



Landmark Trees

ARBORICULTURAL METHOD STATEMENT

12-14 Maresfield Gardens

London

NW3 5SU

REPORT PREPARED FOR:

SHH Architecture & Interior Design

1 Vencourt Place

Ravenscourt Park

W6 9NU

REPORT PREPARED BY:

Adam Hollis

MSc ARB MICFor FArbor A MRICS C Env

Ref: SHH/1214MG/AMS/01a

Date: 27th September 2021

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Web: www.landmarktrees.co.uk

e-mail: info@landmarktrees.co.uk

Tel: 0207 851 4544

London Office: Holden House, 4th Floor, 57 Rathbone Place London W1T 1JU

Registered Office: 15 Abbey Road, Oxford OX2 0AD

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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 SHH Architecture & Design, for assistance with the Variation/ removal of a planning condition at 12-14 Maresfield Gardens, London, NW3 5SU: The London Borough of Camden planning application no: **2021/0746/P**. The proposals comprise: *Installation of wrought iron gate and railings on top of front brick wall. Existing front brick wall to be rebuilt. Installation of bin stores.* These proposals have been submitted for the **Variation of condition 3 (approved plans) of 2020/0899/P : 01/06/2020** for; *Erection of rear extension with glazed doors at upper ground floor; rebuild rear extension at lower ground floor including alteration to fenestration to rear and addition of windows to side elevations; alteration to fenestration at rear first floor level; insertion of rooflights to rear roof; creation of roof terrace at upper ground floor level; all works to both properties, namely to include; a refuse bin store within front garden and the installation of wrought iron gate and railings to front boundary brick wall.*
- 1.1.2 This report lays down the methodology and current best practice for how trees both on and adjacent to the site should be protected during the proposed works. 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 demolition and 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, SHH Architecture & Interior Design 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 an existing site lay-out plan (35223_01-04_PES_REVA), the proposed site layout plan (923002_PL03), the front wall plan as existing (923460_PL01) and the proposed front wall plan (923461_PL02).
- 1.2.3 As Landmark Trees' (LT) arboricultural consultant, Ross Gamblin surveyed the trees on site on 11th August 2021, recording relevant qualitative data in order to assess both their suitability for retention and their constraints upon the site, in accordance with British Standard 5837:2012 Trees in relation to design, demolition and construction – Recommendations [BS5837:2012]. Our survey of the trees, the soils and any other factors, is of a preliminary nature. The trees were surveyed on the basis of the Visual Tree Assessment method expounded by Mattheck and Breloer (The Body Language of Trees,

DoE booklet Research for Amenity Trees No. 4, 1994). LT have not taken any samples for analysis and the trees were not climbed, but inspected from ground level. The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services. Details of the surveyed trees can be found in Appendix 1.

* British Standards Institute: Trees in relation to design, demolition and construction BS 5837: 2012 HMSO, London

1.3 Development Proposals & Potential Impacts

- 1.3.1 The tree constraints from the LT survey have been overlain on to the (923)002_PL03 Proposed Site Plan to create the Tree Protection Plan (TPP) in Appendix 5. The principal primary impacts in the current proposals comprise the incursion into the theoretical Root Protection Areas of T2-T8 for the demolition of and rebuilding of the frontage boundary wall as per the submitted scheme. No tree removals would be necessary to facilitate this proposal.
- 1.3.2 To provide adequate working clearance for the demolition and rebuild of the frontage wall, minor tree pruning works will be required for trees T3-T7. These works are limited to the removal of basal epicormics to a height of 2.50m above ground level.



Photograph 1: View from south west of trees T2 – T8 in relation to frontage boundary wall.

1.4 Sequence of Works

1.4.1 The sequence of works should be as follows:

- installation of Tree Protection Barrier (TPB) and ground protection
- demolition of existing frontage boundary wall, retaining existing foundation
- construction / rebuild of boundary wall and construction of refuse bin store
- removal of TPB and ground protection
- soft landscaping

1.4.2 These works and their arboricultural implications are outlined in sequence below.

1.5 Site Supervision

1.5.1 An individual e.g. the Site Foreman, must be nominated to be responsible for all arboricultural matters on site. Such an individual must be nominated for each phase of work, if demolition and construction contracts are to be awarded separately. The agent(s) must:

- be present on site for the majority of the time
- be aware of the arboricultural responsibilities - to this end, a site briefing / meeting between the Site Foreman and arboricultural consultant must be held before the commencement of each phase of works.
- 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 local authority and/or a retained arboriculturalist in the event of any tree related problems occurring, whether actual or potential
- At this stage, the nominated Key Personnel are as follows:

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

Tel: 0207 851 4544

David Houghton
Arboricultural Manager
 London Borough of Camden
david.houghton@camden.gov.uk

Tel: 0207 974 4444

Pawel Nawojczyk
Architect/Project Manager
 SHH Architecture & Interior Design
PaweIN@shh.co.uk

Tel: 0208 600 4171

TBA
Site Foreman

1.6 Site Monitoring

- 1.6.1 A tree protection protocol should be devised and 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. In addition to the Tree Protection Plan and Arboricultural Method Statement, the protocol should contain a current contact list of the key personnel noted above (subject to any changes and confirmation of key personnel made since the writing of this AMS) and contingency plans covering actions to be taken in the event of accidents or unforeseen incidents involving or affecting retained trees.
- 1.6.2 The protocol should 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 consultant and officer will further liaise as necessary (perhaps meeting on site) until the officer is satisfied that protection measures are again satisfactory.

