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ARBORICULTURAL METHOD STATEMENT (AMS)

**7 The Grove
London
N6 6JU.**

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1. Introduction

- 1.1. This document is an Arboricultural Method Statement (AMS). It is written by a professional arboriculturalist with specialist knowledge of trees. The purpose of this AMS is to protect trees from damage during demolition and construction. All works must comply with the provisions of this method statement unless prior agreement is secured in writing from the author or another suitably qualified arboriculturalist.
- 1.2. Trees are living organisms. Although often very large and long lived they are vulnerable to damage caused by construction and demolition. In particular, root systems must be protected if trees are not to be harmed. This requires protecting the soil in which those roots live. Roots need soil which contains water and air. Soil compacted by heavy vehicles or materials is devoid of air and water and therefore cannot support healthy roots.
- 1.3. In order to protect trees both above and below ground normal practice is to create Construction Exclusion Zones (CEZs) around an area equivalent to each tree's Root Protection Area (as defined by BS5837:2012 Trees in relation to design, demolition and construction - Recommendations). However where, as in this case, construction takes place in a garden close to trees a CEZs of this type would effectively prohibit the development. It is therefore necessary to permit access to areas that would otherwise be off limits and protect the trees by other means.
- 1.4. It is strongly recommended that this document form part of the

tendering process so that contractors are fully aware of constraints when tendering for work. This document should be shown to and agreed with all contractors prior to signing of contracts. Compliance is to be treated as a condition of all contracts.

2. Tree Protection (Generic Provisions)

- 2.1. No damage shall be caused to any part of trees to be retained.
- 2.2. No tree shall be damaged by any crane, boom, or other equipment.
- 2.3. No roots shall be damaged or cut unless as specifically provided for in this AMS.
- 2.4. Soil within Root Protection Areas, marked on the Tree Protection Plan (**TPP**) must be protected from contamination and compaction.
- 2.5. All existing hard standing is to be retained during demolition and construction for as long as possible to reduce loading on soil beneath.

3. Preserving The Hornbeam at 7 The Grove

- 3.1. Construction and demolition are taking place very close to an old hornbeam. This tree is in good health and the purpose of the provisions in this document are that it should remain in good health during and for decades after the build.

4. Tree Protection Plan

- 4.1. The Tree Protection Plan (TPP) defines areas of importance to the health of this tree and provisions to protect it. The **Root Protection Area (RPA)** is the area the tree needs for its roots. This area must be protected from compaction or disturbance, including storage, loading, traffic and spillages.

Given the diameter of this tree the RPA is a circle of 7.2m diameter.

However, because this tree is close to buildings and hard standing, rather than rely simply on a generic 7.2m circle around the tree (as per BS5837), a **Site Specific RPA (SSRPA)** has been included to reflect the tree's likely root zone (see TPP).

4.2. In addition, because the tree is very close to areas of construction and demolition, a further **High Priority RPA (HPRPA)** is defined. This is described by a circle of 2.25m radius around the centre of the tree.

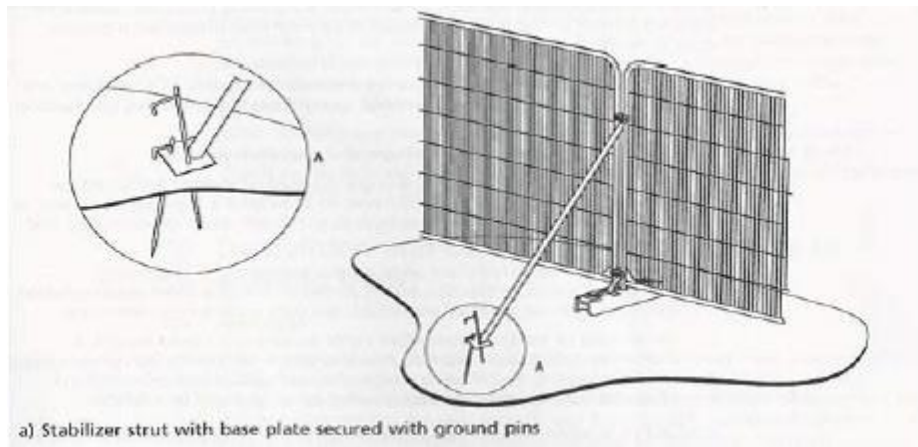
4.3. All three areas (RPA, SSRPA and HPRPA) are marked on the Tree Protection Plan (TPP). For the purpose of this project all three areas are to be treated as essential to the tree's health and restrictions apply to all operations in these areas.

