



ARBORICULTURAL IMPACT ASSESSMENT REPORT FOR:

155-157 Regent's Park Road
Chalk Farm
London
NW3 3QE

INSTRUCTING PARTY:

Uchaux Limited

REPORT PREPARED BY

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Ref: UCX/155RPR/AIA/01

Date: 19th July 2019

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DOCUMENT HISTORY

Revision	Status	Comments	Date
Rev 0	Approved	For Full Application	15/07/2019
Rev a	Approved	For Full Application	As front cover

1. SUMMARY

- 1.1 The existing site comprises a four-storey mixed use building facing on to Haverstock Hill. There is one tree adjacent to the building potentially constraining development. The proposal includes the demolition of the building and replacement with an eight-storey hotel.
- 1.2 There is one tree on adjoining land outside of the application boundary that is within close proximity to the development and needs to be assessed. This tree is an early mature cherry of moderate quality.
- 1.3 The report has assessed the impacts of the development proposals and concludes that two viable options exist, one removing and replacing the tree and one retaining it. Whilst there would be a moderate level impact on the wider area over the short term if the tree were to be removed, the inappropriate long-term position of the tree next to the existing building means that the proposed replacement planting would provide an entirely more sustainable tree resource that has the potential to offer significantly more amenity. If the tree is retained, it will not be directly impacted by the construction of the hotel however the current pruning regime will need to be maintained.
- 1.4 In conclusion, the scheme is not reliant on the removal of the tree, although this would be our preferred option on balance, will have a limited impact on the wider area whether the tree is removed or retained and is therefore acceptable.

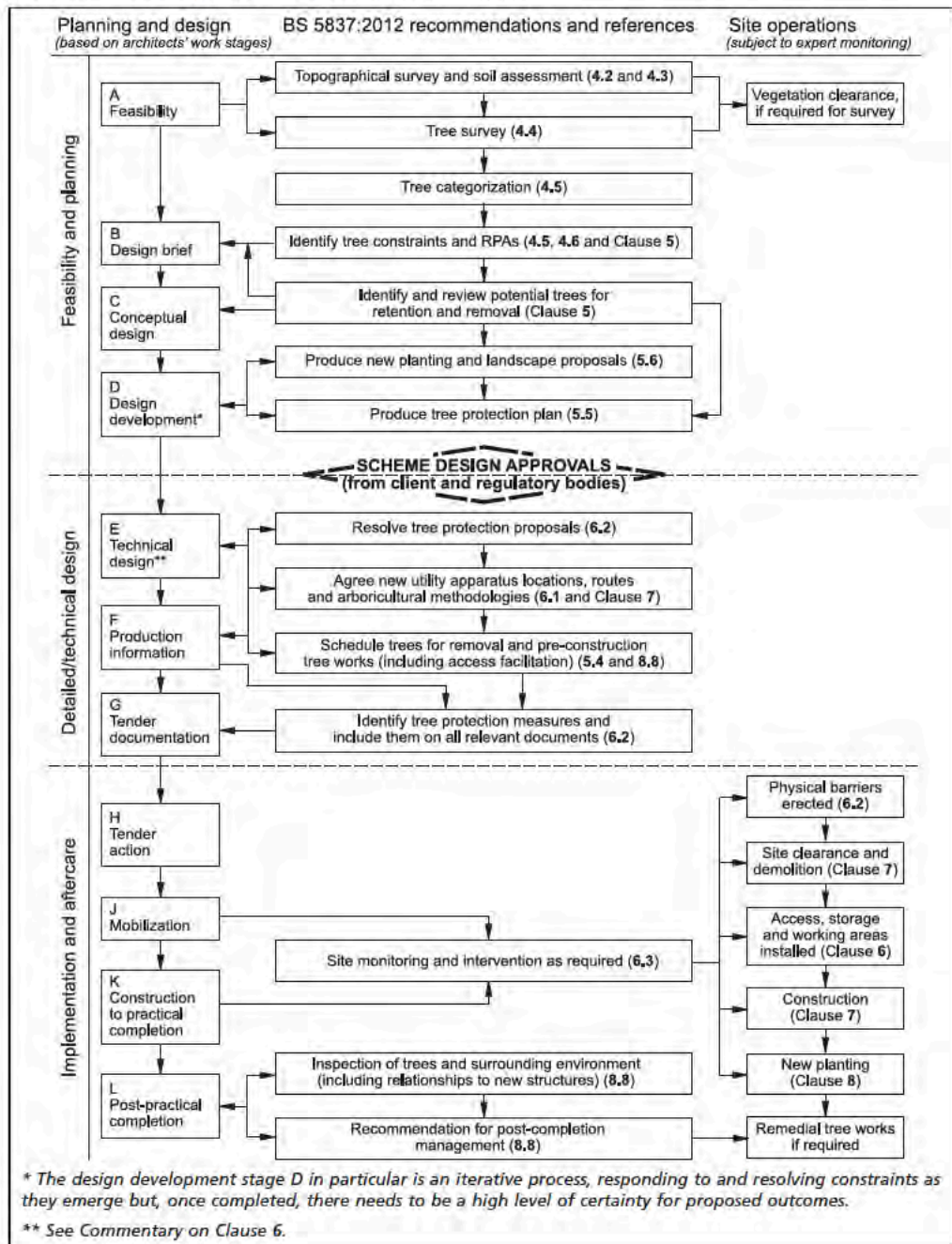
* British Standards Institute: Trees in relation to design, demolition and construction BS 5837: 2012 HMSO, London

