



Landmark Trees

ARBORICULTURAL METHOD STATEMENT:

69 Avenue Road
London
NW8 6HP

REPORT PREPARED FOR:

Ms Huirong HAN c/o RB Project Management
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W1K 2ND

REPORT PREPARED BY:

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Ref: KSR/69AVR/AMS/01

Date: 27th March 2023

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1.0 Introduction

1.1 Purpose & Use of the Method Statement

- 1.1.1 This method statement has been prepared for RB Project Management's client, for assistance with the discharge of planning conditions at 69 Avenue Road, London NW8 6HP: London Borough of Camden planning permission no.: 2020/2330/P. The document will address the following conditions:

4 Prior to the commencement of any works on site, details demonstrating how trees to be retained shall be protected during construction work shall be submitted to and approved by the local planning authority in writing. Such details shall follow guidelines and standards set out in BS5837:2012 "Trees in Relation to Construction". All trees on the site, or parts of trees growing from adjoining sites, unless shown on the permitted drawings as being removed, shall be retained and protected from damage in accordance with the approved protection details.

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

5 Prior to the commencement of construction/demolition works on site, tree protection measures shall be installed in accordance with approved Tree Protection Plan. The protection shall then remain in place for the duration of works on site and works should be undertaken in line with the approved arboricultural method statement, unless otherwise agreed in writing by the local authority.

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

- 1.1.2 This document lays down the methodology for any proposed works that may have an effect upon the trees on and adjacent to the site. It is essential within the scope of any contracts related to the development proposals that this method statement is observed and adhered to. It is recommended that this document form part of the work schedule and specification issued to the building contractors and can be used to form part of the contract.
- 1.1.3 Copies of this document will be available for inspection on site. The developer will inform the local planning authority within twenty-four hours if the arboricultural consultant is replaced.

1.2 Terms of Reference

- 1.2.1 We (LT) are instructed by the client to prepare a method statement for proposed development based on the above planning application with reference to BS 5837:2012 Trees in Relation to Design, Demolition and Construction.
- 1.2.2 For this purpose, the client has supplied us with a site survey plan (Scheme retaining tree) and the consented drawings (floor plans, structural drawings, Construction Management Plan etc.) as found on the council's website. We are also reliant upon our own impact assessment report KSR/69AVR/AIA/02 and plan overlays of tree constraints contained therein. Due to the length of time since it was originally undertaken, our tree survey was updated by Conor Fitzpatrick on the 7th of March 2023. The tree constraints shown on the TPP included herein represent those determined by this more recent survey.

1.3 Development Proposals & Potential Impacts

- 1.3.1 The principal proposals are for: *Demolition of existing side extension and erection of a single storey side and rear extension; erection of a two storey rear extension with roof extension and 3x replacement rear dormer windows; excavation of a basement and small lightwell and associated works.*

1.4 Sequence of Works

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

These works and their arboricultural implications are outlined in sequence below

1.5 Site Supervision

1.5.1 On this site, a site manager will be nominated to be responsible for all arboricultural matters on site. A pre-commencement site briefing/meeting between the site manager and arboricultural consultant will be held (see Table 1 below). The site manager's details will be issued to the London Borough of Camden in the minutes / site monitoring report for this meeting. During this meeting all the tree protection methods below will be studied and familiarization with requirements of this AMS.

The site manager will also:

- be present on site for the majority of the time;
- have the authority to stop any work that is causing, or has the potential to cause harm to any tree;
- be responsible for ensuring that all site operatives are aware of their responsibilities toward trees on site and the consequences of the failure to observe these responsibilities;
- make immediate contact with the Arboricultural consultant in the event of any tree related problems occurring, whether actual or potential, in accordance with a tree protection protocol (see section 1.6 below).

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

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

Tel: 0207 851 4544

1.6 Site Monitoring

1.6.1 Landmark Trees are to be retained as Arboricultural Consultants responsible for site monitoring for the duration of the development. As noted above Adam Hollis MSc (Arb) is the key contact, with monitoring occasionally undertaken by Conor Fitzpatrick (subject to any new staff intake). Site supervision will be undertaken by a qualified and experienced arboriculturalist at pre-determined and agreed time intervals as indicated in Table 1 below. In addition to specific task supervision, general monitoring of protection measures will be undertaken at least once per month, coordinated where practical with visits detailed in Table 1.

