



Arboricultural Survey and Planning Integration Report

at

**Land to rear of 63 Daleham Drive,
Uxbridge,
London.
UB8 3HP**

1st October, 2020



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ARBORICULTURAL REPORT

LOCATION	Land to rear of 63 Daleham Drive, Uxbridge, UB8 3HP	REF: AR/4011/jq
		DATE OF REPORT 1 st October, 2020
CLIENT	Mr Narinder Gill, 117 West Drayton Road, Uxbridge, UB8 3LG	DATE(S) OF INSPECTION 1 st September, 2020
REPORT PREPARED BY	J. Quaife, AA Registered Consultant Dip.Arb.(RFS), F.Arbor.A, CEnv.	
SURVEY INSPECTOR(S)	J. Quaife, AA Registered Consultant Dip.Arb.(RFS), F.Arbor.A, CEnv.	SHEET No. 1 of 8

LOCAL AUTHORITY	London Borough of Hillingdon
CONTACT	Case Officer - Nicola Taplin 01895 250230 ntaplin@hillingdon.gov.uk

Please note that abbreviations introduced in [square brackets] are used throughout the report.

INSTRUCTIONS

Issued by – Mr K. Panesar of Akaal Architecture Ltd, on behalf of Mt Gill.

TERMS OF REFERENCE – To survey the subject trees to assess their general condition and to provide a planning integration statement for the proposed development that safeguards the long term well being of the retained trees in a sustainable manner.

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Summary

The proposal is to demolish the existing outbuilding and to construct a single house. A new access is to be constructed to a short drive for a parking space.

The main landscape presence is a line of cypresses and the central part is to be removed. The retained trees cannot reasonably achieve their growth potential and are to be reduced in height.

A road frontage ash is to be removed as its potential is questionable.

A replacement tree for is it to be planted along with new boundary hedging. As a consequence the landscape character will be altered to some extent, but the arboreal presence will be substantively retained.

The protection of the retained trees can be effected in accordance with current standards and guidance, and there are no matters of post development pressure upon trees that could not be managed with routine maintenance.

The proposal is sustainable in arboricultural terms.

Documents Supplied

- Icelabz Topographical Survey Plan ref: MB-Surv-DD-TS-001 dated 13th December, 2019
- Akaal Architecture Ltd Proposed Site Plan and Elevations, undated
- Officers' Report to pre-application advice dated 26th May, 2020

Scope of Survey

- 1.1 The survey is concerned with the arboricultural aspects of the site only.
- 1.2 There is no statutory tree protection over the subject site.
- 1.3 No discussions took place between the surveyor and any other party.
- 1.4 The trees were inspected on the basis of the Visual Tree Assessment method expounded by Mattheck and Breloer (The body language of trees, DoE booklet Research for Amenity Trees No. 4, 1994).
- 1.5 The survey was undertaken in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations [BS5837] with modification.
- 1.6 This report sets out the Root Protection Area [RPA], described by the RPA radius [RPR] derived from Section 4.6 of BS5837.
- 1.7 Pruning works will be required to be in accordance with British Standard 3998:2010 Tree work - Recommendations [BS3998].
- 1.8 This report does not cover the specific arrangements that may be required in connection with the installation of underground services.
- 1.9 This report sets out the working specifications of tree protection measures, but the specifications of engineering and design features are matters for which we can only provide enough detail in principle to demonstrate the feasibility of the scheme.

Survey Method

- 2.1 The survey was conducted from ground level.
- 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 stem diameters [SD] were measured in centimetres at 1.5 metres above ground level and otherwise in accordance with Annex C of BS5837.
- 2.5 The height of each subject tree was estimated with a clinometer.

- 2.6 The crown diameters were estimated by pacing or visually where access was restricted.
- 2.7 The positions of the subject trees are plotted at Appendix A derived from the supplied plan. Please note that the attached plan is for indicative purposes only.

