

#### ARBORICULTURAL METHOD STATEMENT:

52-54 Avenue Road

London

NW8 6HS

#### **INSTRUCTING PARTY:**

Private Client c/o Domvs London 33B Ransomes Dock Business Centre Parkgate Road London **SW11 4NP** 

#### **REPORT PREPARED BY:**

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: DML/52AVR/AMS/01

**Date:** 5th May 2023

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#### 1.0 Introduction

1.1 Purpose & Use of the Method Statement

1.1.1 This method statement has been prepared for Domvs London's client, for assistance with the discharge of planning conditions at 52-54 Avenue Road, London NW8 6HS: London Borough of Camden planning permission no.: 2022/1863/P. The document will address the following condition:

#### **Tree Protection**

Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during construction work shall be submitted to and approved by the local planning authority in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction" and shall makes reference to the points raised in section 8.2.8 of the Arboricultural Impact Assessment by Landmark Tree dated 6th May 2022 ref. DML/52AVR/AIA/01d.

All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details.

**Reason:** To ensure that the development will not have an adverse effect on existing trees and in order to maintain the character and amenity of the area in accordance with the requirements of policies A2 and A3 of the London Borough of Camden Local Plan 2017.

1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.

1.1.3 Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

#### 1.2 Terms of Reference

- 1.2.1 We (LT) are instructed by the client to prepare a method statement for proposed development based on the above planning application with reference to BS 5837:2012 Trees in Relation to Design, Demolition and Construction.
- 1.2.2 For this purpose, the client has supplied us with a site survey plan (TS21-451-1-2D) and the consented drawings (floor plans, structural drawings, Construction Management Plan etc.) as found on the council's website. We are also reliant upon our own impact assessment report DML/52AVR/AIA/01d and plan overlays of tree constraints contained therein.

## 1.3 Development Proposals & Potential Impacts

1.3.1 The principal proposals are for: Demolition of existing dwelling and erection of three, 3 storey buildings over part lower ground/basement, comprising total of 12 townhouses (12 x 3 bed), together with associated landscaping and installation of new access gate onto Avenue Road.

## 1.4 Sequence of Works

- 1.4.1 The sequence of works will be as follows:
  - initial tree works felling, stump grinding and pruning for working clearances
  - installation of underground services
  - installation of Tree Protection Barrier (TPB) & ground protection
  - demolition of existing building & landscaping
  - main construction
  - removal of TPB
  - hard landscaping
  - soft landscaping

These works and their arboricultural implications are outlined in sequence below

# 1.5 Site Supervision

- 1.5.1 On this site, a site manager will be nominated to be responsible for all arboricultural matters on site. A pre-commencement site briefing/meeting between the site manager and arboricultural consultant will be held (see Table 1 below). The site manager's details will be issued to the London Borough of Camden in the minutes / site monitoring report for this meeting. During this meeting all the tree protection methods below will be studied and familiarization with requirements of this AMS. The site manager will also:
  - be present on site for the majority of the time;
  - have the authority to stop any work that is causing, or has the potential to cause harm to any tree;
  - be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities;
  - make immediate contact with the Arboricultural consultant in the event of any tree related problems occurring, whether actual or potential, in accordance with a tree protection protocol (see section 1.6 below).

Tel: 0207 851 4544

1.5.2 At this stage, the nominated Key Personnel are as follows:

Adam Hollis **Arboricultural Consultant**Landmark Trees
info@landmarktrees.co.uk

## 1.6 Site Monitoring

- 1.6.1 Landmark Trees are to be retained as Arboricultural Consultants responsible for site monitoring for the duration of the development. As noted above Adam Hollis MSc (Arb) is the key contact, with monitoring occasionally undertaken by Ross Gamblin MArborA (subject to any new staff intake). Site supervision will be undertaken by a qualified and experienced arboriculturalist at predetermined and agreed time intervals as indicated in Table 1 below. In addition to specific task supervision, routinel monitoring of protection measures will be undertaken, coordinated where practical with visits detailed in Table 1.
- 1.6.2 Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification (2 weeks) and agreement to supervise any agreed works within the RPA, in accordance with table 1 below.
- 1.6.3 A tree protection protocol for contingencies will be integrated into the site induction process at a pre-commencement meeting involving the developer, the arboricultural consultant, the site manager and the Council tree officer as appropriate. The protocol will be that, in the event of any unplanned incursion / accident / spillage within the RPA, the site agent should notify (by telephone) the retained arboricultural consultant immediately. The consultant will provide advice and attend site as soon as possible. This may require the stoppage of all or part of the works in the vicinity of the tree. The consultant will notify the LPA Tree Officer of the nature and extent of damage, the mitigation strategy and likely prognosis. The contact details of the LPA Tree Officer are:

Tom Little / Nick Bell Tel: 0207 974 4444

Tree and Landscape Officers (Planning)
London Borough of Camden
tom.little@camden.gov.uk

1.6.4 The site monitoring sheet in Appendix 3 will be used to provide photographic evidence, indicate the remedial action required and timescales for remediation completion. The consultant and officer will further liaise as necessary (perhaps meeting on site) until the officer is satisfied that protection measures are again satisfactory. The action in response to incidents will be commensurate with and appropriate to the nature of any such incident. Any breach of the stipulated timescale for remediation will trigger a further monitoring report.

