

**91 SOUTH END ROAD,  
HAMPSTEAD, LONDON**

**ARBORICULTURAL METHOD  
STATEMENT**

A Report to: Lathams Architects

Report No: RT-MME-130553

Date: March 2019



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## REPORT VERIFICATION

This study has been undertaken in accordance with British Standard 5837:2012 "Trees in relation to design, demolition and construction - Recommendations".

Report Version	Date	Completed by:	Checked by:	Approved by:
Final	01/04/2019	Dean Moore Dip Arb (Senior Arboricultural Consultant) & Fiona Shuttle BSc (Arboricultural Project Officer)	Duncan Smith BSc (Hons) MArborA Principal Arboricultural Consultant	Dr Katy Read CEnv, MCIEEM, MCIWEM (Executive Director)

## DISCLAIMER

The contents of this report are the responsibility of Middlemarch Environmental Ltd. It should be noted that, whilst every effort is made to meet the client's brief, no site investigation can ensure complete assessment or prediction of the natural environment.

Middlemarch Environmental Ltd accepts no responsibility or liability for any use that is made of this document other than by the client for the purposes for which it was originally commissioned and prepared.

## VALIDITY OF DATA

The findings of this study are based upon the data provided by the client (listed within Table 1.1, Section 1.1). If the development proposals change then this report will require updating to ensure that all aspects are covered within this document and the trees are adequately protected during the development.

## NON-TECHNICAL SUMMARY

Middlemarch Environmental Ltd was commissioned to compile an Arboricultural Method Statement in respect of the proposed development of land at 91 South End Road, Hampstead in London.

The proposed development of the site is to remove the existing conservatory, construct a new extension to the existing residential building and to undertake levelling works in the front garden to provide greater accessibility and light to the lower ground floor.

This document has been prepared to provide the information necessary for discharge of Condition 4 of the Planning Permission which states:

*"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". 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."*

Section 2 of this report details the specific measures to be adopted to ensure the protection of retained trees during the proposed development.

The site contractor must ensure that they read and understand all the information within Section 2 prior to commencement of any onsite works.

It should be noted that, as detailed in Section 2.17, a pre-commencement site meeting should be arranged between the contractor, Project Arboriculturist and any other interested party. Additionally, the following works within the site should be completed under the supervision of the Project Arboriculturist:

- Hedgerow Translocation (if required).
- Reinstatement of the flagstone path using no-dig construction methods.

The Project Arboriculturist for the development is:

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## 1. INTRODUCTION

### 1.1 PROJECT INTRODUCTION

In March 2019 Lathams Architects commissioned Middlemarch Environmental Ltd to compile an Arboricultural Method Statement in respect of the proposed development of land at 19 South End Road, Hampstead in London.

Middlemarch Environmental Ltd has previously carried out a combined Preliminary Arboricultural Assessment and Impact Assessment for Lathams Architects at this site. The findings of this survey are detailed in Report Number RT-MME-129555-01.

It is understood that the site will be the subject of a planning application for a new extension to the existing residential building and levelling works.

This document has been prepared to provide the information necessary for discharge of Condition 4 of the Planning Permission which states:

*"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". 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".*

Table 1.1 details those drawings and documents, in addition to the Middlemarch Environmental Ltd Report referred to above, that have been considered during the preparation of this document.

Author	Title	Drawing Number	Date
Lathams Architecture + Urbanism Ltd	Proposed Site Plan	7304 (08) 04	24/07/18
Mapmatic	Measured Building Survey	2634	01/05/18
London Borough of Camden	Decision Notice (Town and Country Planning Act 1990 (as amended))	N/A	12/03/19

**Table 1.1: Drawings and Documents Considered**

## 1.2 SITE DESCRIPTION

The site under consideration is the residential dwelling at 91 South End Road, located on the western fringes of Hampstead, London. The site is roughly rectangular in shape and extends to approximately 0.05 ha in size, centred on Ordnance Survey Grid Reference TQ 271 857.

The northern site boundary lies adjacent to South End Road, whilst all other boundaries are bound by neighbouring residential properties and gardens. The wider landscape is dominated by a mixture of residential development and recreational parks, including Hampstead Heath which is located approximately 20m north of the northern site boundary at its nearest point.

At the time of the survey, the site comprised a residential building with a front and rear garden containing amenity grassland and several trees which were predominantly located adjacent to the garden boundaries.

The location of the trees under consideration can be found on Middlemarch Environmental Ltd Drawing Number C129555-01-01.