Ecology Informative

- 3.1 Bats are protected under the Wildlife & Countryside Act 1981 and subsequent legislation and The Conservation of Habitats and Species Regulations 2010 and it is an offence to deliberately or recklessly disturb them or damage their roosts. Trees should be inspected before any works commence and if the presence of bats is suspected advice will need to be sought from the Natural England Bat Line on 0845 1300228. Further advice on bats is available from The Bat Conservation Trust (020 7627 2629).
- 3.2 Tree work should as far as is possible avoid the bird nesting season, which officially (natural England) is from February until August, although the busiest time is from 1st March until 31st July.
- 3.3 Please also be aware that ecology is governed principally by;
- the Wildlife and Countryside Act 1981 (as amended by the CROW Act 2000),
 - the Conservation of Habitats and Species Regulations 2010,
 - the Wild Mammals (Protection) Act 1996, and
 - the Natural Environment and Rural Communities (NERC) Act 2006.
- 3.4 I have completed the Bat Conservation Trust's 3-day course on bats and am conversant with the BS986 Micro-Guide for arboriculturists and the Natural England Bat Habitat Assessment Guidance 2010, and I could not see any indication of bat roosts in the subject trees.

The Site

- 4.1 The subject site is more or less rectangular but with a small projection from the western end of the southern boundary, and is fenced off from the garden off the northern elevation of the house, No.63.
- 4.2 There is an outbuilding approximately halfway along the eastern boundary fence. It is of informal wooden construction and not in good repair.
- 4.3 The land is fairly level with the gardens to Nos. 1 - 4 Hubbards Close to the west, a public footpath to the east beyond which is No.117 West Drayton Road, and a wide grass verge and path to the B465 to the north.
- 4.4 With reference to the British Geological Survey Geology of Britain Viewer the indicated soil parent material is London Clay. The soil is shrinkable and therefore is susceptible to compaction which is harmful to tree roots. From my own purely visual observation there was no indication that the rooting depth of the trees was shallow.
- 4.5 I am not an expert on soils and although I have some working knowledge of them, and so if accurate soil analysis is required then a soil specialist should be contacted.

Subject Trees

- 5.1 There are 18 subject trees which are listed in the schedule at Appendix A. They comprise 16 Monterey cypresses and an ash, and I have included a highway rowan just to the north of the ash. Only two of the cypresses merit a B grade in terms of BS5837¹. All the others are grade C.
- 5.2 The cypresses (T3 to T18) are closely-spaced in a line along the western boundary and are early mature and generally in good condition. The close proximity to each other means that their crowns are mutually suppressed, and would appear odd if singled out. The two I have graded B are the larger dominant trees, and although would also have some in-line foliage suppression, they would, given a little time present well as singletons.
- 5.3 The rowan T1 is a young tree of good form and although not directly affected by the proposal, I have included it because it has associated landscape value.
- 5.4 The ash T2 has a stem that leans to the south-west and was truncated at about 8 metres. The crown formation is visually unbalanced and unfortunately there were some initial indications of ash dieback disease. The symptoms are very mild but the incidence of natural resistance is rare and the longer-term prognosis is not encouraging.
- 5.5 Overall the cypresses trees are in reasonable condition and none of them (nor the ash) presents any significant risk.

The Proposal

- 6.1 The proposal is to demolish the existing outbuilding and to construct a single house of two storeys and with a single storey projection off the southern elevation. The house is to be centrally placed
- 6.2 A new drive to accommodate a parking space will be positioned near the northern boundary, and accessed from a new footpath crossover from the vehicular drive and parking area to the east.

Arboricultural Landscape Integration

- 7.1 The defining arboricultural aspect of the site is the line of cypresses (T3 to T18). One may assume that they were planted as a hedge but they have considerable growth potential.

¹ BS5837 Tree Category Classes

U – Existing condition is such that any existing value would be lost within 10 years and should therefore be removed for reasons of sound arboricultural management.

A – High quality and value (40+ yrs).

1) Mainly arboricultural values 2) Mainly landscape values 3) Mainly Cultural values including conservation.

