

Arboricultural Method Statement

Site: 3a Upper Park Road, London, NW3 2JN
Date: 07/10/2024 **Revision:** 2 **CCL ref No:** 11774
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Client: Studio MCW

Tree Protection Barriers

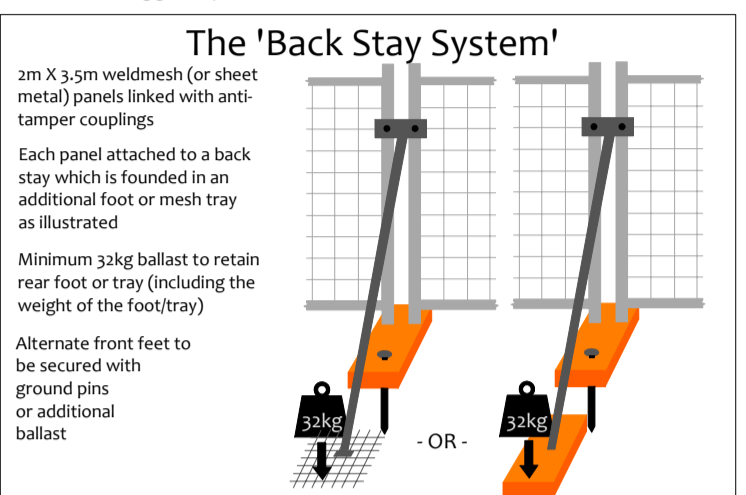
The purpose of tree protection barriers is to keep construction activity away from Restricted Activity Zones or Construction Exclusion Zones. They must be appropriate to the nature and proximity of activity within the site. The barriers must be erected prior to the commencement of all activity including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

The Back-Stay System

This system will be installed where indicated by a 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.

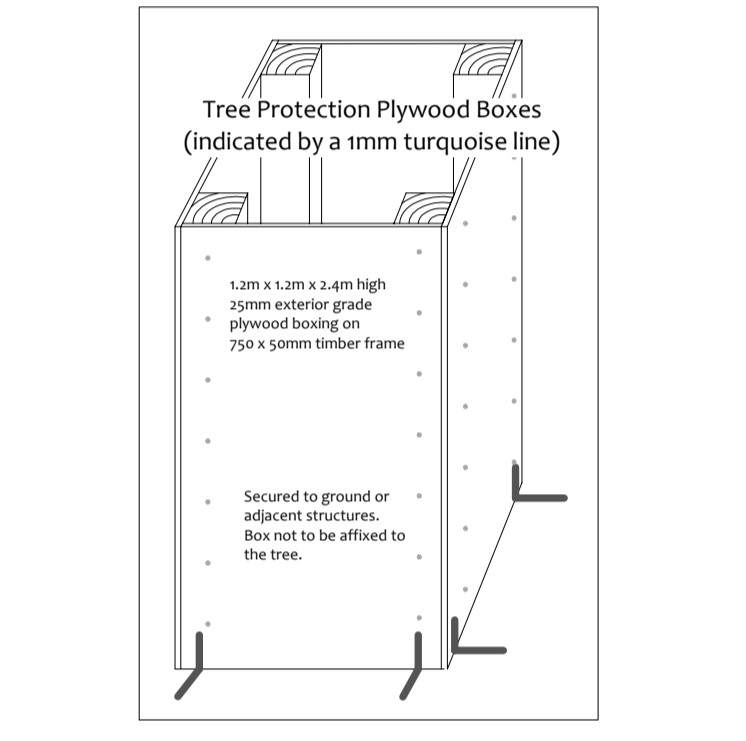
Within this system, weldmesh fencing panels (minimum height 1m) are affixed into rubber or concrete feet and clipped together with anti-tamper couplers. Two couplers should be used, spaced at least 1m apart. Alternate panels will be attached to a diagonal back stay connected to an additional foot or baseplate secured with ground pins or additional ballast. Where ground pins are not used, the total weight of the footplate plus ballast must total no less than 33kg.