## 1.3 TREE RETENTION AND REMOVAL & PRE-DEVELOPMENT TREE WORKS

Several trees are to be removed as part of the proposed landscaping works on the site and to achieve the approved development. The trees to be removed are identified on the Tree Protection Plan Drawing Number C130553-01 and are identified in Table 1.2 below.

Tree No.	Species	BS5837 Category
T1	Apple	C
T2	Fig	C
T3	Leyland cypress	C
T4	Silver birch	B
T5	Holly	C
T10	Privet	U

**Table 1.2: Trees to be Removed**

Overall six trees are to be removed to achieve the approved development and the proposed landscape works. In addition to the tree removal one hedgerow will be temporary translocated into temporary pots while works are being carried out. Once the works are complete, the hedgerow will be replanted it its current position adjacent to the northern boundary.

The specific working practices to be adopted during all tree works are specified in Section 2.20.

## **2. ARBORICULTURAL METHOD STATEMENT**

### **2.1 INTRODUCTION**

The following sections of this report detail the specific measures to be adopted to ensure the protection of retained trees during the proposed development.

The site contractor must ensure that they read and understand all the following sections prior to commencement of any onsite works.

### **2.2 CONSTRUCTION EXCLUSION ZONE**

The Construction Exclusion Zone is the area considered necessary to ensure that the tree roots and canopy are protected from damage during the construction processes. The extent of the exclusion zone is based upon guidance within BS5837:2012 'Trees in relation to design, demolition and construction – Recommendations' the diameter of the stem of each tree (when measured at a height of 1.5m from ground level) in combination with the canopy spread of the tree is considered.

The exclusion zones are to be defined on site throughout the course of the development using protective barriers as described below.

The Construction Exclusion Zones are always to be afforded protection. No works that cause compaction of the soil or severance of tree roots, except where undertaken in accordance with the guidance provided within this document, will be undertaken within any exclusion zone.

### **2.3 PROTECTIVE BARRIERS**

The protective barriers will be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site or the stripping of soil commences. Signs will be installed on the protective barriers to inform site staff of responsibilities and these will include the headings listed in Appendix 1.

The locations of the protective barriers to be installed are shown on the Tree Protection Plan; Drawing Number C130553-01.

The protective barriers are to be constructed in accordance with the specification detailed in BS5837:2012 (Figure 2; Appendix 2). Any variation to the specification of the protective barrier will be agreed with the Local Planning Authority Arboricultural Officer.

The Construction Contractor will inform and forward photographs of the erected fencing to the Project Arboriculturist when the protective barriers have been installed. The Local Planning Authority will be notified in writing once confirmed.

The barriers will remain in place until completion of the development and then they will only be removed with the consent of the Local Planning Authority to permit completion of the scheme.

Other than works detailed within this method statement or approved in writing by the Local Planning Authority no works, including storage or dumping of materials, shall take place within the Construction Exclusion Zone as defined by the protective barrier.

### **2.4 GROUND PROTECTION**

It is not been determined what the loading of the temporary access route is likely to be at this stage, however, ground protection must be capable of supporting the expected loads and avoid compaction and damage to the soil. In this respect the following examples provide adequate suspension of loads within the RPA of retained trees. The ground protection might comprise one of the following:

1. For pedestrian movements only, a single thickness of scaffold boards placed either on top of a driven scaffold frame, so as to form a suspended walkway, or on top of a compression-resistant layer (e.g. 100 mm depth of woodchip), laid onto a geotextile membrane.

2. For pedestrian-operated plant up to a gross weight of 2 t, proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150 mm depth of woodchip), laid onto a geotextile membrane.
3. For wheeled or tracked construction traffic exceeding 2 t gross weight, an alternative system (e.g. proprietary systems or pre-cast reinforced concrete slabs) to an engineering specification designed in conjunction with arboricultural advice, to accommodate the likely loading to which it will be subjected.

## **2.5 PRECAUTIONS IN RESPECT OF TEMPORARY WORKS**

If temporary access is required to the exclusion zone or the RPA of a retained tree then such access will only be gained after consultation with Project Arboriculturist and/or the Local Planning Authority (see Section 2.17 for contact details).

## **2.6 ACCESS DETAILS**

### *Construction Vehicles*

It is understood that construction traffic will not be accessing the site.

### *Pedestrians*

It is understood that pedestrian access to the site during construction will utilise the existing entrance and be confined to the Tree Protection Barriers.

## **2.7 CONTRACTORS CAR PARKING**

Contractor's car parking is to be located offsite. No car parking will be present within the Construction Exclusion Zone.

