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ARBORICULTURAL AND WOODLAND CONSULTANTS

TITLE: **Arboricultural Impact Assessment:**
71 Goldhurst Terrace, London, NW6 3HA

DATE: May 2019

PREPARED BY: Dominic Poston

REF: HWA10216_APIII

Institute of Chartered Foresters
Registered Consultant

ARBORICULTURAL IMPACT ASSESSMENT & METHOD STATEMENT

71 Goldhurst Terrace, London, NW6 3HA

REF: HWA10216_APIII
DATE: May 2019

Prepared For
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1.0	**13.05.19**	**Dominic Poston**	**First Issue**

Summary

The purpose of this report is to provide a preliminary consideration of the arboricultural implications created by proposed development. In accordance with the feasibility and planning sections of BS5837:2012 "Trees in relation to design, demolition and construction – Recommendations", trees deemed to be within the influencing distance of the projected construction have been evaluated for quality, longevity, and initial maintenance requirements. Where trees do not have to be removed for health and safety reasons, a detailed and objective assessment has been made of the consequences of the intended layout.

In this circumstance it is intended to add a basement to and re-model an existing terrace property. As a result, one individual tree was inspected. The arboricultural related implications of the proposal are as follows:

1 **Implications on Construction** – No specialist construction techniques are required, but ground protection must be installed prior to the commencement of works.

2 **Cultural Implications for Retained Trees** – Low. Given its distance to the proposals (and outside calculated RPA), it is not anticipated that any significant root material will be encountered.

3 **Landscape Implications** – None.

4 **Post Development Implications** – None considered reasonably foreseeable.

5 **Post Planning Permission** – Subject to achieving Planning Permission, a detailed Arboricultural Method Statement and Tree Protection Plan will be required. This will include the following detail: ground protection measures, phasing and an extensive auditable monitoring schedule.

Given the above, there are no overt or overwhelming arboricultural constraints that can be reasonably cited to preclude the proposed construction.

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Part One
Introduction

This report is formulated in accordance with the recommendations contained within BS 5837, providing appropriate and sufficient information to enable the relevant Local Planning Authority (LPA) to consider the effects of the proposed development upon existing trees. It includes an impact assessment and a tree protection plan and method statement detailing how retained trees may be successfully integrated into the design. It is fully in line with the BS 5837 advice relating to the planning application stage of the process highlighted in Table B1 reproduced below:

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	

1 Particulars of Instruction

1.1 Hallwood Associates Ltd (HWA) are instructed by Jagdish Parihar to provide specialist arboricultural advice in accordance with the principles laid out within British Standard *BS 5837: 2012 "Trees in relation to design, demolition and construction – Recommendations* (BS) with regards to a planning application being made at 71 Goldhurst Terrace, NW6 3HA.

2 Authorship

2.1 The author is a chartered arboriculturist and chartered environmentalist. He holds the Royal Forestry Society's Professional Diploma in Arboriculture, is a fellow member of the Arboricultural Association and a registered consultant with the Institute of Chartered Foresters. The findings in this report are reached through site observations and conclusions are made in light of the author's experience. Details are available upon request or at www.hallwoodassociates.com.

3 Provided Documents

3.1 The author was provided with copies of the following plan(s):

I. Existing site layout
II. Proposed layout

4 Scope of Survey

4.1 This report and all plans appended to it have been formulated using guidance given in the British Standard 5837: 2012 'Trees in relation to design, demolition and construction – Recommendations'.

4.2 The tree survey was carried out independently, as far as possible, of the proposed new layout, as recommended in the British Standard.

4.3 The survey contains details of the size, condition and retention category of each tree which may be affected by the proposed development.

4.4 The retention category is derived from the British Standard which allows arboriculturists to place trees in certain bands so that impacts can be appropriately quantified and managed; broadly defined as follows:

- A Category - High quality and value - such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested);
- B Category - Moderate quality and value - those in such a condition as to make a significant contribution (a minimum of 20 years is suggested);

- C Category - low quality and value – currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested).
- U Category - in such a condition that any existing value would be lost within 10 years and which should, in the current context be removed for reasons of sound Arboricultural management.

4.5 Tree positions have been taken from, or estimated from the provided plans. It would be prudent to confirm positions if it could affect the proposed construction.

