
ARBORICULTURAL IMPACT ASSESSMENT AND METHOD STATEMENT

6A Grange Road, London, N6 4AP

Report by

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On the instructions of Ilyas Amlani

11/11/24

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1 Report summary

- 1.1 MMEvironment Ltd. was instructed by **Ilyas Amlani** to provide BS5837 compliant tree survey and Arboricultural Report to accompany the planning application for the site at **6A Grange Road, London, N6 4AP** to develop **detached house with a basement**.
- 1.2 Total number of **18** trees was identified from which **None** tree of High Amenity Value (A Category) ; **4** trees of Medium Amenity Value (B Category); **14** trees of Low Amenity Value (C Category) and **None** trees of Unsuitable for retention (U Category).
- 1.3 **T009 - T011** require removal to facilitate the proposal and new landscape scheme.
- 1.4 **T007 and T008 (total area of approx. 55.5m²)** RPAs will require a 3-dimensional confinement system to facilitate the proposed hard standing.
- 1.5 **T007 and T008 (total area of approx. 26.45m²)** Root Protection Area (RPA) will require a temporary ground protection to avoid compaction of the soil and disruption of the tree root environment.
- 1.6 **T007 (approx.11.5m² or 4% of total RPA)** will be impacted by the proposed **foundation**; as such, the site investigation will have to take place to understand root morphology, prior development works commencement. The specialist construction methods such as pile and beam will likely be employed.
- 1.7 All retained trees (T001 – T004 and T012) will be protected from damage by the erection of 2m high fencing at the edge of their Root Protection Areas (RPAs).
- 1.8 The development proposal will have a little or negligible impact on the retained trees or their wider contribution to an area character if the methods detailed in this report will be followed.

2 Introduction and report background

2.1 Instruction

- 2.1.1 MMEEnvironmental Ltd. has been instructed by Ilyas Amlani to carry out a tree survey and produce the Arboricultural report in support of a planning application for the site at 6A Grange Road, London, N6 4AP.
- 2.1.2 MMEEnvironmental Ltd. was instructed to carry out a survey of all trees on or immediately adjacent to the proposed development site and to consider the impact of the development on the trees, including which trees should be removed, which ones are suitable for retention and how trees to be retained will be protected during the development, if approved. The means of tree protection is set out in the Arboricultural Method Statement at Section 4.
- 2.1.3 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.
- 2.1.4 The British Standard 5837: 2012 *Trees in relation to design, demolition, and construction – Recommendations* is recognised standard under the National Policy Planning Framework (NPPF) considering trees in the planning process. It provides a methodology of tree categorisation 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.
- 2.1.5 The author of this report is Michal Mixa FdSc. MarborA, Director of MMEEnvironmental 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.

2.2 Methodology

2.2.1 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.

2.2.2 All trees were graded following BS5837 tree survey guidance:

- Category **A** – trees of high quality and value, with an estimated life expectancy of 40 years.
- Category **B** – trees of moderate quality and value. An estimated life expectancy of at least 20 years.
- Category **C** – trees of lower quality and value. An estimated life expectancy of at least 10 years, with a stem diameter of up to 150mm measured at 1.5m from ground level.
- Category **U** – dead, dying or unsuitable for retention. Life expectancy of less than 10 years.

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 Supporting Documents

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

Document purpose	Reference Number
Proposed Floor Plan (landscape)	241111_Grange Road_01
TOPOgraphical Survey	RGL-24-4230-01

3 The site

3.1 The site

3.1.1 The site visit was conducted on **19th October 2022** to undertake the survey.

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

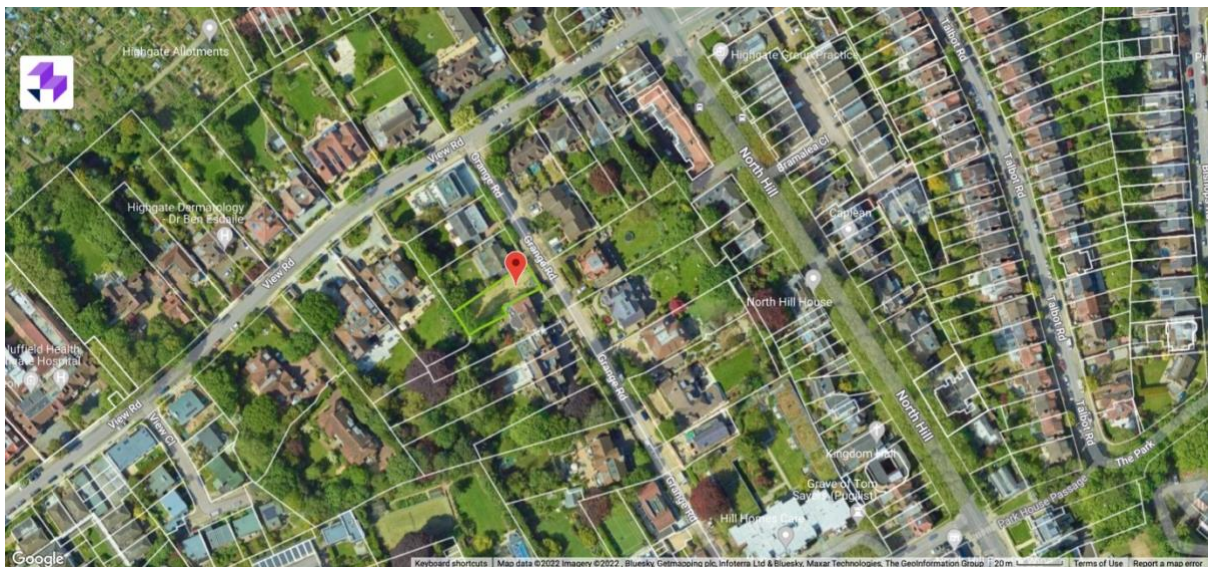


Figure 1 Site in situ highlighted green (Landtech Ltd)

3.2 Soil

3.2.1 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.

