Arboricultural Assessment & Method Statement

35a King Henrey's Road, Primrose Hill, London

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17 July 2017

17170-AA-CA

Site location and approximate boundaries

This aerial image is provided courtesy of Google. The yellow line indicates the approximate site boundary and is illustrative only.

Report purpose, validation statement and tree protection plan

Report purpose

This is a BS 5837 compliant arboricultural assessment report providing sufficient information for the Local Planning Authority ("LPA") to consider the effect of the proposed development on local character from a tree perspective. It includes an analysis of how trees will be affected and an arboricultural method statement describing how retained trees will be protected and managed during the development activity. It is fully in line with the BS 5837 advice relating to the planning application stage of the process highlighted in Table B1 reproduced below:

Table B. 1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions)	Existing and proposed finished levels
	Tree retention/removal plan (finalized)	Tree protection plan
	Retained trees and RPAs shown on proposed layout	Arboricultural method statement - heads of terms
	Strategic hard and soft landscape design, including species and location of new tree planting	Details for all special engineering within the RPA and other relevant construction details
	Arboricultural impact assessment	
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using trenchless method	Arboricultural site monitoring schedule
	Dimensioned tree protection plan	Tree and landscape management plan
	Arboricultural method statement – detailed	Post-construction remedial works
	Schedule of works to retained trees, e.g. access facilitation pruning	Landscape maintenance schedule
	Detailed hard and soft landscape design	

Validation statement

For LPA validation purposes, this report includes:

- a **BS 5837 compliant tree survey**, including a tree protection plan showing the location of the existing trees, their categorisation, the location of the new structures and hard surfacing and the tree protection measures;
- an **arboricultural assessment** which describes how the development proposal will affect local character from a tree perspective;
- an **arboricultural method statement** describing the tree protection and management measures, and how they should be implemented; and
- two **appendices** setting out the background administrative information and a schedule of tree information.

The tree protection plan

More specifically, the tree protection plan is based on the provided information and it should only be used for dealing with the tree issues. It shows:

- the existing trees numbered, with high/moderate categories (A & B) highlighted in green triangles and low/unsuitable categories (C & U) highlighted in blue rectangles;
- the circular interpretation of root protection areas ("RPA") of category A, B and C trees (grey circles);
- the location of the construction exclusion zone ("CEZ"), which is the area of restricted access, to be protected by temporary barriers (fencing and/or ground protection); and
- the location of precautionary areas outside the CEZ where limited, but careful access is permitted.

Summary

1. The development proposal

The development proposal by Ms Hildreth is to carry out various improvement works, including an extension and modification to the retaining wall and garden steps at 35a King Henry's Road, Primrose Hill, London.

2. Background administrative information

Our instructions, how we prepared this report and other relevant background information is explained in Appendix 1. All the trees that could be affected were inspected and that information is listed in Appendix 2.

3. Impact on trees and local character

No trees will need to be removed or pruned because of this development proposal and so there will be no impact on the tree aspects of local character resulting from it. Although the retained trees are close to the development activity, they can be protected through the use of special precautions without any adverse impacts.

4. Table 1: Summary of category A, B and C trees to be protected using special precautions

	British Standard 5837 Category		
	A (High quality)	B (Moderate quality)	C (Low quality)
Protect using special precautions	None	None	T6

5. Table 2: Extra precautions in addition to primary protection using barriers (fencing and ground protection)

Activities requiring extra precautions	Tree number(s)
Pollution control near retained trees	All trees
Excavation in RPAs	T6
Removal of existing surfacing and/or structures in RPAs	T6
Installation of new structures in RPAs	T6
Installation of new services and/or upgrading of existing services in RPAs	All trees

Note: The detailed analysis explaining how these trees will be protected is provided in Section 2 of this report. The approximate locations of the protective measures are shown on the tree protection plan. It is likely that some details of the tree protection will need to be refined in response to a planning condition, once consent is issued.