## **2.8 SITE COMPOUND**

At time of writing, the need for a site compound had not been confirmed, but if required, the site compound will be located outside of the Construction Exclusion Zone and its establishment will not cause harm to retained trees.

## **2.9 STORAGE SPACE**

At time of writing, locations for storage of materials on site had not been formally identified however, due to the constrained nature of the site the materials are most likely to be in the front garden on top of the proposed ground protection.

## **2.10 INFRASTRUCTURE REQUIREMENTS**

At time of writing, details of proposed underground services are not available, however, the nature of the site is such that new underground services are unlikely to pass through the RPAs of retained trees and that connections will be made into existing services in areas outside of the Construction Exclusion Zone.

If any underground services are to be installed within the RPA of a retained tree, then the Project Arboriculturist will be consulted (see Section 2.17 for contact details). The methodology for the installation, maintenance or removal of any services within an RPA will be in accordance with NJUG Volume 4 'Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees'. This will include hand-dug "broken" trenches to ensure that maximum protection is given to tree roots.



## **2.11 DEMOLITION, HARD SURFACE REMOVAL & REMOVAL OF STRUCTURES**

There are no existing buildings, structures or hard surfaces present on site that require demolition or removal within the Construction Exclusion Zone defined by protective fencing, or within the Root Protection Areas (RPAs) of retained trees.

## **2.12 NEW HARD SURFACES**

No new hard surfaces are proposed for construction with the RPA of any retained tree on the site.

## **2.13 SITE GRADIENTS**

It is understood that, to prevent damage occurring to retained trees, no alterations of soil level will take place within the exclusion zones as defined by the protective barriers. If site gradient alterations within the RPA of any retained tree are required then the Project Arboriculturist will be consulted for advice (see Section 2.17 for contact details).

## **2.14 CONSTRUCTION OF STRUCTURES WITHIN THE RPA/CONSTRUCTION EXCLUSION ZONE**

### *Garden Path*

The existing garden path is currently in a state of disrepair and needs to be re-laid. The current flagstone path needs to be carefully lifted, to ensure no damage to the tree roots occurs. Once all the flagstones have been lifted no unnecessary access is to be made in this area. It is understood that no excavations will take place but where possible the levels will be increased with sand to allow the desired level to be achieved. Once the path is at the desired level the flag stones will be laid from the garden side.

## **2.15 SOFT LANDSCAPING**

Any soft landscaping within the exclusion zone will be undertaken by hand. A 500 mm radius from any tree trunk will remain uncovered by turf or other planting to allow penetration of water and air into the soil.

## **2.16 USE OF HERBICIDES**

Any herbicide used during the development works shall be systemic, spot applied, and mixed according to manufacturers' recommendations.

## **2.17 ON SITE MONITORING REGIME & CONTACT DETAILS**

All operations will be monitored by the main contractor. The main contractor will ensure that all works within this document are followed (this will be built into the contract specification).

If any issues arise in relation to the retained trees the Project Arboriculturist will be contacted for advice. The Project Arboriculturist for the development is:

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### *Induction and Personnel Awareness*

Details of tree protection and methods of working around trees will be included within site inductions to new members of site staff.

A copy of this document and the related Tree Protection Plan will be kept on site and accessible to staff.

### *Monitoring/Audits*

A pre-commencement site meeting will be arranged between the contractor, Project Arboriculturist and any other interested party. During this meeting all outstanding items will be finalised and these will be communicated to the Local Planning Authority as required.

### *Works Requiring Arboricultural Supervision*

The following aspects of the development will be completed under supervision of the Project Arboriculturist:

- Hedgerow Translocation.
- Reinstatement of the Flagstone path.

## **2.18 USE OF SUBCONTRACTORS**

The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

## **2.19 CONTINGENCY PLAN FOR SOIL CONTAMINATION**

Water will be readily available on site and will be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact the Project Arboriculturist for advice.

## **2.20 REMEDIAL TREE WORKS AND TREE REMOVAL**

All tree works are to be completed prior to commencement of construction works and installation of the protective barriers. The trees to be removed are detailed in Table 1.2.

All tree works are to be completed by suitably qualified and insured arboricultural in accordance with *BS3998:2010 'Tree Work – Recommendations'*.

Where the removal of tree stumps is required, and the works will be undertaken within 15 m of any retained tree then they will be ground out using a proprietary stump grinder and they will not be removed by winching or mechanical excavation.

The following methodology, adopted from BS8545:2014, should be adhered to throughout the translocation of suitable hedgerow/trees in order to maximize the likelihood of successful transition.

