

Arboricultural Method Statement

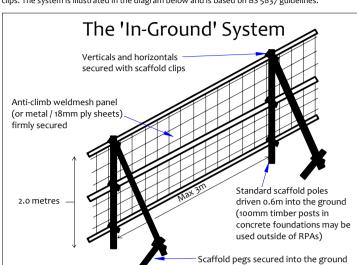
Site: 29 South Road, Twickenham, TW2 5NU

Date: 04/10/2024 | Revision: 1 | CCL ref No: 12021

Tree Protection Barriers

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

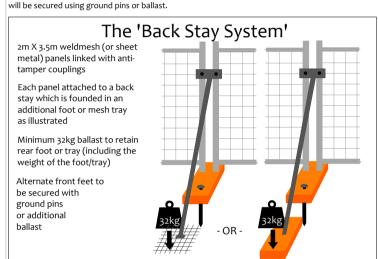
Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles and diagonal bracing struts. Weldmesh panels (or similar – e.g. Heras type fencing panels, or 18mm+ plywood boards) are secured to this scaffold framework using sturdy clips e.g. standard scaffold clips. The system is illustrated in the diagram below and is based on BS 5837 guidelines.



The Back-Stay System — NA

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



the purpose of the fencing and that it will not be moved, or traversed, other than by authorised

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Stem Protection – Timber Boxing

Where indicated by a turquoise square on the Tree Protection Plan, it shall be necessary to install The purpose of tree protection barriers is to keep construction activity away from Restricted Activity robust plywood boxing to protect a tree stem, The plywood boxing specification is indicated in the Zones or Construction Exclusion Zones. They must be appropriate to the nature and proximity of diagram opposite. The actual size of the plywood boxing shall be determined by the extent of the activity within the site. The barriers must be erected prior to the commencement of all activity root flare at the base of each stem. The box shall be large enough to avoid contact with any part of including demolition, soil stripping and delivery of materials and demolition (except where existing the tree that it surrounds. No fixings shall be attached to any part of the tree. Instead, it shall be free structures require demolition to enable the barriers to be installed). Barrier systems are specified standing or attached to the ground or adjacent structures (e.g. walls or fences). It shall be made firm enough to withstand occasional knocks from any plant machinery that may be operate in its vicinity. Removal of Tree Protection Barriers

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 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 minimi 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 of construction traffic. Otherwise, it will be reinforced or replaced with adequate ground protection

Unless specified otherwise, ground protection will consist of 24mm OSB boards laid at double thickness and screwed together to prevent slippage. The ground will be made even by raking, and by adding a 100mm of sand or woodchip, wherever vehicular access is proposed. Where only pedestrian

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

Nithin 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 installed, and excavation shall be limited to that required for new planting. Furthermore, the project arborist will be consulted prior to any works being undertaken in these zones.
- No construction activity or excavation will occur unless agreed otherwise by the project arborist and local authority.

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

- 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 spoil will be stored.
- only and supervised by the project arborist

Tree Works Specification

No fires will be permitted.

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

Tree Reference	Action Required	Notes
Tı	Prune back the two lowest branches growing towards the proposal by 3m.	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 3m.

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

The pruning works should be undertaken sympathetically, working to BS 3998 guidelines.

Restrictions in Specific Zones

No fires will be permitted.

Restricted Activity Zone A

construction. The following restrictions shall apply:

 No vehicles or plant machinery will park or operate unless a suitable load spreading surface is in place. The load spreading surface will be installed and/or maintained as specified under the heading Ground Protection Measures. This will remain in place throughout the entire demolition and construction phase or until any new 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 No 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 0.5m 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. If roots are encountered in excess of 25mm diameter, they will be retained wherever 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.

In this zone a ground bearing slab foundation is proposed for the bin and bike stores foundations are to be installed. To minimise the impact on roots the following restrictions will apply: Storage of materials and spoil will 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 ement products) will be forbidden

In this zone, the following additional restrictions will apply when removing the existing hard surface and replacing it with a new hard surface:

 Hand-operated tools will be used to lift the existing surface if practicable. Where this is not practicable, plant machinery may be used. In which case the General Restrictions machinery will operate from outside of the Restricted Activity Zone, or from a load spreading hard surface. The machinery will NOT operate from soft ground within the **Preparatory Works**

teeth are horizontal and do not disturb the ground below the sub-base. • If engineers determine that deeper excavation is necessary (e.g. inadequate load | Fires

 Any roots that need to be removed will be neatly pruned using sharp secateurs. The cut will be made perpendicular to the direction of root growth to ensure as small a Canopy Protection

been installed as specified under the heading Ground Protection Measures. In the absence of such ground protection, the area will be adequately fenced off and

When installing a new hard surface over existing areas of soft landscaping, the following Storage of Spoil and Materials estrictions (No-Dig Technique) will apply:

marshalled to ensure overhanging branches are not damaged.