4.4. Construction Exclusion Zone (CEZ)

4.5. It is recognised that access to parts of the RPAs are essential to the build and therefore special provisions apply to those parts of the RPA where construction and demolition activities will occur. Those parts of the RPA to which access is not essential will be a Construction Exclusion Zone (CEZ).

4.6. Prior to commencement of works fencing is to be constructed to prevent access to the Construction Exclusion Zone (CEZ). This fencing is to remain in place during the entire build. The fencing is not to be opened or moved without prior written approval of an appropriately qualified arboricultural consultant.

4.7. The CEZ fencing will take the form set out in BS5837 as illustrated in the diagram below.



4.8. The fence shall be clearly marked at all times "Construction Exclusion Zone – NO ACCESS".

4.9. Notwithstanding this CEZ much of the demolition and construction will take place within the RPA. It is essential therefore that the provisions of this AMS are followed to avoid unnecessary damage to the tree or its roots.

4.10. Particular caution is necessary in the High Priority Root Area marked on the TPP. This is the area closest to the tree where larger roots are likely to occur. However the provisions of this AMS apply to the entire RPA unless otherwise stated.

5. Specific Operations within the RPA

5.1. Demolition

5.1.1. All demolition operations should take place on existing hardstanding (i.e. concrete surfaces) and materials extracted east out

of the RPA, not west into the CEZ/RPA.

5.1.2. Hardstanding to be lifted should only be removed once other above ground demolition has been completed. Particular care must be taken within the High Priority Root Area to avoid damage to above or below ground roots and to avoid soil compaction. Loading must be avoided in this area and if any load that cannot be carried by hand has to transit the HPRA ground protection must be installed first.

5.1.3. In so far as it may be desirable or necessary to remove hardstanding before potential loading ground protection should be installed.

5.1.4. The garden paving slabs west of the terrace are not to be subjected to loading unless ground protection is installed above it.

5.2. Ground Protection

5.2.1. Existing concrete surfaces outside the HPRA can be loaded up to a maximum of 1000kg without extra ground protection. All other areas must be protected with temporary above ground load bearing surfaces for any loading greater than 100kg.

5.2.2. Ground protection specification.

5.2.2.1. The ground should be covered with a permeable, geo-textile membrane. Woodchip to a minimum depth of 150mm will be laid over the membrane. Woodchip shall be untreated material from

broadleaved trees of average particle size of 1cm³ or larger.

5.2.2.2. The woodchip will then be covered with 20mm thick exterior grade plywood or interlocking proprietary temporary ground cover of equivalent strength and thickness.

5.3. Locating Foundations and Excavations within the Root

Protection Areas

5.4. The foundations for the outbuilding will be formed by concrete pads.

These pads and their footings require careful sighting and installation especially where they are located outside the footprint of the existing shed and or within the High Priority RPA. Excavations for the footings will require supervision by the author or another suitably qualified arboricultural consultant.

5.5. The pads and their footings shall not penetrate more than 150mm below existing ground layer. Excavations will be conducted by hand under arboricultural supervision. Precise locations will be determined by sub-soil root conditions in consultation with the author or other arboricultural consultant once excavations have been done.

5.6. The foundations for the new terrace will be formed by a strip foundation located beneath the existing terrace and cantilever above the Site Specific RPA. This will avoid excavations within the areas likely to contain roots. Although part of this strip foundation is within the generic RPA, locating it beneath the existing terrace reduces the risk that roots will be encountered.

However to ensure no damage occurs the trench for this foundation must be dug by hand. If any root greater than 25mm in diameter is encountered the author or another suitably qualified arboricultural consultant must be consulted. No root greater than 25mm in diameter shall be cut or damaged.

5.7. Basement Excavations

5.7.1. It is considered unlikely that roots will occur in the area to the east end of the RPA to be dug out for the new basement staircase. However it is possible that roots will be present and excavations must therefore be dug manually to a depth of 1m. If any roots of a diameter greater than 25mm are found the project arboricultural consultant should be consulted immediately.

6. Generic Provisions

- 6.1. No **soil level** is to be changed other than in accordance with approved architects plans; as agreed with a qualified arboricultural consultant; or temporarily as above ground protection (see Ground Protection above).
- 6.2. If any **root > 25mm** in diameter is exposed advice must be sought from the author or another suitably qualified arboricultural consultant.
- 6.3. If any root < 25mm Ø has to be cut it must be cut with a sharp tool, leaving a cleanly cut surface.
- 6.4. No **heavy materials** are to be stored within the HPRA or CEZ. This

includes: machinery, tools, bricks, paving slabs, resurfacing materials, spoil, etc. Heavy means anything that cannot be easily lifted by one operative by one hand.

