

## **Arboricultural Method Statement**

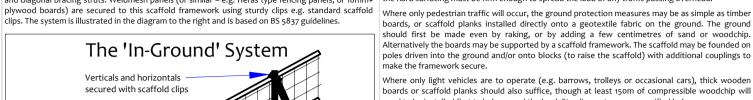
Site: Teil House, 10D Kidderpore Avenue, NW3 7SU

Date: 26/05/2021 Revision: 3 CCL ref No: 10332

**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.

## The In-Ground System This system may be installed where indicated by a solid purple line on the Tree Protection Plan. It shall remain in place throughout the entire construction phase.



Anti-climb weldmesh pane (or metal / 18mm ply sheets) firmly secured tandard scaffold poles driven 0.6m into the ground (100mm timber posts in concrete foundations may be used outside of RPAs)

Scaffold pegs secured into the ground 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

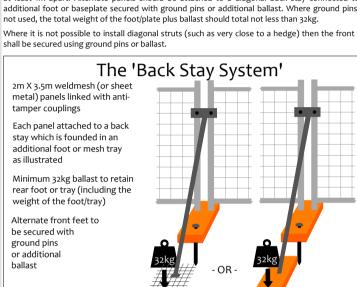
enable permitted activities within a Bestricted Activity Zone. This system should be able to withstand

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

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. The 'Back Stay System' 2m X 3.5m weldmesh (or sheet

tamper couplings Each panel attached to a back stay which is founded in an additional foot or mesh tray as illustrated Minimum 32kg ballast to retain rear foot or tray (including the

weight of the foot/tray) Alternate front feet to be secured with ground pins or additional ballast



Author: Joe Taylor FdSc (Arboriculture), M. Arbor A

Client: Nigel Bird Architects

**Removal of Tree Protection Barriers** 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 arboris

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 and reinforced (where applicable and adequate). should be robust enough to withstand occasional knocks by plant machinery and, once installed, the robust enough to withstand occasional knocks by plant machinery and, once installed, the ground protection shall be installed. The ground protection shall be installed. need to be able to adequately spread the load of construction traffic. Where existing hard surfacing Vertical scaffold poles are driven into the ground, onto which are affixed horizontal scaffold poles | is to be retained, it shall not be necessary to install additional ground protection measures. However, and diagonal bracing struts. Weldmesh panels (or similar – e.g. Heras type fencing panels, or 18mm+ the hard surfacing must be firm enough to spread the load of any traffic passing overhead.

> boards, or scaffold planks installed directly onto a geotextile fabric on the ground. The ground should first be made even by raking, or by adding a few centimetres of sand or woodchip. Alternatively the boards 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 framework secure.

> Where only light vehicles are to operate (e.g. barrows, trolleys or occasional cars), thick wooden boards or scaffold planks should also suffice, though at least 150m of compressible woodchip will need to be installed first to help spread the load. Sturdier systems are specified below: Where cars will regularly park or heavier vehicles/plant machinery will occasionally operate, sturdier ground protection measures will be required such as metal road plates, or purpose built synthetic oad mats over a compression resistant layer such as 150mm of woodchip or 100mm of a 3D cellular confinement system in-filled with 7-40mm angular gravel (e.g. CellwebTM).

> A temporary concrete slab may also be considered as a suitable load spreading platform. Where a pile driver needs to operate, a concrete slab may be the preferred option. Where existing structures need to be removed, this shall be done with temporary ground protection measures in place to enable this to be achieved without compacting soils.

> 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 with a new hard surface.

## **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 landscaping works are being undertaken. At such times, all restrictions that apply to the *Restricted* Activity Zone shall apply. Furthermore, the project arborist shall be informed prior to
- any works being undertaken in these zones. No 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 in this report 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 spoil shall be stored.
- No fires shall be permitted
- All hazardous materials (including non-essential cement products) shall be forbidder Removal of hard surfaces, structures or turf shall 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

e Reference	Action Required	Notes
T2	Prune lowest branches to create a clearance distance of 2.5m from the proposal.	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 2.5m.

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 authorised personnel.