2. INTRODUCTION

2.1 Terms of Reference

- 2.1.1 This Arboricultural Impact Assessment report has been prepared by Landmark Trees (LT) on behalf of Uchaux Limited ('the Applicant'), to support a full planning application submitted to the London Borough of Camden ('LBC').
- 2.1.2 The application relates to the demolition of the existing mixed-use building and construction of an hotel that incorporates a residential element. Specifically, full planning permission is sought for:
"Redevelopment to provide a ground plus 7-storey building comprising a retail unit at ground, a hotel and single residential unit with associated works."
- 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') 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 both support the Design Team to the Scheme Design Approvals stage in the process chart overleaf and support the planning application itself.**

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: 13545-Design freeze 01 - Massing model

Proposals: 13545-A-L00-00-100

2.3 Scope & Limitations of Survey

2.3.1 As Landmark Trees' (LT) arboricultural consultant, I surveyed the trees on site on 13th June 2019, 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

2.3.3 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.

2.3.4 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 with recommendations as to the minimum requirements to facilitate development (which form part of the planning application) provided at Appendix 2.
- 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 (RPA's), 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. General observations, discussion, conclusions and recommendations follow, below.

3.0 SITE CHARACTERISTICS

3.1 Property Description & Planning Context



Photograph 1: T1 located in front of 155-157 Regent's Park Road

- 3.1.1 The existing site comprises a four-storey building on the corner of Regents Park Road and Haverstock Hill. The building fronts Haverstock Hill and is set back from the main road by an area of public realm. The site comprises a mix of uses including retail at ground floor with office accommodation at first and third floors above and a single residential unit on the top floor.
- 3.1.2 The site is relatively level throughout.
- 3.1.3 We are not aware of the existence of any Tree Preservation Orders and understand that the site stands outside any Conservation Area.
- 3.1.4 Relevant local planning policies comprise Policy 7.21 of the London Plan 2016 and Policies A3, and D1 of the Camden Local Plan (adopted 3rd July 2017). The London Plan is currently under revision with policies G1 and G7 being the relevant elements of the draft 2019 version.

