

ARBORICULTURAL DEVELOPMENT STATEMENT

Site:
Holiday Inn Express,
Swiss Cottage,
London,
NW3 5HS



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ARBORICULTURAL DEVELOPMENT STATEMENT

Arboricultural Implications Assessment and Method Statement guided by recommendations within BS5837:2012

Client: Summit Hotels Ltd

Site: Holiday inn Express, Swiss Cottage, London, NW3 5HS

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Consultant: HND

Date: November 2017

SUMMARY

The proposal is for an extension at the site of the existing Holiday Inn Express, Swiss Cottage, London, NW3 5HS.

This Arboricultural Development Statement (ADS) will demonstrate the protection measures for the trees and should be read in association with the Tree Protection Plan CBA7611.02A TPP which identifies tree retention measures. It follows the initial tree survey, implications assessment and on-going discussions to minimise the impact upon the existing tree stock.

The emphasis of the report is predominantly that of preservation and tree protection. It identifies methodologies to provide protection for trees, to ensure their healthy and safe retention during and post development, as guided by BS5837:2012 and current best practice.

A total of 5 (five) individual trees can be retained within the development as detailed within this report.

There is 1 (one) tree that will be lost to facilitate the development.

CBA Trees believes that the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

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1.0 INTRODUCTION

- 1.1 There is a proposal to extend the existing Holiday Inn Express hotel located in Swiss Cottage, London, NW3 5HS.
- 1.2 Document disclosure provided:
 - Proposed site plans provided by Ica Architects.
 - Structural information provided by Pure Structures.
- 1.3 The client provided the original site plans and locations of the trees, and these have been the basis for the production of subsequent plans. Whilst CBA Trees has had a limited input in defining the contents of the development plan, it broadly conforms to the requirements of BS5837:2012 "Trees in Relation to Design, Demolition and Construction Recommendations" and current best practice advice.
- 1.4 Our advice has been sought on the principles of the development in relation to the potential impact on the existing tree stock, to inform and to facilitate the development layout that is acceptable in arboricultural terms.

2.0 CLIENT'S BRIEF

- 2.1 In line with our written quotation and verbal instructions, information has been compiled in accordance with BS5837:2012 and current best practice advice.
 - To undertake a Tree Survey, appended at CB1.
 - To produce an AutoCAD compliant Tree Survey Plan that relies on the accuracy of the survey provided by the client. (Plan CBA7611.01C TSP appended with the Tree Survey Schedule at CB1).
 - To produce a schedule of Root Protection Areas in accordance with BS5837:2012 Annex D, appended at CB2.
 - To undertake an Arboricultural Implications Assessment (AIA) of the development provided by the client to identify which trees will be lost, which can be retained and suggest mitigating build techniques in order to retain trees.
 - Based on the above and further on-going discussions, to provide an Arboricultural Development Statement detailing the methodologies for the retention of the tree stock where feasible, in relation to the approved development layout including a Tree Protection Plan CBA7611.02A TPP appended at CB3.
- 2.2 The advice provided is in support of the current planning application and has been formulated without discussion with the main construction contractors who at this stage have not been appointed. Once the main contractors are appointed, amendments to this Method Statement may be required for construction purposes. All amendments will be assessed by the retained arboricultural consultant and approved in writing by the London Borough of Camden.

3.0 DESCRIPTION OF THE SITE

3.1 The existing site is made up of a retained and terraced garden, sloping steeply from the rear of the site towards the existing building.

4.0 THE TREE STOCK

4.1 A tree survey was undertaken by CBA Trees in October 2016 that identified 6 (six) individual trees; a Tree Survey Schedule and Plan CBA7611.01C TSP are appended at CB1.

4.2 Tree Categorisation Method

Category U = Trees in such a condition that any value would be lost within 10 years, or should be removed for reasons of sound arboricultural management. There were no 'U' grade trees on or adjacent to the site at the time of surveying.

Note: BS5837:2012 states -

"Category U trees are 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."

- Category A = Trees of high quality and value: in such a condition as to make a substantial contribution, (40 years or more is recommended). There were no individual 'A' grade trees on or adjacent to the site at the time of surveying.
- Category B = Trees of moderate quality and value, capable of making a significant contribution for in excess of 20 years. There were 4 (four) individual 'B' grade trees on or adjacent to the site at the time of surveying (Trees 1, 3, 4.1 and 4.2)
- Category C = Trees of low quality and value which might remain for a minimum of 10 years or young trees with stems of less than 150mm diameter. There were 2 (two) individual 'C' grade trees in total on or adjacent to the site at the time of surveying (Trees 2 and 5)

Note:

Trees under these categories are trees that should be a material consideration in the development process; the subcategories are intended to reflect arboricultural, landscape and cultural values respectively.

4.3 For more details of the existing tree stock, refer to the Tree Survey Schedule (appended at CB1).

5.0 TREE PRESERVATION ORDER/CONSERVATION AREA

5.1 Following consultation with the London Borough of Camden, CBA Trees has been made aware that CBA Trees tree reference 1 is protected by Tree Preservation Order C465. If it is intended to carry out works to trees on site prior to the granting of Full Planning Consent and Discharge of Planning Conditions or, in excess of those shown within this development statement, it will be necessary to obtain written consent from the London Borough of Camden.

6.0 PROPOSED TREE RETENTION AND TREE LOSS

- 6.1 In accordance with the recommendations contained within BS5837:2012, an experienced arboriculturist has assessed the requirements for tree protection and the Root Protection Area (RPA) (appended at CB2). The implications of the proposed development are detailed below, along with any mitigating measures to ensure the retention of these trees.
- As part of the assessment, dimensions have been scaled from the proposed drawing prepared and modified, to include the relevant Tree Survey data and the information as shown on plan CBA7611.02A TPP, appended at CB3.

7.0 SUMMARY OF ARBORICULTURAL IMPLICATIONS

7.1 The following summary of implications relates to trees which will require mitigation measures to allow for construction operations. Trees not listed below can be fully protected in accordance with BS5837:2012 as indicated on Plan CBA7611.02A TPP.

Tree No.	Species	BS 5837:2012 Cat	Potential cause of harm	Implication	Mitigation
5	Ash	С	Root severance	Complete loss	Retention of proximal better trees

8.0 PRE-COMMENCEMENT SITE MEETING

8.1 It is recommended that a pre-commencement site meeting should be held prior to any works commencing on site to agree all approved processes with the arboricultural consultant, the construction personnel and the London Borough of Camden. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work.

9.0 ADDITIONAL ARBORICULTURAL ADVICE FOR SITE PERSONNEL

- 9.1 To provide site personnel with additional information regarding the requirements of Tree Protection, a leaflet, appended at CB5 shall be issued to all staff at the time of their site induction. Spare copies of this leaflet shall be available in the site office as replacements.
- 9.2 In order to inform site personnel of the purpose of the barriers, information notices shall be fixed to the barriers at 5m intervals. These notices shall be of all-weather construction and shall be substantially in the form of the specimen provided at appendix CB5 and replaced as and when necessary.

