

Landmark Trees

ARBORICULTURAL IMPACT ASSESSMENT REPORT FOR:

21-23 Bedford Place
London
WC1B 5JJ

INSTRUCTING PARTY:

Firmdale Hotels PLC
18 Thurloe Place
London
SW7 2SP

REPORT PREPARED BY

David Gardner
MSc MArborA
&
Adam Hollis
MSc ARB MICFor FArbor A MRICS C Env

Ref: FMD/21BFP/AIA/01b

Date: 1st July 2024

The content and format of this report are for the exclusive use of the client in planning. It may not be sold, lent, hired out or divulged to any third party, not directly involved in the subject matter without Landmark Trees' written consent.

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

Landmark Trees is the trading name of Landmark trees Ltd. Registered in Wales. Reg No. 3882076



PART 1: MAIN TEXT

Section	Content	Page No
1.0	SUMMARY	3
2.0	INTRODUCTION	4
3.0	SITE CHARACTERISTICS	9
4.0	DEVELOPMENT CONSTRAINTS	14
5.0	TABLE OF IMPACTS	17
6.0	ARBORICULTURAL IMPLICATIONS	18
7.0	CONCLUSION	20
8.0	RECOMMENDATIONS	21
9.0	COMPLIANCE	24
10.0	REFERENCES	25

PART 2 - APPENDICES

APPENDIX 1	Survey Data	28
------------	-------------	----

PART 3 - PLANS

PLAN 1	Tree Constraints Plan	31
PLAN 2	Impact Assessment Plan(s)	33
PLAN 3	Outline Tree Protection Plan	36

DOCUMENT HISTORY

Revision	Status	Comments	Date
Rev 0	DRAFT	For Internal Review (Client / Design Team)	12/04/2024
Rev 01	Authorised	For External Issue (Planning Application)	13/04/2024
Rev 01a	Authorised	For External Issue (Planning Application)	23/04/24
Rev 01b	Authorised (Text corrected p. 21)	For External Issue (Planning Application)	01/07/24

1. SUMMARY

- 1.1 The existing site comprises three terraced townhouses standing adjacent to a number of trees potentially constraining development. The proposal includes remodelling and minor extension of the townhouses.
- 1.2 There are no trees on the property itself but 4 trees stand on adjoining land outside of the application boundary that are within close proximity to the development and need to be assessed. One of these is judged as being a moderate quality tree with the remainder being low-quality trees.
- 1.3 The report has assessed the impacts of the development proposals and concludes there would be no impact on the resource. Following the modification of the Root Protection Area* (RPA) of the trees to the rear of the building, there is no encroachment of these areas and nor is any tree removal / pruning required. Provided construction activities are adequately controlled, net impacts are therefore assessed as being likely to be negligible.
- 1.4 Notwithstanding the above assurances, the report sets out a series of recommendations prior and during construction that will ensure impacts to trees are minimised. These are detailed in sections 6.3 and 8 of this report.
- 1.5 In conclusion, the proposal, through following the above recommendations, will have no, or very limited, impact on the existing trees and is acceptable.

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

2. INTRODUCTION

2.1 Terms of Reference

2.1.1 Firmdale Hotels PLC instructed Landmark Trees (LT) to prepare this Arboricultural Impact Assessment, to support a full planning application submitted to the London Borough of Camden ('LBC').

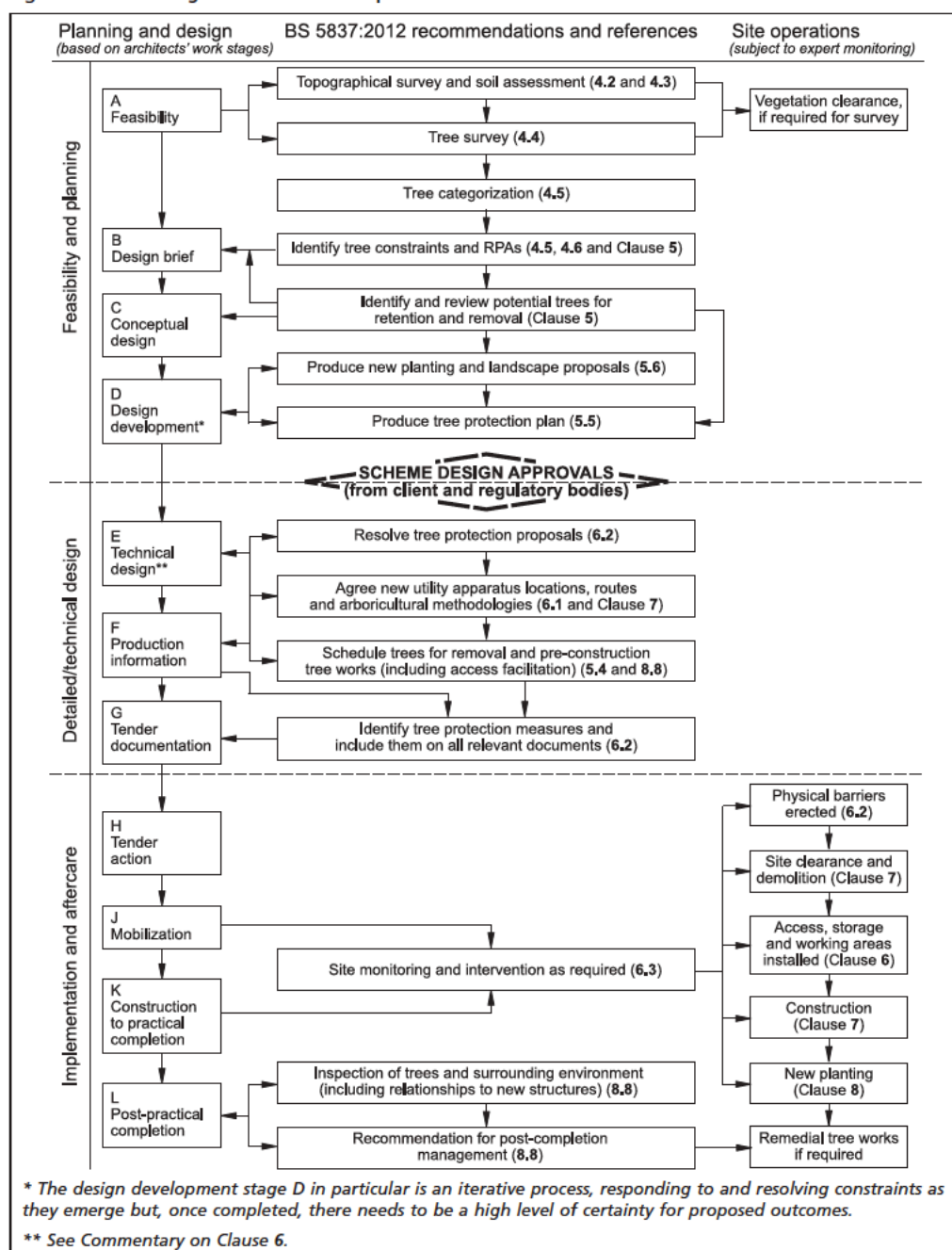
2.1.2 The application relates to the remodelling and extension of the townhouses. Specifically, full planning permission is sought for:

