Arboricultural Method Statement & Tree Protection Plan – In Accordance with BS 5837:2012

<table>
<thead>
<tr>
<th>Proj. No</th>
<th>6112</th>
<th>54 Portland Road, London, W11 4LQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client:</td>
<td></td>
<td>Caroline Lor</td>
</tr>
<tr>
<td>Date of Report:</td>
<td>18/05/2017</td>
<td>Revision: Original</td>
</tr>
</tbody>
</table>
Arboricultural Method Statement & Tree Protection Plan – In Accordance with BS 5837:2012

54 Portland Road, London, W11 4LQ

Contents

1.0 Introduction
2.0 Specific Details
3.0 Appendices
1.0 Introduction

1.1 Terms of Reference

1.1.1 Hayden's Arboricultural Consultants Limited has been commissioned by Caroline Lor to prepare a bespoke Arboricultural Method Statement for the approved development at 54 Portland Road, London, W11 4LQ.

1.1.2 This report provides supplementary information to that submitted in the Tree Survey, Arboricultural Impact Assessment and Preliminary Method Statement & Tree Protection Plan dated 24th January 2017 (ref: 5771).

1.1.3 In accordance with the requirements of Royal Borough of Kensington and Chelsea Council, information is required regarding the following:

(i) Tree Protection Measures
(ii) Ground Protection Measures
(iii) Access Facilitation Pruning
(iv) Material Storage
(v) Phasing and Monitoring Schedule

2.0 Specific Details

2.1 Tree Protection Measures

2.1.1 Prior to the commencement of development, a Barksaver will be installed around the stem of T001. Alternatively, 2.5m high ply-boards can be erected and secured around the tree’s stem. Whichever method is used it will be retained until completion of the development.

2.1.2 Details of the Barksaver are provided on the attached drawing no. 6112-D-AMS and also included at Appendix E.

2.2 Ground Protection Measures

2.2.1 Site access is encumbered by the theoretical Root Protection Area (RPA) of T001. However, as shown on the attached drawing no. 6112-D-AMS, the RPA is safeguarded by existing hard surfaces which are to be retained. It will not therefore be necessary to install temporary ground protection to protect the tree’s roots.

2.3 Access Facilitation Pruning

2.3.1 Access facilitation pruning is detailed in the Tree Survey, Arboricultural Impact Assessment and Preliminary Method Statement & Tree Protection Plan dated 24th January 2017 (ref: 5771). However, for ease of data management the specification is reproduced at Appendix C.

2.3.2 Following demolition of the existing stepped, landscaped front garden, the single 30mm root unearthed during the initial site investigations will be cleanly severed with secateurs ensuring the final wound is tear free.

2.3.3 The single root to be severed is located at a depth of 650mm at the location annotated on the attached drawing no. 6112-D-AMS.
2.4 **Material Storage**

2.4.1 It is proposed to remove the existing hard surfaces and spoil from site as demolition of the front landscaped garden occurs and that construction materials will be brought to site as and when required.

2.4.2 However, on the attached drawing no. 6112-D-AMS an area had been annotated where materials are to be stored if this is temporarily required during demolition and construction.

2.5 **Phasing and Monitoring Schedule**

2.5.1 The proposal involves the integration of a number of aspects that affect tree protection. For this reason the project must be carefully phased to ensure the highest level of protection for the tree at all times. Accordingly, a method statement flowchart/checklist has been produced that shows the phasing recommendation to cover the operations on site as they affect the retained tree. This is included on drawing no. 6112-D-AMS.

2.5.2 In accordance with item 6.3 of BS 5837:2012, the site and associated development must be monitored regularly by a competent Arboriculturalist to ensure that the arboricultural aspects of the planning permission are complied with. As such, the method statement flowchart/checklist included on drawing no. 6112-D-AMS should be used as an auditable monitoring schedule to assess the progress of key site events/activities.
3.0 Appendices

Appendix A    Species List
Appendix B    Schedule of Trees
Appendix C    Schedule of Works to Allow Development
Appendix D    Explanatory Notes
Appendix E    Advisory Information & Sample Specifications

1. BS 5837:2012 Figure 1 - Flow Chart – Design and Construction & Tree Care
2. European Protected Species and Woodland Operations Decision Key to aid planning of woodland operations and protecting EPS (v.1)
3. Bark Savers

