



Arboricultural Method Statement

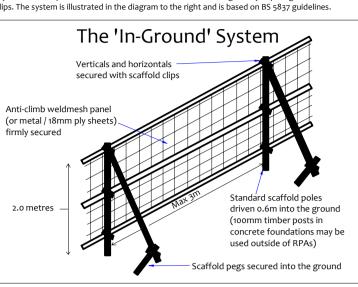
Site: Barnes Hospital, South Worple Way, SW14 8SU Date: 08/03/2022 | Revision: 2 | CCL ref No: 10770

Tree Protection Barriers

The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They should be appropriate to the nature and proximity of activity within the site. The barriers should 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 below and should be installed according to the legend on the Tree Protection Plan.

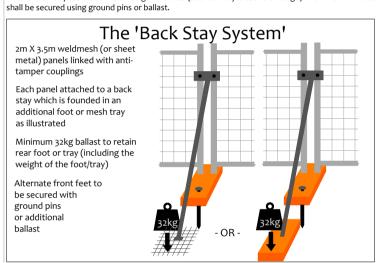
This system may be installed where indicated by a solid purple line on the Tree Protection Plan. It should be robust enough to withstand occasional knocks by plant machinery and, once installed, of construction traffic. Otherwise it shall be reinforced or replaced with adequate ground protection Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles Unless specified otherwise, ground protection shall consist of 24mm OSB boards laid at double

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 shall first be made even by raking, plywood boards) are secured to this scaffold framework using sturdy clips e.g. standard scaffold or by adding a few centimetres of sand or woodchip. Where only pedestrian traffic will occur boards or by adding a few centimetres of sand or woodchip. clips. The system is illustrated in the diagram to the right and is based on BS 5837 guidelines.



The Back-Stay System —— This system may be installed where indicated by a solid or 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 should be able to withstand occasional knocks by machinery and should 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 should 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 should total not less than 32kg. Where it is not possible to install diagonal struts (such as very close to a hedge) then the front feet | Tree Works Specification



Suitable weather-proof notices should be displayed to identify tree protection zones. They should state the purpose of the fencing and that it should not be moved, or traversed, other than by

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Removal of Tree Protection Barriers

Client: Star Land Realty UK Ltd

Removal of protective fencing or ground protection measures shall be done after all major construction 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

or planks may be supported by a scaffold framework. The scaffold may be founded on poles driven into the ground and/or onto blocks (to raise the scaffold) with additional couplings to make the

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, engineer's specifications should be referred to.

The ground protection measures shall 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 shall apply:

- Tree Protection Barriers shall be erected and maintained throughout the entire project as indicated on the Tree Protection Plan and under the header -Tree Protection Barriers.
- These shall remain in place at all times except when authorised pedestrian paving and landscaping works are being undertaken. At such times, adequate ground protection measures shall be installed, and excavation shall be limited to that required for installing the new surfaces. The project arborist shall be consulted prior
- to any works being undertaken in these zones. No other construction activity or excavation shall occur unless agreed otherwise by
- the project arborist and local authority. No vehicles or plant machinery shall be driven or parked.
- No tree works, other than those specified on this document shall be undertaken. No alterations of ground levels or conditions shall occur.
- No chemicals or cement washings permitted. • No temporary structures shall be installed.
- No fires shall be permitted. All hazardous materials (including non-essential cement products) shall be forbidden

• Removal of hard surfaces, structures or turf shall be done using hand operated tools

only and supervised by the project arborist.

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

construction activity.				
Tree Reference	Action Required	Notes		
T1, T2, T3, T12, T12 and 2m tall Stag's horn Sumach	Remove.	Stumps of trees within the RPAs of retained trees shall be removed with a stump grinder NOT a mechanical excavator.		
Т6	Reduce overall canopy by a maximum of 4m.	Branches to be pruned to a suitable pruning point.		
Т8	Crown lift to a height of 5m to provide suitable construction vehicle access.	Branches to be pruned back to a secondary branch junction or the branch collar wherever possible. Pruning to be kept to a minimum to achieve the desired clearance of 5m.		
T7 and T22	Prune back foliage growing towards the closest building to create a clearance of 2.5m.	Branches to be pruned back to a secondary branch junction or the branch collar wherever possible.		

Restrictions in Specific Zones

Restricted Activity Zone A

Within this zone trees roots are likely to be present where access will be required to facilitate No demolition, removal of surfaces, or soil stripping shall commence until the protective fencing and construction. The following restrictions shall apply:

No vehicles or plant machinery snail park or operate unless a suitable local spreading surface is in place. The load spreading surface shall be installed and/or maintained as specified under the heading **Ground Protection Measures**. This shall remain in place throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition and construction phase or until any new throughout the entire demolition a permanent hard surfacing is installed. Any pedestrian activity other than very occasional shall also require a suitable load spreading surface. • Removal of existing structures such as, walls, steps and hard surfaces (where

