



Site Specific Arboricultural Method Statement

Land at 21 Barnhill, Eastcote, HA5 2SY

A report to Kuljit Singh

Date: 28th December 2020

Report No: WAS 161 -AMS/2020

Table of Contents

Report Verification.....	3
Disclaimer.....	3
Validity of Data.....	3
Introduction and Scope of Method Statement.....	4
Abbreviations:	4
Arboricultural Method Statement	5
Pre-commencement of project.....	5
Excavation within RPA of Retained Trees	5
Tree Protection Barriers & Construction Exclusion Zone.....	5
Ground Protection of Existing Surfaces within Root Protection Area (RPA) of Nearby Trees.....	5
▪ Ground protection using 100mm depth of wood chip/bark mulch shall be laid as shown hatched on the TPP in addendum 2 following erection of TPF and prior to re-starting construction on site	5
Access Facilitation Pruning & Tree Surgery/Removal Works.....	6
Schedule of Tree Works (Trees surveyed on 4 th December 2020).....	6
Tree work to be carried out to the following standards and guidelines:.....	6
Site Access and Construction Working Area (CWA).....	6
Site Storage and Accommodation.....	6
Installation of Services	6
Arboricultural Supervision (AS)	7
Conclusion	7
References.....	8
Declaration	8
Addendum 1 – Tree Protection Informative	9
Protecting Root Zone of Trees (BS 5837:2012 section 6.2 Figs. 2 & 3):.....	9
The Root Protection Area (RPA).....	9
Key Points	9
Excavation within Root Protection Area of trees.....	10
Site Hoarding.....	10
Ground Protection System Specification for pedestrian access areas only:.....	10
Addendum 2 – Tree Protection Plan	11
Addendum 3 – Method Statement	15

Report Verification

This method statement has been undertaken in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".

Disclaimer

The contents of this report are the responsibility of Wassells Arboricultural Services Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Wassells Arboricultural Services Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

Validity of Data

The findings of this study are valid for a period of 12 months from the date of survey. If works have not commenced by this date, an updated site visit should be carried out by a suitably qualified and experienced arboriculturist to assess any changes to the trees and groups on site and to inform a review of the conclusions and recommendations made.

It should be noted that trees are dynamic living organisms that are subject to natural changes as they age or are influenced by changes in their environment. As such following any significant meteorological event or changes in the growing environment of the trees they should be re-assessed by a suitably qualified and experienced arboriculturist.

Introduction and Scope of Method Statement

This document has been produced to provide a method statement to ensure the protection of all retained trees that could potentially be affected by construction activity on the site and to discharge the following requirements of the Harrow Council PP

Reference: Planning Permission – 23547/APP/2020/3705 dated 30th November 2020

The scope of this report follows the recommendations and guidance described within **BS 5837: 2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*** which set out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures.

This AMS will also recommend any required tree works to enable access and also to mitigate potential damage from construction activity and for the future well-being of the trees concerned.

Abbreviations:

RPA = root protection area

CEZ = construction exclusion zone

CWA = construction working area (including materials storage)

AMS = arboricultural method statement

AS = Arboricultural Supervision

TPF = tree protection fencing/hoarding/barrier

Arboricultural Method Statement

Pre-commencement of project

- Construction work has already started on this project. Please refer to the updated site method statement in *addendum 3* below, produced for the most recent PP
-

Excavation within RPA of Retained Trees

Ref: Addendum 1

- Foundations for the outhouse have already been excavated and laid (strip) and the construction started up to nearly roof level
- The photographic evidence shown within the method statement would appear to substantiate the claim that no major roots were encountered during the excavation. However, this is not full proof evidence but reasonable to assume that no damage was done to the root system of the Oak tree T1

Tree Protection Barriers & Construction Exclusion Zone

Ref: Tree protection plan in addendum 2

- Tree protection fencing (TPF) is to be erected prior to re- starting on site
- Tree protection fencing shall be as per specification in addendum 2 below
- Notices as shown in addendum 2 below are to be erected on all tree protection panels as information for construction staff

