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ARBORICULTURAL METHOD STATEMENT FOR 16 VALE CRESCENT TILEHURST



**Prepared on instructions from:
Mr & Mrs Harrison
16 Vale Crescent
Tilehurst
Reading
RG30 6ED**

Ref: PB/AMS-20/09.02

11th February 2020



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Summary

This Arboricultural Method Statement (AMS) sets out the mitigation required to demonstrate how the root protection areas (RPAs) of retained trees will be protected during the proposed site development works; including removal of the shed and existing paths, access to the proposed development area and construction works.

We were provided with a copy of the following drawing and this method statement is based upon the supplied information:

- Dwg No. 263-(A1)-03-A-Proposal 3 from Zoe Lewis Architects Ltd dated 13 January 2020.

We have calculated the RPAs and they are shown in the mitigation plan PB/MIT-01/09.02 included at Appendix 1.

Mitigation is required to demonstrate how the retained tree root protection areas (RPAs) will be protected during any development, including access to the proposed development area.

The impacts upon the trees implicated in this proposed development are the direct loss of two category 'C' trees, trees (T) T1 and T2, to facilitate the proposal. The removal of T5, category 'U', is anticipated as a result of the British Standard classification for trees of poor health and condition.

1. Introduction

1.1 Instructions

- 1.1.1 Urban Tree Experts are instructed by Zoe Lewis Architects Ltd, 12A Castle Hill, Reading, RG1 7RD on behalf of Mr & Mrs Harrison to prepare an AMS, based on the BS 5837:2012 report and tree data ref SH/5837-01/30.05, and the drawings as set out above.

2. Scope of this report

- 2.1 The AMS sets out the mitigation required to demonstrate how the retained tree RPAs will be protected during the proposed site development works at 16 Vale Crescent, Tilehurst, Reading, RG30 6ED including access to the proposed development area, demolition of the existing garage and construction of the proposed garden building.

3. Site visit

- 3.1 The trees were surveyed by Simon Holmes MSc, MICFor on Thursday 30th May 2019 for the preparation of BS 5837:2012 Report ref SH/5837-01/30.05.



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4. General

4.1 The key protection issues associated with this scheme in relation to existing trees, in the short, medium and long term, are the need for:

- The protection of trees to be retained from physical damage to their above and below ground structures.
- The protection of tree habitat.
- The protection of the soil structure and prevention of damage to tree root systems by chemicals and other noxious substances/materials.
- Monitoring, supervisions and liaison.

4.2 Tree Preservation Order Status

A search of Reading Borough Council's Tree Preservation Order (TPO) directory and Conservation Area maps was carried out on the 10th June 2019. The search revealed that the application site is not within a conservation area but there is a woodland TPO (no 2/16) for Gypsy Lane. The directory did not include a map of the trees covered therefore, further information must be sought from Reading Borough Council's Natural Environment Team before any works are carried out on any trees.

4.3 This report must be read in conjunction with the following drawings:

- Mitigation drawing, ref PB/MIT-01/09.02 included at Appendix 1.
- Default tree protection barrier (TPB) from BS 5837:2012 included at Appendix 2.
- Ground protection measures included at Appendix 4.

5. Introduction

5.1 Terms of reference:

We are to review the British Standard (BS) 5837:2012 tree survey reference data in order to integrate the proposed development options and safeguard the long-term preservation of the retained trees. This AMS provides guidance on the typical range of processes that are involved during development and seeks to ensure that appropriate methods of implementation are carried out. It further aims to provide a holistic view of the development process and seeks to address any potential issues and conflicts that may arise and provide solutions to these, resolving them in line with current arboricultural and industry best practice guidance.

5.2 The AMS sets out the mitigation required to demonstrate how the retained tree RPAs will be protected during the proposed site development works including access to the proposed development area and construction works; and they must be implemented to secure successful tree retention.

In the absence of industry specific guidance on the installation of underground services, all new services required for this project must conform to the minimum standards required and will be those as set out in the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees.



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We have used our extensive experience to interpret these references in the context of evolving good practice and site-specific issues relating to the proposal at 16 Vale Crescent.