No other building works will be permitted.

specified under the heading Ground Protection Measures. No excavation will occur beyond the removal of turf (50mm maximum), surface
 Hazardous Materials vegetation and herbaceous roots. Only hand tools will be used to achieve this.

 All tree roots will remain undisturbed. • A 3-dimensional cellular confinement system will be incorporated into the sub-base

to improve its load-bearing capacity. • This may require the finished levels to be raised above the existing levels.

Restricted Activity Zone B

install an Above Ground Foundation. The following restrictions will apply:

- Deep concrete strip foundations will not be acceptable in this area. Instead, an
 Siting of Cabins
- All roots will be retained intact. • Piles may be installed to support the beam foundation. In which case, trial pits will be • All services to and from site cabins will be installed above ground through any Root Protection excavated to determine the location of the piles. Trial pits will be 650mm x 650mm undertaken in the presence of the project arborist. Soil will first be loosened with a • The cabins will be founded on a suitable load spreading surface. garden fork to ascertain if large roots are present before the loosened soil is removed with a spade. If roots in excess of 25mm are encountered, they will be retained intact, and the pile will be relocated. Roots in excess of 10mm will be pruned

using sharp secateurs. Beyond this depth, piles may be installed using an auger or piling rig. Pile diameter will not exceed 600mm unless agreed otherwise with the

Restrictions in Specific Zones - Continued

Restricted Activity Zone C

In this zone wall foundations are to be installed. To minimise the impact on roots the following

Hand tools will be used during the excavation to a depth of 600mm. Below this depth a carefully marshalled mechanical excavator may be used. • A shallow beam shall be incorporated into the foundation design to ensure that all roots in excess of 50mm and most roots in excess of 25mm are retained

 If roots in excess of 50mm diameter are encountered they will be retained intact and the foundations will bridge over them. The exposed roots will be adequately shuttered off using timber and a suitable protective packaging material such as damp cloth or polystyrene prior to any concrete being cast. Any shuttering structure will be designed to prevent any ingress of concrete to within at least 50mm of any root surface. Enough room will be left surrounding each root to enable future growth (at least 30mm gap containing loose soil or

compressible material). • If roots in excess of 25mm but less than 50mm diameter are encountered close to the edge of the excavation, they will be retained wherever possible and protected with damp sacking during times that they are unearthed. Any roots that need to be severed will be pruned with secateurs.

Restricted Activity Zone D

• Excavation shall be limited to the removal of any existing hard surfacing, vegetation or turf layer, and shall be undertaken using hand tools only. Only hand tools shall be used during the excavation and overseen by the project • If roots in excess of 25mm diameter are encountered close to the edge of the excavation, they shall be retained wherever possible and protected with damp sacking during times that they are unearthed. Any roots that need to be severed shall

be pruned with secateurs.

Wherever possible, excavation will be limited to the existing surface and its sub-base. No demolition, removal of surfaces, or soil stripping will commence until the protective fencing and • If a toothed bucket is used, the excavator bucket will be orientated such that the

bearing capacity), this will be undertaken using hand tools only and supervised by the No fires will be permitted beneath any tree canopy or within 5m of any tree stem, branch or foliage. project arborist. No excavation will occur beyond a depth of 300mm below the fires will be permitted in the vicinity of any exposed tree roots.

 After removal of the hard surface and sub-base, no vehicles or driven machinery will be permitted to enter this zone unless adequate ground protection measures have been introduced to enter this zone unless adequate ground protection measures have
 No machinery in excess of 2m will pass beneath the canopy of any tree without being carefully marchalled 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 marchalled in order to protect tree canopies the following restrictions will apply throughout the site: If materials require installation or delivery beneath tree canopies, this will be done without the

• When operating beneath tree canopies, any mechanical excavator will be carefully

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 Prior to the new surface being installed, no vehicles or plant machinery will drive, measures are adequate to ensure no soil compaction or contamination occurs. All hazardous operate or park until unless ground protection measures are implemented as materials (including non-essential cement products) will be forbidden.

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.