6. Overall arboricultyural assessment of how the development proposal will affect local character from a tree perspective

No trees will be lost as a result of this proposal and there will therefore be no detrimental impact on local character.

Arboricultural method statement

This arboricultural method statement has taken account of all the recommendations set out in 6.1 of BS 5837 (reproduced courtesy of BSI below).

6.1 Arboricultural method statement

6.1.1 A precautionary approach towards tree protection should be adopted and any operations, including access, proposed within the RPA (or crown spread where this is greater) should be described within an arboricultural method statement, in order to demonstrate that the operations can be undertaken with minimal risk of adverse impact on trees to be retained.

6.1.2 The arboricultural method statement should be appropriate to the proposals and might typically address some or all of the following, incorporating relevant information from other specialists as required:

a) removal of existing structures and hard surfacing;

b) installation of temporary ground protection (see **6.2.3**);

c) excavations and the requirements for specialized trenchless techniques (see **7.7.2**);

d) installation of new hard surfacing – materials, design constraints and implications for levels;

e) specialist foundations – installation techniques and effect on finished floor levels and overall height;

f) retaining structures to facilitate changes in ground levels;

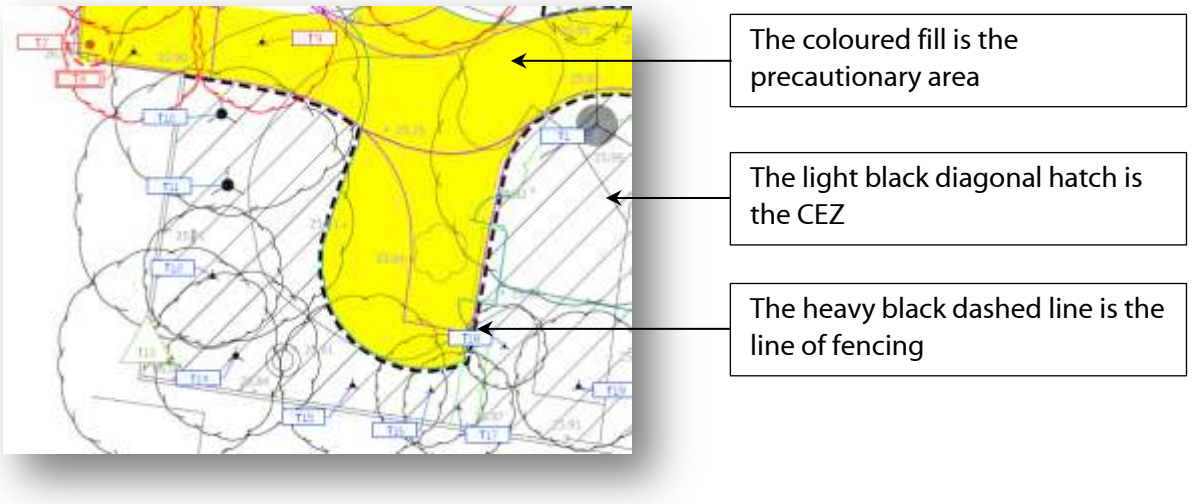
g) preparatory works for new landscaping ;

h) auditable/audited system of arboricultural site monitoring, including a schedule of specific site events requiring input or supervision.

6.1.3 The arboricultural method statement should also include a list of contact details for the relevant parties.

7. Identification of areas to be protected

The tree protection plan (typical annotation illustrated below) shows all the areas where protective measures are necessary. The construction exclusion zone ("CEZ") boundary is shown on the plan as the heavy dashed black line, with the lighter diagonal hatching behind. If necessary, further precautionary areas outside the CEZ are shown on the plan as a coloured fill, where a high level of care is required.



8. Arboricultural supervision

An arboricultural consultant should be appointed by the developer to advise on the tree management for the site and to attend:

- a pre-commencement meeting before any work starts; and
- regular supervision visits to oversee the agreed tree protection.