10.0 PRE-DEVELOPMENT TREE WORKS

- 10.1 All tree works will be undertaken prior to the commencement of site preparation and construction works.
- 10.2 <u>All permitted or approved tree work</u> should be carried out in accordance with the British Standard "Recommendations for Tree Work" BS3998:2010, by suitably qualified and experienced professional arborists. Under no circumstances shall site personnel undertake any tree pruning operations. All tree surgery works should be carried out prior to the development of the site, and erection of protective barriers.
- 10.3 If any works are required to retained trees protected by a TPO (CBA Trees Tree 1) or within a Conservation Area, prior to full planning permission being granted, written approval must be obtained in advance from the London Borough of Camden.
- 10.4 Consideration should be given to the timing of the proposed tree works to avoid the active growing period of trees. Therefore, all tree work should ideally be carried out during the dormant period from November through to February and then again from June to August.
- 10.5 Due to the official bird nesting season considered to be from 1st March through to the 31st July (Natural England) depending on weather conditions, consideration must also be given to the potential for nesting birds. Therefore if tree work is to be carried out within June, July or August the project ecologist must be consulted to:

- Complete or advise on a pre-works survey which needs to be carried out by a suitably competent person. As a general rule, it should be assumed that birds will be nesting in trees, and it is down to contactors to assess, record and confirm that any works carried out in the management of trees and other vegetation has not disturbed actively nesting birds*.
- Ground vegetation, and therefore ground nesting birds, can often be overlooked by tree workers so additional care and controls should be taken when access and egress to the work site may also cause disturbance or damage to a nesting site. This is also true for retained trees on site as the removal of adjacent trees or remedial works on a tree may lead to an established nest being abandoned, exposed to the elements or predation. This action is also a breach of the Act and therefore could lead to prosecution due to the infringement of the Wildlife and Countryside Act 1981 and breaching the European Habitats Directive 1992/Nesting Birds Directive*.
- 10.6 Although not apparent at the time of the site visit, consideration should also be given to the presence of bats, and a full visual assessment should be undertaken before any works are carried out on the trees. Where bats are identified as a serious concern, a bat survey should be undertaken by qualified and trained personnel to identify the needs of the bats (roosts, resting place etc) and no tree works can be carried out until the 'all clear' is given, or a programme of recommendations is received in writing.
- 10.7 Should additional tree works become apparent during the construction process written consent will be required from the London Borough of Camden prior to these additional works being undertaken.
- 10.8 All tree works that are required to facilitate the development are detailed within the Tree Works Schedule appended at CB4.

11.0 TREE PROTECTION MEASURES

11.1 Reasons for Tree Protection

The correct and timely installation and maintenance of tree protection measures is the most important action necessary to ensure retained trees, groups, woodlands and hedgerows on and adjacent to the site, remain unaffected by development operations. Exclusion of construction activity from the outset of site preparation will ensure those trees identified for retention are maintained in a safe and healthy condition.

Although aerial parts of the tree, trunk, branches and twigs are obvious, extensive and irreparable damage can be caused to the roots and rooting environment without any immediately noticeable effect. Severance of large roots in close proximity to the stem can result in the immediate loss of stability and/or rapid death whilst damage to more distal parts of the root system or rooting environment will result in a slow decline in tree health over a period of several years, resulting in premature loss.

11.2 Damage to Trunks Stems and Branches

Impact damage to the crown of the tree can result in the loss of leaves which produce starch and sugars (carbohydrates) and a reduction in the visual amenity which established trees provide. These carbohydrates are necessary for maintaining all biological functions within the tree, including growth, reproduction and defence. Extensive crown damage will reduce the tree's ability to produce carbohydrates and increase physiological stress on the tree.

The bark protects the underlying vascular tissue and cells responsible for growth from drying, disease and decay. Bark is loosely attached to the underlying tissue and can be easily damaged or removed through direct contact. It is particularly susceptible to damage when trees are young or in early spring following the onset of growth.

Impact damage which removes bark, results in dysfunction of the underlying vascular tissue preventing transport of water, mineral nutrients and carbohydrates to parts of the tree to which they are connected. If damage to the bark extends around the whole circumference, the root, branch or trunk the section beyond the damage will be killed.

Branches which are either broken or are torn from the trunk of the tree, create wounds which are prone to colonization by wood destroying organisms. These organisms cause internal decay, which result in future tree failure and premature loss.

11.3 Purpose of Tree Protection

All site operations will be planned, implemented and supervised so as to prevent the following:

- Root severance
- · Damage to the bark, branches and trunks
- Compaction of the soil within the Construction Exclusion Zone
- Alterations in soil level
- Soil contamination by phytotoxic materials such as herbicides, petrol, oils, diesel, cement and concrete washings or other construction additives

11.4 Tree Protection

Once site preparation has been complete and all demolition and ground remediation works have been completed tree protection for the construction phase will be implemented in accordance with Plan CBA7611.02A TPP.

A copy of the Tree Protection Plan will be displayed in the site office and canteen as a point of reference for all site operatives.

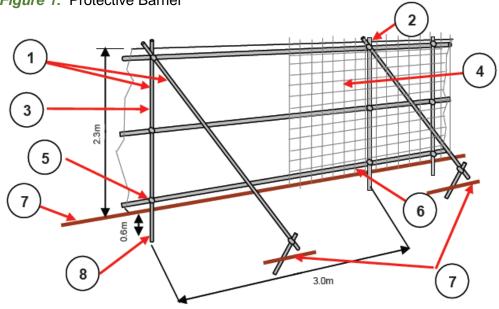
11.5 Standard Protective Barriers

Trees (1 - 4.2) are adjacent to areas of significant construction activity or areas of minor or low risk demolition and will be protected by installing the following protective fence as indicated on Tree Protection Plan CBA7611.02A TPP. The barrier is to comprise of a vertical and horizontal framework, well braced to resist impacts, with

vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels should be securely fixed with wire or scaffold clamps.

In accordance with Section 6.2.2.4 of BS5837:2012, weldmesh panels on rubber or concrete feet are not resistant to impact, and will not be used for tree protection purposes.