- Sensitive reinstatement of Level 01, 02 and 03 plan layouts to reference the spirit of the historic plan form
- Sensitive repair and restoration of existing fabric including fire places, lath and plaster ceilings, cornicing, decorative plasterwork, and mouldings
- Erection of new rear extension infills on Basement Level and minor extensions to three existing add-ons on levels 01 and 02
- Proposed window replacement to return windows to a more accurate Georgian style, to both front and rear elevations
- Proposed internal passenger lift for accessibility to all Levels which also to act as an evacuation lift
- Introduction of terrace on Ground Floor with new stairs linking to rear terrace garden

2.1.3 This report will assess the impact on trees and their constraints, identified in our survey. Although the proposals were known at the time of the survey, Landmark Trees endeavour to survey each site blind, working from a topographical survey, wherever possible, with the constraints plan informing their evolution. The purpose of the report is to provide guidance on how trees and other vegetation can be integrated into construction and development design schemes. The overall aim is to ensure the protection of amenity by trees which are appropriate for retention.

- 2.1.4 Trees are a material consideration for a Local Planning Authority when determining planning applications, whether or not they are afforded the statutory protection of a Tree Preservation Order or Conservation Area. British Standard BS 5837:2012 Trees in Relation to Design, Demolition and Construction sets out the principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and new developments. The Standard recommends a sequence of activities (see Fig.1 overleaf) that starts in the initial feasibility and design phase (RIBA Stage 2 'Concept Design' as defined in 2012) with a survey to qualify and quantify the trees on site and establish the arboricultural constraints to development (above- and below-ground) to inform the design in an iterative process, and continues with an assessment of the arboricultural impacts of the final design and measures to mitigate such impacts should they be negative. Detailed technical specifications for mitigation and protection measures are devised in the design phase that follows (RIBA Stage 3-4 'Developed and Technical design'), and the sequence ends with the Implementation and Aftercare phase (RIBA Stages 5-7) with the implementation of those measures once planning permission is granted, guided by Arboricultural Method Statements (RIBA Stage 4-5, 'Technical Design and Construction) and professional guidance where appropriate.
- 2.1.5 **This report is produced to support the Design Team to the Scheme Design Approvals stage in the process chart overleaf.**

Figure 1 The design and construction process and tree care



2.2 Drawings Supplied

- 2.2.1 The drawings supplied by the client and relied upon by Landmark Trees in the formulation of our survey plans are:

Existing site survey: 2205-SPP-BP-0G-DR-A-02-1001-S2-P01

Proposals: 2205-SPP-BP-B1-DR-A-20-1001-S2-P02 & 2205-SPP-BP-0G-DR-A-20-1002-S2

2.3 Scope & Limitations of Survey

- 2.3.1 As Landmark Trees' (LT) arboricultural consultant, Adam Hollis surveyed the trees on site on the 10th of April 2024, 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].
- 2.3.2 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.
- 2.3.3 The results of the tree survey, including material constraints arising from existing trees that merit retention, should be used (along with any other relevant baseline data) to inform feasibility studies and design options. For this reason, the tree survey should be completed and made available to designers prior to and/or independently of any specific proposals for development. Tree surveys undertaken after a detailed design has been prepared can identify significant conflicts: in such cases, the nature of and need for the proposed development should be set against the quality and values of affected trees. The extent to which the design can be modified to accommodate those trees meriting retention should be carefully considered. Where proposed development is subject to planning control, a tree survey should be regarded as an important part of the evidence base underpinning the design and access statement
- 2.3.4 A tree survey is generally considered invalid in planning terms after 2 years, but changes in tree condition may occur at any time, particularly after acute (e.g. storm events) or prolonged (e.g. drought) environmental stresses or injuries (e.g. root severance). Routine surveys at different times of the year and within two - three years of each other (subject to the incidence of the above stresses) are recommended for the health and safety management of trees remote from highways or busy access routes. Annual surveys are recommended for the latter.
- 2.3.5 The survey does not cover the arrangements that may be required in connection with the laying or removal of underground services.

2.4 Survey Data & Report Layout

- 2.4.1 Detailed records of individual trees are given in the survey schedule in Appendix 1.
- 2.4.2 A site plan identifying the surveyed trees, based on the Instructing Party's drawings / topographical survey is provided in Part 3 of this report. This plan also serves as the Tree Constraints Plan with the theoretical Recommended Protection Areas (RPAs), tree canopies and shade constraints, (from BS5837: 2012) overlain onto it. These constraints are then overlain in turn onto the Instructing Party's proposals to create a second Arboricultural Impact Assessment Plan in Part 3. Physical measures required to protect trees during construction are then added to this plan to create an Outline Tree Protection Plan.
- 2.4.3 Whilst we endeavour to review all relevant documentation / plans prior to producing this Outline Tree Protection Plan, there may be instances where this is not possible or they are not available at the time of writing. Those responsible for designing elements including temporary works that may affect trees should recognise the primacy of the tree protection details contained herein and follow its provisions or alert us to potential conflicts.
- 2.4.4 General observations, discussion, conclusions and recommendations follow, below.

3. SITE CHARACTERISTICS

3.1 Property Description & Planning Context



Photograph 1: Aerial view of application site

- 3.1.1 This property is located at the northern end of Bedford Place and comprises three Georgian townhouses.
- 3.1.2 The site is relatively level throughout.
- 3.1.3 We are not aware of the existence of any Tree Preservation Orders*, but understand the site stands within the Bloomsbury Conservation Area, which will affect the subject trees: it is a criminal offence to prune, damage or fell such trees without permission from the local authority.
- 3.1.4 Relevant local planning policies comprise Policies G1 and G7 of the London Plan 2021 and Policies A3, A5, D1 and D2 of the Camden Local Plan (adopted 3rd July 2017).

* If the client is aware of such, we ask that they confirm these details with us. A purchaser of a site will be informed of the existence of any TPOs during the conveyancing process; an existing owner of a site must be served with a copy of any TPOs made during their ownership. Landmark Trees can investigate the matter further on instruction from the client, but this is beyond our normal scope of instruction as it can take c. 28 days to fully discover this information (which is beyond our standard turnaround and will substantially delay the issue of the instructed report). Some LPAs maintain registers online and / or offer a more rapid telephone or email response. These services though are not wholly reliable and we have had experience of receiving incorrect advice.