- 1.6.5 Supervision will require the arboricultural consultant to be present during the key elements of proposed incursions into the protection areas, and likewise for any unplanned incursions which the LPA have approved. If the arboricultural consultant is satisfied and that the specific task is proceeding in accordance with the methodology set out in the AMS, after an appropriate briefing, the supervision for the task may be reduced to telephone and email contact between the site manager and arboricultural consultant. Ongoing routine site monitoring continues as per Table 1.
- 1.6.6 The Local Authority will be accorded free access to the site subject to H&S requirements; as noted at 1.6.3, any problems will be reported directly to Arboricultural consultant, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation. As noted in Table 1 below, a final sign-off visit will be carried out at the end of the development and a formal letter sent to both the client and the London Borough of Camden indicating an end to the monitoring period. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection.
- 1.6.7 Landmark Trees will be instructed to provide the above monitoring. In the absence of routine payment (as per our business terms), routine monitoring will cease (temporarily or permanently) and the London Borough of Camden will be informed of the cessation of monitoring. The client will also reserve the right to dismiss Landmark Trees and replace with another arborist, but must inform the London Borough of Camden.

**Table 1: Site Monitoring Visits** 

Supervision Visit No:	Details	Lead in Time Required by LT	Action
Visit 1: Pre-Development Site Inspection (S.2.3 of AMS) To be repeated prior to Construction Phase	<ul> <li>To include Site Agent briefings (S.1.5) prior to both demo AND construction phases.</li> <li>To confirm position of protective fencing and that it has been erected in accordance with AMS (S.2.2 and Tree Protection Plan in Appendix 4);</li> <li>To check any pre-demolition/construction ground protection is in place.</li> <li>To check any tree works have been undertaken in accordance with this AMS (S.2.1. and Appendix 1).</li> <li>Determine if further tree work is required and seek required permission if necessary.</li> <li>To check site facilities/access are in accordance with the AMS (S.3.3).</li> </ul>	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days of site supervision visit (Site Monitoring Sheet in Appendix 3).
Visit 2: Demolition of existing structure / landscaping	<ul> <li>Attend any demolition activities where supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification.</li> <li>Date to be confirmed following formal project planning.</li> <li>2 weeks prior notice required.</li> </ul>	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days as per visit 1
Visit 3: Installation of piling within RPA (S3.7)	<ul> <li>Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification.</li> <li>Date to be confirmed following formal project planning.</li> <li>2 weeks prior notice required.</li> </ul>	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days as per visit 1
Ongoing Monitoring Visits	<ul> <li>Periodically during 12 months (or longer) of entire project and prior to construction phase.</li> <li>Attend site to confirm protective measures are still in place / can be removed at appointed times. Ensure attendance is timed for any other key elements of proposed (and any other unplanned) incursions into the protection areas.</li> <li>Pre-start landscape meeting with main contractor to confirm ongoing tree protection measures.</li> </ul>	TBC as project develops	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days as per visit 1
Final Site Visit - Completion of construction phase supervision visit (S.5)	After it has been confirmed that the construction phase is complete, allow removal of temporary protective fencing and ground protection. Specify any remedial work if necessary.	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days as per visit 1

# 2.0 Pre- Development Site Preparation

#### 2.1 Arboricultural Works

- 2.1.1 All works must be carried out by a competent arborist in accordance with BS 3998: 2010 and any other prevailing good professional practice including BS 8545:2014 Trees: from nursery to independence in the landscape. Recommendations.
- 2.1.2 Specific works recommended to facilitate development are the felling of the 20 trees listed in Appendix 1 and the pruning of T5, T27 and T30 (also listed in Appendix 1).

#### 2.2 Installation of Tree Protection Barrier

- 2.2.1 The Root Protection Area (RPA) indicates the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. The default position is for the RPAs to be fully fenced off to form the boundary of the Construction Exclusion Zone (CEZ), an area based on the RPA, from which access is prohibited for the duration of the project, including the storage of any works materials and equipment.
- 2.2.2 A Tree Protection Barrier [TPB] comprising steel mesh panels of 2.4m in height ('Heras') shall be erected to protect retained trees. These panels will be mounted on a scaffolding frame as shown in Figure 1 below (this is also Figure 2 of BS5837: Trees in Relation to Design, Demolition and Construction in paragraph 6.2.2.2). T5, T26 and T27 will be separated from the construction traffic by the site hoarding along Elsworthy Road. This hoarding shall be at least 19mm in thickness, no part of this hoarding may be affixed to the trees themselves.

