

Arboricultural Method Statement

Site: Tell House, 10d Kidderpore Avenue, NW3 7SU
Date: 04/09/2020 **Revision:** 2 **CCL Ref No:** 10332
Author: Joe Taylor (Arboriculture), M. Arbor A
Client: Nigel Bird Architects

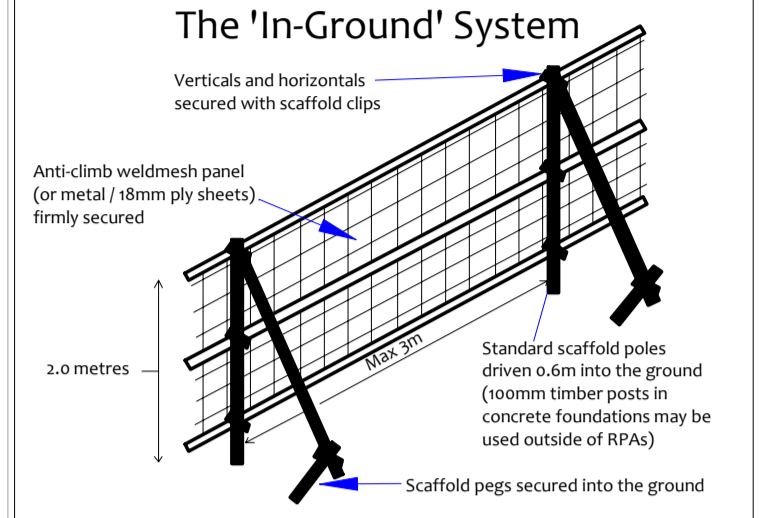
Tree Protection Barriers

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 any activity including demolition, soil stripping and delivery of materials and demolition (except where existing 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.

The In-Ground System

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 loads by plant machinery and, once installed, shall remain in place throughout the entire construction phase.

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 systems illustrated in the diagram to the right and is based on BS 5837 guidelines.

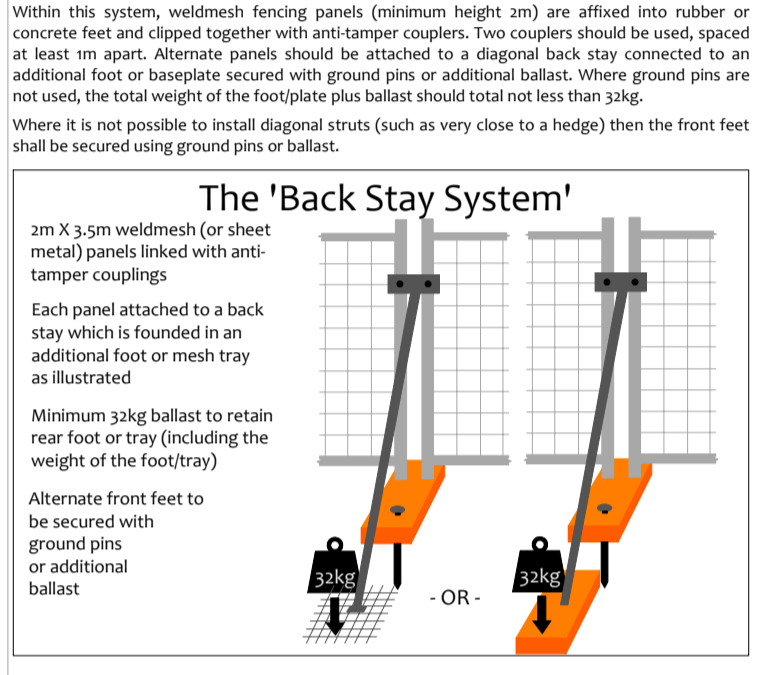


The Back-Stay System

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 loads 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 ballast secured with ground pins or additional ballast. Where ground pins are not used, the total weight of the footings plus ballast should total not less than 3kg.

Where it is not possible to install diagonal struts (such as very close to a hedge) then the front feet shall be secured using ground pins or ballast.



