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# ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

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8 Inglewood Road, London, Camden, NW6 1QZ

Report by

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*FdSc. MArborA*

On the instructions of Chiltern Hill Properties LLP

Wednesday, 10 July 2024

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## 1 Report summary

- 1.1 MMEEnvironmental Ltd was instructed by **Chiltern Hill Properties LLP** to provide BS5837 compliant tree survey and Arboricultural Report to accompany the planning application for the site at **8 Inglewood Road, London, Camden, NW6 1QZ** to develop **basement extension**.
- 1.2 Total number of **6** trees was identified from which **No** tree of High Quality (A Category) ; **2** trees of Medium Quality (B Category); **4** trees of Low Quality (C Category) and **No** trees Unsuitable for retention (U Category).
- 1.3 **No** trees require removal to facilitate the proposal.
- 1.4 **T001 RPA is currently occupied by existing foundation and hard standing, as such it is understood that root system did not develop below such features due to limited access to the water and air below the foundation. The proposed sunken patio and stairs impact approx. 12m<sup>2</sup> or 16% of total RPA. The arboriculturally supervised excavation will be required to identify if any tree roots are present and if so the roots will be removed by sharp tool following methodology of BS5837 principles. Tree roots removal should not comprise structural and health integrity of the tree as it is in far edge of the RPA.**
- 1.5 **No temporary ground protection will be required as retained trees RPA are currently occupied by existing hard standing.**
- 1.6 **T001** will be protected from damage by the erection of 2m high barrier around the stem of the tree. Other retained trees are outside boundary fence, and such no protective barriers are required.



## 2 Introduction and report background

### 2.1 Instruction

2.1.1 MMEEnvironmental Ltd. has been instructed by Chiltern Hill Properties LLP a survey of all trees on or within 15m to the proposed development at the site 8 Inglewood Road, London, Camden, NW6 1QZ; the impact of basement extension to the existing trees appraised; including information of which trees should be removed, which ones are suitable for retention and how trees to be retained will be protected during the development; and provide the means of tree protection is set out in the Arboricultural Method Statement at Section 6.

### 2.2 Report Background and Methodology

2.2.1 The report produced following principles of British Standard BS5837:2012 Trees in relation to design, demolition, and construction – Recommendations. The Section 4 Arboricultural Method Statement specifies the principles which need to be adopted during the demolition and construction of the development. The survey covers trees of a 75mm or above trunk diameter and any significant vegetation on the development site. Although any specific activities proposed in RPAs may require agreement by Local Planning Authority (LPA) if requested in the reserved matters stage.

2.2.2 The British Standard 5837: 2012 *Trees in relation to design, demolition, and construction – Recommendations* is recognised standard considering trees in the planning process. It provides a methodology of tree categorisation (Appendix 2) to inform which trees are suitable for retention. It also provides the options for the tree protection of retained trees during the development works and their sustainability for the proposal.

2.2.3 All measurements were made from ground level using a laser for measuring height, diameter tape to measure trunk diameters etc, but where access was limited, dimensions were estimated.

2.2.4 All trees were graded following BS5837 tree survey guidance (Appendix 2).

### 2.3 Limitation

2.3.1 The survey was undertaken from the ground level using essential tools without detailed investigations. The data collected can be found in the tree schedule in Appendix 2.

2.3.2 The tree condition can rapidly change due to unpredictable factors, such as climatic and artificial events as such reinspection shall be made if such circumstance occur or 2 years after the initial survey if required for the planning application as per BS5837 guidance.

## 2.4 The Author

2.4.1 The author of this report is Michal Mixa FdSc. MarborA, Director of MMEnvironmental Ltd., who started his career as a ground person for a tree management company in Southwest London and progressed to the lead climbing arborist. After five years. He started his first technical role as a Tree Officer in the London Borough of Southwark and developed his knowledge and skills to become an Arboricultural consultant. He is a holder of the FdSc in Arboriculture and has five years of technical experience Methodology.

Author	Position	Date	Signature
Michal Mixa FdSc	Director/ Arboricultural Consultant	<i>Wednesday, 10 July 2024</i>	

## 2.5 Supporting Documents

2.5.1 Supporting documents provided by the client are summarised in the table below (Table 1).

Document purpose	Reference Number
Proposal Plans	046(P)022 Ground Floor (C) (1)
OS Tile (downloaded from Mapserve.co.uk and supplied by MMEnvironmental Ltd.)	8-Inglewood-Road-London-Camden-NW6-1QZ (source Mapserver.co.uk)

### 3 The site and Tree Survey

#### 3.1 The site

3.1.1 The site visit was conducted on **15<sup>th</sup> June 2024** to undertake the survey.

3.1.2 The site comprises residential dwelling in densely urbanised neighbourhoods. Figure 1 shows the site in situ.



Figure 1 Site in situ highlighted red (Google Maps)

#### 3.2 Tree Survey

3.3 Total number of **6** trees was identified from which **No** tree of High Quality (A Category) ; **2** trees of Medium Quality (B Category); **4** trees of Low Quality (C Category) and **No** trees Unsuitable for retention (U Category).

3.3.1 Details specific to each tree can be found in the Tree Schedule (Appendix 3).

### 3.4 Soil

- 3.4.1 According to British Geological Survey data the site is dominated by soils including clay particles (Figure 2), as such specialist consideration shall be made to design the foundations. Thus, foundations will need to be designed in line with the National House Building Council (NHBC) Standards Chapter 4.2 *Building near trees*. The document specifies foundation depths near to existing trees on shrinkable clay soils. Site specific soil investigations will need to confirm whether the soil is of high, moderate, or low shrinkage potential. NHBC provides guidance on categorising trees as high, moderate, or low water demand species and the proposed species list for landscape planting may be found in CBA's Report.
- 3.4.2 The foundation design should consider proposed tree plantation, which may pose the risk from the soil subsidence.