B – Of moderate quality and value (20+ years).

1) Mainly arboricultural values 2) Mainly landscape values 3) Mainly Cultural values including conservation.

C – Those of low quality and value (10+ years).

Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a SD of less than 15cm could be considered for relocation.

- 7.2 There are two aspects to the cypresses site. The first is that in such confined circumstances they cannot be allowed to reach their full growth potential, which on this site is certainly 25 metres. Accordingly they should be reduced in height to about 9 metres. As they have a persistent main stem it will be difficult to create a “soft” appearance, but they will produce multiple shoots which can be pruned again to give a more round top profile. If this pruning is carried out initially then this shoot growth will appear by the time the house is built.
- 7.3 In addition, the central part of the line of cypresses, (the ten trees T4 to T13), are to be removed as they would be overly dominant to the proposed house.
- 7.3 The cypress T3 is to be retained as a dominant tree, and the cypress T14 is also retained at the northern end of the remaining cypresses for the same reason.
- 7.4 The ash on the northern boundary is not actually a good specimen, despite appearing to be so from a distance, and as I describe in paragraph 5.4 above has limited potential. Accordingly it is to be removed.
- 7.5 The proposal includes the planting of a new hedge along the northern boundary and along the northern two-thirds of the western boundary, as I have shown at Appendix B. There is existing fencing, but a hedge will not only appear softer and provide shelter for small birds, but can also be allowed to grow slightly taller than the fence for additional screening.
- 7.6 The species choice is open, but I suggest that it is of mixed evergreen species, an id holly is to be included I should be a species with spineless leave such as *Ilex aquifolium* ‘J C Van Tol’.
- 7.7 There is also scope to plant a new tree in the north-western corner of the site, which together with the highway rowan T1 will mitigate the loss of the ash T2. I suggest that a native Wild Service Tree *Sorbus torminalis* is planted.

Post Development Pressure

- 8.1 The concept of post development pressure is not that routine maintenance work to maintain clearances and the proportionality of trees is unacceptable. The term should more accurately be one of irresistible post development pressure where the spatial or physical relationship of a retained tree to a structure or feature demands pruning or removal that is inappropriate, but to which the local planning authority could not reasonably refuse consent.
- 8.2 The spatial relationship of the retained trees to the proposed house will not cause maintenance problems.
- 8.3 The southern line of cypresses will cause shade to the rear garden later in the afternoon, but otherwise the plot will be open.
- 8.4 Accordingly there will be no appreciable post development pressure, and certainly none that would oblige the Council to give consent to inappropriate tree works.

Tree Protection Measures

- 9.1 The BS5837 gives a Root Protection Area [RPA] for each retained tree by reference to Section 4.6 in the BS. The RPA is an estimation of the area of the root system that would need to be retained to sustain the condition of the tree if all the other roots outside it were to be severed. The RPA represents a smaller proportion, (on average only a third), of a tree's root system and consequently whilst the RPA is particularly important to ensure that there are no adverse effects upon stability, if an encroachment does not reduce the overall assimilative function of the root system significantly it is unlikely to cause harm. However, as with any factor relating to trees each individual situation must be justified in site-specific terms.
- 9.2 The RPA is usually described as a circle with a radius (Root Protection Area Radius [RPR]) of the prescribed distance within which no unspecified activity should occur, though the shape and position of the RPA can be modified by an arboriculturist to meet individual site conditions according to the probable distribution of the tree roots. Intrusion into the RPA can take place only where the ground is adequately protected in accordance with the requirements of Section 6.2.3 of BS5837 or where work is carried out to an agreed design and working method.
- 9.3 Quaife Woodlands uses a tabular method to derive rounded-up RPA radii in half-metre graduations (Appendix C). Circular RPAs are not always appropriate but I have used them in this instance as they cover pen ground.
- 9.4 **RPA Encroachment** The only RPA encroachment is by the car parking space into the RPA of cypress T3. However, this is by a modest area and the tree's root system will benefit from the removal of the adjacent cypresses and the ash and the competition of their roots.
- 9.5 There is no need for any special surfacing and a normal sub-base can be installed, but the surface should be laid with a permeable material. The new drive should be laid initially so as to provide a hard standing for construction access. This can be temporarily reinforced with load dissipation sheeting and the final wearing surface laid at the end of construction to avoid it being damaged or disfigured.
- 9.6 **Tree Protection Fencing** The combined zones of RPAs form the Construction Exclusion Zone [CEZ] and will be protected by a Tree Protection Fence [TPF] comprising steel mesh panels of 1.8 metres in height ('Heras'). These panels will be mounted on a scaffolding frame as shown at Figure 2 of BS5837 (Appendix D) and will encompass the retained cypresses. There is space for scaffolding between the south-western corner of the proposed house and the RPA of T14, but this will not be a thoroughfare and materials will need to be brought around each side of the house.
- 9.7 The TPFs are to be erected before any work commences on site, are to remain in situ undamaged for the duration of all work or each phase, and only to be removed once all work is completed. The TPFs are to carry waterproof warning notices denying access within the CEZ.
- 9.8 **Ground Protection** There are no areas requiring ground protection. The demolition of the outbuilding will not adversely affect the retained trees.

