Table of Contents

*If this report has been released electronically the appendices referred to herein can be found in the annexed zip folder/s as .pdf or .dwg files. If this report has been released in hard copy the appendices will be bound into the back of this report. Plans may be annexed separately as A1 or A0 copies where a bound-in A3 copy is not appropriate.*

Executive Summary ........................................................................................................................................ 3
General Information ....................................................................................................................................... 3
Tree Survey .................................................................................................................................................. 5
Arboricultural Implications Assessment ........................................................................................................... 6
  Development Background ................................................................................................................................. 6
  Development Footprint & Below Ground Constraints ....................................................................................... 6
  Development Footprint & Above Ground Constraints ..................................................................................... 7
  Development Footprint & Future Tree Works ..................................................................................................... 7
Replacement Planting ....................................................................................................................................... 7
Arboricultural Method Statement ...................................................................................................................... 8
  Accidents and emergencies involving trees ......................................................................................................... 8
  Phasing of tree measures and site monitoring .................................................................................................. 8
Tree Works ....................................................................................................................................................... 9
Prohibition ......................................................................................................................................................... 9
Specification for Replacement Planting ............................................................................................................... 9
Specification for plant handling and storage ....................................................................................................... 10
Specification for installation of root barriers ..................................................................................................... 10
Specification for preparation of planting pits ..................................................................................................... 10
Specification for installation of irrigation system ............................................................................................... 11
Specification for installation of tree support ..................................................................................................... 11
Specification for finishing .................................................................................................................................. 11
Aftercare and maintenance ................................................................................................................................. 12
  Specification for maintenance ............................................................................................................................ 12
  Specification for watering ................................................................................................................................ 12
Planting Specification ........................................................................................................................................ 12
Document Production, Approval and Distribution Record .................................................................................... 13
Executive Summary
This report describes the extent and effect of the proposed development at 65 Ladbroke Road, Notting Hill, W11 3PD (“site”) on trees within and adjacent to the site.

Trees within and adjacent to the site have been surveyed by Arbtech Consulting Ltd using a methodology guided by British Standard 5837:2005 ‘Trees in relation to construction – Recommendations’ (“BS5837”).

Subsequently, this report has been produced, balancing the layout of the proposed development against the competing needs of trees. This report comprises all of the requisite elements of an arboricultural implications assessment, method statement and supporting plans.

Checklist for Submission to Local Planning Authority

<table>
<thead>
<tr>
<th>Item</th>
<th>✔</th>
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</thead>
<tbody>
<tr>
<td>Tree survey</td>
<td>✔</td>
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<tr>
<td>Tree constraints plan</td>
<td>✔</td>
</tr>
<tr>
<td>Arboricultural implications assessment</td>
<td>✔</td>
</tr>
<tr>
<td>Arboricultural method statement</td>
<td>✔</td>
</tr>
<tr>
<td>Tree protection plan</td>
<td>✔</td>
</tr>
</tbody>
</table>

This report and its appendices follow precisely the strategy for arboricultural appraisal intended to provide local planning authorities with evidence that trees have been properly considered throughout the development process.

It is the conclusion of this report that the overall quality and longevity of the amenity contribution provided for by the trees within and adjacent to the site will not be adversely affected as a result of the local planning authority consenting to the proposed development.

General Information
Client: Terrence and Lara Stevens.

Site: 65 Ladbroke Road, Notting Hill, W11 3PD.
Agent (if applicable): Phil Coffey for and on behalf of Coffey Architects.

Brief proposal description: Demolition of existing extension to be replaced with a three storey extension with single storey entrance.

Planning application reference: N/A

Documents referred to:

<table>
<thead>
<tr>
<th>Document</th>
<th>Reference</th>
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</thead>
<tbody>
<tr>
<td>Topographical survey drawing</td>
<td>N/A</td>
</tr>
<tr>
<td>Proposed layout drawing</td>
<td>110121 65 Ladbroke Road</td>
</tr>
<tr>
<td>Landscape master plan drawing</td>
<td>N/A</td>
</tr>
<tr>
<td>LPA pre-app comments</td>
<td>Yes</td>
</tr>
<tr>
<td>British Standard 5837:2005</td>
<td>“BS5837”</td>
</tr>
</tbody>
</table>
Tree Survey

Survey: An arboricultural survey to BS5837 of all trees within impacting distance of the site was undertaken by Linda Henderson for Arbtech Consulting Ltd on 07/01/2010.