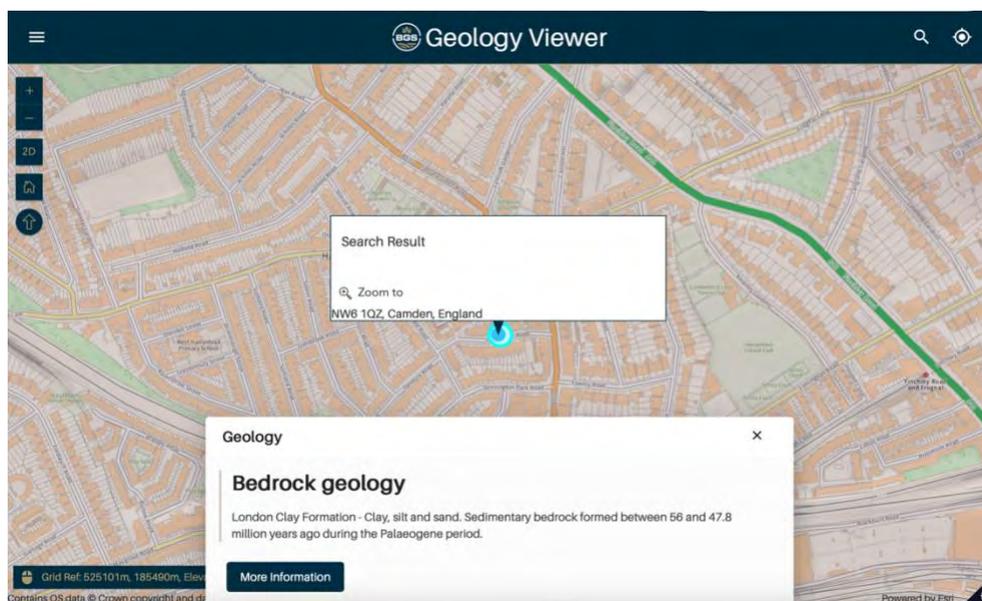


Figure 2 Screenshot of British Geological Survey online mapping system showing site soil composition.(bgs.org.uk)

### 3.5 Legal constraints

- 3.5.1 The online search with the Local Planning Authority (LPA) was conducted, which confirmed that the site location is not located within Conservation Area (CA). The search confirmed that the trees are not a subject the Tree Preservation Order (TPO).

## 4 Arboricultural impact statement

### 4.1 The proposal

4.1.1 The latest proposal seeks the development of basement extension (Figure 3).

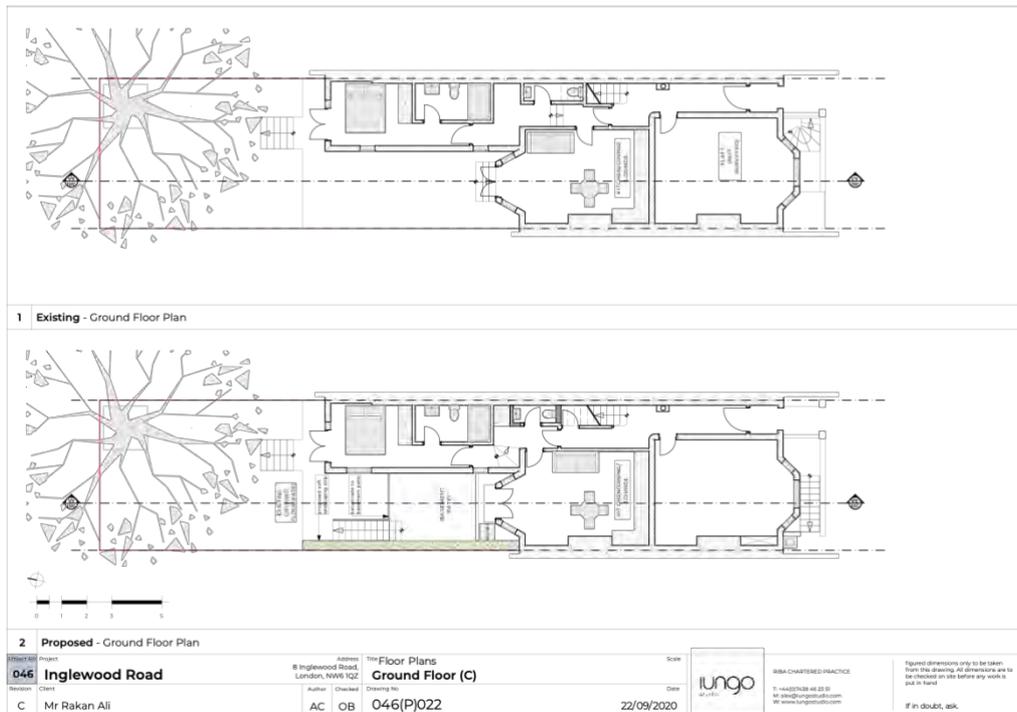


Figure 3 Proposed design scheme (supplied by client)

### 4.2 Impact of Tree Removal

4.2.1 No trees require removal to facilitate the proposal, as such the development present no impact to local landscape and amenity.

### 4.3 Impact on Tree Roots and Rooting Environment.

- 4.3.1 Rooting of trees is a dynamic process. The root growth responds to changing site conditions by promoting root expansion in areas where soil conditions are favourable; and restricting the growth in areas where conditions are unfavourable or supplies of nutrients and water have been exhausted. Health trees of most species can withstand the loss of roots, to a maximum of about 20% of the rooting area, with no long-term detrimental impact. An impact on approximately 5% of the root system is therefore likely to be tolerated by these healthy and vigorous trees without a significant impact on their health. These trees are not currently exhibiting signs of stress, and their starch reserves will be high. It is anticipated that they shall re-establish their root to shoot ratio in the first growing season.
- 4.3.2 T001 RPA is currently occupied by existing foundation and hard standing, as such it is understood that root system did not develop below such features due to limited access to the water and air below the foundation. The proposed sunken patio and stairs impact approx. 12m<sup>2</sup> or 16% of total RPA. The arboriculturally supervised excavation will be required to identify if any tree roots are present and if so the roots will be removed by sharp tool following methodology of BS5837 principles. Tree roots removal should not compromise structural and health integrity of the tree as it is in far edge of the RPA..

### 4.4 Impact of the Underground Utilities

- 4.4.1 Location of the underground services is not known in the time of the writing report. If the proposal seeks the location of the apparatus in Root Protection Area of the retained trees, a proposal shall be consulted with Arboriculturist and approved by Local Planning Authority in written prior its installation.
- 4.4.2 Section 6.7 is providing general guidance in line with BS5837 to installation of the utility services within RPA of retained trees.

### 4.5 Tree protection measures required for development activities

- 4.5.1 All retained trees (T001) require protection from damage by the erection of 2m high barrier around the stem of the tree.