5 Limitations

5.1 The potential effect of development on trees, whether statutorily protected (e.g. by 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. HWA have not checked whether trees on site are statutorily protected and you **must** carry out a statutory tree protection check if you intend to undertake any works prior to formal planning consent being issued.

5.2 Comments relating to non arboricultural matters may be made throughout this report. Making comments on such matters is within the normal remit of our instructions and the range of the author's experience. Any opinion thus expressed should be deemed as provisional and confirmation sought from an appropriately qualified professional.

5.3 The statements made in this report do not take account of the effects of extremes of climate, vandalism or accident, whether physical, chemical or fire. Hallwood Associates Limited cannot therefore accept any liability in connection with these factors, nor where prescribed work is not carried out in a correct and professional manner in accordance with current good practice. The authority of this report ceases at any stated time limit within it, or if none stated after two years from the date of the survey or when any site conditions change, or pruning or other works unspecified in the report are carried out to, or affecting, the subject tree(s), whichever is the sooner.

5.4 All rights in this report are reserved. Its content and format are for the exclusive use of the addressee in dealing with this site. It may not be sold, lent, hired out or divulged to any third party not directly involved in this site without the written consent of Hallwood Associates Limited.

5.5 European legislation and UK statutes such as the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 and the Conservation of Habitats and Species Regulations 2010 (as amended) provide statutory protection to birds, bats and other species that inhabit trees. These could impose significant constraints on the use and

timing of site access in addition to any of the tree matters detailed in this report. These issues are beyond the scope of this report and have therefore not been considered.

6 Methodology

6.1 Each tree was surveyed and given a number corresponding to the provided plan(s) found at Appendix B. For each group or individual information was collected as recommended at 4.4.2.5 of BS 5837. The survey was preliminary in nature and did not involve aerial or detailed inspection. This data is held within the tree schedule which can be found at Appendix A.

6.2 BS5837 recommends that trees within categories A-C (where A is highest quality) are a material consideration in the development process. However, it should be noted that young trees with a stem diameter less than 150mm may be considered for relocation. Category U trees are those that will not be expected to exist for long enough to justify their consideration in the planning process. The A-C categories are combined with the numbers 1, 2 or 3. These numbers signify whether the justification for the category was based on arboricultural, landscape or cultural/conservation values respectively. The tree categories are illustrated on the plans with colour coding. Category A trees are light green, category B are mid blue, category C are grey and category U are dark red.

6.3 Where category U trees are notable for their conservation, heritage or landscape value, even though only for the short term, they may be upgraded, although they might be suitable for retention only where issues concerning their safety can be appropriately managed.

6.4 Section 4.6 of BS5837 recommends that the trunk diameter measurement for each tree is used to calculate the root protection area (RPA), which can then be interpreted to identify the design constraints and, once a layout has been developed, the Construction Exclusion Zone (CEZ) to be protected by barriers (tree protection plan (TPP)).

6.5 Following inspection and grading of the trees, the information listed in Appendix A is used to provide constraints guidance to the project architect based on the locations of the best trees. All U trees are ignored as they not of good enough quality to be considered as a material constraint on development.

6.6 The enclosed tree protection plan (TPP) shows the trees recommended for retention, their relevant RPA and provisional positions for protective fencing and ground protection. The position of the protective fencing is adjusted by estimating the likely root morphology. Root morphology will be influenced by the ground conditions; roots will proliferate where soil conditions are favourable and less so where the ground conditions are poor e.g. Buildings and metalled roads with deep foundations will inhibit root growth into the area.

Part One: Introduction

7 The Site

7.1 The site, located at Ordnance Survey Grid Reference TQ262843 was visited by Dominic Poston on 09 May 2019 and comprises an existing residential terrace property with associated garden.

7.2 The tree stock on site consists primarily of one mature common ash located on the southern boundary and within the ownership of the neighbouring property.

Part Two
Arboricultural Impact Assessment

This arboricultural impact assessment has taken account of all the recommendations set out in BS 5837 section 5.4, as reproduced below:

5.4 Arboricultural impact assessment

5.4.1 The project arboriculturist should use the information detailed in **5.2** and **5.3** to prepare an arboricultural impact assessment that evaluates the direct and indirect effects of the proposed design and where necessary recommends mitigation.

