

| Tree/Group Number | No. of Trees | Species | DIMENSIONS | | | | | | | | Life stage | Condition Notes | RPA (m ²) | RPR (m) | Life expectancy (yrs) | BS Category |
|-------------------|--------------|--|------------|--------------------|--------------|--------------|--------------|--------------|--------------|---------------------|--------------|---|-----------------------|---------|-----------------------|-------------|
| | | | Height (m) | Stem diameter (cm) | No. of Stems | Spread N (m) | Spread E (m) | Spread S (m) | Spread W (m) | Crown Clearance (m) | | | | | | |
| Tree T1 | 1 | <i>Betula jacquemontii</i> Himalayan birch | 10.0 | 20 | 1 | 3.0 | 4.0 | 3.0 | 2.5 | 2.5 | Early Mature | Structural condition Good. Physiological condition Good. | 18.1 | 2.4 | 20-40 | C1 |
| Hedge H2 | 2 | <i>Laurocerasus officinalis</i> Cherry Laurel | 2.5 | 2 | | | | | | 0.0 | Young | Structural condition Fair. Physiological condition Fair. Other species refer to Bamboo and Fatsia japonica. | | | 10-20 | C1 |
| | 30 | <i>other</i> other | | | | | | | | | | Predominantly bamboo species acting as a screen from the adjacent property with sparse planting of both Fatsia japonica and Prunus laurocerasus ‘Otto Luyken’ | | | | |
| Tree T3 | 1 | <i>Pinus sp.</i> Pine sp. | 2.0 | 3 | 3 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | Young | Structural condition Fair. Physiological condition Fair. Ornamental pine | 1.2 | 0.6 | 10-20 | C1 |
| Shrub S4 | 1 | <i>other</i> other | 2.5 | 1 | 15 | 0.5 | 0.5 | 0.5 | 0.5 | 0.0 | Young | Structural condition Fair. Physiological condition Fair. Other species refer to Bamboo. | 0.7 | 0.5 | 10-20 | C1 |
| Tree T5 | 1 | <i>Aesculus hippocastanum</i> Horse chestnut | 16.0 | 90 | 1 | 6.0 | 6.0 | 5.5 | 5.0 | 6.0 | Mature | Structural condition Fair. Physiological condition Fair. Bark exudation. Pruning wounds - Decayed. Pruning wounds - Historic. Root environment - Restricted. Pseudomonas syringae pv. aesculi on southern side of main stem. | 366.4 | 10.8 | 10-20 | C2 |
| Tree T6 | 1 | <i>Cotoneaster sp.</i> | 7.0 | 12 | 2 | 2.0 | 5.5 | 3.5 | 3.5 | 2.0 | Early Mature | Structural condition Fair. Physiological condition Fair. Crown conflict - Structure / boundary / wire / tree. Pruning wounds - Historic. Stem base is approximately 0.5m below the finished floor level of the property. | 13.0 | 2.0 | 10-20 | C1 |
| Tree T7 | 1 | <i>Thuja plicata</i> Western red cedar | 7.0 | 9 | 1 | 1.0 | 1.0 | 1.0 | 1.0 | 2.5 | Young | Structural condition Fair. Physiological condition Fair. Pruning wounds - Historic. Stem base is approximately 0.5m below the finished floor level of the property. | 3.7 | 1.1 | 10-20 | C1 |
| Tree T8 | 1 | <i>Tilia x europaea</i> | 16.0 | 60 | 1 | 6.0 | 6.0 | 5.0 | 5.0 | 2.5 | Mature | Structural condition Fair. Physiological condition Fair. Access to inspect base - Restricted / obscured. Epicormic growth - Base. Fork - Weak with included bark. Pruning wounds - Historic. Unable to inspect tree(s) closely due to basal/trunk epicormic growth. | 162.9 | 7.2 | 20-40 | B1 |
| Tree T9 | 1 | <i>Platanus x hispanica</i> London plane | 11.0 | 19 | 1 | 6.0 | 5.0 | 3.0 | 5.0 | 3.0 | Semi Mature | Structural condition Good. Physiological condition Good. Root environment - Restricted. Suppressed crown - Minor. Street tree. Crown slightly suppressed by adjacent London Plane. Clearance over drive is greater than 3m as it is at the periphery of the crown. | 16.3 | 2.3 | 40+ | B2 |
| Tree T10 | 1 | <i>Platanus x hispanica</i> London plane | 20.0 | 101 | 1 | 9.0 | 8.0 | 8.0 | 8.0 | 3.0 | Mature | Structural condition Good. Physiological condition Good. Pruning wounds - Historic. Stem base is approximately 0.8m above finished floor level of No.66. | 461.5 | 12.1 | 20-40 | B2 |