- 2.2.3 The TPBs are to be erected before any work (other than tree surgery) commences on site, are to remain 'in situ' undamaged for the duration of all work or each phase, and only to be removed once all work is completed. If any work is deemed necessary prior to the erection of fencing a Landmark Trees representative should be informed to enable their presence to oversee the work being carried out.
- 2.2.4 The location of the RPAs and TPBs are shown in the Tree Protection Plans at Appendix 4.

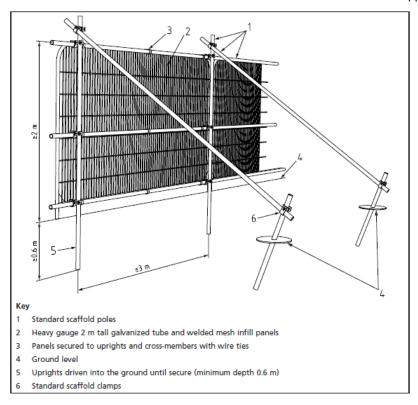


Fig. 1 Tree Protection Barrier Specification (Source: Figure 2 from BS5837 - Default specification for protective barrier)

## 2.3 Ground Protection

2.3.1 Extant areas of RPA that cannot be fenced off and therefore lie outside the CEZ must be protected with fit-for-purpose ground protection. The location and type of ground protection is shown in the Tree Protection Plans at Appendix 4. As per paragraph 2.2.3, this ground protection is to be installed before any work (other than tree surgery) commences on site, is to remain 'in situ' undamaged for the duration of all work until the landscape phase and only to be removed once all construction work is completed.

2.3.2 In order to provide a sufficient level of protection to unfenced parts of RPAs, a minimum of 100mm deep concrete will be poured onto the existing surface (to within 0.5m distance from the front of the piling line). The extent of this pour will be defined by shuttering to prevent overspill. Where the existing surface is permeable, a HDPE liner or equivalent will be employed. This concrete layer will remain in situ until the completion of construction works and the site being handed over to specialist landscaping contractors. It is imperative that the site manager closely control site access following the removal of this ground protection to avoid the compaction of soil. It is ESSENTIAL that a briefing is held with the retained arboriculturalist prior to removal of the ground protection.

## 2.4 Soil Mitigation

2.4.1 As per paragraph 5.3b of BS5837, mitigation measures to improve the soil environment that is used by a tree for growth should be provided when RPAs are encroached. In this instance, this will take the form of the addition of a 75mm layer of mulch to be applied to soft ground within the Construction Exclusion Zone of affected trees. This layer of mulch will be maintained in place throughout the duration of construction activities.

## 3.0 Development Phase

- 3.1.1 The following general precautions will apply:
  - No fires shall be made on any part of the site, or within 20m of any tree to be retained.
  - No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
  - No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
  - No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
  - No storage of materials shall be made within the protective fences.
  - No breaching or moving of the protective hoarding without the approval of an arboriculturist.
- 3.1.2 The procedures for dealing with variations and incidents are detailed in S1.6.

## 3.2 Working within Root Protection Areas (RPA)

- 3.2.1 Although the default position is to exclude all construction activity from the RPA, this degree of protection is not entirely possible on the site: it is necessary to perform some works (in part) within the RPA i.e. demolition of existing building and hard landscaping, installation of services and construction of new buildings and hard surfacing.
- 3.2.2 All involved parties will need to be made aware of the deficiencies. In these instances, careful and supervised working, as described in sections S. 3.4 (services), S. 3.6 (demolition), S. 3.7 (construction) and S. 3.8 (landscaping) will be required.

## 3.3 Site Access, Accommodation & Storage

- 3.3.1 Site access will be as per the layout within our Tree Protection Plan (Appendix 4). Site accommodation and material storage will utilise the site interior away from tree RPA.
- 3.3.2 Delivery lorries will be excluded from RPAs by fencing / hoarding and ground protection. Adequate allowance must be made for vehicle heights and ground clearance, where tree canopies overhang access routes. Any further pruning for working clearances must be discussed first with the arboriculturalist; once agreed in principle these works should be approved by the appropriate tree officer and approved in writing by the LPA.

## 3.4 Routing & Installation of Services

- 3.4.1 Drawing 2673 SKC003 P1 shows foul water and surface water perforated drain runs within the RPAs of T's 5, 10 and T27. It will be necessary for the provisions of NJUG Vol.4 to be adopted for this installation, namely that all excavations are carried out manually under arboricultural supervision. Roots encountered shall be retained, being kept damp by wrapping in hessian until the trench is backfilled.
- 3.4.2 In order to avoid the removal of physical tree protection measures whilst construction activities are taken place, the installation of the services detailed above will be carried out prior to machinery being brought onto site or the commencement of any other works other than tree surgery.