5.4.2 The assessment should take account of the effects of any tree loss required to implement the design, and any potentially damaging activities proposed in the vicinity of retained trees. Such activities might include the removal of existing structures and hard surfacing, the installation of new hard surfacing, the installation of services, and the location and dimensions of all proposed excavations or changes in ground level, including any that might arise from the implementation of the recommended mitigation measures. In addition to the impact of the permanent works, account should be taken of the buildability of the scheme in terms of access, adequate working space and provision for the storage of materials, including topsoil.

NOTE Scaled cross-sections and other drawings might be required to demonstrate the feasibility of the proposals (see Annex B).

5.4.3 As well as an evaluation of the extent of the impact on existing trees, the arboricultural impact assessment should include:

a) the tree survey (see **4.4**);

b) trees selected for retention, clearly identified (e.g. by number) and marked on a plan with a continuous outline;

c) trees to be removed, also clearly identified (e.g. by number) and marked on a plan with a dashed outline or similar;

d) trees to be pruned, including any access facilitation pruning, also clearly identified and labelled or listed as appropriate;

e) areas designated for structural landscaping that need to be protected from construction operations in order to prevent the soil structure being damaged;

f) evaluation of impact of proposed tree losses;

g) evaluation of tree constraints (see **5.2**) and draft tree protection plan (see **5.5**);

h) issues to be addressed by an arboricultural method statement (see **6.1**), where necessary in conjunction with input from other specialists.

Part Two: Impact Assessment

8 The Proposal

8.1 The proposal is to re-model and construct a basement extension.

9 Arboricultural Features

9.1 There is 1 (one) tree which have been categorised B.

9.2 A schedule of tree condition and category of retention (see 4.4 above) is attached at appendix A.

10 Detailed Impact Assessment

10.1 The proposed developments impact upon the trees has been assessed according to RPA encroachment and disturbance. All trees affected and the proposed mitigation is identified in Table 1 below:

Important Trees		Non-Important Trees	Impact	Reason	Mitigation
A	B	C			
-	-	-	Trees to be removed	Building construction and/or proximity	N/A
-	-	-	Trees to be pruned	To make space for development	N/A
-	-	-	RPA disturbance	Removal or installation of surfaces/ structures/ landscaping	N/A

Table 1: Arboricultural Implications

10.1 Although the proposed works are outside of the calculated RPA for T1. Construction activity is likely to be required and therefore appropriate precautionary measures are required as detailed within the preliminary method statement at Part 3.

11 Protection of Retained Trees

11.1 The successful retention of trees depends on the quality of protective measures and the administrative procedures to ensure those protective measures remain in place throughout development. An effective way of achieving this is by way of a detailed Arboricultural Method Statement (AMS), and Tree Protection Plan (TPP) which can be specifically referred to in a

planning condition. A preliminary (heads of Terms) AMS for this development is located at Part 3.

12 Mitigation

12.1 Given that no trees are impacted, it is not considered appropriate or necessary to propose mitigation planting.

13 Tree Works Schedule

13.1 No tree works are identified as required in order to facilitate the development as proposed.

Part Three (Preliminary) Arboricultural Method Statement

This arboricultural method statement has taken account of the recommendations set out in section 6.1 of BS 5837, as reproduced below:

> **6.1 Arboricultural method statement**
>
> **6.1.1** A precautionary approach towards tree protection should be adopted and any operations, including access, proposed within the RPA (or crown spread where this is greater) should be described within an arboricultural method statement, in order to demonstrate that the operations can be undertaken with minimal risk of adverse impact on trees to be retained.
>
> **6.1.2** The arboricultural method statement should be appropriate to the proposals and might typically address some or all of the following, incorporating relevant information from other specialists as required:
>
> a) removal of existing structures and hard surfacing;
>
> b) installation of temporary ground protection (see **6.2.3**);
>
> c) excavations and the requirement for specialized trenchless techniques (see **7.7.2**);
>
> d) installation of new hard surfacing – materials, design constraints and implications for levels;
>
> e) specialist foundations – installation techniques and effect on finished floor levels and overall height;
>
> f) retaining structures to facilitate changes in ground levels;
>
> g) preparatory works for new landscaping;
>
> h) auditable/audited system of arboricultural site monitoring, including a schedule of specific site events requiring input or supervision.
>
> **6.1.3** The arboricultural method statement should also include a list of contact details for the relevant parties.

14 General Principals

14.1 An arboricultural consultant will be appointed by the developer to advise on tree management for the site and to attend:

- The pre-commencement meeting before any works start;
- Regular supervision visits, every two to four weeks, or as otherwise agreed; and
- As needed to oversee any specific works which could affect trees.