Figure 1: Protective Barrier



- 1. Standard scaffold poles
- 2. Uprights to be driven into the ground
- **3.** Panels secured to uprights with wire ties and where necessary standard scaffold clamps
- **4.** Weldmesh wired to the uprights and horizontals
- 5. Standard clamps
- **6.** Wire twisted and secured on inside face of barriers to avoid easy dismantling
- 7. Ground level
- **8.** Approximately 0.6m driven into the ground

Example of protective barriers:



12.0 DEMOLITION

- 12.1 Demolition of existing surface structures will be carried out so as to prevent damage to existing retained trees.
- 12.2 Demolition of the structures in close proximity to the retained trees must be done with due care and attention, in order to adequately respect overhanging canopies of all retained trees. To this end, the following rules will apply:

- Site personnel are to undergo an induction session prior to being allowed to work on site. The induction will introduce the contractors to the requirements of the Protection Method Statement. A copy of the Method Statement will be made available as a point of reference in respect of tree protection requirements. In addition, a copy of the Tree Protection Plan will be provided or pinned up in the site hut. During the induction, trees which are to be retained and protected will be highlighted to the demolition personnel and they will be physically shown which trees are to be protected on site. In this way, it is hoped that unnecessary damage, by root disturbance and collision of machinery booms and operating arms with tree crowns can be avoided.
- All walls, foundations and basements are to be pulled in on themselves towards
 the centre of the site and away from retained trees. This will be done in a direction
 away from the tree protective barriers and all large machinery to be operated at
 least 2.5-3.0 metres outside the line of the tree protective fence line from where
 it is erected for the site preparation works.
- Any machinery used for this purpose is to stand and operate over existing hard surfaces wherever possible, but always outside the CEZ as defined by the protective barriers.
- Lightweight structures will be demolished and removed by hand. Work will be carried out from existing hard surface. If the structure is not served by existing hard surface ground protection will be laid in accordance with Plan CBA...
- Where dust is created and deposited on adjacent retained trees, provision will be made to wash down the crowns of retained trees weekly to prevent excessive dust affecting the photosynthetic capacity of retained trees.

13.0 EXISTING SERVICES

- 13.1 No information has been provided on the location and size of existing services. However, existing services within the RPA and CEZ of retained trees will not be chased out, but cut at the edge of any structure and left *in-situ*.
- 13.2 Cabling will only be recovered from beneath a CEZ where it is located in ducting, and can be removed by winching from an existing service manhole beyond the CEZ.
- 13.3 Service pipes and ducts, where they are located within the CEZ or RPA of retained trees, will be made redundant either by pipe bursting or by filling with an inert material such a foamed concrete.

14.0 AVOIDING DAMAGE TO STEMS AND BRANCHES

14.1 Care shall be taken when planning site operations, to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might

make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

15.0 VEHICULAR MOVEMENTS

15.1 It is not anticipated that there will be a need for excess vehicular movement near the retained trees, given that there is established access / areas of existing hard surface within the site which are suitable for the purpose.

16.0 SITING OF TEMPORARY OFFICES, TOILETS AND MATERIAL STORAGE COMPOUNDS

16.1 It is anticipated that all storage materials and deliveries shall make use of the existing access and hard surfaces within the site confines, in order to avoid unnecessary damage to tree roots.

16.3 Site Huts

All site huts (if required) that are to be situated on ground that is not existing hard surfacing shall have appropriate footings or be situated on a temporary surface, which will aid in reducing the potential for compaction of the ground, where they are in close proximity to the existing tree protective barrier line. Site huts can be used as part of the protective barrier boundary, and in some cases, can be beneficial where installation does not conflict with the aerial parts of the tree.

If it is proposed that site huts, ground protection or stores are to be located within the RPA of retained trees for more than 3 months, a temporary irrigation and aeration system will be installed to ensure that the rooting environment is maintained in a good condition. The system will include a compressible layer of composted wood chip or forest bark over a geotextile separation layer, on which ground protection or site huts can be placed. Watering will depend on permeability of the soil, weather conditions and the extent of the area covered, but should include weekly watering from April to September, when no rainfall has occurred for more than four consecutive days.

17.0 GENERAL CONSIDERATIONS WITHIN AND OUTSIDE THE CONSTRUCTION EXCLUSION ZONE

- 17.1 Inside the CEZ formed by the protective barrier and ground protection measures, the following prohibitions shall apply:
 - No construction activity will occur within the CEZ unless otherwise stated in this
 report, or agreed in writing with London Borough of Camden prior to the specific
 activity taking place.

- 17.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:
 - Materials, which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
 - Fires shall not be lit in a position where their flames can extend to within 5 metres
 of foliage, branches or trunk. This will depend on the size of the fire and the wind
 direction.
 - Notice boards, telephone cables or other services shall not be attached to any part of the tree. (See appendix CB5 Common Causes of Damage During Construction Works)

18.0 UTILITY SERVICE CONNECTIONS

18.1 Details of service location proposals have not been forwarded to CBA Trees at the time of compiling this assessment. It is however assumed, given the location of the trees, that services will be installed outside the root protection areas of retained trees, and connected to the existing where practicable, this will avoid disturbance of tree roots and ensure their healthy retention.

19.0 GROUND LEVEL ALTERATIONS

19.1 The proposed development requires that ground levels will be reduced in close proximity to the CEZ of Trees 1 and 4.2. Normally it will not be possible to reduce levels within the RPA of retained trees, as it is recognised that this will result in extensive root damage.

Driven sheet piling will be installed immediately to the rear of the retaining wall. Ground levels within the RPA will not be reduced or temporarily battered back to allow for construction.

20.0 SOFT LANDSCAPING WORKS

- 20.1 Any soft landscaping works within the development area will be in accordance with the approved landscape plan, and any specification of such works approved by the local planning authority.
- 20.2 CBA Trees has not been provided with the final landscaping proposals, however all landscaping will accord with following requirements:
 - The construction exclusion zone will remain off limits for all site plant and machinery unless fit for purpose ground protection is installed. Pedestrian traffic

must be kept to an absolute minimum only permitted for the ground preparation and landscape installation works

 The landscaping works will need to be undertaken in such a way as to avoid level changes, deep digging or mechanical rotovating. Excavation of planting pits with the RPA can cause serious harm the root system of retained trees. Planting pits within the RPA of retained trees will be excavated by hand to avoid roots greater than 25mm and masses of smaller roots.

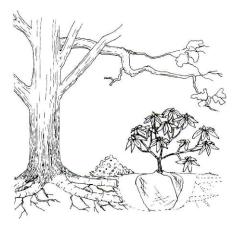


Figure 2:

Root severance as a result of planting within RPA

Planting Trees and Shrubs. Watson G. W. and Himelick E. B. 1997

- If any planting pits are required within the CEZ of retained trees, these will be dug
 by hand and with care avoiding roots greater than 25mm diameter or masses of
 smaller roots.
- 20.3 Installation of turf within the CEZ will require that:
 - In all cases, existing vegetation will be removed to ground level by hand following treatment with a suitable systemic herbicide which is not toxic to existing retained trees. This prevents the build-up of methane formed as part of the composition process.
 - Stumps will be ground out to 300mm below ground level and resulting holes filled with sharp horticultural sand to provide a stable base for laying of the new turf
- 20.4 Any surface mulch will consists of well-composted material such as bark or wood chips. This is necessary to avoid potential nutrient loss from the soil, such as Nitrogen, as the mulch breaks down, as nutrient loss can be detrimental to the health and longevity of retained trees.
- 20.5 All work specified in the approved landscaping scheme shall be carried out before the end of the first planting and seeding season, following the occupation of any completed part of the development.
- 20.6 Any existing tree shown to be retained, or trees and shrubs to be planted as part of the landscaping scheme that are removed, die, become severely damaged beyond recovery or diseased within 2-5 years of the completion of the development

(dependent on planning conditions), shall be replaced with trees or shrubs of appropriate size and species that complement the existing tree stock, within the next planting season. Where the trees in question are protected by planning controls, the local planning authority should be informed and necessary arrangements made prior to such work.