Table 1: Site Monitoring Visits

Supervision Visit No:	Details	Action
Visit 1: Pre-Development Site Inspection (S.2.3 of AMS)	<ul style="list-style-type: none"> To include construction Site Agent briefing (S.1.5). To confirm position of protective fencing and ground protection and that it has been erected in accordance with AMS (S.2.2 and Tree Protection Plan in Appendix 5); 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). 	Issue a brief report with findings to Development Manager and Main Contractor within 5 days of site supervision visit (see Site Monitoring Sheet Appendix 3).
Visit 2: Installation of any new services within RPA (S3.4)	<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 NJUG provisions or other specification. Date to be confirmed following formal project planning. 2 weeks prior notice required. 	
Visit 3: Demolition of hard surfaces/structures within RPA (S3.6) and Arboricultural supervision of construction within RPA	<ul style="list-style-type: none"> Attend any excavation within RPAs where arboricultural supervision is prescribed by the AMS and any other unplanned incursions into the protection areas (subject to Local Authority agreement as noted above). 2 weeks prior notice required. 	Issue a brief report with findings to Development Manager and Main Contractor within 5 days of site supervision visit (see Site Monitoring Sheet Appendix 3).
Ongoing Monitoring Visits	<ul style="list-style-type: none"> Periodically during 6 months (or longer) of entire project. Visits will be based intensity of site operations; once a month is considered reasonable. To be carried out before, between and after detailed visits 2 and 3 above. Attend site to confirm protective measures are still in place. Ensure attendance is timed for any other key elements of proposed (and any other unplanned) incursions into the protection areas. Telephone and email contact between the site foreman/ contractor and arboriculturalist. 	Issue a brief report with findings to Development Manager and Main Contractor within 5 days of site supervision visit (see Site Monitoring Sheet Appendix 3).
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 ground protection and protective fencing. Specify any remedial work if necessary.	Issue a brief report with findings to Development Manager and Main Contractor within 5 days of site supervision visit. (Site Monitoring Sheet And arboricultural checklist at Appendix 3)

1.6.3 Landmark Trees should 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 James Bell Tech Cert. (subject to any new staff intake). Site monitoring should be undertaken by a qualified and experienced arboriculturalist at pre-determined and agreed time intervals as indicated in Table 1 below and the checklist in Appendix 3.

- 1.6.4 The arboriculturalist should arrive at the site, check in at the site office and be safely escorted around the site by the site agent, checking the maintenance of tree protection measures. Routine visits will generally be unannounced. However, the arboriculturalist will also visit subject to advance notification and agreement to supervise any agreed works within the RPA.
- 1.6.5 Supervision will not require the arboriculturalist to be present throughout all operations to ensure tasks are carried out as per the approved methodology, but certainly, during the key elements of proposed (and any other unplanned) incursions into the protection areas (subject to LPA agreement and for whatever reasons). Such supervision would require the arboriculturalist to attend site, if not the whole task, to ensure the arboricultural objectives were met. However, where tasks are ongoing, provided the arboriculturalist is satisfied, and after an appropriate briefing, the supervision may be reduced to telephone and email contact between the site manager and arboriculturalist.
- 1.6.6 The checklist in Appendix 3 will be kept by the site manager and copies will be made available to the project arboriculturalist/tree officer to show evidence of site monitoring. Landmark Trees will provide a separate site monitoring sheet where remedial action is required, to be circulated to the client, site manager and the Council's tree officer (see Appendix 3).
- 1.6.7 The LPA's Arboricultural Officer will have free access to the site and report on any problem areas directly to the developer's Project Arboriculturalist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure implementation. 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 LPA 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.
- 1.6.8 N.B. Landmark Trees will only be responsible for providing monitoring in so far as they fully instructed to do so and regularly paid for such services by the client. In the absence of routine payment (as per our business terms), routine monitoring will cease (temporarily or permanently) and the LPA 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 LPA.

1.7 Statement Adoption

- 1.7.1 It is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the development manager specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of tree protection recommendations have been priced in to the job. If conflicts between any part of a tree and the building arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflects lack of best practice. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

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 this development are the removal of basal and epicormic growth from the main stems of trees T2 – T7, but it is suggested that these works could be completed in the interest of good arboricultural husbandry, regardless of the planning proposal. The modest extent of the proposed pruning works are indicated in Photograph 2 below. These specific works and any other husbandry works are listed in Appendix 2.



Photograph 2: Pruning works to T2-T7

2.2 Installation of Tree Protection Barriers & Ground Protection

2.2.1 BS5837: (2012) Trees in Relation to Development stipulates the following:

6.2.2.1 Barriers should be fit for the purpose of excluding construction activity and appropriate to the degree and proximity of work taking place around the retained tree(s). Barriers should be maintained to ensure that they remain rigid and complete.

2.2.2 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 RPA's 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.

2.2.3 A Tree Protection Barrier [TPB] comprising 2m tall welded mesh panels shall be erected in the locations indicated on the TPP. Where the TPB extends over soft ground, 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). Where the TPB is to be installed onto the existing hard surfacing retained as part of the ground protection, scaffold mounting will be impractical and therefore it will be mounted on rubber or concrete feet. The feet mounted fence panels shall be joined together using a minimum of two anti-tamper couplers, installed so that they can only be removed from inside the fence. The distance between the fence couplers should be at least 1m and should be uniform throughout the fence. The panels should be supported on the inner side by stabilizer struts mounted on a block tray (see Figure 2 below).

2.2.3 All TPB is to be erected before any work commences on site, is 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 only other exception is the completion of soft landscaping but if any excavations, however minor, are to be carried out as part of soft landscaping within RPAs, an arboricultural assessment must be carried out beforehand and any arboricultural protection measures incorporated. The TPB should carry waterproof warning notices denying access within the RPA.

2.2.5 The Tree Protection Plan in Appendix 5 illustrates where the protective fencing will be located to form the boundary of the Construction Exclusion Zone (CEZ). The CEZ is an exclusion zone and suitable steps will be taken to prevent access by pedestrians and vehicles and the storage of any works materials and equipment will be located outside of the CEZ. Where areas of the RPA lie outside the CEZ, ground protection measures will be required.