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



Stem Protection – Timber Boxing

Where indicated by a turquoise square on the Tree Protection Plan, robust plywood boxing will be installed around the stem of T1. The plywood boxing specification is indicated in the diagram below. The actual size of the plywood boxing will be determined by the extent of the root flare at the base of the stem. The box shall be large enough to avoid contact with any part of the tree or its surroundings. No fixings shall be attached to any part of the tree. Instead, it shall be free standing or attached to the ground or adjacent structures (e.g. adjacent walls or fences).



Restrictions in Specific Zones

Restricted Activity Zone A

Within this zone, tree roots are likely to be present where access is required to facilitate 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 will also require a suitable load spreading surface.
- Removal of existing structures such as walls, steps and hard surfaces (where applicable) will be undertaken using hand tools only. The existing boundary wall adjacent T1 will be carefully demolished and pulled in a direction away from T1.
- When replacing the existing western boundary wall, no excavation will occur beyond the depth of the existing foundations. If foundations require replacing, all tree roots in excess of 25mm will be retained.
- Excavation for the proposed refuse store will be undertaken using hand tools only. Excavation for the proposed underground attenuation tank will not exceed a depth of 450mm and will be excavated using hand tools only.
- Excavation for the surface channel will not exceed a depth of 100mm, without prior consultation with the project arborist and a methodology agreed and approved by the local authority. Excavation to be undertaken using hand tools only.
- The existing driveway is to be replaced with permeable surfacing and stone storage. No excavation will occur beyond the removal of the existing surface.
- Any gardeners' walls to be installed will be constructed on a shallow pile and beam type foundation. Excavation will be undertaken using hand tools, and any tree roots with a diameter over 25mm will be retained intact and spinned over.
- Excavation for timber patio post holes shall be undertaken using hand tools only and will be positioned to avoid tree roots in excess of 25mm diameter. A void will be maintained between the underside of the decking and the ground to maintain rooting conditions. See further restrictions under the heading: **New Decking Posts**.
- No further changes to ground levels will occur.
- No further excavation will occur in this zone.
- No new permanent or temporary structures will be erected other than those shown on the planning application documents unless 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 50mm that need to be removed will be secured with secateurs.
- Storage of materials and spoil will be avoided in these areas 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) will be forbidden.
- No fires will be permitted.

Restricted Activity Zone B

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. piling). The specific method adopted will vary between contractors. However, the following restrictions will apply and must be adhered to:

- No excavation or ground disturbance will occur beyond the footprint of the basement.
- Where an excavator is used, it should operate from within the footprint of the basement, or from a suitable load spreading surface.
- The excavator or piling rig shall be marshalled to ensure no contact is made with any tree canopy.
- Any piling mat required shall need to be installed entirely above ground. If this requires additional stabilisation, using screw piles for example, trial excavation shall be undertaken in the presence of the project arborist to determine where such piles may be located to avoid all significant roots (i.e. roots over 25mm in diameter).
- In the case of piling, the project arborist shall oversee the initial 1m of excavation and shall ensure that any roots encountered are neatly pruned.

Restricted Activity Zone C

Within this zone it is proposed to excavate for the lower ground floor to a depth of 1.2m. The following restrictions will apply:

- No excavation or ground disturbance will occur beyond the footprint of the lower ground floor.
- The appointed arborist will oversee the initial excavation, to a minimum depth of 100mm along the edge of the proposed footprint, which should be undertaken using hand tools only.
- Any root severance that is required will be undertaken by the arborist present, who will use clean, sharp tools.
- If an excavator is required for the remainder of the excavation, it will operate from a suitable load-spreading surface. The excavator will also be marshalled to ensure no contact is made with any tree canopy.

Restricted Activity Zone D

In this zone, excavation is required for the upper ground floor. A section of the existing boundary wall is to be demolished and replaced with the outer-facing wall of the extension. The following restrictions will apply:

- No excavation will occur beyond the depth of the existing wall foundation.
- The new extension is to be constructed on a shallow raft/beam foundation.
- Excavation for the raft/beam will not exceed a depth of 200mm.
- Excavation and removal of any existing surfaces will be undertaken using hand tools.
- The raft/beam will be supported on screw piles. Before installing the screw piles, their approximate location will be decided, and the upper soils will be probed to ensure there are no significant tree roots directly beneath the surface.