Notices

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, traversed, or traversed, other than by authorized personnel.

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 construction. The following restrictions shall apply:

- No vehicles or plant machinery shall park or operate unless a suitable load 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 construction phase or until any new 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 applicable) shall be undertaken using hand tools or a mechanical excavator operating from outside the Restricted Activity Zone and carefully marshalled by the project arborist.
- No excavation shall occur beneath any existing hard surfacing and its sub-base or beneath the foundations of any structure such as wall, steps or patio.
- No further excavation shall occur in this zone without consulting the project arborist and obtaining approval from the local authority.
- Existing ground levels shall be retained undisturbed or raised by no more than 200mm. Ground levels may only be raised using granular topsoil (not rich in clay) or where new surfacing is proposed.
- No new permanent or temporary structures shall be erected other than those shown 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 methodology agreed and approved by the local authority.
- If roots are encountered in excess of 25mm diameter, they shall be retained wherever possible and protected with damp sacking during times that they are unearthed. Any roots in excess of 50mm 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 cement products) shall be forbidden.
- No fires shall be permitted.

Restricted Activity Zone B

Within this zone it is proposed to excavate for the foundations for the new extension and sunken garden. Either contiguous piling (or sheet piling) shall be installed along the edge of the excavation, or an alternative method shall be adopted which does not disturb soils beyond the footprint of the proposed (e.g. piling). A typical method of piling would be to excavate to a specified depth (e.g. 1m), install shuttering and then cast the concrete for the proposed walls. Then to excavate short sections beneath this wall and cast deeper concrete. Then to excavate in between these deeper sections and infill with concrete. In this manner excavation may continue to any specified depth without disturbing soils beyond the footprint of the bulk. The specific method adopted will vary between contractors. However, the following restrictions will apply and must be adhered to:

- Excavation shall not extend more than 200mm beyond the footprint of the proposal in the direction of the trees.
- Where a small excavator is used, it shall operate from outside of the adjacent Construction Exclusion Zone.
- The excavator or piling rig shall be marshalled to ensure no contact is made with any tree canopy.
- The project arborist shall oversee all excavation in this area.

General Restrictions - Throughout the Site

Preparatory Works

No demolition, removal of surfaces, or soil stripping shall commence until the protective fencing and ground protection measures are installed to the satisfaction of the local authority.

Fires

No fires shall be permitted beneath any tree canopy or within 5m of any tree stem, branch or foliage. No fires shall be permitted within any Construction Exclusion Zone or Restricted Activity Zone. No fires shall be permitted in the vicinity of any exposed tree roots.

Canopy Protection

In order to protect tree canopies the following restrictions shall apply throughout the site:

- 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.
- If materials require installation or delivery beneath tree canopies, this shall be done without the 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 shall be carefully marshalled in order to ensure that branches are not accidentally damaged.

Storage of Spoil and Materials

Storage of materials and spoil shall 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 materials (including non-essential cement products) shall be forbidden.

General Restrictions - Continued

Hazardous Materials

Any mixing of cement based materials shall take place outside the Construction Exclusion Zones and Restricted Activity Zones. Where cement is to be mixed at considerable distances from trees and water havoli/canals enter Root Protection Areas, then no further special measures are required. Otherwise, provision shall be made to ensure that that no water run-off enters 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.

Underground Services

No underground services (including soak-aways) shall 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.

Site Hoarding

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

- Ground levels shall be maintained as existing.
- Foot holes shall not exceed 300mm x 300mm.
- No post holes 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 machinery sited outside of Root Protection Areas.
- Roots in excess of 25mm shall be retained wherever possible.
- Roots in excess of 50mm 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).

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.

Siting of Cabins

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 Area.
- 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 200mm).
- Exploratory post holes shall be dug before committing to post / panel positions. If any roots in excess of 20mm are encountered there 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 50mm 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 hedges may be planted within Root Protection Areas using hand tools to minimise excavation.