3.2 Soil Description

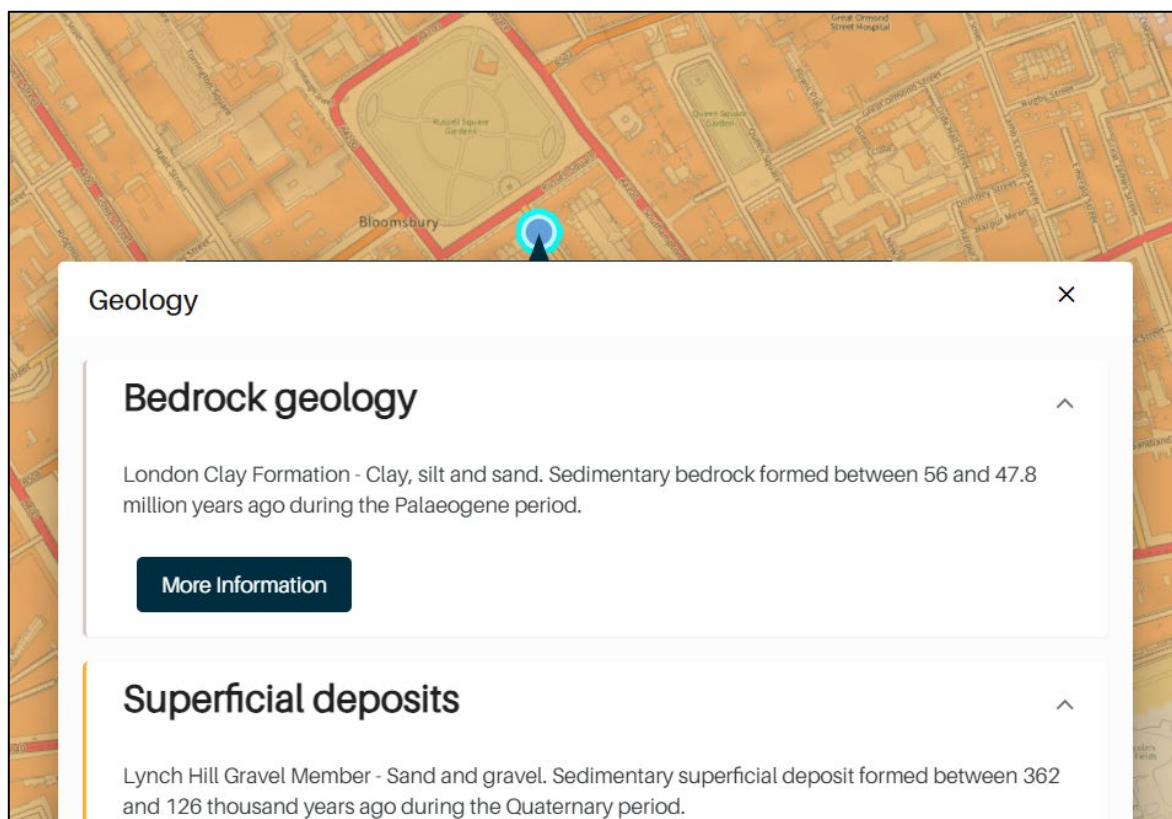


Figure 2: Extract from the BGS Geology of Britain Viewer

- 3.2.1 In terms of the British Geological Survey, the site overlies the London Clay Formation with Lynch Hill Gravel superficial deposits (see indicated location on Fig.2 plan extract above). The associated soils are generally, sand and gravel, but with subsoils of highly shrinkable clay; e.g. slowly permeable seasonally waterlogged fine loam over clay. Such highly plastic subsoils are prone to movement: subsidence and heave, but their influence will depend somewhat on the actual depth of that clay (sand and gravel deposits are not shrinkable). The actual distribution of the soil series are not as clearly defined on the ground as on plan and there may be anomalies in the actual composition of clay, silt and sand content.
- 3.2.2 Sand and gravel soils are less prone to compaction during development than clay soils, potentially reducing the threat to tree health from construction traffic. The design of foundations near problematic tree species will also need to take into consideration subsidence risk in relation to the clay subsoil and its depth. Further advice from the relevant experts on the specific soil properties can be sought as necessary.

3.3 Subject Trees

- 3.3.1 Of the 4 surveyed trees, 1 is category* B (Moderate Quality) and 3 are category C (Low Quality); none are category A (High Quality) or U (Poor Quality).
- 3.3.2 The tree species found on the site comprise common lime, cypress and field maple.
- 3.3.3 In terms of age demographics there are 2 semi-mature and 2 mature trees present.
- 3.3.4 Full details of the surveyed trees can be found in Appendix 1 of this report.

*page 9 of: [British Standards Institute: Trees in relation to design, demolition and construction BS 5837: 2012 HMSO, London](#)



Photograph 2: Street trees T3 and T4

Arboricultural Impact Assessment Report: 21-23 Bedford Place, London WC1B 5JJ

Instructing party: Firmdale Hotels PLC, 18 Thurloe Place, London SW7 2SP

Prepared by: David Gardner & Adam Hollis of Landmark Trees, Holden House, 4th Floor, 57 Rathbone Place, London W1T 1JU



Photograph 3: Common lime T1



Photograph 4: Cypress T2

4. DEVELOPMENT CONSTRAINTS

4.1 Primary Constraints

- 4.1.1 BS5837: 2012 gives Recommended Protection Areas (RPAs) for any given tree size. The individual RPAs are calculated in the Tree Schedule in Appendix 1 to this report, or rather the notional radius of that RPA, based on a circular protection zone. The prescribed radius is 12-x stem diameter at 1.5m above ground level, except where composite formulae are used in the case of multi-stemmed trees.
- 4.1.2 Circular RPAs are appropriate for individual specimen trees grown freely, but where there is ground disturbance, the morphology of the RPA can be modified to an alternative polygon, as shown in the diagram below (Figure 3). Alternatively, one need principally remember that RPAs are area-based and not linear – notional rather than fixed entities.

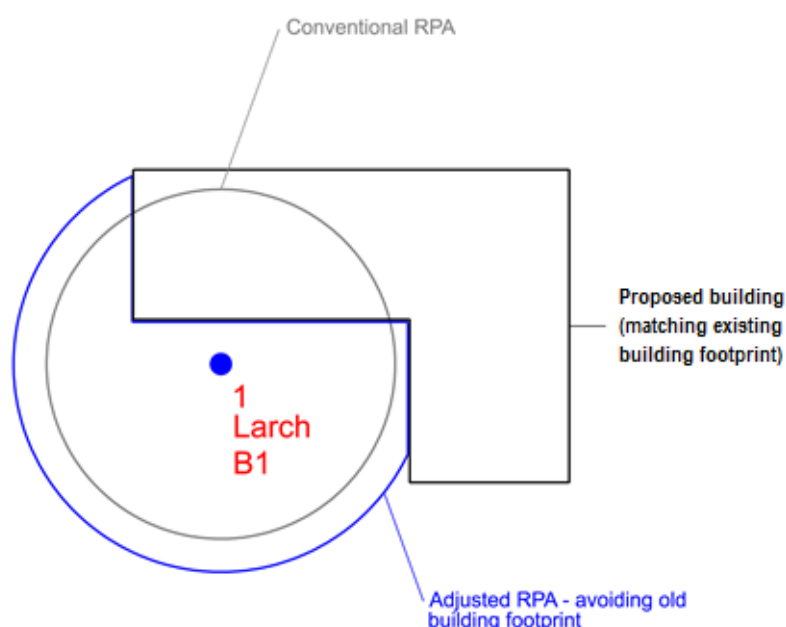


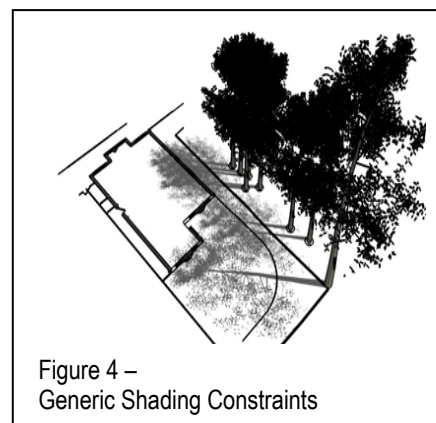
Figure 3 – Generic BS 5837 RPA Adjustments

- 4.1.3 In BS5837, paragraph 4.6.2 states that RPAs should reflect the morphology and disposition of the roots; where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically, a polygon of equivalent area should be produced. Modifications to the shape of the RPA should reflect a soundly based arboricultural assessment of likely root distribution. This can be done as a desktop / theoretical exercise but is not altogether (scientifically) reliable and may also invite disagreement / differences of opinion as to that distribution.

