

# **Arboricultural Method Statement**

Site: 12a Church Row, NW3 6UU

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**Removal of Tree Protection Barriers** 

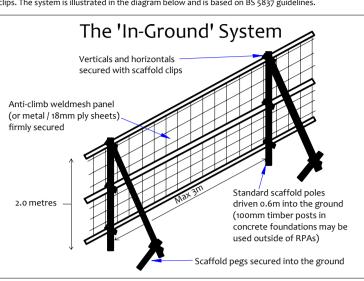


## **Tree Protection Barriers**

The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They must be appropriate to the nature and proximity of activity within the site. The barriers must be erected prior to the commencement of all activity including demolition, soil stripping and delivery of materials and demolition (except where existing Ground Protection Measures structures require demolition to enable the barriers to be installed). Barrier systems are specified

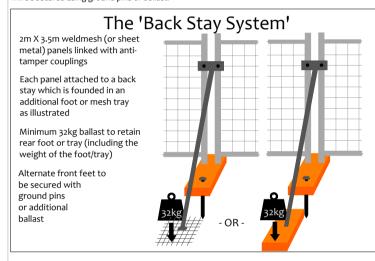
The In-Ground System This system will be installed where indicated by a solid purple line on the Tree Protection Plan. It will be robust enough to withstand occasional knocks by plant machinery and, once installed, will remain of construction traffic. Otherwise, it will be reinforced or replaced with adequate ground protection

Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles Unless specified otherwise, ground protection will consist of 24mm OSB boards laid at double plywood boards) are secured to this scaffold framework using sturdy clips e.g. standard scaffold adding a 100mm of sand or woodchip, wherever vehicular access is proposed. Where only pede clips. The system is illustrated in the diagram below and is based on BS 5837 guidelines.



The Back-Stay System — OR — OR This system will be installed where indicated by a dashed purple line on the Tree Protection Plan. It is more practical over existing hard surfaces or where the fencing needs to be moved to enable permitted activities within a Restricted Activity Zone. This system is able to withstand occasional knocks by machinery and must not be relocated except with the consent of the site manager and the

approval of the local authority. Within this system, weldmesh fencing panels (minimum height 2m) are affixed into rubber or concrete feet and clipped together with anti-tamper couplers. Two couplers should be used, spaced at least 1m apart. Alternate panels will be attached to a diagonal back stay connected to an additional foot or baseplate secured with ground pins or additional ballast. Where ground pins are not used, the total weight of the foot/plate plus ballast must total no less than 32kg. Where it is not possible to install diagonal struts (such as very close to a hedge) then the front feet will be secured using ground pins or ballast



Suitable weather-proof notices are to be displayed to identify tree protection zones. They must state

**Restrictions in Specific Zones** 

below and are to be installed according to the legend on the Tree Protection Plan.

Removal of protective fencing or ground protection measures will only be done after all major work is complete and their removal has been approved by the appointed arborist.

Within Restricted Activity Zones, soils containing roots may be subject to compaction due to general construction activity (including pedestrian activity and use of plant machinery). In order to minimise compaction, it is proposed to ensure that a suitable load-spreading surface is in place at all times. Any existing hard surfacing may be retained where engineers consider it adequate to spread the load

and diagonal bracing struts. Weldmesh panels (or similar – e.g. Heras type fencing panels, or 18mm+ thickness and screwed together to prevent slippage. The ground will be made even by raking, and by traffic will occur, boards or planks may be laid directly onto the ground or supported by a scaffold framework. The scaffold will be founded on poles driven into the ground and/or onto blocks (to raise the scaffold) with additional couplings to make the framework secure.

Where engineers consider OSB boards to be inadequate (e.g. for large plant machinery where the tracks may chew up the timber) sturdier ground protection measures will be installed such as road plates, or 100mm of 7–40mm angular gravel installed in 3D cellular confinement system (e.g.

If a piling mat is required, specifications will be agreed between engineers and the project arborist. The ground protection measures will be installed and approved before commencement of demolition and construction activity and before the arrival of plant machinery or materials. They shall remain in place until all heavy construction activity is complete or until they are due to be replaced

## **Construction Exclusion Zones**

Within Construction Exclusion Zones the following restrictions apply:

- Tree Protection Barriers will be erected and maintained throughout the entire project
- as indicated on the Tree Protection Plan and under the header -Tree Protection These will remain in place at all times except when authorised landscaping works are being undertaken. At such times, adequate ground protection measures will be
- Furthermore, the project arborist will be consulted prior to any works being No construction activity or excavation will occur unless agreed otherwise by the project arborist and local authority.

nstalled, and excavation shall be limited to that required for new planting.