Notices

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

Removal of Tree Protection Barriers

Removal of protective fencing or ground protection measures will only be done after all major construction work is complete and their removal has been approved by the appointed arborist.

Ground Protection Measures

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

Unless specified otherwise, ground protection will consist of 20mm 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.

Where engineers consider OSB boards to be inadequate (e.g. for large plant machinery) 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. CellwebTM).

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 will remain in place until all heavy construction activity is complete.

Construction Exclusion Zones

Within 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 heading - Tree Protection Barriers.
- These will remain in place at all times until all construction works is complete. The tree protection measures at the rear of the site will only be removed to enable landscaping works and installation of the proposed timber decking. At such times, ground protection measures will be installed, and excavation shall be limited to that required for new timber post holes.
- No other construction activity or excavation will occur unless agreed otherwise by the project arborist and local authority.
- 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.
- No fires will be permitted.
- All hazardous materials (including non-essential cement products) are forbidden.

Tree Works Specification

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

Tree Reference	Action Required	Notes
T6	Prune canopy back to the boundary.	Branches to be pruned back to a suitable branch junction or the branch collar wherever possible.

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



General Restrictions

Preparatory Works

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

Fires

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

Canopy Protection

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 marshalled in order to ensure that no branches are damaged.
- If materials require installation or delivery beneath tree canopies, this will 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 will be carefully marshalled in order to ensure that branches are not accidentally damaged.

Storage of Spoil and Materials

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 measures are adequate to ensure no soil compaction or contamination occurs. All hazardous materials (including non-essential cement products) will be forbidden.

Hazardous Materials

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. Otherwise, provision will be made to ensure that the mixing area is contained so that no water run-off enters the Root Protection Area of any trees (see diagram for example). 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 containers as specified by current COSHH Regulations, and kept away from Root Protection Areas.

Underground Services

Except for those detailed under Restricted Activity Zone A, no further underground services will be installed 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 will apply:

- Ground levels will be maintained as existing.
- Post holes will not exceed 300mm x 300mm.
- No post hole will be excavated within 1.0m of any tree stem.
- Post holes will 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 will be retained wherever possible.
- Roots in excess of 50mm will be pruned with sharp secateurs.
- Pruning will be minimal and only undertaken where absolutely necessary to facilitate the site hoarding. It will 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 will be sited outside of Construction Exclusion Zones and Restricted Activity Zones unless 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 apply:

- All services to and from site cabins will be installed above ground through any Root Protection Areas.
- No excavation will be undertaken within Root Protection Areas to enable cabins to be installed.
- The cabins will be founded on a suitable load spreading surface.

New Decking Posts

Where new decking is to be installed within Root Protection Areas, the following restrictions will apply:

- All post holes will be excavated by hand and kept as narrow as possible (maximum diameter 300mm).
- Exploratory post holes will be dug before committing to post / panel positions. If any roots in excess of 50mm are encountered, they are to remain intact and the post hole will 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 will be neatly pruned back with secateurs. This shall encourage healing and reduce the likelihood of infection.

Timing of Operations

Activity within the site shall be planned 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 pruning to be undertaken (see Header - Tree Works Schedule).
3rd.	Pre-Construction Phase	Install the tree protection barriers (fencing and ground protection boards - see Headers - Tree Protection Barriers and Ground Protection Measures).
4th.		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 (if necessary).
Protection measures confirmed acceptable by the Local Authority		
6th.	Demolition and Construction Phase	Demolish existing structures and remove existing surfaces where applicable.
7th.		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 / soil amelioration 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, new timber decking and any proposed tree planting.