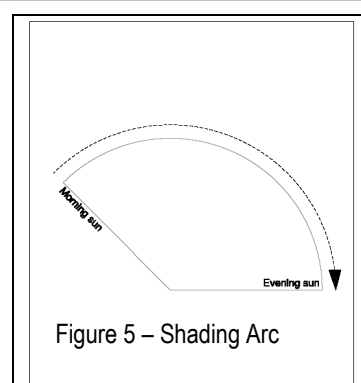
- 4.1.4 LT prefer where possible and practical to raise the issue of modification but suspend judgment until such time as more reliable site investigations have been undertaken (Tree Radar scans and / or trial pits). Of course, the justification for these investigations will depend upon whether trees are (or are likely to be once modified) subject to impacts and also upon their quality / condition: it is generally not worth commissioning a radar study to locate the roots of a poor- or low-quality tree. On other occasions, there may not be the opportunity to commission investigations, either because the access is restricted by ownership / tenancy or the report's turnaround simply does not allow it, and they may need to follow on or be conditioned. **In this instance, a priori RPA modifications have been to reflect the existing barriers to rooting and findings of the Basement Impact Assessment.**
- 4.1.5 The quality of trees will also be a consideration: U Category trees are discounted from the planning process in view of their limited useful life expectancy. Again, Category-C trees would not normally constrain development individually, unless they provide some external screening function.
- 4.1.6 At paragraph 5.1.1. BS5837: 2012 notes that "Care should be exercised over misplaced tree preservation; attempts to retain too many or unsuitable trees on a site are liable to result in excessive pressure on the trees during demolition or construction work, or post-completion demands on their removal."
- 4.1.7 In theory, only moderate quality trees and above are significant material constraints on development. However, low quality trees comprise a constraint in aggregate, in terms of any collective loss / removal, where replacement planting is generally considered appropriate.
- 4.1.8 In this instance, the lack of internal trees and barriers to rooting into the site mean that there are few constraints upon its development.

4.3 Secondary Constraints

4.3.1 The second type of constraint produced by trees that are to be retained is that the proximity of the proposed development to the trees should not threaten their future with ever increasing demands for tree surgery or felling to remove nuisance shading (Figure 4), honeydew deposition or perceived risk of harm.



4.3.2 The shading constraints are crudely determined from BS5837 by drawing an arc from northwest to east of the stem base at a distance equal to the height of the tree, as shown in the diagram opposite. Shade is less of a constraint on non-residential developments, particularly where rooms are only ever temporarily occupied.



4.3.3 This arc (see Figure 5) represents the effects that a tree will have on layout through shade, based on shadow patterns of 1x tree height for a period May to Sept inclusive 10.00-18.00 hrs daily.

4.3.4 Assuming that they will be retained, the orientation of the off-site trees means have the potential to provide a variety of secondary constraints, including shading, organic deposition and the potential need to maintain crown clearance in the future. The significance of these constraints will vary depending on the location and proximity to the proposed re-development which is considered below (in Sections 5 & 6). As specified by BS5837, this section (4) of the report considers only the site as it is, not in the light of pending proposals.

Note: Sections 5 & 6 below will now assess the impacts of the proposals upon constraints identified in Section 4 above. Table 1 in Section 5 presents the impacts in tabular form (drawing upon survey data presented in Appendices 1 & 2). Impacts are presented in terms of whole tree removal and the effect on the landscape or partial encroachment (% of RPA) and its effect on individual tree health. Section 6 discusses the table data, elaborating upon the impacts' significance and mitigation.

Table 1: Arboricultural Impact Assessment

(Impacts assessed prior to mitigation and rated with reference to Matheny & Clark (1998))

Hide irrelevant

Show All Trees

Ref: FMD/21BFP/AIA

B.S. Cat.	Tree No.	Species	Impact	Tree / RPA Affected	Age	Growth Vitality	Species Tolerance	Impact on Tree Rating	Impact on Site Rating	Mitigation
C	3	Maple, Field	Wider Construction Activities	m ² N/A %	Semi-mature	Normal	Moderate	Very Low	Very Low	Appropriate physical protection
C	4	Maple, Field	Wider Construction Activities	m ² N/A %	Semi-mature	Normal	Moderate	Very Low	Very Low	Appropriate physical protection

6. ARBORICULTURAL IMPLICATIONS

6.1 Rating of Primary Impacts

- 6.1.1 Following the modification of the RPAs of T1 and T2, the proposed development will not encroach into any area where the protection of roots / soil structure is a priority. As the basement extensions are to be underpinned, no conflict with the overhanging crowns will take place as a result.
- 6.1.2 Thus, provided the trees adjacent to the site are adequately protected from wider construction activities, there should be no impact to them.
- 6.1.3 We understand that the property's owners are already (or will be) in discussions with Camden in regard to cutting back T3 and T4 from the buildings' frontage to allow more daylight. This is likely to obviate the need for any access facilitation pruning necessary for the development considered herein.

6.2 Rating of Secondary Impacts

- 6.2.1 There will always be marginal secondary impacts of honeydew / litter deposition and partial shade on this site, regardless of development. Whilst T2 in particular will cast shade over the proposed terrace, the nature of the site's proposed use means that post-development conflict is significantly less likely than with a residential development. In our view, the status quo is unlikely to change with further development, which is the salient point for planning to consider. Thus, the secondary impacts of development are minimal.

6.3 Mitigation of Impacts

- 6.3.1 Wider construction activities will need to be adequately controlled to prevent incidental damage to T3 and T4 in particular.
- 6.3.2 Nuisance deposition can be further mitigated with routine maintenance, light pruning / deadwooding and the fitting of filtration traps on guttering (see Figure 6 below).
- 6.3.3 The shading impacts can be mitigated by building design, with the provision of dual aspect windows and choice of room layout. Some minor crown reduction may be necessary, but not such as to impose a burden of frequent, repetitive management.