- No vehicles or plant machinery will be driven or parked. No tree works, other than those specified on this document will be undertaken.
- No alterations of ground levels or conditions will occur. No chemicals or cement washings will be permitted.
- No temporary structures will be installed.
- No fires will be permitted • All hazardous materials (including non-essential cement products) will be forbidden • Removal of hard surfaces, structures or turf will be done using hand operated tools only and supervised by the project arborist.

## **Tree Works Specification**

The following table specifies the tree works which will be required prior to the commencement of

Tree Reference	Action Required	Notes
T3 – T5, T8 – T10, T13 – T16, the 3.5m tall cypress and the various shrubs	Remove.	N/A
T17	Prune canopy back to the boundary.	Branches to be pruned back to a secondary branch junction or the branc collar wherever possible.

the purpose of the fencing and that it will not be moved, or traversed, other than by authorised Trees to be removed are indicated by a thin, dashed line.

## General Restrictions - Throughout the Site

**Restricted Activity Zone A** construction. The following restrictions shall apply:

> No vehicles or plant machinery will park or operate unless a suitable load spreading | Demolition permanent hard surfacing is installed. Any pedestrian activity (other than very occasional) will also require a suitable load spreading surface.

· Removal of existing structures such as walls, steps and hard surfaces (where from outside the Restricted Activity Zone and carefully marshalled by the project If any existing hard surfacing is removed or replaced, excavation shall be limited to

the removal of the existing surface and the associated sub-base, and the new surface shall be permeable. • No further excavation will occur in this zone without consulting the project arborist and obtaining approval from the local authority. Existing ground levels will be retained undisturbed or raised by no more than 150mm. Ground levels may only be raised using granular topsoil (not rich in clay) or where

new surfacing is proposed. No raising of ground levels whatsoever will occur within o.5m of any tree stem. · No new permanent or temporary structures will be erected other than those shown on the planning application documents unless approved by the local authority. Underground services will not be installed in this area without prior consultation with the project arborist and a methodology agreed and approved by the local authority. possible and protected with damp sacking during times that they are unearthed. Any roots in excess of 10mm that need to be severed will be pruned with secateurs. • Storage of materials and spoil will be avoided unless it has been agreed with the **Fires** 

 No fires will be permitted. When installing the new pedestrian surface over the **RPA of T11**, the following restrictions will apply:

> No other building works will be permitted • Prior to the new surface being installed, no vehicles or plant machinery will drive, specified under the heading Ground Protection Measures. Excavation shall be limited to the removal of any existing vegetation and loose

 New surface to be highly porous. Sub-base to be porous (MOT type 3)

· Only hand tools will be used to achieve this

### **Restricted Activity Zone B** In this zone foundations are to be installed. In order to minimise the impact on roots it is proposed materials (including non-essential cement products) will be forbidden. to utilise the <u>Hand-Dig Method</u>. The following restrictions will apply:

Hand tools will be used during the excavation to a depth of 600mm. Below this depth

• The excavation will not extend more than 250mm beyond the footprint of the • If roots in excess of 25mm diameter are encountered close to the edge of the proposed building walls in the direction of the trees. excavation, they will be retained wherever possible and protected with damp sacking All other chemicals hazardous to tree health, including petrol and diesel, will be stored in suitable

during times that they are unearthed. Any roots that need to be severed will be containers as specified by current COSHH Regulations, and kept away from Root Protection Areas. the foundations will bridge over them. The exposed roots will be adequately Underground Services

• Any shuttering structure will be designed to prevent any ingress of concrete to within at least 50mm of any root surface. It will be removed or retained after casting as determined best by the project arborist. Enough room will be left surrounding

Site Hoarding each root to enable future growth (at least 30mm gap containing loose soil or

edge of the excavation, they will be retained wherever possible and protected with

• Ground levels will be maintained as existing. damp sacking during times that they are unearthed. Any roots that need to be Post holes will not exceed 300mm x 300mm

## Restricted Activity Zone C

In this zone it is proposed to lower ground levels. To minimise the impact on roots, the following

Roots in excess of 10mm will be pruned with sharp secateurs.

 Excavation will be overseen by the project arborist. Hand tools will be used during the excavation.

The finished pedestrian surface shall be porous.