## 3.5 Changes in Grade

3.5.1 No changes in level are proposed beyond the basement excavation itself, and any direct effect of employing a no-dig construction technique for the drive on the Avenue Road frontage.

#### 3.6 Demolition Measures.

- 3.6.1 Demolition of structures will proceed with due caution to avoid unnecessary damage to trees.
- 3.6.2 All plant and vehicles engaged in demolition works (removals only) will either operate outside the RPA, or work from within the existing built structure and hard standing, near trees. It will be necessary to undertake demolition inwards within the footprint of the existing building (often referred to as "top down, pull back").
- 3.6.3 Should levels of dust build-up on trees occur, it may be necessary to seek the advice of Landmark Trees on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.

#### 3.7 Construction Measures

Detailed method statements and risk assessments will be obtained from all specialist subcontractors involved in the new build and these will be scrutinised by the site agent to ensure the AMS requirements have been considered therein.

- 3.7.1 The limits of the basement piling line along the Elsworthy Road boundary will be pre-excavated by a mini-digger using a toothless bucket to a min. 1m depth. The operations will be directly supervised by a banksman who will ensure any roots encountered over 25mm diameter are retained until consultation with the retained arboriculturalist.
- 3.7.2 A tower crane will be installed within the centre of the site, well away from retained tree canopies and RPAs.
- 3.7.3 During the construction phase and throughout dry periods on site regular hosing down will be carried out to control dust pollution. In the event of dust build up on trees occurring arboricultural advice will be sort and if necessary remedial measures such as hosing down the trees will be taken.
- 3.7.4 Where scaffolding needs to be installed within the RPA the proposed 100mm concrete slab will provide sufficient ground protection.
- 3.7.5 Footings for the bicycle store partly within the RPA of T8 will be manually pre-excavated and root-pruned (as applicable) under arboricultural supervision. In the unlikely event of discovering roots >25mm diameter, they may only be cut in consultation with the retained arboriculturalist and with the approval of the Local Authority Tree Officer.

- 3.8 Removal of Ground Protection & Post Construction Landscaping & Treatment
  - 3.8.1 The tree protection may be removed upon completion of the construction phase and any site machinery has been removed from the RPA.
  - 3.8.2 The new roadway within the RPA of T8, T10 and T12 will require installation using a no-dig methodology in accordance with the provisions detailed below.
  - 3.8.3 Method Statement Specifications for no dig paving construction:
    - i. Remove surface vegetation or treat with suitable herbicide to level under the supervision of the project Arboriculturist
    - ii. Fill any hollows in the exposed ground with no fines 4/20mm clean angular stone.
    - iii. Place TRP4000 geotextile over the area to be protected ensuring a minimum overlap of 300mm.
    - iv. Allow adequate drainage as a separation layer between soft subgrade and GEOWEB® infill material
    - v. Mark out the area to be protected with edging detail e.g. Timber boards / treated railway sleepers or Greenfix Recycled Plastic Edgings
    - vi. Roll out TRP4000 geotextile to cover the area to be protected
    - vii. The Greenfix Geoweb® system is available in 5 depths for varying traffic loadings but each site should have a specific design detailed to ensure the correct depth of product is used. However, unless the existing ground conditions are very soft and have an extremely low CBR then the following can apply:
      - a. 75mm for Pedestrians, Cycleways, and vehicles up to 1.5 tons
      - b. 100mm for Cars, 4 Wheel Drives, Vans etc up to 6 tons
      - c. 150mm for Fire Appliances, Removal Vehicles and Dust Carts up to 20 to 30 tons
      - d. 200mm for construction vehicles, cranes etc 40 tons and above
      - e. 300mm For extra heavy construction use Cranes, Piling Rigs etc.
    - viii. It is important to ensure the correct Geoweb cell size and cell depth are specified and installed based on the anticipated pavement loads. These are calculated based on the following criteria:
      - a. Traffic type and loading
      - b. Frequency of traffic
      - c. Subgrade strength (typically CBR, Ev2, Cu or SPT values)
      - d. Infill type
      - e. Type of surfacing (i.e. tarmac, block paving, grass / gravel pavers etc)
      - f. Allowable settlement of the pavement (if necessary)