Lighting, Bollards, CCTV and associated Cables

If any of the above are to be installed close to tree canopies or within Root Protection Areas of retained trees installation methods shall be detailed in a specific Method Statement and approved by the local authority. Consideration should be given to the following:

- Pruning of branches to enable sufficient clearance for light and vines. Branches should be removed to the branch collar as per British Standard 3998 (2010).
- Root holes must be excavated by hand or using an appropriate sized auger. No other form of mechanical excavation may be used.
- Wherever possible, cables should be routed in a direction directly away from the tree stem rather than tangentially across the rooting zone. The location of all such cables shall be determined after consultation with the project arborist and approval by the local authority.

Use of Heavy Plant

All machinery operators are to be made aware of any Construction Exclusion Zones and Restricted Activity Zones that apply to this site. All machinery operators are to respect these zones and ensure that no damage occurs to trees due to the careless use of machinery. Mechanical excavators should have tracks rather than wheels to help spread their load. They should be carefully marshalled when working close to tree canopies.

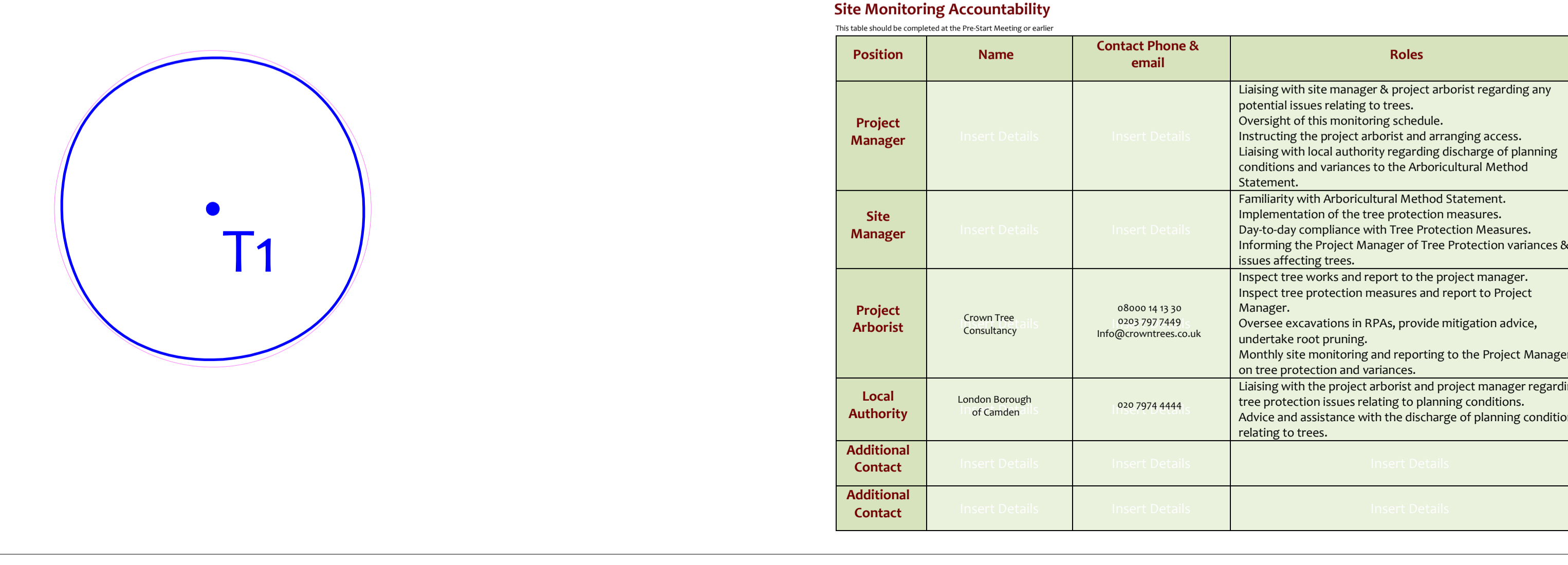
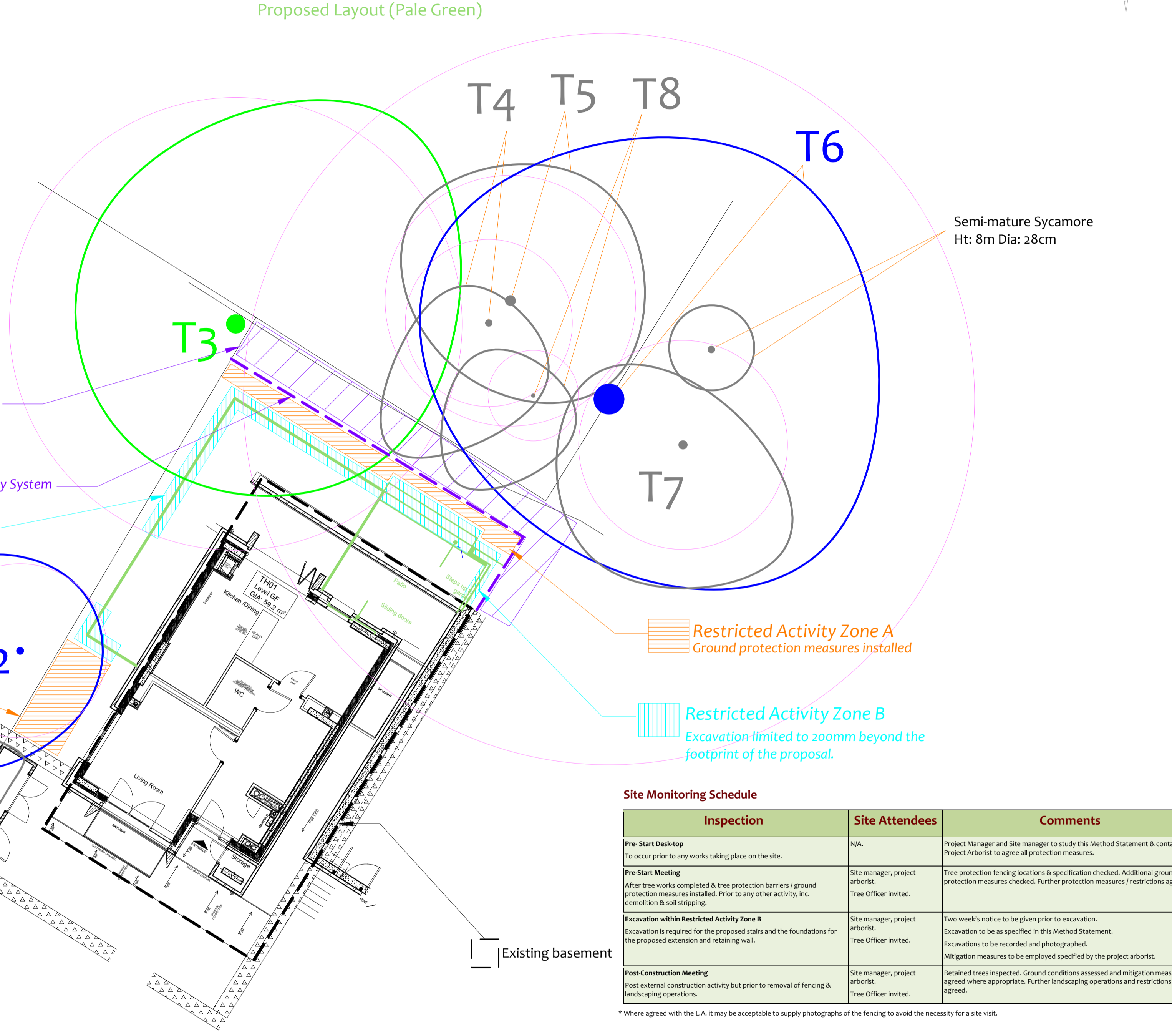
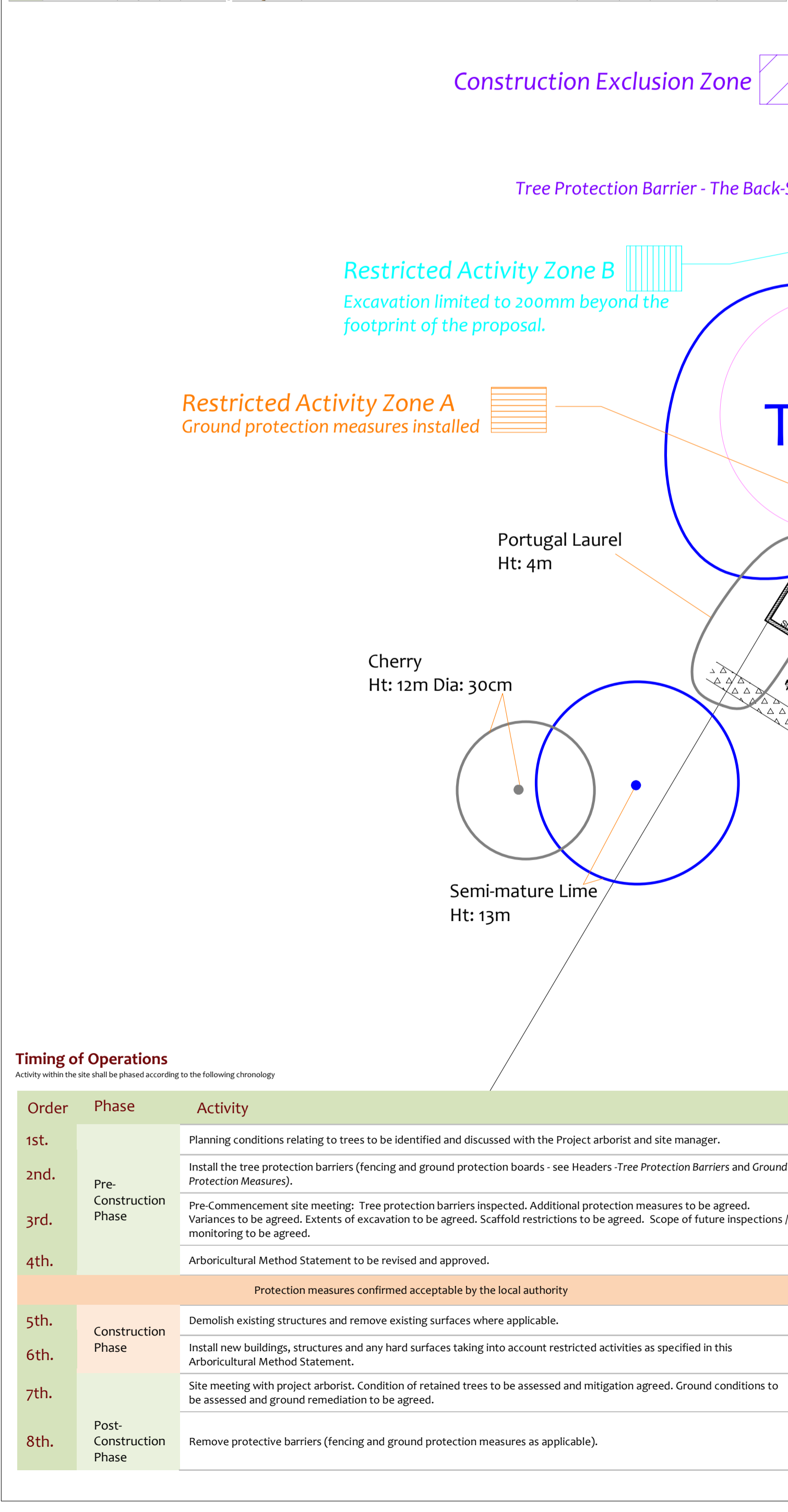
Scaffolding