Ground Protection of Existing Surfaces within Root Protection Area (RPA) of Nearby Trees

Ref: Addendum 1 and tree protection plan in addendum 2

- Ground protection using 100mm depth of wood chip/bark mulch shall be laid as shown hatched on the TPP in addendum 2 following erection of TPF and prior to re-starting construction on site
- Excavation within this area is not allowed.
- Ground protection can only be removed on completion of the project

Access Facilitation Pruning & Tree Surgery/Removal Works

Schedule of Tree Works (Trees surveyed on 4th December 2020)

Tree Number	Tree Species	Diameter Class mm	RPA radius metres	Height metres	Grading Category	Comments Condition	Tree work recommendations
T1	Oak	1400	15	20	A	Reasonable condition. Some minor die-back at top of crown Veteran tree. Growing in garden to rear of new build outhouse	None
T2	Oak	400	4.8	12	C	Reasonable condition. Ivy clad and growing next to side boundary in garden next door	None. Recent bad reduction of lower branches

Access facilitation pruning may be required to crown of trees on new terrace house side to enable scaffolding erection. This will require further application under TPO regs. If necessary.

Tree work to be carried out to the following standards and guidelines:

- BS 3998:2010 Recommendations for Tree Work
- Tree pruning cuts will be carried out using the 'Natural Target Pruning' technique as defined by: *BS 3998:2010 section 7.2.5 and Fig. 2 The Pruning of Trees, Shrubs and Conifers: George E. Brown & Tony Kirkham – 2nd edition revised & enlarged 2004 and Section 3.1.27 of The Arboricultural Association Specification for Tree Works June 2008.*
- Crown clean involves removal of dead, diseased & dying wood from tree crown, thinning of overcrowded crown, and removal of Ivy and all epicormic growth within crown including stem & basal epicormic growth.

Site Access and Construction Working Area (CWA)

- CWA is all areas of site outside of tree protection barriers and the CEZ

Site Storage and Accommodation

- Not within the CEZ
- Designated area to be agreed with AS if required

Installation of Services

- Arrangements for this element of the development of the site are unknown as at time of writing this AMS

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Arboricultural Supervision (AS)

- AS shall be required during work within and adjacent to the RPA of retained trees. It must be undertaken at regular intervals with a written record of the meetings maintained with suitable photographic record in support.
- These are typically as follows:
 1. Erection of tree protection fencing/barrier
 2. Installation of ground protection to retained trees whose RPA are affected by the CWA
 3. Start of Excavation/piling of foundations within the RPA of retained trees – NOT REQUIRED
 4. Tree pruning requirements to prevent crown damage from construction activity -NONE REQUIRED
 5. Installation of underground services within the RPA of retained trees
 6. Tree condition survey on completion of construction work

Conclusion

Provided the recommendations shown above and the methodology for protection of any retained trees are followed, there will not be an effect on the current or future condition of those trees that are retained as part of this scheme.

References

1. BS 5837:2012 Trees in Relation to Design, Demolition and Construction - Recommendations
2. BS3998:2010 Tree Work – Recommendations
3. NJUG Volume 4 Issue2 2007 – Guidelines for the planning, installation, and maintenance of utility apparatus in proximity to trees.
4. NHBC Standards – Section 4.2 Building Near Trees
5. British Geological Survey – London & the Thames Valley
6. Principles of Tree Hazard Assessment – Lonsdale 2001
7. Diagnosis of Ill Health in Trees – Stouts & Winter 2004
8. Design plans – Ravi Patel

Declaration

This AMS is written and checked by Richard Wassell of Wassells Arboricultural Services Ltd. and provided without prejudice as an objective and professional assessment of the trees and site conditions described.