- ix. Insert x 4 equally spaced steel pins along the width of the first panel
- x. Expand Geoweb sections over the area to be protected and use temporary stakes or weights to hold sections open to prevent movement during infilling
- xi. Pin along the length of the panel and along each side to achieve this
- xii. If full panels are not being used, then ensure the cells have been expanded to their full dimension.
- xiii. The Geoweb panels can be cut to shape if required with a heavy-duty Stanley Knife
- xiv. Connect adjacent sections using ATRA® Keys. Position the sections so the slots are aligned, insert the key, and turn 90 degrees locking the panels together. ATRA® Keys provide a long-term connection that is safer, quicker, and stronger than staples or cable ties. In environmentally protected areas (SSSI in United Kingdom), ATRA® Keys can be used without the requirement for diesel-fuelled compressors
- xv. Using 4/ 20mm or 40/20mm clean angular stone to Bs EN 13242 and 12620 (depending on cell depth being used)
- xvi. For permeability, infill the fully connected Geoweb system with a well graded, angular stone such as a 4/20mm or 40/20mm clean angular stone.
- xvii. Allow 30mm overfill for any settlement of the stone into the cells during installation
- xviii. If the area is to be trafficked immediately slightly increase the amount of surcharge overfill to a max 50mm over the Geoweb with 4/20mm or 40/20mm clean angular stone
- xix. Consolidate the fill material with conventional plant or non-vibratory plant when required. Fill should be maintained above the Geoweb system by a minimum of 10mm at all times or a permanent wearing course of blocks, porous asphalt or gravel installed.
- xx. The Geoweb TRP system can be surfaced with the materials listed below.

# **Block Paving**

- Place TRP1000 geotextile separation fabric over the filled Geoweb.
- Lay sand / gravel bedding material as per manufacturer's recommendations.
- Place porous / standard blocks as per manufacturer's instructions. (Such as Brett Paving)

## Porous and Standard Asphalt.

- Slightly surcharge the Geoweb with 30mm of 4/20mm or 40/20mm clean angular stone.
- Place Base and wearing courses of Asphalt as per manufacturer's instructions.

#### **Resin Bound Gravels**

- Place TRP1000 geotextile separation fabric over the filled Geoweb.
- Lay Asphalt carpet and resin bound gravel to the required thickness and as per manufacturer's instructions.
- 3.8.4 For technical data on the Geotextile membrane and the Geoweb cellular confinement system always refer to the manufactures guidelines for design and implementation. Further technical advice can be gained from the manufacturer:

Greenfix Soil Stabilisation and Erosion Control Specialists
Old Manor Farm-Yard Beckford Road
Ashton-Under-Hill
Evesham
Worcestershire
WR11 7SU
01386 881493

info@greenfix.co.uk

- 3.8.5 The number, species, form and size of new plants and other landscaping detail will be specified within a landscape plan.
- 3.8.6 New trees will be containerised (i.e. grown in a container for at least one season after being lifted), ideally in an air pot, and will have well-established radial root growth including a substantial amount of fibrous rooting within the container. There shall be no circling or girdling roots present.
- 3.8.7 The trees will be of the size specified, true to type and free from discernible pests and diseases. If formative pruning has been carried out, the wounds shall have healthy and continuous bark occlusions. In case of any doubt, the recommendations of BS8545: 2014 Trees: from nursery to independence in the landscape Recommendations will be adhered to.
- 3.8.8 Before any landscaping works are carried out, there shall be a site meeting between (as a minimum) the retained arboriculturist and the landscaping manager to discuss tree protection measures. During this meeting, the soil condition shall be assessed and remedial measures specified as appropriate.

- 3.8.9 All landscaping and associated ground works within RPA will be carried out manually and carefully with due regard for soil and root protection, avoiding changes of ground levels or deep digging. Mechanised cultivation must not be used within any RPAs. If existing soft vegetation is to be removed, this shall be done using hand tools only.
- 3.8.10 Individual planting pits shall be dug by hand for trees and shrubs, there shall be no trench planting.
- 3.8.11 The planting pits of trees shall be square and dug to a diameter at least 500mm greater than the diameter of the root ball. The pit shall be deep enough to accommodate the depth of the root ball to the root collar. Should the sides and bottom of the pit be smeared or compacted, they shall be loosened with a fork to facilitate root penetration.
- 3.8.12 Trees and shrubs shall be planted so that the root collar is level with the finished level of the surrounding soil.
- 3.8.13 Planting pits will be backfilled with the excavated soil following the removal of stones and any foreign objects. This backfilling will be carried out in stages of approximately 150mm depth to allow for light consolidation of the backfill throughout the depth of the planting pit. No air pockets shall be left within the pit.
- 3.8.14 Trees shall be secured in place by being tied to double stakes of pressure-treated, peeled timber.
  The ties used shall be biodegradable and will be located at a height of not more than one-third of the clear height of the stem.
- 3.8.15 After planting, all trees and shrubs shall be watered slowly under low pressure until the soil around the trunk and an area equivalent to a circle 1000mm in diameter around it is thoroughly moistened.
- 3.8.16 All newly planted trees and shrubs shall be watered at least once a fortnight between March and October. This frequency will be increased according to rainfall and temperature.
- 3.8.17 An area equivalent to a circle 1000mm in diameter around the stems of all newly planted trees shall be mulched with bark or well-rotted woodchip to a depth of 75mm. This mulch should not be laid in direct contact with tree stems. This mulched area shall be hand-weeded once every fortnight between March and October. Any mulch disturbed during this process will be replaced.
- 3.8.18 Tree stakes and ties will be removed within 18 months of planting.