Notices

## **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. 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 that no water run-off enters
- No excavation shall occur beneath any existing hard surfacing and its sub-base or boneath the foundations of any trees (see diagram for example). Mixers and barrows shall be beneath the foundations of any structure such as wall, steps or patio.
- and obtaining approval from the local authority. • Existing ground levels shall be retained undisturbed or raised by no more than
- 150mm. Ground levels may only be raised using granular topsoil (not rich in clay) or Underground Services where new surfacing is proposed. 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.
   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 on the planning application documents unless approved by the local authority.
- Underground services shall not be installed in this area without prior consultation Statement and approved by the local authority. with the project arborist and a methodology agreed and approved by the local Site Hoarding • If roots are encountered in excess of 25mm diameter, they shall be retained If site hoarding shall be installed over the Root Protection Area of any tree, the following restrictions
- wherever possible and protected with damp sacking during times that they are shall apply: unearthed. Any roots in excess of 10mm that need to be severed shall be pruned with Ground levels shall be maintained as existing. secateurs. Storage of materials and spoil shall be avoided unless it has been agreed with the
   No post hole shall be excavated within 1.5m of any tree stem.
- project arborist that the ground protection measures are adequate to ensure no soil Post holes shall be excavated using hand tools or by a post-hole auger attached to plant 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 approval of the local authority with regard to its location and specification. 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 Siting of Cabins proposal (e.g. pinning). A typical method of pinning would be to excavate to a specified depth (e.g. Cabins shall be located outside of Construction Exclusion Zones and Restricted Activity Zones unless im), 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 consulted and specific tree protection measures agreed. The following general restrictions will apply: sections and infill with concrete. In this manner excavation may continue to any specified depth • All services to and from site cabins shall be installed above ground through any Root Protection without disturbing soils beyond the footprint of the build. The specific method adopted will vary etween 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 Fence Posts or Decking Posts
- Construction Exclusion Zone • The excavator or piling rig shall be marshalled to ensure no contact is made with any restrictions shall apply: 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.

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

Canopy Protection

accidentally damaged.

- 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 All machinery operatives are to be made aware of any Construction Exclusion Zones and Restricted crane is required, they shall be carefully marshalled in order to ensure that branches are not Activity Zones that apply to this site.

## 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 Scaffolding materials (including non-essential cement products) shall be forbidden.

## **General Restrictions - Continued**

## **Hazardous Materials**

Any mixing of cement base materials shall take place outside the Constructio Exclusion Zones and Restricted required. Otherwise, provisior

that no water run-off enters

• No further excavation shall occur in this zone without consulting the project arborist 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.

Sturdy plasic sheet

e.g 1200 guage DP

over plastic she

- Post holes shall not exceed 300mm x 300m
- machinery sited outside of Root Protection Areas. Roots in excess of 25mm shall be retained wherever possible.
- 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). Site hoarding may be installed in place of the specified tree protection measures subject to the

Areas

• 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.

If permanent fencing or decking is to be installed within Root Protection Areas, the following • 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.

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:

- No fires shall be permitted within any Construction Exclusion Zone or Restricted Activity Zone. No removed to the branch collar as per British Standard 3998 (2010). • Post 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 operatives 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.

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.

