

BSi 5837 Arboricultural Method Statement

CLIENT: Mr B Berisha

SITE: 140 Linden Avenue, Ruislip, HA4 8UB

OUR REF: 2239ams/CJO/1112

DATE OF REPORT: 10 December 2024

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SUMMARY

Successful avoidance of any damage can be achieved through appropriate tree protection details, correct implementation of these details and close liaison with the Council's tree officer and the appointed arboriculturist.

These details and procedures are provided in the arboricultural method statements outlined below and illustrated in the Tree Protection Plan at Appendix A. All key site personnel must fully familiarise themselves and understand this method statement and tree protection plan. A copy of the method statement must be kept on site at all times. To ensure the correct installation of the tree protection and its continued efficacy throughout the construction process, the following principals must apply:

- All relevant aspects of this method statement must be incorporated into the construction method statement to avoid any conflicts.
- No building work or other activity associated with development can take place until the approved protection measures are in place and secure, and a site meeting between involving the contractor, architect, arboricultural officer and consultant has taken place.
- Details of key site personnel will be submitted to the Council's arboricultural officer prior to the commencement of site works.
- All key site personnel must fully familiarise themselves and understand this method statement and tree protection plans.
- A copy of this method statement must be kept on site at all times. A large (not less than A3 size) copy of the TPP must be placed on the site office noticeboard.

The tree protection strategy is based on the creation of exclusion zones and ground protection where access within RPAs is required. Additionally, appropriate precautions when excavating for foundations that encroach upon RPAs and removing concrete from within the RPAs is specified.

1.0 INTRODUCTION

1.1 BRIEF

OMC Associates are instructed to provide an arboricultural method statement for 140 Linden Avenue, Ruislip, HA4 8UB to discharge conditions 6 & 7 attached to planning consent 78323/APP/2024/968.

Recommendations are consistent with the most recently revised version of the British Standard on this subject, "Trees in relation to design, demolition and construction - Recommendations", BS 5837 (2012).

1.2 SCOPE AND BACKGROUND

This report incorporates an arboricultural method statement providing the details necessary to ensure retained trees on site are not damaged during construction and is supplemented by two Tree Protection Plans that illustrates the protection measures required.

1.3 DOCUMENTS

The report is informed by the OMC arboricultural impacts assessment report ref. 2149DCS241009, dated 10/10/24.

2.0 PHASING OF INSPECTION/MONITORING

2.1 INTRODUCTION

Section 3 provides all the details relating to tree protection specific to this development. Critical to its implementation is a clear understanding of when and how the protection is implemented, what action must be taken when there is a breach of the approved protection and how to implement any changes in the approved protection necessitated by unanticipated events/changes in design.

2.2 SITE ARBORICULTURALIST

An appropriately experienced and professional arboriculturist must be appointed at the outset whose role will be to ensure full compliance of the approved tree protection measures through regular monitoring and maintenance of a progress sheet that shall be signed off by the arboriculturist and site manager (or equivalent) on completion of the development and submitted to the LPA.

2.3 STAGE 1 - PRE-COMMENCEMENT MEETING

This will involve the arboriculturist, the site manager and other relevant site personnel and optionally the local authority arboricultural officer. He/she must be given sufficient advance warning of the meeting. This meeting could be viewed as a form of induction and will ensure:

1. a full understanding exists of what and where the tree protection comprises - if necessary, the site can be marked out to indicate the positioning of protection.
2. if and when arboricultural supervision is required.
3. exchange of all relevant contact details and distribution of an arboricultural site monitoring record.
4. that all parties are happy with what is agreed and that it is deemed practical. Any tweaks/changes made at this stage that vary to the approved details must be agreed by the LPA Tree Officer and a means of ensuring this is appropriately recorded with the LPA determined.

There is no reason why the tree protection cannot be installed prior to this meeting so long as the opportunity remains for adjusting or improving it according to advice from the site arboriculturist.

2.4 STAGE 2 - MONITORING

The arboriculturist will monitor the development through regular, informal site visits or in accordance with an agreed schedule. The inspection record will be completed and signed off after each visit.

Any discrepancies to the approved, implemented protection shall be highlighted and the site arboriculturist recommended course of action implemented immediately, if necessary, stopping all development until resolved. A re-inspection will be organised to ensure satisfactory resolution.

The site manager will contact the arboriculturist immediately if damage to trees or root zones occurs.

2.5 STAGE 3 - SUPERVISION

The arboricultural method statement (AMS) may specify sensitive works within Root Protection Areas that require arboricultural supervision. These will be clearly shown in the AMS. The site manager will contact the site arboriculturist when this is ready to be carried out.