Appendix F    Drawing No 6112-D-AMS
Appendix A - Species List

Species List:

Acacia

Robinia sp
Appendix B

Schedule of Trees
<table>
<thead>
<tr>
<th>TreeNo</th>
<th>Species</th>
<th>DBH</th>
<th>Height</th>
<th>Visual</th>
<th>Crown Spread</th>
<th>Problems / Comments</th>
<th>BS Cat</th>
<th>Work Required (TS)</th>
<th>Priority (TS)</th>
<th>Work Required (AIA)</th>
<th>Priority (AIA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T001</td>
<td>Robinia</td>
<td>420</td>
<td>13.5</td>
<td>High</td>
<td>N3.0, E3.5, S3.5, W4.5</td>
<td>Located in pavement adjacent to highway. Minor displacement to adjacent paving slabs and curb stones. Tapping lower stem with a sounding mallet did reveal an area of localised decay on the stem's northern and eastern aspects. Area of bark necrosis observed on eastern aspect with column of localised dysfunctional wood beneath. Slight swelling of stem also evident at base. Forks at circa. 3.5m above ground level, slight bark inclusion observed. Tree reduced on a cyclical basis at circa. 11m in height and crown spread at circa. 2m. Tree located 1.5m from front boundary wall, beyond which the front landscaped garden steps down and levels drop by circa. 2m. (Tree inspected and maintained by LPA).</td>
<td>C2</td>
<td>No work required.</td>
<td>4</td>
<td>Prune one 30mm diameter root at the location depicted on drawing no: 6112-D-AMS.</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix C

Schedule of Works to Allow Development
# SCHEDULE OF WORKS (AIA)

54 Portland Road, London

Surveyed By: Nick Hayden  
Surveyed:  
Managed By: Nick Hayden

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Species</th>
<th>Work required</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>T001</td>
<td>Robinia</td>
<td>Prune one 30mm diameter root at the location depicted on drawing no: 6112-D-AMS.</td>
<td>0</td>
</tr>
</tbody>
</table>
Appendix D

Explanatory Notes
Explanatory Notes

Categories

Below is an explanation of the categories used in the attached Tree Survey.

No
Identifies the tree on the drawing.

Species
Common names are given to aid understanding for the wider audience.

BS 5837
Using this assessment (BS 5837:2012, Table 1), trees can be divided into one of the following simplified categories, and are differentiated by cross-hatching and by colour on the attached drawing:

**Category A** - Those of high quality with an estimated remaining life expectancy of at least 40 years;

**Category B** - Those of moderate quality with an estimated remaining life expectancy of at least 20 years;

**Category C** - Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm;

**Category U** - Those trees in such condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.

BS 5837
Table 1 of BS 5837:2012 also requires a sub category to be applied to the A, B, C, and U assessments. This allows for a further understanding of the determining classification as follows:

**Sub Category 1** - Mainly arboricultural qualities;

**Sub Category 2** - Mainly landscape qualities;

**Sub Category 3** - Mainly cultural values, including conservation.

Please note that a specimen or landscape feature may fulfil the requirements of more than one Sub Category.

DBH
Diameter of main stem in millimetres at 1.5 metres from ground level. Where the tree is a multi-stem, the diameter is calculated in accordance with item 4.6.1 of BS 5837:2012.

Age
Recorded as one of seven categories:

**Y** Young. Recently planted or establishing tree that could be transplanted without specialist equipment, i.e. less than 150 mm DBH.

**S/M** Semi-mature. An established tree, but one which has not reached its prospective ultimate height.

**E/M** Early-mature. A tree that is reaching its ultimate potential height, whose growth rate is slowing down but if healthy, will still increase in stem diameter and crown spread.

**M** Mature. A mature specimen with limited potential for any significant increase in size, even if healthy.

**O/M** Over-mature. A senescent or moribund specimen with a limited safe useful life expectancy. Possibly also containing sufficient structural defects with attendant safety and/or duty of care implications.

**V** Veteran. An over-mature specimen, usually of high value due to either its age, size and/or ecological significance.
D Dead.