If scaffolding is required in areas containing ground protection measures, the protective boards shall need to remain in situ and be strengthened and stabilised to bear the weight of scaffold poles. Prior to the installation of any scaffolding within 0.5m of any tree branches, the project arborist shall be consulted to specify any pruning works that may be required.

Tree Protection Plan

Author: Joe Taylor (Arboriculture), M. Arbor A
Client: Nigel Bird Architects

Reference	Age & Species	Height (m)	DBH (mm)	Crown Spread (m)	Scaled Tree Diagram (m)	Notes	Recommendations (Development proposals) (Insert Free Text)	Vigour	Quality
T1	Semi-Mature Silver Lime	14	2	34	4	Form: Single stemmed and vertical with a well formed crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	High	Moderate
T2	Semi-Mature Ash	11	2.5	35	3	Position: Situated on third party land. Form: Single stemmed with a light lean and a balanced crown. History: No evidence of significant pruning. Other: Limited inspection, dimensions estimated.	No action required.	High	Moderate
T3	Mature Ash	17	5	65	7	Position: Situated on third party land. Form: Single stemmed with a slightly unbalanced crown. Other: Location prevented detailed inspection.	No action required.	Moderate	High
T4	Young Sycamore	8	2.5	24	2	Position: On steep embankment. Form: Single stemmed and vertical with an unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	High	Low
T5	Semi-Mature Acer pseudoplatanus	13	3	36	4.5	Position: On steep embankment. Form: Single stemmed and vertical with a well formed crown. History: No evidence of significant pruning. Defects: No significant defects observed.	No action required.	High	Low
T6	Mature Ash	22	9	105	8	Position: On steep embankment. Form: Multi stemmed at 4.5m with a well formed crown. History: Occasional pruning wounds due to crown lifting (now healed). Other: Reduced in the past.	No action required.	Moderate	Moderate
T7	Semi-Mature Sycamore	9	1.5	30	2	Position: Situated on third party land. Form: Single stemmed with a light lean and a low, widely spreading habit. History: No evidence of significant pruning. Other: Limited inspection, dimensions estimated.	No action required.	Moderate	Low
T8	Young Silver Lime	5	1.5	13	2	Form: Single stemmed and leaning with an unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Poor form.	No action required.	Moderate	Low



BS 5837 Root Protection Area (radius = 12xstem diameter) Root Protection Area needing amendment due to site conditions, e.g. presence of existing road or building. Root Protection Area having been amended to account for site conditions	Tree Retention Categories Stems & canopies shown 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 excellent form. Retention of these trees is highly desirable. Trees of moderate quality with a life expectancy of 20-40 years. Usually medium trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees. Unremarkable trees of low quality and form. Individual specimens are not considered to be a material planning consideration. Trees unsuitable for retention due to their very poor condition.
Drawing No: CCL 10332 / TPP Rev: 2 Title: Tree Protection Plan (Existing Layout with Proposals Overlaid) Site: Tell House, 10d Kidderpore Avenue, NW3 7SU Scale: 1:100 Paper Size: A1		

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 After tree works completed & tree protection barriers / ground protection measures installed. Prior to any other activity, inc. demolition & soil stripping.	Site manager, project arborist. Tree Officer invited.	Tree protection fencing locations & specification checked. Additional ground protection measures checked. Further protection measures / restrictions agreed.
Excavation within Restricted Activity Zone B Excavation is required for the proposed stairs and the foundations for the proposed extension and retaining wall.	Site manager, project arborist. Tree Officer invited.	Two week's notice to be given prior to excavation. Excavation to be as specified in this Method Statement. Excavations 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.

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

Site Monitoring 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. Oversight of 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	Insert Details	Insert Details	Familiarity with Arboricultural Method Statement. Implementation of the tree protection measures. Day-to-day compliance with Tree Protection Measures. Informing the Project Manager of Tree Protection variances & issues affecting trees.
Project Arborist	Crown Tree Consultancy	08000 14 13 30 0203 787 7449 Info@crowntrees.co.uk	Inspect tree works and report to the project manager. Inspect tree protection measures and report to Project Manager. Oversee excavations in RPAs, provide mitigation advice, undertake root pruning. Monthly site monitoring and reporting to the Project Manager on tree protection and variances.
Local Authority	London Borough of Camden	020 7974 4444	Liaising with the project arborist and project manager regarding tree protection issues relating to planning conditions. 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