• No excavation shall occur beneath any existing hard surfacing and its sub-base or | • If materials require installation or delivery beneath tree canopies, this shall be done without the beneath the foundations of any structure such as wall, steps or paving. a No-Dig construction method is to be adopted. A permeable surface and granular substrate shall be utilised to enable passage of oxygen and water to the soils

peneath and a 3-dimensional cellular confinement system shall be incorporated into the sub-base to improve its load bearing capacity • Where **new pedestrian surfaces** are proposed, a No-Dig construction method is to be

Storage of materials and spoil shall be avoided in any Construction Exclusion Zones and Restricted

and obtaining approval from the local authority. • Existing ground levels shall be retained undisturbed or raised by no more than Hazardous Materials Existing ground levels shall be recamed undistance of the state of the where new surfacing is proposed.

on the planning application documents unless approved by the local authority. Underground services shall not be installed in this area without prior consultation with the project arborist and a mathematical project arborist arborist arborist and a mathematical project arborist arborist and a mathematical project arborist arborist arborist arborist arborist arborist arborist arborist and a mathematical project arborist arbor Underground services shall not be installed in this area without prior consultation with the project arborist and a methodology agreed and approved by the local authority.

 If roots are encountered in excess of 25mm diameter, they shall be retained distances from trees and water wherever possible and protected with damp sacking during times that they are unearthed. Any roots in excess of 10mm that need to be severed shall be pruned with secateurs. Storage of materials and spoil shall be avoided 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 materials (including non-essential compaction or contamination occurs. All hazardous materials (including non-essential that no water run-off enters cement products) shall be forbidden.

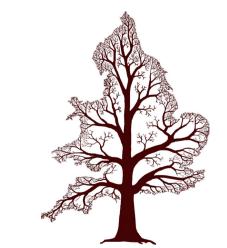
Restricted Activity Zone B

No fires shall be permitted.

Within this zone, it is proposed to excavate for the basement. Either contiguous piling (or sheet piling) shall be installed along the edge of the basement, or an alternative method shall be adopted which does not disturb soils beyond the footprint of the basement (e.g. pinning). A typical method of pinning would be to excavate to a specified depth (e.g. im), install shuttering, and then cast the concrete basement walls. Then to excavate short sections beneath the wall and cast deeper concrete. In this manner, excavation may continue to any specified depth without disturbing soils have determined to the basement walls. Then to excavate short sections beneath the wall and cast deeper concrete. In this manner, excavation may continue to any specified depth without disturbing soils 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. piling) shall be installed along the edge of the basement, or an alternative method shall be adopted

The specific method adopted will vary between contractors and should be confirmed with the local Site Hoarding

- No excavation or ground disturbance shall occur beyond the footprint of the basement.
 Post holes shall not exceed 300mm x 300mm.
- The excavator or piling rig shall be marshalled to ensure no contact is made with any
 Roots in excess of 25mm shall be retained wherever possible. The project arborist shall oversee the initial stages of excavation/piling.



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General Restrictions - Throughout the Site

Preparatory Works

- applicable) shall be undertaken using hand tools or a mechanical excavator operating from outside the Restricted Activity Zone and carefully marshalled by the project

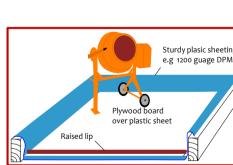
 No machinery in excess of 2m shall pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged.
- use of overhead cranes. • Where a new hard surface is proposed over the Root Protection Areas of T8 and T9, • If materials are to be installed or delivered close to tree canopies (but not beneath them) and a crane is required, they shall be carefully marshalled in order to ensure that branches are not

Storage of Spoil and Materials

adopted and permeable surfaces are to be installed. Any lifting of existing paving

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 • No further excavation shall occur in this zone without consulting the project arborist materials (including non-essential cement products) shall be forbidden.

No new permanent or temporary structures shall be erected other than those shown on the planning application documents unless approved by the local authority outside the Construction



the Root Protection Area of any trees (see diagram for example). Mixers and barrows shall be cleaned within this area. All other chemicals hazardous to tree health, including petrol and diesel, shall be stored in suitable

containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.

- authority prior to commencement. However, the following restrictions shall apply and must be If site hoarding shall be installed over the Root Protection Area of any tree, the following restrictions shall apply:

 - Where an excavator is used, it shall operate from within the footprint of the
 No post hole shall be excavated within 1.5m of any tree stem. • Post holes shall be excavated using hand tools or by a post-hole auger attached to plant

• Roots in excess of 10mm shall be pruned with sharp secateurs. Pruning shall be minimal and only undertaken where absolutely necessary to facilitate the site hoarding. It shall be undertaken by a reputable tree surgeon working to BS 3998 (2010).

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

Cabins shall 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 shall be consulted and specific tree protection measures agreed. The following general restrictions will apply: All services to and from site cabins shall be installed above ground through any Root Protection

Site hoarding may be installed in place of the specified tree protection measures subject to the

• No excavation shall occur within Root Protection Areas to enable cabins to be installed. The cabins shall be founded on a suitable load spreading surface.