Limitations: The survey was made at ground level using visual observation only. Detailed examinations, such as climbing inspections and decay detection equipment were not employed, though may form part of the survey’s management recommendations. Measurements were taken using specialist tapes, laser and GPS devices. Where this was not possible, measurements are estimated.

Scope: Pre-development tree surveys make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (i.e. not in relation to the proposed development).

Land use: The land is presently occupied by a residential dwelling with courtyard.

Topography: The site is generally level.

Relative amenity value: The trees surveyed do contribute to a degree to the landscape amenity of the site and wider locality.

Condition, age and species diversity: The general condition of the trees was normal; some root lifting of paving around the base of the single on site tree was noted, one offsite tree was identified with defects that warrant remedial action.

Status: No statutory protection check has been performed.

Further information: A full schedule including the survey data of all individual trees and groups of trees surveyed can be found at Appendix I.
Arboricultural Implications Assessment

There are a number of issues to be addressed in an arboricultural implications assessment, and broadly these are as follows –

- The effect and extent of the proposed development within root protection areas of retained trees;
- The potential conflicts of the proposed development with canopies of retained trees; and
- The likelihood and reasonableness of any future remedial works to retained trees, beyond that which would have been scheduled in the course of ordinary management.

Development Background

A site meeting was undertaken on 18th January 2010 to discuss the proposal. Present were Tara Stevens, Phil Coffey, James Burton (Arboricultural Officer, Royal Borough of Kensington and Chelsea) and David Greenwood (Arbtech). It was agreed in principle with James that subject to an acceptable replacement tree being planted, the removal of tree reference T5 would be acceptable in this instance.

Development Footprint & Below Ground Constraints

<table>
<thead>
<tr>
<th>Category C trees; T1, T3, T4, T6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category A tree; T2</td>
</tr>
</tbody>
</table>

These off site trees will not be impacted by the proposals; the RPAs are situated wholly outside of the site. No protection measures are required to protect these trees during construction; the trees are at a sufficient distance from the proposals.

| Category B tree; T5 |

This London Plane tree situated within the building courtyard is poorly suited to its location in both terms of a) present and future spread of roots; some lifting of the courtyard paving was clearly evident, it is also noted that the building is likely built upon soil containing a moderate to high clay fraction; and b) present and future canopy.
spread; the lateral branches are presently touching the building, regular maintenance (pollarding) of the crown would be necessary to maintain it to a reasonable size.

Following on site discussions with James Burton (Arboricultural Officer, Royal Borough of Kensington and Chelsea) and based on the above factors, it was agreed in principle that the council would have no objection to the removal of this tree.

**Development Footprint & Above Ground Constraints**

The retained trees have an adequate clearance from the proposals; as such no remedial tree works are required to facilitate the proposal.

**Development Footprint & Future Tree Works**

No issues arise in relation to light/shading of the site as a consequence of the development as no windows of proposed buildings/annexes are unreasonably shaded by the retained trees. The leaf litter and minor twig debris is not oppressively burdensome to cope with and does not render the proposed development unsafe.

**Replacement Planting**

One new tree will be re-planted to mitigate the loss of T5. Due to the tight confines of the existing site and to allow the replacement tree to grow to maturity without significant pruning, the following species are suggested (including the assumed heights and crown spreads at 25 years):

- *Carpinus betulus* ‘Frans Fontaine’ (Hornbeam), (height 15m, crown width 3.0m)
- *Prunus Amanogawa* (Japanese Cherry), (height 7m, crown width 1.0m)
- *Prunus ‘Sunset Boulevard’* (Japanese cherry) (height 10m, crown width 3.0m)
- *Malus trilobata* (Crab apple), (height 6m, crown width 2.5m)
- *Sorbus aucuparia* ‘Cardinal Royal’ (Rowan), (height 9m, crown width 4.0m)

The proposals allow for sufficient growing medium for the tree to develop to maturity; the proposed ground floor entrance will comprise a floating concrete slab thereby maintaining the majority of the on-site available volume, the first floor foundation only
resulting in a minor reduction in rooting volume. Permeable paving shall be used within
the remaining front courtyard area.

