

| Tree Reference | Age & Species                    | Height (m) | DBH (cm) | Crown Spread (m) | W   | E   | Notes   | Recommendations (Dependent on any development proposals) | Vigour | Amenity Value |
|----------------|----------------------------------|------------|----------|------------------|-----|-----|---|--|--------|---------------|
| T1             | Semi-Mature Apple<br>Malus sp.   | 4.5        | 2        | 1.5              | 3.5 | 1.5 | Position: Situated on third party land. Form: Single stemmed and vertical with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.                          | No action required.                                      | High   | Low           |
| T2             | Semi-Mature Apple<br>Malus sp.   | 4          | 2        | 1.5              | 3.5 | 2   | Position: Situated on third party land. Form: Single stemmed and vertical with a slightly unbalanced crown. History: Occasional pruning wounds due to crown reduction. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated. | No action required.                                      | High   | Low           |
| T3             | Semi-Mature Apple<br>Malus sp.   | 3.5        | 2        | 1.5              | 3.5 | 2   | Position: Situated on third party land. Form: Single stemmed and vertical with a balanced crown. History: Multiple pruning wounds due to crown reduction. Defects: No significant defects observed. Other: Limited inspection, dimensions estimated.              | No action required.                                      | High   | Low           |
| T4             | Semi-Mature Cherry<br>Prunus sp. | 3          | 1.5      | 1.5              | 1.5 | 1   | Form: Twin-stemmed at 0.5m with a slightly unbalanced crown. History: No evidence of significant pruning. Defects: No significant defects observed. Other: Recorded stem diameter is equivalent for 3 stems (20cm, 6cm).  | No action required.                                      | High   | Low           |
| T5             | Semi-Mature Lime<br>Tilia sp.    | 8          | 3        | 2.5              | 3.5 | 3.5 | Position: Street tree. Form: Twin-stemmed at 1.5m with a balanced crown. History: No evidence of significant pruning. Defects: No significant defects observed.   | No action required.                                      | High   | High          |

**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 installed on all times.

Any existing hard surfacing may be retained and reinforced (where applicable and adequate), otherwise suitable new ground protection measures shall be installed. The ground protection shall need to be able to adequately spread the load of construction traffic. Where existing hard surfacing is to be retained, it shall not be necessary to install additional ground protection measures. However, the hard surfacing must be firm enough to spread the load of any traffic passing overhead.

Where only pedestrian traffic will occur, the ground protection measures may be as simple as timber 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 any light vehicles are to operate (e.g. barrows, trolleys or occasional cars), thick wooden boards or scaffold planks should also suffice, though at least 15mm 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 road mats over a compression resistant layer such as 150mm of woodchip or 100mm of a 3D cellular confinement system infilled with 50mm angular gravel (e.g. ColwellTM).

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 to be replaced with a new hard surface.

**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 3m shall pass beneath the canopy of any tree without being carefully marshalled in order to ensure that no branches are damaged.
- If materials require insulation 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 prevent soil compaction or contamination occurs. All hazardous materials (including non-essential cement products) shall be forbidden.

**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 run-off cannot enter Root Protection Areas, then no further special measures are required. Otherwise, provision shall be made to ensure that the mixing area is contained so that no water run-off enters the Root Protection Area of any tree (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.
- Post holes shall not exceed 300mm x 300mm.
- No post hole 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 50mm 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 (2013).

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 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.

**Scaffolding**

If scaffolding is required in areas containing ground protection measures, the protective boards shall need to remain in situ and be strengthened and established 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 Removal**

**Retention Category C:** It is proposed to remove the following Retention Category C trees/shrubs: T4, 2m tall dogwood, 3m tall apple and the 3m tall shrub. These trees/shrubs are located within the footprint of the proposal or grow so close to the access into the site, that their retention is not possible.

These are all relatively small trees/shrubs (maximum height 3m, maximum diameter 9cm). They are located within a rear garden and are not visible from public vantage points. Consequently they are considered to have a low amenity value. Their removal shall not have a significant impact on the visual amenity of the locality and they are not considered to be a material planning consideration. The four below photographs show the vegetation within the rear garden.