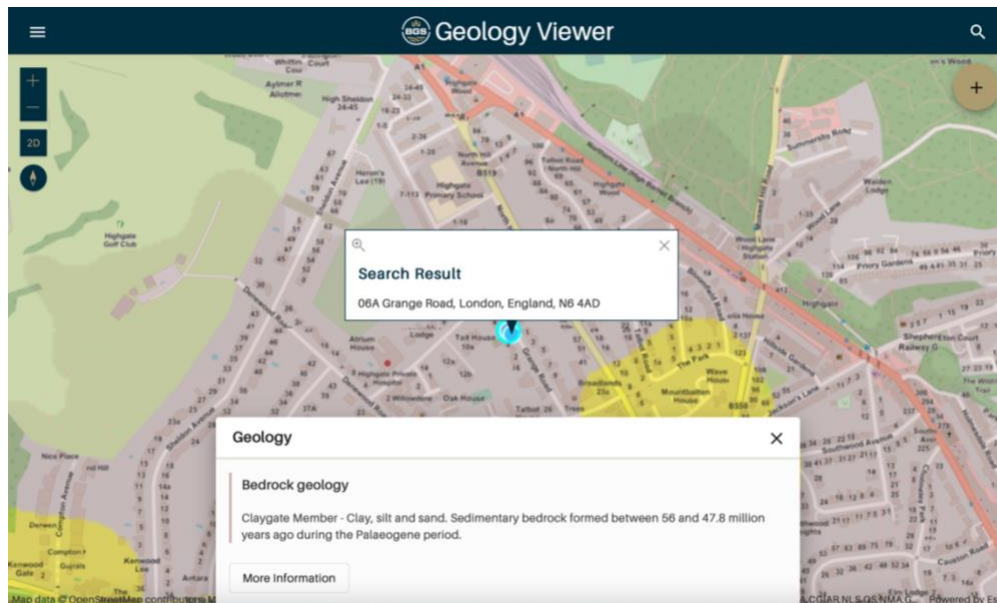


Figure 2 Screenshot of British Geological Survey online mapping system showing site soil composition.(bgs.org.uk)

3.3 Legal constraints

- 3.3.1 I conducted online search with the Local Planning Authority, Haringey, (LPA), which confirmed that the site location is located within Conservation Area (CA). Tree T007 is subject to the Tree Preservation Order (TPO) TPO/2018/0010. Prior to commencing any tree works, request to the LPA shall be made to confirm whether any further TPOs apply.

4 Arboricultural impact statement

4.1 The proposal

4.1.1 The latest proposal seeks the development of detached house with a basement (Figure 3).

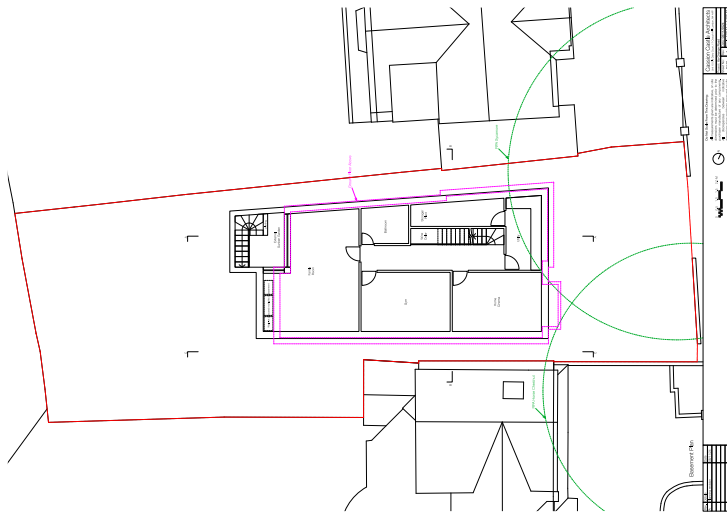


Figure 3 Proposed design scheme (supplied by client)

4.2 Tree works

4.2.1 T009 - T011 will require removal to facilitate the proposal.

4.3 Incursions and works within Root Protection Area

4.3.1 T007 (approx. 11.5m² or 4% of total RPA) will be impacted by the proposed foundation and such the specialist construction must be employed to facilitate the development avoiding disturbance and/or damage to the tree roots.

4.3.2 Within T002 – T006 RPAs ground excavation and creation of the concrete walls of approx. 2m took place. This inevitably resulted in loss of tree root mass. The mitigation action will be required, however the proposal will have no impact on the trees as damage already occurred.

- 4.3.3 T007 and T008 (total area of approx. 55.5m²) RPAs will require a 3-dimensional confinement system backfilled with angular stone and final layer of porous material to the soil to facilitate the proposed hard standing to avoid compaction of the soil and allow water and air penetration to rooting environment of trees.

4.4 Tree protection measures

- 4.4.1 T007 and T008 (total area of approx. 26.45m²) will require temporary ground protection during the lifetime of the development works due to the pedestrian and machinery traffic required for completion of the proposal and to avoid compaction of the existing unsurfaced rooting area.
- 4.4.2 All retained trees (**T001 – T004 and T012**) require protection from damage by the erection of 2m high fencing at the edge of their RPAs as per the specification of BS5837:2012, detailed in section 6.2. (Location specified in Appendix 5 Tree Protection Plan).