## 5 Sequence of works

5.1.1 Individual stages are summarised in diagram below (Table 2).

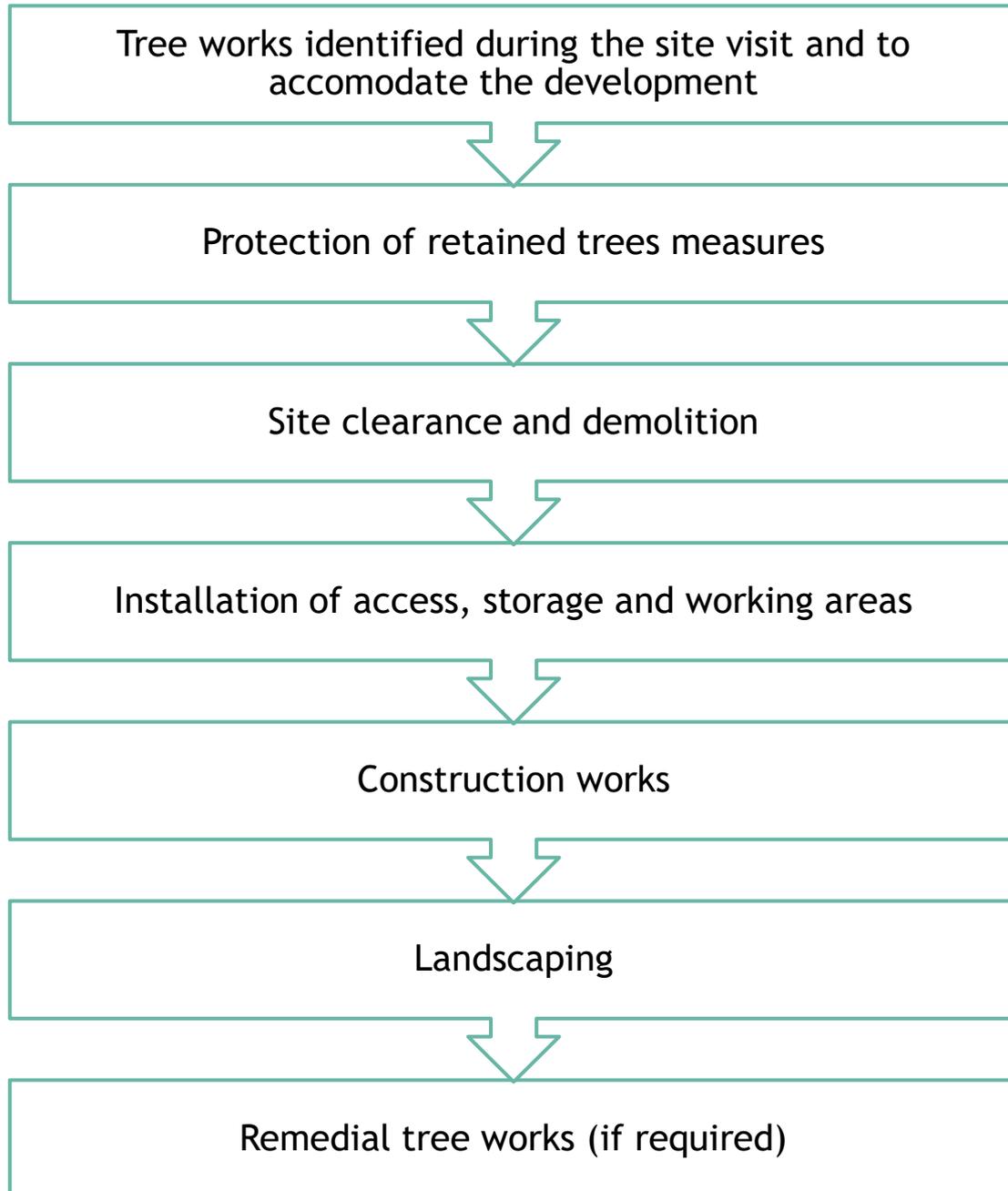


Table 1 Flow chart of individual stages for tree protection.

## 6 Arboricultural method statement

### 6.1 Tree Protection Plan

6.1.1 The attached plan (in Appendix 4) is based on the provided information and reflects the measurements and site boundaries. The plan is only relevant for dealing with tree issues. Trees to be retained have coloured centres and outlines of the crown dimensions are reflected by its quality (refer to section 2.2.2 (Category **A (green)**; Category **B (blue)**; Category **C (grey)**; Category **U (red)**).

6.1.2 Key to the markings on the plan:

- The dashed line shows the protection barriers placement.
- The light **blue** hatching shows RPA offsets, in location already occupied by hard standing or existing structures creating obstacles for the root spread (such existing foundation, boundary walls with the foundation, roads, paving, e.g.).
- The **purple** hatching indicates areas of ground protection within RPA.
- The **orange** hatching indicates areas of specialist construction methods within RPA such as pile and beam foundation, micro-drilling, changes of levels, e.g. (as per related sections of the report and annotation on the TPP)
- The **yellow** hatching indicates the Construction Exclusion Zone (CEZ) areas, and any construction activity must be avoided within the zone.

## 6.2 Stage 1 Installation of Tree protection measures

- 6.2.1 Trees can very easily be damaged during construction activities through their branches being broken by construction traffic passing close to the canopy or by root severance during the digging of foundation or service trenches. Most roots are to be found in the upper 600mm of soil and so even relatively shallow trenches can sever a significant number of roots growing across the direction of the trench. Similarly, the diameter of tree roots tapers sharply within a few metres of the trunk of a tree, so that what might seem to a site worker to be an insignificant root (perhaps only a few centimetres in diameter) may be highly important. Tree roots can also be damaged indirectly, often inadvertently, through soil compaction, which disrupts soil structure and can lead to root death through the development of anaerobic soil conditions. Spillage of toxic materials (e.g., oil or diesel) can also result in root damage and ultimately the death of a tree. Protection of the soil around trees by means of a construction exclusion zone (CEZ) is therefore vitally important to preserve roots undamaged.
- 6.2.2 Tree protection, to enforce the CEZ, will comprise of 2 m tall fencing installed in the positions shown in the tree protection plan before materials are delivered to site or construction commences. The fencing will consist of a scaffold framework, well braced to resist impacts, with vertical tubes spaced at a maximum interval of 3 m (Figure 5). Onto this, weld mesh panels or 2 m high shuttering board will be securely fixed with wire or scaffold clamps. Un-braced weld mesh panels on unsecured rubber or concrete feet will not be used as these are not resistant to impact and are too easily removed by site operatives. An alternative system of bracing which does not require a scaffold framework is shown in Figure 6. The barriers will be clearly marked by all-weather signs "Keep Out" (Figure 7).

