. Category U: trees warranting removal.

"Arboricultural Method Statement (AMS)" — methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

"Tree Protection Plan (TPP)" — a scale drawing, informed by descriptive text where necessary, based upon finalised proposals, showing trees for retention and illustrating tree and landscape protection measures.

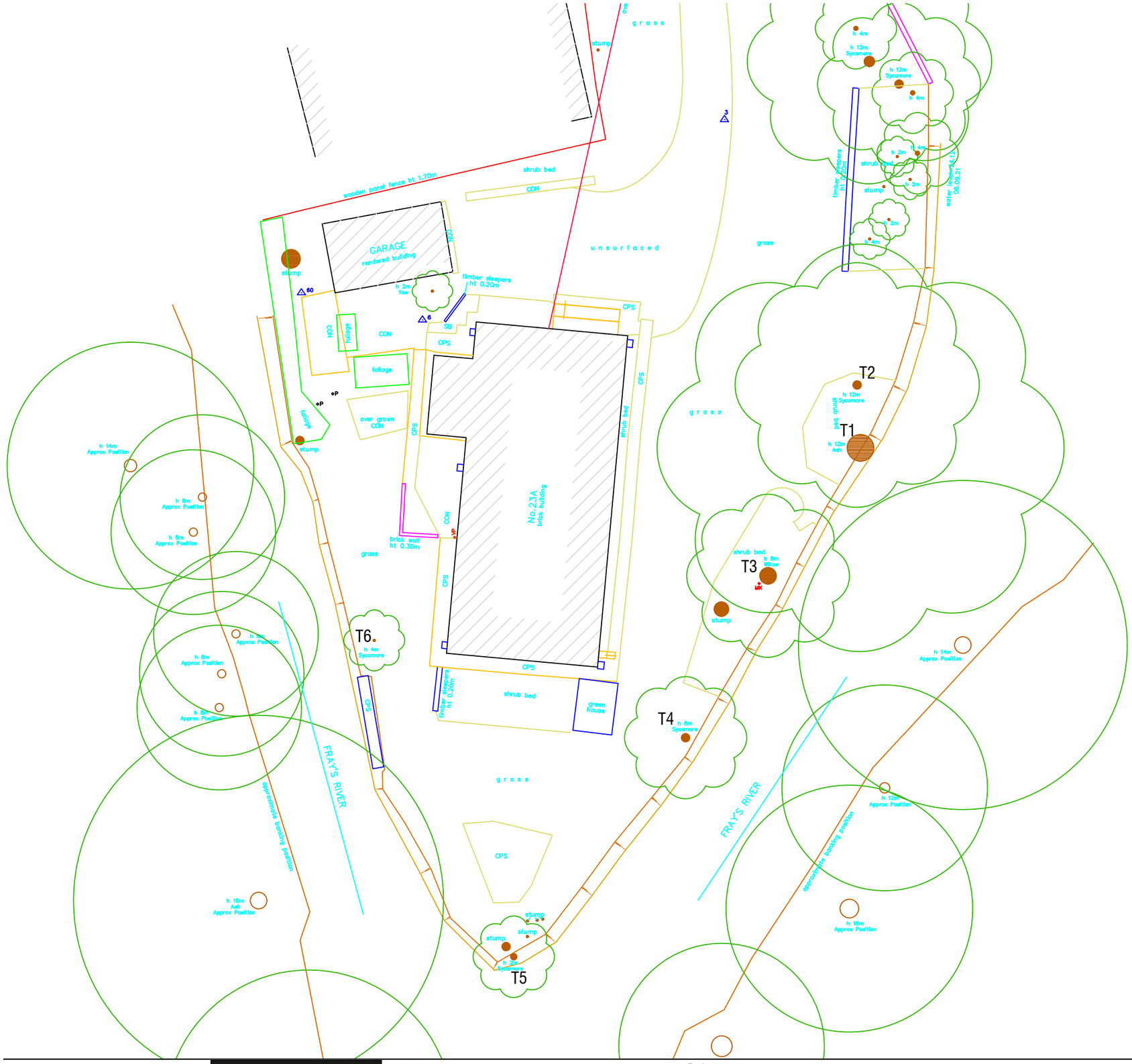
Appendix III — BS5837 Tree Survey Data Table

Tree Survey in accordance with British Standard 5837:2012 'Trees in Relation to Design, Demolition & Construction — Recommendations'

Tree Ref	Species	Age	Height (m)	Stem (mm)	RPA (m)	Crown N-S (m)	Crown E-W (m)	Vitality	BS Cat.	Notes & Management
T1	Ash (Fraxinus excelsior)	M	12	Est. 380	4.6	10	8	Fair	B2	Large tree NE of site. Codomiant stems. Crown noted with deadwood. Root system likely to extend towards construction zone. Monitor condition annually.
T2	Sycamore (Acer pseudoplatanus)	M	12	Est. 350	4.2	10	9	Good	B2	Significant specimen adjacent to T1. Dense canopy. Previous crown work evident. Retain; TPP fencing required.
T3	Willow (Salix sp.)	SM	8	Est. 220	2.6	7	7	Good	B2	Riverside tree, central site. Moisture-seeking roots may extend widely. Ground works within 5m to be carried out manually.
T4	Sycamore (Acer pseudoplatanus)	SM	8	Est. 200	2.4	7	6	Good	B2	Southern portion of site. Moderate crown. RPA exclusion zone to be established prior to any works.
T5	Sycamore (Acer pseudoplatanus)	Y	2	Est. 40	0.5	2	2	Fair	C2	Suppressed young specimen. Limited amenity value. Removal may be considered if necessary; 1:1 replacement required.
T6	Sycamore (Acer pseudoplatanus)	Y	4	Est. 80	1.0	3	3	Fair	C2	Young boundary tree adjacent to river. Low-moderate value. Retain where possible; no-dig approach if works encroach.

Key: M = Mature, SM = Semi-Mature, Y = Young. BS Category: A = High (40+ yr), B = Moderate (20+ yr), C = Low (10+ yr), U = Remove. Suffix: 1 = Arboricultural, 2 = Landscape value.

Tree Survey Plan: As appended (Y2231-2025-A100, dated 31.03.2026)



Legend

Tree 01
Ash - 12m high

Tree 02
Sycamore - 12m high

Tree 03
Willow - 8m high

Tree 04
Sycamore - 8m high

Tree 05
Sycamore - 2m high

Tree 06
Sycamore - 4m high

1:200
0 2 4 6 8m

LYONDALE PLANNING & DESIGN
CROWN HOUSE, HOME GARDENS
DARTFORD, KENT, DA1 1DZ

Client : Mr. Brian Worthington

Project : 23A Frays Avenue
West Drayton
UB7 7AF

Title : Tree Surveys

Stage : PLANNING DRAWINGS

Drawing Number : Y2231-2025-A100
Rev Number : -
Date : 2026.03.31
Paper Size : A3