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BS5837:2012 TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT: 9 Wilder Close, Ruislip, HA4 9LU

Dated: 24th March 2025

Our reference: GHA/DS/160267:25

CONTENTS

Arboricultural Impact Assessment

Location: 9 Wilder Close, Ruislip, HA4 9LU
Our reference: GHA/DS/160267:25
Client: Achi Ejikeme
Dated: 24th March 2025
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 11th March 2025

Instructions

Issued by – Achi Ejikeme

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to 9 Wilder Close, in order to assess their general condition and to provide a planning integration statement for the indicative proposed development that safeguards the long term wellbeing of the retained trees in a sustainable manner.

Executive Summary

The proposal for the site is to renovate the existing house, work that will include new extensions to the side and rear. The proposed scheme requires the removal of T5 a relatively insignificant (C category) tree. The proposal requires new structures to be installed within the root protection areas of nearby trees; however, mitigations are proposed to ensure these structures will not adversely affect these trees. The retained trees require protection in accordance with industry best practice and BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations, in order to ensure their longevity.

Documents Supplied

The client supplied the following documents:

- Existing layout plans
- Proposed layout plans

Scope of Survey

1.1 The survey is concerned with the arboricultural aspects of the site only.

1.2 The planning status of the subject property was not investigated in detail.

1.3 A qualified Arboriculturist undertook the report and site visit and the contents of this report are based on this. Whilst reference may be made to built structure or soils, these are only opinions and confirmation should be obtained from a qualified expert as required.

1.4 Trees in third party ownership were surveyed from within the subject property, therefore a detailed assessment was not possible and some (if not all) measurements were estimated. Where the stem location of a third party tree has been estimated, this is noted on the plan.

1.5 Dense vegetation or climbers (such as ivy) also prohibited full inspections for some trees; this is noted where applicable.

1.6 No discussions took place between the surveyor and any other party.

1.7 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breleor (The body language of tree, DoE booklet Research for Amenity Trees No. 4, 1994)

1.8 The survey was undertaken in accord with British Standard 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

1.9 The client's attention is drawn to the responsibilities under the Wildlife and Countryside Act (1981).

Survey Method

2.1 The survey was conducted from ground level with the aid of binoculars if needed.

2.2 No tissue samples were taken nor was any internal investigation of the subject trees undertaken.

2.3 No soil samples were taken.

2.4 The height of each subject tree was estimated using a clinometer and recorded to the nearest half metre.

2.5 The stem diameter for each tree was measured in line with the requirements set out in BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations.

2.6 The crown spreads were measured with an electronic distometer and recorded to the nearest half metre. Where the crown radius was notably different in any direction this has been noted on the Plan (appendix A) and within the tree table (Appendix B). The crowns of those trees that are proposed for removal, or trees where the crown spread is deemed insignificant in relation to the proposed development are not always shown on the appended plan; however their stem locations are marked for reference.

2.7 The Root Protection Area (RPA) for each tree is included in the tree table, both as an area, and as the radius of a circle.

2.8 The crown clearance was measured using a clinometer and recorded to the nearest half metre. Where it is significantly lower in one direction, this is noted within the tree table at appendix B.

2.9 All of the trees that were inspected during the site visit are detailed on the plan at Appendix A; this plan was produced in colour and **MUST** only be scanned or reproduced in colour. The trees on this plan are categorised and shown in the following format:

COLOUR CODING AND RATING OF TREES:

Category A – Trees of high quality with an estimated remaining life expectancy of at least 40 years. Colour = light green crown outline on plan.

Category B – Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Colour = mid blue crown outline on plan.

Category C – Trees of low quality with an estimated remaining life expectancy of at least 10 to 20 years, or young trees with a stem diameter below 150mm. Colour = uncoloured crown outline on plan.

Category U – Those in such a condition that they cannot realisitically be retained as living trees in the context of the current land use for longer than 10 years. Colour = red crown outline on plan.

All references to tree rating are made in accordance with BS 5837: 2012 – Trees in relation to design, demolition and construction – recommendations', Table 1.

The Site

3.1 The site is located on Wilder Close, to the east of Ruislip town centre.

The Subject Trees

4.1 The details of the subject trees are set out in the Schedule at Appendix B.

4.2 Of the seven individual trees and groups of trees surveyed, one has been assessed as BS 5837 category A, two have been assessed as BS category B, three have been assessed as BS category C with the remaining tree being assessed as BS 5837 category U.