Stem green estimated value

Stem AVE average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

66 Fitzjohns Avenue, London, NW3 5LT

| Tree/Group Number | No. of Trees | Species | DIMENSIONS | | | | | | | Life stage | Condition Notes | RPA (m ²) | RPR (m) | Life expectancy (yrs) | BS Category |
|-------------------|--------------|-------------------------------------|------------|--------------------|--------------|--------------|--------------|--------------|--------------|-------------|---|-----------------------|---------|-----------------------|-------------|
| | | | Height (m) | Stem diameter (cm) | No. of Stems | Spread N (m) | Spread E (m) | Spread S (m) | Spread W (m) | | | | | | |
| Group G11 | 1 | <i>other</i> other | 6.0 | 10 | | | | | 0.0 | Semi Mature | Structural condition Fair. Physiological condition Fair. Access to inspect base - Not possible. Pruning wounds - Historic. Other species refers to Camellia sp. Unable to inspect tree(s) closely as tree situated on neighbouring property. | | | 10-20 | C1 |
| | 2 | <i>Magnolia sp.</i> Magnolia sp. | | | | | | | | | | | | | |

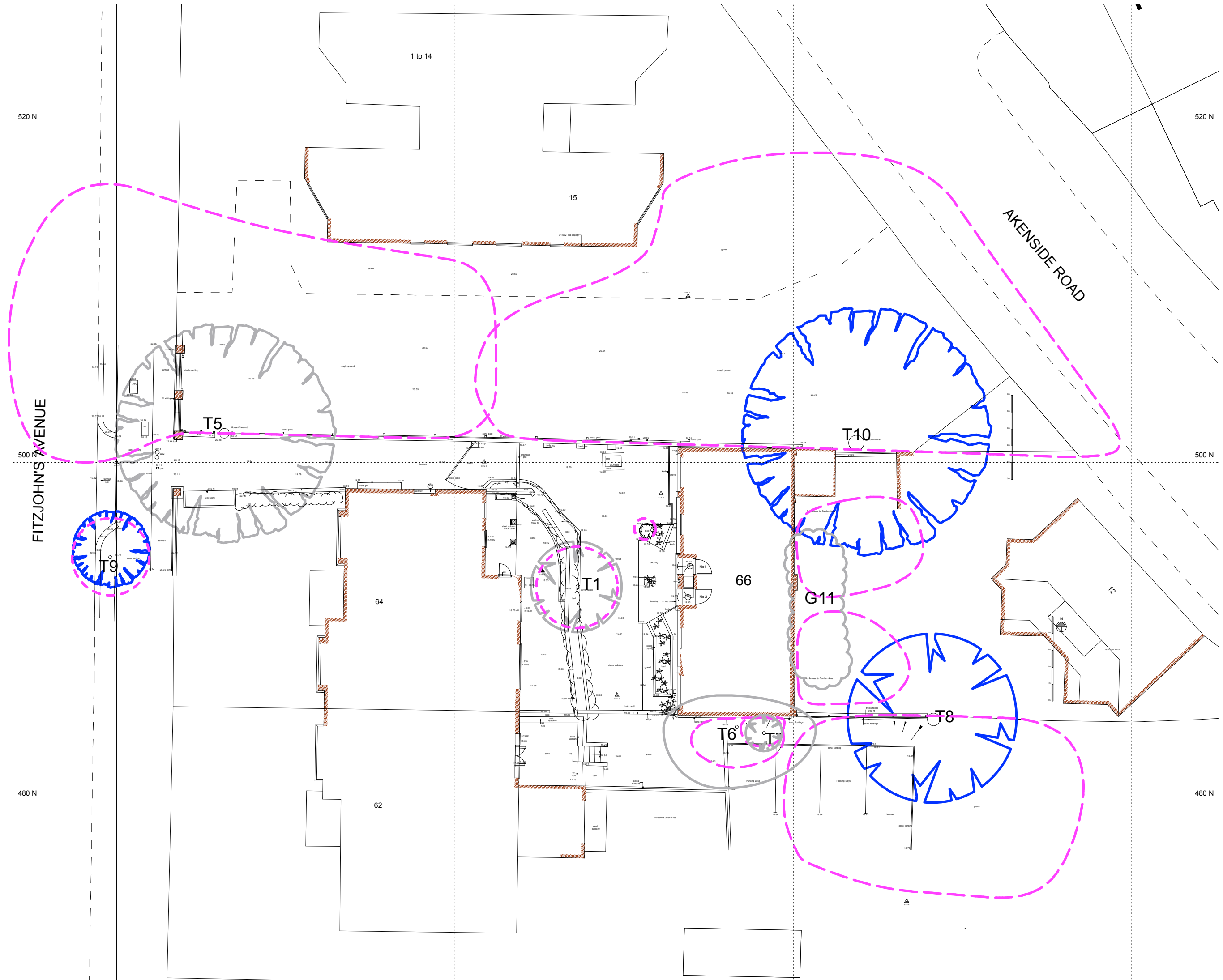
Stem green estimated value






Stem AVE average stem diameter for multi-stemmed trees

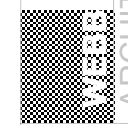
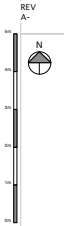
The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) Cascade chart for tree quality assessment

| Category and definition | Criteria (including subcategories where appropriate) | | | Identification on plan |
|---|---|---|---|------------------------|
| Trees unsuitable for retention (see note) | | | | |
| Category U 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 | <ul style="list-style-type: none">* Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)* Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline* Trees infected with pathogens of significance to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality <p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7</i></p> | | | RED |
| | 1 Mainly arboricultural qualities | 2 Mainly landscape qualities | 3 Mainly cultural values, including conservation | |
| Trees to be considered for retention | | | | |
| Category A Trees of high quality with an estimated remaining life expectancy of at least 40 years | Tree 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) | GREEN |