4.5 Sequence of works

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

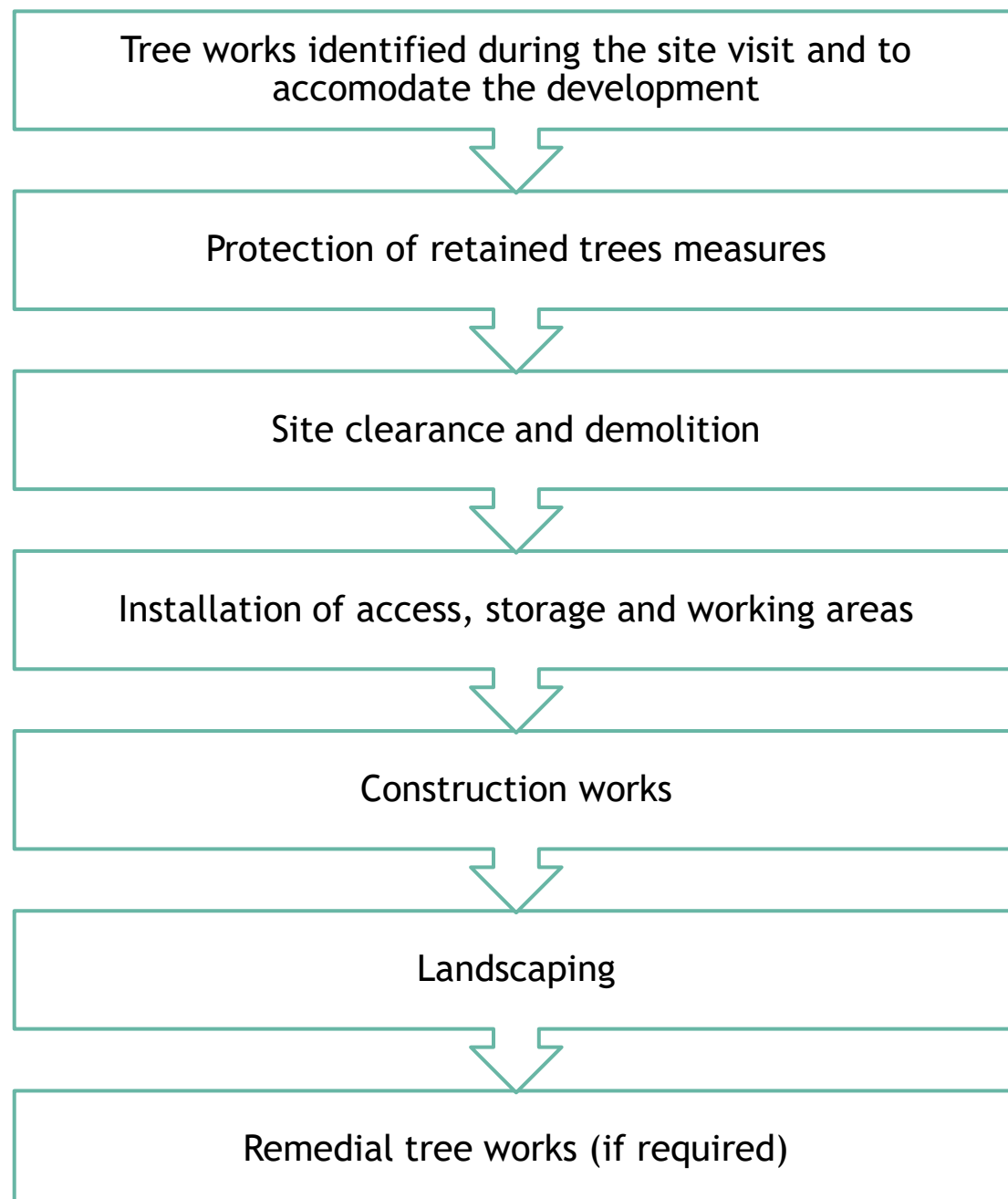


Table 1 Flow chart of individual stages for tree protection.

5 Arboricultural method statement

5.1 Tree Protection Plan

5.1.1 The attached plan (in Appendix 5) 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, whilst trees removed have dashed hatching.

- 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.

5.2 Stage 1 Tree works

5.3 **T009 - T011** require removal to facilitate the proposal.

5.3.1 The tree works should be carried out in line with current British Standard BS3998:2010. It is recommended that the Arboricultural Association undertakes works approved by the contractor. A contractor must ensure that all necessary consents have been received from LPA and follow current industry standards and best practices. To minimise damage to retained trees, stumps, shrubs, and other vegetation must be removed by hand or specialised stump grinding machinery. The poisoning of stumps, if required, must be carried out by trained and qualified operatives.

5.3.2 All work should be carried out to avoid bird nesting season.

5.4 Stage 2 Installation of Tree protection measures

5.4.1 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.

5.4.2 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).

