

**TREE PROTECTION & METHOD STATEMENT**  
(PHASE 2)

**Barriers to be retained as installed in Phase 1**  
(unless adjustments are required as per the methodologies below)

This document was commissioned by Nalco/UCL in February 2025 to comply with condition 4 of the London Borough of Camden's planning decision 2024/3177/P and is to be read in tandem with the Arboricultural Impact Assessment and Method Statement submitted along side it by BDP (Rev 06 dated Feb 2025).

Where appropriate the methodology cited within BPDs document have been used.

The tree protection on this site is subject to implementation as detailed in the following sections. The recommendations of the British Standard (BS5837) have been applied where viable. Where deviations from the preferred approach are required, the impact on any retained trees is minimised through a combination of supervision from an arboriculturist and adherence to the method statement. Once permission is granted, the strategy must be followed to avoid impacting the trees and adhere to any planning conditions. The information within this section must be passed to the site foreman and cascaded to all relevant personnel involved in the project.

Any questions about the content or its implementation shall be directed to Mark Welby Consulting Arborists at 01730 239492 before action is taken.

**Site Supervision - Roles and Responsibilities**

Before development begins, all personnel responsible for overseeing development-related tasks must be provided with the contact information of the project arboriculturist. The site manager is responsible for reporting any tree-related concerns, including any deviations from the Arboricultural Method Statement (AMS), directly to the project arboriculturist. The project arboriculturist, or Arboricultural Clerk of Works (ACoW) will then visit the site and offer recommendations to the site manager on how to address the situation effectively.

The project arboriculturist or an ACoW will conduct periodic site inspections throughout the duration of the work to ensure adherence to the AMS and any relevant planning conditions regarding trees. After each site inspection, the project arboriculturist will prepare a monitoring report that outlines any issues encountered, breaches of the agreed working methods, or violations of tree-related planning conditions, suggested measures for resolving those problems or breaches.

**Site Hoarding**

Boundary hoarding/site security fencing to be weldmesh panels mounted on blocks. Maintaining a 2.5m clearance around the site for pedestrian access. Installed for Phase 1 and retained as required.

**Tree Protection Barriers**

Barriers to be retained as pre Tree Protection Plan for Phase 1.

They must be fit to exclude construction activity and appropriate to the degree and proximity of work around the retained tree(s). Barriers shall be maintained to ensure that they remain rigid and complete.

Barriers to comprise weldmesh panels on blocks with backstays (see inset image).

Signs to be fixed to the fencing at no less than 5m centres (see inset for indicative sign design)

Barriers are to only be removed under the supervision of the ACoW and when construction in the subject area is required. All work in RPAs to be carried out as per the appropriate section of this method statement.

**Trunk Protection**

Where works are to occur near trees and the removal of barriers is necessary to allow access, trunk protection may be appropriate. This will be subject to the discretion of the supervision ACoW, dependent on the specific task. It will comprise wooden hoarding or Trunk Protecta (or similar). See inset images.

**Ground Protection**

If required to facilitate access within RPAs (or as shown on the plan), ground protection is to be installed. This must be capable of supporting the expected loads and avoiding rutting, compaction and damage to the soil: as advised in section 6.2.3 of the British Standard.

An example of standard trackway can be seen on the inset image.

**RPAs (Root Protection Areas)**

The RPA is a root-sensitive area where construction activities are to be excluded. The default method of doing so is through the installation of tree protection barriers. If construction access is required in the RPA then ground protection can be used to facilitate this (see inset image).

Everyone engaged in the construction process is responsible for respecting the tree protection measures and observing the necessary precautions within and adjacent to them.

Inside RPAs, the following shall apply:

- No mechanical excavation whatsoever;
- No excavation by any means without arboriculturist site supervision;
- No hand digging without a written method statement having first been approved by the project arboriculturist;
- No lowering of levels for any purpose (except removal of grass sward using hand tools);
- No storage of plant or materials;
- No storage or handling of any chemical including cement washings;
- No vehicular access (unless ground protection is installed);
- No fire lighting;
- In addition to the above, further precautions are necessary adjacent to trees:
- No substances injurious to tree health, including fuels, oil, bitumen, cement (including cement washings), builder's sand, concrete mixing and other chemicals shall be stored or used within or directly adjacent to the protection area of retained trees;
- No fire shall be lit such that flames come within 5m of tree foliage.