6.5. Digging and Trenching (generic provisions)

- 6.5.1. Any new underground services near to trees will be installed in accordance with: *BS 5837:2012 Trees in relation to design, demolition and Construction - Recommendations*; and *National Joint Utilities Group Booklet 4: 2007 Guidelines for the planning, installation and maintenance of utility services in proximity to trees (NJUG4)* or later industry good practice guidance.
- 6.5.2. No mechanical digging, trenching or other mechanised operations are to occur within CEZs.
- 6.5.3. Any trenching or digging within RPAs to be conducted by hand or using an airspade. Such operations to conform to other specific provisions detailed in this AMS or as agreed in writing by the author or suitably qualified arboricultural consultant.
- 6.5.4. Where possible lighting and any other cables should utilise existing sub surface ducts.
- 6.5.5. If new trenches are required within RPAs there location and method of dig shall be agreed in advance with the author or another suitably qualified arboricultural consultant.

6.6. Roots

- 6.6.1. Any exposed roots must be protected at all times by wrapping with clean hessian.
- 6.6.2. Where possible all roots are to be retained intact.
- 6.6.3. No root with a diameter larger than 25mm Ø shall be cut.
- 6.6.4. If any root > 25mm Ø is exposed advice must be sought from the author or another suitably qualified arboricultural consultant.
- 6.6.5. Any smaller roots which are damaged shall be cut cleanly, with a sharp tool leaving the smallest possible wound.
- 6.6.6. When backfilling any hessian wrapping shall be removed and roots back filled with a no-fines granular material such as sharp sand (not builder's sand which has a high salt content and will kill roots).

6.7. Contaminants, chemicals, fuel, fire etc.

- 6.7.1. No chemicals, fuel, contaminated water, or other toxic substance is to enter or be allowed to seep into any CEZ or RPA.
- 6.7.2. No fire or hot material is to enter any RPA.
- 6.7.3. All mixing of cement / concrete must be undertaken outside of the RPA of all of the retained trees.

6.8. Permeable Surfaces

6.8.1. Any new surfacing within RPAs must be both water and air permeable.

6.9. Arboricultural Supervision

6.9.1. In addition to instances referred to above, specific stages of the development will require supervision by the author or another suitably qualified arboricultural consultant.

6.9.2. A schedule of arboricultural supervision will be agreed between the parties prior to work commencing.

6.9.3. Arboricultural supervision is required as follows.

6.9.4. To sign off tree protection measures, i.e. when the CEZs and GPZs have been installed but prior to any other work commencing.

6.9.5. At predetermined intervals as agreed between the client, the architect and all contractors, before any works commence but once phasing of works has been agreed. These intervals may include the following: before demolition of any structure; after demolition of each structure; after installation of a spoil removal conveyor and/or other machinery to be located within a CPZ or GPZ; after initial excavations; post completion of excavations; pre-reinstatement of landscaping features; post-tree planting; post-final landscaping.

6.9.6. A written log of arboricultural site visits will be maintained by both the lead contractor and the retained arboricultural consultant.

6.10. Access Facilitation Pruning

6.10.1. It is not anticipated that any tree pruning should be required. Any tree pruning operations should first be agreed with a qualified arboriculturalist and approved in advance by the Local Planning Authority. Any such pruning should follow industry guidance as set out in *BS 3998: 2010 Tree Work - Recommendations*. All such works should be done by appropriately qualified arborists.

6.10.2. Tree works should be confined to the minimum crown reduction required to facilitate access.

Russell Miller

4 July 2021

GLOSSARY

AMS Arboricultural Method Statement – a specification for works written by a qualified professional who understands the requirements of trees.

CEZ Construction Exclusion Zone – i.e. no construction access, even on foot, without prior consultation with a qualified arboricultural consultant.

GRPA Generic Root Protection Area – the RPA defined by a circle of diameter determined by *BS 5837:2012 Trees in relation to design, demolition and Construction – Recommendations*.

GPZ Ground Protection Zone – an area requiring temporary ground surfacing designed to avoid compacting the soil beneath.

HPRPA High Priority Root Protection Area – an area close to the tree likely to contain large, high priority roots.

RPA Root Protection Area – the **minimum** area that must be protected if a retained tree is to survive; i.e. to avoid unacceptable root damage the entire RPA must be protected from trenching, digging, compaction, spillage and other construction activity unless as specified in an **arboricultural method statement**.

SSRPA Site Specific Root Protection Area – the RPA determined by an arboricultural consultant to most likely reflect the true location of tree roots.