• Exposed roots over 25mm diameter shall be retained and protected with damp hessian if practicable, else pruned by the arborist. No excavation shall occur beneath the depth of the sub-base of the adjacent

**Preparatory Works** 

No demolition, removal of surfaces, or soil stripping will commence until the protective fencing and

specified under the heading Ground Protection Measures. This will remain in place | Where demolition is proposed within Root Protection Areas, the following restrictions will apply: throughout the entire demolition and construction phase or until any new 

• Demolition will not commence until the protective barriers (including ground protection measures) are installed to the satisfaction of the local authority. (Where demolition is necessary to enable the installation of tree protection barriers, this will be done in a sympathetic manner as set out below, and the tree protection barriers will be installed as soon as demolition is

> Mechanical excavators will not operate within the Restricted Activity Zone unless from on a suitable load spreading surface. Where demolition is required beneath tree canopies, the mechanical excavator will be carefully

marshalled to ensure overhanging branches are not damaged. Alternatively, hand tools may be No significant masonry or timber will be permitted to fall outside of buildings towards adjacent Excessive dust levels alighting on trees will be hosed off using a fine compression spray at the

end of each day. Foundations within (or immediately adjacent to) Root Protection Areas will be removed by excavating on the inside of the foundation first and pulling away from the trees. No excavation will take place between the foundation and the tree rooting area.

 Surfaces will be lifted using hand tools or a mechanical excavator operating from outside the Restricted Activity Zone and carefully marshalled. Evert effort will be made to leave the soils immediately beneath the surface undisturbed. • If roots are encountered in excess of 25mm diameter, they will be retained wherever | • No excavation will occur beneath the existing foundations unless done so using hand tools and

project arborist that the ground protection measures are adequate to ensure no soil No fires will be permitted beneath any tree canopy or within 5m of any tree stem, branch or foliage. compaction or contamination occurs. All hazardous materials (including non-essential No fires will be permitted within any Construction Exclusion Zone or Restricted Activity Zone. No fires will be permitted in the vicinity of any exposed tree roots.

Canopy Protection In order to protect tree canopies the following restrictions will apply throughout the site:

• No machinery in excess of 2m will pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged operate or park until unless ground protection measures are implemented as use of overhead cranes. If materials are to be installed or delivered close to tree canopies (but not beneath them) and a

crane is required, they will be carefully marshalled in order to ensure that branches are not

Storage of Spoil and Materials

Storage of materials and spoil will be avoided in any Construction Exclusion Zones and Restricted Activity Zones unless it has been agreed with the project arborist that the ground protection measures are adequate to ensure no soil compaction or contamination occurs. All hazardous

**Hazardous Materials** 

Any mixing of cement based materials will take place outside the Construction Exclusion Zones and Restricted Activity Zones. Where cement is to be mixed at considerable distances from trees and water run-off cannot enter Root Protection Areas, then no further special measures are required. Otherwise, provision will be made to ensure that the mixing area is contained so that no water run-

shuttered off using timber and a suitable protective packaging material such as damp No underground services (including soak-aways) will be located in any part of the Construction Exclusion Zones or Restricted Activity Zones unless done so in a manner detailed in a specific Method Statement and approved by the local authority.

If site hoarding shall be installed over the Root Protection Area of any tree, the following restrictions

No post hole will be excavated within 1.5m of any tree stem.

· Post holes will be excavated using hand tools or by a post-hole auger attached to plant Roots in excess of 25mm will be retained wherever possib

Pruning will be minimal and only undertaken where absolutely necessary to facilitate the site hoarding. It will be undertaken by a reputable tree surgeon working to BS 3998 (2010). Site hoarding may be installed in place of the specified tree protection measures subject to the

approval of the local authority with regard to its location and specification.

Cabins will be located outside of Construction Exclusion Zones and Restricted Activity Zones unless agreed otherwise by the project arborist. Where this is being considered, the project arborist will be consulted, and specific tree protection measures agreed. The following general restrictions will All services to and from site cabins will be installed above ground through any Root Protection

No excavation will occur within Root Protection Areas to enable cabins to be installed.

• The cabins will be founded on a suitable load spreading surface.

Timing of Operations Phase Order Activity Planning conditions relating to trees to be identified and discussed with the Project Arborist and Site Manager. All specified tree removal and pruning to be undertaken (see Header -Tree Works Schedule). Install the tree protection barriers (fencing and ground protection boards - see Headers -Tree Protection Barriers and Ground Construction Pre-Commencement site meeting: Tree protection barriers inspected. Additional protection measures to be agreed. Variances to be agreed. Location of underground services to be agreed. Extents of excavation to be agreed. Scaffold restrictions to be agreed. Scope of future inspections / monitoring to be agreed. Arboricultural Method Statement to be revised and approved (if necessary). Protection measures confirmed acceptable by the Local Authority Demolish existing structures and remove existing surfaces where applicable. Install new buildings, hard surfaces and services taking into account restricted activities as specified in this Arboricultural Construction Site meeting with Project Arborist. Landscaping restrictions to be agreed. Condition of retained trees to be assessed and mitigation agreed. Ground conditions to be assessed and ground remediation to be agreed. Remove protective barriers (fencing and ground protection measures as applicable). Construction Undertake restricted landscaping operations within Root Protection Areas, including (where applicable) boundary

treatments, pedestrian surfaces, decking and any proposed tree planting.