| Category B 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 downgraded 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 or other cultural value | BLUE |
| Category C Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm | 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 |



-  **Category A**
Trees of high quality and value: in such a condition as to be able to make substantial contribution (a minimum of 40 years is suggested).
-  **Category B**
Trees of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested).
-  **Category C**
Trees of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested); or young trees with a stem diameter below 50mm.
-  **Category D**
Those in such a condition that the tree cannot satisfactorily be retained as being trees in the context of the current land use for longer than 10 years.
-  **BS5837 Root Protection Area**
Prescriptive areas within which tree roots and soil structure must be protected. All work within these areas will require special methods of work.



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Drawing to be read in conjunction with consultants information.
Do not scale from drawing.
All dimensions to be checked on site.
Drawing only to be used for purposes indicated.
Notify architect of any discrepancies.
● WEBB ARCHITECTS LIMITED

66 FITZJOHNS
AVENUE
EXISTING-
SITE PLAN
1:200 / A3

FOR INFORMATION

1169.01.02(A)

BS 5837:2012 TREE RETENTION CATEGORIES

Category A

Trees of high quality and value: in such a condition as to be able to make substantial contribution (a minimum of 40 years is suggested)



Category B

Trees of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)



Category C

Trees of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.



Category U

Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.



BS5837 Root Protection Areas

Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work



66 Fitzjohns Avenue. London. NW3 5LT

1169. Tree Survey and Arboricultural Method Statement.

July 2017.

The owner Mr. E. Green commissioned Webb Architects to draw up plans to demolish the existing studio houses and replace them with new dwellings with basements.

The Local Planning Authority (**LPA**) – The London Borough of Camden granted planning permission in March 2017- Reference number 2015/5847/P .