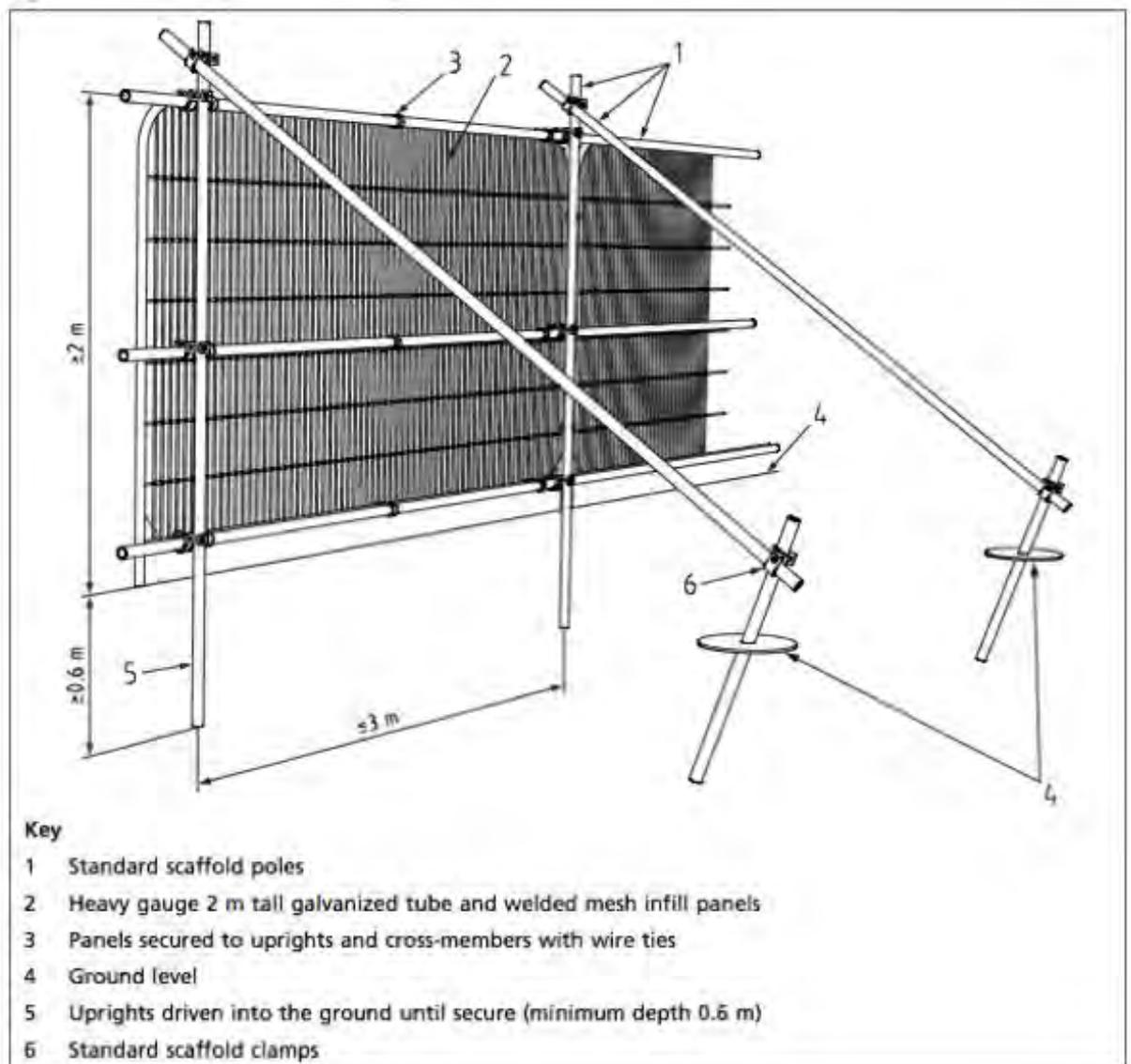


Figure 4 BS5837: 2012 default specification for barriers type

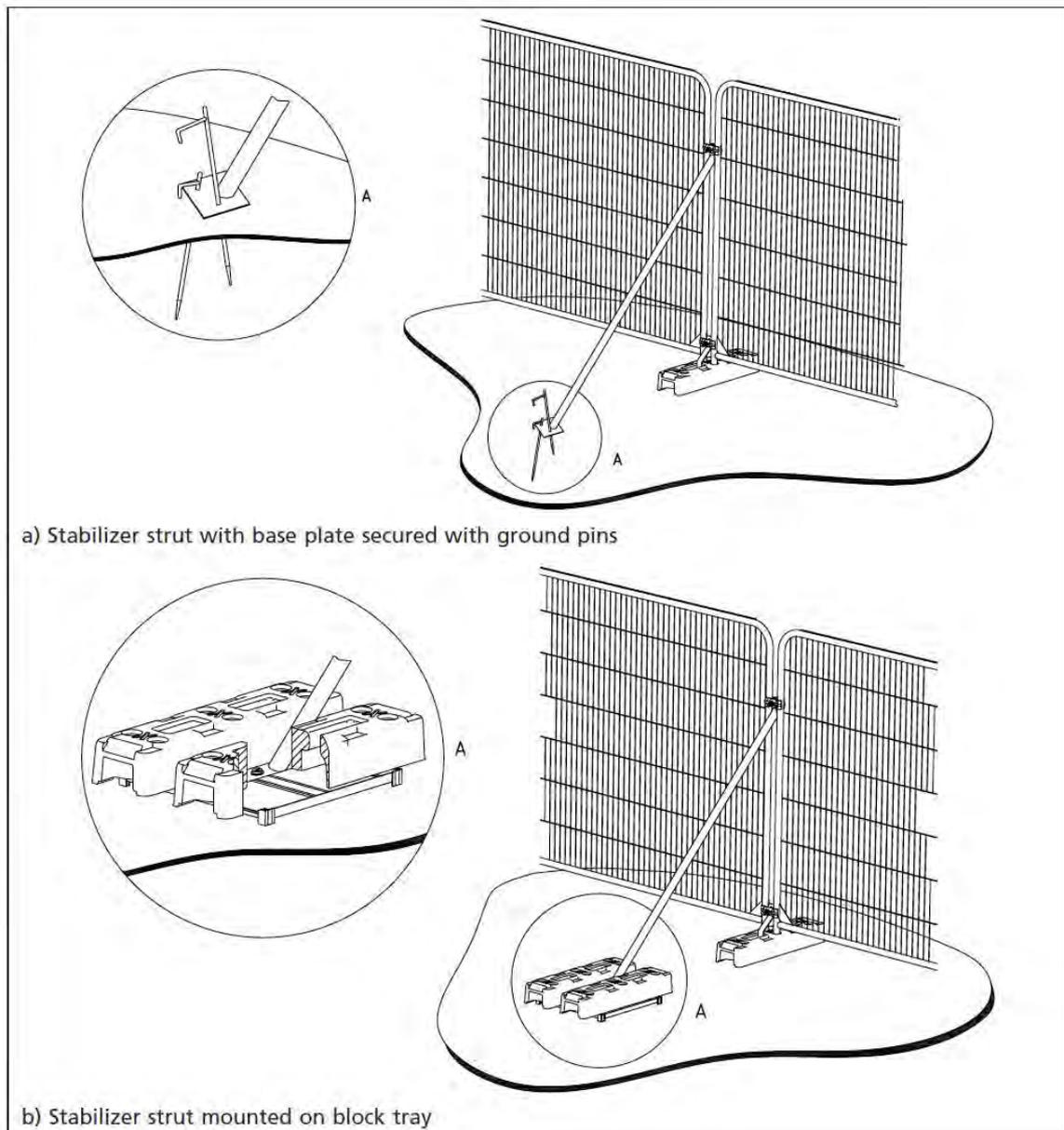


Figure 5 Above ground stabilisation system example (BS5837)



Figure 6 All-weather protective sign example

- 6.2.3 Prior any site activity, the ground protection must be installed. It must not distort or cause compaction of the underlying soil.
- 6.2.4 All tree protection measures will remain in place and kept in good condition until all works are complete, unless otherwise agreed with the LPA.

### 6.3 Stage 2 Site set-up, storage, and material mixing

- 6.3.1 Space must be allowed outside of RPAs for site machinery and material storage.
- 6.3.2 The material must be stored outside the RPAs, which applies to cement mixing and washing points. The runoff potential of the contaminants must be considered to avoid incursion to the RPA of retained trees, refer to TPP (appendix 3).

### 6.4 Stage 3 Incursions and works within Root Protection Area

- 6.4.1 T001 RPA is currently occupied by existing foundation and hard standing, as such it is understood that root system did not develop below such features due to limited access to the water and air below the foundation. The proposed sunken patio and stairs impact approx. 5m<sup>2</sup> or 6.8% of total RPA. The arboriculturally supervised excavation will be required to identify if any tree roots are present and if so the roots will be removed by sharp tool following methodology of BS5837 principles. Tree roots removal should not compromise structural and health integrity of the tree as it is in far edge of the RPA. If roots of importance will be discovered the project will be put on hold and specialist construction methods will be considered.

### 6.5 Stage 4 Tree Planting and soft landscaping

- 6.5.1 Tree protection measures in place may be removed in consultation with LPA or AC.
- 6.5.2 No plant or vehicles can access the soft areas of ground within RPA.
- 6.5.3 No Excavation can take place within RPA of retained trees except of localised post holes for fencing. If the root will be found (<25mm diameter) the hole will be backfilled and moved to another location. The procedure will be followed up until the suitable location without the root will be find.<sup>1</sup>

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<sup>1</sup>If concrete is to be used to secure posts in holes, then an impermeable barrier is to be used between the concrete and soil to prevent potential contamination of the soil environment to avoid damage to the tree roots.