## Personnel and Accountability

This table should be completed at the Pre-Start Meeting or earlier

Position	Name	Contact Phone & email	Roles
Project Manager	Insert Details	Insert Details	Liaising with site manager & project arborist regarding any potential issues relating to trees (including pre-start clarification of the Arboricultural Method Statement).  Scheduling of meetings, excavations and inspections (including project arborist and local authority tree officer where applicable).  Overseeing this monitoring schedule.  Instructing the project arborist and arranging access.  Liaising with local authority regarding discharge of planning conditions and variances to the Arboricultural Method Statement.  Reporting to the local authority following site inspections and any variation or incidents.
Site Manager	Insert Details	Insert Details	Day to day monitoring of tree protection measures. Induction of all contractors. Reporting to the Project Manager and the Appointed Arborist of any incidents or potential variations to the agreed tree protection measures.
Project Arborist	Crown Tree Consultancy	08000 14 13 30 1 0203 797 7449 S Info@crowntrees.co.uk	Liaising with LPA Tree Officer over technical arboricultural matters.  Upon instruction the arborist shall inspect the tree protection barriers including ground protection measures and produce a short report for the project manager to submit.  Upon instruction the arborist shall attend any specified site visits and inspections and produce a short report for the project manager to submit.
Local Authority	London Borough of Camden	Rav Curry Nick Bell 0207 974 3770 Rav.Curry@camden.gov.uk Nick.Bell@camden.gov.uk	Approval of the Arboricultural Method Statement and site monitoring reports.  Liaising with the appointed arborist on all technical arboricultural matters.  Liaising with the Project Manager to agree suitability of tree protection measures and any variations.  Enforcement.  Discharge of planning conditions relating to trees.
Additional Contact	Insert Details	Insert Details	Insert Details

## **Site Monitoring Schedule**

Inspection	Site Attendees	Comments
Pre- Start Desk-top To occur prior to any works taking place on the site.	N/A.	Project Manager and Site Manager to study this Method Statement & contact the Project Arborist to clarify all protection measures.
Pre-Start Meeting After tree works completed & tree protection barriers / ground protection measures installed and prior to any other activity, inc. demolition & soil stripping.	Project Manager, Site Manager, Project Arborist, relevant contractors. Tree Officer invited.	Tree protection fencing locations & specification checked. Ground protection measures checked. Contractors to be inducted to all relevant aspects of the Arboricultural Method Statement. Responsibilities checked and acknowledged. Adherence to the Arboricultural Method Statement to be discussed and agreed. Report on findings to be provided by the arborist and sent to the local authority tree officer by the project manager.
Monthly Inspection and Reporting To occur once per calendar month throughout the entirety of the project until the local authority agree that tree protection measures may be removed.	Site Manager and Project Arborist.	Tree protection fencing locations & specification checked.  Ground protection measures checked.  Past month, present and future month – activities and adherence to Arboricultural Method Statement discussed and checked.  Report on findings to be provided by the Project Arborist and sent to the local authority by the Project Manager.
Overseeing Installation of foundations in Restricted Activity Zone B.  All excavation to be overseen.	Site Manager and Project Arborist.	Two week's notice to be given prior to commencement. Excavation to be as specified in this Method Statement. Roots to be retained or pruned as specified in this Method Statement. Activities to be recorded and photographed. Mitigation measures to be employed specified by the project arborist.
Overseeing Excavation in Restricted Activity Zone C. All excavation to be overseen.	Site Manager and Project Arborist.	Two week's notice to be given prior to commencement.  Excavation to be as specified in this Method Statement.  Roots to be retained or pruned as specified in this Method Statement.  Activities to be recorded and photographed.  Mitigation measures to be employed specified by the project arborist.
Post-Construction Meeting Post external construction activity but prior to removal of fencing & landscaping operations.	Site Manager, Project Arborist. Tree Officer invited.	Retained trees inspected. Ground conditions assessed and mitigation measures agreed where appropriate. Further landscaping operations and restrictions to be agreed.





