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Arboricultural and Planning Integration Report: 92a Swakeleys Road, Ickenham, UB10 8QG

27th September 2021

Ref: GHA/DS/122360:21

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Arboricultural Report

Location: 92a Swakeleys Road, Ickenham, UB10 8QG

Ref: GHA/DS/122360:21

Client: Colin Jenkins

Date: 27th September 2021

Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA

Date of Inspection: 17th August 2021

Instructions

Issued by – Colin Jenkins

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to 92a Swakeleys Road, Ickenham, in order to assess their general condition and to provide a planning integration statement for the indicative proposed development that safeguards the long term well being of the retained trees in a sustainable manner.

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Executive Summary

The proposal for the site is to renovate and extend the existing bungalow. The access from Swakeleys Road will be reused for the new development. 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:

1. Topographical survey
2. Existing layout plans
3. 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 Tree works will be required to be in accord with British Standard 3998 – 2010 (Tree Work - Recommendations).
- 1.10 Underground services near to trees will need to 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).
- 1.11 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 realistically 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 Swakeleys Drive, a residential through road located to the south west of Ickenham.
- 3.2 Access to the property is currently gained via a driveway to the front (south west) of the site.

The Subject Trees

- 4.1 The details of the subject trees are set out in the Schedule at Appendix B.
- 4.2 Of the sixteen individual trees, and groups of trees surveyed, five have been assessed as BS 5837 category B, ten have been assessed as BS category C with the remaining tree being assessed as BS 5837 category U.

Category B	5 trees / groups
Category C	10 trees / groups
Category U	1 tree

The Proposal

- 5.1 The proposal for the site is to renovate and extend the existing bungalow. The access from Swakeleys Road will be reused for the new development.
- 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 A section of G14 and one dead cherry are proposed for removal as part of the new development, as these specimens could not be effectively retained as they are located too close to make their retention feasible / sustainable.

- 6.2 These trees have been given either a C or U category grading in accordance with BS 5837. It is therefore felt that these trees 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

- 6.3 G9 will be pruned to improve clearances from the proposed new structure. A full specification for the proposed pruning can be seen in the tree table at appendix B.
- 6.4 The implementation of the proposal does not lead to the requirement to prune any of the other retained trees, or shrubs.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

- 6.5 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.
- 6.6 Following the assessment described in section 6.5, the RPAs have all been drawn as notional circles as there are no existing site structures (visible from the available access) which are assessed to have the potential to significantly affect tree root morphology.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES

- 6.7 There are small encroachments into the RPAs of G9, T10, T11 and G12 as shown on the appended plan; these encroachments are assessed to be within acceptable levels and these are all healthy trees which will tolerate this small amount of root loss and recover quickly.
- 6.8 The proposed new structures are situated outside of the assessed RPA's of all of the other trees proposed for retention, therefore these trees pose no below ground constraints on the new structures or vice versa.

INSTALLATION OF SERVICES

- 6.9 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, and highly unlikely to give rise to any inconvenience.
- 7.2 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 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** be 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.

8.4 DELIVERY AND STORAGE OF BUILDING MATERIALS

Due to the limited on-site storage space, it may be necessary for bulk deliveries to be split into smaller deliveries. The use of a "just in time" delivery method **MUST** also be adopted to reduce the time materials are stored on site before use.

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

All site huts **MUST** be positioned outside of the retained trees RPA's.

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 correctly supervised. A pre start meeting will occur to ensure all parties are aware of their responsibilities relating to tree protection on site; this will include a site induction for key personnel.

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 which will be damaging to the tree shall be spilled or poured on site.
- **NO** storage of any materials within the root protection zone.

8.10 HARD / SOFT LANDSCAPING NEAR RETAINED TREES

All new pathways and hard landscaping areas within the Root Protection Areas (RPA's) 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.

Conclusion

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

9.2 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.

27th September 2021

Signed:

A handwritten signature in blue ink, appearing to read "Glen Harding".

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	Hornbeam	10	330	1	3.96	6	6	6	6	M	3 (north)	20-40	B1	No notable defects observed during inspection.
T2	Ash and chestnut	8	80	1	0.96	1.5	1.5	1.5	1.5	MA	3	10-20	C2	Off site trees - full inspection not possible. NB: some measurements estimated.
T3	Acer ssp	14	300	1	3.60	4.5	4.5	4.5	4.5	M	6(south)	10-20	C1	Off site tree - full inspection not possible. NB: some measurements estimated.
G4	Sycamore and ash	14	250	1	3.00	4	4	4	4	M	3 (east)	10-20	C2	Off site trees - full inspection not possible. NB: some measurements estimated.
G5	Sycamore and alder	18	671	5	8.05	6	6	6	6	M	4	20-40	B2	Off site trees - full inspection not possible. NB: some measurements estimated. Recommend: cut back lateral growth over site by 2m.
T6	Alder	16	300	1	3.60	7	7	4	4	M	2 (east)	10-20	C1	Poor form.
T7	Cypress	8	240	1	2.88	2.5	2.5	2.5	2.5	M	1.5	10-20	C1	Small tree of little valuee. Recommend: tree to be removed.
T8	Alder	15	880	1	10.56	4	4	4	4	M	2 (epicormic)	Less than 10	U	Dead.

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
G9	Alder	15	570	1	6.84	7.5	7.5	7.5	7.5	M	6	20-40	B2	No notable defects observed during inspection. Recommend: cut back lateral growth over site by 2m.
T10	Weeping willow	12	560	1	6.72	5	5	2	5	M	0	10-20	C1	Part failed into nearby watercourse. Recommend: cut back lateral growth over site by 2m.
T11	Oak	16	800	1	9.60	4	4	4	4	M	8 (west)	20-40	B1	Off site tree - full inspection not possible. NB: some measurements estimated.
G12	Leylandii	8	250	1	3.00	3	3	3	3	M	0	10-20	C2	Lapsed hedge. Recommend: trees to be removed.
T13	Weeping willow	16	900	1	10.80	10	10	10	10	M	2	20-40	B1	Off site tree - full inspection not possible. NB: some measurements estimated. Recommend: cut back lateral growth over site by 2m.

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
G14	Cypress, laurel and other scrub	6	150	1	1.80	2	2	2	2	M	2	10-20	C1	Small trees of little value. Recommend: one tree to be removed.
T15	Weeping willow	10	300	1	3.60	5	5	5	5	M	2	10-20	C1	Off site tree - full inspection not possible. NB: some measurements estimated.
T16	Crataegus	6	220	1	2.64	4	4	4	4	M	2	10-20	C1	Small tree of little value.

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