Variations from the above may be specified in the following sections of this method statement. This is only acceptable where detailed and will typically be subject to supervision by the arboriculturist.

**Hard Surface Removal**

No surface removal within RPAs will occur without arboriculturist supervision.

Stages for hard surface removal within tree protection areas:

1. Contact the project arboriculturist to hold a pre-start site meeting and 'toolbox' talk before starting work and oversee the process.
2. Plant machinery to run only on existing hard surfaces with consent from an arboriculturist.
3. The plant may be used to carefully peel up existing tarmac and concrete.
4. Other surfaces are to be removed by hand (paving etc.).
5. Where any sub-base is unlikely to contain roots and only on approval from the project arboriculturist, it may also be carefully removed.
6. If the supervisor concludes that there are no significant roots in the area following the surface (and possible sub-base) removal then there is no longer a need to proceed cautiously. The supervising arboriculturist will note their conclusions within the record of the overall works. Proceed to step 9.
7. If the supervisor concludes that significant roots are still present then the underlying ground levels are to be retained. No further excavation is to occur.
8. Any exposed roots and surrounding newly exposed areas are to be covered with up to 200mm of topsoil, from elsewhere on site, or imported topsoil to BS3882 Soil may be placed in the area by plant but must be spread by hand.
9. As deemed necessary by the supervising arborist, tree protection barriers are to be erected to protect tree stems and, if appropriate, the newly exposed soft ground. Reference the Tree Protection Plan for approved tree barrier alignments.
10. Work records are to be circulated by supervising arboriculturist and forwarded to the LPA as required.

**Pile & The Installation of New Structures**

1. Contact project arboriculturist to hold pre-start site meeting, a 'toolbox' talk before starting work and provide Arboricultural Clerk of Works (ACoW) supervision throughout the process. A record will be kept by the ACoW of all operations and any variations that may be required. If any variations are likely to be problematic with the tree's retention and/or stability, then the work will cease and discussion held with the Council's Tree Officer to find a mutually acceptable resolution.
2. Tree protection barriers can be removed to allow working access. Exposed soft ground will be protected by trackway matting (see image insert).
3. If deemed appropriate by the ACoW then trunk protection will be installed (see image insert).
4. Grass sward to be removed as necessary using hand tools or a turf stripper. Existing hard surfacing to be removed as per the method outlined in the associated section of this document.
5. No further excavation into underlying levels will occur without the approval of the ACoW.
6. Hand digging using hand tools / air lance to expose roots- adjust location of piles where necessary to minimise cutting roots greater than 25mm diameter, where it is necessary to sever roots greater than 25mm in diameter, advice from the project arboriculturist/ACoW must be sought.
7. Piles are then to be installed using mini-rig with very low ground pressure. Where this rig is to run on exposed soft ground, trackway matting will be used as ground protection.
8. Once the piles are in place, the structure will be fixed to the pile heads. Ground protection is to be retained during this process to provide working space and root protection.
9. Once the structure is in place, tree protection will be installed to protect any exposed RPA as deemed necessary by the supervision ACoW.
10. On completion of the task a record of the work will be circulated to the client for submission to the council as necessary.

**New Hard Surfacing**

To ensure that tree roots, within the ground under this proposed surface, continue to survive during and after construction, a geocellular confinement system (CCS) is proposed. The following is a guide to installation, not an engineering specification. It is critical that an engineer design this surface to ensure long-term durability.