- 9.9 **General Matters** The surface water run-off and soil drainage have not been studied. However, due to the site topography and soil type, I do not foresee any detrimental effects on the trees in hydrological terms as a result of this development.
- 9.10 I have not been provided with any details of the underground service routes but I assume they will be to the east of the proposed house. As such there will be no conflict with trees.
- 9.11 The protection of the trees will also include recognition of other types of potentially damaging activities, such as the storage of materials (and other substances likely to be toxic to plants), parking, site-building requirements, and the use and parking of plant. Although this is only likely to apply to the construction of House 1, particular care and planning is necessary to accommodate the operational arcs of excavation and lifting machinery, including their loads, especially large building components such as beams and roof trusses. Operations like these have the potential to cause incidental damage and logistical planning is essential to avoid conflicts.
- 9.12 One of the main tree protection considerations is the logistical management of the site, but there is sufficient space outside the CEZ.

Conclusions

- 10.1 Of the 18 subject trees 10 are to be removed, but the landscape character of the plot will be retained with new planting. The cypresses cannot be reasonably allowed to grow to their full potential and the proposed height reduction will maintain their proportionality.
- 10.2 The pruning requirements will not cause any of the trees physiological harm, and although will appear stark initially, they will develop more rounded tops and frankly there is little alternative to their management. A new tree and hedging is proposed, and with these matters in consideration the arboricultural landscape impact of the proposal will be neutral.
- 10.3 The retained trees do not cause any significant conflicts in terms of construction activities, nor will any significant issues of post development pressure be likely to emerge that could not be managed with routine maintenance.
- 10.4 The retained trees will all be protected in accordance with current standards and guidance, particularly with logistical planning.
- 10.5 For trees to be sustainable within a development proposal they must be compatible with their surroundings, not just in terms of long-term spatial relationship but also in respect of minimising any potential conflicts to matters of routine maintenance. This proposal achieves this objective.
- 10.6 I have taken account of the information given to me and my own observations on site and I am satisfied that this scheme is arboriculturally sound and that the long-term well-being of the retained trees will be safeguarded in a sustainable manner.

Recommendations

11.1 The successful integration of the proposal with retained trees will need to take account of the following points:

- i) Plan of underground service routes.
- ii) Implementation of the tree protection measures and methods set out in this Report.
- iii) Site logistics plan to include storage, plant parking/stationing, materials handling.
- iv) Site supervision – Following an induction meeting conducted by the project arboriculturist with all those involved in attendance, an individual, e.g. the Site Agent, will be nominated to be responsible for all arboricultural matters on site. This person must:
 - a) be present on site for the majority of the time,
 - b) be aware of the arboricultural responsibilities,
 - c) have the authority to stop any work that is causing, or has the potential to cause harm to any tree,
 - d) be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of any failure to observe those responsibilities,
 - e) make immediate contact with the local authority and/or the project arboriculturist in the event of any tree related problems occurring, whether actual or potential.