More specifically, the form and purpose of the supervision should be as follows:

- **Pre-commencement meeting:** A pre-commencement meeting should be held on site before any of the site clearance and construction work begins. This would normally be attended by the site manager, the arboricultural consultant and a local planning authority ("LPA") representative. In the event that a LPA representative declines to be present, the arboricultural consultant should inform the LPA in writing of the details of the meeting. All tree protection measures detailed in this document should be fully discussed so that all aspects of their implementation and sequencing are understood by all the parties. This should include agreeing the form and location of the most appropriate combination of fencing and/or ground protection to be used as barriers for the CEZ. Any agreed clarifications or modifications to the consented details will be recorded and circulated to all parties in writing. This meeting is where the details of the programme of tree protection should be agreed and finalised, which should then form the basis of any supervision arrangements between the arboricultural consultant and the developer.

- **Ongoing supervision of operations that could affect trees:** Once the site is active, the arboricultural consultant should visit at an interval agreed at the pre-commencement site meeting. This would normally be every two to four weeks for general supervision, but could be at a longer interval if agreed between the parties. The supervision arrangement should be sufficiently flexible to allow the supervision of all sensitive works as they occur. The arboricultural consultant's initial role is to liaise with the developer and the LPA to ensure that protective measures are fit for purpose and in place before any works start on site. Once the site is working, that role should switch to monitoring compliance with arboricultural planning

conditions and advising on any tree problems that arise or modifications that become necessary.

9. Summary of the tree issues to be project managed by the supervising arboriculturist

In overview, it is anticipated that arboricultural input is likely to be needed for the following operations:

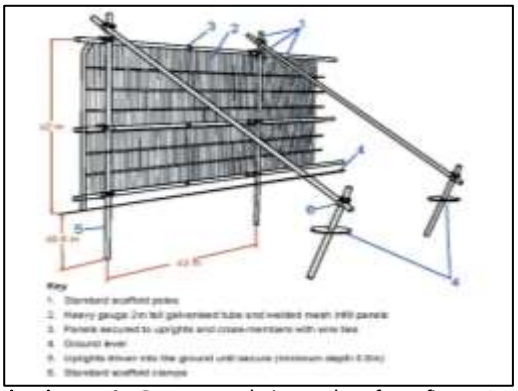
1. Pre-commencement meeting
2. Installation of CEZ barriers (fencing and/or ground protection)
3. Pollution control near retained trees
4. Excavation in RPAs
5. Removal of existing surfacing and structures in RPAs
6. Installation of new structures in RPAs
7. Installation of new services and/or upgrading of existing services in RPAs
8. Removal of protective measures

10. Primary tree protection using fencing

The CEZ is the RPA surrounding retained trees that must be protected from any disturbance by the construction activity. In practice, this can be done by any combination of fencing and ground protection, to be finalised and agreed at the pre-commencement meeting. Whether the CEZ is protected by fencing or ground protection, all the protective measures should be installed before the start of any site works that could affect trees. No protective measures should be removed or temporarily dismantled without consulting the supervising arboriculturist. Furthermore, the condition of all the protective measures should be regularly monitored to ensure they remain fit for purpose. The main means of preventing damage to trees and their RPAs in the CEZ are fencing, barriers and ground protection.

Protective fencing should be installed at the locations shown on the tree protection plan by the heavy black dashed line. The minimum specification for the fencing should be as described in figure 2 of BS 5837 (Fencing image 1) or an equivalent design that effectively restricts access to the RPA it protects.

The precise form of the fencing can vary, provided it is fit for purpose in that it effectively restricts access and damaging activities within the RPA that it encloses. More specifically, behind the fencing, there should be no vehicular access; no fires; no storage of excavated debris, building materials or fuels; no mixing of cement; no service installation or excavation; no raising or lowering of soil levels; and no excessive cultivation for landscape planting. Any variations to these restrictions should be agreed by the supervising arboriculturist.



Fencing image 1: Recommendations taken from figure 2 of BS 5837.

Fencing image 2: Heras fencing wired to scaffold braced posts is a robust and effective interpretation of the BS specification.