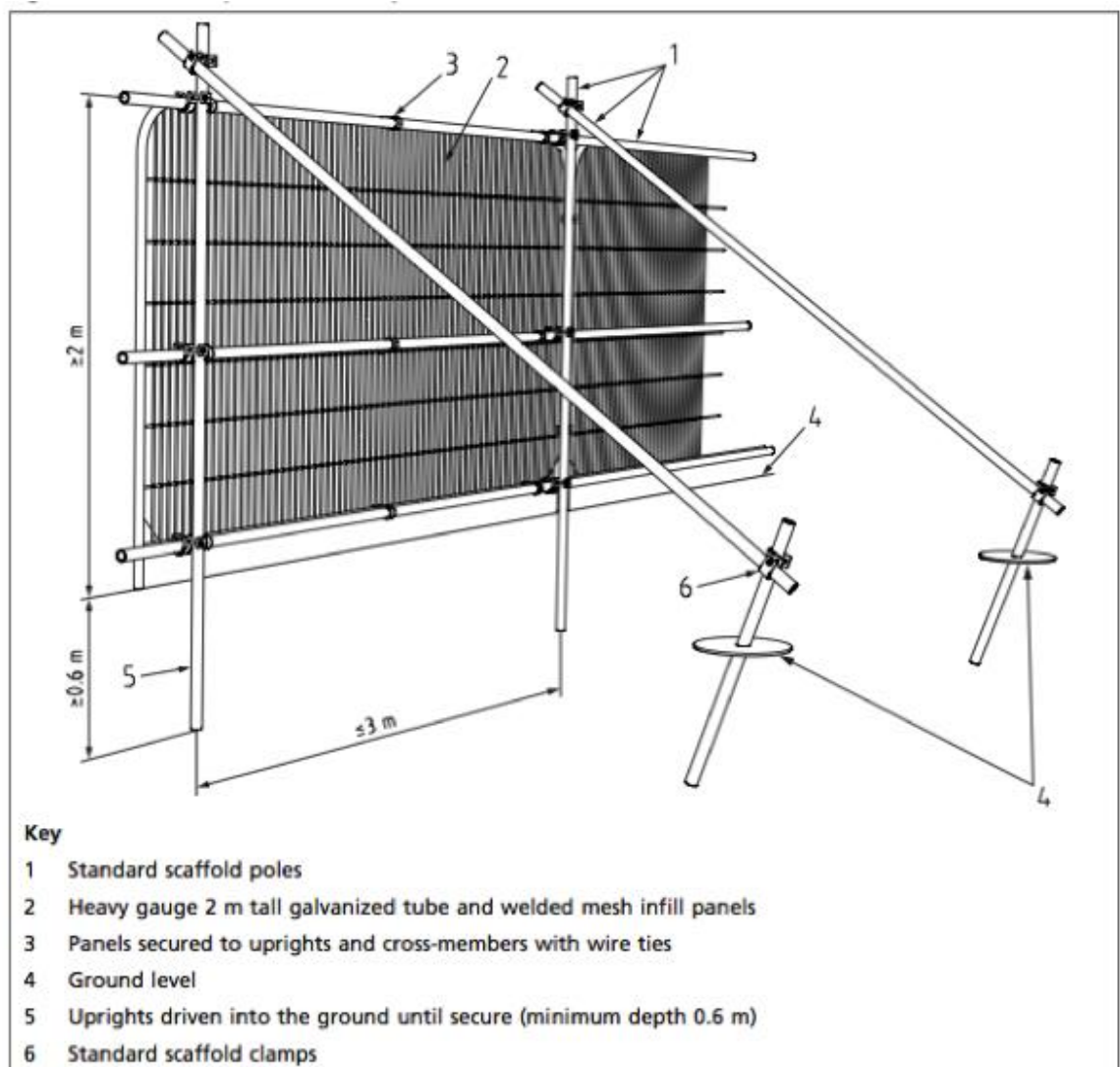


Figure 4 BS5837: 2012 default specification for barriers type

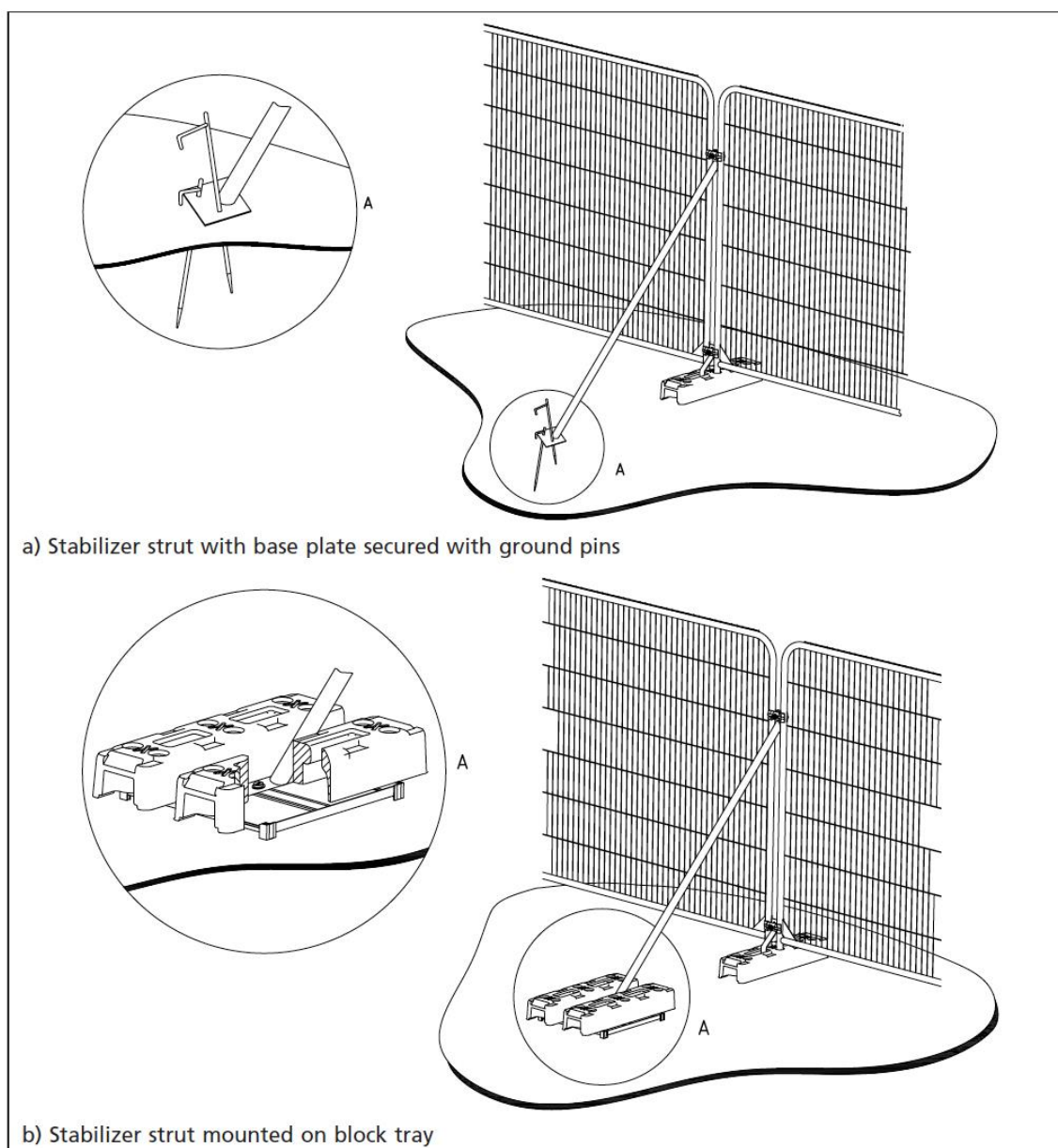


Figure 5 Above ground stabilisation system example (BS5837)



Figure 6 All-weather protective sign example

- 5.4.3 T007 and T008 (total area of approx. 26.45m²) Root Protection Area (RPA) will require multitrack system laid on top of a compression-resistant layer (e.g., 150 mm depth of woodchip), laid onto a geotextile membrane during the lifetime of the development works to allow pedestrian traffic within rooting environment without the disturbance or/and compaction of the soil.
- 5.4.4 All tree protection measures will remain in place and kept in good condition until all works are complete, unless otherwise agreed with the LPA.

5.5 Stage 3 Site set-up, storage, and material mixing

- 5.5.1 Space must be allowed outside of RPAs for site machinery and material storage.
- 5.5.2 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).

5.6 Stage 5 Incursions and works within Root Protection Area

- 5.6.1 T007 (approx. 11.5m² or 4% of total RPA) will be impacted by the proposed **foundation**. Arboriculturally supervised hand-dug trench along the contours of the proposed footing to 600mm depth in areas not occupied by the existing foundation of the same depth will be required to understand root morphology and evaluate if the design is achievable in Arboricultural terms. The specialist's construction methods, such as pile and beam, will be employed if the roots are identified under the proposed foundation to avoid damage to the roots and avoid soil compaction of the exposed ground to promote root development.
- 5.6.2 T007 and T008 (total area of approx. 55.5m²) RPAs (total of approx. [number] m²) will require a 3-dimensional confinement system back filled with angular stone and final layer of porous material allowing water and air penetration to the soil to avoid compaction and promote trees rooting environment in order to accommodate the proposed hard standing.

5.7 Stage 6 Tree Planting and soft landscaping

- 5.7.1 Tree protection measures in place may be removed in consultation with LPA or AC.

- 5.7.2 No plant or vehicles can access the soft areas of ground within RPA.
- 5.7.3 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 found.¹
- 5.7.4 Proposal seek plantation as mitigation of the tree loss. At the moment of the writing the species and the location is unknown and will be confirmed at the later date. The plantation should be done away from the RPA if practicable or by using hand tools following the same principles as described in section 5.8.1. in line with guidance of BSI (2014) BS8545: Trees from nursery to independence in the landscape: Recommendations.
- 5.7.5 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.

5.8 Summary of the site monitoring and supervision

- 5.8.1 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.

¹¹If 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.

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 T007 (approx.11.5m ² or 4% of total RPA) RPA	Project Arborist and construction contractor	Prior to the commencement of the demolition works	To determine root morphology and evaluate the need for specialist construction methods such as pile and beam, if roots are discovered, the most suitable location will be determined for piles.