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, i.e. demolition & soil stripping.	Project Manager, Site Manager, Project Arborist, relevant contractor, Tree Officer invited.	Tree protection fencing locations & specification checked. Ground protection measures checked. Contractor 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 Project Arborist and sent to the local authority free officer by the project manager.
Monthly Inspection and Reporting To occur once per calendar month throughout the entirety of the project until the local authority agree that tree protection measures may be removed.	Site Manager and Project Arborist.	Tree protection fencing locations & specification checked. Ground protection measures checked. Post reports, present and future needs - activities and adherence to Arboricultural Method Statement discussed and checked. Report on findings to be provided by the Project Arborist and sent to the local authority by the Project Manager.
Overseeing Basement Excavations in Restricted Activity Zone B. Excavations to be overseen by the project arborist.	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 Excavations in Restricted Activity Zones C and D. Initial Excavation to be overseen by the project arborist.	Site Manager and Project Arborist.	"Two weeks" notice to be given prior to commencement. Excavation to be 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.
Any other ground disturbance in Restricted Zones A and B. Including demolition, soil stripping, removal of hard surfaces, excavation for new surfacing, foundations, service trenches etc.	Site Manager, Project Arborist.	"Two weeks" notice to be given prior to commencement. Excavation to be as specified in this Method Statement. Mitigation measures to be employed specified by the project arborist. 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 & 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.

Personnel and Accountability

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

Position	Name	Contact Phone & email	Roles
Project Manager	TBC at Pre-Start Meeting	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	TBC at Pre-Start Meeting	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 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

Tree Data Schedule

Reference	Age & Species	Height (m)	Crown Spread (m)	Notes	Recommendations	Health	Priority	Quality	Value	Life Expectancy (yrs)	Retention Category
T1	London Plane	25	8 x 13	Position: Situated on third party land. Multi-stemmed at gn with a balanced crown. Managed by cyclic pollard. Occasional pruning wounds due to crown lifting (treating well). Defects: No significant defects observed.	No action required.	Good	1	Good	High	40+	B+
T2	Lime	9.5	6 x 3	Position: Situated on third party land. Multi-stemmed at gn with a balanced crown. Managed by cyclic pollard. Occasional pruning wounds due to crown lifting (treating well). Defects: No significant defects observed.	No action required.	Good	1	Good	Low	40+	C
T3	Lime	12	5 x 4	Position: Situated on third party land. Single stemmed and leaning with an unbalanced crown. Managed by cyclic pollard. Occasional pruning wounds due to crown lifting (treating well). Defects: Poor values where multi-stemmed. Acceptable condition at present due to heavy reduction. Tree displaying boundary wall.	No action required.	Good	1	Fair	Low	40+	C
T4	Horse Chestnut	16	3 x 9	Position: Currently situated on third party land, adjacent near boundary. Multi-stemmed at gn with a balanced crown. Managed by cyclic pollard. Occasional pruning wounds due to crown lifting (treating well). Defects: No significant defects observed. Retaining wall adjacent tree has collapsed in the past leaving roots exposed.	No action required.	Good	1	Fair	Moderate	20-40	B
T5	Pear	5	3 x 2	Position: Situated on third party land. Single stemmed and leaning with an unbalanced crown. Managed by cyclic pollard. Occasional pruning wounds due to crown lifting (treating well). Defects: Significant bark wounds to stem (acceptable condition at present).	Monitor.	Fair	1.5	Fair	Low	20-40	C
T6	Bay Laurel	5	1.5 x 1	Position: Situated on third party land. Multi-stemmed at gn with an unbalanced crown. No evidence of significant pruning. Defects: Limited inspection, dimensions estimated.	No action required.	Good	1	Good	Low	40+	C

Tree Protection Plan

BS 5837 Root Protection Area (Sometimes not included on the Tree Protection Plan to avoid confusion with restricted zones)

T1 = Tree No 1 G2 = Group No 2 H3 = Hedge No 3

Tree Retention Categories
Stems & Canopies shown

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

Tree Retention Categories
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.