Where individual trunks or branches are vulnerable to impact damage, a framework of scaffold or wood can be constructed to provide protection (Fencing images 3 and 4).

Fencing image 3: A scaffold-braced framework surrounding the trunk reduces the risk of accidental impact.

Fencing image 4: Board secured to scaffold framework adds another layer of protection for vulnerable trunks and branches

11. Primary tree protection using ground protection

Where it is not practical to protect the CEZ by the use of fencing alone, BS 5837 (6.2.3) allows for the fencing to be set back and the soil protected by ground protection. This allows improved access during construction, with the ground protection preventing damage to the CEZ outside the protection of the fencing. A range of methods can be used, including retaining existing hard surfacing or structures that already protect the soil, installing new materials, or a combination of both. Whatever the choice of method, the end result must be that the underlying soil (rooting environment) remains undisturbed and retains the capacity to support existing and new roots. Ground protection images 1 & 2 illustrate a range of practical surface coverings that can effectively protect CEZs of retained trees.

Ground protection image 1: Heavy-duty plywood set onto a compressible woodchip layer and pinned into position is suitable to spread the loading from pedestrian access.

Ground protection image 2: Plywood fixed to a wood frame is another effective method of protecting soil from pedestrian compaction.

On this site, all the precautionary areas annotated with yellow shading on the tree protection plan should be protected with ground protection while vulnerable to damage, in line with the above examples. Where appropriate, any existing hard surfacing can be retained and utilised. Any surfacing to be retained that is disrupted during the course of the construction activity can be replaced, reconditioned or upgraded as necessary. This work should be subject to arboricultural supervision.

12. Extra precautions – pollution control near retained trees

The following guidance should be applied wherever risk assessment identifies a significant risk of chemical pollution. Spilt chemicals that can soak into RPAs will kill existing roots and may prevent new roots growing, so provision must be made to minimise the risk of contamination to soil within the normal risk management protocols for the site. This would normally include means of containing spillages and procedures for clearing them up if they occur (Pollution image 1). All cement mixing and vehicle washing points must be located outside RPAs, with provision to

contain any spillages. Where the contours of the site create a risk of polluted water or toxic liquids running into RPAs, a precautionary measure of bunding or a frame, sealed with heavy-duty plastic sheeting sufficient to prevent contamination (Pollution image 2), must be used to contain accidental spillages.

Pollution image 1: Where fuel or other chemicals are stored on site, it is now standard practice to have emergency spillage kits available to restrict the environmental impact of accidents.

Pollution image 2: Soil bunding or a supporting framework covered in heavy-duty plastic sheeting is essential where there is a risk of spillages contaminating RPAs. This specifically applies to cement mixing areas and vehicle washing facilities.

13. Extra precautions – excavation in RPAs

The following guidance applies to tree T6, which is shown on the tree protection plan. Precautionary areas are RPAs outside the fencing, i.e. they are areas where construction activity can take place, but it must be carried out with care to avoid damaging the sensitive rooting environment. BS 5837 (7.2) makes provision for excavating in RPAs, explaining that all excavation must be carried out carefully using hand-held tools and preferably by compressed air soil displacement, taking care not to damage the bark and wood of any roots (Excavation images 1–4).

All soil removal must be done with care to minimise the disturbance of roots beyond the immediate area of excavation. Where possible, flexible clumps of smaller fibrous roots should be retained if they can be displaced temporarily or permanently beyond the excavation without damage. If digging by hand, a fork should be used to loosen the soil and help locate any substantial roots. Once roots have been located, the trowel should be used to clear the soil away from them without damaging the bark. Exposed roots to be removed should be cut cleanly with a sharp saw or secateurs 10–20cm behind the final face of the excavation. Roots temporarily exposed must be protected from direct sunlight, drying out and extremes of temperature by appropriate covering such as dampened hessian sacking (Excavation image 4). If necessary, roots less than 2.5cm in diameter can be cut cleanly without consultation with the supervising arboriculturist. Roots greater than 2.5cm in diameter should be cut only after consultation with the supervising arboriculturist.