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 ²	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

² 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.

Post Construction Meeting	Site manager, Project Arborist and LPA Arboricultural officer	After construction completion. Prior to the dismantling of tree protection measures and landscape work.	Check the condition of the retained trees and explain further restrictions if applicable.
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- 5.8.2 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.

6 Conclusion and recommendations

- 6.1.1 This report has been prepared to accompany the planning application for the site at 6A Grange Road, London, N6 4AP.
- 6.1.2 T009 - T011 will require removal to facilitate the proposal. None of the trees is of High or Medium amenity value, and as such, their removal presents no constraints to the development according to BS5837. The proposal also displays mitigation plantation according to supplied landscape plan.
- 6.1.3 T007 and T008 (total area of approx. 55.5m²) RPAs will require a 3-dimensional confinement system to facilitate the proposed hard standings to avoid compaction and allow water and air penetration to the soil.
- 6.1.4 T007 (approx. 11.5m² or 4% of total RPA) will be impacted by the proposed demolition and the proposed foundation; as such, the specialist's construction methods such as pile and beam will have to be employed if tree roots are identified along with the envelope of the proposed footings.
- 6.1.5 Within T002 – T006 RPAs ground excavation and creation of the concrete walls of approx. 2m took place. This inevitably resulted in loss of tree root mass. The remedial action will be required especially in case of T002 which is reasonably prominent tall tree in its environment exposed. The tree shall be reduced by at least 30% of the crown mass to retain the tree and give it a chance to re-establish structural integrity. This also applies for T006, which is also more prominent tree and more exposed to the wind force. Rest of the trees are shaded and although the root severance was significant the crown reduction should not exceed 20% of total crown mass. All trees will require annual reinspection by independent Arboricultural consultant with access to the base of the trees to ensure structural stability. The first inspection shall take place within 3 months of publication of this report, as the tree assessment produced was limited by access. The inspection may conclude different tree works recommendation outcome such the above recommendation should be deemed as preliminary.
- 6.1.6 T007 and T008 (total area of approx. 26.45m²) Root Protection Area (RPA) will require multitrack system laid on top of a compression-resistant layer (e.g., 150 mm depth of woodchip), laid onto a geotextile membrane during the lifetime of the development works to allow pedestrian traffic within rooting environment without the disturbance or/and compaction of the soil.
- 6.1.7 All retained trees (**T001 – T004 and T012**) will require tree protection barriers around the RPAs.