11.2 As a matter of course these points will be resolved in consultation with and subject to the approval of the planning authority through their Arboricultural Officer.

11.3 The sequence of works should be as follows:

- i) initial tree removal and pruning
- ii) installation of TPF
- iii) site preparation - demolition of the outbuilding
- iv) installation of underground services
- v) construction of new drive
- vi) main construction, including hard landscaping
- vii) removal of TPF
- viii) new planting and other soft landscaping

The statements made in this Report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Quaife Woodlands cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this Report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the Report are carried out to, or affecting, the Subject Trees, whichever is the sooner.



Quaife Woodlands Arboricultural Survey AR/4011/jq

Land to rear of 63 Daleham Drive, Uxbridge, UB8 3HP

Site Plan - Existing Layout

Scale 1:200 approximately @ A3

1st September 2020

0 5 10 15 20 metres

Scaling accuracy is sufficient for planning purposes but this drawing should not be used for construction
This plan is drawn in colour so monochrome reproduction may be unreliable

BS 5837:2012 Tree Categories

- U Tree that should be removed
- A Tree that is highly desirable for retention
- B Tree that is desirable for retention
- C Tree of no particular merit, could be retained
- Tree off site

Schedule of Subject Trees

Tree	Stem Øcm	Height m	Average Crown Øm	BS cat	RPA m ²	RPA rad m	Comments
T1 Rowan	11	6	4	C	13	2.0	Off Site - Highway tree
T2 Ash	60	13	10	C	177	7.5	Stem lean SW, truncated at 8m, poor form, crown asymmetric to N. To be removed
T3 Monterey Cypress	38	15	8	B	79	5.0	-
T4 Monterey Cypress	32	14	6	C	50	4.0	To be removed
T5 Monterey Cypress	33	13	4	C	50	4.0	To be removed
T6 Monterey Cypress	34	14	4	C	50	4.0	To be removed
T7 Monterey Cypress	25	13	4	C	28	3.0	To be removed
T8 Monterey Cypress	45	15	6	C	95	5.5	Small secondary stem to N, To be removed
T9 Monterey Cypress	31	14	4	C	50	4.0	To be removed
T10 Monterey Cypress	25	14	5	C	28	3.0	To be removed
T11 Monterey Cypress	29	14	9	C	38	3.5	To be removed-
T12 Monterey Cypress	24	13	4	C	28	3.0	To be removed
T13 Monterey Cypress	26	12	5	C	38	3.5	To be removed
T14 Monterey Cypress	32	14	8	B	50	4.0	-
T15 Monterey Cypress	29	13	6	C	38	3.5	-
T16 Monterey Cypress	26	12	5	C	38	3.5	-
T17 Monterey Cypress	25	13	6	C	28	3.0	-
T18 Monterey Cypress	26	13	6	C	38	3.5	-



