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BS5837:2012 TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT: 7B Hollycroft Avenue, London, NW3 7QG

Dated: 18th April 2024

Our reference: GHA/DS/133460:24

CONTENTS

Arboricultural Impact Assessment

Location: 7B Hollycroft Avenue, London, NW3 7QG
Our reference: GHA/DS/133460:24
Client: K Lui
Dated: 18th April 2024
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 11th April 2024

Instructions

Issued by – K Lui

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to 7B Hollycroft Avenue, London, 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 construct a new garden room in the rear garden of the property. The proposed scheme does not require the removal or pruning of any of the trees on site, or of trees within nearby adjacent sites; therefore, the landscape character of the site will be unaffected by the proposal. 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 No discussions took place between the surveyor and any other party.

1.6 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)

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

1.8 Underground services near to trees will need to be installed in accord with the guidance given in BS5837.

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 Hollycroft Avenue in the Hampstead area of north west London.

The Subject Trees

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

4.2 Of the six individual trees, and groups of trees surveyed, three have been assessed as BS 5837 category A, with the remaining three trees being assessed as BS 5837 category C.

Category B	3 trees
Category C	3 trees

The Proposal

5.1 The proposal for the site is to construct a new garden room in the rear garden of the property.

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 The proposed site layout and all of its associated structures allows for the healthy retention of all of the trees on the site itself, and within nearby adjacent sites; therefore, the arboricultural landscape character of the site will be retained.

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

6.2 The implementation of the proposal does not lead to the requirement to prune any of the retained trees, or shrubs.

6.3 There is a slight overhang of the new structure from the crown of T4 and T5. The defining branch structure of these trees is however well clear of the proposed upper building line and therefore building works can progress safely without the need for any facilitation pruning.

ASSESSMENT OF RETAINED TREES ROOT PROTECTION AREAS

6.4 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.

6.5 The RPAs of T4, T5 and T6 have been amended to take account of the existing 900mm high retaining wall to the rear of site (these trees sit 900mm higher than the land where the structure will sit); these adjustments can be seen on the appended plan.

*Below – retai*ning *wall to rear of site*

6.6 The other RPAs have been drawn as notional circles, as there are no structures within their RPAs that have been assessed to significantly impact the root layout.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES & PROPOSED MITIGATIONS

6.7 Given the presence of the retaining wall as shown in section 6.5, the new structure is outside of the assessed RPAs of all trees. The new structure will also be installed with screw piles and the new building will sit above the existing levels with the new screw piles being the only below ground part of the structure.

INSTALLATION OF SERVICES

6.8 The full details of existing and proposed new services have not been made available at the time of writing.

6.9 New services must be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers must also be sited outside the RPAs of any nearby trees.

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.

7.3 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.

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

If assessed necessary, fencing will be installed to protect the trees (all work is on foot using hand tools only). Any protective fencing **MUST** be as that shown in BS 5837 (see Appendix C).

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 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 INCOMING SERVICES, DRAINAGE AND SOAKAWAYS

New services **MUST** be routed to avoid all RPAs of retained trees on site and within nearby sites. From an assessment of the subject site, undertaken in conjunction with the project architect, there is no reason to assume this isn't possible. Inspection chambers **MUST** be sited outside the RPA.

8.5 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 (either remotely or on site) to ensure all parties are aware of their responsibilities relating to tree protection on site; this **MUST** include a site induction for key personnel. 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.

8.6 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.

8.7 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 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.

18th April 2024
Signed:

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

Appendix A
TREE PLAN
(see separate PDF)