21.0 SITE MONITORING AND SUPERVISION

- 21.1 It is recommended that on-going arboricultural site monitoring takes place for the duration of the proposed development, to be carried out by a qualified and experienced arboriculturist at pre-determined and agreed time intervals, and governed by the type, timing, location and intensity of site works. London Borough of Camden to Condition site monitoring if required.
- 21.2 If Conditioned, it will take the form of regular inspections (to be agreed, but at least one visit per month during the construction phase of the development is advised, together with additional visits to supervise works with the CEZ of retained tree/s), the aim of the visits is to maintain on-going liaison with all personnel involved in the site development, London Borough of Camden and its Tree Officer.
- 21.3 Any defects requiring rectification shall be notified to the Contractor/Site Manager and the client.
- 21.4 In addition, a site logbook for tree protection measures is kept to record all stages of the development from the erection of the protective barriers, right through to the completion of the project. This will be made available to the arboricultural consultant and London Borough of Camden if required, to show evidence of continuous site monitoring.

Example pro-forma

Date	Activity	Checked	Comments/ damage noted	By whom	Signed	Action taken
	Erection of protective barriers					
	Inspection of protective barriers					

21.5 The London Borough of Camden Tree Officer (or appropriate representative) will have agreed access to the site, and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

22.0 REPORT DAMAGE TO TREES AND TREE PROTECTION BARRIERS

- 22.1 Should any damage be caused to trees noted for retention, either by the above works or as the result of any other action, the damage should be reported to the site supervisor immediately. The site supervisor shall report up the chain of responsibility to the retained consultant arboriculturist, or in the absence of such an appointment, to an appropriately qualified arboriculturist, to enable remedial measures to be implemented as necessary and as agreed with London Borough of Camden.
- 22.2 Should protective barriers become damaged so as to impair its function in protecting trees, all work shall cease in the vicinity of the damage, until the fence has been returned to standard.

23.0 REMOVAL OF PROTECTIVE BARRIERS

- 23.1 When the development phase is complete, all drainage and service runs are in place, all site machinery has been removed and any landscaping for the principal area of the site has been implemented, the protective barriers will be dismantled.
- 23.2 This fence dismantling must be undertaken with great care, and will need to be supervised to avoid heavy machinery being used within the root protection areas. Hoarding, scaffolding and other barrier materials will need to be removed from site immediately.

24.0 COMPLETION MEETING

24.1 Upon completion of all the works specified above, and in line with procedures also specified, the retained arboricultural consultant will invite the London Borough of Camden Tree Officer to meet on site to discuss the project and to agree on any remedial works required.

25.0 FUTURE MANAGEMENT AND POST DEVELOPMENT TREE MANAGEMENT

- 25.1 The site owner will be under an obligation to maintain and manage the tree stock on site, and should seek to address this obligation through having regular tree inspections by a suitably qualified arboricultural consultant.
- 25.2 At Section 8.8 of BS5837:2012, emphasis is placed on the aftercare of trees following completion of development works. Whilst we support these recommendations, this is a matter for our clients to consider and for London Borough of Camden to determine whether they wish to apply a Condition relating to this aspect of work.

ARBORICULTURAL/CONSTRUCTION METHOD STATEMENTS

Post development management of BS5837:2012

8.8.3 Post-development management: existing trees

A programme of inspections to advise on any necessary work to retained trees should be drawn up in conjunction with an arboriculturist. This programme might include recommendations for frequency of inspection and/or proposals for tree work [see Note to **5.3.4c**)], and should take the form of a management plan. A copy of this plan should be supplied to all parties with an interest in future site management.

NOTE 1 Trees growing on a site before development takes place can, if adversely affected, be in decline over a period of several years before they die.

NOTE 2 Where the trees in question are subject to legal, planning or other regulatory controls, the appropriate authority needs to be informed and any necessary agreements obtained prior to work being undertaken.

8.8.4 Post-development management: new plantings

8.8.4.1 Regular maintenance of newly planted trees is of particular importance for at least three years during the critical post-planting period and might, where required by site conditions, planning requirements or legal agreement, be for 5 years or more. A detailed maintenance schedule covering this period should be prepared in conjunction with the landscape design proposals, and appropriate arrangements made for its implementation.

NOTE Maintenance operations would normally include weed control and watering as necessary, inspection and adjustment of support systems and monitoring of growth. Formative pruning might also be required to achieve desired effects or to provide for access or clearance.

8.8.4.2 Defects that become apparent during the maintenance period should be addressed by appropriate remedial works (including replacement planting where necessary) as advised by a competent person.

26.0 CONCLUSIONS

- 26.1 The development proposals for the construction of an extension to the Holiday Inn Express at Swiss Cottage, London, NW3 5HS have been assessed broadly in accordance with BS5837:2012 "Trees in Relation to Design, Demolition and Construction Recommendations".
- 26.2 It is our opinion that the trees identified for retention can be afforded due respect and provided adequate protection, ensuring their safe and healthy retention during the development process.
- 26.3 1 (one) tree, categorised as C grade, is proposed for removal to facilitate this development. It is low value and its loss should not influence the Local Authority's decision on whether or not to approve this proposal.
- 26.4 It is our opinion that the loss of the tree will not have a detrimental effect on the local visual amenity or significantly alter the visual treed character of the local area, if a landscaping scheme that includes quality trees, selected to suit the site conditions and the space available, is implemented.
- 26.5 Provided the recommendations included within this report are strictly adhered to, CBA Trees believes the trees highlighted for retention within this report can be retained without undue stress on their long-term health.

27.0 CONTACT LIST

- 27.1 It is suggested that points of contact and lines of communication are established prior to commencement of the works on site including:
 - Arboricultural Consultant
 - Project Architect
 - Highways Engineer
 - Structural Engineer
 - Drainage Engineer
 - Landscape Architects
 - London Borough of Camden's Tree Officer
 - London Borough of Camden's Planning Case Officer
 - Site Supervisor and Foreman
- 27.2 It is advised that the site supervisor establishes their own listing of contact details at the pre-start site meeting, and displays this in their office for general use as necessary.

28.0 BIBLIOGRAPHY

- British Standard 5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations"
- British Standard 3998:2010
 - "Recommendations for Tree Work"
- National Joint Utilities Group Publication Volume 4 –
 "Guidelines for the planning, installation and maintenance of utility services in proximity to trees"
- Wildlife and Countryside Act 1981
- Conservation of Habitats and Species Regulations 2010 (as amended)
- Town and Country Planning Acts







TREE SURVEY NOTES

This Tree Survey has been undertaken within the recommendations of British Standards 5837:2012 and current arboricultural best practice.