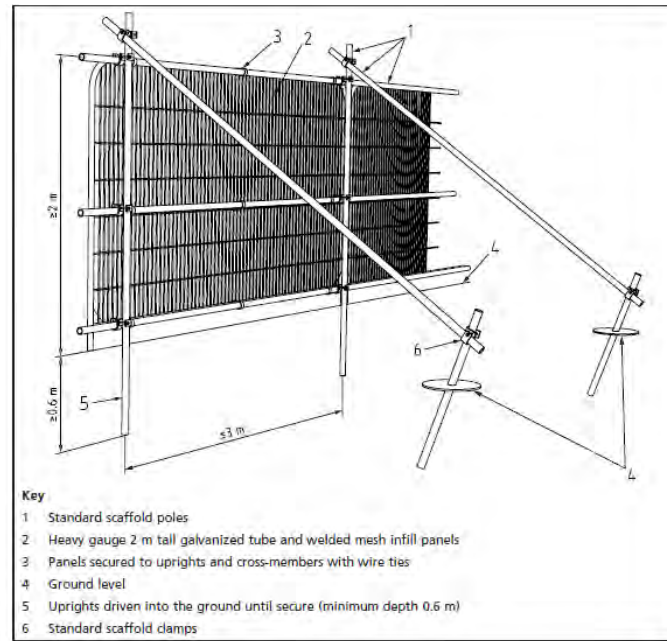


Fig. 1 Tree Protection Barrier Specification
(Source: Figure 2 from BS5837 - Default specification for protective barrier)

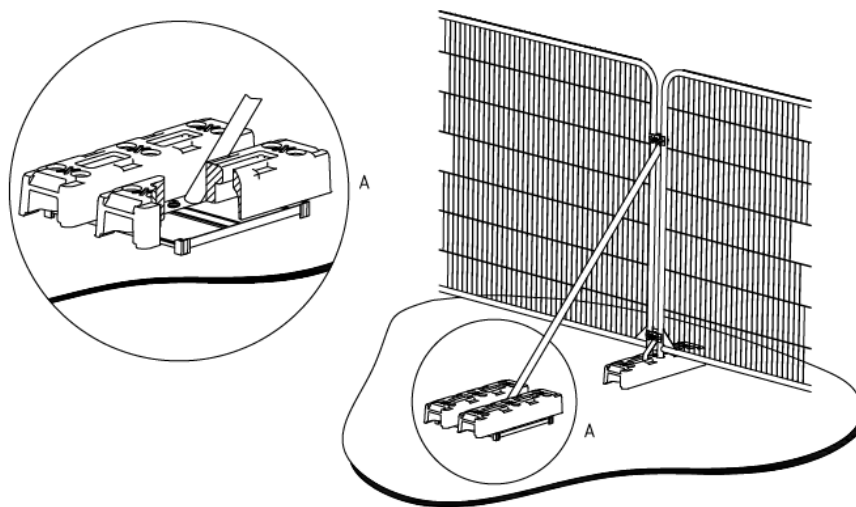


Fig. 2 Concrete / Rubber Feet Mounted Tree Protection Barrier Specification
(Source: Figure 3 from BS5837 – Above ground stabilising system for protective barrier)

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 5. 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.

2.3.2 In this instance, where existing hard surfacing is to be retained it is to be utilised for pedestrian access and to protect the rooting areas of T2-T7 for the duration of the wall construction. All other open ground over the RPA of the retained trees in the vicinity of the wall to be covered with 2D geotextile membrane (e.g. 'PermaTex 300' type) to be laid with 100mm of greensource woodchip, below continuously abutted scaffold boards or sections of manufactured board to the front garden.

2.4 Pre-Development Site Inspection

2.4.1 Upon completion of the tree works and installation of the protection measures, the standard of work can be checked by the retained arboricultural consultant who can then liaise with the local authority. If there are any amendments to either the tree works or additional protection measures, they will be agreed at this meeting and confirmed in writing.

3.0 Development Phase

3.1 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 fences without the approval of an arboriculturist.
- Alterations in levels within the tree protection fence areas shall be avoided.

3.1.2 The procedures for dealing with variations and incidents are detailed in S1.6, with the routine inspections, unannounced visits and supervisory visits highlighted in Table 1. It is also noted that the arboriculturist shall attend site as required by architect, or site agent, or the LPA; any breaches of tree protection measures will be the subject of a site monitoring report, which will be copied to architect, client and LPA. The site monitoring sheet in Appendix 3 will be used to provide photographic evidence (if required), indicate the remedial action required and timescales for remediation completion. 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.

3.2 Root Protection Areas (RPA)

- 3.2.1 The Root Protection Area (RPA) is a desirable zone of protection around the trees' rooting system and these have been marked on the plan in Appendix 5. As much as possible, the RPA's will lie within the CEZ and therefore, be fully fenced off. However, due to the proximity of the boundary wall to be replaced, this degree of protection is not entirely possible for the surveyed trees. As noted above, it is necessary to perform some limited works within the RPA of T2-T7 i.e. disassembly and construction of the frontage wall.
- 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. 3.4 (routing of services) and S. 3.6 (demolition of structures and surfaces) and S. 3.7 (construction) will be required.

3.3 Site Access, Accommodation & Storage

- 3.3.1 Site access and accommodation will be as per the layout within our Tree Protection Plan (Appendix 5), making use of the existing access routes off Maresfield Gardens to the west.
- 3.3.3 Construction and delivery vehicle traffic will be excluded from RPA's by the specified tree protection fencing. 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. Materials can be unloaded and stored throughout the interior of the site(s) away from protected trees and their RPA.
- 3.3.4 Many site activities are potentially damaging to trees e.g. material storage, parking, soil compaction and the use of plant machinery. In this latter example particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage Banksmen will also be positioned on site during any manoeuvres as well as during grab operations, deliveries and collections. The Banksmen will be in position ahead of scheduled arrival and leaving of any construction vehicle.