1.6.2 Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification (2 weeks) and agreement to supervise any agreed works within the RPA, in accordance with table 1 below.

1.6.3 A tree protection protocol for contingencies will be integrated into the site induction process at a pre-commencement meeting involving the developer, the arboricultural consultant, the site

manager and the Council tree officer as appropriate. The protocol will be that, in the event of any unplanned incursion / accident / spillage within the RPA, the site agent should notify (by telephone) the retained arboricultural consultant immediately. The consultant will provide advice and attend site as soon as possible. This may require the stoppage of all or part of the works in the vicinity of the tree. The consultant will notify the LPA Tree Officer of the nature and extent of damage, the mitigation strategy and likely prognosis. The contact details of the LPA Tree Officer are:

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

Tel: 0207 974 4444

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

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

Table 1: Site Monitoring Visits

Supervision Visit No:	Details	Lead in Time Required by LT	Action
Visit 1: Pre-Development Site Inspection (S.2.3 of AMS)	<ul style="list-style-type: none"> To include Site Agent briefings (S.1.5) prior to start of works. To confirm position of protective fencing and that it has been erected in accordance with AMS (S.2.2 and Tree Protection Plan in Appendix 4); To check any pre-demolition/construction ground protection is in place. To check any tree works have been undertaken in accordance with this AMS (S.2.1. and Appendix 1). Determine if further tree work is required and seek required permission if necessary. To check site facilities/access are in accordance with the AMS (S.3.3). 	Minimum 2 weeks	Issue a brief report with findings to Architect, Tree Officer and Main Contractor within 5 days of site supervision visit (Site Monitoring Sheet in Appendix 3).
Visits 2 & 3: Installation of piling within RPA (S3.7)	<ul style="list-style-type: none"> Attend any excavation within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification. Date to be confirmed following formal project planning. 2 weeks prior notice required. 	Minimum 2 weeks	As per visit 1
Visit 4: Construction of terrace within RPA	<ul style="list-style-type: none"> Attend no-dig construction within RPA's where arboricultural supervision is prescribed by the AMS to ensure work is undertaken in accordance with its specification. Date to be confirmed following formal project planning. 2 weeks prior notice required. 	Minimum 2 weeks	As per visit 1
Ongoing Monitoring Visits	<ul style="list-style-type: none"> Periodically during 12 months (or longer) of entire project and <u>prior to construction phase</u>. Visits will be based on intensity of site operations, but at a minimum of monthly visits. Attend site at least once per month to confirm protective measures are still in place / can be removed at appointed times. Ensure attendance is timed for any other key elements of proposed (and any other unplanned) incursions into the protection areas. <u>Pre-start landscape meeting</u> with main contractor to confirm ongoing tree protection measures. 	TBC as project develops	As per visit 1
Final Site Visit - Completion of construction phase supervision visit (S.5)	After it has been confirmed that the construction phase is complete, allow removal of temporary protective fencing and ground protection. Specify any remedial work if necessary.	Minimum 2 weeks	As per visit 1 and provide signed arboricultural checklist (see Appendix 3)

2.0 Pre- Development Site Preparation

2.1 Arboricultural Works

- 2.1.1 All works must be carried out by a competent arborist in accordance with BS 3998: 2010 and any other prevailing good professional practice including BS 8545:2014 Trees: from nursery to independence in the landscape. Recommendations.
- 2.1.2 Specific works recommended to facilitate development are the felling of G15 and the part removal of G27. These specific works to facilitate development and any other husbandry works are listed in Appendix 1.