**Height**  Recorded in metres, measured from the base of the tree.

**Crown Base**  Recorded in metres, the distance from ground and aspect of the lowest branch material.

**Lowest Branch**  Recorded in metres, the distance from ground and aspect of the emergence point of the lowest significant branch.

**Life Expectancy**  Relates to the prospective life expectancy of the tree and is given as 4 categories:

1 = 40 years+;
2 = 20 years+;
3 = 10 years+;
4 = less than 10 years.

**Crown Spread**  Indicates the radius of the crown from the base of the tree in each of the northern, eastern, southern and western aspects.

**Minimum Distance**  This is a distance equal to 12 times the diameter of the tree measured at 1.5 metres above ground level for single stemmed trees and 12 times the average diameter of the tree measured at 1.5 metres above ground level for multi stemmed specimens. (BS 5837:2012, section 4.6).

**RPA**  This is the Root Protection Area, measured in square metres and defined in BS5837:2012 as “a layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority”. The RPA is shown on the drawing. Ideally this is an area around the tree that must be kept clear of construction, level changes of construction operations. Some methods of construction can be carried out within the RPA of a retained tree but only if approved by the Local Planning Authority’s tree officer.

**Water Demand**  This gives the water demand of the species of tree when mature, as given in the NHBC Standards Chapter 4.2 “Building Near Trees”.

**Visual Amenity**  Concerns the planning and landscape contribution to the development site made by the tree, hedge or tree group, in terms of its amenity value and prominence on the skyline along with functional criteria such as the screening value, shelter provision and wildlife significance. The usual definitions are as follows:

Low  An inconsequential landscape feature.

Moderate  Of some note within the immediate vicinity, but not significant in the wider context.

High  Item of high visual importance.

**Problems/Comments**  May include general comments about growth characteristic, how it is affected by other trees and any previous surgery work; also, specific problems such as deadwood, pests, diseases, broken limbs, etc.

**Work Required**  Identifies the necessary tree work to mitigate anticipated problems and deal with existing problems identified in the “Problems/comments” category.
**Work Required (AIA)**

Identifies the tree work specifically necessary to allow a proposed development to proceed.

**Priority**

This gives a priority rating to each tree allowing the client to prioritise necessary tree works identified within the Tree Survey.

1. **Urgent** – works required immediately;
2. **Works required within 6 months**;
3. **Works required within 1 year**;
4. **Re-inspect in 12 months**,
0. **Remedial works as part of implementation of planning consent**.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access Facilitation Pruning</strong></td>
<td>One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.</td>
</tr>
<tr>
<td><strong>Arboricultural Method Statement</strong></td>
<td>Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.</td>
</tr>
<tr>
<td><strong>Arboriculturist</strong></td>
<td>Person who has, through relevant education, training and experience, gained expertise in the field of trees in relation to construction.</td>
</tr>
<tr>
<td><strong>Competent Person</strong></td>
<td>Person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached. <strong>NOTE</strong> - a competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Site-based operations with the potential to affect existing trees.</td>
</tr>
<tr>
<td><strong>Construction Exclusion Zone</strong></td>
<td>Area based on the root protection area from which access is prohibited for the duration of a project.</td>
</tr>
<tr>
<td><strong>Root Protection Area (RPA)</strong></td>
<td>Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree’s viability, and where the protection of the roots and soil structure is treated as a priority.</td>
</tr>
<tr>
<td><strong>Service</strong></td>
<td>Any above or below ground structure or apparatus required for utility provision. <strong>NOTE</strong> - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.</td>
</tr>
<tr>
<td><strong>Stem</strong></td>
<td>Principal above ground structural component(s) of a tree that supports its branches.</td>
</tr>
<tr>
<td><strong>Structure</strong></td>
<td>Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.</td>
</tr>
<tr>
<td><strong>Tree Protection Plan</strong></td>
<td>Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.</td>
</tr>
<tr>
<td><strong>Veteran Tree</strong></td>
<td>Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned. <strong>NOTE</strong> - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.</td>
</tr>
</tbody>
</table>

© 2013 Hayden’s Arboricultural Consultants Limited
Appendix E

Advisory Information & Sample Specifications
1. BS 5837:2012 Figure 1 - Flow Chart – Design and Construction & Tree Care

* The design development stage D in particular is an iterative process, responding to and resolving constraints as they emerge but, once completed, there needs to be a high level of certainty for proposed outcomes.