2.6 STAGE 4 - COMPLETION

On completion of all works on site, the site arboriculturist will be called to site to carry out a final inspection of the trees and the integrity of the RPAs. A Record of Completion will be signed by the site arboriculturist and the site manager and submitted to the LPA for discharge or complete discharge of outstanding conditions.

This will not be completed where damage to trees or RPAs is noted at this final inspection until remedial measures as agreed between the site arboriculturist and the LPA Arboricultural Officer are fully implemented.

3.0 TREE PROTECTION SPECIFICS

The tree protection strategy is based on the creation of exclusion zones and ground protection where access within RPAs is required.

Additionally, appropriate precautions when excavating for foundations that encroach upon RPAs and removing concrete from within the RPAs is specified.

3.1 GROUND PROTECTION

Protection of the ground within RPAs is essential to ensure the potentially harmful effects of construction activity on ground conditions (compaction and the absorption of potentially toxic materials) are avoided. Creation of a Construction Exclusion Zone (CEZ) using protective fencing is the optimum means of protecting Root Protection Areas but where access within RPAs is required, protection of the ground is essential. (See Appendix D for an illustrated example).

Ground protection as illustrated in TPP1 (demolition phase) and reconfigured as shown in TPP 2 will be laid out. There will be a need to lay the new underground services during phase after site clearance and the ground protection will need to be manipulated to allow for this.

Temporary ground protection must comply with British Standard Recommendations, as below:

- a) 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., 100mm depth of woodchip), laid onto a geotextile membrane; or 18mm 2400x1200mm plyboard.
- b) For pedestrian-operated plant up to a gross weight of 2t: proprietary, inter-linked ground protection boards placed on top of a compression resistant layer (e.g., 150mm of woodchip), laid onto a geotextile membrane.
- c) For wheeled or tracked construction traffic exceeding 2t gross weight: an alternative system (e.g., *proprietary systems of 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.

The ground protection around will comply with (a) above.

3.2 INSTALLATION OF PROTECTIVE BARRIERS

An RPA is defined in BSI 5837 (2012) as “the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree”.

Damage to the RPA can be avoided through the establishment of Construction Exclusion Zones (CEZ) with the use of protective fencing. The use of a CEZ prevents or limits RPA incursion by separating from construction activity.

The positioning of all tree protection fencing is clearly illustrated on Tree Protection Plans 1 and 2. It is phased firstly to accommodate removal of existing structures and site clearance and then reconfigured to allow for construction of the dwelling.

The barriers used to secure the CEZ must be installed prior to commencement of any construction activity. Once erected and secured the exclusion zone must not under any circumstances be altered or removed without advice from the arboriculturist and/or approval of the local planning authority.

BS 5837:2012 recommends weld mesh Heras-type panels secured firmly to a scaffold framework (scaffold clamps are recommended) and braced with diagonal stabilizer struts all secured to the ground with metal pins, see Appendix B.

NOTE: In the event the fencing becomes damaged it must be repaired or replaced as soon as is reasonably practicable to preserve its efficacy.

Tree protection posters as shown at Appendix C should be secured to the fencing to serve as explanation for its presence.

Only once the protective fencing is in place and secured, (as well as any other protection measures detailed below) may construction commence. The fencing will remain in place and secured until such time that all construction is complete, and materials/equipment have been removed from the site.

3.3 TREATMENT OF ROOTS/ROOT PRUNING - EXCAVATION/GROUNDWORKS WITHIN RPAS

Roots are likely to be encountered when the piled foundations for the new dwelling are constructed garage. This is highlighted by the bold bright green line shown in TPP2. During these groundworks the following guidelines will be adhered to:

- No roots of greater than 25mm must be cut without consultation.
- Where roots can be carefully moved to one side, this should be carried out rather than being severed.
- If cutting of root(s) of less than 25mm diameter is deemed necessary they must be cleanly pruned, preferably back to a side branch, using sharp bi-pass secateurs or loppers. Once pruned, the cut root(s) must be immediately covered with damp, clean, hessian sacking (in summer months) which must be kept damp so long as the roots remain exposed, or dry hessian sacking in winter to prevent desiccation and protect from rapid temperature changes.
- Prior to backfilling, any hessian wrapping should be removed and retained roots should be surrounded with sharp sand (builders' sand should not be used because of its high salt content which is toxic to roots) or other granular fill, before soil is replaced.
- If new concrete is to be used, an impermeable membrane must be placed along the exposed face to prevent contact with and scorching of roots, and to ensure leachates do not contaminate the immediate rooting area in the future.

Where the pile locations are proposed, an exploratory hole will be dug in accordance with the specification above to 700mm to establish the presence of roots. Where roots of more than 30mm diameter are encountered, the pile position will be tweaked to ensure these are not damaged.