# 4.0 Summary of Proposed Methods

# 4.1 Table of Impacts and Mitigation

4.1.1 The table below summarises the main areas where trees could become damaged by the proposed development and the methods that need to be adopted in order to prevent such damage:

Table 2: Summary of Proposed Methods

<u>Impact</u>	<u>Mitigation</u>	<u>Reference</u>	Trees Affected
General site access, material storage etc.	Ground protection to acceptable standards.	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 4	All retained trees
Demolition of existing structures within RPA	Pull back technique within RPA	Section 3.6	T26 & T27
Damage to roots caused by basement excavation within RPA.	Manual excavation of outer limits of basement within RPA to 1m depth with pre-emptive root pruning	Section 3.7	T5 & T27
Damage to roots caused by provision of new hard surfacing	No-dig construction	Section 3.8	T8, T10 & T12

## 5.0 Completion

## 5.1 Completion Meeting

5.1.1 Following completion of the works listed above, a Landmark Trees consultant will conduct a walkover survey of the trees to review any defects or signs of ill-health, and inform the local authority in a final report as per Table 1. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection. A separate LT post-development tree inspection is recommended to facilitate a constructive meeting.

# Signed

Alle .

Adam Hollis
MSc Arb FAborA MICFor HND Hort
Chatered Forester

Chatered Forester Fellow & Registered Consultant of Arboricultural Association

.....

Adam Hollis MSc ARB MICFor FArbor A MRICS C Env 5th May 2023

For and on behalf of Landmark Trees

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#### **APPENDIX 1: ARBORICULTURAL WORKS**

## Notes for Guidance:

# 1, 2, 3 - Urgent (ASAP), Standard (within 6 months), Non-urgent (2-3 years)

- Pre-emptive root pruning of foundation encroachments under arboricultural supervision.

CB - Cut Back to boundary/clear from structure.

CL# - Crown Lift to given height in meters.

CT#% - Crown Thinning by identified %.

CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).\*

CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)

DWD - Remove deadwood. Fell - Fell to ground level.

FInv - Further Investigation (generally with decay detection equipment).

Pol - Pollard or re-pollard.

Mon

- Check / monitor progress of defect(s) at next consultant inspection which should be <18 months in frequented areas and <3 years in areas of more occasional use. Where clients retain their own ground staff, we recommend an annual in- house inspection and where practical, in the aftermath of extreme weather events.

Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

<sup>\*</sup>Not generally specified following BS3998:2010

Tree No.	English Name	Height	Crown Spread		Crown Spread		Ground Clearance	B.S. Cat	Comments	Works Recommended to Facilitate Development
T1	Bay	6	3	4	4	3.5	1.5	C1	Bifurcated from 0.2m, compression union.	Fell
T2	Silver Birch	13	3	2	4	2	3	C2	Crown offset from base. Poor form.	Fell
Т3	Common Lime	19	5	8	5	1.5	2	Major deadwood in crown. Crown distorted due to group		Fell
T4	Common Lime	22	6	8	5	4	4	4 B1 Ivy on stem. Minor deadwood , epicormic growth		Fell
T5	London Plane	21	11	7	8	13	5.5	A1	Historically reduced.	CB / CL to provide constructional clearance
Т6	Silver Maple	20	10	10	10	4	1.5	B1	Ivy on stem. Epicormics on stem. Historical limb failure point at 10m, north side, minor localised dieback. Crown bias to east. Bifurcated from 2.5m.	Fell
T7	Sycamore	15	4	1	2	3	4	C2	Crown distorted due to group pressure. Self set.	Fell
Т9	Common Lime	18	5	1	4	2	2	Ivy on stem. Major deadwood in crown. Historically pollarded with extensive and advanced decay set in at old topping point. Minimal holding wood remaining after a stem failure.		Fell
T11	Unknown	2.5	0	0	0	0	0	U	Dead.	Fell
T13	Common Lime	14	3	1	3	3	1	C2  Ivy on stem. Epicormics on stem. Major deadwood in crown. Historically pollarded, codominant but has lost leader and is decaying out at failure point, leaving remaining stem susceptible to further failure.		Fell
T14	Common Lime	21	4	6	4	4	1	B1	Ivy on stem. Epicormics on stem. Major deadwood in crown. Historically pollarded. Minor lean in main stem to south.	Fell