The present application proposal adds a second floor.
This is the only material change to the consented proposal.

British Standard 5837 2012

"Trees in relation to Design, Demolition and Construction – Recommendations" (**BS**) is used as the benchmark for tree submissions to the LPA.

Tree roots and their care were extensively rehearsed at the application stage for 2015/5847/P. The consented tree survey and method statement is reproduced below.

For this proposal there is one change in paragraph 1 the arboricultural method statement which relates to the adjacent London Plane, T10.

The change states that crown lifting is to be no more than 4 metres.

The proposed second storey ridge height is 3.26 metres from existing.

The existing consent to lift the crown is 3 metres above existing crown height.



This photograph shows that the lowest branch of the Plane is greater than 1 metre from the existing roof.



This photograph shows that the first branch of a diameter approaching 100mm is circa 5 metres from the existing roof. It is fairly clear that a 3 metre lift as consented will accommodate the new roof height proposal however the arboricultural method statement below has specified up to 4 metre lift - this is to ensure that there is no margin for error.

Please refer to drawing no. 1169.01.02 A. This is the existing site layout which is submitted as a pdf and can be zoomed to any size to reveal fine detail.

The drawing shows.

- Scale bar.
- Drainage and service features
- The position of boundary walls.
- Existing drive surfaces.
- The existing house building foot print.
- The position of catalogued trees and shrubs.
- Polygonal root protection areas (**RPA**) (as described in the BS) of trees.

The spot levels on this drawing show

- The site is to all intents and purposes level.
- The land to the north is circa 0.8 metres higher and this is retained by a brick wall.
- The yard of the house to the west is 1.6 metres lower.
- The land to the south is circa 0.7 metre lower.

Tree catalogue.

| No | Common name of tree | Height estimated in metres | Stem diameter in mm at 1.5 metres from base | Branch spread towards compass points estimated in metres | Height of crown clearance estimated in metres | Estimated remaining contribution in years. Category grading as per table 1 of the BS Comments |
|-----|--|----------------------------|---|--|---|---|
| 1 | Birch | 10 | 200 | N 3 E 4 S 3 W 2 | 2 | 20 C |
| 5 | Horse Chestnut | 16 | 900 | N 6 E 6 S 5 W 5 | 6 | 20 C Symptoms of some form of Chestnut blight on stem. |
| 6 | Cotoneaster | | | | | shrub |
| 7 | Western Red Cedar | 7 | 90 | N 1 E 1 S 1 W 1 | 2 | 20 C |
| 8 | Lime | 16 | 600 | N 6 E 6 S 5 W 5 | 2 | 40 B |
| 9 | London Plane | 11 | 190 | N 6 E 5 S 3 W 5 | 3 | 40 B |
| 10 | London Plane | 20 | 1090 | N 9 E 8 S 8 W 8 | 3 | 40 B The south western crown overhangs the existing houses and the lowest twigs are circa 2 metres higher than the roof. |
| G11 | Shrubbery including Magnolia and Camellia. | | | | | 20 C |

Young trees T1, T7 & T9 will have a bias of growth towards gaining height.
Mature trees T5, T8 & T10 will be at more or less at their final dimensions and should be capable of producing abundant seed.
A tree will be young for relatively few years and mature for relatively many years.

Arboricultural Implications Assessment

The rear and side elevations of the new dwelling will be built on the existing foundation lines. The outer piling line will consist of contiguous flight auger piles. The piling rig will drill through the existing foundations.

(Generally if roots from neighbours trees are under existing domestic dwelling foot prints they could be deemed to be an actionable nuisance- however at no 66 the root barriers are so deep and the underlying conditions so harsh that it is unlikely that there are any roots from T10 and G11 within the curtilage of no.66).

RPA (root protection area) for retained trees is proportionate to the stem diameter of the individual tree.

RPA is the area which contains sufficient roots to sustain a tree during building works. Ideally RPA should remain undisturbed whilst building takes place.

Normative RPA is shown as a circle on a plan.

It is often the case that due to barriers there will not be roots in part of that normative RPA.

In many cases the RPA can be offset to better rooting conditions contiguous to the circle.