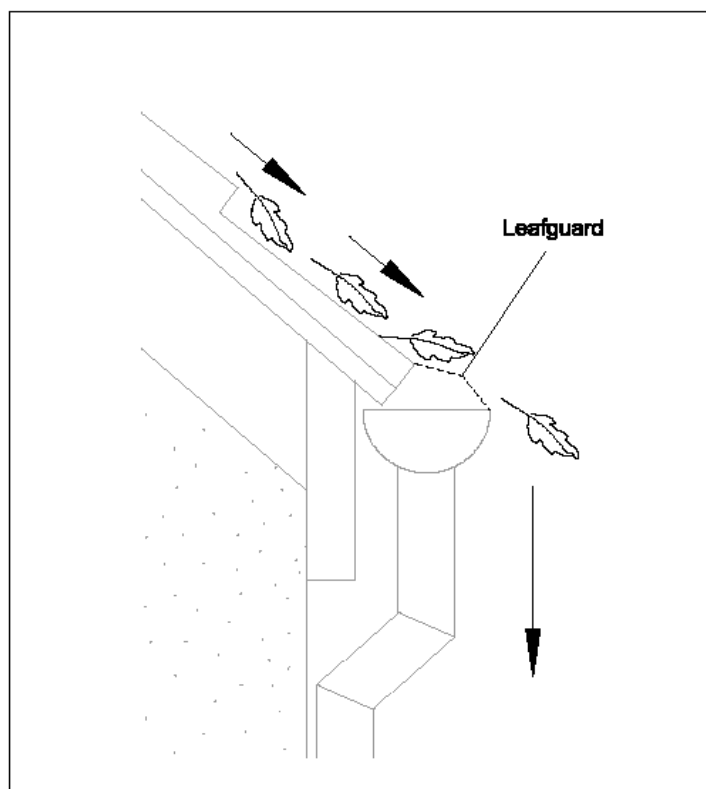


Figure 6: Filtration traps, as shown above, could be fitted on the gutters which can easily be maintained at 2-3m above ground.

7. CONCLUSION

- 7.1 The potential impacts of development are very low / negligible with no RPA encroachments nor loss of canopy cover necessary.
- 7.2 The wider potential impacts of development can be largely mitigated through design and precautionary measures. These measures can be elaborated in Method Statements in the discharge of planning conditions.
- 7.3 Therefore, the proposals will not have any significant impact on either the retained trees or wider landscape thereby complying with Policies G1 and G7 of the London Plan 2021 and Policies A3, A5, D1 and D2 of the Camden Local Plan (adopted 3rd July 2017). Thus, with suitable mitigation and supervision the scheme is recommended to planning.

8. RECOMMENDATIONS

8.1 Specific Recommendations

- 8.1.1 General construction activities within the RPAs of trees identified in Table 1 above, will need to be controlled by method statements specifying mitigation methods suggested in para 6.3 above and by consultant supervision as necessary. These method statements can be provided as part of the discharge of conditions.

8.2 General Recommendations for Sites Being Developed with Trees / Outline Arboricultural Method Statement

- 8.2.1 Any trees which are in close proximity to the proposed development should be protected with a Tree Protection Barrier (TPB). Protective barrier fencing should be installed immediately following the completion of the tree works, remaining in situ for the entire duration of the development unless otherwise agreed in writing by the Council. In this instance, it will comprise 19mm self-supporting hoarding around T3 and T4's planting pits. The TPB should be erected prior to commencement of works, remain in its original form on-site for the duration of works and be removed only upon full completion of works. The areas behind the TPBs are to be treated as Construction Exclusion Zones (CEZ) where no access, material, spoil or plant storage is permitted.
- 8.2.2 A TPB may no longer be required during soft landscaping work but a full arboricultural assessment must be performed prior to the undertaking of any excavations within the RPA of a tree. This will inform a decision about the requirement of protection measures. It is important that all TPBs have permanent, weatherproof notices denying access to the RPA. 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 Plan in the Appendices
- 8.2.3 The basement extension will be carried out via underpinning with spoil removed to a skip on Bedford Place via the conveyor shown on the outline TPP. Site cabins will be located on a scaffold gantry in the location indicated on the outline TPP in Part 3 of this report.
- 8.2.4 Any pruning works must be in accordance with British Standard 3998:2010 Tree work [BS3998].
- 8.2.5 Where sections of hard surfacing are proposed in close proximity to trees, it is recommended that "No-Dig" surfacing be employed in accordance with BS5837:2012.
- 8.2.6 If the RPA of a tree is encroached by underground service routes then BS5837:2012 and NJUG VOLUME 4 provisions should be employed. If it is deemed necessary, further arboricultural advice must be sought.
- 8.2.7 Numerous site activities are potentially damaging to trees e.g. parking, material storage, the use of plant machinery and all other sources of soil compaction. In operating plant, particular care is required to ensure that the operational arcs of excavation and lifting machinery, including their loads, do not physically damage trees when in use.

8.2.8 To enable the successful integration of the proposal with the retained trees, the following points will need to be taken into account:

- 1) Plan of underground services.
- 2) Schedule of tree protection measures, including the management of harmful substances.
- 3) Method statements for constructional variations regarding tree proximity (e.g. foundations, surfacing and scaffolding).
- 4) Site logistics plan to include storage, plant parking/stationing and materials handling.
- 5) Tree works: felling, required pruning and new planting. All works must be carried out by a competent arborist in accordance with BS3998.
- 6) Site supervision: the Site Agent must be nominated to be responsible for all day-to-day arboricultural matters on site. This person must:
 - be present on site for the majority of the time;
 - be aware of the arboricultural responsibilities;
 - have the authority to stop work causing, or may cause harm to any tree;
 - ensure all site operatives are aware of their responsibilities to the trees on site and the consequences of a failure to observe these responsibilities;
 - arrange with the retained arboricultural consultant an initial pre-start briefing to inspect tree protection measures and agree a schedule of monitoring thereof on an initial monthly basis to be reviewed over the duration of works.
 - give advance notice (ideally 2 weeks) to retained arboricultural consultant to arrange for supervision of any excavation (especially for services and foundations) within RPA
 - make immediate contact with the local authority and/or a retained arboricultural consultant in the event of any tree related problems occurring.

8.2.9 These points can be resolved and approved through consultation with the planning authority via their Arboricultural Officer.

8.2.10 The sequence of works should be as follows:

- i) initial tree works: felling, stump grinding and pruning for working clearances;
- ii) installation of TPB for demolition & construction;
- iii) installation of underground services;
- iv) installation of ground protection;
- v) main construction;
- vi) removal of TPB;
- vii) soft landscaping.

9. COMPLIANCE: Trees and the Planning System

- 9.1 Under the UK planning system, local authorities have a statutory duty to consider the protection and planting of trees when granting planning permission for proposed development. The potential effect of development on trees, whether statutorily protected (e.g. by a tree preservation order or by their inclusion within a conservation area) or not, is a material consideration that is taken into account in dealing with planning applications. Where trees are statutorily protected, it is important to contact the local planning authority and follow the appropriate procedures before undertaking any works that might affect the protected trees.
- 9.2 The nature and level of detail of information required to enable a local planning authority to properly consider the implications and effects of development proposals varies between stages and in relation to what is proposed. Table B.1 provides advice to both developers and local authorities on an appropriate amount of information. The term “minimum detail” is intended to reflect information that local authorities are expected to seek, whilst the term “additional information” identifies further details that might reasonably be sought, especially where any construction is proposed within the RPA.
- 9.3 This report delivers information appropriate to a full planning application and to these specific proposals as per BS5837 Table B.1 below, providing both minimum details and further additional material in the form of general tree protection recommendations and constructional variation.