** See Commentary on Clause 6.
European Protected Species and woodland operations

Decision tree to aid planning of woodland operations and protecting EPS (v.1)

The diagram below illustrates the questions that woodland managers and operators should consider when deciding whether they need to apply for an EPS licence. It should be noted that the diagram presents a simplified overview of the decision-making process.

1. Are any ‘European Protected Species’ likely to be found in this site location and in this type of woodland or forest?
   - Any species of bat (any wood with old trees)
   - Dormouse (copice with low growth or under-storey in southern England)
   - Otter (woodland adjoining many rivers in England)
   - Great crested newt (many long-established ponds) and natterjack toad (very few sites)
   - Sand lizard and smooth snake (sandy sites, Dorset/Surrey heaths and scattered coastal locations).

   **YES**
   **NO**

2. Are they known or likely to be present in this particular wood?
   - Check the National Biodiversity Network (www.nbn.org.uk)
   - Seek advice from County Wildlife Trust or specialist organisation
   - Consult individual local naturalists/experts
   - Signs of their presence observed in the wood (e.g. bat roost holes or hazelnuts gnawed by dormice).

   **YES**
   **NO**

3. Are the proposed operations or activities likely to involve ANY of the following:
   A) Capture, injure or kill a protected animal
   B) Cause a significant disturbance to a protected animal
   C) Take or destroy the eggs of a protected animal
   D) Damage or destroy a breeding site or resting place of one of the protected species?

   **YES**
   **NO**

   **Note:** If 'Yes' to 3A, 3B or 3C then go to 4 below.
   If 'Yes' to 3D only, then skip 4 and proceed directly to 5 below.

4. Will any capture, injury, killing, disturbance or taking or destruction of eggs be deliberate? i.e. is the harm indicated in 3A, 3B or 3C above intentional, or foreseen as a most likely result of carrying out the operation?

   **YES**
   **NO**

5. Can the operations be modified to avoid committing an offence (i.e. 3D or deliberate 3A, 3B or 3C) by following good practice guidance for EPS such as:
   - Leaving some areas undisturbed and/or phasing the work
   - Avoiding the areas or times in which EPS are likely to be concentrated
   - Doing the work at a particular time of year
   - Using a different machine or technique or route?

   **YES**
   **NO**

6. Can you make an EPS licence application which satisfies the following 3 tests:
   - The purpose of the operation is to help deliver the Government's Biodiversity and/or Forestry Strategies and is therefore required by reason of overriding public interest
   - There is no satisfactory alternative, and
   - The operation will not adversely affect the conservation status of the EPS concerned?

   **YES**
   **NO**

The decision process above has been produced by the Forestry Commission and further information can be obtained from www.forestry.gov.uk.

Operations can proceed

Operations can proceed

Operations can proceed

Operations can proceed, taking care to avoid such harm

Modified operations can proceed

If /when an EPS licence has been granted the operations can proceed, but any conditions must be complied with

An EPS Licence cannot be granted and the operations cannot be carried out without a significant risk of committing an offence
3. Barksavers Specification

BarkSavers™
Armored blankets for trees

BENEFITS

- Protection when a fence installation is not possible
  - Construction along roadways where there are street trees nearby

- A feasible protection alternative
  - Especially when combined with aeration and vertical mulching to alleviate soil compaction

- Trunk injury prevention
  - Avoids wounds that can impede the transport of food and water and cause irreparable harm to tree health.

- Breathable inner cushioning layer
  - Inner layer breaths to allow air flow while protecting the bark from injury.

- Unique two-layer design
  - Consists of a flexible cushioning wrapped around the trunk, and a rigid outer shell strong enough to withstand the toughest blow

- Available in all sizes to fit your diameter needs

P. O. Box 441 ● South Hadley, MA 01075
866.777.8733 (Toll free) ● 413.467.7313 (Fax)
www.treesnewengland.com
BarkSavers™
Armored blankets for trees

PRODUCT SIZING

<table>
<thead>
<tr>
<th>Size Description</th>
<th>Inside Diameters (mm)</th>
<th>Overall Height (m)</th>
<th>No. of Straps</th>
<th>Approx. Cost *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small BS™</td>
<td>300</td>
<td>1.2</td>
<td>2</td>
<td>£11.85</td>
</tr>
<tr>
<td>Medium BS™</td>
<td>400</td>
<td>1.5</td>
<td>2</td>
<td>£21.50</td>
</tr>
<tr>
<td>Large BS™</td>
<td>500</td>
<td>1.8</td>
<td>2</td>
<td>£30.30</td>
</tr>
<tr>
<td>Extra Large BS™</td>
<td>600</td>
<td>1.8</td>
<td>3</td>
<td>£46.75</td>
</tr>
</tbody>
</table>

(*Based on retail, non-bulk product pricing- + deliver & vat per metre.)