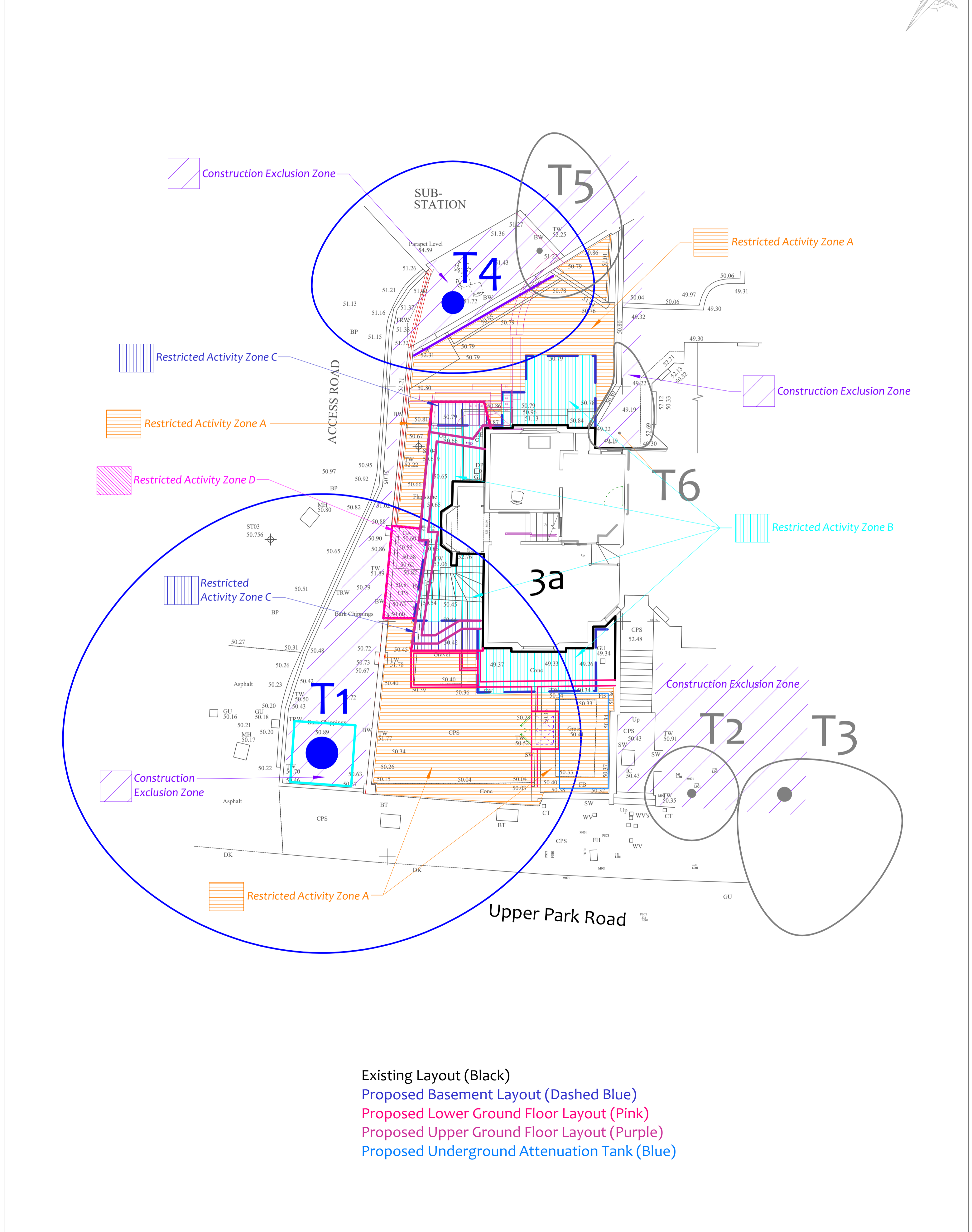
Category A tree
Trees of moderate quality with a life expectancy of 20+ years. Usually mature trees, or younger trees with good form. Retention of these trees is desirable though less than Category A trees.

Category C tree
Unremarkable trees of low quality and form. Individual specimens are not considered to be a material planning consideration.

Category U tree
Trees unsuitable for retention due to their very poor condition.

Drawing No: **CCL 11774** / TPP Rev: 2
 Title: **Tree Protection Plan**
 (Existing Layout with Proposals Overlaid)
 Site: **3a Upper Park Road, London, NW3 2JN**

Scale: 1:100 Paper Size: A1



Existing Layout (Black)
 Proposed Basement Layout (Dashed Blue)
 Proposed Lower Ground Floor Layout (Pink)
 Proposed Upper Ground Floor Layout (Purple)
 Proposed Underground Attenuation Tank (Blue)