Tree No.	English Name	Height	Crown Spread		Crown Spread		Crown Spread		Ground Clearance	B.S. Cat	Comments	Works Recommended to Facilitate Development
T15	Tree of Heaven	19	6	1	9	5	4	B2	Ivy on stem. Poorly formed tree with crown offset from base. Bias to north and east.	Fell		
T17	Unknown	3	3	1	3	3	2	C2	Ivy on stem. Dieback in crown.	Fell		
T18	Tree of Heaven	18	3	1	7	6.5	4	C1	Ivy on stem. Dieback in crown. Low bud/leaf density. Major deadwood in crown. Uniformly thin crown with reduced leaf size and density. Tree in physiological decline.	Fell		
T19	Portugal Laurel	8	1	3	3	3	2	2 C2 Ivy on stem. Crown distorted due to group pressure. Trifurcated from 0.5m, suppressed.		Fell		
T20	Common Lime	19	4	6	6	6	2	B1	Epicormics on stem. Historically pollarded and subsequently reduced, ivy clad.	CB 2m		
T21	Common Lime	20	6	4	4	5	1.5	B2	Ivy on stem. Epicormics on stem. Major deadwood in crown. Historically pollarded and subsequently reduced. Heavy bias to north. Lifted and cut back on south side. Codominant from c 1.5m. Poor resulting form.	Fell		
T22	Leyland Cypress	17	0	3	2	2	5	C2	lvy on stem. Forming joint crown with adj group. Over lifted.	Fell		
T23	Leyland Cypress	17	6	1	4	3	5	B2	lvy on stem. Forming joint crown with adj group. Bifurcated from 1.2m, arf DBH .	Fell		
T24	Leyland Cypress	17	1	6	3	3	6	C1	Ivy on stem. Overlifted on south side, poor resulting form. Forming joint crown with adjacent trees.	Fell		
T25	Cherry Plum	7	5	3	2	2	1	C2	Ivy on stem. Dieback in crown. Crown distorted due to group pressure. Suppressed form.	Fell		
T27	London Plane	21	8	9	9	10	3.5	A1	Well formed tree. Part reduced on north and east side of crown.	CB 2-3m		
T30	Cypress, Leyland	11	4	4	4	4	2.5	C2	Co-dominant stems, included bark in main stem unions, consented for felling, not removed yet	CB 2.5m		

Tree No.	English Name	Height	Ó	Crowi	n Sprea	ad	Ground Clearance	B.S. Cat	Comments	Works Recommended to Facilitate Development
T31	Pine, Austrian	10	3	4	4	3	2.5	B/C2	Remote survey only, Redband needle blight (marked increase since 2014)	Fell

## **APPENDIX 2: GENERAL GUIDELINES**

- 2.1 All work must be to BS 3998:2010 'Recommendations for tree work'.
- 2.2 Staff carrying out the work must be qualified, experienced and ideally be Arboricultural Association approved contractors, and will be covered by adequate public liability insurance.
- 2.3 Any defects seen by a contractor or the client that were not apparent to the consultant must be brought to the consultant's attention immediately.
- 2.4 No liability can be accepted by the consultant in respect of the trees unless the recommendations of this method statement are carried out under the supervision of a Landmark Trees consultant.
- 2.5 It is advisable to have trees inspected by a consultant regularly. On this site it is recommended that these inspections are made every year.

# **APPENDIX 3: SAMPLE SITE MONITORING SHEET**



# **Site Monitoring Report Sheet**

Client:				Planning Ref:	
Local Authority:				Date:	
Site Address:				·	
Proposal:					
Visit Checklist		Y/N			Y/N
Tree protection barrier place	(TPB) in		TPE	3 as per approved	
Ground protection (GF	) in place		GF	as per approved	
TPB / GP breached				es damaged	
Site Agent briefed by L	T				
LT briefed by Site Agen	†				
LPA informed					
Remedial action requir	ed				
Comments					
Recommendations					
Outcome					
1					
2					
3					
Δ					