5.3 Precautions when working in the RPA:

The following prohibitions apply within any tree RPA:

- No linear mechanical excavation whatsoever without prior written agreement from the Local Planning authority (LPA) and Arboricultural Consultant (AC).
- No excavation by any other means without arboricultural site monitoring.
- No hand digging without a written method statement from the main contractor having first been approved in writing by the AC.
- No change or lowering of levels unless agreed in writing with the LPA and AC, except for the removal of grass sward using hand tools in accordance with BS 5837:2012 (section 7.4.2.1).
- No construction of a sealed hard surface.
- No storage of plant or materials.
- No storage or handling of any chemical including cement washings, unless site specific mitigation is approved by the AC and the LPA.
- No vehicular access without prior written agreement from the LPA.
- No fire lighting.

5.4 In addition to the measures above further precautions are necessary adjacent to trees:

- A minimum 10 metre separation distance, or the RPA radius if it is greater, shall normally be observed between any tree RPA during the cement mixing phases including storage and other substances injurious to tree health, this should include such things as fuels, oil, bitumen, cement (including cement washings), builders' sand, concrete mixing and other chemicals.

5.5 Avoiding damage to stems and branches:

Care shall be taken when planning site operations in proximity to trees to ensure that contact with the retained trees and overhanging branches is avoided. Such contact can result in serious injury to the tree and might make the safe retention impossible. Consequently, any tree protection in proximity to the trees shall be constructed under the supervision of the AC, to ensure that adequate clearance from the trees is at all times maintained.

5.6 Access pruning:

Access pruning is not anticipated to any tree; this is dealt with at section 7.2. Any changes that identify trees that require additional pruning may only be conducted following consent and must be undertaken in accordance with BS 3998:2010 and current arboricultural practice.

At no time must the trees be pruned by the construction contractors. All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors under the guidance of the AC.



6. Tree protection general

6.1 Default fencing (BS 5837:2012, Figure 2, section 6, Appendix 2)

The proposed scheme involves construction activities in close proximity to retained trees. It is considered that the minimum default type fencing must be that shown at Appendix 2. The location for this type of fencing is shown as lines on the mitigation drawing ref PB/MIT-01/09.02. If construction work is adjacent to or within an RPA the default tree protection fencing may be inappropriate or unsuitable and therefore any alternative specification to the default above must only be used following a written contingency plan submitted to and approved by the AC and LPA. It should identify the reasons why the default cannot be used, the location and duration required for the substitute fence and it must be erected under the supervision of the AC. The AC must be given reasonable time to provide advice.

Specific tree protection measures have been considered at conflict points and mitigating measures are set out within this document that are proportionate to the risks associated with this project.

6.2 Ground protection measures:

Ground protection is required to protect at least a functional minimum mass of undisturbed ground during the construction process and is required to limit compaction or contamination of the RPA. An example of ground protection is set out at Appendix 4 and is considered generic to elements of this scheme. The specific ground protection measures must be installed and maintained during all the construction phases, unless work is directly supervised by the AC and agreed by the LPA. The proposed works on this site have been assessed and on the basis of the drawings supplied the following site specific precautions and mitigation is required.

7. Site specific precautions and mitigation

7.1 Tree loss:

We anticipate the direct loss of two trees as a result of the development. They are:

- T1 and T2; both of Category 'C' - "Trees of low quality".
- The loss of these two trees will only have a minor negative impact on the wider landscape character and a minor loss of amenity locally. There will be no negative impact on the sylvan character of the site when viewed directly from the roadside to the south, Gipsy Lane, or the neighbours to the north.

Further tree removal is anticipated as a result of the British Standard classification for trees of poor health and condition, and includes:

- T5 in BS category 'U'.

Before any trees are removed or any pruning works are carried out to any trees within the site, an application for works to protected trees must be made to Reading Borough Council's Natural Environment Team.



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7.2 Access Pruning.

Tree pruning is not required to any tree.

Mitigation:

- Were the position to change, tree pruning may only be conducted following consent from RBC and must be undertaken in accordance with BS 3998:2010 and current arboricultural practices. At no time must the trees be pruned by the construction contractors.
- All tree pruning must be undertaken by suitably qualified and insured arboricultural contractors under the guidance of the AC.