**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 authorized 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 forbidden.
- 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 construction activity.

| Tree Reference  | Action Required                    | Notes   |
|---|------------------------------------|---|
| T4, 3m tall shrub, 3m tall Crab Apple and 2m tall Dogwood | Remove.                            | Stumps of trees within the RPAs of retained trees shall be removed with a stump grinder NOT a mechanical excavator. |
| T1 and T2   | Prune canopy back to the boundary. | Branches to be pruned back to a secondary branch junction or the branch collar wherever possible.                   |

**Restrictions in Specific Zones**

**Restricted Activity Zone A**

Within this zone trees 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 150mm. 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 150mm diameter, they shall be retained wherever possible and protected with damp packing during times that they are unearthed. Any roots in excess of 10mm 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.

**Restrictions in Specific Zones Continued**

**Restricted Activity Zone B**

Within this zone it is proposed to excavate for the lower ground floor. Either contiguous piling (or sheet piling) shall be installed along the edge of the lower ground floor, or an alternative method shall be adopted which does not disturb soils beyond the footprint of the lower ground floor (e.g. piling). A typical method of piling would be to excavate to a specified depth (e.g. 1m), install sheet piling and then cast the concrete lower ground floor walls. Then to excavate short sections beneath this wall and cast deeper concrete. Then to excavate in between these deeper sections and fill with concrete. In this manner excavation may continue to any specified depth without disturbing soils beyond the footprint of the build.

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

- No excavation or ground disturbance shall occur beyond the footprint of the lower ground floor or the site boundary.
- Where a small excavator is used, it shall operate from within the footprint of the lower ground floor.
- The excavator or piling rig shall be marshalled to ensure no contact is made with any tree canopy.



**Timing of Operations**

Activity within the site shall be phased according to the following chronology:

| Order | Phase             | Activity  |
|-------|-------------------|---|
| 1st.  | Pre-Construction  | Planning conditions relating to trees to be identified and discussed with the Project arborist and site manager.  |
| 2nd.  | Pre-Construction  | All specified tree removal and pruning to be undertaken (see Header -Tree Works Schedule).  |
| 3rd.  | Pre-Construction  | Install the ground protection boards where applicable (ground protection boards - see Header -Ground Protection Measures).  |
| 4th.  | Pre-Construction  | Pre-Commencement site meeting: Tree protection measures 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.  | Pre-Construction  | Arboricultural Method Statement to be revised and approved. Protection measures confirmed acceptable by the local authority   |
| 6th.  | Construction      | Demolish existing structures and remove existing surfaces where applicable.   |
| 7th.  | Construction      | Install new buildings, hard surfaces and services taking into account restricted activities as specified in this Arboricultural Method Statement.   |
| 8th.  | Post-Construction | Remove the ground protection boards where applicable.   |

**Site Monitoring Schedule**

| Inspection  | Site Attendees  | Comments  |
|---|---|---|
| <b>Pre-Start Desk-top</b><br>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><br>After tree works completed & tree protection barriers / ground protection measures installed. Further protection measures / restrictions agreed. Demolition & soil stripping. | Site manager, project arborist, Tree Officer invited. | Tree protection fencing locations & specification checked. Additional ground protection measures installed. Prior to any other activity, inc. |
| <b>Intermediate Inspection and Reporting</b><br>Throughout the demolition and external construction phase.  | Site manager and project arborist.*                   | Project manager, site manager and project arborist to liaise regarding any issues which may affect trees. To occur at least once per month.   |

\* 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  |
|---------------------------|--------------------------|--|--|
| <b>Project Manager</b>    | 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. |
| <b>Site Manager</b>       | 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.  |
| <b>Project Arborist</b>   | Crown Tree Consultancy   | 08000 14 13 30<br>0203 797 7449<br>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.                         |
| <b>Local Authority</b>    | London Borough of Camden | Tree Team<br>020 7974 4444<br>planning@camden.gov.uk     | Liaising with the project arborist and project manager regarding tree protection issues relating to planning conditions.   |
| <b>Additional Contact</b> | Insert Details           | Insert Details   | Insert Details   |
| <b>Additional Contact</b> | Insert Details           | Insert Details   | Insert Details   |