3.4 REMOVAL OF EXISTING HARDSTANDING WITHIN RPAS

Existing hardstanding, garden structures and the foundations of the existing dwelling located within the RPAs will be removed in accordance with the following methodology:

- Concrete will be broken and dismantled manually. Hand operated hydraulic equipment may be used. The work should be carried out in small sections.
- Carefully ease out broken concrete (and substrate where this is applicable) and any other objects without tearing larger roots (> 25mm) that may have grown under or around them. If this has occurred, carefully prise the root away and cleanly cut the root first with sharp secateurs.
- Refer to Section 3.3 for general guidance of root pruning and root exposure.

These areas are shown in TPP1 as cyan hatching.

3.5 WORKING WITH CEMENT/CONCRETE MIXING

Concrete or cementitious (mortar, cement, slurry) washout wastewater is caustic with a PH over 12 and is, therefore, highly toxic to trees and other vegetation. It is also important not to mix concrete or dispense of concrete in the vicinity of trees in order to avoid the risk of it leaching into the soil.

These activities will not take place within 7m of any identified RPA.

Where concrete footings and other structures cast from concrete below ground level near to root systems of retained vegetation is required (foundations of extension), the incorporation of protection

(e.g., sheathing with an impermeable membrane such as heavy-grade polythene sheeting) is extremely important to prevent it coming into contact with roots.

Additionally, regardless of the presence of trees, the integrity of the ground must be protected for future planting.

The use of a banded area for the purpose of cement/concrete mixing to contain spillages and runoff is recommended.

3.6 NO-DIG CONSTRUCTION OF HARDSTANDING

The proposed new flagged surface along the eastern side of the house and to the rear, as hatched in blue on TPP3 will be constructed using a "No-Dig" cellular confinement system as detailed below, to protect the integrity of the texture and structure of the ground, and the substrate and finishing surface will be fully porous.

The ground must be level in terms of an absence of bumps and dips before laying a three-dimensional cellular confinement system. This may involve infilling any slight dips with sharp sand and skimming off any slight humps. It will not involve a reduction in ground level.

Once the preparatory ground works are complete, installation of the cellular confinement system can commence. The confinement system shall be undertaken in accordance with the method described below:

- Any roots encountered in the course of the excavations will, where possible, be preserved and protected from desiccation as per the method described at section 3.3.
- A geotextile membrane (not less than 500 micron gauge/78grams per sqm woven geotextile such as Terram Fastrack G90) will be laid directly onto the soil over the whole area where the driveway is to be installed.
- Spread MOT type 3 or similar over the membrane.
- Lay a three-dimensional cellular confinement system suitable for pedestrian use only (e.g., Cellweb by Geosynthetics Ltd. or similar). The cellular confinement will be pulled out over the entire area to be protected and pinned with proprietary 'J' pins. It may be haunched with lean mix concrete.
- The cells of the confinement system will then be filled with 20-40mm no-fines aggregate/10-50mm graded washed stone, this will be poured progressively inwards from the site entrance to ensure any machinery only moves on the laid sub-base. The aggregate will not be tipped straight onto the confinement system.
- Once all cells are filled, the sub-base will be compacted using a wacker-plate (or similar) to ensure binding with the confinement system and to minimise any rutting of the surface.

All work must at all times take place on protected ground.

Installation of the cellular confinement system should not take place when the ground is wet or saturated to avoid the possibility of compaction; the period between May and October is advisable.

3.7 TREE WORKS

The lateral spread of seven trees (T1, T2, T4, T6, T8, T9 & T10) will be reduced by 2.5 – 4m to create space for the construction of the dwelling closest to the trees and to maintain clearance from the house after construction. The trees' canopies are already high over the property given their historic management, so this work would not involve the pruning of any large diameter branches; nor would it detract from the trees' appearance and amenity value.

All work will be carried out prior to commencement.

This will be carried out in full compliance with BS 3998 (2010).

3.8 NEW UNDERGROUND SERVICES WITHIN RPAS

A section of new underground services as illustrated with a bold bright green line in TPP1 will be laid within RPAs.

The ground protection that has been put down for the demolition phase will need to be removed just sufficiently to allow for the trenching to be carried out.

Digging to 0.7m will be fully compliant with the specification given in section 3.3. Beyond this depth a mini digger may be used so long as all activity take place on ground protection plates.

3.9 SOFT AND HARD LANDSCAPING

Once all other work has been completed and the site is ready to be landscaped, all protective fencing and ground protection shall be removed to allow for access.