6.5.4 Any landscaping proposed within RPA of retained trees shall be undertaken by using hand tools to avoid compaction of the ground and disruption of the rooting environment. Turf and other soft surfaces to be introduced will be kept to a minimum thickness (maximum 100mm) and laid upon existing soft ground. If undulations need to be levelled, then sharp sand will be used and no excavation will be undertaken. Retaining structures will be installed using pile and beam construction. No strip foundations will be installed. No tree roots are allowed to be removed without written consent of project arboriculturist or LPA in case of protected trees.

## 6.6 Underground Utilities

6.6.1 Location of the underground services is not known in the time of the writing report.

6.6.2 If any underground services will be proposed within RPA, an unconventional excavation method will be required. Great care must be taken to minimize disturbance of the rooting environment and removal or damage of the roots. Trenchless solutions will have to be apply following the guidance of BS5837:2012.

### Trenchless solutions for differing utility apparatus

Method	Accuracy mm	Bore dia. <sup>A)</sup> mm	Max. sub. <sup>B)</sup> length m	Applications	Not suitable for
Microtunnelling	<20	100 to 300	40	Gravity-fall pipes, deep apparatus, watercourse/ roadway undercrossings	Low-cost projects due to relative expense
Surface-launched directional drilling	≈100	25 to 1 200	150	Pressure pipes, cables including fibre optic	Gravity-fall pipes, e.g. drains and sewers <sup>C)</sup>
Pipe ramming	≈150	150 to 2 000	70	Any large-bore pipes and ducts	Rocky and other heavily obstructed soils
Impact moling <sup>D)</sup>	≈50 <sup>E)</sup>	30 to 180 <sup>F)</sup>	40	Gas, water and cable connections, e.g. from street to property	Any application that requires accuracy over distances in excess of 5 m

<sup>A)</sup> Dependent on strata encountered.  
<sup>B)</sup> Maximum subterranean length.  
<sup>C)</sup> Pit-launched directional drilling can be used for gravity fall pipes up to 20 m subterranean length.  
<sup>D)</sup> Impact moling (also known as thrust-bore) generally requires soft, cohesive soils.  
<sup>E)</sup> Substantial inverse relationship between accuracy and distance.  
<sup>F)</sup> Figures given relate to single pass; up to 300 mm bore achievable with multiple passes.

Figure 7 BS5837 Trenchless Solution for differing utility apparatus installation requirements.