Additionally, the consultant will have a supervisory role in the following operations:

- Site preparation, including tree works and any demolition requirements
- Installation, maintenance and removal of tree protection.

14.2 To ensure that the Local Planning Authority Tree Officer has an opportunity to visit the site, the Local Authority is to be given notice in writing 5 full working days prior to the date of commencement of development to check all physical tree protection.

14.3 Equally as important as the physical measures of tree protection are the links of communication. The section below should include the details of the relevant parties and individuals that are important in the process of tree preservation at this development site. Such details should be retained by all relevant parties and available on site at all times. It is an undertaking that the relevant parties are advised of any changes in personnel or contractor during the development process. The Contact details are to be updated prior to commencement of any works in connection with the planning permission.

Contractor: TBA

LPA Tree Officer: TBA

Project Manager: TBA

Arboricultural Consultant: Dominic Poston, Hallwood Associates (07946 938906)

15 Sequence of Events

15.1 ***Before demolitions, soil stripping and construction work starts (including bringing of plant and materials on site):***

- **A pre-commencement site meting** shall be held prior to the commencement of any works associated with the proposed development. This is required in order for the Local Planning Authority, the retained Arboricultural Consultant and construction personnel to agree all approved site processes. This meeting could be used to formally agree the methods of work, position of site offices, material storage, compounds, parking and tree protection measures prior to commencement of the development and the associated clearance work. If an LPA representative is unavailable, the retained arboricultural consultant will inform the LPA in writing of the details of the meeting.

15.2 ***After tree works but before demolition, soil stripping and construction work starts (including bringing of plant and materials onto site):***

- **Tree protection** will be installed in accordance with the recommendations in BS5837:2012 after tree works have been carried out but before any construction or demolition has commenced.

15.3 ***During construction:***

- **Tree protection will not be moved or altered** without written consent from the Local Planning Authorities tree officer and the area within (Construction Exclusion Zone (CEZ)) will be considered sacrosanct.

- **Arboricultural supervision** will be provided as and when necessary throughout development process.

15.4 ***Post construction works and following removal of all plant and materials from site:***

- **Remove tree protection** to facilitate landscaping. This will only be permitted once construction work is complete; following approval from the Local planning authorities' tree officer.

Part Three: Preliminary Method Statement

16 Tree Surgery Works

16.1 Should a requirement for tree works become apparent during the construction process; written consent will be required from the LPA prior to these additional works being undertaken.

17 Site Monitoring and Supervision

17.1 Once the site is active, the arboricultural consultant will visit at an interval agreed at the pre-commencement meeting. This would normally be between two to four weeks for general supervision but could be longer if agreed between the parties.

17.2 The supervision arrangement will be sufficiently flexible to allow the supervision of all sensitive works as they occur. The arboricultural consultant's initial role is to liaise with the developer and the LPA to ensure protective measures are fit for purpose and in place before works commence. That role will switch to compliance monitoring when development begins.

17.3 All supervisory visits will be formally confirmed in writing and circulated to all relevant parties, including the LPA. The purpose of these written records is to firstly provide proof of compliance that will allow the developer to robustly demonstrate adherence to best practice in the event of disputes, and secondly to help the LPA efficiently discharge the relevant planning conditions.

17.4 Results will be recorded and available for scrutiny by the LPA and Developer. Any defects requiring remediation or rectification shall be notified to the site foreman/manager and the client.

17.5 Should damage occur to any of the retained trees for whatever reason, the damage should be reported to the site foreman/manager immediately. The site foreman/manager will then report to the retained arboricultural consultant to enable remediation to be implemented as necessary and agreed with the LPA.

17.6 The LPA Tree Officer (or appropriate representative) will have agreed access to the site, and will report on any problem areas directly to the developer's retained arboriculturist, who will then visit the site and make recommendations to the developer on how best to rectify the situation and ensure the implementation.

17.7 Upon completion of all development works the retained Arboricultural Consultant, the client and a representative from the LPA will meet on site to discuss any remedial works required.

18 Tree Protection

18.1 The existing boundary fence will act as tree protection fencing in this instance with the remainder of the RPA being protected with ground protection. This will be installed at the locations shown on the tree protection plan.