- All work within RPAs shall take place on mobile ground protection plates.
- There will be no vehicular movements of any kind within RPA's.
- There will be no mechanical excavation within RPA's.
- No paths or structures that are not shown on the Tree protection plan associated with this report will be constructed or laid until consultation with the site arboriculturist and a methodology agreed.
- All cultivation within RPA's will be fully compliant with the details in section 6.3.
- Any further tree work required to facilitate for landscape works will be agreed with the site aboard culture list and carried out in compliance with BS3998

Any ground damage or ground compaction within RPAS that occurred during the development where ground should have been protected through protective fencing or ground protection will be fully reinstated by decompaction (terraventing) and subsequent mulching to 80mm depth with suitable composted chippings.

3.10 SITE SET UP / WELFARE

Welfare - locations for site huts, temporary toilets etc: Where required, this will be located beyond any CEZ.

Storage of materials: This will be located 5m beyond any CEZ.

Cement/Concrete mixing: See section 3.5. No mixing will take place within 7m of the edge of any CEZ.

A suitable position is shown on the TPP.

3.11 ADDITIONAL PRECAUTIONS OUTSIDE THE TREE EXCLUSION ZONE

- All-weather notices should be erected on the barrier with words such as "Exclusion Zone – Not to be moved without appropriate consent". Copies of such notices are attached at Appendix C.
- Materials that will contaminate the ground such as diesel oil and concrete mixings will not be discharged within the RPA or within 10m of any of the tree stems.
- Notice boards, telephone cables or other services should not be attached to any part of the tree.
- No fires that have the potential for flames to extend to within 5m of any point of the tree are to be lit.

4.0 SEQUENCE OF EVENTS

4.1 PHASES OF TREE PROTECTION

All key site personnel must fully familiarise themselves and understand this method statement and tree protection plan. A copy of the method statement must be kept at all times on site. A large (not less than A3 size) copy of the TPP must be placed on the site office noticeboard. The general sequence of events should be as follows:

Stage 1: Pre-commencement site meeting involving the site manager/foreman and arboriculturist. The local authority arboricultural officer may also be notified of this meeting in good time to allow the opportunity for he/she to attend. Mark out positions for protection for phase 1 and discuss all tree protection issues.

Stage 2: Install tree protection fencing and ground protection as per TPP1 and inspect.

Stage 3: On completion of demolition, site clearance, reconfigure tree protection fencing and ground protection s per TPP2.

Stage 6: Construct house

Stage 7: Remove tree protection and carry out hard and soft landscaping.

4.2 ARBORICULTURAL INVOLVEMENT

The arboriculturist will monitor the development through periodic site visits or in accordance with an agreed schedule. Regularity will be determined by the impact of the scheme on trees, the complexity of protection and the significance of trees. The inspection record will be completed and signed off after each visit.

Any discrepancies to the approved, implemented protection shall be highlighted and the site arboriculturist recommended course of action implemented immediately, if necessary, stopping all development until resolved. A re-inspection will be organised to ensure satisfactory resolution.