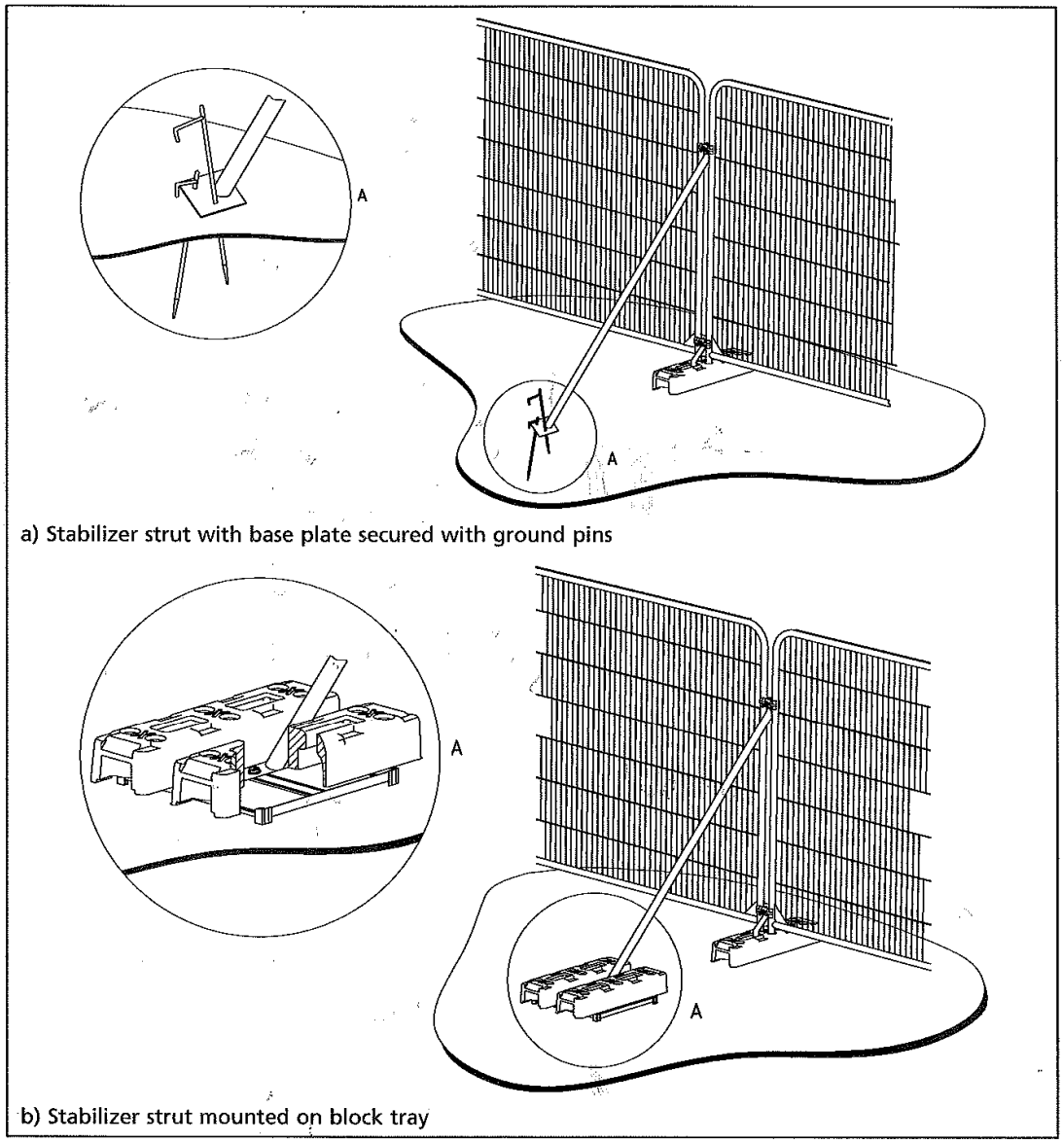
Appendix B
TREE TABLE

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	Holly	6	150	1	1.80	2.5	2.5	2.5	2.5	M	2	10-20	C1	Small tree of limited value in the wider landscape.
T2	Apple	5	130	1	1.56	1	0.5	1	2	M	2	10-20	C1	Small tree of limited value in the wider landscape.
T3	Apple	4	128	2	1.54	1	3	2	2	M	1.5	10-20	C1	Small tree of limited value in the wider landscape.
T4	Lime	14	541	2	6.49	6	3	5	3	M	4 over site	20-40	B1	Off site - full inspection not possible. Some measurements estimated. Previously crown reduced.
T5	Sycamore	18	600	1	7.20	3	5	4	4	M	5 over site	20-40	B1	Off site - full inspection not possible. Some measurements estimated. Previously crown reduced.
T6	Lime	18	500	1	6.00	2	5	4	3	M	6	20-40	B1	Off site - full inspection not possible. Some measurements estimated. Previously crown reduced.

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