Fence Posts or Decking Posts

- If permanent fencing or decking is to be installed within Root Protection Areas, the following restrictions shall apply: • All post holes shall be excavated by hand and kept as narrow as possible (maximum diameter
- Exploratory post holes shall be dug before committing to post / panel positions. If any roots in excess of 25mm are encountered they are to remain intact and the post hole shall be relocated slightly. The fencing system must permit such flexibility (i.e. where fixed panel widths are used, all post holes must be excavated before committing to the final location).
- Any roots in excess of 10mm which are severed shall be neatly pruned back with secateurs. This will encourage healing and reduce the likelihood of infection. Walls shall be avoided over Root Protection Areas unless their foundations may be spanned over roots using a beam system.

Hedges may be planted within Root Protection Areas using hand tools to minimise excavation.

Timing of Operations

ctivity within the site shall be phased according to the following chronology				
Order	Phase	Activity		
1st.		Planning conditions relating to trees to be identified and discussed with the Project arborist and site manager.		
2nd.		All specified tree removal and pruning to be undertaken (see Header -Tree Works Schedule).		
3rd.	Pre- Construction	Install the tree protection barriers (fencing and ground protection boards - see Headers - Tree Protection Barriers and Ground Protection Measures).		
4th.	Phase	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. Boundary treatments to be agreed. Extents of excavation to be agreed. Scaffold restrictions to be agreed. Scope of future inspections / monitoring to be agreed.		
5th.		Arboricultural Method Statement to be revised and approved inecessary.		
Protection measures confirmed acceptable by the local authority				
6th.	Demolition and	Demolish existing structures and remove existing surfaces where applicable.		
7th.	Construction Phase	Install new buildings, hard surfaces and services taking into account restricted activities as specified in this Arboricultural Method Statement.		
8th.		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.		
9th.	Post- Construction Phase	Remove protective barriers (fencing and ground protection measures as applicable).		
10th.		Undertake restricted landscaping operations within Root Protection Areas, including (where applicable) boundary treatments, pedestrian surfaces, decking and any proposed tree planting.		

Personnel and Accountability

Position	Name	Contact Phone & email	Roles
Project Manager	TBC at detailed design stage through condition.	Insert Details	Liaising with site manager & project arborist regarding any potential issues relating to trees. Scheduling of meeting, excavations and inspections. 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.
Site Manager	TBC at detailed design stage through condition.	Insert Details	Day to day monitoring of tree protection measures. Fortnightly supply of site photographs showing all tree protection measures. Induction of all contractors. Reporting to the Appointed Arborist of any incidents or potential variations to the agreed tree protection measures.
Project Arborist	Crown Tree Consultancy	08000 14 13 30 0203 797 7449 S Info@crowntrees.co.uk	Liaising with LPA Tree Officer over all arboricultural matters. Initial inspection and signing off of tree protection barriers including ground protection measures. Monthly site visits and inspections. Oversight of excavation for basement down to 1.2m in Restricted Zones. Reporting to the local authority following site inspections and any variation or incidents.
Local Authority	London Borough of Richmond upon Thames	Insert Details	Receipt of reports from the appointed arborist. Liaising with the appointed arborist to agree suitability of tree protection measures and any variations. Enforcement. Advice and assistance with the discharge of planning conditions relating to trees.
Additional Contact	Insert Details	Insert Details	Insert Details
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 agree all protection measures.
Pre-Start Meeting	Site manager, project arborist.	The make stim for single estions 0 and displication should
•	1 ,, ,	Tree protection fencing locations & specification checked.
After tree works completed & tree protection barriers / ground protection measures installed. Prior to any other activity, inc. demolition & soil stripping.	Tree Officer invited.	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 sent to the local authority tree officer (see accompanying reporting template)
Monthly Inspection and Reporting	Site manager and project arborist*	Tree protection fencing locations & specification checked.
To occur once per calendar month throughout the entirety of the project until the		Ground protection measures checked.
local authority agree that tree protection measures may be removed		Past month, present and future month – activities and adherence to Arboricultural Method Statement discussed and checked.
		Report on findings to be sent to the local authority tree officer within 5 working days.
Oversee initial stages of excavation for foundations in Restricted Activity Zone B.	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.
Any other ground disturbance in Restricted Zones & Construction Exclusion Zones	Site manager, project arborist.	Two week's notice to be given prior to commencement.
Including demolition, soil stripping, removal of hard surfaces, excavation for new		Excavation to be as specified in this Method Statement.
surfacing, foundations, service trenches etc.		Excavations to be recorded and photographed.
		Mitigation measures to be employed specified by the project arborist.
Post-Construction Meeting	Site manager, project arborist.	Retained trees inspected. Ground conditions assessed and mitigation measures agreed whe
Post external construction activity but prior to removal of fencing & landscaping operations.	Tree Officer invited.	appropriate. Further landscaping operations and restrictions to be agreed.

* Where agreed with the L.A. it may be acceptable to supply photographs of the fencing to avoid the necessity for a site visit. **General Site Photographs**











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

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

Tree Retention Categories

Trees unsuitable for retention due to their very poor condition

Usually maturing trees, or younger trees with good form. Retent ese trees is desirable though less than Category A trees arkable trees of low quality and merit. Individual specimer

rawing No: CCL 10770 Tree Protection Plan (Existing Layout with Proposals Overlaid)