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# **Tree Protection Plan**

## Free Data Schedule

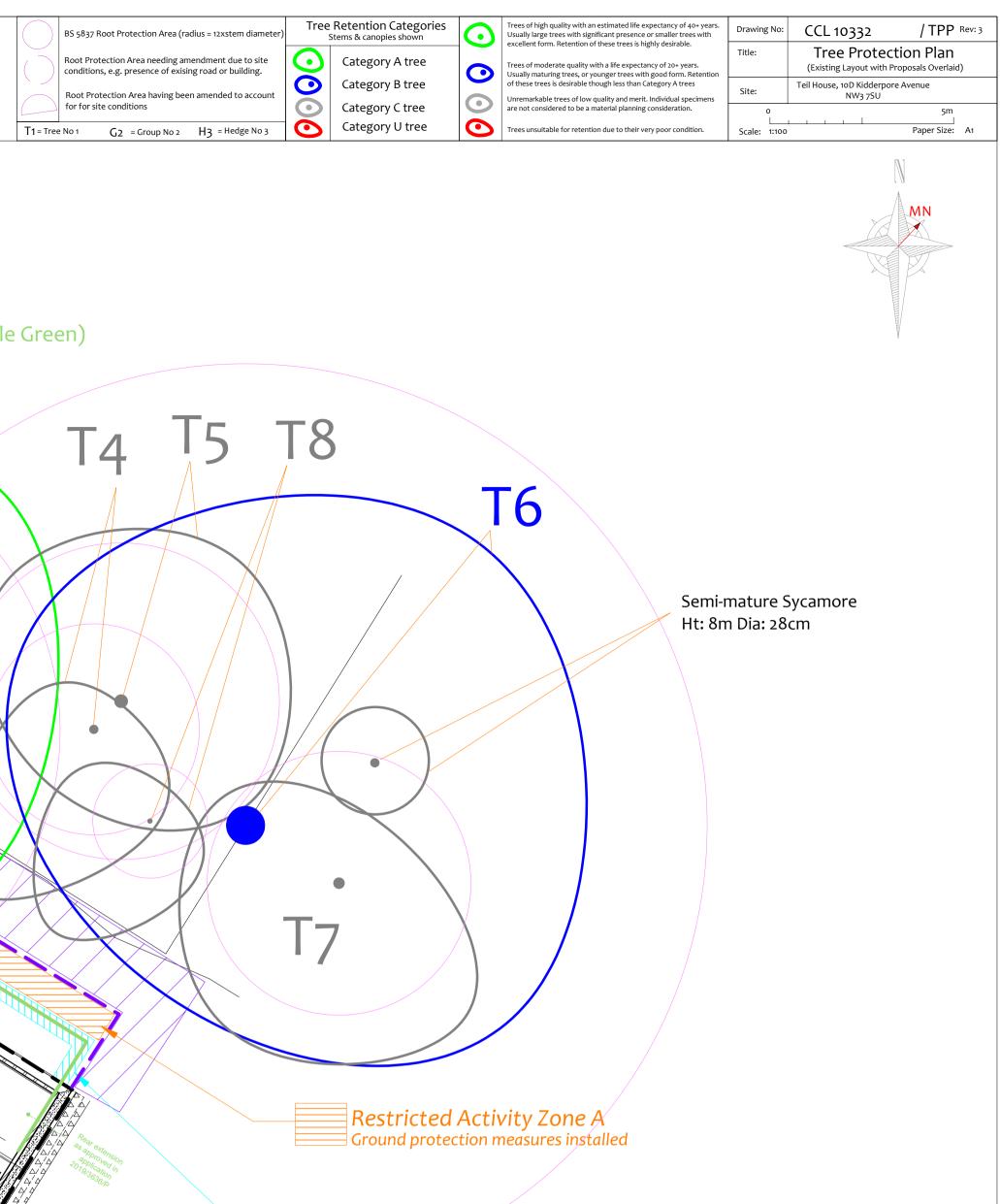
Spread (m) Diagram (m Age & Specie Semi-Mature Silver Lime History: No evidence of significant pruning. Defects: No significant defects observed. Tilia petiolaris Semi-Matur Position: Situated on third party land. Ash No evidence of significant pruning. Other: Fraxinus excelsion Mature sition: Situated on third party land Young Position: On steep embankmen Sycamore 8 2.5 24 2 History: No evidence of significant pruning. Acer Defects: No significant defects observed pseudoplatanus Semi-Mature Position: On steep embankme Sycamore History: No evidence of significant pruning. Acer Defects: No significant defects observed. pseudoplatanus Mature Position: On steep embankmen Ash Reduced in the past. Fraxinus excelsio Semi-Mature Position: Situated on third party land Sycamore History: No evidence of significant pruning. Defects: No significant defects observed. Acer Other: Limited inspection, dimensions estimate oseudoplatanus Young Silver Lime History: No evidence of significant pruning. 5 1.5 <sup>13</sup> <sub>2.5</sub> Defects: No significant defects observed. Other: Poor form. Tilia petiolaris