Table B.1 Delivery of tree-related information into the planning system

Stage of process	Minimum detail	Additional information
Pre-application	Tree survey	Tree retention/removal plan (draft)
Planning application	Tree survey (in the absence of pre-application discussions)	Existing and proposed finished levels
	Tree retention/removal plan (finalized)	Tree protection plan
	Retained trees and RPAs shown on proposed layout	Arboricultural method statement – heads of terms
	Strategic hard and soft landscape design, including species and location of new tree planting	Details for all special engineering within the RPA and other relevant construction details
	Arboricultural impact assessment	
Reserved matters/ planning conditions	Alignment of utility apparatus (including drainage), where outside the RPA or where installed using a trenchless method	Arboricultural site monitoring schedule
	Dimensioned tree protection plan	Tree and landscape management plan
	Arboricultural method statement – detailed	Post-construction remedial works
	Schedule of works to retained trees, e.g. access facilitation pruning	Landscape maintenance schedule
	Detailed hard and soft landscape design	

10.0 REFERENCES

- Barlow JF & Harrison G. 1999. Shade By Trees, Arboricultural Practice Note 5, AAIS, Farnham, Surrey.
- British Standards Institute. 2012. Trees in Relation to Design, Demolition and Construction - Recommendations BS 5837: 2012 HMSO, London.
- Centre for Ecology & Hydrology. 2006. Tree Roots in the Built Environment, HMSO, London.
- Helliwell R (1980) Provision for New Trees; Landscape Design; July/August issue
- International Society of Arboriculture (ISA). 1994. The Landscape Below Ground. ISA, Champaign, Illinois. USA.
- Lonsdale D 1999. Research for Amenity Trees No.7: Principles of Tree Hazard Assessment and Management, HMSO, London.
- Matheny, N; Clark, J. R.1998. Trees and Development: A Technical Guide to Preservation of Trees during Land Development. ISA, Champaign, Illinois. USA.
- Mattheck C. & Breloer H. 1994. Research for Amenity Trees No.2: The Body Language of Trees, HMSO, London.
- Thomas P, 2000 & 2014. Trees: Their Natural History, Cambridge University Press, Cambridge.
- Trowbridge J & Bassuk N (2004) Trees in the Urban Landscape: Site Assessment, Design, and Installation; J Wiley & Sons inc. NJ USA



Landmark Trees

Caveats

This report is primarily an arboricultural report. Whilst comments relating to matters involving built structures or soil data may appear, any opinion thus expressed should be viewed as qualified, and confirmation from an appropriately qualified professional sought. Such points are usually clearly identified within the body of the report. It is not a full safety survey or subsidence risk assessment survey. These services can be provided but a further fee would be payable. Where matters of tree condition with a safety implication are noted during a survey they will of course appear in the report.

A tree survey is generally considered invalid in planning terms after 2 years, but changes in tree condition may occur at any time, particularly after acute (e.g. storm events) or prolonged (e.g. drought) environmental stresses or injuries (e.g. root severance). Routine surveys at different times of the year and within two - three years of each other (subject to the incidence of the above stresses) are recommended for the health and safety management of trees remote from highways or busy access routes. Annual surveys are recommended for the latter.

Tree works recommendations are found in the Appendices to this report. It is assumed, unless otherwise stated ("ASAP" or "Option to") that all husbandry recommendations will be carried out within 6 months of the report's first issue. Clearly, works required to facilitate development will not be required if the application is shelved or refused. However, necessary husbandry work should not be shelved with the application and should be brought to the attention of the person responsible, by the applicant, if different. Under the Occupiers Liability Act of 1957, the owner (or his agent) of a tree is charged with the due care of protecting persons and property from foreseeable damage and injury.' He is responsible for damage and/or nuisance arising from all parts of the tree, including roots and branches, regardless of the property on which they occur. He also has a duty under The Health and Safety at Work Act 1974 to provide a safe place of work, during construction. Tree works should only be carried out with local authority consent, where applicable.

Inherent in a tree survey is assessment of the risk associated with trees close to people and their property. Most human activities involve a degree of risk, such risks being commonly accepted if the associated benefits are perceived to be commensurate.

Risks associated with trees tend to increase with the age of the trees concerned, but so do many of the benefits. It will be appreciated, and deemed to be accepted by the client, that the formulation of recommendations for all management of trees will be guided by the cost-benefit analysis (in terms of amenity), of tree work that would remove all risk of tree related damage.

Prior to the commencement of any tree works, an ecological assessment of specific trees may be required to ascertain whether protected species (e.g. bats, badgers and invertebrates etc.) may be affected.



Landmark Trees

PART 2 – APPENDICES

APPENDIX 1

TREE SCHEDULE

Botanical Tree Names

Lime, Common : *Tilia x europaea*

Maple, Field : *Acer campestre*

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: 21-23 Bedford Place
Date: 10/04/24

Appendix 1

Landmark Trees Ltd
020 7851 4544
Surveyor(s): Adam Hollis
Ref: FMD/21BFP/AIA

BS5837 Tree Constraints Survey Schedule

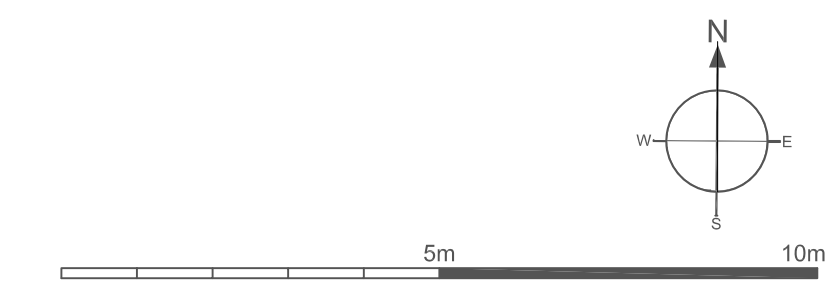
Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diamete	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
1	Lime, Common	15	4766	7.0	800	Mature	9.6	Normal	Fair	B	1	40+	Pollarded Remote survey only (RS)
2	Cypress	5	4565	5.0	750	Mature	9.0	Normal	Fair	C	2	20+	Unsuitable species for position Lopped to N
3	Maple, Field	9	4335	3.5	250	Semi-mature	3.0	Normal	Fair	C	2	40+	Street tree
4	Maple, Field	9	3343	3.5	250	Semi-mature	3.0	Normal	Fair	C	2	40+	Street tree




Landmark Trees

PART 3 – PLANS

PLAN 1**TREE CONSTRAINTS PLAN**





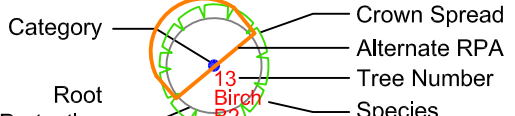
Landmark Trees

Holden House, 4th Floor, 57 Rathbone Place, London W1T 4JU
Tel: 0207 851 4544 Mobile: 07812 889928
e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 21- 23 Bedford Place	1:100 @ A1
Drawing Title: Tree Constraints Plan	April 2024