Excavation image 1: Careful hand-digging using conventional

Excavation image 2: Air spades are very effective at exposing

tools is acceptable for exposing roots in RPAs.

Excavation image 3: Air spades are particularly useful where roots are very dense.

roots and services with minimal damage.

Excavation image 4: Exposed roots must be protected from light, drying out and extremes of temperature by covering with hessian sacking and boards until they can be covered back with soil.

14. Removal of existing hard surfacing and structures in RPAs

The following guidance will be applied to tree T6 which is shown on the tree protection plan.

For the purposes of this guidance, the following broad definitions apply:

- **Hard surfacing:** Any hard surfacing used as a vehicular road, parking or pedestrian path including tarmac, solid stone, crushed stone, compacted aggregate, concrete and timber decking. This does not include compacted soil with no hard covering.
- **Structures:** Any man-made structure above or below ground including service pipes, walls, gate piers, buildings and foundations. Typically, this would include drainage structures, car-ports, bin stores and concrete slabs that support buildings.

Roots frequently grow adjacent to and beneath existing surfacing and structures, so great care is needed during access and demolition. Damage can occur through physical disturbance of roots and/or the compaction of soil around them from the weight of machinery or repeated pedestrian passage. This is not generally a problem whilst surfacing and structures remain in place because they spread the load on the soil beneath and further protective measures are not normally necessary. However, once that protection is removed and the soil below is newly-exposed, the potential for damage to roots becomes an issue. In summary, there should be no vehicular or repeated pedestrian access unless existing ground protection is retained or new protective measures are installed (Hard surfacing/structure removal image 1). All exposed RPAs must be protected until there is no risk of damage from the development activity.

Hard surfacing/structure removal image 1: Ground protection must be used where repeated foot or vehicle traffic could cause compaction in sensitive RPAs. It can be as simple as plywood for pedestrians, but must be more robust for vehicles.

Hard surfacing/structure removal image 2: Machines with a long reach can be used to lift out heavy surfacing and structures as long as the machine sits outside the RPA and the exposed surface is protected before there is any further access.

Removing existing surfacing and structures is a high-risk activity for any adjacent roots and the following guidance must be observed:

1. Appropriate tools for manually removing debris may include a pneumatic breaker, crow bar, sledgehammer, pick, mattock, shovel, spade, trowel, fork and wheelbarrow (Images 3 and 4 below). Secateurs and a handsaw must also be available to deal with any exposed roots that have to be cut.
2. Machines with a long reach may be used if they can work from outside RPAs or from protected areas within RPAs (Image 2 above), but they must not encroach onto unprotected soil in RPAs.
3. Debris to be removed from RPAs manually must be moved across existing hard surfacing or temporary ground protection in a way that prevents compaction of soil. Alternatively, it can be lifted out by machines, provided this does not disturb RPAs (Image 2 above).
4. Great care must be taken throughout these operations not to damage roots as set out in the above paragraph on excavation and dealing with roots.
5. If appropriate, leaving below ground structures in place should be considered if their removal may cause excessive root disturbance.

Hard surfacing/structure removal image 3: Careful lifting of cemented-in sets round this tree allowed them to be re-laid on a permeable sand base, improving the water input into the soil around the trunk.

Hard surfacing/structure removal image 4: These trees had impermeable surfacing right up to their trunks, which had to be removed by hand before installing new structures.

15. Extra precautions – installation of new structures in RPAs

The following guidance will be applied to tree T6 which is shown on the tree protection plan.

New structures in RPAs are potentially damaging to trees because they may disturb the soil and disrupt the existing exchange of water and gases in and out of it. Mature and over-mature trees are much more prone to suffer because of these changes than young and maturing trees. Adverse impact on trees can be reduced by minimising the extent of these changes in RPAs. This can be done by constructing the main structures above ground level on piled supports and redirecting water to where it is needed. The detailed design and specification of such structures is an engineering issue that should be informed and guided by tree expertise.