Category A	1 tree
Category B	2 trees
Category C	3 trees
Category U	1 tree

The Proposal

5.1 The proposal for the site is to renovate the existing house, work that will include new extensions to the side and rear.

5.2 The proposed location of the above structures can be seen on the appended plan.

Arboricultural Impact Assessment

PROPOSED TREE REMOVAL / RETENTION:

6.1 T5 is proposed for removal as part of the new development, as this tree could not be effectively retained as it is located within the outline of the new structures, or located too close to make its retention feasible / sustainable. This tree has been given a C category grading in accordance with BS 5837 and therefore should not act as a limitation on the effective use of the site, or impose any significant constraints on the layout (see table 1 BS5837).

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

6.2 T3 and T6 will be pruned to improve clearances from the proposed new structure.

6.3 The proposed work to T3 is assessed to be minor and will not adversely impact the health or amenity value of this tree.

6.4 The work to T6 is partly on safety grounds (see comments on condition in appendix B) and thus would be required regardless of the proposals, in order to assure the safety of the site users.

6.5 The implementation of the proposal does not lead to the requirement to prune any of the other retained trees.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

6.6 Section 4.6.3 of BS 5837: 2012 states that the Root Protection Area (RPA) of each tree should be assessed by an arboriculturalist considering the likely morphology and disposition of the roots, when known to be influenced by past or existing site conditions.

6.7 The assessed RPAs (excluding the RPAs of U category trees and those trees which are proposed for removal) can be seen on the appended plan where some have amended to take account of the existing structures.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES & PROPOSED MITIGATIONS

6.8 There is an encroachment into the RPAs of T3 and T6 from the new structure as shown on the appended plan; thus, the use of traditional strip foundations will not be acceptable as this would cause harm to these trees.

6.9 The use of a system employing mini piles in conjunction with ground beams will instead be used and is now widely accepted. Localised piles will be positioned (following trial digs) to ensure that any significant roots (over 25mm) that are present in the area where the new building will sit can be retained and protected to coexist with the new structure.

6.10 In order to arrive at a suitable foundation design (which minimises root disturbance within the RPAs of nearby retained trees), site specific and specialist advice regarding footings should be sought from an Engineer, in close discussion with the projects Arboriculturalist.

6.11 The proposed new structure is situated outside of the assessed RPAs of all of the other trees proposed for retention, therefore these trees pose no below ground constraints on the new structures or vice versa.

ACCESS TO THE NEW DEVELOPMENT

6.12 The existing driveway and parking areas will be retained and there are no plans to upgrade or extend these areas as part of the proposed site works.

HARD LANDSCAPING

6.13 All new pathways and soft landscaping areas within the Root Protection Areas (RPAs) of the retained trees should be designed using no-dig, up and over construction and in close co-ordination with the retained Arboriculturalist using porous materials.

INSTALLATION OF SERVICES

6.14 The installation of underground apparatus and drainage systems with the use of mechanical excavators will undoubtedly sever any roots that may be present and can change the hydrology and structure of the nearby soil in a way that will adversely affect the health of any nearby trees. Particular care should therefore be taken when assessing the layout of new services and consideration must be given to the methods of installation of all underground apparatus.

Post Development Pressure

FUTURE TREE AND STRUCTURE RELATIONSHIPS

7.1 The retained trees are at a satisfactory distance from the proposed new building outline and highly unlikely to give rise to any inconvenience.

7.2 Some minor lateral pruning of the retained trees and shrubs may be required in the medium term; however, any such work would not have a significant impact on the health or amenity value of these trees.

7.3 Regular inspections of the retained trees by a suitably qualified Arboriculturalist and subsequent remedial works will ensure that the trees are maintained in a suitable manner, to exist in harmony with the new structures and its occupants for many years to come.

Tree Protection Measures and Preliminary Method Statement for Development Works

8.1 TREE WORK

A list of all tree works that are required (including trees to be removed) is included in the tree table at Appendix B. Where any tree work is needed, this work **MUST** be in accordance with British Standard 3998 – 2010 (Tree Work - Recommendations).