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 The upper layer of top soil contains the majority of a tree's roots and if this is disturbed by a reduction in ground level, serious damage can be caused.

- 3.5.2 No changes in soil grade are proposed as part of this scheme, however if ground levels need to be marginally altered within the RPA of any tree, prior agreement must be sought from the Tree Preservation Officer and given in writing by the LPA.

3.6 Wall Disassembly / Demolition Measures.

- 3.6.1 Modest access facilitation pruning should be undertaken to prevent injurious contact between operators utilizing manual tools and the trees. Any such pruning will be undertaken in accordance with British Standard 3998: Recommendations for tree works (See Section 2.1 / Appendix 1).
- 3.6.2 Demolition of structures within the vicinity of trees will proceed with due caution to avoid unnecessary damage to trees. **Such measures apply in particular to T2, T3, T4, T5, T6 and T7 with regard to the removal of the existing boundary wall to their west.**
- 3.6.3 It is necessary to remove the existing wall elevation to enable it's repair. Where this is necessary, the brickwork will be first broken up with manual power tools and arisings then carefully manually removed from RPA. It is imperative during this process that no excavation beyond the existing foundation levels occurs. Any hardstanding or hard landscaping beyond the walling shall remain in situ for the duration of the works.
- 3.6.4 The use of plant is not permitted within the RPA of any retained trees.
- 3.6.5 Any operators engaged in the disassembly and removal of arisings shall carry out all activities from either the public footpath and/or retained hard surfacing adjacent to the trees.
- 3.6.6 Should any small fibrous roots be encountered during this phase they will be cut back cleanly to the face of the dig nearest to the tree, using a sharp hand saw or secateurs. Roots larger than 25mm diameter may only be cut in consultation with an arboriculturalist.
- 3.6.7 Any roots exposed during the removal of the existing wall including those requiring severance subject to the methodology above should be covered with damp hessian to prevent desiccation and until erection of the new walling is complete.

3.7 Construction Measures

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

- 3.7.1 Replacement hard landscaping within retained trees RPA will require a no-dig construction technique, simply building upon the existing sub-base without disturbing the ground below. Choice of construction method will initially depend upon root penetration within the existing sub-grade. The key principle is not to excavate in the presence of roots.

3.8 Removal of Tree 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 Following the construction phase, impacted trees within the site boundary, identified for such treatment, will receive remedial soil remediation treatment: deep root fertiliser / mycorrhizal injection and surface mulching.
- 3.8.3 Any further landscaping works should avoid the changing of ground levels or deep digging. Mechanised cultivation such as tractor-mounted rotovation must not be used within the RPA's of existing trees.
- 3.8.4 Heavy machinery should not be used in the vicinity of any retained trees.
- 3.8.5 If herbicides are to be used they should be appropriate to their purpose and not in such a way as to damage any retained trees or vegetation; they must be applied by a suitably qualified person i.e. a holder of a recognised 'certificate of competence'.
- 3.8.6 Ideally, retained trees should be within a shrub area as this reduces the chances of compaction and disturbance of root systems.
- 3.8.7 Any new planting schemes adopted should consider aspects of the site such as current design, layout and future use. Consideration should also be given to the soil type, climate and overall character of the landscape.

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.	Tree protection to acceptable standards. Pruning works	Paras 2.2.1 & 3.3.3 Tree Protection Plan in Appendix 5	All retained trees
Removal of existing hard landscaping within RPA/ Damage to roots caused by wall disassembly	Use of manual power tools / No plant permitted within RPA	Section 3.6	T2-T7
Construction of new hard landscaping in RPA	Use of existing subbase/wall foundation	Section 3.7	T2-T7
Injurious contact between construction traffic and trees	Tree protection fencing / Tree pruning works	Para 2.1.2	All retained trees

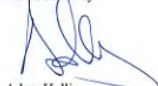
5.0 Completion

5.1 Completion Meeting

- 5.1.1 Following completion of the works listed above, a Landmark Trees consultant would meet with a local authority representative and agree upon any remedial works deemed necessary. It is the client's duty to notify LT that the project has been completed, in order to facilitate such an inspection.
- 5.1.2 A separate LT post-development tree inspection (with specific reference to trees identified in the Appendix 1 schedules) is recommended to facilitate a constructive meeting and to monitor the health of some of the more senescent trees on site.
- 5.1.3 Any works agreed in the above meeting will be confirmed in writing and will be performed to BS 3998: 2010 Tree Works.
- 5.1.4 Landmark Trees recommend that any work proposed post development is checked to avoid penalty for performing illegal work on a protected tree.
- 5.1.5 As noted at 1.7 above, it is recommended that, in due course, acceptance of the recommendations in this report is demonstrated by, for example, the development manager specifying in writing to the building contractor that tree care conditions apply in execution of the contract, and by an estimate or written undertaking from the contractor to the architect demonstrating that the practical aspects of tree protection recommendations have been priced in to the job.
- 5.1.6 If conflicts between any part of a tree and the building arise in the course of development these can often be resolved quickly and at little cost if a qualified arboriculturist is consulted promptly. Lack of such care is often apparent quickly and decline and death of such trees can spoil design aims and can of course affect saleability, and reflects lack of best practice. Trees that have been the recipients of careful handling during construction add considerably to the appeal and value of the finished development.