Key:

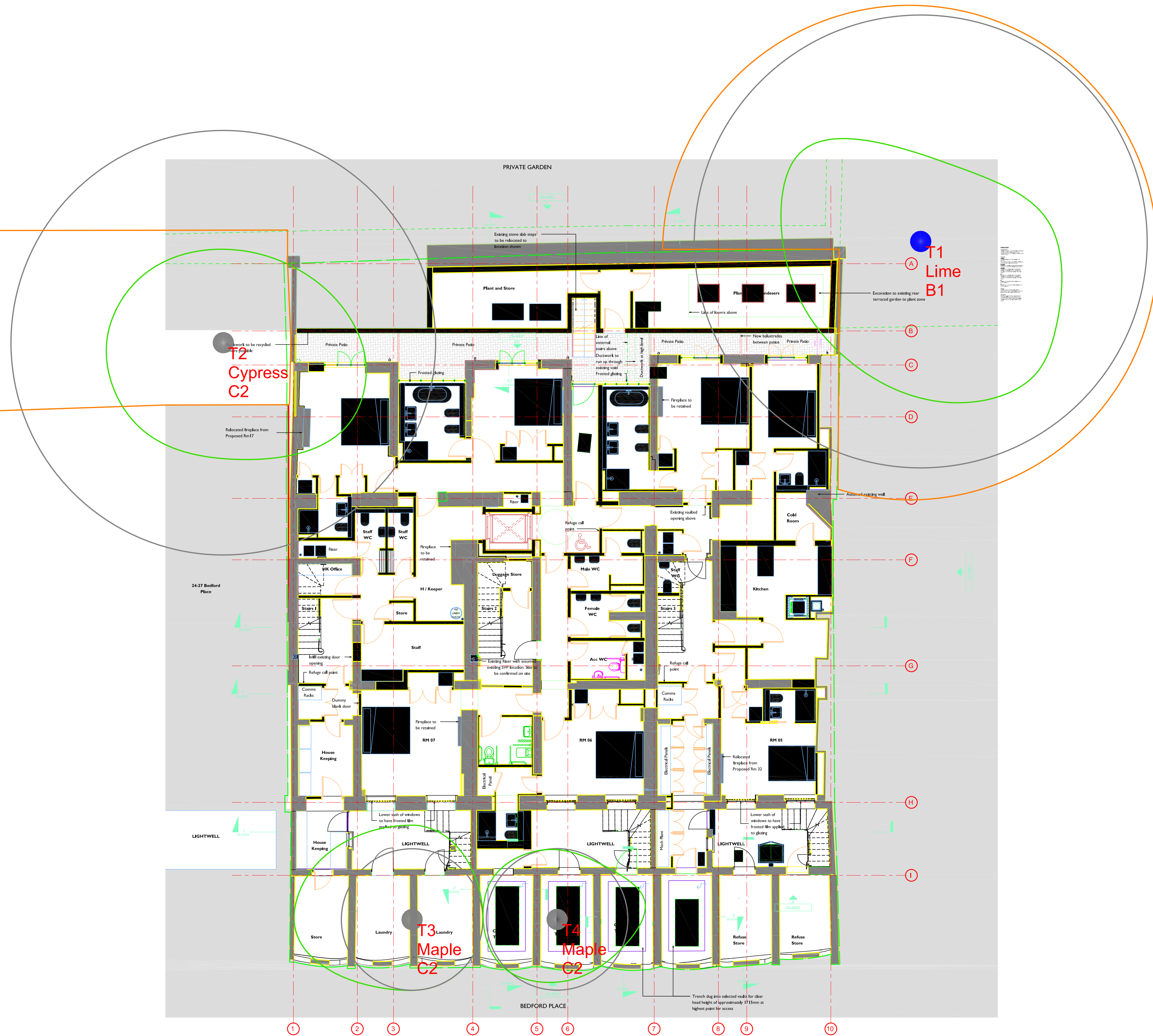
- Category A
High Quality
- Category B
Moderate Quality
- Category C
Low Quality
- Category U
Trees Unsuitable for Retention



Note: All Tree Positions Are Approximate (not shown on original survey)

PLAN 2**ARBORICULTURAL IMPACT ASSESSMENT PLAN (S)**

- i. Basement
- ii. Ground Floor



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.

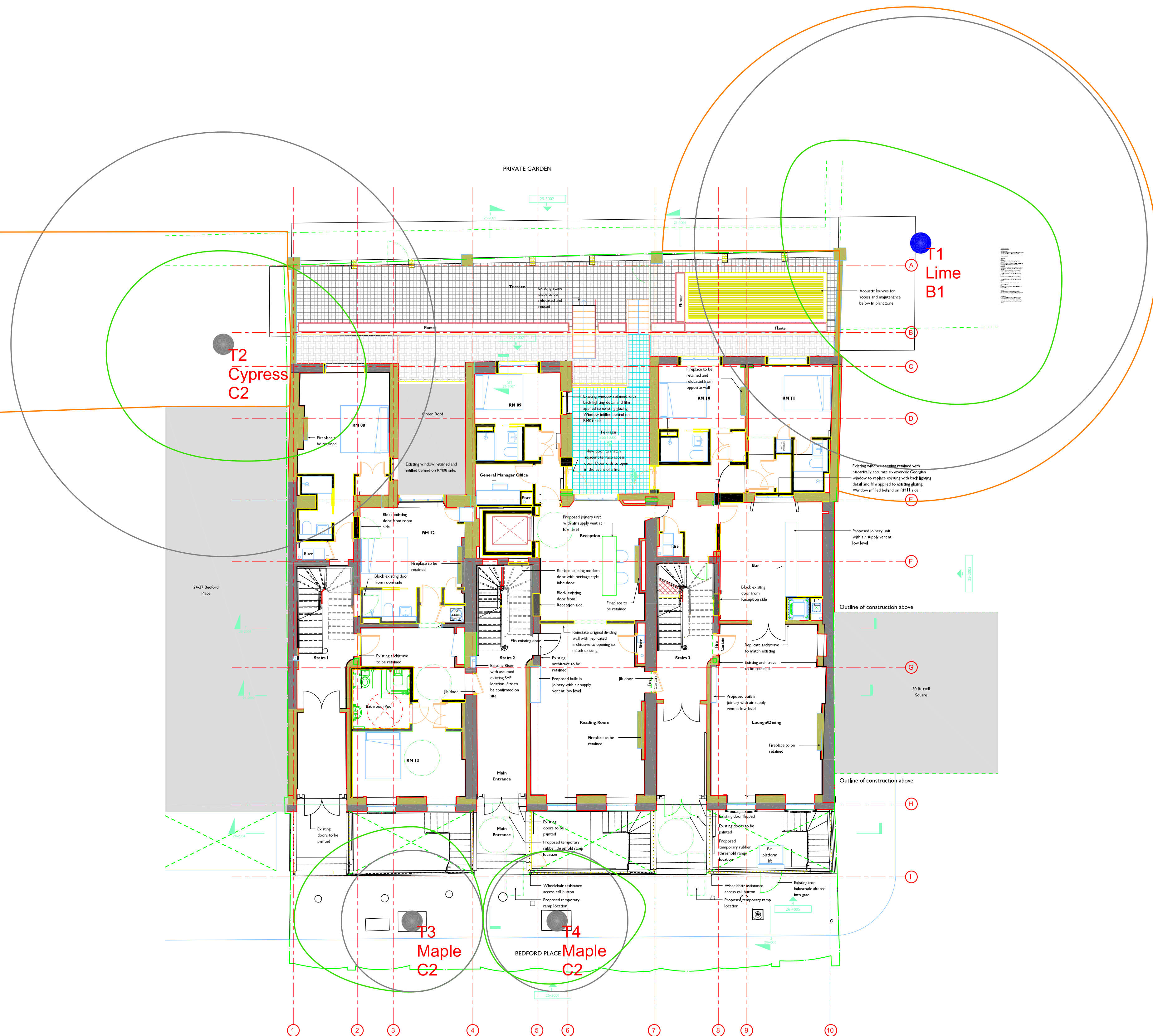
Branch spread in metres is taken at the four cardinal points to derive an accurate representation of the crown.

