



# Site Specific Arboricultural Method Statement

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Land at 8 Lindfield Gardens, London NW3 6PU

A report to Marc Lixenberg

Date: 7TH APRIL 2022

Report No: WAS173 -AMS/2021 REVA

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## 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 AMS are valid for a period of 18 months from the date of the statement. If works have not commenced by this date, an updated site visit and AMS may be required and should be carried out by a suitably qualified and experienced Arboriculturist to assess any changes to the site and trees.

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 condition requirements of the Camden Council PP

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

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## Arboricultural Method Statement

### Pre-commencement of project

- A pre-commencement site meeting is to be arranged by the site manager to ensure all tree protection measures are in place as described in the AMS and prior to the start of any demolition and/or construction works.
- Monitoring and reporting of AMS requirements shall be carried out as described in addendum 3 below.
- Cross-reference to the site Demolition and Construction Management Plan is essential to ensure tree protection is correctly and adequately managed.

### Excavation within RPA of Retained Trees

#### Ref: Addendum 1

- Care to be taken when excavating the existing terrace bank to form the new retaining wall for the lower garden area, where roots of T1 may be encountered.
- All roots encountered that are above 25mm in diameter shall be properly severed with a suitable pruning saw and removed to enable construction.

### Tree Protection Barriers & Construction Exclusion Zone

#### Ref: Tree protection plan in addendum 2

- Tree protection fencing (TPF) is to be erected prior to starting on site as part of the initial site start up and is to be retained until completion of the project. Where it is required to move TPF to enable access for agreed reasons, this shall be done under supervision from site AS prior to moving.
- Tree protection fencing shall be as per Type 2 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

There is no requirement for ground protection on this project

### **Access Facilitation Pruning & Tree Surgery/Removal Works**

- Any tree works required to enable demolition and construction works to start must be agreed at the pre-commencement site meeting.
- Prior agreed tree works such as removal and pruning shall be carried out prior to start on site.
- Where trees are protected by a TPO then permission shall be required for any unagreed additional tree works prior to start on site.

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

- BS 3998:2010 Recommendations for Tree Work

### **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 areas to be agreed with the AS as part of the pre-commencement site meeting, if potential to impact trees is considered to be likely.

### **Installation of Services**

- New service routes will be carefully considered using the AS below to advise on protection of nearby trees prior to commencement on site.

### **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.
- The AS must include a pre-construction commencement site visit, to be arranged by the Site Manager under instruction from Architects, and thereafter at specific events that affect the retained trees on site to enable sign-off by the AS.
- The monitoring and reporting of site supervision are described in addendum 3 below.

### **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 – Jo Cowen Architects
9. Foundation plans
10. Demolition and Construction Management Plan
11. Wassells Tree Survey Report – WAS 160/2020-REV A