Small sheds, carports and bin stores

Light structures do not normally require substantial foundations and can have permeable bases. Ideally, their bases should be of a no-dig, load-spreading construction set directly on to the soil surface. They require a flat base and so an undulating site will need levelling to provide a suitable surface. Excavation of any high points by up to 5cm and filling depressions with permeable fill to provide a flat base will normally be acceptable provided no roots greater than 2.5cm in diameter need to be cut. If large roots are found, the preferred course of action would be to raise the base level of the structure by filling rather than cutting roots. However, if this is not practical and large roots have to be cut, the situation should be discussed with the supervising arboriculturist before

a final decision is made. Light covering structures can be fixed onto a frame that can rise directly from the base or be fixed to supports either banged into the ground or set in carefully dug holes. Provided the supports are well spaced, i.e. greater than 1.5m apart, and of a relatively narrow diameter, i.e. not in excess of 15cm, it is unlikely they will cause any significant disturbance to RPAs.

Walls on existing foundations and retaining walls

A free-standing wall on an existing foundation is unlikely to require any additional excavation and so its construction should have no adverse impact on RPAs if the appropriate ground protection is in place while the new wall is being built. However, replacing existing walls or constructing new walls that retain the soil of RPAs normally requires some limited excavation back into the exposed soil face to provide a working space of at least 10–20cm behind the inside wall face. This should be done carefully and limited to no more than required to construct the new wall. Any roots found should be dealt with as set out above. Once the wall is completed, any voids behind it should be filled with good quality top soil and firmed into place, but not over compacted. Specific difficulties with large roots that are found during the course of the construction should be referred to the supervising arboriculturist.

16. Extra precautions – installation of new services and/or upgrading of existing services in RPAs

The following guidance will be applied to all retained trees as appropriate, which are shown on the tree protection plan.

Excavation to upgrade existing services or install new services in RPAs may damage retained trees. Where possible, all services should be outside RPAs and installation in RPAs should only be chosen as a last resort. If installation within RPAs is being considered, as advised in 4.1.3 of the NJUG guidance, the decision should be made in consultation with the LPA or the supervising arboriculturist before any work is carried out. If service installation is agreed within RPAs, the NJUG protocol as set out in 4.1.3 of its guidance should be used to decide the most appropriate method. In summary, this sets out that "*Acceptable techniques in order of preference are; a) trenchless, … b) Broken trench – hand-dug … c) Continuous trench – hand-dug*". If trenchless methods are to be used, there is normally a starting pit and a finishing pit that have to be dug at each end of the service run and these must be outside RPAs. Where a hand-digging option is agreed, any roots discovered during the excavations should be dealt with as explained above. Where possible, backfilled material around excavated services must not be heavily compacted, with specific advice provided in 4.1.5 of the NJUG guidance.

17. Removal of protection

All protective barriers must remain in place until the construction activity is finished and there is no realistic risk of damage to the protected soil surfaces.

Appendices

Appendix 1: Background administrative information, data collection and any additional relevant information