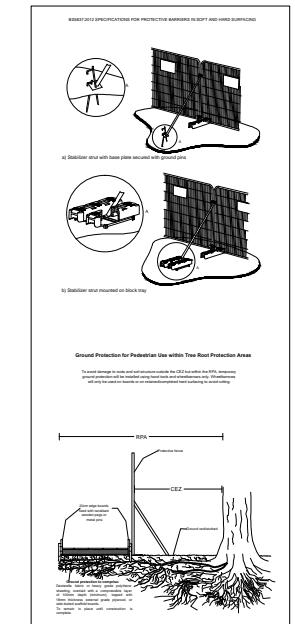
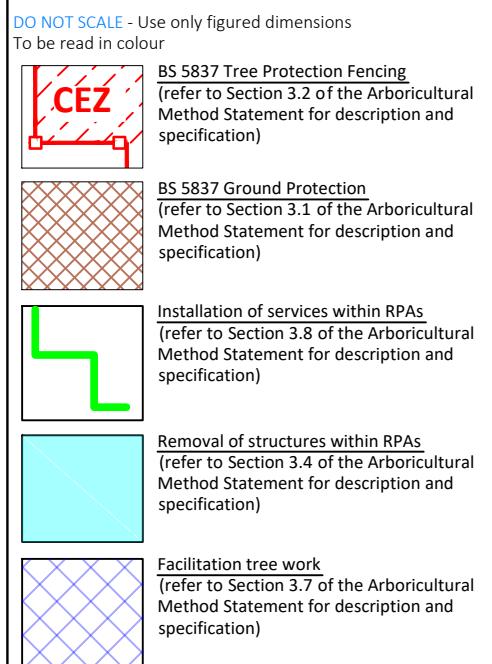
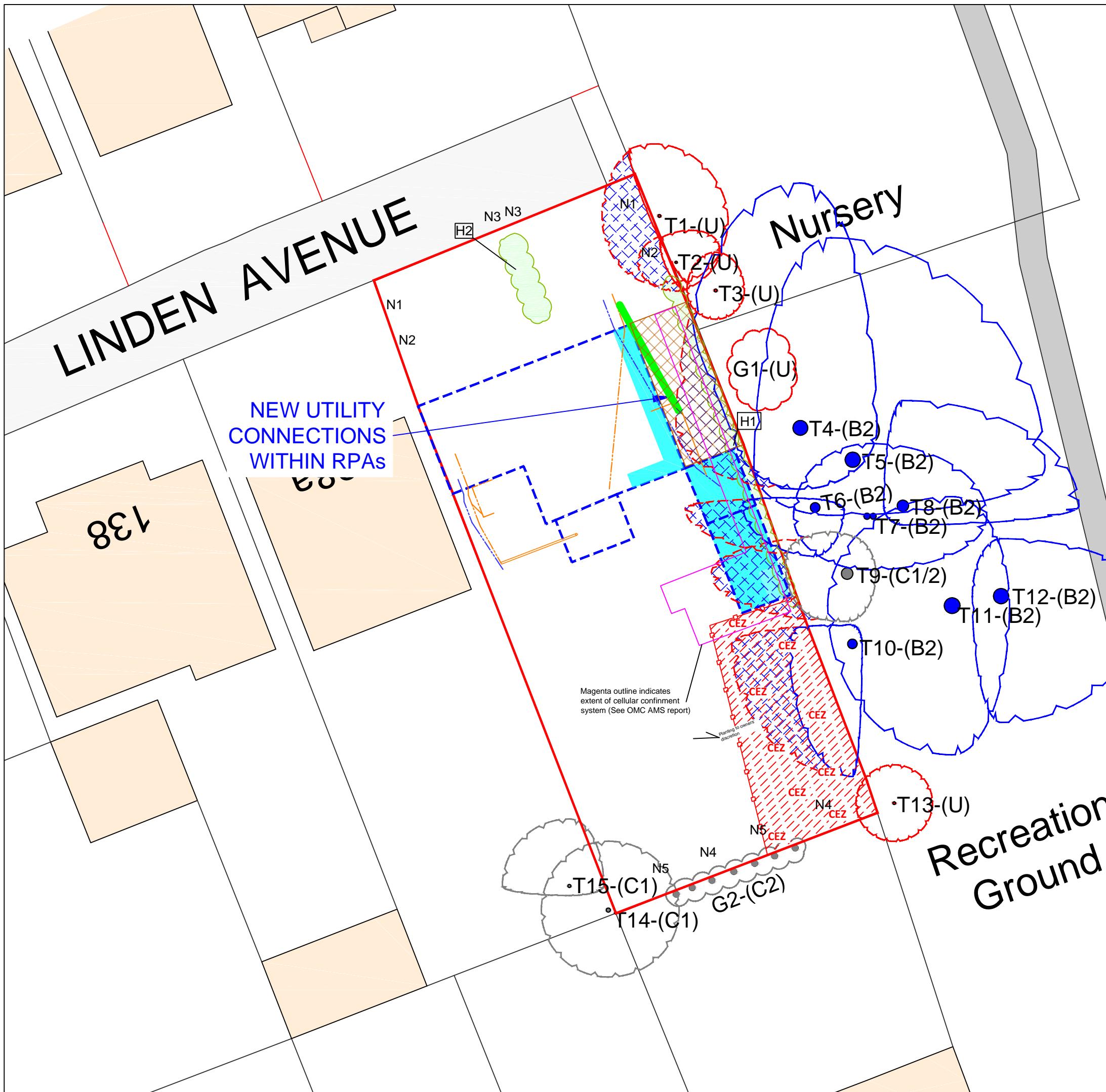
The site manager will contact the arboriculturist immediately if damage to trees or root zones occurs.

Once all works are complete, arrange post construction meeting to ensure no damage to trees and RPAs. (Organise remedial works as recommended by the arboriculturist where damage noted). Remove temporary protection.

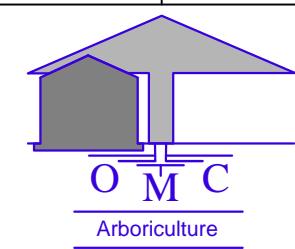


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Appendix A Tree Protection Plans



Title	
Tree Protection Plan Phase 1	
Client	
Mr B. Berisha	
Project	
140 Linden Avenue, Ruislip, HA4 8UB	
Date	Drawn by
December 2024	CS
Project Ref.	Scale
2149_TPP_1	1:200 @ A3