- Each tree has been numbered and, where instructed, for future identification on site, has been tagged using small durable metal or plastic tags.
- Due to variations of existing ground levels through the site, height dimensions are estimated and are given in metres. Accurate heights, measured with the aid of optical instruments can be provided where instructed.
- Trunk/stem diameters are measured in mm at 1.5 metres above ground level, using a standard measuring tape as defined by British Standards, unless otherwise stated.
- Estimated branch spread is taken in metres from the centre of the trunk, at the four cardinal points of a compass, to achieve an accurate representation of the crown shape which will be recorded on the tree survey plan.
- An assessment of a tree's age classification is made in terms of its maturity within the site's landscape and defined as:

Υ young trees

SM semi-mature trees early mature trees

М mature trees

OM over-mature trees

An assessment of a tree's physiological condition is defined as:

fully functioning biological system showing average vitality i.e. normal bud growth, leaf size, crown density and wound closure Good =

fully functioning biological system showing below average vitality i.e. reduced bud growth, smaller leaf size, lower crown density and Fair reduced wound closure

a biological system with limited functionality showing significantly below average vitality i.e. limited bud growth, small and chlorotic leaves, Poor

low crown density and limited wound closure

dead Dead =

An assessment of a tree's structural condition is defined as:

no significant structural defects Good

Fair structural defects which could be alleviated through remedial tree surgery or management practices

structural defects which cannot be alleviated through tree surgery or management practices Poor

dead Dead =

An assessment of a tree's future life expectancy is defined as: <10, 10+, 20+ or 40+ years.

Categorisation of Trees

The category for each tree is assessed using the recommendations of BS5837:2012. The assessment has not considered any site-specific development proposals, but will have considered any changes on or off-site which may have an effect on the conditions surrounding the surveyed trees.

The trees have been classified into one of the following categories (and one or more sub-categories [this will however not increase the value of the tree]) and are indicated on the associated drawings by colours as indicated.

Category U				Identification colour on plan
Trees 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	 Trees that have a serious, irremediable, structural dependence that will become unviable after removal of oth companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significate. Trees infected with pathogens of significance to the suppressing adjacent trees of better quality 	er category U trees (e.g. where, for ant, immediate, and irreversible over	whatever reason, the loss of all decline	DARK RED
Category A	1 – Mainly arboricultural values	2 – Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of high quality with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands, of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B	1 – Mainly arboricultural values	2 - Mainly landscape values	3 – Mainly cultural values	Identification colour on plan
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are down-graded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation value or other cultural value	MID BLUE
Category C	1 – Mainly arboricultural values	2 - Mainly landscape values	3 - Mainly cultural values	Identification colour on plan
Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY

Clients are advised that Tree Surveys are a basic data collection exercise and record of tree condition at the time of survey. This will identify any visible signs of ill-health or major defects, advising a further detailed investigation where appropriate. This will most often take the form of a request for either "full ground level inspection" or "climbing inspection required". There may also be a further reference to the need for "decay detection equipment" to aid diagnosis. A tree survey does not include a comprehensive schedule or specification of remedial tree works, but may contain a guide to the work which might be undertaken by a prudent tree owner, purely for reasons of health and safety.

A Tree Survey should not be confused with a Tree Inspection or Arboricultural Implication Assessment, which are totally separate exercises.

Templates/TreeSurveyNotesBS5837:2015



	TREE SURVEY REPORT (BS5837:2012)							
Site:	Holiday Inn Express, Swiss Cottae, London							
Date:	23 September 2016							
Consultant:	Dominc Poston F.Arbor.A. MICFor, CEnv, Prof Dip (RFS), BSc (Hons), HND							
Tagged:	No							

Notes:-

- 1. It may be advised that some trees should have the ivy removed to enable a re-survey to be carried out. This would also alleviate the tree from becoming suppressed; carrying additional weight that increases the chance of windthrow due to a larger dense crown area; and only receiving restricted light. Unless otherwise stated, in order to prevent regrowth, it is only necessary to remove a 300mm section of ivy and clear around the base.
- 2. It may be advised that it was only possible to estimate the diameter of some trees because of ivy smothering, dense vegetation, or trees located off-site with no access.
- 3. The estimated remaining contribution in years, and the tree grading category have been calculated for the current situation and may alter where further investigation works are advised.
- 4. Some trees or groups may have been given an interim grade. The reason for the interim grading is addressed in the timescales given as this may have a bearing on health and safety and/or any development proposals.
- 5. Tree Groups have been assessed with estimated and representative data.
- 6. This is not a Tree Works Schedule. Any preliminary management recommendations are listed in the interests of health and safety and should be carried out by a prudent tree owner.
- 7. Any management recommendations are suggested for reasons of health and safety only, regardless of development proposals at this stage. However, the defects requiring remedial tree surgery are by their very nature potential wildlife habitats, including protected species which needs consideration prior to any tree surgery works commencing.

TREE PRESERVATION ORDER/CONSERVATION AREA:

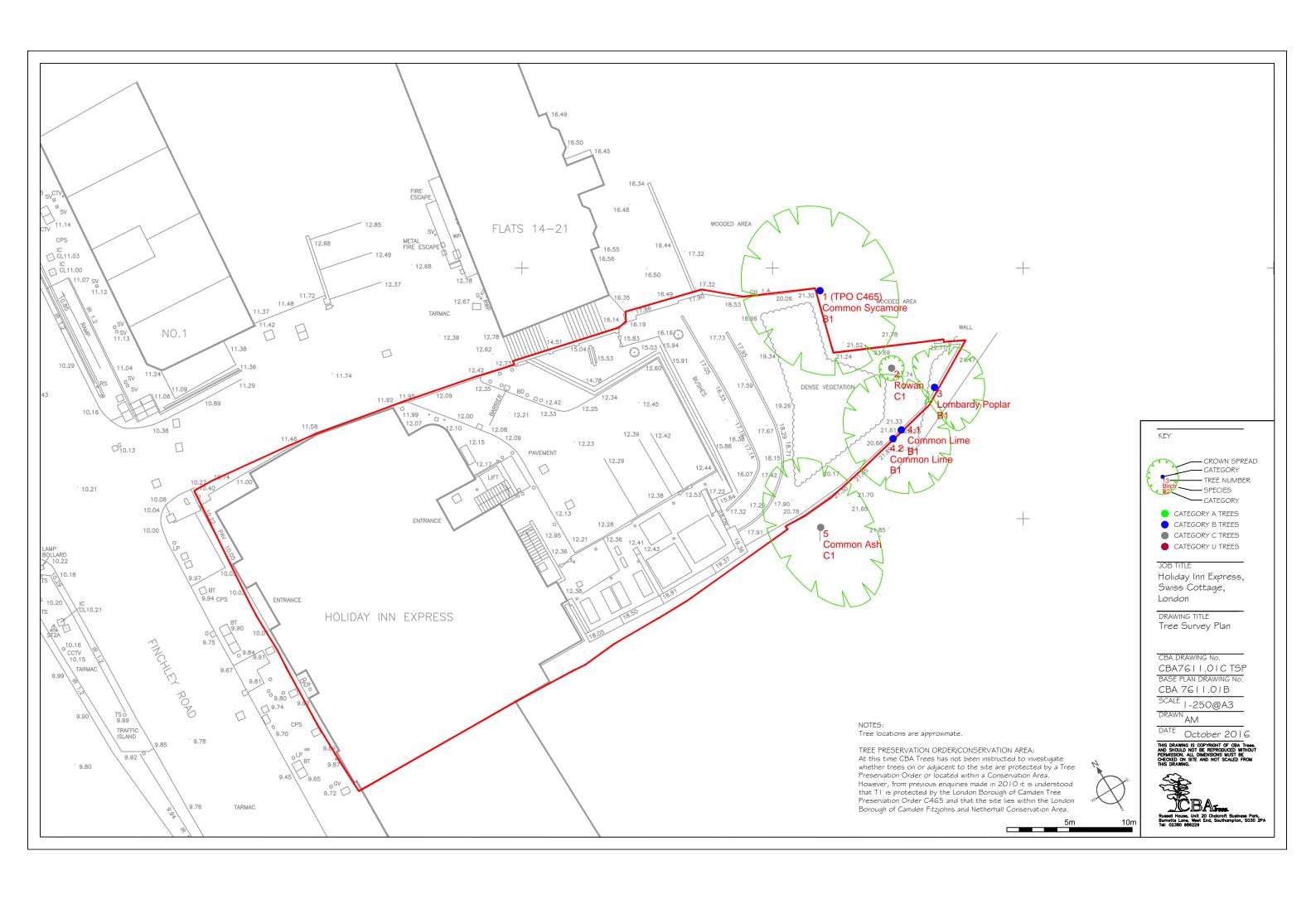
At this time CBA Trees has not been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area. However, from previous enquiries made in 2010 it is understood that T1 is protected by the London Borough of Camden Tree Preservation Order C465 and that the site lies within the London Borough of Camden Fitzjohns and Netherhall Conservation Area.