3.2 Soil Description

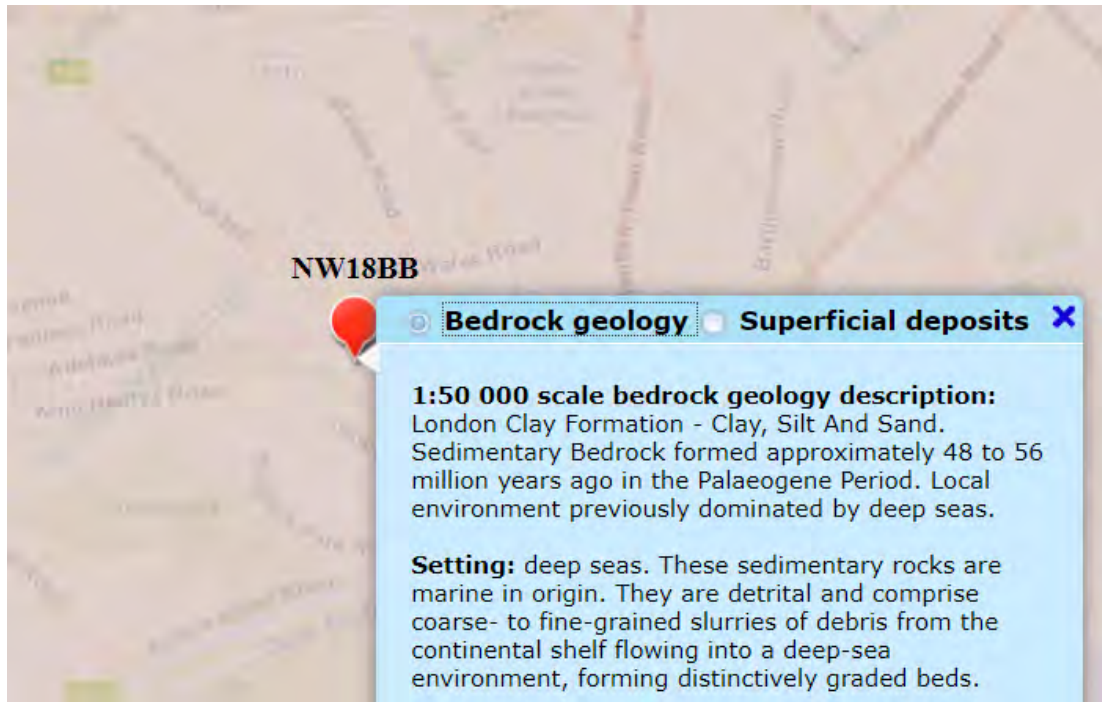


Figure 2: Extract from the BGS Geology of Britain Viewer

- 3.2.1 In terms of the British Geological Survey, the site overlies the London Clay Formation (see indicated location on Fig.1 plan extract below). The associated soils are generally, highly shrinkable clay; e.g. slowly permeable seasonally waterlogged fine loam over clay. Such highly plastic soils are prone to movement: subsidence and heave. 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 Clay soils are prone to compaction during development with damage to soil structure potentially having a serious impact on tree health. The design of foundations near problematic tree species will also need to take into consideration subsidence risk. Further advice from the relevant experts on the specific soil properties can be sought as necessary.

3.3 Subject Trees

- 3.3.1 One tree was surveyed, an early mature category B* (moderate quality) cherry. It was noted that the tree has early stage bacterial canker and is outgrowing its metal guard.

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

- 3.2.4 Full details of the surveyed trees can be found in Appendix 1 of this report.



Photograph 2: Proximity of T1 to building with resultant cutting back evident



Photograph 3: Example of bleeding on lower stem

4.0 DEVELOPMENT CONSTRAINTS

4.1 Primary Constraints

- 4.1.1 A tree's primary constraint on development is the physical space it occupies or requires above and below ground on a given site. The current canopy spreads and heights are noted in our survey; allowance for further growth and broader aspects of juxtaposition are considered under secondary impacts below. With regard to root spread, BS5837 defines the Root Protection Area (RPA) as a layout design tool indicating 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.
- 4.1.2 The individual RPA's 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.
- 4.1.3 Circular RPA's 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 2). Alternatively, one need principally remember that RPA's are area-based and not linear – notional rather than fixed entities.

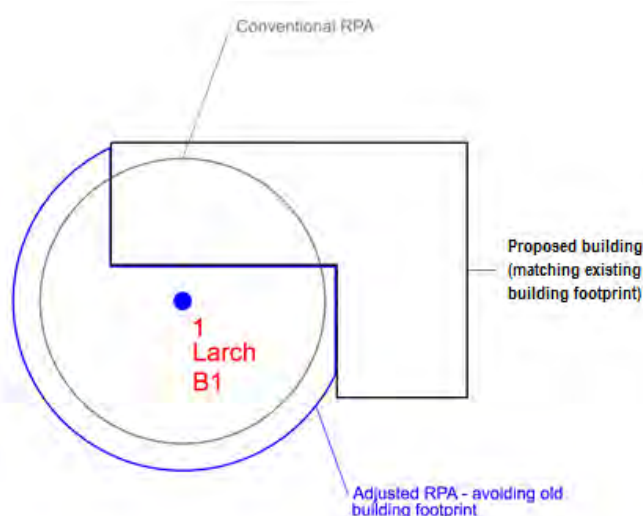


Figure 3– Generic BS 5837 RPA Adjustments (for fictitious site)

- 4.1.4 In BS5837, paragraph 4.6.2 states that RPA's 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.

4.1.5 **No *a priori* modifications have been made in this instance.**

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 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 constraints posed by the moderate quality tree are tempered by its inappropriate long-term position and lack of suitability for the repeated cutting back from the building this necessitates.