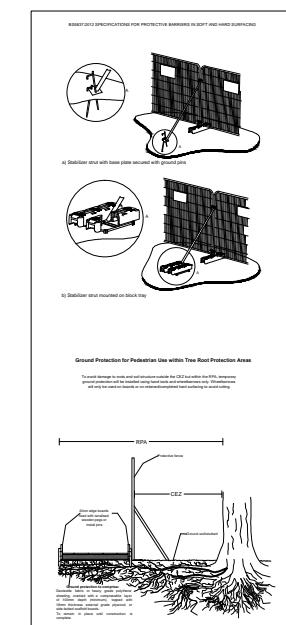


DO NOT SCALE - Use only figured dimensions
To be read in colour

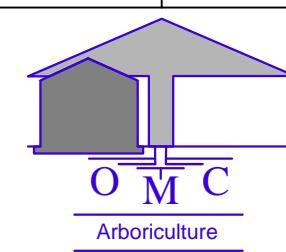
The logo consists of the letters 'CEZ' in a bold, red, sans-serif font, enclosed within a red rectangular border. The border has diagonal hatching lines running from the top-left corner to the bottom-right corner, creating a cross-hatched effect. The logo is positioned to the left of the text 'BS 5837 Tree Protection Fencing'.

BS 5837 Ground Protection
(refer to Section 3.1 of the Arboricultural Method Statement for description and specification)

Treatment of roots within RPAs
(refer to Section 3.3 of the Arboricultural Method Statement for description and specification)



Title	
Tree Protection Plan - Phase 2	
Client	
Mr B. Berisha	
Project	
140 Linden Avenue, Ruislip, HA4 8UB	
Date December 2024	Drawn by CS
Project Ref. 2149 TPP 2	Scale 1:200 @ A3



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Appendix B Specification for Heras protective fencing and signage



TREE PROTECTION AREA KEEP OUT!

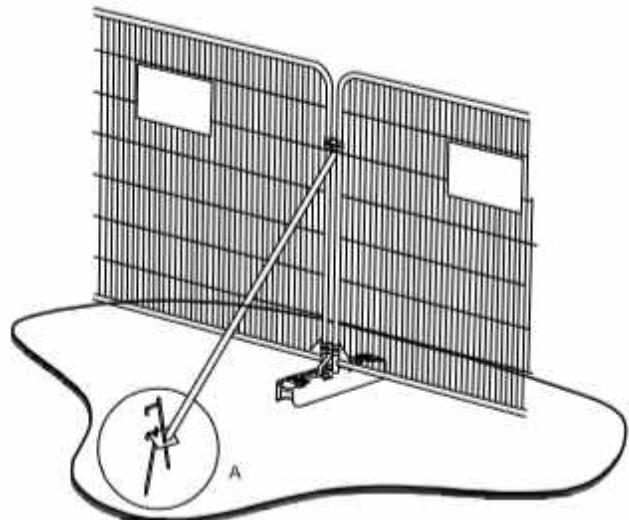
(TOWN & COUNTRY PLANNING ACT 1990)

**TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING
CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE
PRESERVATION ORDER.**

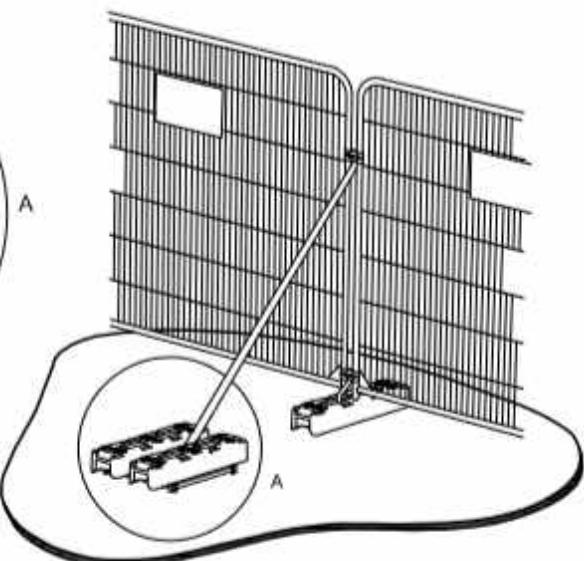
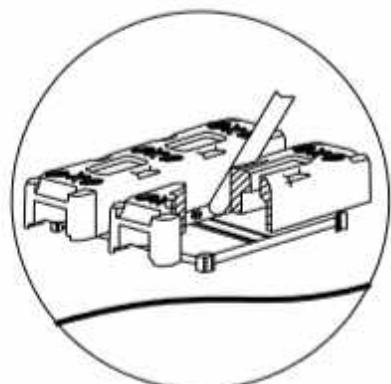
**CONTRAVICTION OF A TREE PRESERVATION ORDER MAY LEAD TO
CRIMINAL PROSECUTION.**