Tree No	Species	H't (m)	Single/ Multi- Stemmed (S or MS)	Stem Diam (mm)	N	Spr	nch read n) S	w	N	(r	Crown GL n) S	w	Life Stage	Physio- logical Condition	Structural Condition and General Observations	Preliminary Management Recommendations	Est. Rem. Contrib. (Yrs)	Cat
	Common Sycamore Acer pseudoplatanus	16	Ø	Est 600	7.0	6.0	7.0	6.0	4.0	3.0	3.0	4.0	М			None required at time of survey	20+	B1

CBA7611 2016-09-23 v3 TS

Tree No	Species	H't	Single/ Multi- Stemmed	Stem Diam		Spr (n	nch read n)	.,		A(Crown GL n)		Life Stage	Physio- logical Condition	Structural Condition and	Preliminary Management Recommendations	Est. Rem. Contrib.	Cat
2	Rowan Sorbus aucuparia	(m) 4	(S or MS)	(mm) <75	1.0	1.0	1.0	1.0	2.0	2.0	2.0	W 2.0	Y	Fair	General Observations Fair Wire cutting into trunk	Remove wire and stake	(Yrs) 20+	C1
3	Lombardy Poplar Populus nigra 'Italica'	25	S	630	3.0	4.0	4.0	1.0	4.0	4.0	4.0	4.0	M	Good	Staked Fair Grows at top of stone retaining wall Ivy on trunk and in crown Unable to verify health and safety of trunk due to ivy Minor deadwood in crown	Sever ivy and re-survey	20+	B1 Interim
4	Common Lime Tilia x europaea	14	See below	See below	5.0	4.0	5.0	4.0	4.0	4.0	4.0	4.0	M	Good	Fair Suspect growing conditions due to levels and retaining wall condition Ivy on trunk and in crown limits survey Two trees growing one homogenous crown	Sever ivy and re-survey	20+	B1 Interim
4.1	Common Lime Tilia x europaea	-	S	Est 330	-	-	-	-	-	-	-	-	-	-	-	-	-	B1 Interim
4.2	Common Lime Tilia x europaea	-	S	Est 350	-	-	-	-	-	-	-	-	-	-	-	-	-	B1 Interim
5	Common Ash Fraxinus excelsior	15	MS <5	Est 600	6.0	4.0	7.0	4.0	6.0	6.0	6.0	6.0	M	Fair	Fair Off-site Bifurcated at ground level Ivy on trunk and in crown Unable to verify health and safety due to moss and ivy Previously crown reduced Crown shape distorted due to group pressure Weighted north	Sever ivy and re-survey	20+	C1

CBA7611_2016-09-23 v3 TS 2







	BS5837:2012 TREE ROOT PROTECTION AREA SCHEDULE
Site:	Holiday Inn Express, Swiss Cottage, London
Date:	23 September 2016
Consultant:	Dominic Poston F.Arbor.A. MICFor, CEnv, Prof Dip (RFS), BSc (Hons), HND

Notes:

- 1. This is an assessment of the Root Protection Area (RPA) required, based on the individual tree data collected and Section 4.6.1 of BS5837:2012.
- 2. At this juncture this document is for your sole guidance and ongoing discussions purposes only and is not intended for general circulation, as it assumes that all but the 'U' trees will be retained, which clearly may not be the case.
- 3. For all single stem trees with a stem diameter greater than 1250mm, and multi-stem trees with a stem diameter greater than 1500mm, the calculated RPA has been capped at 707m2 in accordance with Section 4.6.1 of BS5837.2012.