4.2 Secondary Constraints

4.2.1 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 3), honeydew deposition or perceived risk of harm.



Figure 3 –
Generic Shading Constraints

4.2.2 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.

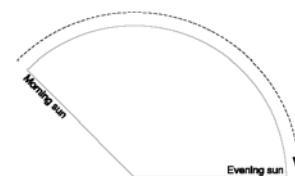


Figure 4 – Shading Arc

4.2.3 This arc (see Figure 4) 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.

4.2.4 Were it to be retained, the orientation of the off-site trees means it has 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))

Ref: UCX_155RPR_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
B	1	Cherry, Wild (Gean)	Felled to Facilitate Development	m ² N/A %	Early Mature	Normal	N/A	N/A	Low	New planting / landscaping

6.0 ARBORICULTURAL IMPLICATIONS

6.1 Rating of Primary Impacts

- 6.1.1 The principal impact in the current proposals is the removal of T1 as part of the refurbishment of the area of public realm to the front of the application site. Whilst the loss of a moderate quality tree would ordinarily give rise to a concomitant level of impact, in this case the ongoing nuisance the tree causes to the occupiers of the existing building and sub-optimal health it exhibits, mean that its loss is assessed as being of low impact.
- 6.1.2 The proposed replanting scheme offers the opportunity to secure a replacement tree in a location where it is highly unlikely to have to be pruned back from the new development thereby preventing the use of untold gallons of fossil fuels which would have to be expended if the tree were retained whether development proceeds or not. It also offers the opportunity to plant a tree into a significantly greater volume of soil than T1 currently likely benefits from. This will not only improve the establishment rate of the replacement tree, minimising the period of time when amenity is lessened but also increase the likely lifespan of the replacement specimen.
- 6.1.3 It should be noted that, should LBC desire the retention of the tree, the development will have no effect upon it, provided that demolition and construction activities are adequately controlled.

6.2 Rating of Secondary Impacts

- 6.2.1 The proposed removal of T1 and replacement further away from buildings reduces the level of secondary impacts from the existing arrangement.
- 6.2.2 Should however the tree be retained, there will be no increase in secondary impacts from the *status quo*. The tree will still of course need to be cut back from the adjacent hotel elevation but such repetitive pruning is already undertaken. The relatively young age of the tree means that it is better able to tolerate and adapt to this and, provided it is carried out regularly, only fine material will need to be pruned.

6.3 Mitigation of Impacts

- 6.3.1 The replanting scheme will offer considerable enhancement and replaces a tree growing in a poor long-term position. Replacement trees will have the advantage of being specifically selected for the proposed site, healthy and fit-for-purpose. Design can provide for a diverse range of native and ornamental species that will compliment rather than conflict with the proposals, so providing a more sustainable long-term resource for the future . A selection of tree species and cultivars for open and constricted sites is provided in Appendix 3.
- 6.3.2 Should the tree be retained, all plant and vehicles engaged in demolition works should either operate outside the RPA, or should run on a temporary surface designed to protect the underlying soil structure. The demolition of the building should proceed inwards in a “pull down” fashion. Hard surfacing can be lifted with caution by a skilled machine operator again working away from the tree. The limits of excavation within RPAs will be undertaken manually; any roots encountered will be cleanly pruned back to an appropriate junction with a sharp pruning saw or secateurs. Roots larger than 25mm diameter may only be cut in consultation with an arboriculturalist.

7.0 CONCLUSION

- 7.1 The scheme is not reliant upon the removal and replacement of the tree although this is our preferred option as it would provide a more satisfactory long-term juxtaposition between trees and buildings. The potential impacts of development are therefore all relatively low when considered in the round, despite the potential removal of the only tree adjacent to the proposals.
- 7.2 The tree that is recommended for felling is of some individual significance but is of compromised health and growing in a poor long-term position. The replacement planting proposed offers betterment over the medium-long term.
- 7.3 Equally, if the tree is retained, the proposals will have no impact upon it provided suitable design and precautionary measures are adopted. These measures can be elaborated in Method Statements in the discharge of planning conditions.
- 7.4 Therefore, whether the tree is removed or retained, the proposals will not have any significant impact on either the retained tree or wider landscape thereby complying with Policy 7.21 of the London Plan 2016 and Policies A3, and D1 of the Camden Local Plan (adopted 3rd July 2017) as well as Policies G1 and G7 of the draft (July 2019) London Plan. Thus, with suitable mitigation and supervision the scheme is recommended to planning.