 A porous surface and sub-base will be utilised to enable the passage of oxygen and Otherwise, provision will be made to ensure that the mixing area is contained so that no water runoff enters the Root Protection Area of any trees. Mixers and barrows will be cleaned within this area. All other chemicals hazardous to tree health, including petrol and diesel, will be stored in suitable

Underground Services

No underground services (including soak-aways) will be located in any part of the Construction In this zone foundations are to be installed. To minimise the impact on roots, it is proposed to Exclusion Zones or Restricted Activity Zones unless done so in a manner detailed in a specific Method Statement and approved by the local authority.

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

 No excavation for the raft or beam will occur other than for the removal of any
 Cabins will be located outside of Construction Exclusion Zones and Restricted Activity Zones unless vegetation and scraping of loose topsoil, to a maximum depth of 100mm. This will be undertaken using hand tools and overseen by the project arborist.

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

and excavated using hand tools to a depth of at least 600mm. Excavation will be • No excavation will occur within Root Protection Areas to enable cabins to be installed.

Timing of Operations

ity within the	site shall be phased according	to the following chronology				
Order	Phase	Activity				
st.	Pre- Construction Phase	Planning conditions relating to trees to be identified and discussed with the Project Arborist and Site Manager.				
nd.		All specified tree removal and pruning to be undertaken (see Header -Tree Works Schedule).				
rd.		Install the tree protection barriers (fencing and ground protection boards - see Headers -Tree Protection Barriers and Gr Protection Measures).				
th.		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.				
th.		Arboricultural Method Statement to be revised and approved (if necessary).				
		Protection measures confirmed acceptable by the Local Authority				
oth.	Demolition and	Demolish existing structures and remove existing surfaces where applicable.				
th.	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.				

Remove protective barriers (fencing and ground protection measures as applicable).

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

Undertake restricted landscaping operations within Root Protection Areas, including (where applicable) boundary

Personnel and Accountability

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

Construction

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 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.
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.
Overseeing Excavation in Restricted Activity Zone A Supervision is only required id deeper excavation than the existing hard surface and its sub-base is required.	Site Manager and Project Arborist.	Two weeks' 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. Mitigation measures to be employed specified by the project arborist. Activities to be recorded and photographed. Report on findings to be provided by the Project Arborist and sent to the local authority by the Project Manager.
Overseeing Excavation in Restricted Activity Zone B and D Excavation to be overseen where specified.	Site Manager and Project Arborist.	Two weeks' 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. Mitigation measures to be employed specified by the project arborist. Activities to be recorded and photographed. Report on findings to be provided by the Project Arborist and sent to the local authority by the Project Manager.
Post-Construction Meeting Post external construction activity but prior to removal of fencing	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.

Tree Data Schedule

This Tree Data Schedule has been created using the survey information collected by Gifford Tree Services (see Gifford Tree Services report dated 29/07/2022).

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	Reference G = Groul H = Hedg	Age & Species	Height (m	Crown Ht (Diameter (w	N E		Physiological Condition	Retention Category
				J	۵	S	S		Structura Condition	37
		Mature						25	Moderate	40+
		Atlas Cedar				, '	7			70.
	T1		20	5	90	7	7		Fair	В
		Cedrus atlantica.					/		Fair	. D
		Mature						[² 5	Moderate	10-20
	_	Sorbus				, '	3			10-20
	T2		10	2	25	3	3		Poor	С
		Sorbus sp.					3		Fair	
		Mature						[² 5	Moderate	40+
	_	Oak				, '	9			401
	Т3		18	2.5	100	9	. 9		Fair	_
		Quercus robur.					9		Fair	. A
		Mature				١.	,	[25	Moderate	20-40
	т.	Sorbus			0		4	-		20 40
	T4		10	2.5	80	4	. 4		Fair	C
		Sorbus sp.					4		Fair	
		Mature				Ϊ_		[25	Moderate	40+
		Norway Maple				, '	5	-		40'
	T5		10	2.5	90	5	5	3-0-1 H	Fair	В
		Acer platanoides.					ס		Fair	D
		Mature				1	,	[25	Moderate	20-40
		Norway Maple					4			20 70
	T6		14	2.5	35	4	4	The same	Fair	C
		Acer platanoides.					7		Fair	
i								. L		



Tree Protection Plan

BS 5837 Root Protection Area ometimes not included on the Tree Protection Plan to avoid confusion with restricted Zones)

 T_1 = Tree No 1 G_2 = Group No 2 H_3 = Hedge No 3

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

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 arkable trees of low quality and merit. Individual specimer

Frees unsuitable for retention due to their very poor condition

Trees of high quality with an estimated life expectancy of 40+ years. Usually large trees with significant presence or smaller trees with CCL 12021 Tree Protection Plan (Existing Layout with Proposals Overlaid) 29 South Road, Twickenham, TW2 5NU Paper Size: A1