Signed: *R.J. Wassell* Date: *28.12.MMXX*

Richard Wassell. Director

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Addendum 1 – Tree Protection Informative

Ref: BS 5837:2012 in Tables C.1 & D.1 of annex C & D

Protecting Root Zone of Trees (BS 5837:2012 section 6.2 Figs. 2 & 3):

The Root Protection Area (RPA)

This is the area surrounding a tree that is deemed to contain sufficient roots and rooting volume to maintain the trees viability in the future. The root system is typically concentrated in the uppermost 600 – 1200mm of the soil and is not necessarily symmetrical around the tree, being dependent on a number of factors such as water, nutrients, oxygen, soil penetrability and physical obstructions such as existing foundations, roads or changes in level (terracing).

The RPA is a design layout tool that is deemed to be a minimum area around a tree where the protection of roots and soil structure are treated as a priority. This area is envisaged as and portrayed with a circle around each tree as would be the case if it were an open grown with no physical restrictions. Where there appears to be restrictions to root growth then rooting may occur in areas outside of this typical RPA area. Where this is deemed to be likely then a “no-dig” root investigation trench can be carried out to determine actual depth and density of rooting.

Key Points

1. AVOID building works within the RPA if at all possible but if not then carefully consider the following: where the RPA is likely to be severely affected because of site design constraints then felling and planting replacement(s) trees in a more suitable location on the site will need to be considered.
2. Where possible do not use strip foundations within the RPA, if absolutely necessary consider using a trenching saw or excavate by hand to avoid ‘shatter damage’ to the root system.
3. Consider using piling techniques for foundations @ maximum 350 mm diameter with ground beams on or above the surface of the root zone.
4. Unless unavoidable, do not exceed entering the root zone by more than one fifth of RPA radius.
5. Do not trench tangentially across the root zone for footings and services unless it cannot be avoided.
6. Consider ‘no dig’ techniques for services installation, with radial service lines being preferable to tangential across the root zone. Where this is undertaken then boring must be carried out below 600mm deep.
7. Any hard surfacing, paths and roads need to have the same considerations for the RPA and as in the above points. Where possible paths and hard surfacing (patios etc.) need

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to be surface constructed (cellular) and semi-porous to allow water penetration and gaseous exchange into the root system of trees.

Excavation within Root Protection Area of trees

Where trees are to be retained then any proposed foundation, underground services work and hard surfacing such as roads/paths falling within the RPA of trees that are to be retained shall be kept as far away from tree stems as possible (SEE NOTE 1 ABOVE). Where any such works are necessary within the RPA there will be a requirement to dig carefully by hand and ensure any roots encountered of maximum 25mm in diameter shall be exposed and correctly pruned back by a competent Arborist. Where larger roots are encountered of above 25mm in diameter then advice from the Arboricultural Supervisor (AS) for the site must be sought prior to any work being undertaken.

Any roots exposed/ pruned back as part of the above operation shall NOT be left exposed to drying out. All roots exposed/pruned shall be either covered with damp Hessian sacking prior to backfill or backfilled/covered immediately with a suitable open and free draining compost/loam.

Site Hoarding

Site hoarding, where possible, shall be no closer than 1.5 metres away from the stem of retained trees and consist of 2400mm high x 1200mm wide x 20mm thick plywood sheets supported by minimum 100mm square posts and 100 x 50mm rails with posts at 2.5 metre centres.

Post holes for site hoarding that are required within the RPA of nearby trees shall be dug by hand and are to be a maximum of 300 x 300mm and 450mm deep

Posts to be supported in the ground with 1 bag of “PostCrete” per post or use of “Meta Posts” if applicable

Ground Protection System Specification for pedestrian access areas only:

- Level area of RPA concerned by blinding with sharp sand at maximum depth of 50mm
- Lay geo-textile membrane such as ‘Terram’ to cover area concerned and peg down on banked areas as required
- Cover geo-textile with maximum of 100mm MOT Type 1 sub-base – not compacted
- Retain MOT type 1 with edge restraint/terrace restraint using 30 x 100mm edging board pegged every 2 metres to prevent migration of the sub-base
- OR
- Use 20mm minimum thickness plywood sheets instead of MOT type 1 and ensure they are secured from moving

Other manufactured ground protection systems are available such as Eve Tracking, EcoGrid or similar and should be used as an alternative where machinery access is required.