8.2 TREE PROTECTION BARRIERS

It is essential for the future health of the trees to be retained on site, that all development activity is undertaken outside the root protection zone of these trees. The position of the fence **MUST** be marked out with biodegradable marker paint on site and agreed with appropriate representatives from the LPA and contractor. The fencing **MUST** be erected **prior** to any works in the vicinity of the trees and removed only when all development activity is complete. The protective fencing **MUST** be as that shown in BS 5837 (see Appendix C). The herras panels **MUST** be joined together using a minimum of two anti-tamper couplers which **MUST** be installed so they can only be removed from the inside of the fence. The panels **MUST** supported by stabilizer struts, which **MUST** be installed on the inside and secured to the ground using pins or appropriate weights.

The Fence must be marked with a clear sign reading:

"Construction Exclusion Zone – No Access"

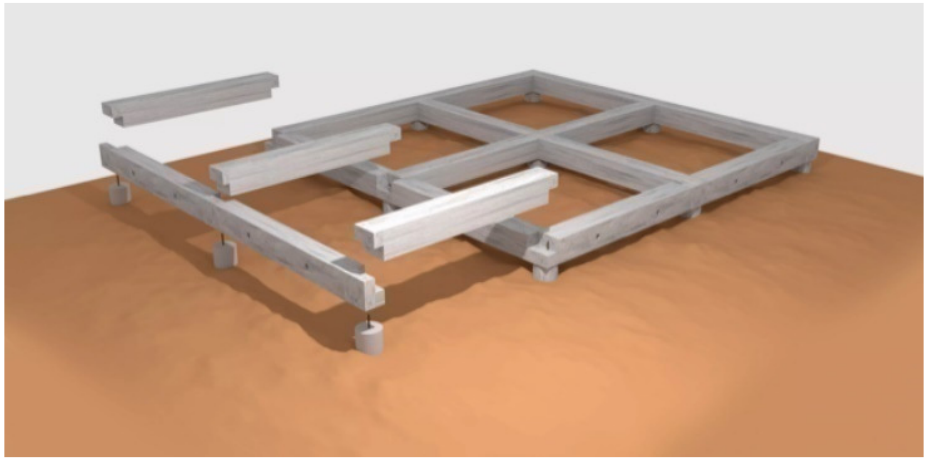
8.3 GROUND PROTECTION – LIGHTWEIGHT ACCESS ONLY

Where any additional ground protection is required, these areas **MUST** be covered with a permeable membrane, with 150mm layer of compressible woodchip overlaying it; an 18mm marine ply boards will then be secured on top of the woodchip to allow a 1.5tonne mini-digger to access the area without causing major compaction or soil erosion.

Above: ground protection make-up

8.4 PILED FOOTINGS

- Before the actual installation of the new structure starts, all RPA's that may be affected will be covered with temporary ground protection as set out in BS. 5837
- Gaps in the ground protection should be left where it is expected to install the pile or dig holes.
- Pile location should be hand dug to depth of 750mm to establish significant root structures.
- If there are any roots over 25mm in diameter that could be damaged the pile location will be moved to avoid disturbing the root.
- Once the piles have been installed, the supporting beams for the must be raised above the ground level between the piles and no further excavation carried out.
- The beams between the piles will be precast or cast on site using a biodegradable void former. The slab will be cast between the beams using a biodegradable void former such as Clayboard or similar approved. The ground protection must remain in place until work is complete and there is no risk to the RPAs



8.5 SITE HUTS, WELFARE FACILITIES AND STORAGE OF EQUIPMENT, MATERIALS AND CHEMICALS

All site huts **MUST** be positioned outside of the retained trees RPAs.

8.6 MIXING OF CONCRETE

All mixing of cement / concrete **MUST** be undertaken outside of the RPA of all of the retained trees.

8.7 INCOMING SERVICES, DRAINAGE AND SOAKAWAYS

Any new underground services which are to be located within (any portion of) the RPAs of any trees which are to be retained **MUST** be installed in accord with the guidance given in BS5837 together with the National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4). Service installation layouts **MUST** be planned to keep apparatus together in common ducts, in order to minimise the need for excavations. Service trench excavation within the RPAs **MUST NOT** be undertaken with the use of any mechanised machinery (minidiggers, JCBs or alike).

8.8 ON SITE SUPERVISION

Regular site supervision is essential to ensure all potentially damaging activities near to trees are properly supervised. A pre start site meeting **MUST** occur to ensure all parties are aware of their responsibilities relating to tree protection on site; this **MUST** include a site induction for key personnel.