7.3 Site set up and access to site during demolition and construction is adjacent to and over the RPA of T3, T4, and T7. The following precautions are required for demolition and construction access to the work area:

Mitigation:

- The TPB must be installed prior to any construction activity as shown on drawing PB/MIT-01/09.02 and remain in situ for the duration of the scheme.
- To ensure the RPA of trees T3, T4 and T7 remains undamaged, and to prevent contamination and compaction during construction work, temporary ground protection must be installed.
- The temporary ground protection is shown on the mitigation drawing PB/MIT-01/09.02 and set out in Appendix 4.
- This must be suitable for the maximum weight of vehicles and construction machinery required for the site.
- Where vehicle access is required, examples of temporary ground protection to be used include DuraDeck® ground protection mats laid on top of the existing surface on a 150mm deep layer of woodchip or sharp sand to minimise compaction and prevent damage to surface roots.
- If temporary ground protection is to be used this must remain in situ for the duration of the works.

7.4 Protection of trees in construction exclusion zone.

The RPAs of trees T6, T7 and T8 that are outside the proposed construction area must be protected by a tree protection barrier.

Mitigation:

- The TPB must be installed prior to any construction activity as shown on drawing PB/MIT-01/09.02 and remain in situ for the duration of the scheme.
- Heras panels supported on rubber blocks secured to the ground with road pins must be used in the location as shown on the mitigation drawing PB/MIT-01/09.02 to provide protection for the RPAs. This must remain in situ for the duration of the works.

7.5 Demolition and removal of existing garage and shed within the RPA of retained trees T3 and T4.

Mitigation:

- The TPB and temporary ground protection must be installed prior to any demolition work as shown on drawing PB/MIT-01/09.02 and remain in situ for the duration of the scheme.



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7.5 Continued...

- Where the barrier may need to be temporarily moved to allow works access additional temporary ground protection must be applied as per Appendix 4.
- The existing garage base is to be retained over the RPAs of T3 and T4 for the new car parking area between the boundary fence and up to the foundation line for the proposed new garden building.
- The existing garage base is to be removed over the footprint of the proposed new garden building. The concrete base should be cut with a disc cutter, taking care not to cut into the sub-base and avoid damage to any underlying tree roots.
- Demolition of the garage and lifting of concrete and hard surfaces must be carried out with a mini-excavator either positioned outside the RPA of the retained tree or working from the area protected with temporary ground protection, using a toothless bucket, and working in a direction away from the edge of the RPA.
- To avoid root desiccation, any roots over 25mm and clumps of fibrous roots below 25mm encountered during this removal process must immediately be covered with new topsoil.
- It is essential that digging into the sub base when removing existing concrete and hard surfaces over RPAs is avoided.

7.6 Construction of the new garden building over the RPA of retained trees T3 and T4 must be undertaken using bored piles and a suspended reinforced concrete slab set above ground level with a ventilated void in order to minimise disturbance to the root protection area.

Mitigation:

- Within the RPA of the retained tree there must be no disturbance of the existing base layer or additional compaction during the construction works.
- Any surface vegetation requiring removal within the RPAs must be agreed with the AC, furthermore it must be removed by hand tools in accordance with BS 5837:2012, 7.4.2.1. Under no circumstances must mini diggers or similar machinery be used to remove the surface vegetation in RPAs.
- To ensure the RPA of the retained trees remains undamaged, and to prevent contamination and compaction during access, excavation and construction of the piles and slab, the RPA must be protected with temporary ground protection as the works progress, as set out in Appendix 4.
- The initial excavation for the piles within tree RPAs shall be by hand for the first 600 millimetre depth to ascertain that any major tree roots are not disturbed.
- Should this excavation reveal the presence of significant tree roots the proposed pile must be repositioned to avoid any potential damage; the foundation design will incorporate sufficient flexibility such that the pile can be repositioned to an alternative unobstructed position.
- The piles are to be installed with a remotely hydraulic powered mini pile rig to avoid disturbance to the RPAs. This machine has a gross weight of approximately 1.5 tonnes and is supported on wide full length rubber tracks to minimise bearing pressure. The trailer mounted power pack can be sited up to 30 metres from the pile positions, supplying power via umbilical hoses.



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7.6 Continued...