## 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: *07.04.MMXXII*

**Richard Wassell. Director**

**CHort MCIHort MArborA NDArb (RFS) Kew Diploma NEBOSHlevel3**



## 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 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.

## **Addendum 2 – Tree Protection Plan**

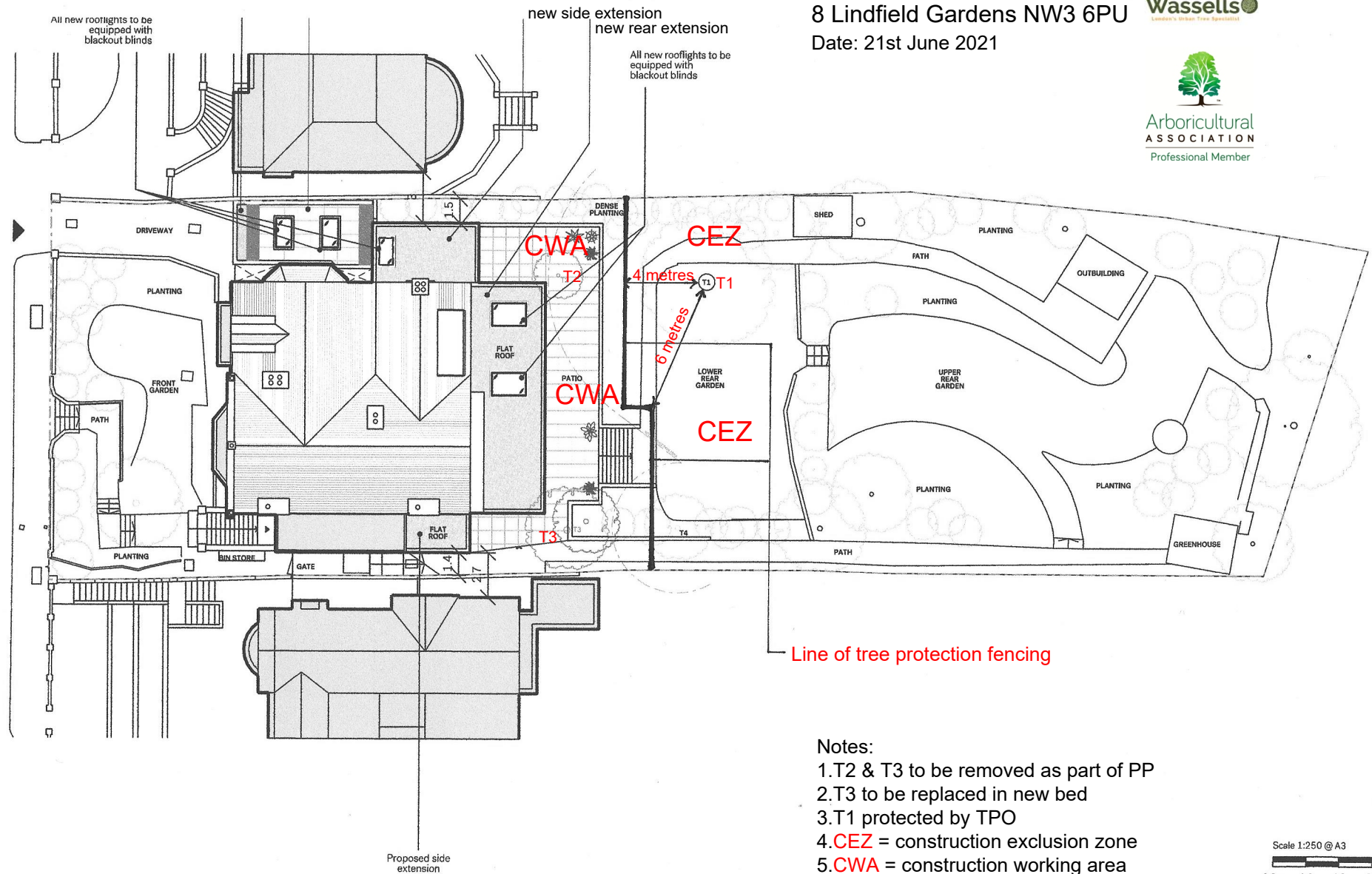
# Tree Protection Plan

## 8 Lindfield Gardens NW3 6PU

Date: 21st June 2021

**Wassells**  
Landscape & Urban Tree Specialists

**Arboricultural  
ASSOCIATION**  
Professional Member



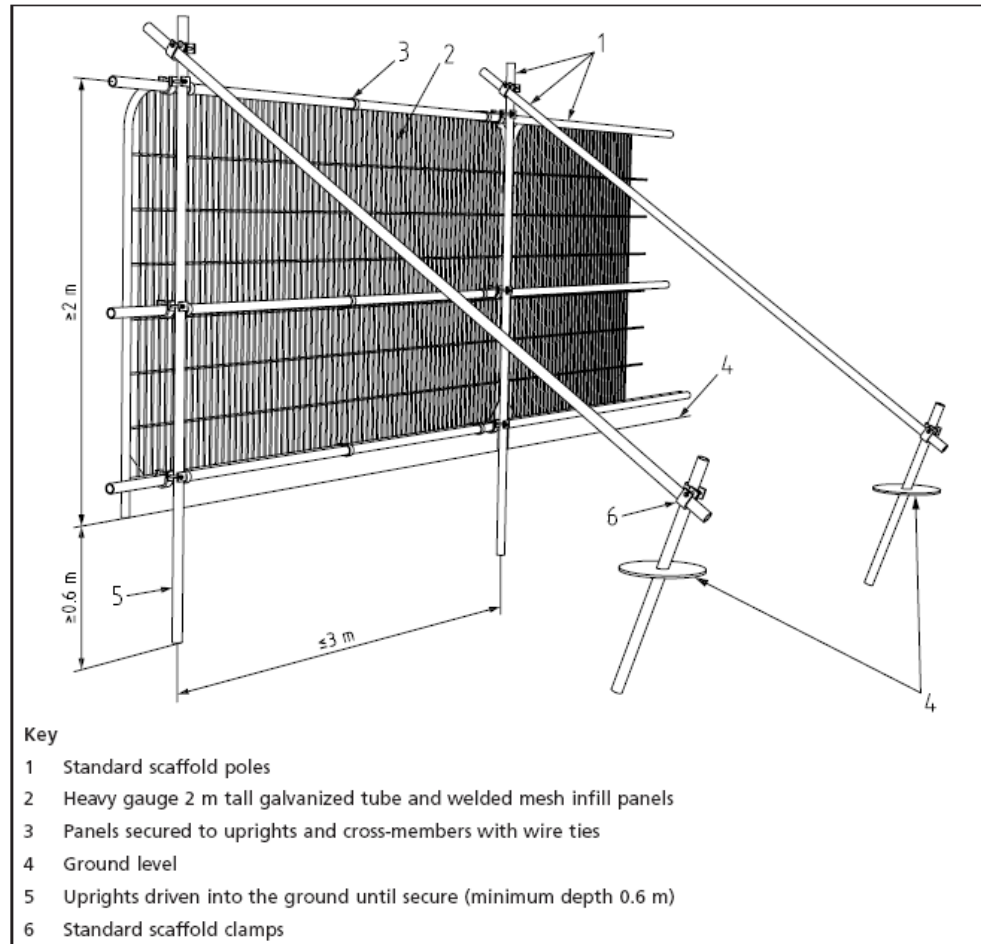
### Notes:

1. T2 & T3 to be removed as part of PP
2. T3 to be replaced in new bed
3. T1 protected by TPO
4. **CEZ** = construction exclusion zone
5. **CWA** = construction working area
6. **MINOR ALTERATION TO PLAN AS AGREED WHICH DOES NOT AFFECT TREE PROTECTION**  
REF: CHARLES TASHIMA  
ARCHITECTURE DATED 4TH  
JANUARY 2022

Scale 1:250 @ A3  
0.0m 2.0 4.0 6.0 8.0 10.0m

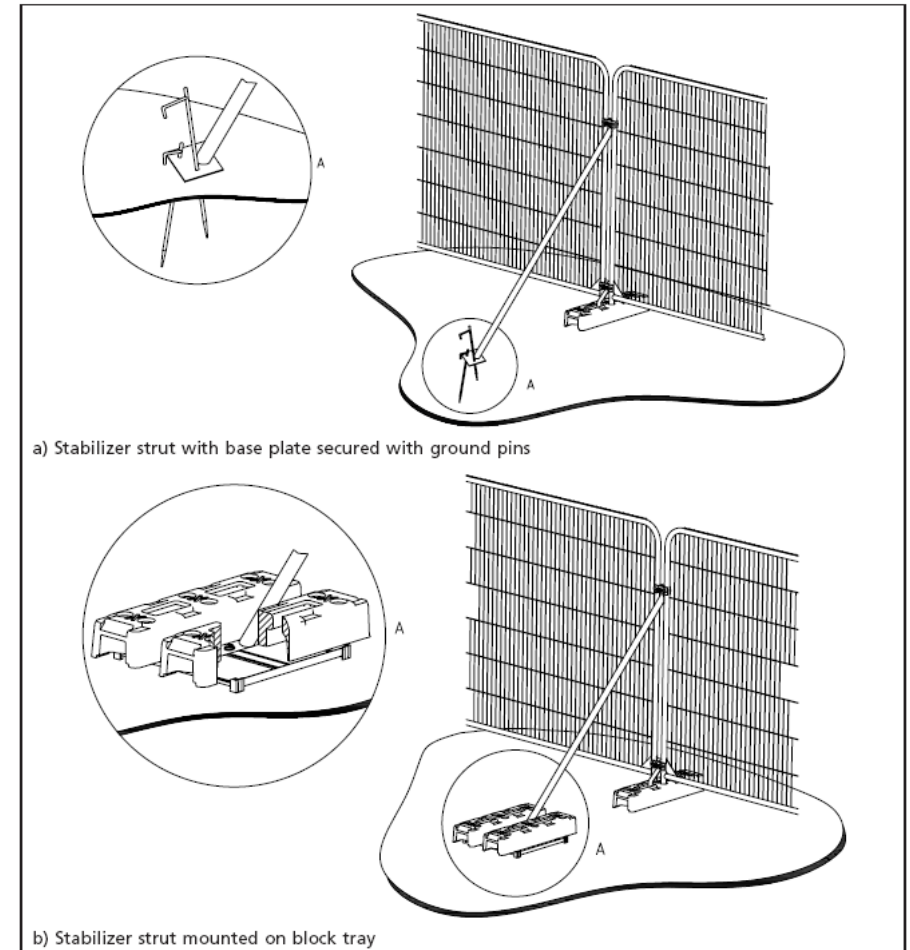
## BS5837:2012: FENCING SPECIFICATIONS

Figure 2 Default specification for protective barrier



TYPE 1 - using scaffolding and welded mesh

Figure 3 Examples of above-ground stabilizing systems



TYPE 2 - using standard Heras fencing panels

# CONSTRUCTION EXCLUSION ZONE NO ACCESS

**\*\*PLEASE REPORT IMMEDIATELY ANY DAMAGE TO TREES OR FENCING TO THE SITE MANAGER\*\***

## Addendum 3 – Arboricultural site supervision and monitoring

## SITE MONITORING VISITS

Supervision Visit No:	Details	Lead in Time Required	Action
<b>Visit 1: Pre-Development Site Inspection</b>	<ul style="list-style-type: none"> <li>To include Site Agent briefings prior to demolition &amp;/or construction phase.</li> <li>To confirm position of protective fencing and that it has been erected in accordance with AMS</li> <li>To check any pre-demolition/construction ground protection is in place.</li> <li>To check any tree works have been undertaken in accordance with this AMS</li> <li>Determine if further tree work is required and seek required permission if necessary.</li> <li>To check site facilities/access are in accordance with the AMS</li> </ul>	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days of site supervision visit
<b>Visit 2: Installation of foundations/piling within RPA</b>	<ul style="list-style-type: none"> <li>Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification.</li> <li>Date to be confirmed following formal project planning.</li> <li>2 weeks prior notice required.</li> </ul>	Minimum 2 weeks	As per Visit 1
<b>Visit 3: Resurfacing operations within RPA</b>	<ul style="list-style-type: none"> <li>Attend resurfacing operations within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification.</li> <li>Date to be confirmed following formal project planning.</li> <li>2 weeks prior notice required.</li> </ul>	Minimum 2 weeks	As per Visit 1
<b>Ongoing Monitoring Visits</b>	<ul style="list-style-type: none"> <li>Periodically during 12 months (or longer) of entire project and <u>prior to construction phase</u>.</li> <li>Visits will be based on intensity of site operations, but at a minimum of monthly visits.</li> <li>Attend site at least once per month to confirm protective measures are still in place / can be removed at appointed times. Ensure attendance is timed for any other key elements of proposed (and any other unplanned) incursions into the protection areas.</li> <li><u>Pre-start landscape meeting</u> with main contractor to confirm ongoing tree protection measures.</li> </ul>	TBC as project develops	As per Visit 1