The plan 1169.01.02.A illustrates how the offset can be found within the land of the tree owners.

The existing houses were built in the 1980s, in which case the foundation depth would have been guided by NHBC (National House Building Council) practice note 3 which provided guidance to avoid damage caused by trees near dwellings. (This subsequently became Chapter 4.2 of the NHBC Standards).

The foundations would have been built at a depth to avoid any subsequent problems which could be caused by the London Plane **T10** (it is a very safe assumption that the tree predates the houses).

It is marginally possible that root damage to the Plane could have occurred but the tree is showing no sign of stress, (due to the lack of space it is a very safe assumption that the northern retaining wall also pre dates the houses).

However to confirm the depth of the foundations the applicant commissioned a trial pit at the northern most end of the western elevation.

The trial pit confirmed that the base of existing foundations are in excess of 2 metres below the base of T10. The foundation arrangement is illustrated on previously submitted drawing 1168 .01.02.

The building will also constitute a "rain shadow" and the underlying clay will not be conducive to root growth.

T10s rooting environment has got to be outside of the footprint of the existing house and therefore the south west segment of the normative RPA is discounted.

T10, the Planes roots will be to the north of northern retaining wall – this wall will remain undisturbed during building.

The Lime T 8 - the normative RPA is out side of the proposed piling line.

The Cotoneaster T 6 and the Western Red Cedar T7 are of a size where their roots will not be lower than the foundations of the existing southern elevation of the houses.

The Cotoneaster is not subject to planning controls and along with the shrubbery that comprises group 11 can be pruned back to the boundary in the normal course of household maintenance. The boundary must not be crossed and all arisings must be offered back to the owners.

The depth of material which makes up the existing entrance drive is not known at the western end. It is therefore proposed in the arboricultural method statement below to introduce a "load spreader" on to the drive to protect possible roots of the Chestnut T5 during construction works.

The narrow width of the drive also precludes very heavy vehicles.

The case officer will acknowledge that this is an existing drive that can be maintained as the owners see fit and possibly in a similar fashion that the boroughs would seek to maintain the highways- eg replacing the wearing layer without disturbing the bearing layer. The site is already fully serviced.

Arboricultural Method Statement. Sequence of Events.

1. T1 Birch will be removed to build.

(Drawing no. 1169. 02.11 shows finished levels and space for new plantings as described in the submitted design and access statement **(DAS)**).

Access facilitation pruning of the London Plane T10 (if required) will be confined to the lowest side limbs of the south western crown. This will not involve removal of branches which are greater than 100mm diameter. The pruning will be carried out by certificated contactors guided by section 7.6 of British Standard 3998 2010 "Tree work –recommendations".

The maximum amount of crown lifting will not exceed 4 metres.

BS 3998 is a normative reference to BS5837, the Boroughs Tree Officer and contractors who have the aptitude to prune this tree will be familiar with section 7.6 of BS 3998.

2. The existing access drive surface will remain unaltered throughout building works.

The surface will be covered with 130 mm of fresh wood chip which will be overlaid with "evetrakway" panels.

3. All demolition works will be carried out within the footprint of the building using top down fold back methods.

4. All piling and excavation works for the basement will be carried out from within the footprint.

5. Existing services routes are serviceable and suitable for the new dwellings - these will re-connected at the closest point to the new basements.

6. When all construction works are completed the approach driveway can be restored. Material will be removed by hand only and from the wearing layer only. The bearing layer will not be disturbed.

7. Refer to plan 1169/SK01 and plant one Field Maple - *Acer campestre* "Streetwise" in the position marked T11 on the plan.

The tree will be planted as a light standard as described in BS3936 part 1.

BS3936 part 1 is a normative reference to BS 5837.

The tree will be pit planted to its original soil mark and sufficiently firmed so as to avoid the requirement for staking. The tree will be mulched to a radius of 0.5 metre with composted wood chip to a depth of 100mm. The mulch will be fleeted adjacent to the stem to avoid contact with the lower stem. A 60cm spiral rabbit guard will be fitted to the lower stem to reduce the possibility of damage from various sources.

Tim Price. M.arbor.A