Quaife Woodlands Arboricultural Survey AR/4011/jq

Land to rear of 63 Daleham Drive, Uxbridge, UB8 3HP

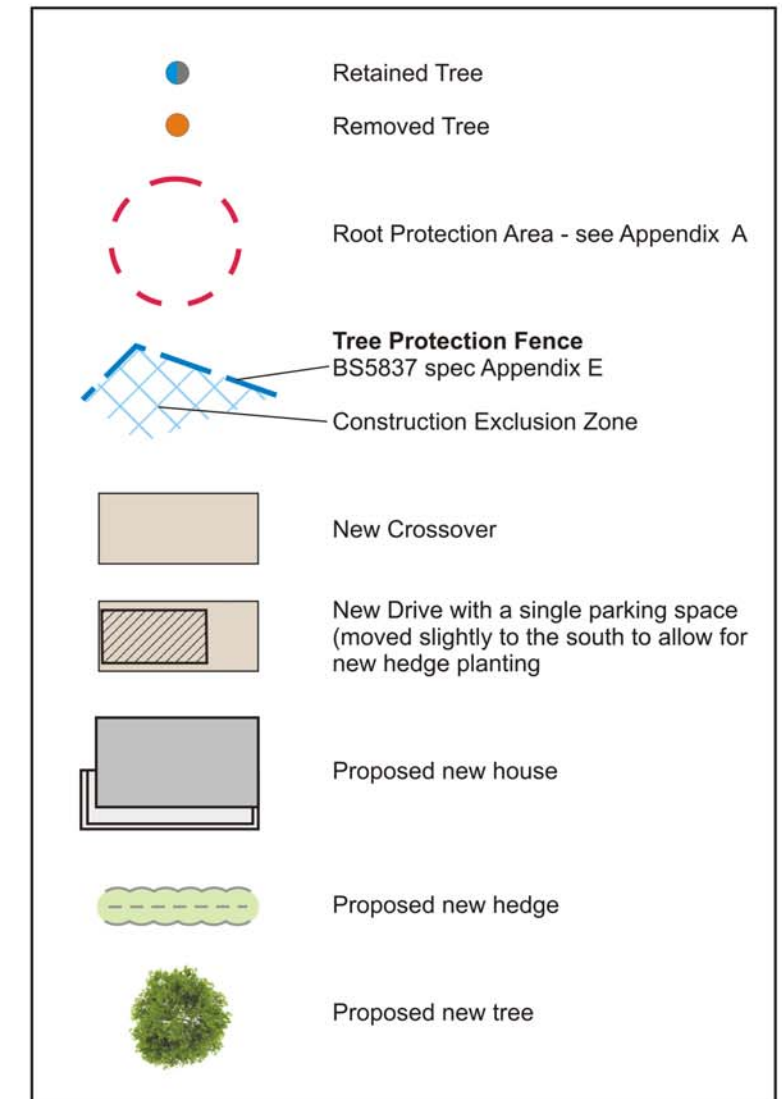
Site Plan - Proposed Layout with Tree Protection Measures

Scale 1:200 approximately @ A3

1st October 2020

0 5 10 15 20 metres

Scaling accuracy is sufficient for planning purposes but this drawing should not be used for construction
This plan is drawn in colour so monochrome reproduction may be unreliable



BS5837:2012 (Paragraph 4.6.1)
Root Protection Area radii in ½ metre graduations



The ½ metre graduations of RPA radii have been calculated back to produce diameter dimensions, which in turn have been rounded down to the nearest centimetre. If the BS5837 multiplier factor is plotted on a graph it produces a straight gradient and if the ½ metre steps are plotted they are all above that line, thus ensuring that the RPA radii err on the generous side.

<i>Single Stem up to diameter (mm)</i>	<i>RPA Radius (m)</i>	<i>RPA (m²)</i>
1250	15.0	707
1210	14.5	660
1170	14.0	616
1120	13.5	573
1080	13.0	531
1040	12.5	491
1000	12.0	452
960	11.5	416
920	11.0	380
870	10.5	346
830	10.0	314
790	9.5	284
750	9.0	255
710	8.5	227
670	8.0	201
620	7.5	177
580	7.0	154
540	6.5	133
500	6.0	113
460	5.5	95
420	5.0	79
370	4.5	64
330	4.0	50
290	3.5	38
250	3.0	28
210	2.5	20
160	2.0	13

Extract from British Standard 5837: 2012
Trees in relation to design, demolition and construction
- Recommendations

Figure 2. Default specification for Tree Protection Barrier

Indicated framework support as the usual method of support for steel mesh panels ('Heras'). Some variation can be employed if appropriate, such as support by wooden posts (75mm x 75mm x 2.75m) dug or concreted into the ground (dry mix concrete contained within a plastic bag), or if there is no pressure of access a lighter form of netting on driven stakes.