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





a) Stabilizer strut with base plate secured with ground pins



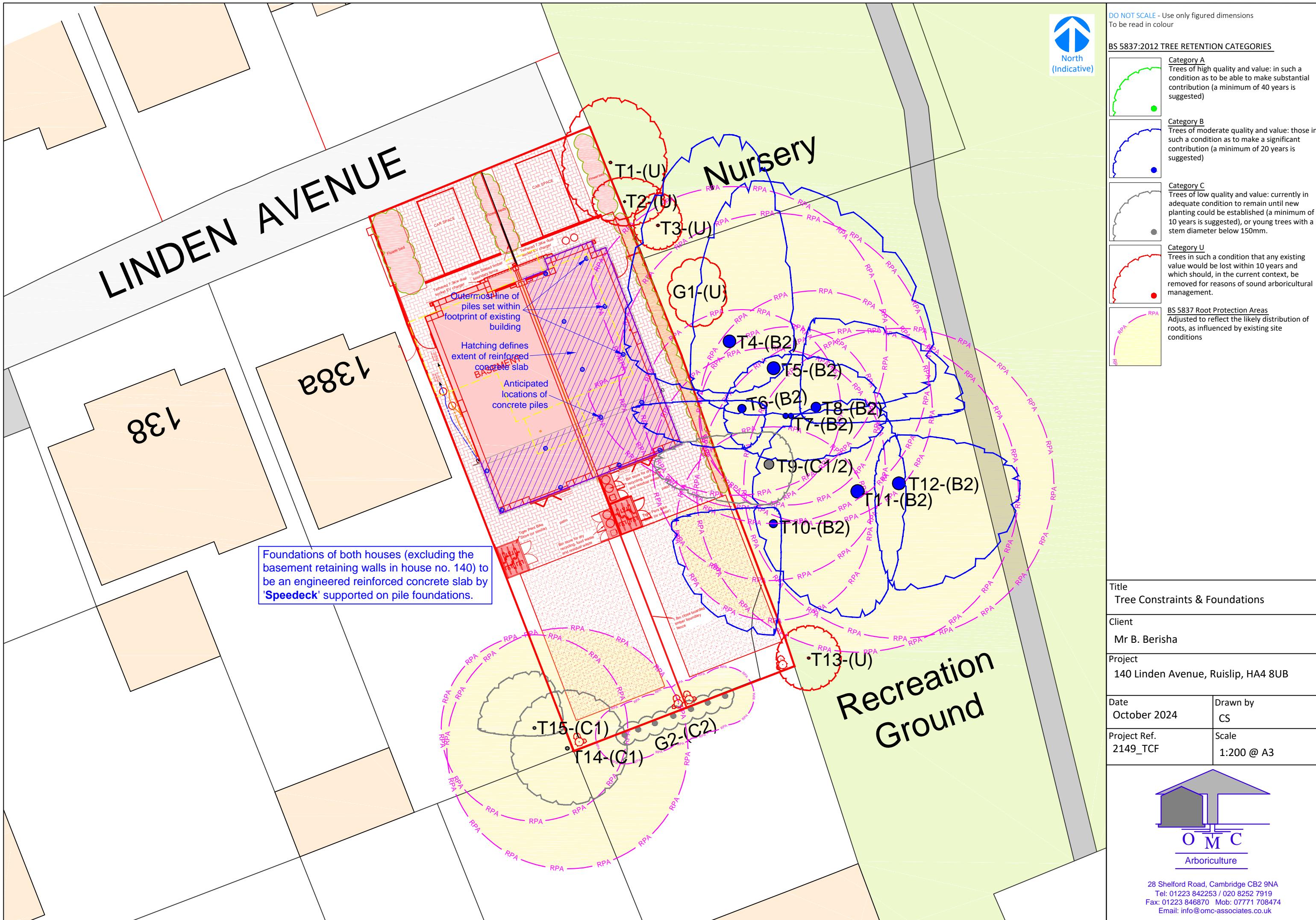
b) Stabilizer strut mounted on block tray





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Appendix C Tree Constraints Plan