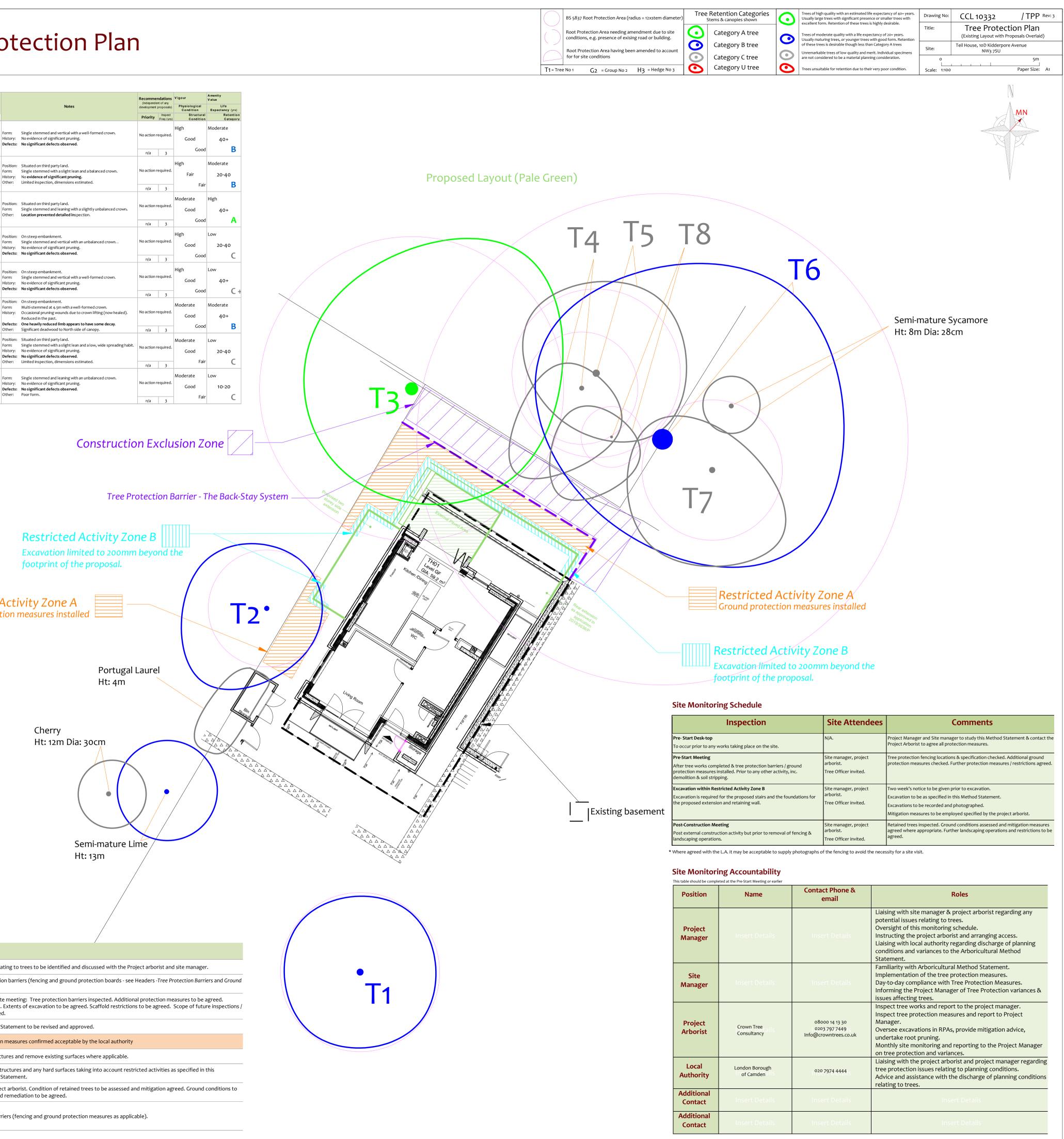
# Restricted Activity Zone A

Cherry

### Timing of Operations d according to the following chronology

OrderPhaseActivity1st.Pre-ConstructionPlanning conditions relating to trees to be ider2nd.Pre-ConstructionInstall the tree protection barriers (fencing and Protection Measures).3rd.Pre-Commencement site meeting: Tree protect Variances to be agreed. Extents of excavation monitoring to be agreed.4th.Protection Measures5th.Post- Phase6th.Phase7th.Site meeting with project arborist. Condition on be assessed and ground remediation to be agreed8th.Post- Construction Phase					
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Sth.       Construction Phase       Demolish existing structures and remove exist Arboricultural Method Statement.         7th.       Site meeting with project arborist. Condition or be assessed and ground remediation to be agr         8th.       Post-Construction	3rd.		Variances to be agreed. Extents of excavation		
5th.       Construction Phase       Demolish existing structures and remove exist Arboricultural Method Statement.         6th.       Install new buildings, structures and any hard of Arboricultural Method Statement.         7th.       Site meeting with project arborist. Condition of be assessed and ground remediation to be agr         8th.       Post-Construction	4th.		Arboricultural Method Statement to be revised		
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Post-     Post-       8th.     Construction   Remove protective barriers (fencing and ground	6th.		<b>e</b> .		
8th. Construction Remove protective barriers (fencing and ground	7th.				
	8th.	Construction	Remove protective barriers (fencing and groun		





Inspection	Site Attendees	Comments
<b>Pre- Start Desk-top</b> 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.
<b>Pre-Start Meeting</b> 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.

This table should be comple	eted 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 797 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 Mof Camden	020 7974 4444 s	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