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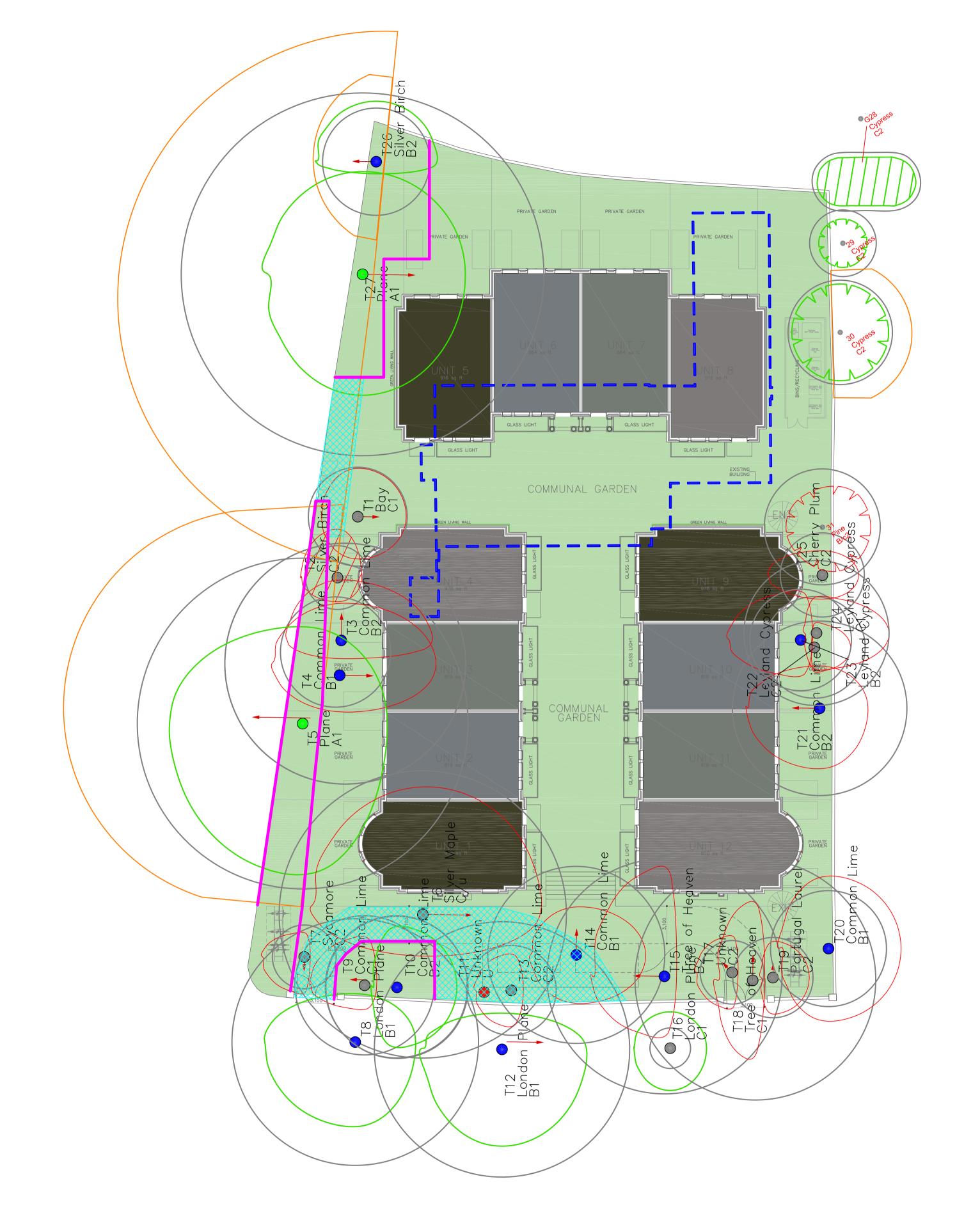




**Arboricultural Supervision Sign off Checklist** 

Tree No (s)	Project Phase	Task	Date Completed	Signed (Project arboriculturist)	Signed (Site Manager)
	Pre- commencement	Pre-commencement site meeting to include site manager briefing (S.1.5)			
	Pre- commencement	Confirm the location and specification of the protective measures is in accordance with AMS & Tree Protection Plan (TPP)			
	Pre- commencement	Confirm any tree works have been undertaken in accordance with this AMS (S.2.1/ App 1) and determine if further tree work is required			
	Pre- commencement	Seek required permission for further tree works if necessary.			
	Installation of any new services	Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS (S3.4) to ensure work is undertaken in accordance with NJUG provisions or other specification.			
	Demolition	Demolition of hard surfaces/ structures within RPA (S3.6) Confirm position of any additional temporary ground protection and that temporary ground protection is in accordance with AMS.			
	Completion of Demolition	Sign off of the demolition phase			
	Construction	Supervised manual excavation of foundations			
	Construction	Installation of 'No Dig' hard surfacing			
	Construction	Additional excavations (if required)			
	Completion of Construction	Completion of construction			
	Post Construction	Removal of machinery and materials from site			
	Post Construction	Dismantle & removal of protective measures			
	Landscaping	Completion of Landscaping			
	Project Completion	Sign off from project arboriculturist			

# **APPENDIX 4: TREE PROTECTION PLAN**



Proposed Ground Floor Plan



underground services.

Category C
Low Quality

concrete slab

Category U
Trees Unsuitable for Retention
Ground Protection: 100mm

This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for

Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.

Root Protection Areas (RPA) are derived from stem diameter measured at 1.5 m above adjacent ground level (taken on sloping ground on the upslope side of the tree

1:200@ A1

May 2022

Tree Position Approximate (not shown on original survey)

Tree Felled To Facilitate

Tree Protection Fencing

Development

analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of