- The piles are formed with a 200mm diameter continuous flight auger. Once bored to the designed depth the augers are extracted, a plastic coated cardboard sleeve inserted to debond the pile shaft from volumetric ground movement over the top 3 metres of the shaft, and to avoid root damage caused by leaching of cementitious materials into the ground.
- The pile is then reinforced with the specified prefabricated reinforcement cage and the bore filled with self-compacting high slump, high strength concrete.
- Once the piles have been installed the temporary ground protection will be removed.
- The proposed superstructure will be supported by the piles via a 200 millimetre thick flat reinforced concrete raft constructed on top of the existing sub-base level.
- The raft will be constructed on a biodegradable, honeycomb void-former sub base, such as “Clayboard”, or similar approved, with an impermeable membrane fitted on top of this to prevent the leaching of cementitious materials into the ground.
- The honeycomb void-former will act as shuttering for the slab and temporarily support the weight of the liquid concrete until it sets.
- The void-former can then be wetted and washed away, or left to degrade naturally, to leave a clear, breathable void to allow movement of air and moisture beneath the slab.

7.7 The full details of installation and excavation for services, foul drainage or outside lighting were not available at the time this method statement was prepared although it is believed service ducts will be located in the upper patio adjacent to the retaining wall, and away from the RPAs of T4 and T7. Therefore the following generic mitigation applies:

Mitigation:

- The proposed services and foul drainage drawings must be submitted to and approved in writing by the LPA prior to any services and foul drainage works starting on site.
- The tree protection barrier must be installed prior to any construction activity and in the location as shown on drawing PB/MIT-01/09.02, and remain in situ until all construction activity is completed. All excavations within the RPA of any retained trees affected by below ground works must be undertaken by hand or an approved trenchless technique.
- If roots less than 25 millimeters in diameter are encountered during excavation they must be cut cleanly with a sharp hand saw and covered with damp hessian to prevent them from drying out.
- In the absence of industry specific guidance on the installation of underground services, all new services required for project must conform to the minimum standards required will be those as set out in the National Joint Utilities Group (NJUG) 2007 Volume 4, Issue 1: *Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees*.



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- 7.8 Spoil movements, storage of materials, skips, parking and welfare facilities.

Mitigation:

- Spoil and building materials must not be stored in the RPA of the retained trees.
- Skips, parking and welfare facilities must be sited beyond the RPAs of retained trees.
- To ensure the RPAs of the other retained trees remains undamaged and to prevent contamination and compaction during access and construction the RPAs must be protected with temporary ground protection as set out in Appendix 4 and shown on PB/MIT-01/09.02
- The TPB must be installed prior to any site activity as shown on drawing PB/MIT-01/09.02 and remain in situ for the duration of the scheme.

8. Arboricultural supervision

- 8.1 Site supervision is considered unnecessary and would be disproportionate to the risk associated with the work.

9. Contingency plans

- 9.1 A general contingency plan for this project should be prepared by the main contractor for controlling such things as chemical/fuel spillage, run off from cement washings, sewage or water leaks, site collisions and emergency access into or adjacent to tree RPA.

10. Queries

Any queries regarding this report should be addressed, in the first instance, to Urban Tree Experts:

Bramley House
Newnham Bridge
Tenbury Wells
Worcestershire
WR15 8NX

Telephone: 0118 9762 902
Email: info@tree-surveys.com

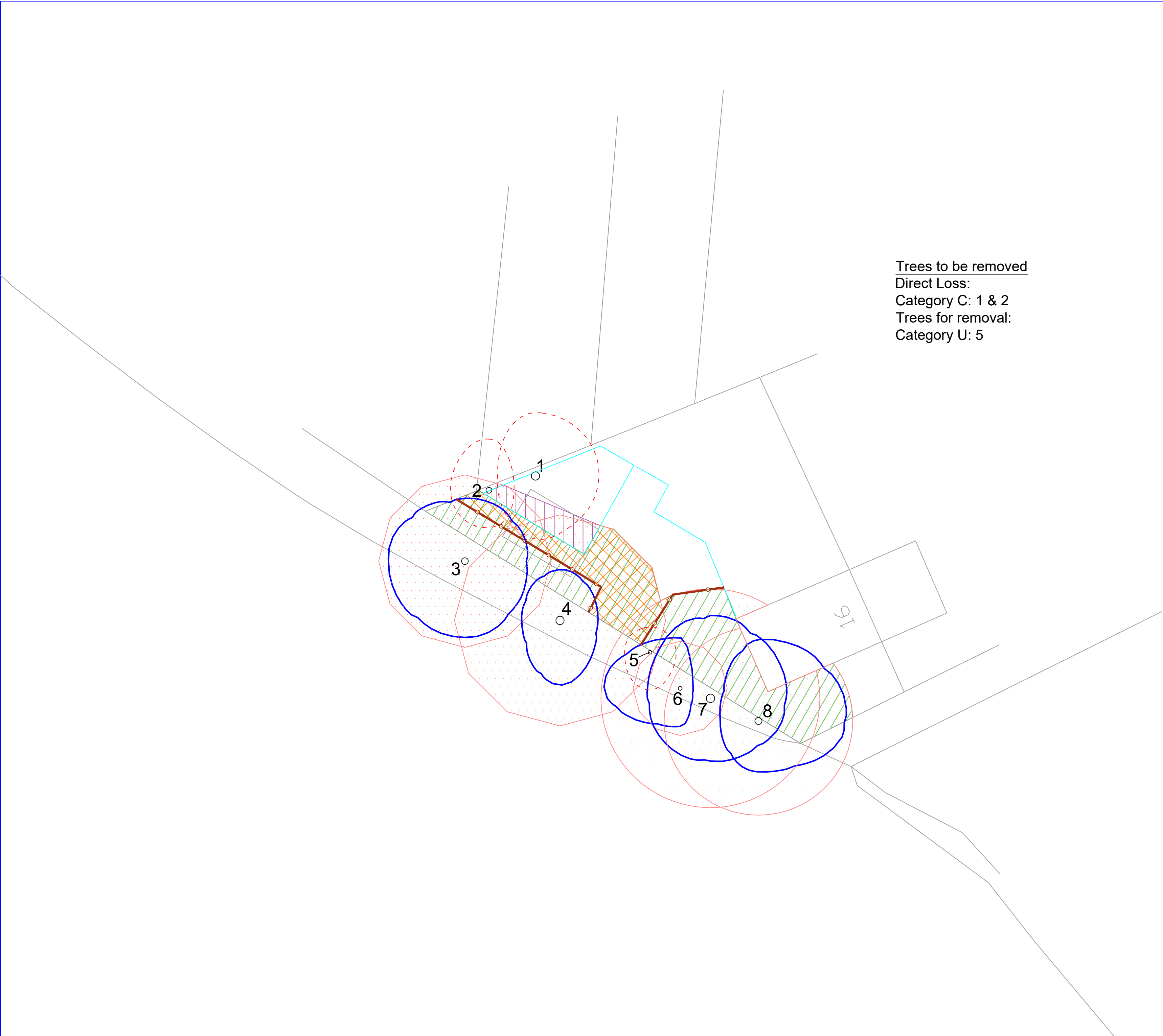
Paul Billin, BSc, MICFor
Chartered Arboriculturist
Urban Tree Experts



Urban Tree Experts

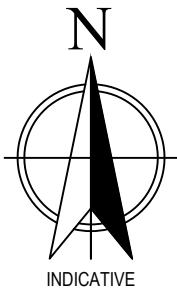
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APPENDIX 1



Trees to be removed
Direct Loss:
Category C: 1 & 2
Trees for removal:
Category U: 5

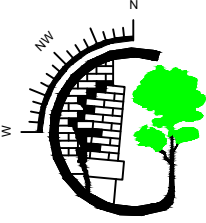
- NOTES
- All dimensions must be checked on site and not scaled from this drawing.
 - The original of this drawing was produced in colour, a monochrome copy should not be relied upon.
 - Read drawings in conjunction with arboricultural report.
 - Topo based on OS data, Licence No. 100022432
 - Proposal based on Drg. No. 263-(A1)-03-A Proposal 3 dated 13/01/2020



- Key:
-  Trees retained
- refer to report for information
 -  Tree number
- refer to report for information
 -  Existing site features
 -  Root protection area (RPA)
 -  Proposed area of works
 -  Tree protection barrier (TPB)
- refer to report for information
 -  Trees for removal
- refer to AMS
 -  Temporary ground protection (min. area)
- refer to AMS
 -  Existing levels and surfacing to be retained
- refer to AMS
 -  Pile and slab foundations (min. area)
- refer to AMS



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Client	Mr & Mrs Harrison		
Job Title	16 Vale Crescent		
Drawing Title	MITIGATION PLAN		
Scale	1:200 @ A2		
Date	February 2020	Drawn: MJE	Checked: PB
Drg. No.	PB/MIT-01/09.02	Rev.	