18. Table 3: Background administrative information

	Background administrative information
Report date & reference	17 July 2017 - 17170-AA_CA
Tree protection plan reference	BT1
Our instructing client	Jennifer Hildreth
Our instructions	Visit the site, assess the relevant trees, prepare a schedule of their details, describe the impact of the proposal on those trees and identify the tree protection issues in an arboricultural method statement confined to the heads of terms
Provided documents	Land survey, drawing number 17274-01-01 received by email on 15 June 2017 and layout, drawing number 170712_018-A-Plans.dwg received by email one 12 July 2017
Report author and credentials	Chris Allder is a Chartered Forester (www.charteredforesters.org) and an AA Registered Consultant (www.trees.org.uk), and fully qualified to undertake the assessments in this report. Further details of his credentials can be found at www.barrelltreecare.co.uk/who-we-are
Report limitations	We have not checked if the trees are protected. If any tree works are proposed before a planning consent is given, then the existence of any statutory protection must be checked with the LPA. This report does not consider ecological or archaeological issues, or any other matter beyond the assessment of the trees.
Technical references	In preparing the analysis in this report, detailed consideration was given to the guidance and advice in the following technical references: • Climate Change Act (2008) www.legislation.gov.uk/ukpga/2008/27/contents • Town and Country Planning Act 1990 http://www.legislation.gov.uk/ukpga/1990/8/contents • National Planning Policy Framework ("NPPF"), published by the DCLG www.gov.uk/government/publications/national-planning-policy-framework--2 • BS 5837 (2012) *Trees in relation to design, demolition and construction – Recommendations*, BSI http://shop.bsigroup.com/ • BS 8545 (2014) *Trees: from nursery to independence in the landscape – Recommendations*, BSI http://shop.bsigroup.com/ • BS 3998 (2010) *Tree work – Recommendations*, BSI http://shop.bsigroup.com/ • *Trees in the Townscape: A Guide for Decision Makers*, published by the Trees & Design Action Group http://www.tdag.org.uk/ • *Trees in Hard Landscapes: A Guide for Delivery*, published by the Trees & Design Action Group http://www.tdag.org.uk/ • National Joint Utilities Group (2007) Volume 4, Issue 2: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees* www.njug.org.uk/publications/

Appendix 1: Background administrative information, data collection and any additional relevant information

19. Table 4: Data collection

	Data collection
Date of site visit	23 June 2017
People present during site visit	Chris Allder accompanied by Wei Shan Chia (Architect)
Weather & visibility	Clear, still and dry, with good visibility
Limitations to observations	• Our inspection of the trees for the purposes of assessing their condition and work requirements is made on the basis that they will be annually inspected in the future to identify any changes in condition and review the original recommendations. For these reasons, the tree assessment advice only remains valid for one year from the date that the trees were last inspected. • All observations were of a preliminary nature and did not involve any climbing or detailed investigation beyond what was visible from accessible points at ground level. • Observations of trees outside the site boundaries are confined to what was visible from within the site. • All dimensions were estimated unless otherwise indicated.
Tree location and numbering	Each tree was inspected and the numbering scheme is indicated on the tree protection plan. If appropriate, obvious hedges and groups were identified and numbered. If important trees were found on site that were not included on the provided plan, their approximate positions and canopy extents are indicated on the plan.
Recording of tree data	For each tree and any group or hedge found on site, the information collected was recorded on the tree schedule in Appendix 2 and the tree protection plan.
Compliance of data collection with BS 5837	The data collection is fully compliant with the advice in subsection 4.4.2 of BS 5837. When collecting this information, specific consideration was given to any low branches that may influence future use, age class, physiological condition, structural condition and remaining contribution. Where appropriate, crown spreads were also noted where they differed from those shown on the provided land survey.
Calculation of RPAs	Following the recommendations in Table D1 of BS 5837, the diameter of each tree was rounded up to the next 2.5cm increment, with the radius of a nominal circle and the resultant RPA taken directly from that table. This information is listed for each tree in the tree schedule in Appendix 2.

Appendix 2: Tree schedule and explanatory notes

NOTE: Colour annotation is A & B trees with green background; C & U trees with blue background; trees to be removed in red text.

Tree No	Species	Height (m)	Diameter (cm) @ 1.5m	Maturity	Low Branches	Category	Notes	Tree Works	RPA radius (m)	RPA area (m2)
T1	Lime	20	75	Mature	-	B	Off-site tree, regularly pollarded, narrow crown	-	9.0	254
G2	Bay, ivy	3	15	Maturing	-	C	Overgrown on trellis, partial collapse	-	1.8	10
T3	Privet	3	20	Mature	-	C	Multi stemmed, poor, suppressed	-	2.4	18
T4	Plum	5	30	Mature	-	C	Off-site tree, leaning	-	3.6	41
T5	Lawson cypress	5	22.5	Maturing	-	C	Off-site tree, twin stemmed, poor, up against boundary wall, vine climber choked	-	2.7	23
T6	Japanese maple	8	37.5*	Mature	-	C	Multi stemmed from base (19, 20 and 25cm), vine clad, outside ownership boundary	-	4.5	64