Once the tree protection is in place they must remain *in-situ* throughout the following list:

- Contractor occupancy
- Plant and Materials delivery
- Construction works
- Installation of porous surfacing
- Utility installation
- Completion of development
- Landscaping

19 Demolition

19.1 Demolition of existing surface structures will be carried out so as to prevent damage to existing retained trees.

19.2 Demolition of the structures in close proximity to the retained trees must be done with due care and attention, in order to adequately respect overhanging canopies of all retained trees. To this end, the following rules will apply:

- Site personnel are to undergo an induction session prior to being allowed to work on site. The induction will introduce the contractors to the requirements of the Protection Method Statement. A copy of the Method Statement will be made available as a point of reference in respect of tree protection requirements. In addition, a copy of the Tree Protection Plan will be provided or pinned up in the site hut. During the induction, trees which are to be retained and protected will be highlighted to the demolition personnel and they will be physically shown which trees are to be protected on site. In this way, it is hoped that unnecessary damage, by root disturbance and collision of machinery booms and operating arms with tree crowns can be avoided.

- All walls, foundations and basements are to be pulled in on themselves towards the centre of the site and away from retained trees. This will be done in a direction away from the tree protective barriers and all large machinery to be operated at least 2.5-3.0 metres outside the line of the tree protective fence line from where it is erected for the site preparation works.

- Any machinery used for this purpose is to stand and operate over existing hard surfaces wherever possible, but always outside the CEZ as defined by the protective barriers.

- Lightweight structures will be demolished and removed by hand. Work will be carried out from existing hard surface. If the structure is not served by existing hard surface ground protection will be laid in accordance with the approved tree protection plan.

- Where dust is created and deposited on adjacent retained trees, provision will be made to wash down the crowns of retained trees weekly to prevent excessive dust affecting the photosynthetic capacity of retained trees.

20 Existing Services

20.1 No Information has been provided on the location and size of existing services. However, existing services within the RPA and CEZ of retained trees will not be chased out, but cut at the edge of any structure and left *in- situ.*

20.2 Cabling will only be recovered from beneath a CEZ where it is located in ducting, and can be removed by winching from an existing service manhole beyond the CEZ.

20.3 Service pipes and ducts, where they are located within the CEZ or RPA of retained trees, will be made redundant either by pipe bursting or by filling with an inert material such a foamed concrete.

21 Avoiding Damage to Stems and Branches

21.1 Care shall be taken when planning site operations, to ensure that wide or tall loads, or plant with booms, jibs and counterweights can operate without coming into contact with retained trees. Such contact could result in serious damage to them, and might make their safe retention impossible. Consequently, any transit or traverse of plant in close proximity to trees, will be conducted under the supervision of a banksman, in order to ensure adequate clearance from trees is maintained at all times.

22 Siting of Temporary Offices, Toilets and Material Storage Compounds

22.1 The locations shall be agreed in writing with the LPA prior to the commencement of works on site, and will remain in only those agreed locations throughout the construction phases. If an alternative location is required, this must be agreed in writing with the LPA. This will also include the delivery; storage and movement of all essential facilities, as well as aspects such as temporary contractor vehicle parking and site location of chemical mixing (e.g. concrete). All such locations will be outside of the RPAs, and avoid areas where 'run off' of chemicals may flow into RPAs.

22.2 ***Material Storage***

This shall be accommodated outside of the RPA, particularly to avoid harmful spillages of fuel, or phytotoxic substances that may damage the health of retained trees.

23 General Considerations Within and Outside the Root Protection Area

23.1 Inside the RPA formed by the protective barrier and ground protection measures, the following prohibitions shall apply:

- No construction activity will occur within the CEZ unless otherwise stated in this report, or agreed in writing with the LPA prior to the specific activity taking place.

23.2 In addition to the above, further precautions are necessary adjacent to trees outside the CEZ:

- Materials, which will contaminate the soil e.g. concrete mixing, diesel oil and vehicle washings, shall not be discharged within 10 metres of the tree stem. This should take into consideration the topography of the site and slopes, to avoid materials such as concrete washings running towards trees.
- Fires shall not be lit in a position where their flames can extend to within 5 metres of foliage, branches or trunk. This will depend on the size of the fire and the wind direction.
- Notice boards, telephone cables or other services shall not be attached to any part of the tree.

24 Utility Service Connections

24.1 Details of service location proposals have not been forwarded to HWA at the time of compiling this assessment. It is however assumed, given the location of the trees, that services will be installed outside the root protection areas of retained trees, and connected to the existing where practicable, this will avoid disturbance of tree roots and ensure their healthy retention.