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APPENDIX 2



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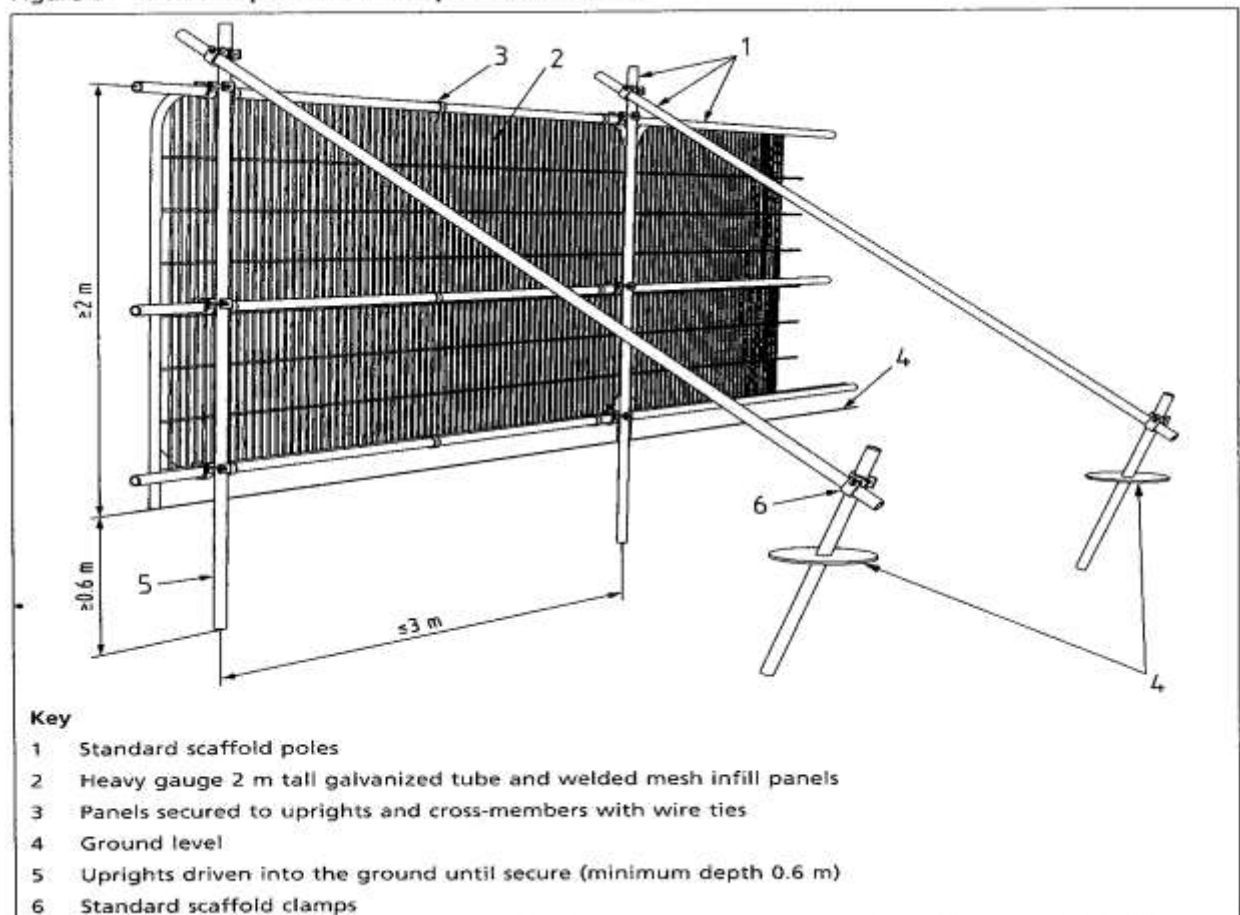
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BS 5837 FIGURE 2 TREE PROTECTION

Root Protection Areas (RPAs), enclosed by Default Temporary Protective Fencing, as detailed below and to be agreed with the Local Planning Authority (LPA), shall:

1. Be protected throughout the development process, as specified and detailed in BS 5837:2012 Section 6.2, Fig 2
2. Be erected prior to any construction, demolition or excavation works and remain in place for the duration of the project.
3. Preclude any delivery of site accommodation and or materials and or plant machinery.
4. Preclude all construction related activity, with the sole exception of specified arboricultural works and any other works carried out under supervision that has been agreed by all parties, and:
5. Preclude the storage of all development related materials and substances including fuel, oils, additives, cement and or any other deleterious substances.
6. Any incursions into RPAs must be by prior arrangement, following consultation with the LPA.