- 6.1.8 Provided precautions to protect the identified trees are specified and implemented through the measures included in this report; the development proposal will have little or negligible impact on the retained trees or their wider contribution to an area amenity and character if the methods 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. National joint utilities group (2007) NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees
9. The National Archives (2017) Town and Country planning act, 1990,
<http://www.legislation.gov.uk/ukpga/1990/8/contents>; Accessed 20.02.2017
10. Trees and design action group (2014) Trees in a hard landscape: Guide for delivery
11. Department for Communities and Local Government (2014) Tree Preservation Orders and trees in conservation areas

Appendix 2: Tree Schedule

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
- Root Protection Area:
 - Radius (in meters)
 - Area (in square meters)
- Structural and Physiological Condition (Good, Fair, Poor, Dead).
- Preconstruction recommendations in the context of the site's current use during and after the development.
- Bat Potential (No potential, Low, Medium, High, Confirmed)

Retention Category	No. trees
B	4
C	14

Total18

Rem. Contrib.	No. trees
20+ Years	4
30+ Years	10
40+ Years	3
50+ Years	1



Ref.	Species	Full Structure	Measurements	General Observations	Retention Category	RPA	Measurements2	Photo
T001	Elder (<i>Sambucus nigra</i>)	Tree 3 stems	Height (m): 5 3 stems, diam(mm): 120, 100, 90 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 0.5 Lowest Branch (m): 1(NE) Life Stage: Early Mature Rem. Contrib.: 20+ Years	On the neighbouring property behind the perimeter fence. Imbedded ded tree within. Cavity on the dead tree. Imbalanced Crown.	C3	Radius: 2.2m. Area: 15 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Fair Bat Habitat: Medium	
T002	Lombardy Poplar (<i>Populus nigra italica</i>)	Tree	Height (m): 18 Stem Diam (mm): 800 Spread (m): 3N, 4.5E, 4.5S, 4.5W Crown Clearance (m): 4 Lowest Branch (m): 2(N) Life Stage: Mature Rem. Contrib.: 30+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Weak Forks. Cavities on Stem. Codominant stems. Recently excavated within RPA.	C1,3	Radius: 9.6m. Area: 290 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Poor Bat Habitat: High	
T003	Pedunculate Oak (<i>Quercus robur</i>)	Tree	Height (m): 14 Stem Diam (mm): 700 Spread (m): 6N, 6E, 6S, 6W Crown Clearance (m): 1 Lowest Branch (m): 2(W) Life Stage: Early Mature Rem. Contrib.: 50+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Leaning Stem. Recent excavation within RPA.	B1,3	Radius: 8.4m. Area: 222 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: Low	
T004	English Yew (<i>Taxus baccata</i>)	Tree	Height (m): 6 Stem Diam (mm): 600 Spread (m): 5N, 5E, 5S, 5W Crown Clearance (m): 0 Lowest Branch (m): 1(N) Life Stage: Early Mature Rem. Contrib.: 40+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Weak Forks. Recently excavated within RPA.	B1,3	Radius: 7.2m. Area: 163 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Fair Bat Habitat: Medium	
T005	Cotoneaster (<i>Cotoneaster sp.</i>)	Tree 4 stems	Height (m): 5 4 stems, diam(mm): 80, 80, 100, 90 Spread (m): 2.5N, 2.5E, 2.5S, 2.5W Crown Clearance (m): 0 Lowest Branch (m): 0(N) Life Stage: Early Mature Rem. Contrib.: 20+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Ornamental shrub. Multistem. Recently excavated within the RPA.	C3	Radius: 2.1m. Area: 14 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: No Potential	
T006	Goat Willow (<i>Salix caprea</i>)	Tree 5 stems	Height (m): 8 5 stems, diam(mm): 110, 120, 100, 100, 100 Spread (m): 2N, 3E, 2S, 3W Crown Clearance (m): 2 Lowest Branch (m): 0.5(N) Life Stage: Early Mature Rem. Contrib.: 20+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Multistem. Recently excavated within the RPA.	C3	Radius: 2.9m. Area: 26 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Fair Bat Habitat: No Potential	