2.2 Installation of Tree Protection Barrier

- 2.2.1 The Root Protection Area (RPA) indicates the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority. The default position is for the RPAs to be fully fenced off to form the boundary of the Construction Exclusion Zone (CEZ), an area based on the RPA, from which access is prohibited for the duration of the project, including the storage of any works materials and equipment.
- 2.2.2 A Tree Protection Barrier [TPB] comprising steel mesh panels of 2.4m in height ('Heras') shall be erected to protect retained trees. These panels will be mounted on a scaffolding frame as shown in Figure 1 below (this is also Figure 2 of BS5837: Trees in Relation to Design, Demolition and Construction in paragraph 6.2.2.2). Street tree, T6 will be separated from the site by the site hoarding across the front boundary and will have further self-supporting boxed hoarding, 2.4m in height, around its planting pit to protect against site access collision. This hoarding shall be at least 19mm in thickness, no part of this hoarding may be affixed to the tree.

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

2.2.4 The location of the RPAs and TPBs are shown in the Tree Protection Plans at Appendix 4.

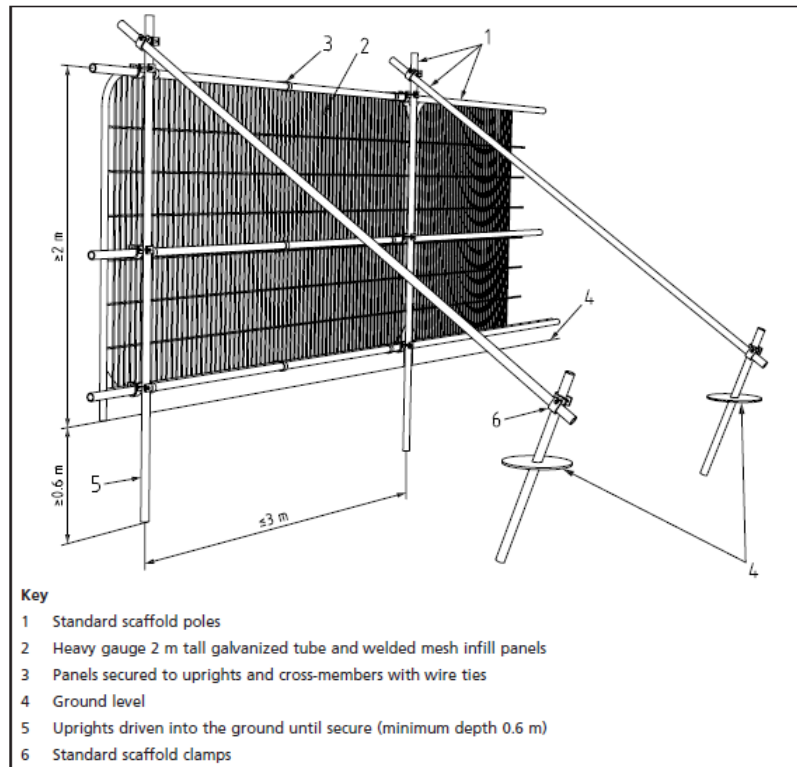


Fig. 1 Tree Protection Barrier Specification
(Source: Figure 2 from BS5837 - Default specification for protective barrier)

2.3 Ground Protection

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

- 2.3.2 In order to provide a sufficient level of protection, a minimum of 100mm deep concrete will be poured onto the existing surface (to within 0.5m distance from the front of the piling line). The extent of this pour will be defined by shuttering to prevent overspill. Where the existing surface is permeable, a HDPE liner or equivalent will be employed. This concrete layer will remain in situ until the completion of construction works and the site being handed over to specialist landscaping contractors for the proposed soil mitigation and no-dig drive construction. It is imperative that the site manager closely control site access following the removal of this ground protection to avoid the compaction of soil. It is ESSENTIAL that a briefing is held with the retained arboriculturalist prior to removal of the ground protection.
- 2.3.3 During resurfacing operations at the end of the development, exposed sub-base will not be left open to vehicular access, but boarded over for temporary pedestrian access only. The replacement paving within RPA will be installed promptly (within 24 hrs of lifting the old pavement).

2.4 Soil Mitigation

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

3.0 Development Phase

3.1.1 The following general precautions will apply:

- No fires shall be made on any part of the site, or within 20m of any tree to be retained.
- No spilling or pouring of fuels, oils, solvents, tar shall be made on any part of the site.
- No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged within 10 metres of the trunk of a tree that is to be retained.
- No spillage or discharge of wet mortar or concrete shall be made on any part of the site.
- No storage of materials shall be made within the protective fences.
- No breaching or moving of the protective hoarding without the approval of an arboriculturist.