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).

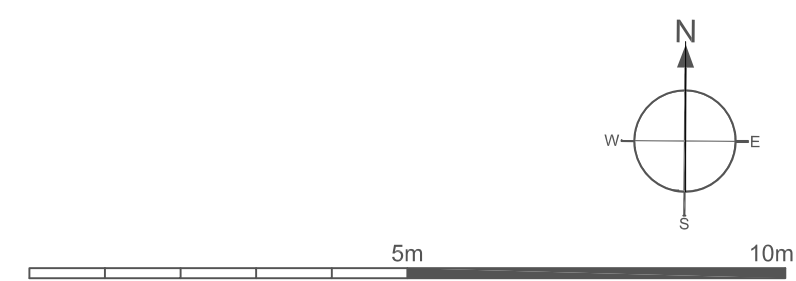
Landmark Trees
Holden House, 4th Floor, 57 Rathbone Place, London W1T 4JU
Tel: 0207 851 4544 Mobile: 07812 989928
e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: 21- 23 Bedford Place
Drawing Title: Arboricultural Impacts Assessment
1:100@ A1
April 2024

Key:
Category A High Quality
Category B Moderate Quality
Category C Low Quality
Category U Trees Unsuitable for Retention
Crown Spread
Alternate RPA
Tree Number
Species
Category
Root Protection Area
Note: All Tree Positions Are Approximate (not shown on original survey)




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).



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: 21- 23 Bedford Place	1:100@ A1
Drawing Title: Arboricultural Impacts Assessment	April 2024

Key:

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

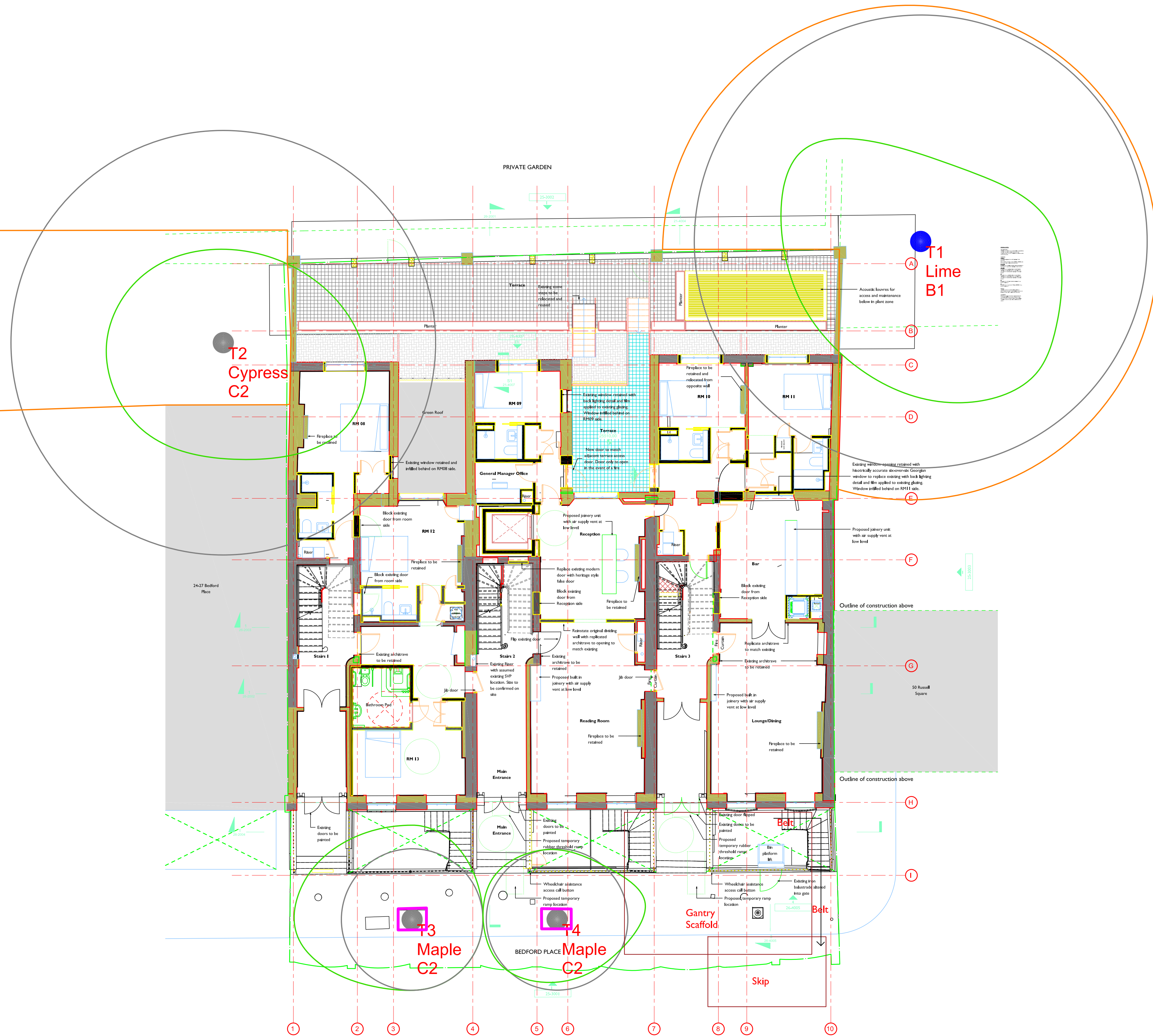
Category

- Crown Spread
- Alternate RPA
- Tree Number
- Species
- Category

Note: All Tree Positions Are Approximate (not shown on original survey)

PLAN 3

OUTLINE TREE PROTECTION 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: 21- 23 Bedford Place
Drawing Title: Tree protection Plan
1:100@ A1
April 2024

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
Alternate RPA
Tree Number
Species
Category
Tree Protection Fencing

Note: All Tree Positions Are Approximate (not shown on original survey)