Signed

Yours sincerely



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

Adam Hollis MSc ARB MICFor FABor A

27th September 2021

For and on behalf of *Landmark Trees*

Web: www.landmarktrees.co.uk
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

London Office: Holden House, 4th Floor, 57 Rathbone Place London W1T 1JU

Registered Office: 15 Abbey Road, Oxford OX2 0AD

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APPENDIX 1: TREE SCHEDULE

Botanical Tree Names

Cherry, Wild cherry /Gean : Prunus avium
Maple, Japanese : Acer palmatum

Notes for Guidance:

1. Height describes the approximate height of the tree measured in metres from ground level.
2. The Crown Spread refers to the crown radius in meters from the stem centre and is expressed as an average of NSEW aspect if symmetrical.
3. Ground Clearance is the height in metres of crown clearance above adjacent ground level.
4. Stem Diameter (Dm) is the diameter of the stem measured in millimetres at 1.5m from ground level for single stemmed trees. BS 5837:2012 formula (Section 4.6) used to calculate diameter of multi-stemmed trees. Stem Diameter may be estimated where access is restricted and denoted by '#'.
5. Protection Multiplier is 12 and is the number used to calculate the tree's protection radius and area
6. Protection Radius is a radial distance measured from the trunk centre.
7. Growth Vitality - Normal growth, Moderate (below normal), Poor (sparse/weak), Dead (dead or dying tree).
8. Structural Condition - Good (no or only minor defects), Fair (remediable defects), Poor - Major defects present.
9. Landscape Contribution - High (prominent landscape feature), Medium (visible in landscape), Low (secluded/among other trees).
10. B.S. Cat refers to (British Standard 5837:2012 section 4.5) and refers to tree/group quality and value; 'A' – High, 'B' - Moderate, 'C' - Low, 'U' - Unsuitable for retention. The following colouring has been used on the site plans:
 - High Quality (A) (Green),
 - Moderate Quality (B) (Blue),
 - Low Quality (C) (Grey),
 - Unsuitable for Retention (U) (Red)
11. Sub Cat refers to the retention criteria values where 1 is Arboricultural, 2 is Landscape and 3 is Cultural including Conservational, Historic and Commemorative.
12. Useful Life is the tree's estimated remaining contribution in years.



Site: 12-14 Maresfield Gardens

Date: 13/08/21

Appendix 1

Landmark Trees Ltd

020 7851 4544

Surveyor(s): Ross Gamblin

Ref: SSH_1214MG_AIA

BS5837 Tree Constraints Survey Schedule

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diamete	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
1	Holly	6	2/3/2.5/3	2.0	240	Mature	2.9	Moderate	Fair	C	1	10+	Poor specimen, low vitality Poor shoot extension
2	Beech, Copper	18	4/6.5/6/7	4.0	640	Mature	7.7	Poor	Poor	U		<10	Root damage (recent development) Dying back (uniform) Crown very thin with reduced leaf size and almost devoid of live growth. Tree in terminal decline
3	Lime, Common	16	1.5/0.5/15/1.5	4.0	490	Mature	5.9	Normal	Fair	B	2	>40	Pollarded
4	Lime, Common	16	1/1/1..5/2	4.0	440	Mature	5.3	Normal	Fair	B	2	>40	Pollarded
5	Lime, Common	16	1.5/0/2/2	4.0	390	Mature	4.7	Normal	Fair	B	2	>40	Pollarded
6	Lime, Common	16	1/1.5/1.5/2	4.0	460	Mature	5.5	Normal	Fair	B	2	>40	Pollarded

APPENDIX 2: 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: 12-14 Maresfield Gardens

Date: 13/08/21

Surveyor(s): Ross Gamblin

Ref: SSH_1214MG_AIA

Appendix 2

Recommended Tree Works

Hide irrelevant

Show All Trees

Tree No.	English Name	B.S. Cat	Height	Ground Clearance	Crown Spread	Recommended Works		Comments/ Reasons
2	Beech, Copper	U	18	4.0	4/6.5/6/7	Fell		Root damage (recent development) Dying back (uniform) Crown very thin with reduced leaf size and almost devoid of live growth. Tree in terminal decline Recommended husbandry 1
3	Lime, Common	B	16	4.0	1.5/0.5/15/1.5	CL	2.5	Pollarded To facilitate development
4	Lime, Common	B	16	4.0	1/1/1..5/2	CL	2.5	Pollarded To facilitate development
5	Lime, Common	B	16	4.0	1.5/0/2/2	CL	2.5	Pollarded To facilitate development
6	Lime, Common	B	16	4.0	1/1.5/1.5/2	CL	2.5	Pollarded
7	Lime, Common	B	16	4.0	4444	CL	2.5	Pollarded To facilitate development

APPENDIX 3: GENERAL GUIDELINES AND SAMPLE SITE MONITORING SHEET

- 3.1 All work must be to BS 3998:2010 - '*Recommendations for tree work*'.
- 3.2 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.
- 3.3 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.
- 3.4 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.
- 3.5 It is advisable to have trees inspected by a consultant regularly. On this site it is recommended that these inspections are made every year.



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 breached		Trees damaged since last visit	
Client briefed by LT			
LT briefed by Client			
LPA informed			
Remedial action required			
Comments			
Recommendations			
Outcome			
1			
2			
3			
4			