Appendix 2: Tree schedule and explanatory notes

Explanatory Notes

- **Abbreviations:**

  RPA : Root protection area

- **Botanical tree names:**

Bay	: *Laurus nobilis*
Ivy	: *Hedera helix*
Japanese maple	: *Acer palmatum*
Lawson cypress	: *Chamaecyparis lawsoniana*
Lime	: *Tilia* sp
Plum	: *Prunus* sp
Privet	: *Ligustrum vulgare*

- **BS 5837 (2012) compliance:** All data has been collected based on the recommendations set out in subsection 4.4 of BS 5837.
- **Tree inspections and site limitations:** Each tree was subjected to a quick visual check level of inspection. Where there is restricted access to the base of a tree, its attributes are assessed from the nearest point of access. Climbing inspections are not carried out during this level of inspection and, if heavy ivy is present, tree condition is assessed from what can be seen from the ground. A separate note is recorded if further investigation may be required to clarify its status.
- **Crown spreads:** Crown spread dimensions are not listed in the tree schedule because they are illustrated on the land survey base to all the plans in this document. Where crown spreads of significant trees on site are found to deviate from those shown on the provided land survey, we have noted it in the text of the report and annotated it on our plans.
- **Dimensions:** All dimensions are estimated unless annotated with a '*'.
- **Species:** Species identification is based on visual observations. Where there is some doubt over tree identity, sp is noted after the genus name to indicate that the species cannot be reliably identified at the time of the survey. Where there is more than one species in a group, only the most frequent are noted and not all the species present may be listed.
- **Height:** Height is estimated to provide a broad indication of the size of the tree.
- **Trunk diameter:** Trunk diameter is estimated or measured and recorded in 2.5cm increments as advised in BS 5837 Table D1. It is measured with a diameter tape unless access is restricted, direct measurement is not possible because of ivy on the trunk or the tree is assessed as poor quality. The point of measurement and the adjustments for stem variations are as advised in Figure C1 of BS 5837.
- **Maturity:** In planning context, maturity provides a simplistic indication of a tree's ability to cope with change and its potential for further growth. For the purposes of this report, young indicates a potential to significantly increase in size and a high ability to cope with change, maturing indicates some potential to increase in size and a medium ability to cope with change, and mature indicates little potential to increase in size and limited ability to cope with change.
- **Low branches:** Any low branches that would not be feasible for removal during normal management and should be considered as a design constraint are noted here and explained in the notes.
- **Category:** Our assessment automatically considered tree physiological/structural condition (BS 5837, 4.4.2.5h), and so these are not listed separately in the schedule. Additionally, the category accounts for the remaining contribution (BS 5837, 4.4.2.5i) as greater than 40 years for A trees, greater than 20 years for B trees, at least 10 years for C trees and less than 10 years for U trees, so this

Appendix 2: Tree schedule and explanatory notes

is also not listed separately in the schedule. Category A, B and C trees are automatically listed as sub-category 1 unless otherwise stated.

- **Notes:** Only relevant features relating to physiological or structural condition and low branches that may help clarify the categorisation are recorded. If there are no notes, then the presumption should be that no relevant features were observed.
- **Tree works:** The recommended tree works are based on the quick visual check level of inspection and only intended to address significant hazards identified during that inspection.
- **Future tree safety inspections:** Due to the time that may elapse between the original survey and the start of development, all trees should be re-inspected as part of the standard risk management process before any works start on site. Our assessment of the trees was carried out on the basis that a re-inspection would be carried out within a year of the assessment visit and our advice on tree condition must be reviewed annually from the date of that visit.

barrell
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