Key personnel:

Name	**Position**	**Contact number / email:**
Glen Harding	Retained arboriculturalist	07884 056 025 Or info@ghatrees.co.uk
TBC	Local authority Arboricultural Officer	TBC
TBC	Site manager	TBC

After this pre start meeting, day-to-day responsibility for tree protection will be devolved to the site manager who will make contact with the retained arboriculturalist as needed.

8.9 OTHER TREE PROTECTION PRECAUTIONS

- **NO** fires lit on site within 20 metres of any tree to be retained.
- **NO** fuels, oils or substances with will be damaging to the tree shall be spilled or poured on site.
- **NO** storage of any materials within the root protections zone.

8.10 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

All new pathways and hard landscaping areas within the Root Protection Areas (RPAs) of the retained trees **MUST** be designed using no-dig, up and over construction techniques, and be specified in close co-ordination with the retained Arboriculturalist. Porous materials **MUST** also be used when surfacing near the trees. No machinery will be used for this work, which **MUST** all be done by hand.

8.11 DISMANTLING PROTECTIVE BARRIERS
Protective barriers must only be completely removed when all machinery, and equipment has left site.

Conclusion

9.1 In conclusion, the principal arboricultural features within the site can be retained and adequately protected during development activities.

9.2 No significant or important trees will be lost to facilitate the proposed scheme.

9.3 Subject to precautionary measures as detailed above, the proposal will not be injurious to trees to be retained.

Recommendations

10.1 Site supervision – An individual e.g. the Site Agent, must be nominated to be responsible for all arboricultural matters on site. This person must:

a. Be present on the site the majority of the time.
b. Be aware of the arboricultural responsibilities.
c. Have the authority to stop any work that is, or has the potential to cause harm to any tree.
d. Be responsible for ensuring that all site personnel are aware of their responsibilities towards trees on site and the consequences of the failure to observe those responsibilities.
e. Make immediate contact with the local authority and / or retained arboriculturalist in the event of any related tree problems occurring whether actual or potential.

10.2 It is recommended, that to ensure a commitment from all parties to the healthy retention of the trees, that details are passed by the architect or agent to any contractors working on site, so that the practical aspects of the above precautions are included in their method statements, and financial provision made for these.

24th March 2025
Signed:

Glen Harding MICFor, MSc (Forestry), MArborA
For and on behalf of GHA Trees

Appendix A
TREE PLAN
(see separate PDF)