## 6.7 Summary of the site monitoring and supervision

6.7.1 The Project Arboricultural Consultant (PAC) shall attend the site prior to the commencement of the development to ensure a satisfactory level of protective fencing and ground protection; ground-level alternations; construction of walls, installation of new surfaces within RPAs of retained trees and at least every month during the development works. 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 visit	Attendees	Timing	Reason
Pre-Commencement Meeting	Site manager, Project Arborist and LPA Arboricultural officer	After completion of the tree works and installation of the three protective measures. Unless LPA agrees, further actions are not permitted, such as demolition or soil excavation.	Check if tree protection measures satisfy the methodology detailed in AMS and LPA expectations. Additional action is required for the protection of the trees and comments on the development
Root investigation within T001 RPA.	Project Arborist and construction contractor	Prior to the commencement of the demolition works	To determine root morphology and evaluate the removal of the roots.
Regular site monitoring and reporting	Project Arborist and Site manager	Regular site monitoring of the tree protection measures and in the event of unexpected issues during the development. The pictures of the site will be provided every two weeks <sup>2</sup>	To mitigate any potential issues raised during the development, control of protective measures maintenance and monitor site activity which could cause damage to the retained trees

6.7.2 All Site monitoring or supervision shall be followed by a report submission with an annotated photographic record and textual commentary on all matters of tree protection to the Local Authority, which is in breach of the Arboricultural Method Statement by act or omission. The initial site visit confirming the placement of satisfactory tree protection shall be notified to LA within five working days prior to the commencement of the development.

<sup>2</sup> LPA may specify different frequency and report requirements. Pictures of the protective measures and site set up provided by a site manager may be acceptable by LPA to lower unnecessary site visits.

## 7 Conclusion and recommendations

- 7.1.1 This report has been prepared to accompany the planning application for the site at 8 Inglewood Road, London, Camden, NW6 1QZ. Trees on and within 15m of the proposed development were identified. The impact of the proposed basement extension was appraised in section 4; including trees retention, removal and how trees will be protected during the development. The details of the tree protection are then summarised in section 6.
- 7.1.2 No trees will require removal to facilitate the proposal as such the proposal does not present impact to local amenity and landscape.
- 7.1.3 T001 RPA is currently occupied by existing foundation and hard standing, as such it is understood that root system did not develop below such features due to limited access to the water and air below the foundation. The proposed sunken patio and stairs impact approx. 12m<sup>2</sup> or 16% of total RPA. The arboriculturally supervised excavation will be required to identify if any tree roots are present and if so the roots will be removed by sharp tool following methodology of BS5837 principles. Tree roots removal should not comprise structural and health integrity of the tree as it is in far edge of the RPA..
- 7.1.4 No temporary ground protection will be required as retained trees RPA are currently occupied by existing hard standing.
- 7.1.5 All retained trees T001 will require tree protection barriers around the RPAs. Other retained trees are outside the fence boundary.
- 7.1.6 The proposal will be achievable in Arboricultural Terms, if the methodology detailed in this report will be followed.

## Appendix 1 – References

1. British Geological Survey (2014).  
<http://mapapps.bgs.ac.uk/geologyofbritain/home.html>. BGS, Keyworth, Nottingham.
2. G. Mercer, A. Reeves & D. O'Callaghan. 'The Relationship between Trees, Distance to Buildings and Subsidence Events on Shrinkable Clay Soil' AB Academic Publishers 2011. Arboricultural Journal, 33, 229-245.
3. BSI (2010) BS 3998:2010 'Tree Work – Recommendations. British Standards Institute
4. BSI (2014) BS8545: Trees from nursery to independence in the landscape: Recommendations. British Standards Institute
5. BSI (2012) BS5837: Trees in Relation to Design, Development and Construction: Recommendations. British Standards Institute
6. BSI (2014) BS8545: Trees from nursery to independence in the landscape: Recommendations. British Standards Institute
7. BSI (2015) BS 8596:2015 – Surveying For Bats In Trees And Woodland. British Standards Institute
8. The National Archives (2017) Town and Country planning act, 1990,  
<http://www.legislation.gov.uk/ukpga/1990/8/contents>; Accessed 20.02.2017
9. Trees and design action group (2014) Trees in a hard landscape: Guide for delivery
10. Department for Communities and Local Government (2014) Tree Preservation Orders and trees in conservation areas

## Appendix 2 – BS5837 Cascade Chart for Tree Quality Assessment

Category and definition	Criteria (including subcategories when appropriate)			Identification on plan
Trees unsuitable for retention (see Note)				
<b>Category U</b>  Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	<ul style="list-style-type: none"> <li>Trees that have serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g., where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)</li> <li>Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul> <i>NOTE Category U trees can have existing or potential conservation value which might be desirable to preserve; see 4.5.7.</i>			<b>Dark red</b>
	<b>1 Mainly arboricultural qualities</b>	<b>2 Mainly landscape qualities</b>	<b>3 Mainly cultural values, including conservation</b>	
<b>Trees to be considered for retention</b>				
<b>Category A</b>  <b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	<b>Light green</b>
<b>Category B</b>  <b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years	Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remedial defects, including unsympathetic management and storm damage), such that they are unlikely to be suitable for retention of beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	<b>Mid blue</b>
<b>Category C</b>  <b>Trees of low quality</b> with an estimated remaining expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape value	Trees with no material conservation or other cultural value	<b>Grey</b>

## Appendix 3: Tree Schedule

Surveyor	Shaun Murphy Morris	Date	15 <sup>th</sup> June 2024
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Data collected for each tree includes the following information:

- Sequential reference number, i.e., T001, T002, T003 etc.
- Species:
  - Common Name
  - Botanical Name in Latin
- Measurements:
  - Height (in meters).
  - Stem diameter (in millimetres).
  - Ground clearance, representing a level of first significant branching or canopy
  - Life stage (Young, Semi Mature, Early Mature, Mature, Veteran).
  - Estimated remaining contribution (>10 years, 10 + years, 20 + years, 30+ years, 40 + years).
- Branch Spread, recorded in meters at the extents of the 4 Cardinal Points, i.e., North, East, South & West.
- General Observations
- Retention Category (See Appendix 2)
- Root Protection Area:
  - Radius (in meters)
  - Area (in square meters)
- Structural Condition:
  - Good - Having no significant structural defects.
  - Fair - Some defects observed though no high priority works are required.
  - Poor – Major defects which will usually require significant remedial works or tree removal
  - Dead – Tree is dead.
- Physiological Condition:
  - Good - Healthy and with no symptoms of significant disease
  - Fair - Disease present or vigour is impaired.
  - Poor - Significant disease present or vigour is extremely low.
  - Dead - Tree is dead.
- Preconstruction recommendations in the context of the site's current use during and after the development.