Figure 2 Default specification for protective barrier





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APPENDIX 3

TREE PROTECTION ZONE
KEEP OUT!

NO DIGGING OR TRENCHING
NO STORAGE OF PLANT OR MATERIALS
NO VEHICLE ACCESS
NO FIRE LIGHTING
NO CHEMICAL HANDLING
AVOID PLANT CONTACT WITH TREE CANOPY
REPORT ANY DAMAGE
TO TREES OR FENCING IMMEDIATELY



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APPENDIX 4

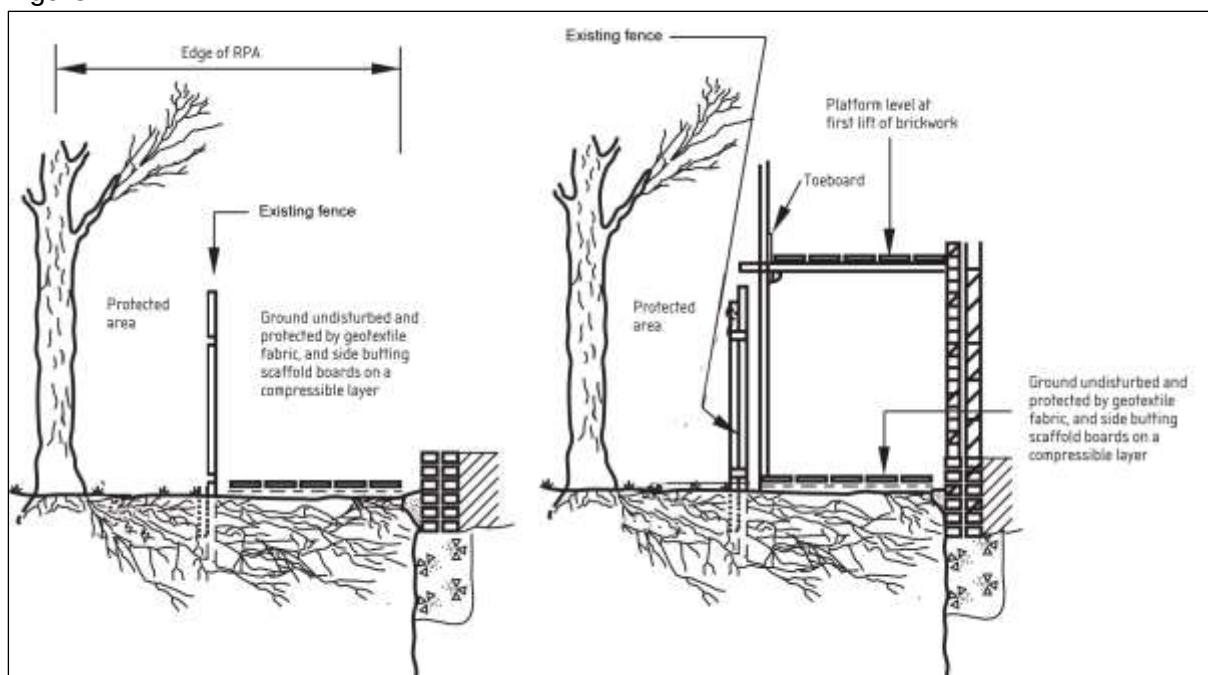


GROUND PROTECTION

Temporary Ground Protection

Any temporary ground protection that may be required within an RPA shall conform to section 6.2.3. of BS 5837:2012, an example is shown in Figure 1 below.

Figure 1.



Option 1 – No vehicle access required.

1. Prior to installing ground protection the area beneath it must be lined with heavy duty polythene (1000/250 microns) to prevent contamination of the soil within the protected RPA.
2. Side butting scaffold boards shall be fitted to ensure adequate cover of the area to be protected.
3. Prior to any demolition or construction works, site preparation, excavation or delivery of plant and materials the Arboricultural Consultant shall inspect the temporary ground protection.
4. The temporary ground protection shall remain in place until completion of the project and only removed following receipt of written permission from the LPA.

Option 2 - Vehicle access required

In place of the above items 1, 2 and 3 the use of a temporary metal track, such as DuraDeck® ground protection mats, MegaDeck™ or Rig Mats, they should be laid on a 150mm deep layer of woodchip or sharp sand to minimise compaction and prevent damage to surface roots.