3.1.2 The procedures for dealing with variations and incidents are detailed in S1.6.

3.2 Working within Root Protection Areas (RPA)

3.2.1 Although the default position is to exclude all construction activity from the RPA, this degree of protection is not entirely possible on the site: it is necessary to perform some works (in part) within the RPA i.e. demolition of existing building and hard landscaping, formation of basement, construction of new above ground building elements and hard landscaping.

3.2.2 All involved parties will need to be made aware of the deficiencies. In these instances, careful and supervised working, as described in sections S. 3.6 (demolition of surfaces), S. 3.7 (construction) and S. 3.8 (landscaping) will be required.

3.3 Site Access, Accommodation & Storage

3.3.1 Site access will be as per the existing arrangement. Site accommodation and material storage will utilise the building interior and protected ground at the front of the site.

3.3.2 Delivery lorries will be excluded from RPAs by fencing and ground protection. Adequate allowance must be made for vehicle heights and ground clearance, where tree canopies overhang access routes. Any further pruning for working clearances must be discussed first with the arboriculturalist; once agreed in principle these works should be approved by the appropriate tree officer and approved in writing by the LPA.

3.4 Routing & Installation of Services

- 3.4.1 Every effort should be made to ensure that the routing and installation of services avoid the RPA at the design stage; however if unavoidable then it may be possible, with written permission from the LPA, to implement the provisions of BS5837 and NJUG VOLUME 4 (e.g. radial trenching and /or mole trenching) under arboricultural supervision.

3.5 Changes in Grade

- 3.5.1 No changes in level are proposed beyond the basement excavation itself, and any direct effect of employing a no-dig construction technique for the new / replacement hard surfacing.

3.6 Demolition Measures.

- 3.6.1 Demolition of structures within what would otherwise be an RPA will proceed with due caution to avoid unnecessary damage to trees. **Aside from areas within the piling limits, all hard surfaces within RPA will be retained until the landscape phase (and then broken out as per 3.6.4 below).**
- 3.6.2 All plant and vehicles engaged in demolition works (removals only) will either operate outside the RPA, or work from within the existing built structure and reinforced hard standing, near trees. It will be necessary to undertake demolition inwards within the footprint of the existing structures (often referred to as “top down, pull back”).
- 3.6.3 Should levels of dust build-up on trees occur, it may be necessary to seek the advice of Landmark Trees on remedial measures, e.g. hose down the tree(s) immediately following any significant accumulation of dust.
- 3.6.4 During the landscaping phase, the existing hard standing to be replaced within the RPA of retained trees, will be first broken up with manual power tools and then carefully removed with light plant by a skilled machine operator, either operating outside the RPA, or working from within the remaining existing hard standing. Existing paving slabs should be lifted by hand.

3.7 Construction Measures

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

- 3.7.1 The limits of the basement piling line within RPAs will be manually pre-excavated to a min. 1m depth and root-pruned (as applicable) under arboricultural supervision. In the unlikely event of discovering roots >25mm diameter, they may only be cut in consultation with the retained arboriculturalist and with the approval of the Local Authority Tree Officer.
- 3.7.2 The garage will be constructed using discontinuous piles with above ground beam supporting the slab. RPA piling encroachments will be pre-emptively excavated by hand or with an Airspade under arboricultural supervision. Roots smaller than 25mm diameter may be cut cleanly with a sharp pruning saw or secateurs back to a junction. Roots larger than 25mm diameter may only be cut in consultation with the retained arboriculturalist and with the approval of the Local Authority Tree Officer.
- 3.7.3 During the construction phase and throughout dry periods on site regular hosing down will be carried out to control dust pollution. In the event of dust build up on trees occurring arboricultural advice will be sought and if necessary remedial measures such as hosing down the trees will be taken.
- 3.7.4 Where scaffolding needs to be installed within the RPA the proposed 100mm concrete will provide sufficient ground protection.

3.8 Removal of Ground Protection & Post Construction Landscaping & Treatment

3.8.1 The tree protection may be removed upon completion of the construction phase and any site machinery has been removed from the RPA.