Web: www.landmarktrees.co.uk
e-mail: info@landmarktrees.co.uk
Tel: 0207 851 4544

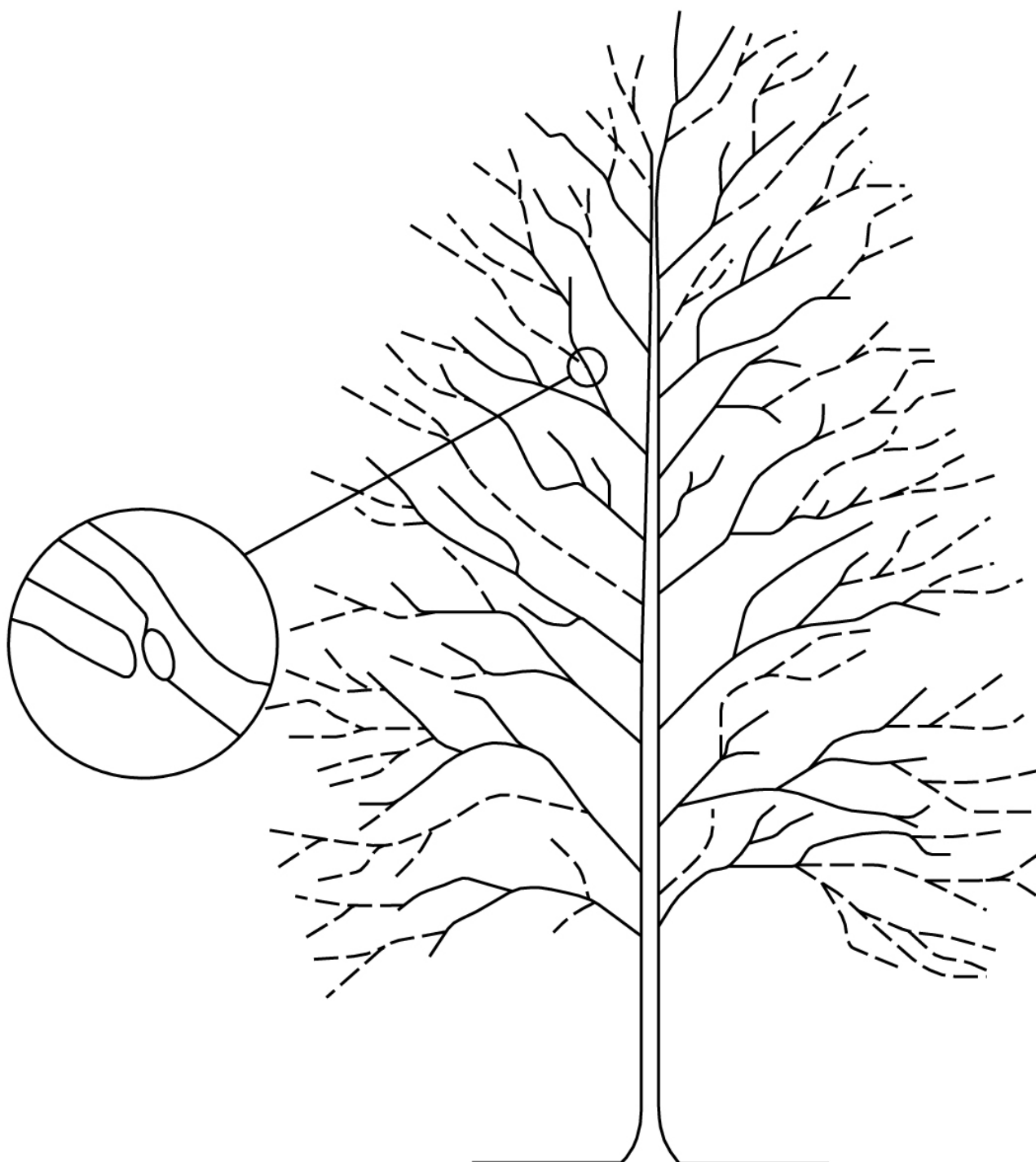
London Office: Holden House, 4th Floor, 57 Rathbone Place London W1T 1JU

Registered Office: 15 Abbey Road, Oxford OX2 0AD

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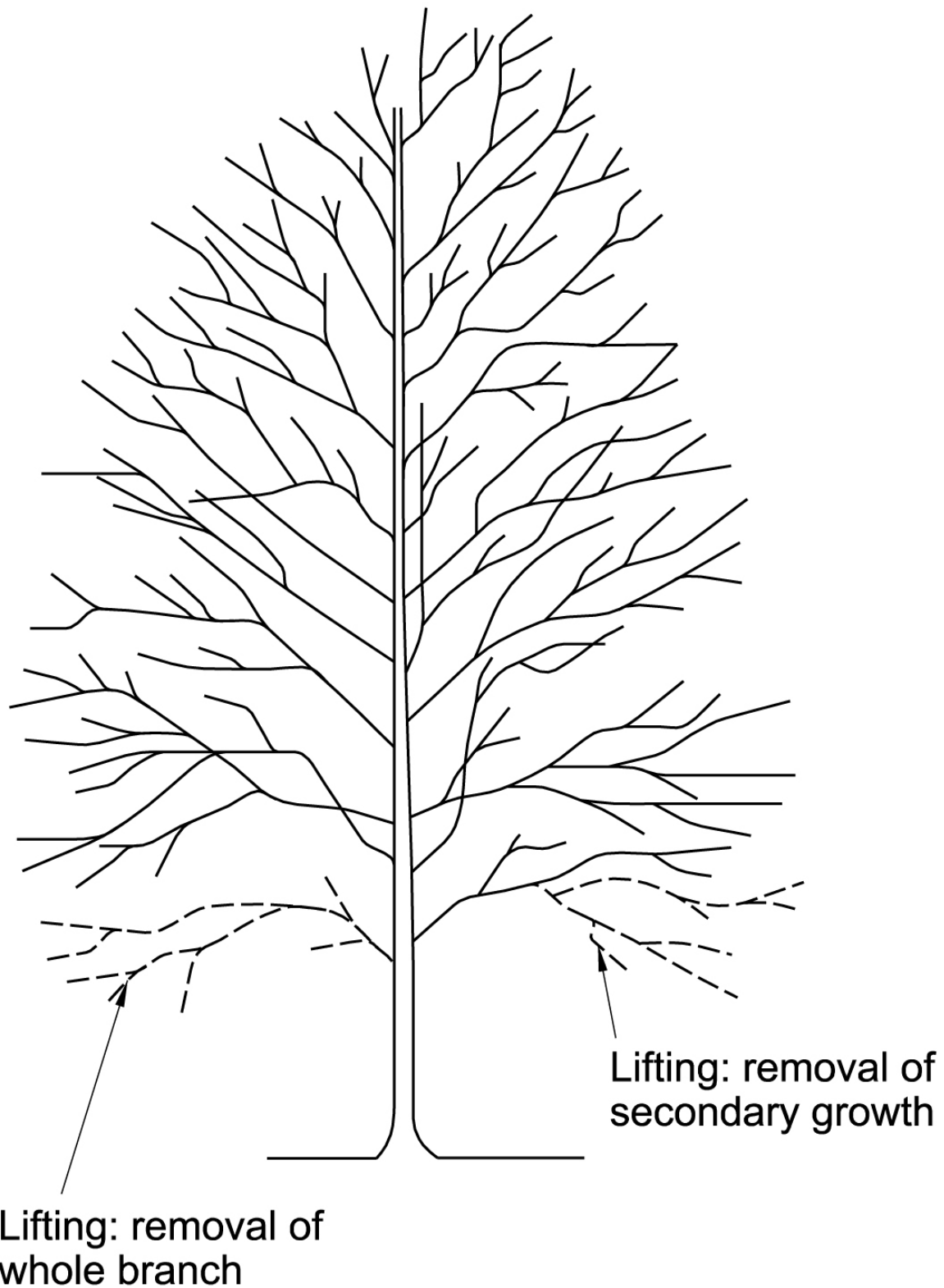