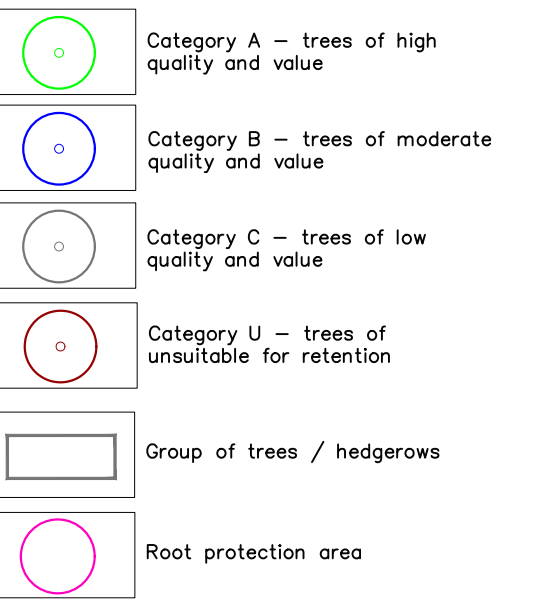
Ref.	Species	Full Structure	Measurements	General Observations	Retention Category	RPA	Measurements2	Photo
T007	Sycamore (<i>Acer pseudoplatanus</i>)	Tree	Height (m): 11 Stem Diam (mm): 800 Spread (m): 6.5N, 6.5E, 6.5S, 6.5W Crown Clearance (m): 3 Lowest Branch (m): 3(E) Life Stage: Mature Rem. Contrib.: 40+ Years	Ivy on the Stem. Minor Deadwood. Cavities on the stem.	B1,3	Radius: 9.6m. Area: 290 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Good Bat Habitat: High	
T008	Horse Chestnut (<i>Aesculus hippocastanum</i>)	Tree	Height (m): 7 Stem Diam (mm): 700 Spread (m): 4N, 4E, 4S, 4W Crown Clearance (m): 4 Lowest Branch (m): 4(S) Life Stage: Mature Rem. Contrib.: 40+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. High standing Coppice. Stem cavities.	B3	Radius: 8.4m. Area: 222 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Fair Structural Cond: Fair Bat Habitat: High	
T009	Buddleia (<i>Buddleia sp.</i>)	Tree 4 stems	Height (m): 2 4 stems, avg.(mm): 70 Spread (m): 3N, 3E, 1S, 2W Crown Clearance (m): 0 Lowest Branch (m): 0(E) Life Stage: Early Mature Rem. Contrib.: 20+ Years	Self set tree.	C3	Radius: 1.7m. Area: 9 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Good Bat Habitat: No Potential	
T010	Birch (<i>Betula sp.</i>)	Tree	Height (m): 3 Stem Diam (mm): 70 Spread (m): 2N, 2E, 1S, 2W Crown Clearance (m): 0 Lowest Branch (m): 0(N) Life Stage: Young Rem. Contrib.: 30+ Years	Self set young tree,	C1	Radius: 0.8m. Area: 2 sq m.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Good Bat Habitat: No Potential	
T011	Goat Willow x3 (<i>Salix caprea</i>)	Group 3 trees	Height (m): 2 3 stems, avg.(mm): 70 Spread (m): 3N, 3E, 3S, 3W Crown Clearance (m): 0 Lowest Branch (m): 0(N) Life Stage: Young Rem. Contrib.: 30+ Years	Self set trees.	C2	Area: 13 sq m, plus a 1m buffer.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Good Bat Habitat: No Potential	
T012	Laurel Cherry x5 (<i>Prunus laurocerasus</i>)	Group 5 trees	Height (m): 2 5 stems, avg.(mm): 100 Spread (m): 2N, 2E, 2S, 2W Crown Clearance (m): 0 Lowest Branch (m): 0(S) Life Stage: Early Mature Rem. Contrib.: 30+ Years	On the neighbouring property behind the perimeter fence. Data and location Estimated. Formally maintained hedge.	C2,3	Area: 44 sq m, plus a 1m buffer.	Other Reference: Distance1: Distance2: Physiological Cond: Good Structural Cond: Good Bat Habitat: No Potential	

Appendix 3: Tree Constraints Plan

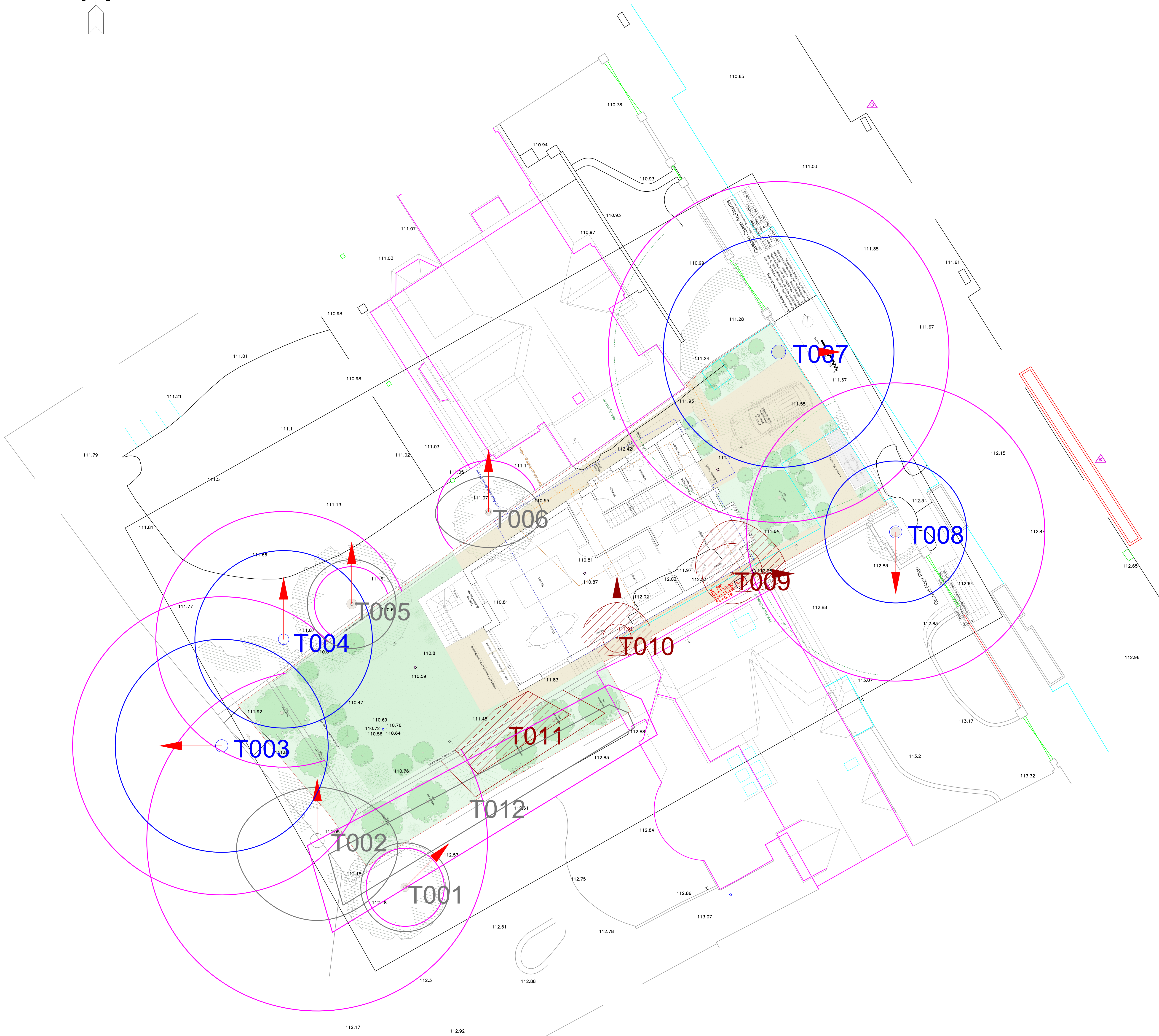
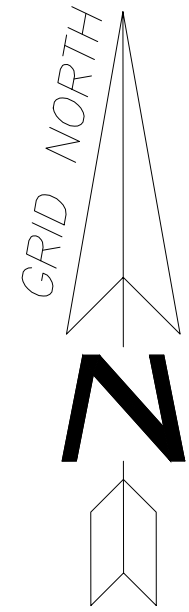
as Amlani