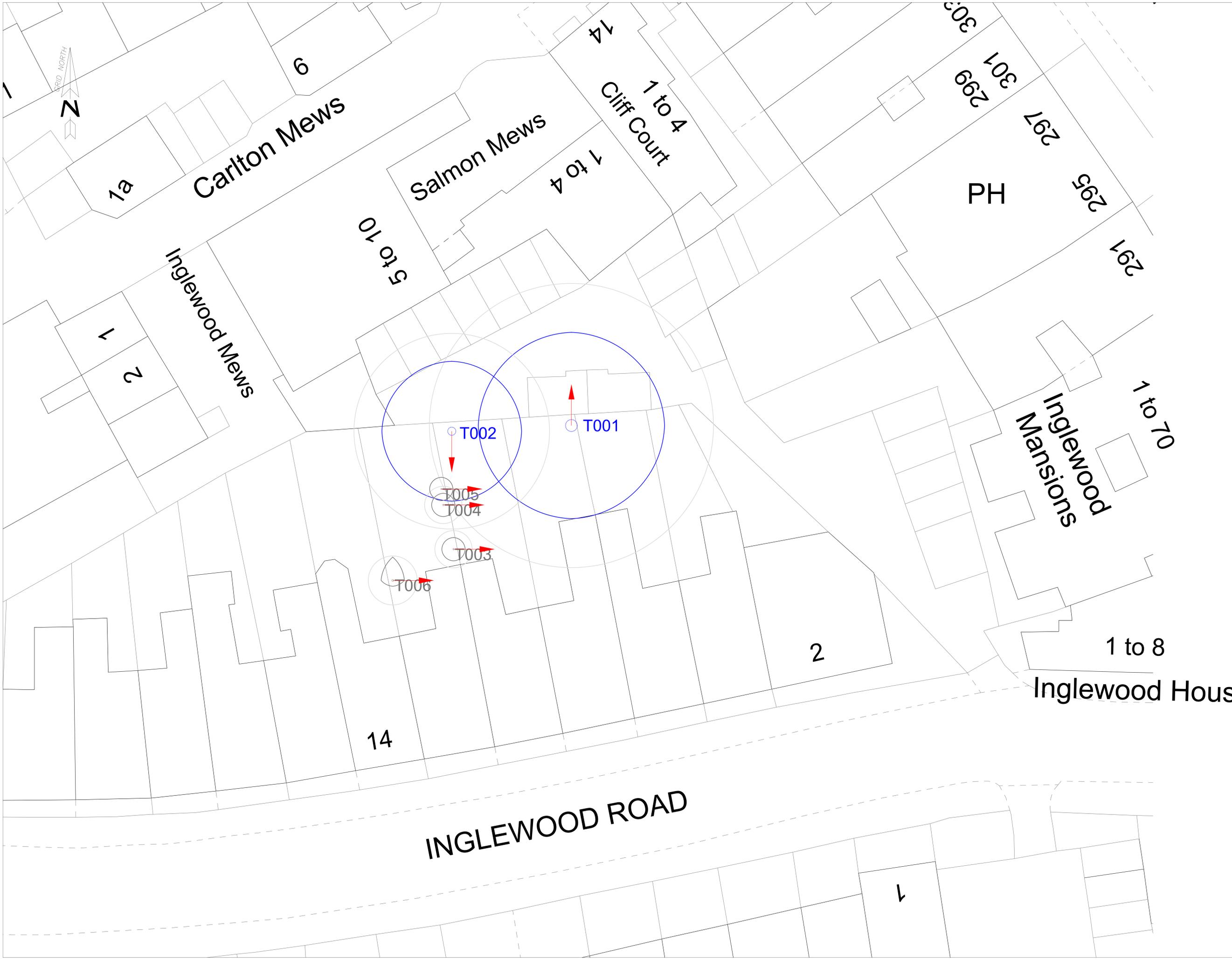


Retention Category	No. trees
B	3
C	3
U	1
<hr/>	
Total	7

Ref.	Species	Full Structure	Measurements	Survey Notes	Retention Category	RPA	Measurements2
T001	Purple norway maple ( <i>Acer platanoides</i> 'Crimson King')	Tree	Height (m): 11 Stem Diam(mm): 330 Spread (m): 3.5N, 3.5E, 3.5S, 3.5W Crown Clearance (m): 1 Lowest Branch (m): 1(N) Life Stage: Early Mature Rem. Contrib.: 30+ Years	Previously pollarded. Subject of regular pruning regime. Girdling root	C1,3	Radius: 4.0m. Area: 50 sq m.	Other Reference: Distance1: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: No Potential
T002	Sycamore ( <i>Acer pseudoplatanus</i> )	Tree	Height (m): 4 Stem Diam(mm): 550 Spread (m): 3N, 4E, 5S, 4W Crown Clearance (m): 3 Lowest Branch (m): 3(W) Life Stage: Mature Rem. Contrib.: 40+ Years	Deadwood. Co-dominant branches. Girdling Root	B1,3	Radius: 6.6m. Area: 137 sq m.	Other Reference: Distance1: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: No Potential
T003	London plane ( <i>Platanus x hispanica</i> )	Tree	Height (m): 17 Stem Diam(mm): 640 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 5 Lowest Branch (m): 5(W) Life Stage: Mature Rem. Contrib.: 50+ Years	Street Tree. Subject of the regular pruning regime. Pollard.	B1,3	Radius: 7.7m. Area: 186 sq m.	Other Reference: Distance1: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: No Potential
T004	Elder ( <i>Sambucus nigra</i> )	Tree	Height (m): 4 1 stems Spread (m): 2N, 2E, 2S, 3W Crown Clearance (m): 2 Lowest Branch (m): 2(E) Life Stage: Early Mature Rem. Contrib.: <10 years	Uprooted. Tree leaning towards the fence. Ivy on the stem. Dead roots.	U	No RPA due to Retention Category of U.	Other Reference: Distance1: Physiological Cond: Poor Structural Cond: Poor Bat Habitat: No Potential
T005	Sycamore ( <i>Acer pseudoplatanus</i> )	Tree	Height (m): 14 Stem Diam(mm): 460 Spread (m): 4N, 4E, 4S, 6W Crown Clearance (m): 3 Lowest Branch (m): 4(E) Life Stage: Mature Rem. Contrib.: 40+ Years	Tree on the bank. Basal growth. Weak union. Codominant stems.	B1,3	Radius: 5.5m. Area: 95 sq m.	Other Reference: Distance1: Physiological Cond: Good Structural Cond: Fair Bat Habitat: No Potential
T006	Sycamore ( <i>Acer pseudoplatanus</i> )	Tree	Height (m): 5 Stem Diam(mm): 450 Spread (m): 1N, 1E, 1S, 1W Crown Clearance (m): 2 Lowest Branch (m): 2(N) Life Stage: Mature Rem. Contrib.: 40+ Years	On the neighbouring property behind perimeter fence. Data and location estimated. Heavily pollarded. Below ground levels of client property in bank.	C3	Radius: 5.4m. Area: 92 sq m.	Other Reference: Distance1: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: No Potential
T007	Leyland cypress ( <i>X Cuprocypris leylandii</i> )	Tree	Height (m): 6 Stem Diam(mm): 150 Spread (m): 1.5N, 1.5E, 1.5S, 1.5W Crown Clearance (m): 2 Lowest Branch (m): 2(N) Life Stage: Semi Mature Rem. Contrib.: 20+ Years	On the neighbouring property behind perimeter fence. Data and location estimated. Below property ground levels. Tree on the bank.	C3	Radius: 1.8m. Area: 10 sq m.	Other Reference: Distance1: Physiological Cond: Good Structural Cond: Good Bat Habitat: No Potential