DESIGN & CONSTRUCTION

Trees New England LLC no longer manufactures BarkSavers™. Our goal is to provide a re-usable tree protection alternative for architects, builders, contractors, and planners when protective fencing is not an option. Trunk protection at minimal is best especially where other remediation alleviations will be carried out after the completion of the project. We only ask that you credit our Company with the design of the product when BarkSavers™ is used in specification or when in use.

- **OUTSIDE**: Rigid HDPE corrugated pipe
  - Protects the bark against injuries from the outside
  - Can be purchased from
  - **metro-flow limited**
    The Barn, Church Farm, Church Lane, Stockbury, Kent, ME9 7RD
    Tel: 01795 843866
    Fax: 01795 841701
    [www.metro-flowltd.co.uk/metro_twin.htm](http://www.metro-flowltd.co.uk/metro_twin.htm)

- **INSIDE**: Flexible, cushioning protection of fibre/felt carpet padding
  - Protects the bark against injuries from inside the pipe

- **FASTENER**: Strap-on construction made of Tree Chain Lock Ties and Lock/Bolt
  - Fastens the BarkSavers™ firmly to the tree
**MATERIALS NEEDED TO CREATE A BARKSAVERS™**

<table>
<thead>
<tr>
<th>Drainage Pipe Inside Diameter x Height</th>
<th>Carpet Padding (sq metres)</th>
<th>Chain Lock Ties</th>
<th>No. of Ties</th>
<th>No. of Locks/ Bolts</th>
</tr>
</thead>
<tbody>
<tr>
<td>300mm x 1.2m</td>
<td>1.25</td>
<td>1.00m</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>400mm x 1.5</td>
<td>1.75</td>
<td>1.25m</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>500mm x 1.8m</td>
<td>2.70</td>
<td>1.75m</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>600mm x 1.8m</td>
<td>3.60</td>
<td>2.25</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

**CONSTRUCTION**

1. Cut drainage pipe with a saws all, a circular saw or with a hack saw  
   a. Each section of pipe will be cut twice to form 2 halves

2. Cut Chain Lock Ties to specified length, set aside quantity of Locks needed per tie.

3. Cut fibre/felt carpet padding to specified length
BarkSavers™
Armored blankets for trees

INSTALLATION

1. Wrap trunk with carpet padding

2. Wrap carpet padding with both halves of split BarkSavers™
   o Protects the bark against injuries from inside the pipe

3. Wrap Chain Lock Ties around at the top, another piece in the middle, and a third piece at the bottom

4. Connect the Chain Lock Ties with the Locks/Bolts
   o Acts as security measure

BarkSavers™ doing their job!

They’re not just BS1
BarkSavers™ really do work

P. O. Box 441 ● South Hadley, MA 01075
866.777.8733 (Toll free) ● 413.467.7313 (Fax)
www.treesnewengland.com
Appendix F

Drawing No 6112-D-AMS
Arboricultural Impact Assessments ●
Arboricultural Method Statements ●
Tree Constraints Plans ●
Arboricultural Feasibility Studies ●
Shade Analysis ●
Picus Tomography ●

Arboricultural Consultancy for Local Planning Authority ●
Quantified Tree Risk Assessment ●
Health & Safety Audits for Tree Stocks ●
Tree Stock Survey and Management ●
Mortgage and Insurance Reports ●
Subsidence Reports ●
Woodland Management Plans ●
Project Management ●
Ecological Surveys ●

Telephone 01284 765391
Email info@treesurveys.co.uk
Website www.treesurveys.co.uk

5 Moseley’s Farm Business Centre
Fornham All Saints
Bury St Edmunds
Suffolk
IP28 6JY