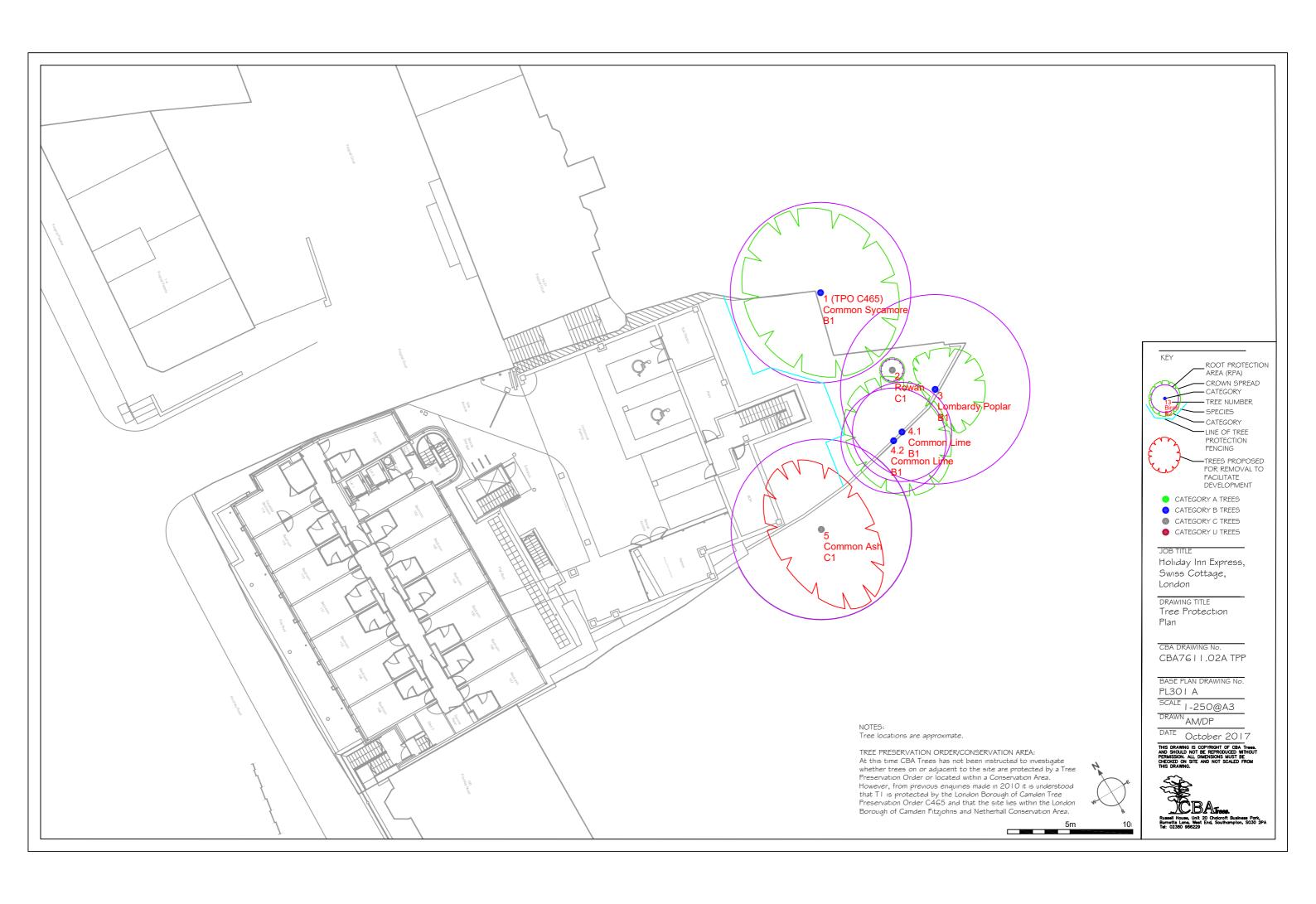
TREE PRESERVATION ORDER/CONSERVATION AREA:

At this time CBA Trees has not been instructed to investigate whether trees on or adjacent to the site are protected by a Tree Preservation Order or located within a Conservation Area. However, from previous enquiries made in 2010 it is understood that T1 is protected by the London Borough of Camden Tree Preservation Order C465 and that the site lies within the London Borough of Camden Fitzjohns and Netherhall Conservation Area.

Tree No	Species	Category	Single/ Multi-Stemmed (S or MS)	Stem Diameter (mm)	Initial Linear Root Protection Distance (Radius m)	Root Protection Area (m2)
1 TPO C465	Common Sycamore Acer pseudoplatanus	B1	S		0.00	0.00
	Rowan Sorbus aucuparia	C1	S	75	0.90	2.55
3	Lombardy Poplar Populus nigra 'Italica'	B1 Interim	S	630	7.56	179.58
4	Common Lime Tilia x europaea	B1 Interim	See below	See below	See below	See below
4.1	Common Lime Tilia x europaea	B1 Interim	S	330	3.96	49.27
4.2	Common Lime Tilia x europaea	B1 Interim	S	350	4.20	55.42
5	Common Ash Fraxinus excelsior	C1	MS <5	600	7.20	162.88

CBA7611_2016-09-23 v3 RPA 1







*		TRE	E WORKS SC	HEDULE
7	Client:	Summit Hotels Ltd	Site:	Holiday Inn Express, Swiss Cottage, London, NW3 5HS
LCBA Trees	Date:	November 2017	Consultant:	Dominic Poston F.Arbor.A. MICFor, CEnv, Prof Dip (RFS), BSc (Hons), HND

Tree No.	Species	Recommended Works
5	Common Ash	Fell to allow development

- All tree works are advised to be carried out between July and September or November and February. Tree works should also avoid the season for nesting birds.
- All tree works should be carried out in accordance with current best practice guidelines and BS3998:2010 Tree Work Recommendations.
- We recommend the use of an Arboricultural Association Approved Contractor or an ISA Certified Arborist/Tree Worker suitably insured and experienced to carry out the tree works.

CBA7611_2017-11-03 v1 TWS





TREES AT_____:

SUMMARY OF TREE PROTECTION MEASURES

Introduction

This leaflet shall be issued to all site personnel as part of their induction briefing.

It describes in summary form the precautions that site personnel shall at all times follow, to ensure that the existing trees on the site come to no harm.

The precautions described are neither arbitrary nor reducible and must be adhered to in full.

These precautions are necessary because unprotected trees are very vulnerable to damage during demolition and construction works.

Furthermore, many of the trees on the site are under **LEGAL PROTECTION** and damaging them can result in heavy fines.

Two common misconceptions about trees:

MYTH: Trees have deep taproots and so shallow excavations will not harm the tree.

FACT: 90% of all tree's roots are found in the top 600mm of soil; all excavations near to trees are likely to cause root damage which can kill the tree.

MYTH: Trees will quickly heal over any bark wound, with no ill effect.

FACT: Bark wounds take years to heal and larger ones never do; missing bark can lead to disease and even the death of the tree.

Tree Protection

All trees adjacent to unsupervised work areas have been protected by tree protection barriers.

These barriers must be respected at all times and no attempts shall be made to damage, bypass or ignore them.

In areas designated for supervised working, no works shall be undertaken without the supervisor being present or without him/her issuing a "carry on" chit.

Prohibitions Adjacent to Trees

Inside the exclusion area of the tree protection, the following prohibitions shall apply.

- No digging or scraping
- No storage of plant or materials
- No vehicular access
- No fire lighting
- No handling, discharge or spillage or any chemical substance
- No water-logging

In addition to the above, further precautions shall be taken near to trees.

- A 10m separation distance shall be observed between trees and any substance injurious to their health, including fuels, oil, bitumen, cement (including washings) builders' sand, concrete mixing and other chemicals.
- No fire shall be lit such that flames come within 5m of any foliage; this shall be taken to mean a fire separation distance to the leaved of 20m.

Avoiding Damage to Stem and Branches

Care shall be taken when planning site operations to ensure that wide or tall loads or plant with booms, jibs and counterweights, can operate without coming into contact with trees.

Consequently, any transit or traverse of plant in proximity to trees shall be conducted under the supervision of a spotter to ensure that adequate clearance is at all times maintained.

In some circumstances, it may be impossible to achieve this, necessitating the pruning of the tree.

If this is necessary, a specialist team shall be called in following referral to the project Arboriculturist.

No tree pruning shall be undertaken by demolition or construction personnel.