3.8.2 Where existing hard surfacing is to be replaced, it will be installed onto the existing sub-base with minor augmentation as necessary. New paving/hard landscaping will require a no-dig construction technique, using a cellular confinement system with no fines aggregate in line with the specification below.

3.8.3 Method Statement - Specifications for no dig paving construction:

- i. Remove surface vegetation or treat with suitable herbicide to level – under the supervision of the project Arboriculturist
- ii. Fill any hollows in the exposed ground with no fines 4/20mm clean angular stone.
- iii. Place TRP4000 geotextile over the area to be protected ensuring a minimum overlap of 300mm.
- iv. Allow adequate drainage as a separation layer between soft subgrade and GEOWEB® infill material
- v. Mark out the area to be protected with edging detail e.g. Timber boards / treated railway sleepers or Greenfix Recycled Plastic Edgings
- vi. Roll out TRP4000 geotextile to cover the area to be protected
- vii. The Greenfix Geoweb® system is available in 5 depths for varying traffic loadings but each site should have a specific design detailed to ensure the correct depth of product is used. However, unless the existing ground conditions are very soft and have an extremely low CBR then the following can apply:
 - a. 75mm - for Pedestrians, Cycleways, and vehicles up to 1.5 tons
 - b. 100mm - for Cars, 4 Wheel Drives, Vans etc up to 6 tons
 - c. 150mm - for Fire Appliances, Removal Vehicles and Dust Carts up to 20 to 30 tons
 - d. 200mm - for construction vehicles, cranes etc 40 tons and above
 - e. 300mm – For extra heavy construction use – Cranes, Piling Rigs etc.
- viii. It is important to ensure the correct Geoweb cell size and cell depth are specified and installed based on the anticipated pavement loads. These are calculated based on the following criteria:
 - a. Traffic type and loading
 - b. Frequency of traffic
 - c. Subgrade strength (typically CBR, Ev2, Cu or SPT values)
 - d. Infill type

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

Block Paving

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

Porous and Standard Asphalt.

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

Resin Bound Gravels

- Place TRP1000 geotextile separation fabric over the filled Geoweb.
- Lay Asphalt carpet and resin bound gravel to the required thickness and as per manufacturer's instructions.

- 3.8.4 For technical data on the Geotextile membrane and the Geoweb cellular confinement system always refer to the manufactures guidelines for design and implementation. Further technical advice can be gained from the manufacturer:

Greenfix Soil Stabilisation and Erosion Control Specialists
 Old Manor Farm-Yard Beckford Road
 Ashton-Under-Hill
 Evesham
 Worcestershire
 WR11 7SU
 01386 881493
 info@greenfix.co.uk / Roy@greenfix.co.uk

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

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

4.0 Summary of Proposed Methods

4.1 Table of Impacts and Mitigation

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

Table 2: Summary of Proposed Methods

<u>Impact</u>	<u>Mitigation</u>	<u>Reference</u>	<u>Trees Affected</u>
General site access, material storage etc.	Ground protection to acceptable standards.	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 4	All retained trees
Demolition of existing structures within RPA	Pull back technique within RPA	Section 3.6	T12
Damage to roots caused by basement excavation within RPA.	Manual excavation of outer limits of basement within RPA to 1m depth with pre-emptive root pruning	Section 3.7	T1, T17, T18, G19, G20, T21, G26, G27 & T28
Damage to roots caused by provision of new hard surfacing	No-dig construction	Section 3.8	T1 – T10, G15, T17, T18 & G19

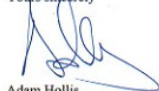
5.0 Completion

5.1 Completion Meeting

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

Signed

Yours sincerely



Adam Hollis
MSc Arb F Arbor A MICFor HND Hort
Chartered Forester
Fellow & Registered Consultant of Arboricultural Association

Adam Hollis MSc ARB MICFor F Arbor A MRICS C Env

27th March 2023

For and on behalf of **Landmark Trees**

Web: www.landmarktrees.co.uk

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APPENDIX 1: ARBORICULTURAL WORKS

Notes for Guidance:

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

- RP - Pre-emptive root pruning of foundation encroachments under arboricultural supervision.
- CB - Cut Back to boundary/clear from structure.
- CL# - Crown Lift to given height in meters.
- CT#% - Crown Thinning by identified %.
- CCL - Crown Clean (remove deadwood/crossing and hazardous branches and stubs).*
- CR#% - Crown Reduce by given maximum % (of outermost branch & twig length)
- DWD - Remove deadwood.
- Fell - Fell to ground level.
- FInv - Further Investigation (generally with decay detection equipment).
- Pol - Pollard or re-pollard.
- Mon - Check / monitor progress of defect(s) at next consultant inspection which should be <18 months in frequented areas and <3 years in areas of more occasional use. Where clients retain their own ground staff, we recommend an annual in- house inspection and where practical, in the aftermath of extreme weather events.
- Svr Ivy / Clr Bs - Sever ivy / clear base and re-inspect base / stem for concealed defects.

*Not generally specified following BS3998:2010



Site: 69 Avenue Road

Date: 07/03/2023

Surveyor(s): Conor Fitzpatrick

Ref: KSR_69AVR_AMS

Appendix 1

Recommended Tree Works To Facilitate Development

Hide irrelevant

Show All Trees

Landmark Trees

Tree No.	English Name	B.S. Cat	Height	Ground Clearance	Crown Spread	Recommended Works	Comments/ Reasons
T10	Lime, Common	A	23	2.0	6	CB Cut back to provide constructional clearance	Restricted rooting Included bark in branch unions Reduce back away from house as limbs are touching roof. Recommended husbandry 2
G15	Lime, Common	B	14	3.0	4	Fell	Pollard (Old) Group of 3 trees. Lower canopy resting on roof. To facilitate development
16	Chestnut, Horse	U	14	2.0	6	CB Cut back to provide constructional clearance	Included bark in main stem unions Decay in trunk Canker. Recommended husbandry 2
T17	Lime, Common	B	16	2.0	5	CB Cut back to provide constructional clearance	Pollard (Old) Decay in pollard heads Minor Decay in Base. Dancing pavement slabs/restricted growth. Recommended husbandry 2
T18	Lime, Common	A	22	2.5	8586	CB Cut back to provide constructional clearance	Deadwood throughout crown Included bark in branch unions Crown rubbing against building. Recommended husbandry 2
G19	Lime, Common	B	12	2.5	2	CB Cut back to provide constructional clearance	Pollard (Old) Decay at trunk base Lapsed pillared. Pollard poles have been pruned to form new high canopy.



Landmark Trees

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Appendix 1

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Recommended Tree Works To Facilitate Development

Hide irrelevant

Show All Trees

Tree No.	English Name	B.S. Cat	Height	Ground Clearance	Crown Spread	Recommended Works	Comments/ Reasons
G26	Lime, Common	B	17	3.0	6	Cut back to provide constructional clearance	Ivy smothered Recommended husbandry 2
G27	Lime, Common	C	12	3.0	3	SFeil	To facilitate development
T28	False Acacia					CB Cut back to provide constructional clearance	Recently felled.

APPENDIX 2: GENERAL GUIDELINES

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

APPENDIX 3: SAMPLE SITE MONITORING SHEET



Site Monitoring Report Sheet

Client:		Planning Ref:	
Local Authority:		Date:	
Site Address:			
Proposal:			
Visit Checklist	Y/N		Y/N
Tree protection barrier (TPB) in place		TPB as per approved	
Ground protection (GP) in place		GP as per approved	
TPB / GP breached		Trees damaged	
Site Agent briefed by LT			
LT briefed by Site Agent			
LPA informed			
Remedial action required			
Comments			
Recommendations			
Outcome			
1			
2			
3			
4			