Stages for installation of the cellular confinement surface:

1. Contact project arboriculturist to hold pre-start site meeting, a 'toolbox' talk before starting work and provide supervision throughout the process.
2. Remove any protection barriers to allow access and replace with ground protection in working area.
3. Remove existing grass sward to 50mm with hand tools or turf stripper only.
4. No further excavation whatsoever within RPAs.
5. Remove any existing hard surfacing (see section of method statement above)
6. Install a non-woven geotextile (such as Root-tex 3D) directly over soil grade level (levelled where necessary, by non-compacted washed sand) and fix in place.
7. Lay the cellular system (CCS) over the geotextile, which is secured open under tension during the infill process with steel staples or wooden pegs;
8. Install kerbs and edgings directly on top of the existing soil grade level. For light structures, a treated peg and board may be acceptable. For more substantial structures, railway sleepers, haunched concrete with road pins, drilled kerbstones, gabions or cast in situ kerbs will be appropriate;
9. Fill the cellular system ensuring any machinery works only on already filled areas. Typical infill consists of no fines angular granular material 20-40mm, which will remain uncompacted;
10. If required, cover with a non-woven geotextile (Root-tex 3D or similar).
8. If level increase require it, use additional layers of CCS.
9. Install porous wearing surface.

Any variation to the above specification must meet the following design criteria for low-invasive surfaces to provide the conditions for continued tree survival and growth:

- Maintain oxygen diffusion through the new surface to the rooting area (5-12% by volume)
- Maintain sufficient passage of water to the rooting area (12-40% by volume)
- Avoid compaction by maintaining a soil structure sufficient to sustain root growth (soil bulk density below 1.4g/cc)

Site analysis of the soil type and its structural characteristics will be required before determining the specific depth of products to be adopted, for example, footpaths normally require a depth of 75mm and, 100mm to 200mm depths are used for residential driveways, while greater depths may be required for the passage of heavier traffic such as for construction access and delivery vehicles.

If ground levels are to be raised more than 150mm this shall be achieved by the use of a granular material, which does not inhibit vertical gaseous diffusion. For example, no-fines gravel, washed aggregate, structural soil (min. 20% sand content) or cobbles.

**Raising of Levels in Soft Landscape Areas**

Where levels increases are approved within RPAs that are to be soft landscaped, this will be achieved using layers of CCS, installed as above.

The layers will be filled with the same 20-40 clean stone to allow water and gaseous throughput. The top layer will be filled with good quality topsoil and turf or planted as approved.

50cm offset from existing tree stems will be provided by the use of tree rings (design details to be submitted by others).