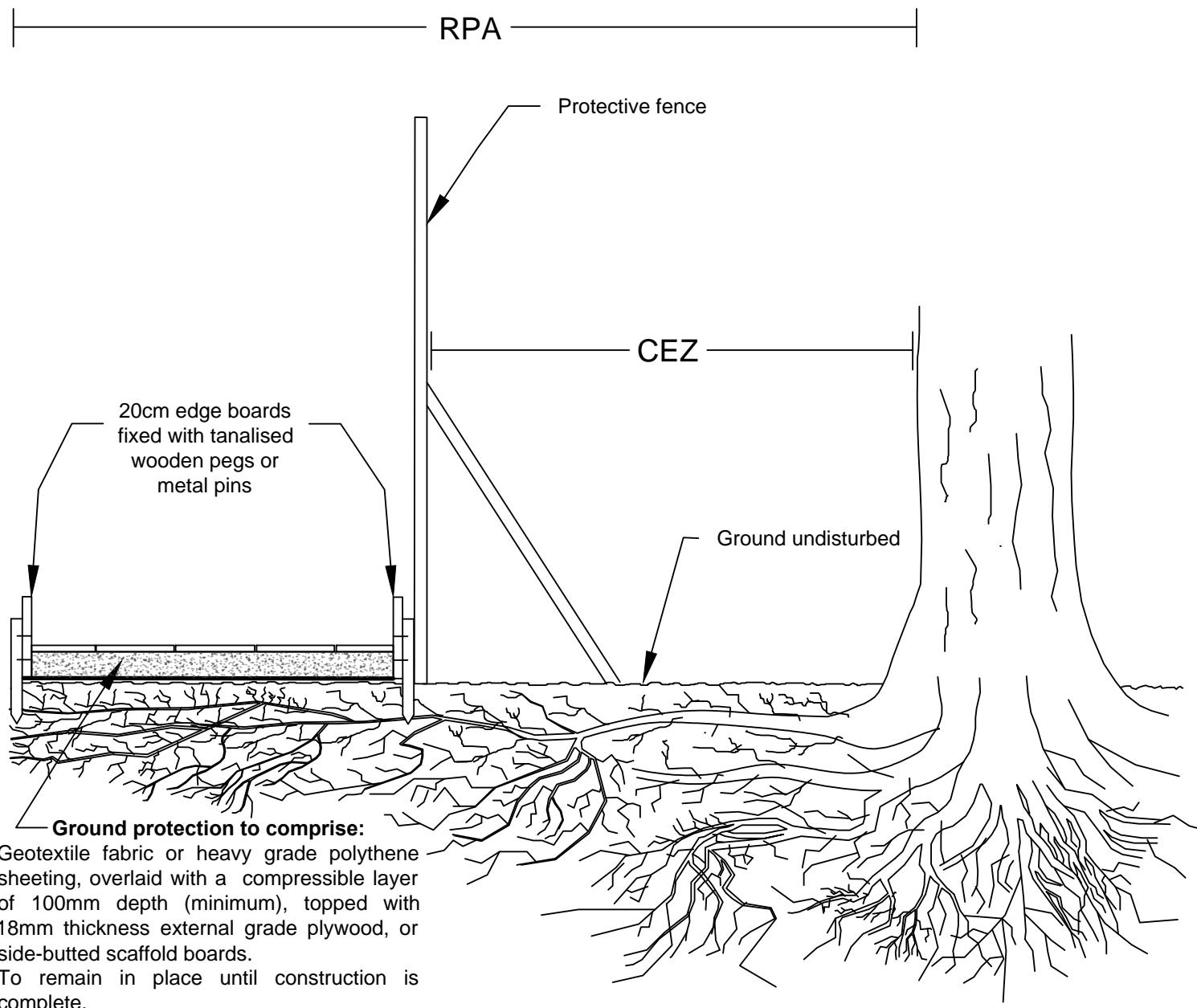


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Appendix D Ground Protection

Ground Protection for Pedestrian Use within Tree Root Protection Areas

To avoid damage to roots and soil structure outside the CEZ but within the RPA, temporary ground protection will be installed using hand tools and wheelbarrows only. Wheelbarrows will only be used on boards or on retained/completed hard surfacing to avoid rutting.





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Appendix E Examples of bund for cement mixing



Instabund Containment Bund



Portable Spill Bund



Cement mixing tray (Toolstation)



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Appendix F Monitoring schedule

ARBORICULTURAL MONITORING SCHEDULE

PURPOSE OF VISIT	TIMING	PERSONNEL PRESENT	REMOTE - PHOTO BASED	OBSERVATIONS AND RECOMMENDATIONS	COMPLETE Y/N
1. Appoint arboriculturist to oversee all arboricultural issues on site.	Pre-commencement				
2. On-site tree protection induction with construction team, arboriculturist & tree officer (if attending); *	Pre-commencement				
3. Erect tree protective fencing and ground protection as detailed in the AMS and shown in TPP1 and carry out tree works*	Pre-commencement				
4. Remove the existing structures/demolition; lay services	Construction				
5. Reconfigure tree protection prior construction of dwelling as per TPP2	Construction				
6. Remove tree protection to accommodate all hard and soft landscaping as per TPP3	Construction				
7. Final, completion inspection and identification of any remedial actions.	Completion of scheme				

* Tree protection may be put in place and inspected at the same time as the site induction/meeting in some circumstances

Project Contacts

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Arboriculturist:	Christopher Overbeke - OMC Associates	01223 842303 chris@omc-associates.co.uk
Project Agent:	Bedri Berisha	07974980703 bedriberisha@hotmail.co.uk

Notes