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BS5837:2012 TREE SURVEY AND ARBORICULTURAL IMPACT ASSESSMENT: Garth Hotel, 69 Gower Street, London, WC1E 6HJ

Dated: 4th April 2025

Our reference: GHA/DS/888160:25

CONTENTS

Arboricultural Impact Assessment

Location: Garth Hotel, 69 Gower Street, London, WC1E 6HJ
Our reference: GHA/DS/888160:25
Client: Garth Hotel
Dated: 4th April 2025
Prepared by: Glen Harding MICFor, MSc (Forestry), MArborA
Date of Inspection: 7th March 2024

Instructions

Issued by – Garth Hotel

TERMS OF REFERENCE – GHA Trees were instructed to survey the subject trees within and adjacent to Garth Hotel, 69 Gower Street, 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 extension to the rear (south west) of the existing hotel building; the new extension will be above an existing basement area. A new rear pergola will also be installed as well as new landscaping in the rear garden. The proposed scheme requires the removal of one bay tree (T1) and one Pittosporum shrub (T4) to the rear of the property. The removal of the bay tree would be required regardless of the proposal, given its proximity to the existing building and all of the associated issues. T4 is a shrub and is thus exempt from the conservation area regulations. 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 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.

1.3 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.

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

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 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 Gower Street in central 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, two have been assessed as BS category B, with the remaining trees being assessed as BS 5837 category C.

Category B	2 trees
Category C	4 trees / groups

The Proposal

5.1 The proposal for the site is to construct a new extension to the rear (south west) of the existing hotel building; the new extension will be above an existing basement area.

5.2 A new rear pergola will also be installed as well as new landscaping in the rear garden.

5.3 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 scheme requires the removal of one bay tree (T1) and some small trees / shrubs (T4 and G6) to the rear of the property.

6.2 The removal of the bay tree has been consented in the past and would be required regardless of the proposal, given its proximity to the existing building and all of the associated issues as outlined below:

Issues posed by T1:

- The tree is 3.5m from the nearest part of the building and as such its crown is toughing the hotel building.
- The crown has been pruned heavily to the north in the past as the crown has also caused issues for the property to the north.

- The crown dominates both nearby properties making the gardens unusable due to shade as well as incessant bird droppings on the patio area.
- The roots are causing damage the patio area.
- The stem touches the boundary wall and will likely damage it, if left unmanaged.

Photos of T1:

Below: crown proximity to buildings

Below: bird droppings on table on patio

Below: damage to patio

Below: stem in contact with wall

6.3 T4 and G6 are small C category trees of little value in the local landscape and their removal is desirable to improve the garden space to the rear.

TREE PRUNING TO ACCOMODATE THE PROPOSAL OR ACCESS TO THE SITE

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

6.5 There is no part of the new structure which will have tree canopies (from trees to be retained) overhanging it and the building works can progress safely without the need for any facilitation pruning.

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 RPAs of several trees have been amended to take account of the existing structures; these adjustments can be seen on the appended plan.

ASSESSED IMPACT ON RPAS BY PROPOSED STRUCTURES & PROPOSED MITIGATIONS

6.8 There is a very small encroachment into the RPA of T3; this encroachment equates to 1.1% and is therefore assessed to be within acceptable levels.

6.9 The new pergola will be a modest structure installed with localised support posts, which will be positioned (following trial digs) to ensure that any significant roots (over 25mm) that are present in the area where the posts will sit. If any smaller roots are found, these can be cut using sharp hand sharp tools to leave a 'clean' cut, in order to minimise the risk of infection by decay pathogens. The post holes within the RPAs should then be lined with plastic sheeting before any concrete or cement is placed into the hole, in order that there is no risk of leaching into the nearby soil as the mixture dries.

6.10 Where sections of new soft landscaping are within the RPAs, a no-dig construction will be necessary, to ensure that all existing ground levels are retained in their current form, as well as ensuring that satisfactory moisture and oxygen can be obtained from the underlying soil by any tree roots in this area. Porous materials must be used to ensure rainwater can penetrate the soil beneath the new patio.

6.11 The proposed new structures are 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 structure or vice versa.

INSTALLATION OF SERVICES

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

6.13 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 outline 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 PROTECTION BARRIERS

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"

8.2 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.

8.3 MIXING OF CONCRETE

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

8.4 USE CRANES, RIGS AND BOOMS

Precautionary measures **MUST** be observed to avoid contact of any retained trees when manoeuvring cranes rigs or booms into position.

8.5 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.

8.6 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.

8.7 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.

8.8 DISMANTLING PROTECTIVE BARRIERS

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

Conclusion

9.1 The proposed scheme requires the removal of one bay tree to the rear of the property; The removal of this tree would however be required regardless of the proposal, given its proximity to the existing building and all of the associated issues.

9.2 T4 and G6 will also be removed; these are all small C category trees / shrubs.

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.