APPENDIX 4: INDICATIVE PRUNING GUIDELINES



NOTE: Branches pruned back to suitable outward pointing bud or small branch.

REDUCING THE CROWN

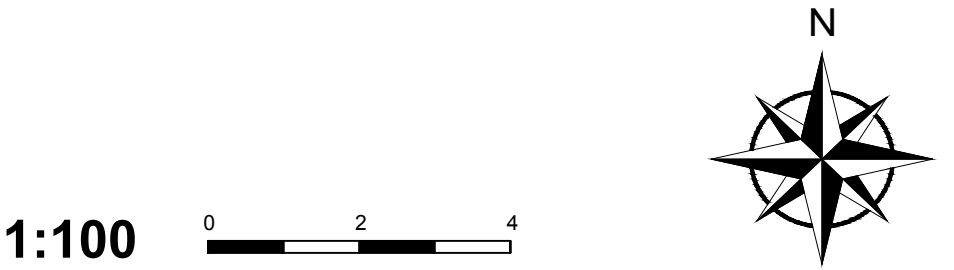
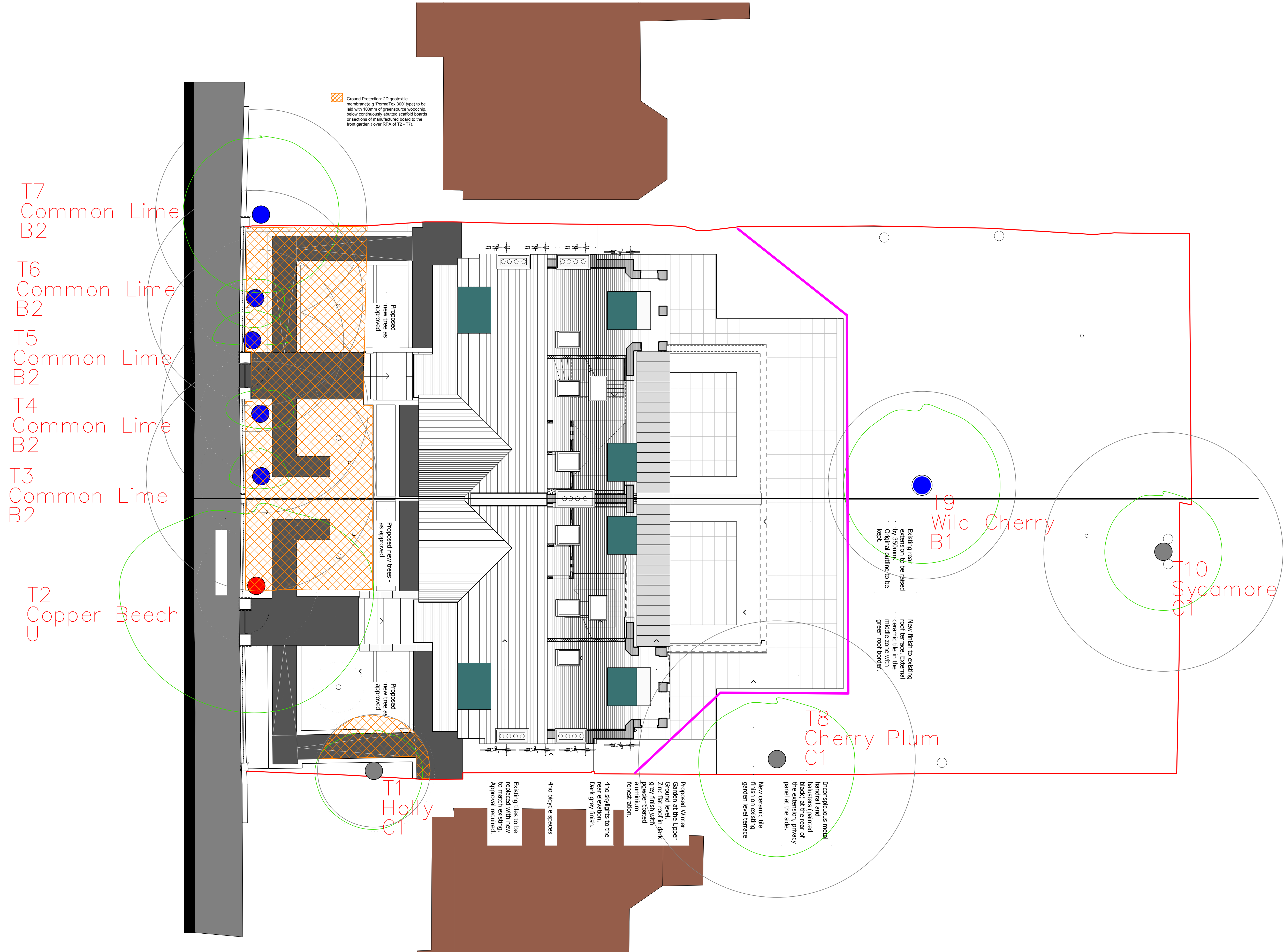


CROWN LIFTING

APPENDIX 5: TREE PROTECTION PLANS

- i. During wall construction**
- ii. At completion of wall construction**

Proposed Site 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).