8.0 RECOMMENDATIONS

8.1 Specific Recommendations

- 8.1.1 Recommendations for works required to facilitate development are found in Appendix 2 and a selection of columnar tree species cultivars for constricted sites provided in Appendix 3. Any tree removals recommended within this report should only be carried out with local authority consent.
- 8.1.2 Replace felled tree T1 with native ornamental nursery stock under current best practice; i.e. conforming to and planted in accordance with the following:

- BS8545: 2014 Code of Practice for Trees from Nursery to Landscape
- BS 3936-1: 1992 Nursery stock. Specification for trees and shrubs; and
- BS 5236:1975 Cultivation and Planting of Trees in the Advanced Nursery Stock Category.
- All replacement stock should be planted and maintained as detailed in BS 4428:1989 (Section 7): Recommendations for General Landscape Operations.

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

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



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.



PART 2 – APPENDICES

APPENDIX 1

TREE SCHEDULE

Botanical Tree Names

Cherry, Wild cherry /Gean : Prunus avium

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: Regents Park Road Hotel

Date: 13/06/19

Appendix 1

Landmark Trees Ltd

020 7851 4544

Surveyor(s): Adam Hollis

Ref: UCX_155RPR_AIA

BS5837 Tree Constraints Survey Schedule

Tree No.	English Name	Height	Crown Spread	Ground Clearance	Stem Diameter	Age Class	Protection Radius	Growth Vitality	Structural Condition	B.S. Cat	Sub Cat	Useful Life	Comments
1	Cherry, Wild (Gean)	8	5442	2.0	300	Early Mature	3.6	Normal	Good	B	2	20+	Leaf shot holes Bleeding on lower stem Early stage bacterial canker Outgrowing metal guard

APPENDIX 2

RECOMMENDED TREE WORKS TO FACILITATE DEVELOPMENT (See Table 1)

Notes for Guidance:

- 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



Landmark Trees

Site: Regents Park Road Hotel

Date: 13/06/19

Appendix 2

Surveyor(s): Adam Hollis

Ref: UCX_155RPR_AIA

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
1	Cherry, Wild (Gean)	B	8	2.0	5442	Fell	Leaf shot holes Bleeding on lower stem Early stage bacterial canker Outgrowing metal guard To facilitate development

APPENDIX 3: TREE SELECTION FOR URBAN LOCATIONS

Table A4.1: Small Ornamental Tree Species

Common Name	Species	(Columnar Form for discrete usage)
Hawthorn	<i>Crataegus monogyna</i>	Stricta
Cockspur	<i>Crataegus prunifolia</i>	Splendens
Cherry	<i>Prunus x hillieri</i>	Spire
Bird cherry	<i>Prunus padus</i>	Albertii
Rowan / Mountain ash	<i>Sorbus aucuparia</i>	Cardinal Royal
Swedish whitebeam	<i>Sorbus intermedia</i>	Brouwers
B. whitebeam	<i>Sorbus x thuringiaca</i>	Fastigiata

Table A4.2: Medium Specimen Tree Species

Common Name	Species	(Columnar Form for discrete usage)
Chinese red bark birch	<i>Betula albosinensis</i>	Fascination
Mongolian lime	<i>Tilia mongolica</i>	
Hornbeam	<i>Carpinus betulus</i>	Fastigiata Frans Fontaine
Turkish hazel	<i>Corylus colurna</i>	
Maidenhair tree	<i>Gingko biloba</i>	
Pride of India	<i>Koelreuteria paniculata</i>	Fastigiata
European larch	<i>Larix decidua</i>	Sheerwater Seedling
Tulip tree	<i>Liriodendron tulipifera</i>	Fastigiata

Table A4.3: Larger Specimen Tree Species

Common Name	Species	(Columnar Form for discrete usage)
English oak	<i>Quercus robur</i>	f. Koster
American elm	<i>Ulmus americana</i> Princeton	
Cedar of Lebanon	<i>Cedrus libani</i>	