To minimise the potential for future root damage to the paving from invasive roots, a
root barrier will be installed around the tree pit.

A detailed specification for the replacement tree can be found in the Arboricultural
Method Statement.

**Arboricultural Method Statement**

This method statement is to be approved and agreed to in writing by all key personnel
prior to the commencement of site works.

**Accidents and emergencies involving trees**

Any accidents and emergencies involving trees shall be immediately reported to
Arbtech and their advice sought and agreed to by the council.

**Phasing of tree measures and site monitoring**

The tree measures shall be phased as follows.

The stages highlighted in bold type require the Arbtech’s input. After each stage is
successfully completed a brief report will be sent electronically to the council for their
records.

a) Undertake tree removal works  
b) Undertake and complete works to building  
c) Remove scaffolding  
d) Undertake external landscape works  
e) **Undertake tree planting in accordance with the approved protection plans**
   and this method statement  
f) **Sign off from the company as no further involvement required**
Tree Works

For reasons of public safety, all tree works referred to herein must be carried out prior to any site personnel commencing works or any building materials being delivered.

Summary of Tree Works

<table>
<thead>
<tr>
<th>Tree or Group Reference #</th>
<th>Remove</th>
<th>Canopy</th>
</tr>
</thead>
<tbody>
<tr>
<td>T5</td>
<td>Remove to ground level and grind out stump.</td>
<td></td>
</tr>
</tbody>
</table>

Prohibition

- Mechanical digging or scraping is not permitted within a defined root protection area or within areas cordoned off by protective barrier fencing.
- Fires are not permitted within 10.0m of any vegetation.
- Machinery, plant and vehicles are not permitted to be washed down within 5.0m of vegetation.
- Leaning objects against or attaching of objects to a tree is not permitted.
- Chemicals and materials are not to be transported, stored, used or mixed within a root protection area or within areas cordoned off by protective barrier fencing.

Specification for Replacement Planting

The replacement tree is to be planted in a location as illustrated on the Replacement Tree Plan (RTP-01).

The tree to be one semi mature specimen of size (20-25cm girth) and to comprise of one of the following species;

- *Carpinus betulus* ‘Frans Fontaine’
- *Prunus Amanogawa*
- *Prunus* ‘Sunset Boulevard’
- *Malus trilobata*
- *Sorbus aucuparia* ‘Cardinal Royal’ (Rowan)
Tree planting shall occur in the first planting season (normally 1st Oct – 31st March) following completion of construction and hard landscaping works and preparation of the planting area. Planting should not be undertaken during extreme weather conditions.

All trees shall conform to BS3936 British Standard for Nursery Stock.

All plants shall have a habit normal for the species and variety and shall be healthy, vigorous and free of any insects, disease and mechanical injury. Trees exhibiting any defect should be rejected.

**Specification for plant handling and storage**

All trees should be planted as soon as practicably possible after delivery; trees not planted on the day of delivery should be stored close together in an upright position and their root balls covered with sharp sand, moist compost/soil or wet straw.

Trees shall be handled in a manner which does not distort the root ball (e.g. supporting slings under the root ball); trees should not be lifted by the trunk. Trees should be rejected if they are dropped to the ground suddenly.

**Specification for installation of root barriers**

The root barrier shall be DeepRoot root barrier UB 18-2 (Geosynthetics Ltd) and shall be laid out in locations as specified in the Replacement Tree Plan (RTP-01) and shall comprise an area of 1m² minimum.

The system shall be installed in a pre dug trench, interlocked in accordance with the manufacturer’s instructions and shall be set to a height level with the finished ground level. A detailed installation diagram is illustrated in the Replacement Tree Plan (RTP-01)

**Specification for preparation of planting pits**

The planting pit is to be excavated to a sufficient size to accommodate the root ball, allowing a minimum of 0.5m clearance. Prior to planting the sides to be broken up and
the base dug over to a depth of 150mm to assist in creating preferential conditions for root development.