Free Survey & Protection Plan

1 of 1	Scale 1:250 @ A0	Date 19.10.2022
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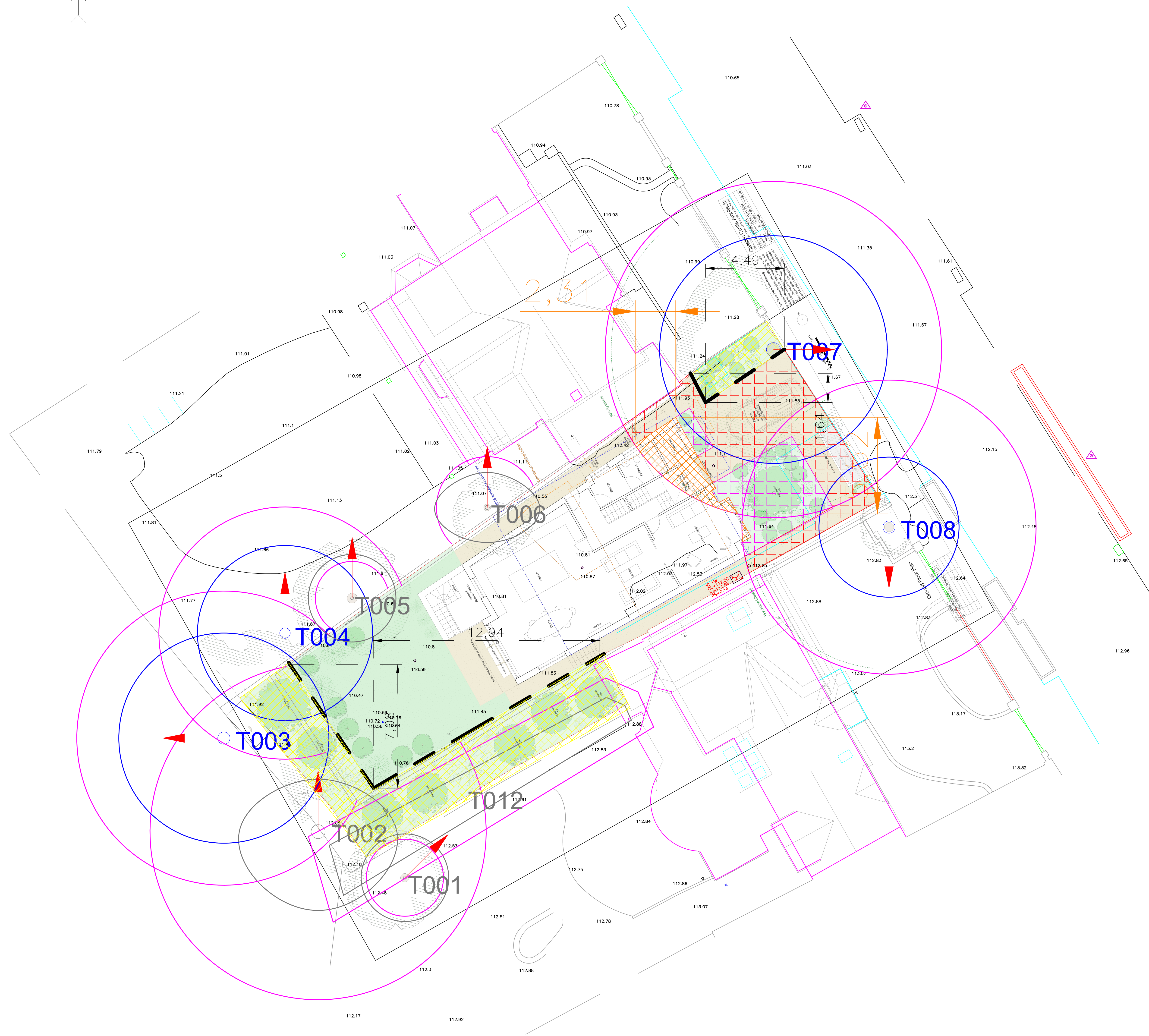
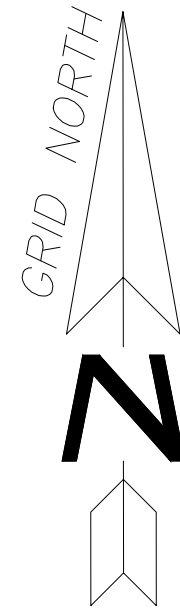
Appendix 4: Tree Removal And Retention Plan



- 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 5: 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
- Specialists Construction Methods
- Construction Exclusion Zone