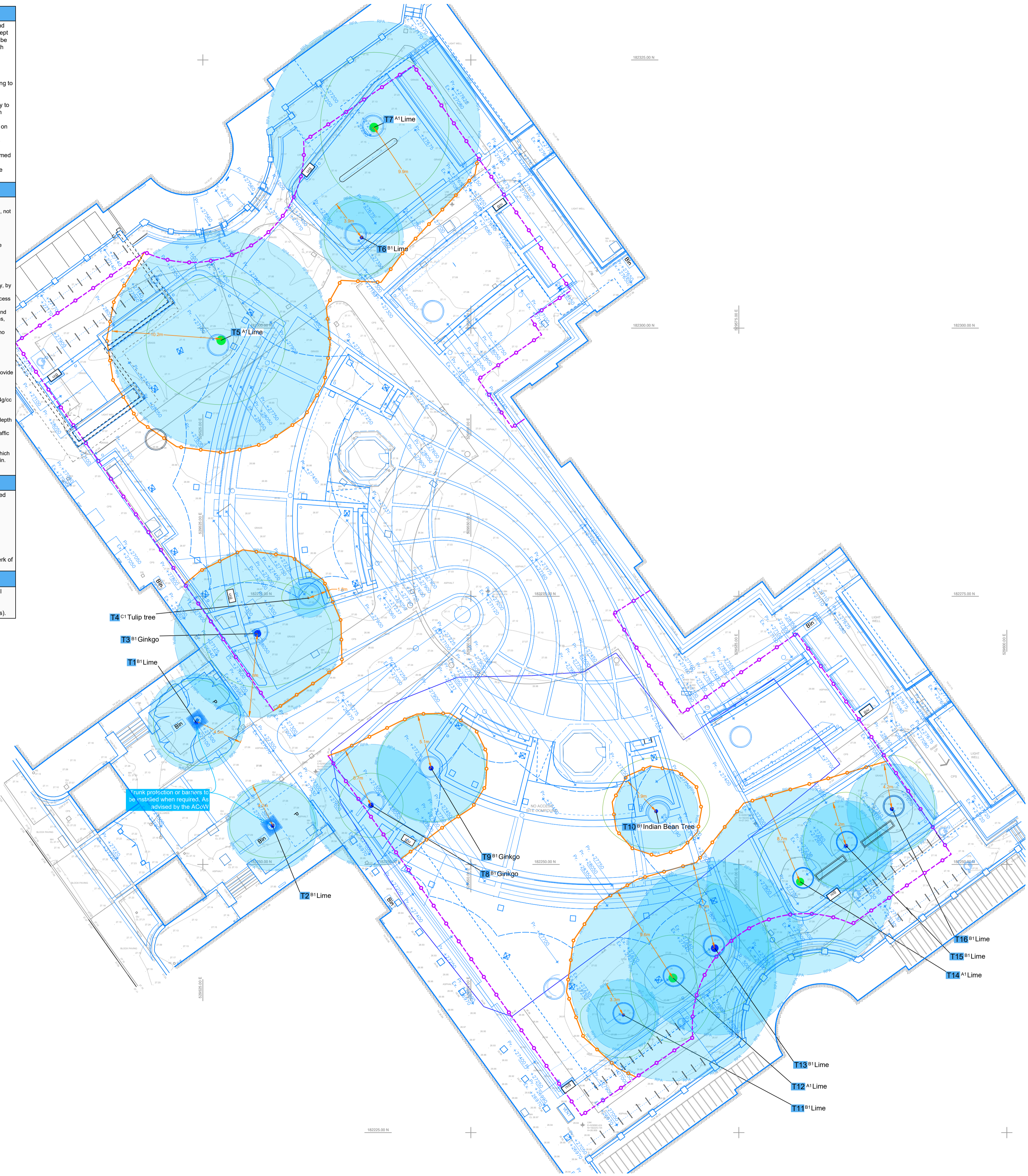
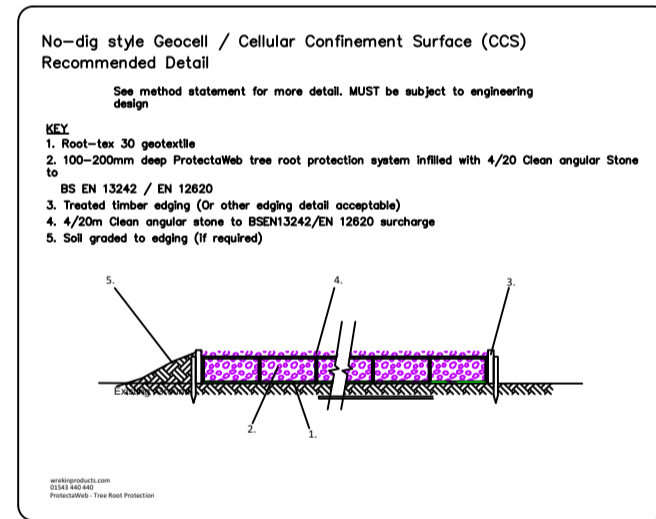
All work to raise levels in soft RPAs will be carried out under the supervision of the Arboriculturist Clerk of Works.

**New Trees in RPAs**

Excavation for tree pits in RPAs will be carried out by hand under the supervision of an Arboriculturist Clerk of Works.

The recommendations in BS 8545:2014 will be followed.

Planting pit design and tree species are detailed within the landscape proposals (submitted by others).



REV	DATE	UPDATES	DRAWN
1	21/02/2025	0.01	0.01



- Orange line: CEZ extent. To be protected with temporary protective barriers or ground protection to allow construction access. See insets and method statement for details.
- Purple line: Site hoarding. Allowing 2.5m access around site perimeter.

- Blue square: Tree ref/category/species
- Blue circle: Root protection area
- Green circle: Crown spread

- BS 5837:2012 Tree Quality Categories**
- Green circle: Category A - High quality
  - Blue circle: Category B - Moderate quality
  - Yellow circle: Category C - Low quality
  - Red circle: Category U - Unsuitable for retention
- This plan has been drafted in colour. A monochrome version must not be relied upon

**Tree Protection: Phase 2**

**UCL Main Quad,**  
Gower Street, London,  
WC1E 6AE

Date: 21/02/2025 Scale: 1:200 @A2

DWG Ref: **MW 2502.UCL.TPP**