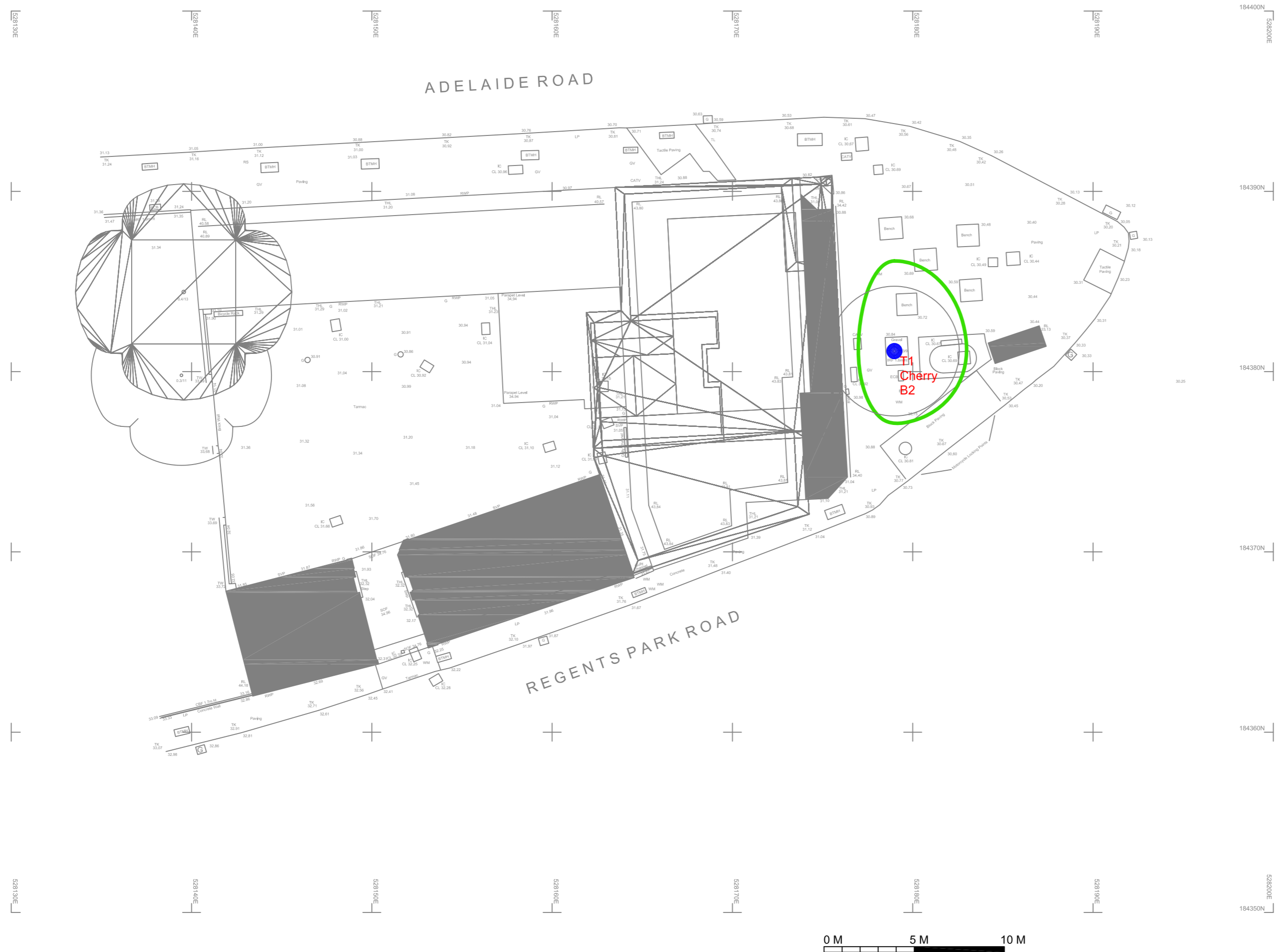


Landmark Trees

PART 3 – PLANS

PLAN 1

TREE CONSTRAINTS 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).

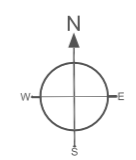
Landmark Trees
 20 Broadwick Street, London, W1F 8HT
 Tel: 0207 851 4544 Mobile: 07812 989928
 e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: Regents Park Road Hotel	1:200@ A2
Drawing Title: Tree Constraints Plan	June 2019

Key:

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

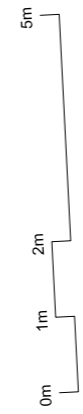
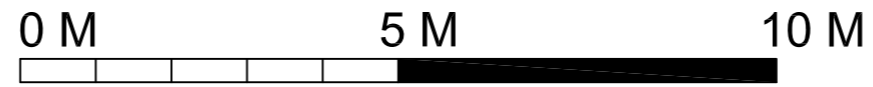
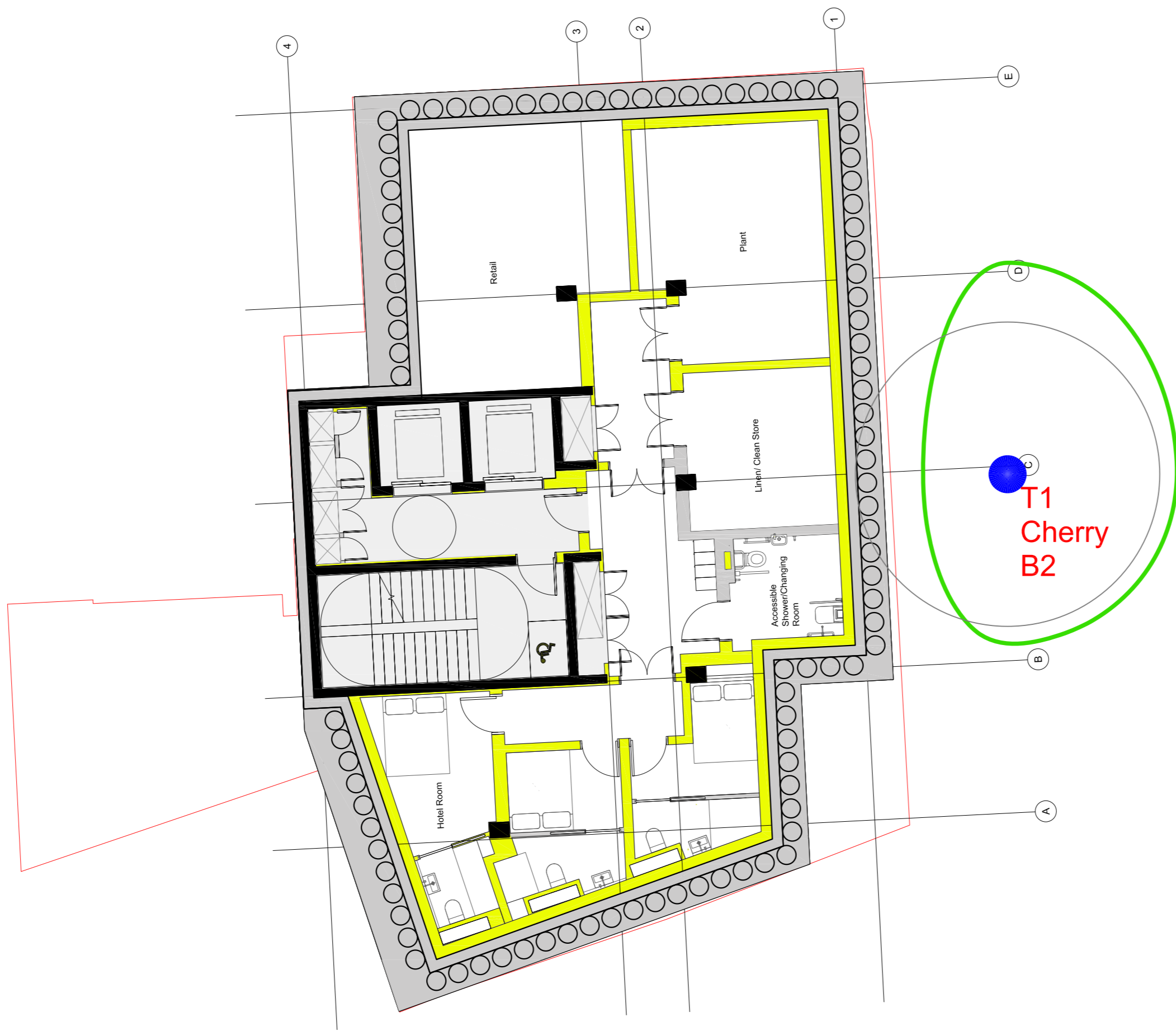
Category ——— Crown Spread
 Root Protection Area ——— Tree Number
 ——— Species
 ——— Category
 Tree Position Approximate (not shown on original survey)



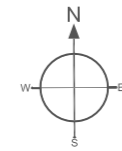
PLAN 2

ARBORICULTURAL IMPACT ASSESSMENT PLAN (S)

- i. Basement Plan
- ii. Ground Floor



Proposed Basement Outline



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).