The trees shall be planted to the same depth as they were in the nursery i.e. not above the root collar.

All cord and wrapping shall be untied/removed from the base of the stem.

**Specification for installation of irrigation system**

The irrigation system to be installed shall be Rootrain Metro system (Greenleaf).

The system shall be installed prior to backfilling, set to a depth of approximately 250mm below the finished surface level. The inlet cap should protrude to between 25 – 50mm above the final level (including mulch).

**Specification for installation of tree support**

Trees to be supported either above or below ground to the following specification:

- **Above ground support** – this shall comprise two softwood stakes (1.8m length, 100mm diameter) with a cross bar, set to a height of 1/3rd of the total tree height above ground level. Stakes shall be located outside of the root ball.
- **Below ground** – to comprise *Platipus Root ball Fixing System (RF1P)* (*Platipus Anchors Ltd)*.

**Specification for finishing**

The pit shall be backfilled with the excavated top soil. Backfilled soil shall be firmed to prevent air pockets and settling.

The planting area shall then be mulched to a depth of 75mm with amenity grade bark mulch. Mulch should not be piled up against any tree stem.

At planting, each tree shall be watered with at least 25 litres of water to ensure thorough soaking of the root ball and surrounding ground.
Aftercare and maintenance

Specification for maintenance

Maintenance shall occur for a period of 60 months from completion of the works.

During this period the following should occur as required:

- Restore mulch layer
- Maintain mulch weed free.
- Check ties and supports adjust/repair where necessary.
- Replace any dead, dying or defective tree within the next planting season.

Specification for watering

During the period 1st May to 30th September trees shall be watered every week during the first year after planting and at two weekly intervals during the second year after planting.

Each tree shall be watered with 90 litres of water every two weeks (or 45 litres weekly). Watering is not necessary where the root ball is soaked on the day of irrigation.

Planting Specification

1 x (Final species to be agreed).

1. The soft surfaced area to be excavated to a depth of 350mm.
2. DeepRoot root barrier UB 18-2 to be installed around the soft surfaced area in accordance with the Replacement Tree Plan (RTP-01).
3. The exposed area shall then be backfilled until level with the original surface using top soil to BS 3882:2007 General Purpose Grade.
4. Preparation of planting pit.
5. Installation of Rootrain Metro system.
6. Backfilling
7. Installation of twin stake and tie support / Platipus Root ball Fixing System.
8. Installation of mulch.
### Limitations

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<table>
<thead>
<tr>
<th>Item ref</th>
<th>Species</th>
<th>Age</th>
<th>Vitality</th>
<th>BS Cat</th>
<th>BS Cat</th>
<th>Clr</th>
<th>Height</th>
<th>DBH</th>
<th>N</th>
<th>S</th>
<th>E</th>
<th>W</th>
<th>Notes</th>
<th>Mgt reco's</th>
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</thead>
<tbody>
<tr>
<td>Item ref</td>
<td>The identification reference number which is either present on the tree tag, or a plan, or both, for unique surveyed items.</td>
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<tr>
<td>Species</td>
<td>The common name (and botanical name where appropriate) of the tree.</td>
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<tr>
<td>Age</td>
<td>The stage of life cycle; Y=Young, EM=Early Mature, M=Mature or LM=Late Mature.</td>
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<tr>
<td>Vitality</td>
<td>The general physiological condition of the tree; Dead, Poor or Normal.</td>
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<tr>
<td>BS Cat</td>
<td>The retention category referring to useful contribution in years; R=&lt;10yrs, C=10-20yrs, B=20-40yrs or A=&gt;40yrs.</td>
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<tr>
<td>BS Cat</td>
<td>The retention category referring to the type of amenity; 1=Individual, 2=Landscape/Group or 3=Biodiversity/Cultural.</td>
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<tr>
<td>Clr</td>
<td>The height of ground clearance in metres.</td>
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<tr>
<td>Height</td>
<td>The height of the tree in metres.</td>
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<tr>
<td>DBH</td>
<td>The stem diameter in millimetres at breast height (1.5m for single stemmed trees or 0.0m for multi-stemmed trees).</td>
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</tr>
<tr>
<td>NSEW</td>
<td>The extent of the canopy in the principal compass points in metres; N=North, S=South, E=East or W=West.</td>
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</tr>
<tr>
<td>Notes</td>
<td>Notes and general comments on the structural condition of the tree, or its environment.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mgt reco's</td>
<td>Preliminary management recommendations. Note: these do &quot;not&quot; refer to a scheme/development/layout.</td>
<td></td>
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</table>
### Survey Schedule (Appendix I)