Appendix B
TREE TABLE

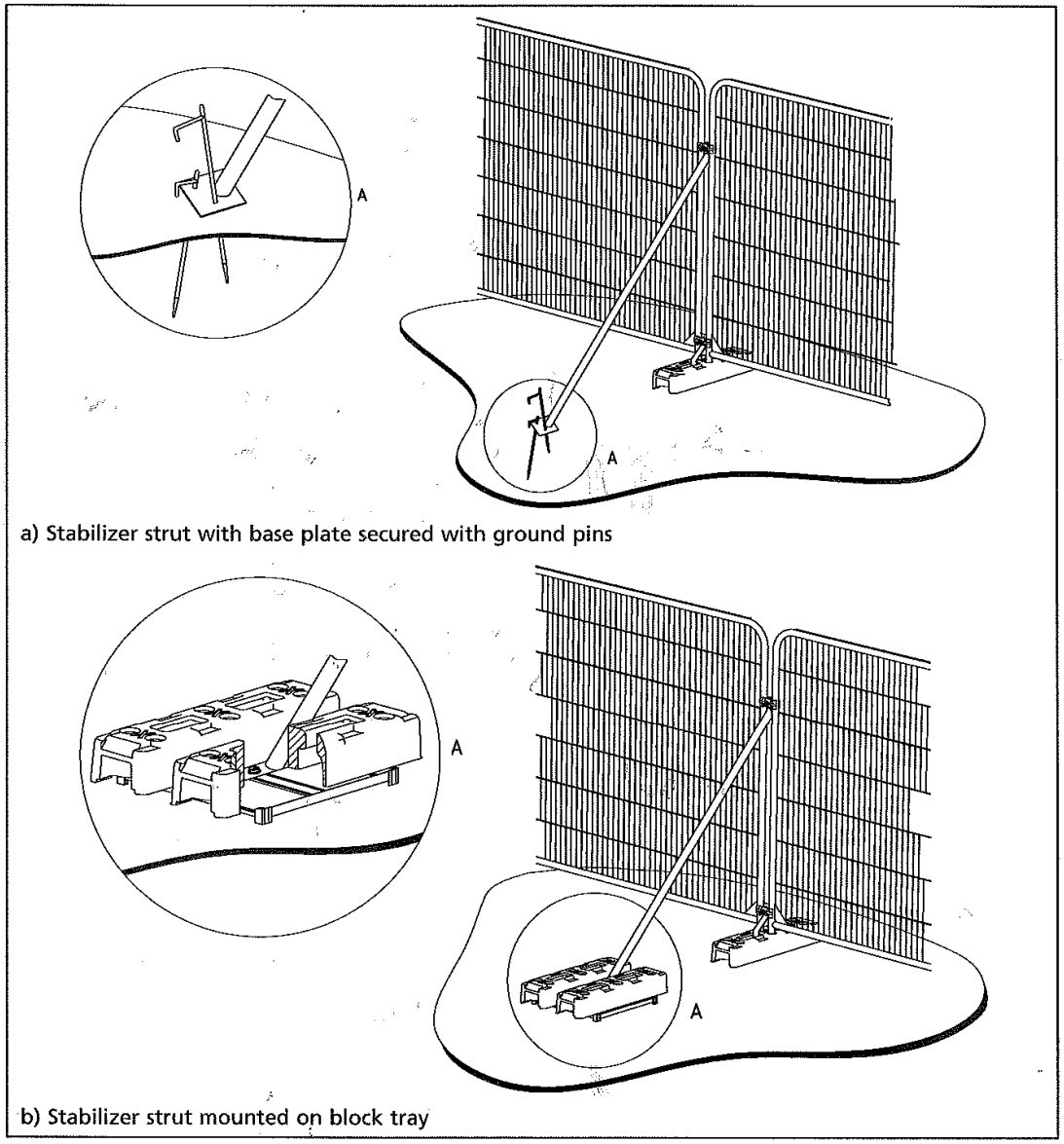
Tree Number	Tree Name (species)	Ht (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	N (m)	E (m)	S (m)	W (m)	Age Class	Clearance (m)	Estimated life expectancy	BS Category	Comments / Recommendations
T1	Ash	13	417	2	5.00	3	4	4	3	M	4 west	10-20	C1	Self set tree of little value. Poor fork at 0.5.
T2	Sorbus	10	170	1	2.04	3	2.5	2	1	M	3	10-20	C1	Suppressed tree of poor form.
T3	Lime	21	420	1	5.04	5	4.5	5	5	M	3 south	40+	A1	No significant / notable defects observed during inspection. Recommend: prune laterally on house side by 1m.
T4	Horse chestnut	14	640	1	7.68	5	4	4.5	6	M	5 east	20-40	B1	No significant / notable defects observed during inspection.
T5	Leyland cypress	16	400	1	4.80	3	5	3	3.5	M	2	10-20	C1	Unremarkable tree of modest quality and of limited value in the wider landscape. Recommend: to be removed.
T6	Weeping willow	17	1120	1	13.44	6	6.4	10	4	M	2 east, first branch 5	20-40	B1 and B3	Previously crown reduced. Bark wound at 1m south side. East stem removed in past. Decay fungi now present on this stem. Several dead / split limbs in crown. Leans to west. Recommend: crown reduce letarlly and in height to minimise risk of failure.

Tree Number	Tree Name (species)	Ht (m)	Calculated Stem Diameter (mm)	Number of Stems	Root Protection Area (Radius, m)	N (m)	E (m)	S (m)	W (m)	Age Class	Clearance (m)	Estimated life expectancy	BS Category	Comments / Recommendations
T7	Palm	4	200	1	2.40	1	1	1	1	OM	2	Less than 10	U	Smothered in ivy.

KEY :
Tree No: (T= individual tree, G= group of trees, W= woodland)
Age class: Young (Y), Middle aged (MA), Mature (M), Over mature (OM), Veteran (V)
Height (Ht): Measured in metres +/- 1m

Appendix C
TREE FENCING DETAIL

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



a) Stabilizer strut with base plate secured with ground pins

b) Stabilizer strut mounted on block tray