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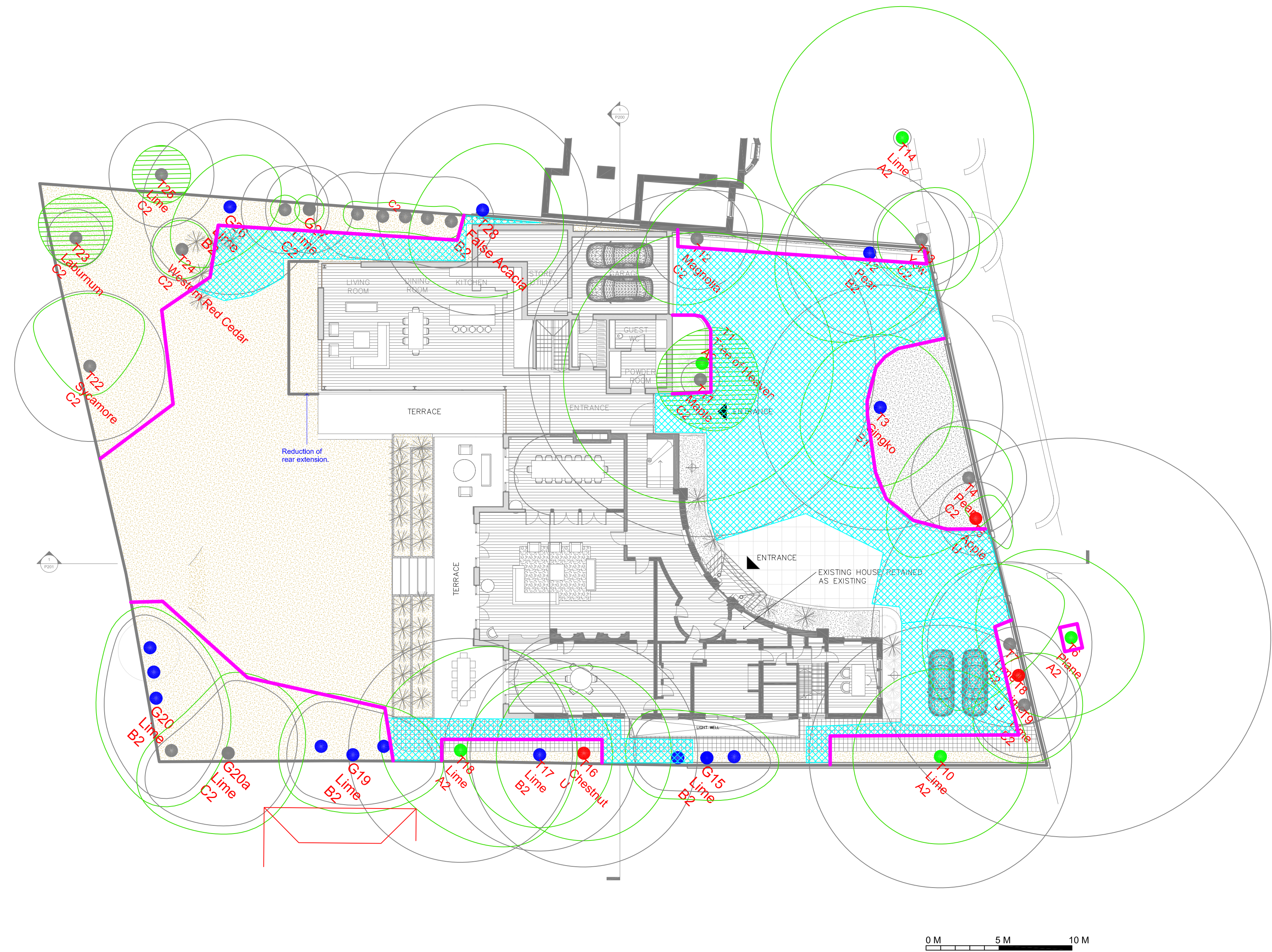
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Arboricultural Supervision Sign off Checklist

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

APPENDIX 4: TREE PROTECTION PLAN



Proposed Ground Floor Plan

NOTE:
This survey is of a preliminary nature. The trees were inspected from the ground only on the basis of the Visual Tree Assessment method. No samples were taken for analysis. No decay detection equipment was employed. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

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

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

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Site: 69 Avenue Road
Drawing Title: Tree Protection Plan
1:200@ A1
March 2023

Key:
Category A High Quality
Category B Moderate Quality
Category C Low Quality
Category U Trees Unsuitable for Retention
Ground Protection: 100mm thick concrete
Tree Protection Fencing
Crown Spread
Tree Number
Species
Category
Tree Position Approximate (not shown on original survey)
Root Protection Area