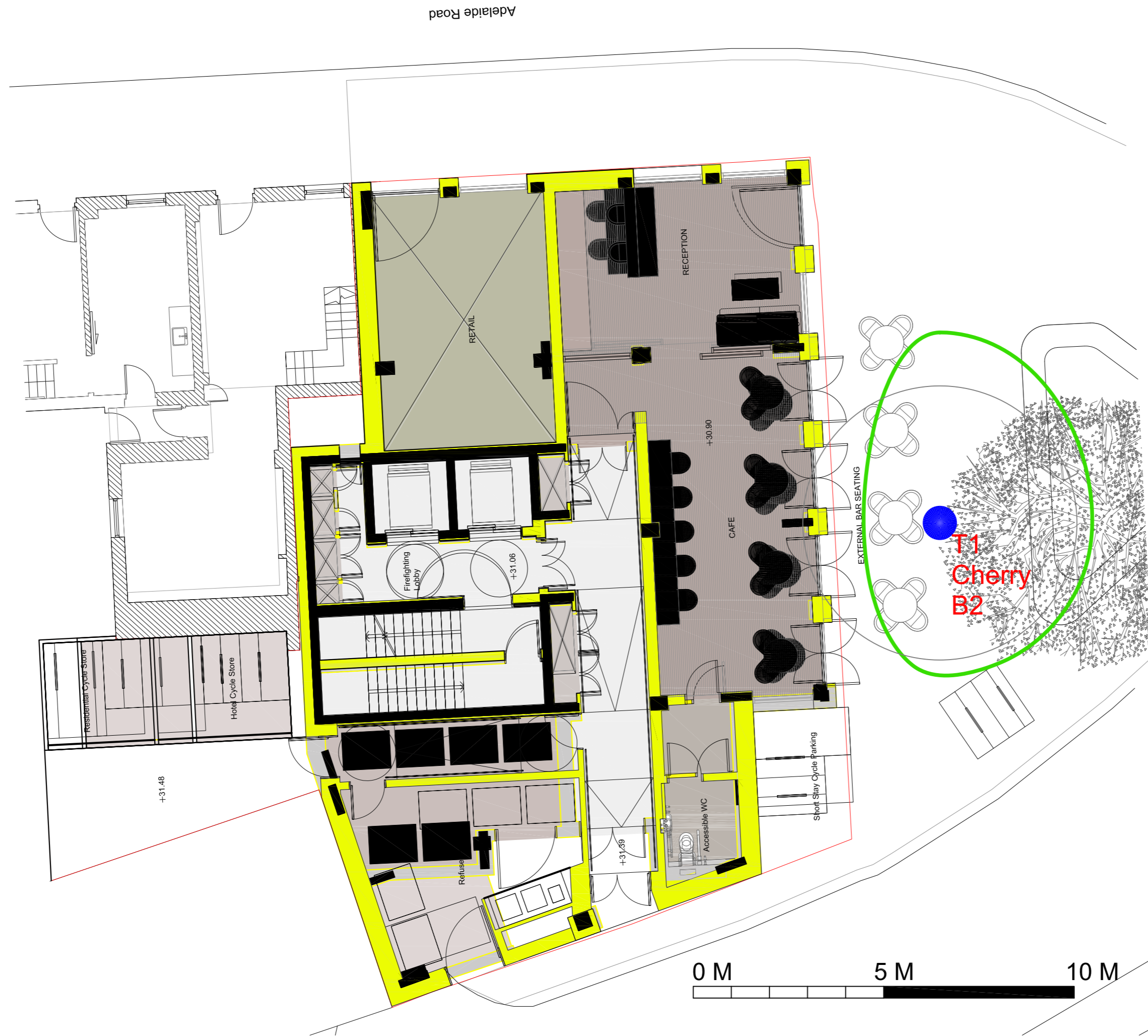
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 e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: Regents Park Road Hotel	1:100@ A2
Drawing Title: Arboricultural Impact Assessment Plan	July 2019

Key:

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

Category ——— Crown Spread
 Root Protection Area ——— Tree Number
 ——— Species
 ——— Category
 Tree Position Approximate (not shown on original survey)



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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 e-mail: info@landmarktrees.co.uk Web: www.landmarktrees.co.uk

Site: Regent's Park Road Hotel	1:100@ A2
Drawing Title: Arboricultural Impact Assessment Plan	July 2019

Key:

- Category A High Quality (Green circle)
- Category B Moderate Quality (Blue circle)
- Category C Low Quality (Grey circle)
- Category U Trees Unsuitable for Retention (Red circle)
- Crown Spread (Dashed green line)
- Tree Number (Number in red)
- Species (Species name in red)
- Category (Text label)
- Root Protection Area (Green hatched area)
- Tree Position Approximate (not shown on original survey) (Green hatched circle)