## Appendix 4: Tree Constraints Plan

-  Category A – trees of high quality and value
-  Category B – trees of moderate quality and value
-  Category C – trees of low quality and value
-  Category U – trees of unsuitable for retention
-  Group of trees / hedgerows
-  Root protection area

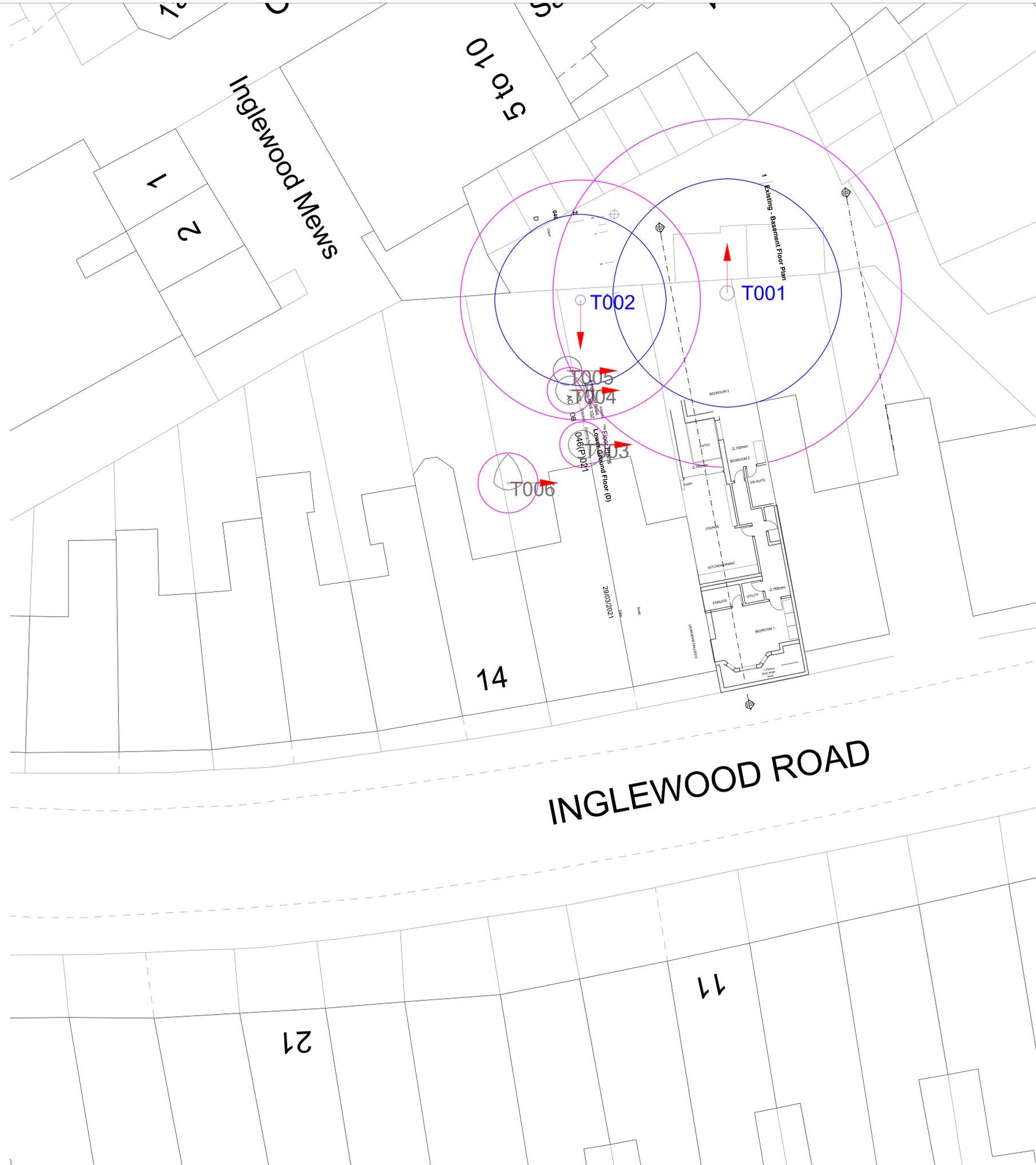




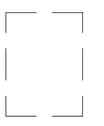
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## Appendix 5: Tree Removal And Retention Plan



-  Category A – trees of high quality and value
-  Category B – trees of moderate quality and value
-  Category C – trees of low quality and value
-  Category U – trees of unsuitable for retention
-  Group of trees / hedgerows
-  Root protection area
-  Trees to be removed



## Appendix 6: Tree Protection Plan

-  Category A – trees of high quality and value
-  Category B – trees of moderate quality and value
-  Category C – trees of low quality and value
-  Category U – trees of unsuitable for retention
-  Group of trees / hedgerows
-  Root protection area
-  RPA Offset
-  Tree protective barriers
-  Temporary Ground Root Protection
-  Permanent Ground Root Protection
-  Specialist Construction Methods
-  Construction Exclusion Zone