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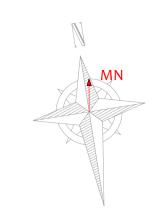
BS 5837 Root Protection Area (radius = 12xstem diameter Root Protection Area needing amendment due to site conditions, e.g. presence of exising road or building. Root Protection Area having been amended to account for for site conditions

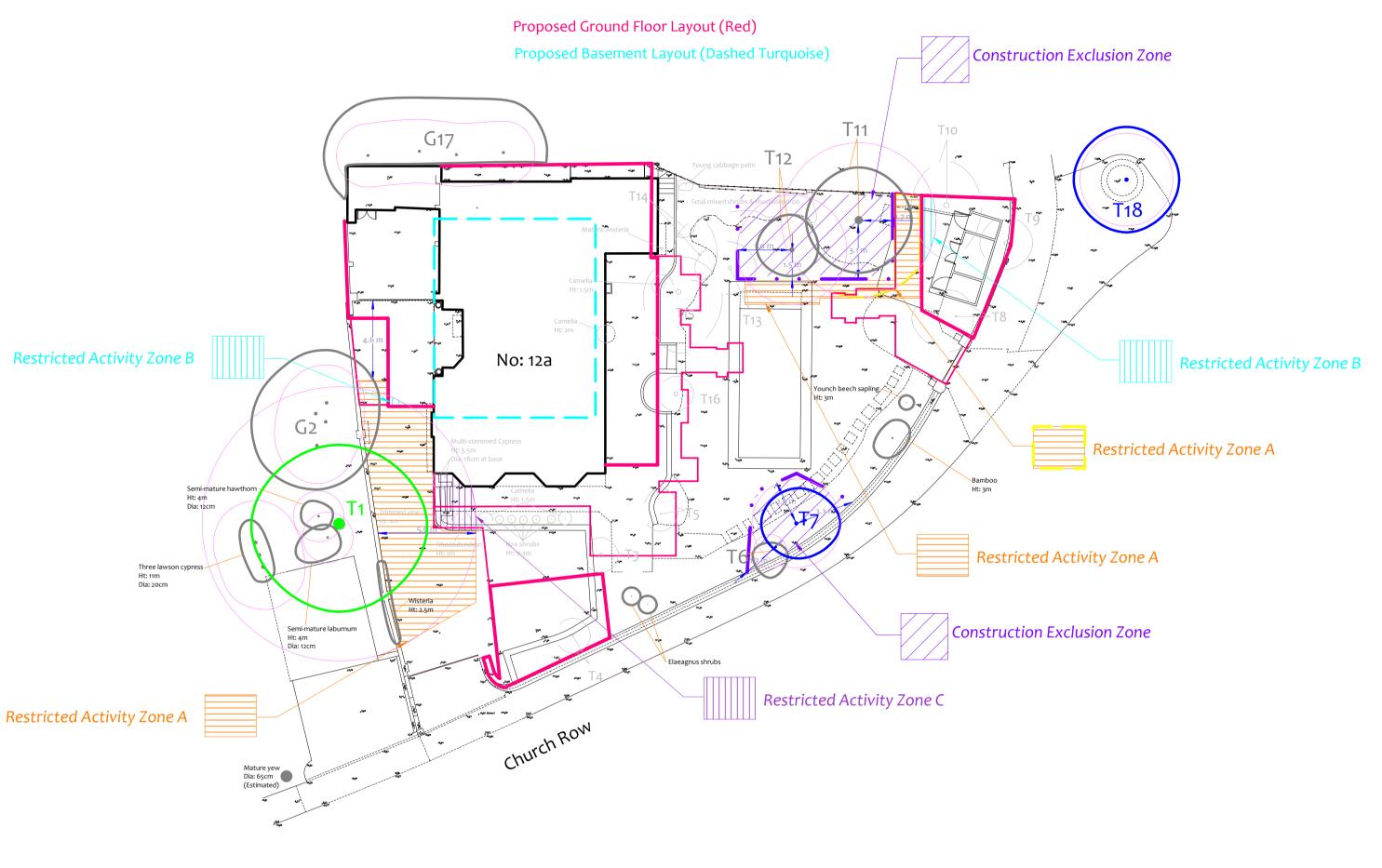
G2 = Group No 2 H3 = Hedge No 3

Category A tree Category B tree Category C tree Category U tree

Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with **Tree Retention Categories** ellent form. Retention of these trees is highly desirable. Usually maturing trees, or younger trees with good form. Retense trees is desirable though less than Category A trees rkable trees of low quality and merit. Individual specimen:

Orawing No: CCL 10999 Tree Protection Plan (Existing Layout with Proposals Overlaid) 12a Church Row, Hampstead Trees unsuitable for retention due to their very poor condition Paper Size: A1





### **Tree Data Schedule Tree Data Schedule**