<b>Final Site Visit - Completion of construction phase supervision visit</b>	After it has been confirmed that the construction phase is complete, allow removal of temporary protective fencing and ground protection. Specify any remedial work if necessary.	Minimum 2 weeks	As per Visit 1 and provide signed arboricultural checklist

## Site Monitoring Report Sheet

<b>Client:</b>		<b>Planning Ref:</b>	
<b>Local Authority:</b>		<b>Date:</b>	
Site Address:			
Proposal:			
<b>Visit Checklist</b>	<b>Y/N</b>		<b>Y/N</b>
Tree protection barrier (TPB) in place		TPB as per approved	
Ground protection (GP) in place		GP as per approved	
TPB / GP breached		Trees damaged	
Site Agent briefed by Wassells			
Wassells briefed by Site Agent			
LPA informed			
Remedial action required			
<b>Comments</b>			
<b>Recommendations</b>			
<b>Outcome</b>			
1			
2			
3			
4			



### Arboricultural Supervision Sign off Checklist

Tree No (s)	Project Phase	Task	Date Completed	Signed (Project arboriculturist)	Signed (Site Manager)
	<b>Pre-commencement</b>	Pre-commencement site meeting to include site manager briefing )			
	<b>Pre-commencement</b>	Confirm the location and specification of the protective measures is in accordance with AMS & Tree Protection Plan (TPP)			
	<b>Pre-commencement</b>	Confirm any tree works have been undertaken in accordance with this AMS and determine if further tree work is required			
	<b>Pre-commencement</b>	Seek required permission for further tree works if necessary.			
	<b>Installation of any new services</b>	Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with NJUG provisions or other specification.			
	<b>Demolition</b>	Demolition of hard surfaces/ structures within RPA. Confirm position of any additional temporary ground protection and that temporary ground protection is in accordance with AMS.			
	<b>Completion of Demolition</b>	Sign off of the demolition phase			
	<b>Construction</b>	Supervised manual excavation of foundations			
	<b>Construction</b>	Installation of 'No Dig' hard surfacing			
	<b>Construction</b>	Additional excavations (if required)			
	<b>Completion of Construction</b>	Completion of construction			
	<b>Post Construction</b>	Removal of machinery and materials from site			
	<b>Post Construction</b>	Dismantle & removal of protective measures			
	<b>Landscaping</b>	Completion of Landscaping			
	<b>Project Completion</b>	Sign off from project arboriculturist			