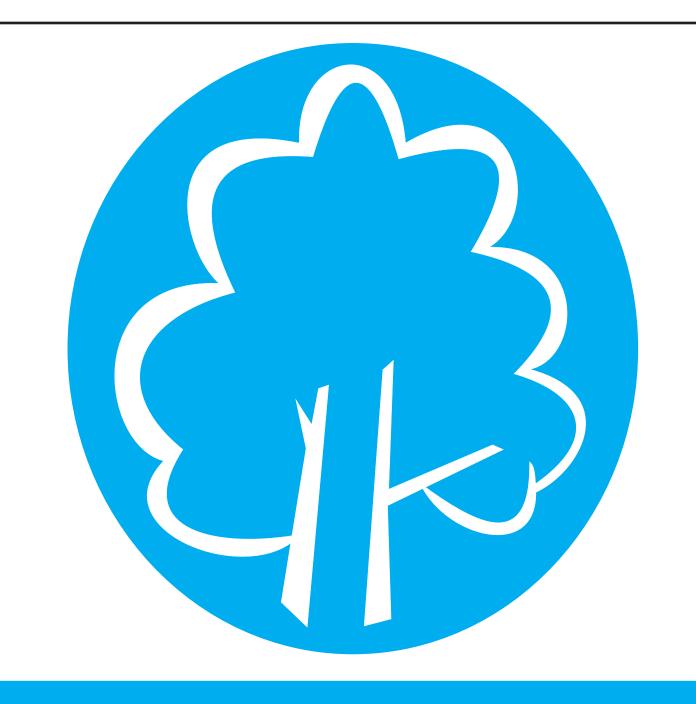
Asking for Help

If you see any damage to a tree or its protective fencing, or if you need a tree pruning for plant clearance, contact **CBA Trees** as follows:

Office Telephone: 020 8098 6229

REMEMBER:

ALL TREE DAMAGE IS
AVOIDABLE –
SO AVOID IT!



PROTECTIVE BARRIERS.
THESE BARRIERS MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.



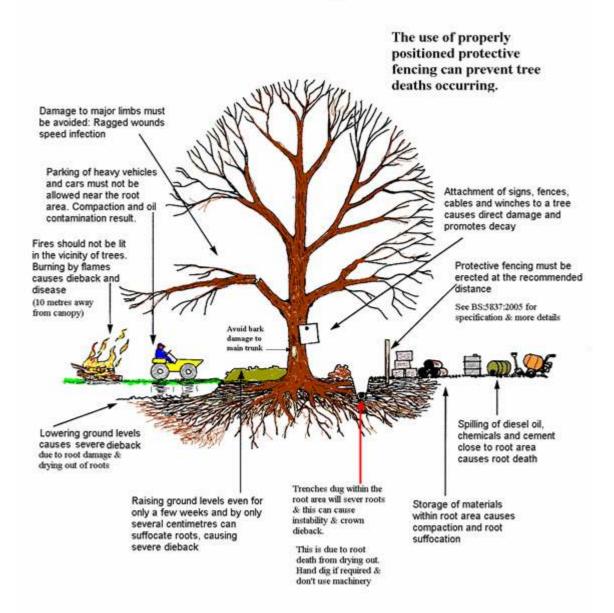
TREE PROTECTION AREA KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.

CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Common causes of Tree Death



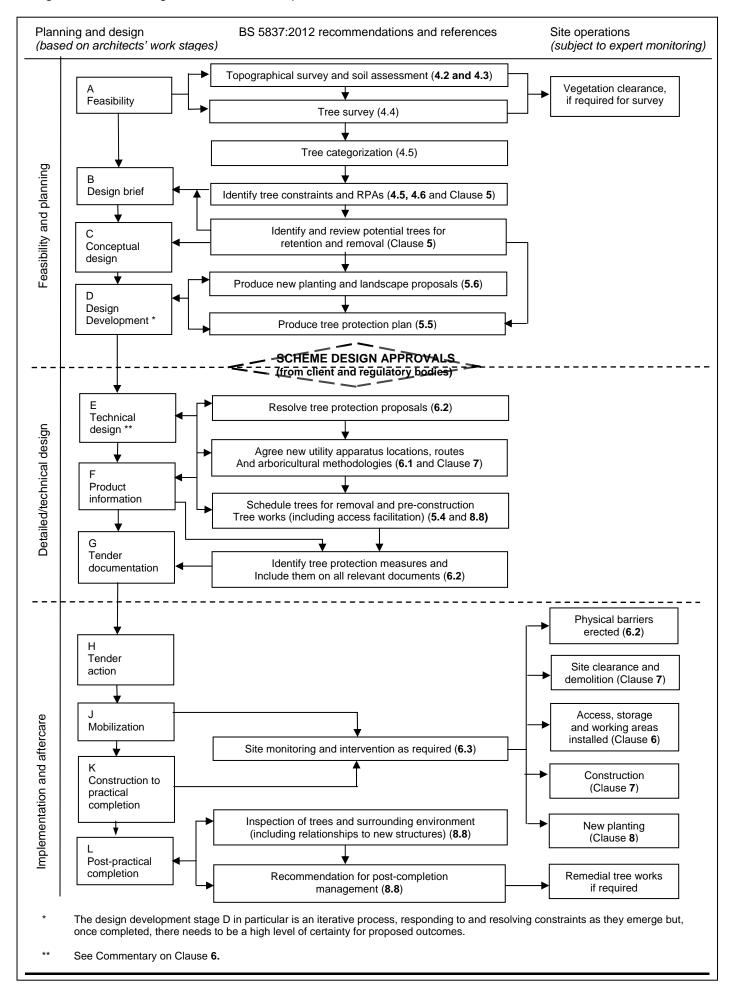
Please use copies of this as an on-site poster for personnel

(Source: Arboricultural Information Exchange website, 2005)





Figure 1 The design and construction process and tree care







The Professional Arboricultural Consultancy

Qualifications of Dominic Poston Senior Consultant

Dominic Poston F.Arbor.A. MICFor, CEnv, Prof Dip (RFS), BSc (Hons), HND has recently joined CBA Trees as a Senior Consultant and brings with him a wealth of knowledge and experience. He has over 15 years' experience of undertaking a variety of arboricultural assessments for a wide range of public, corporate and private clients.

Having attained a Bachelor of Science Degree in Horticulture, a Higher National Diploma in Landscape Management and the prestigious Royal Forestry Society's Professional Diploma in Arboriculture, Dominic is now a fellow of the Arboricultural Association, a Chartered Arboriculturist and Chartered Environmentalist and has attained Registered Consultant status with the Institute of Chartered Foresters.

He has considerable experience as an advisor to planning teams, currently acting as lead arboriculturist on three high volume (<1000units) active development sites in East Anglia as well as several smaller developments nationwide.

Dominic has appeared numerous times at planning related Public Inquiries, and also undertakes advocacy at Inquiries on behalf of Rule 6 parties. Additionally he has been instructed as an expert witness on several occasions to assist local authorities with prosecutions for offences under Tree Preservation Order legislation, and has appeared at Crown Court.