**Tree survey field data compliant to British Standard 5837:2005**

<table>
<thead>
<tr>
<th>Item ref</th>
<th>Species</th>
<th>Age</th>
<th>Vitality</th>
<th>BS Cat</th>
<th>BS Cat Clr</th>
<th>Height</th>
<th>DBH</th>
<th>N</th>
<th>S</th>
<th>E</th>
<th>W</th>
<th>Notes</th>
<th>Mgt reco's</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1</td>
<td>London plane (<em>Platanus x hispanica</em>)</td>
<td>M</td>
<td>Good</td>
<td>A</td>
<td>1 6</td>
<td>18</td>
<td>600</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>Tree is located off site within an enclosed garden all attributes are estimated. The tree bifurcates at 2.5m from ground level at which point it has developed adaptive growth of a lean towards the east over the garage. The tree has been pruned in the recent past however on a northern lateral on the western side is a large amount of dysfunctional wood. This limb is over the public footpath.</td>
<td>Inform the local highway authority and the owner of the tree of the dysfunctional limb.</td>
</tr>
<tr>
<td>T2</td>
<td>London plane (<em>Platanus x hispanica</em>)</td>
<td>M</td>
<td>Poor</td>
<td>C</td>
<td>1 6</td>
<td>18</td>
<td>900</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>Tree is located off site within an enclosed garden all attributes are estimated. The tree has been pruned in the recent past no actionable defects were noted at the time of inspection.</td>
<td>None</td>
</tr>
<tr>
<td>T3</td>
<td>false acacia (<em>Robinia pseudoacacia</em>)</td>
<td>Y</td>
<td>Good</td>
<td>C</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>150</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Tree is located off site within an enclosed garden all attributes are estimated. The tree has been planted in closed proximity to the brick boundary wall there are diagonal cracks within the mortar of the wall next to the tree.</td>
<td>Inform the local highway authority and the owner of the tree of cracking within the wall.</td>
</tr>
<tr>
<td>T4</td>
<td>box elder (<em>Acer negundo</em> 'Flamingo')</td>
<td>Y</td>
<td>Good</td>
<td>C</td>
<td>2</td>
<td>Ground level</td>
<td>4</td>
<td>200@ Ground level</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Tree is located off site within an enclosed garden all attributes are estimated. No actionable defects noted at the time of inspection.</td>
<td>None</td>
</tr>
<tr>
<td>T5</td>
<td>London plane (<em>Platanus x hispanica</em>)</td>
<td>EM</td>
<td>Good</td>
<td>B</td>
<td>1</td>
<td>2</td>
<td>16</td>
<td>300</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>On site tree located within a quarter semi circle red brick planting bed that is approximately 30cm in height.</td>
<td>Crown reduce by 30% to create new pollard points to ensure the tree is not touching any on site or off site structures. The tree should be maintain at this size to ensure it does not over grown and damage brick raised bed that it is planted within.</td>
</tr>
<tr>
<td>T6</td>
<td>silver birch (<em>Betula pendula</em>)</td>
<td>Y</td>
<td>Poor</td>
<td>C</td>
<td>1</td>
<td>5</td>
<td>8</td>
<td>150</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>Street tree. Poor structural form probably due its crown being suppressed by the surrounding tall buildings and taller tree T5</td>
<td>None</td>
</tr>
</tbody>
</table>
Tree Constraints Plan (TCP)
Indicative 3m crown spread at 25 years

- DeepRoot UB18-2 Root barrier
- Hard surfacing / edging as per project specifications
- 75mm mulch above tree pit
- 150mm

Not to scale