### *Hedgerow/Tree Translocation: Before Care*

1. Ground conditions should be assessed prior to any excavation works commencing. In particular, the ground should not be waterlogged, excessively dry or frozen.
2. Tree pits will be excavated within the receptor site to match the approximate Root Protection Areas (RPAs) of translocated trees. Consideration should be given to variables such as soil structure, texture and pH, all of which have the potential to impact on the development of young trees.
3. Tree pits should have a diameter of at least 75 mm greater than the RPA of translocated trees and be no deeper than the existing rootball of the trees.

### *Hedgerow/Tree Translocation: Unearthing and Replanting*

4. Excavation of trees identified for translocation should be carried out using hand-held tools. The earth around the RPA of each tree should be dug out and the rootball preserved as fully as possible, with a minimum of four major lateral roots and evenly distributed fibrous roots present.
5. Following excavation, exposed rootballs should immediately be covered with damp hessian and remained covered until re-planting. At all times following wrapping, the wrapped root system should be kept fully irrigated.

6. Trees should be transferred to tree pits as soon as possible after excavation. Hessian wrapping should be removed beforehand and the backfill medium used should be as close as possible, in texture and structure, to the soil excavated from the tree pit (if not actually the excavated soil).
7. Backfill should be added gradually, in layers of 150 mm to 230 mm depth, ensuring the tree is held upright, and firmed at each stage to eliminate air pockets under and around the root system.

*Hedgerow/Tree Translocation: After Care*

8. Immediately after planting, the tree pit should be saturated to field capacity and mulch applied, if deemed necessary.
9. Should above ground support be required, the use of tree stakes and ties is recommended, with stakes driven into the ground to a sufficient depth to provide full support for the tree. The length of time such support is left in place will vary depending on the specimen, but should in all cases be removed as soon as possible.
10. Following translocation, irrigation and formative pruning should be undertaken at regular intervals to assist in the transplanting process. The frequency of these works should be determined through consultation with the Project Arboriculturist.

All tree translocations should be supervised by the Project Arboriculturist and completed prior to any construction works commencing on site. Translocation works should ideally be carried out during the dormant season, typically identified as between early November and March.

## **2.21 RESPONSIBILITIES**

It will be the responsibility of the main contractor to ensure that the planning conditions attached to the planning consent are adhered to at all times and that a monitoring regime in regard to tree protection is adopted on site.

The main contractor will be responsible for contacting the Local Planning Authority should any issues are raised related to the trees on site.

If pruning works to trees are required at any time, then permission must be sought from the Local Planning Authority first and then the works must be carried out in accordance with *BS3998:2010 'Recommendations for Tree Work'*.

The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective barriers will remain in position until completion of all construction works on the site.