4th April 2025
Signed:

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

Appendix A
TREE PLAN
(see separate PDF)

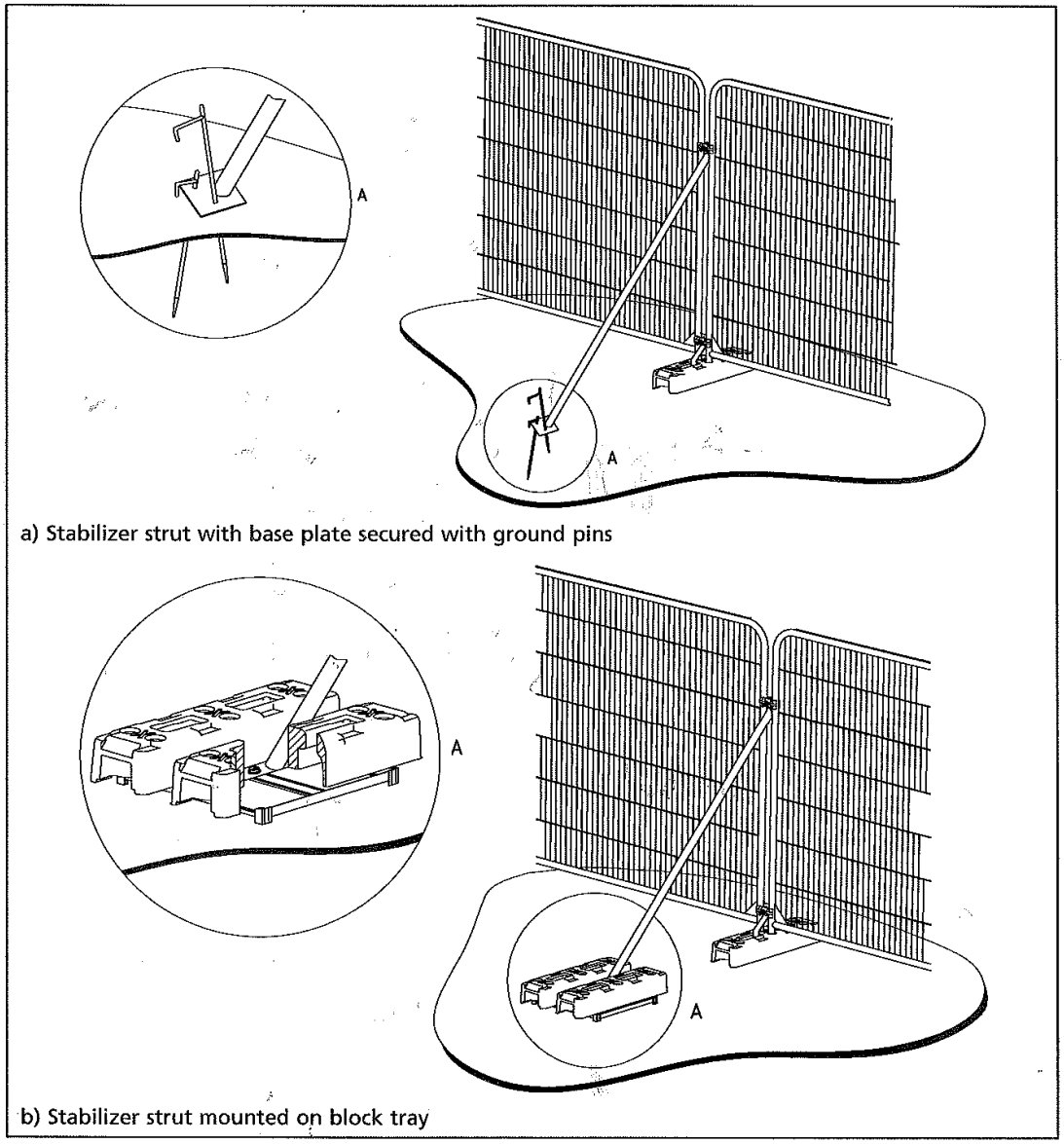
Appendix B
TREE TABLE

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	Bay	18	620	1	7.44	2	5	5.5	2.5	M	2 south, first branch 6	20-40	B1	3.5 from building. Cut back heavily on north site in past as crown in contact. Bird faeces all over patio and tables below. Localised damage to patio surface. Recommend: to be removed.
T2	Leyland cypress	16	340	1	4.08	4	3	5.5	4	M	5 south	10-20	C1	Off site - full inspection not possible. Some measurements estimated.
T3	Poplar	13	1200	1	14.40	0	2	4	4	M	6	20-40	B1	Off site - full inspection not possible. Some measurements estimated. Topped in past.
T4	Pittosporum	5	80	1	0.96	1	1.5	1	0.5	M	2	10-20	C1	Shrub. Recommend: to be removed.
T5	Cypress	6	120	1	1.44	1	1	1	1	M	2	10-20	C1	Small tree of limited value in the wider landscape.
G6	Elder and palm	4 to 7	100	1	1.20	1	1	1	1	M	2	10-20	C2	Small trees of limited value in the wider landscape. Recommend: to be removed.

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