Landmark Trees
Holden House, 4th Floor, 57 Rathbone Place, London W1T 4JU
Tel: 0207 851 4544 Mobile: 07812 989928
e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 12-14 Maresfield Gardens	1:100@ A1
Drawing Title: Tree Protection Plan	September 2021

Key:

- Category A High Quality
- Category B Moderate Quality
- Category C Low Quality
- Category U Trees Unsuitable for Retention

Category

Root Protection Area

Crown Spread

Tree Number

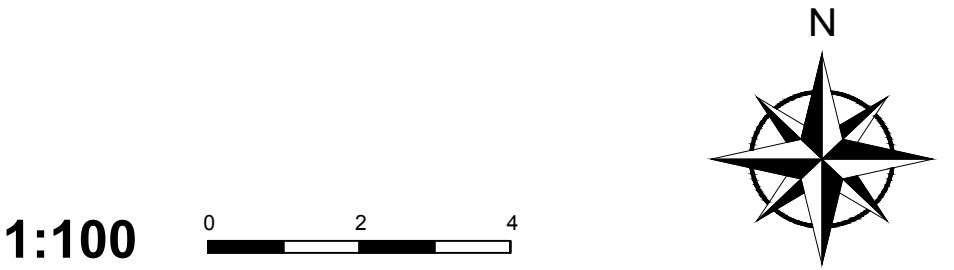
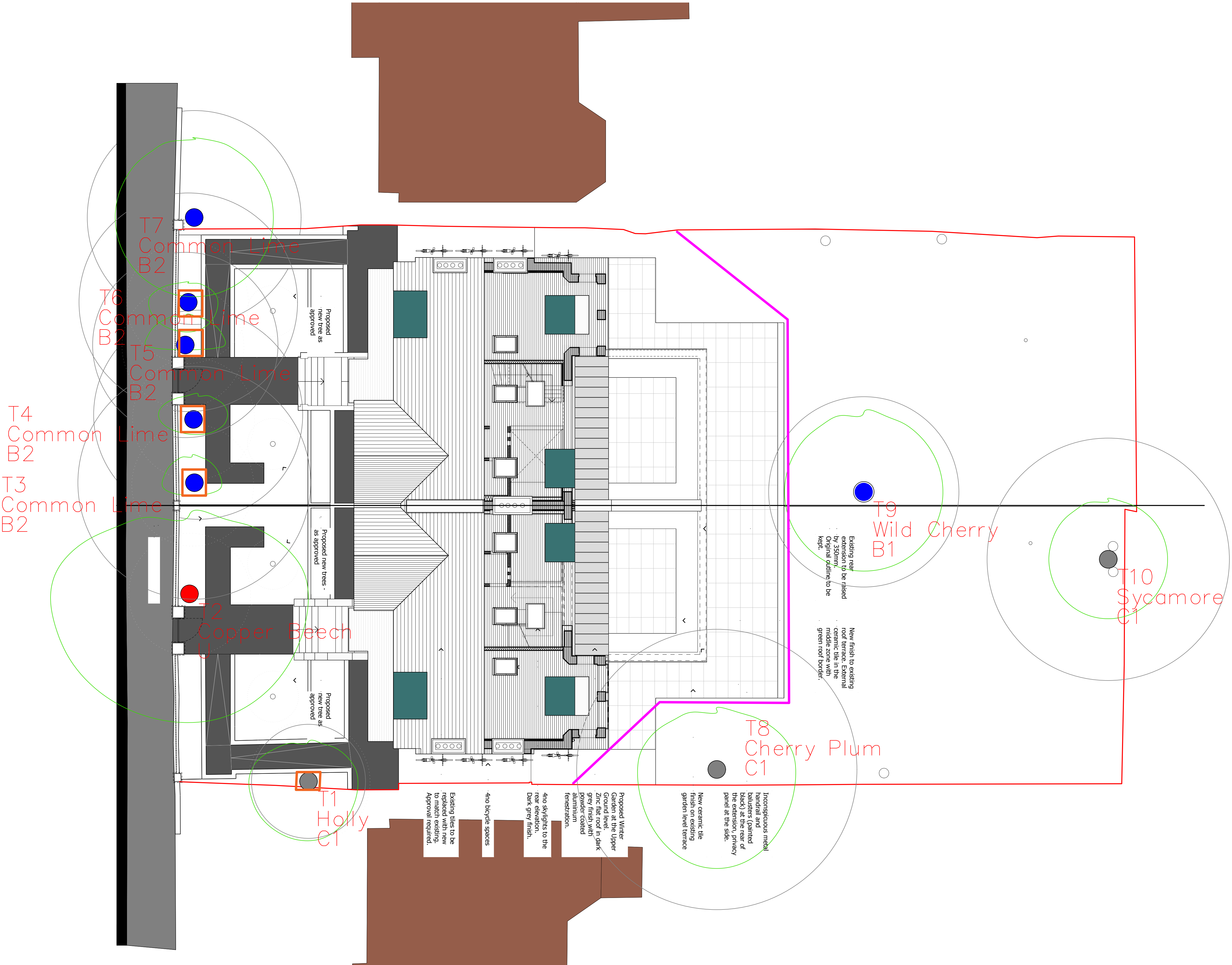
Species

Category


Tree Protection Fencing

Ground Protection: See drawing for details

Proposed Site 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: 12-14 Maresfield Gardens	1:100@ A1
Drawing Title: Tree Protection Plan	September 2021

Key:

Category A
High Quality

Category B
Moderate Quality

Category C
Low Quality

Category U
Trees Unsuitable for Retention

Category

Root Protection Area

Tree Protection Fencing

Self-supporting timber site hoarding

Crown Spread

Tree Number

Species

Category