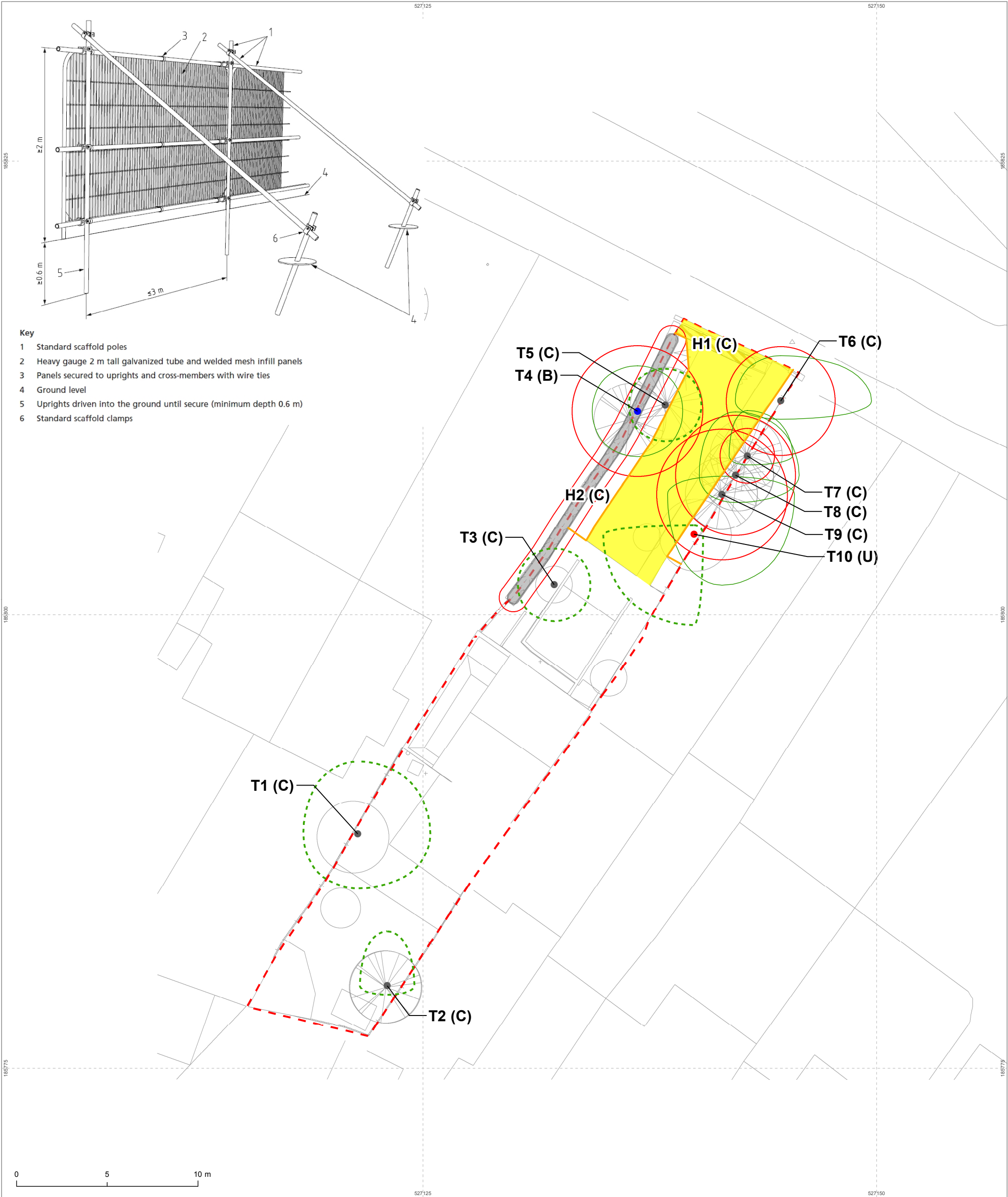
The barriers and signs will always be maintained in position and checked on a regular basis by a designated person on site.

## **2.22 GENERAL PRECAUTIONS**

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 m of the trunk of any tree that is to be retained. No fires will be lit within 20 m of the trunk of any tree that is to be retained.

### **3. DRAWINGS**

Drawing Number C116827-01 - Tree Protection Plan



**Legend**

- Category B tree
- Category C tree
- Category U tree
- Category C group
- Hedgerow to be temporarily translocated
- Current canopy - tree to be removed
- Current canopy - tree to be retained
- Root protection area
- Tree protection barrier (BS 5837:2012)
- Ground protection
- Site boundary
- Proposed plan

Project 91 South End Road, Hampstead, London	
Drawing Tree Protection Plan	
Client Lathams Architects	
Drawing Number C130553-01	Revision 00
Scale @ A3 1:200	Date March 2019
Approved By DM	Drawn By GT

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C130553-01

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NJUG Volume 4 (2007) Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees.

## APPENDICES

APPENDIX 1: Headings for Protective Barrier Notices and Example Protection Sign

APPENDIX 2: Details of Protective Barrier

## **APPENDIX 1**

Headings for Protective Barrier Notices



### **Root Protection Area (RPA) Model Notice**

DON'T excavate within this area

DON'T use any form of mechanical plant with this area

DON'T store materials, plant or equipment within this area

DON'T move plant or vehicles within this area

DO contact the Local Authority Arboricultural Officer or owner of the tree if excavation within this area is unavoidable

DO protect any exposed roots uncovered within this area with dry sacking

DO backfill with a suitable inert granular and top soil material mix as soon as possible on completion of work

ANY WORK in this area requires a permit from the Local Authority Arboricultural Officer



**PROTECTIVE FENCING. THIS  
FENCING MUST BE  
MAINTAINED IN ACCORDANCE  
WITH THE APPROVED PLANS  
AND DRAWINGS FOR THIS  
DEVELOPMENT.**



**TREE PROTECTION AREA  
KEEP OUT !**

**(TOWN & COUNTRY PLANNING ACT 1990)  
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY  
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A  
TREE PRESERVATION ORDER.  
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY  
LEAD TO CRIMINAL PROSECUTION**

**ANY INCURSION INTO THE PROTECTED AREA MUST BE  
WITH THE WRITTEN PERMISSION OF THE LOCAL  
PLANNING AUTHORITY**

## APPENDIX 2

### Details of Protective Barrier

Figure 2 Default specification for protective barrier