24.2 Where such techniques are not practical or cost effective then further advice will be sought as to appropriate methodologies for the installation of new services.

25 Soft Landscaping Works

25.1 Any soft landscaping works within the development area will be in accordance with an approved landscape plan, and any specification of such works approved by the local planning authority.

25.2 HWA has not been provided with the final landscaping proposals, however all landscaping will accord with following requirements:

- The construction exclusion zone will remain off limits for all site plant and machinery unless fit for purpose ground protection is installed. Pedestrian traffic must be kept to an absolute minimum only permitted for the ground preparation and landscape installation works
- The landscaping works will need to be undertaken in such a way as to avoid level changes, deep digging or mechanical rotovating. Excavation of planting pits with the RPA can cause serious harm the root system of retained trees. Planting pits within the RPA of retained trees will be excavated by hand to avoid roots greater than 25mm and masses of smaller roots.
- If any planting pits are required within the CEZ of retained trees, these will be dug by hand and with care avoiding roots greater than 25mm diameter or masses of smaller roots.

25.3 Installation of turf within the CEZ will require that:

- In all cases, existing vegetation will be removed to ground level by hand following treatment with a suitable systemic herbicide which is not toxic to existing retained trees. This prevents the build-up of methane formed as part of the composition process.

- Stumps will be ground out to 300mm below ground level and resulting holes filled with sharp horticultural sand to provide a stable base for laying of the new turf

25.4 Any surface mulch will consist of well-composted material such as bark or wood chips. This is necessary to avoid potential nutrient loss from the soil, such as Nitrogen, as the mulch breaks down, as nutrient loss can be detrimental to the health and longevity of retained trees.

25.5 All work specified in the approved landscaping scheme shall be carried out before the end of the first planting and seeding season, following the occupation of any completed part of the development.

25.6 Any existing tree shown to be retained, or trees and shrubs to be planted as part of the landscaping scheme that are removed, die, become severely damaged beyond recovery or diseased within 2-5 years of the completion of the development (dependent on planning conditions), shall be replaced with trees or shrubs of appropriate size and species that complement the existing tree stock, within the next planting season. Where the trees in question are protected by planning controls, the local planning authority should be informed and necessary arrangements made prior to such work.

26 Removal of Protective Barriers

26.1 When the development phase is complete, all drainage and service runs are in place, all site machinery has been removed and any landscaping for the principal area of the site has been implemented, the protective barriers will be dismantled.

26.2 This fence dismantling must be undertaken with great care, and will need to be supervised to avoid heavy machinery being used within the root protection areas. Hoarding, scaffolding and other barrier materials will need to be removed from site immediately.

Appendices

APPENDIX A – Tree Survey Schedule

APPENDIX B – Plans

Appendix A
TREE SURVEY SCHEDULE

Appendices

TREE SURVEY KEY							
		Age Class		Definition	**Retention Category**		
Stem Dia	= Stem diameter (mm) at 1.5m above ground level	**Y**	Young	1st 1/3rd of life expectancy	Category (BS 5837)		**Note:**
C.C.	= Height of crown clearance above ground level	**SM**	Early Mature	2nd 1/3rd of life expectancy	**A**	High Quality & Value	**'Tree Works' are based upon our assessment of the proposal and the original site inspection.**
U.L.E.	= Useful Life Expectancy of the tree in years	**M**	Mature	Final 1/3rd of life expectancy	**B**	Moderate quality & value	
Stems	No of stems emanating below 1.5m above ground level	**OM**	Over mature	Beyond life expectancy & in natural decline	**C**	Low quality & value	
(Ref)	Number and type of feature (T – tree, H – hedge, G – group, S - stump)	**V**	Veteran	Great age & poss. high conservation value	**U**	No quality & value - Remove	

TREE SURVEY SCHEDULE (TABLE 3)

(Ref) No.	Species	Height (m)	Stem diameter (mm)	No of stems	Branch spread N (m)	Branch spread E (m)	Branch spread S (m)	Branch spread W (m)	Canopy Height (m)	Life Stage	Observations	Tree Works	ULE (yrs)	Retention category
T1	Common Ash	16	710	1	7	7	6	4	5	M	Previous heavy reduction. 3rd party tree. Moderate deadwood and apical dieback throughout.	**None**	20+	B1

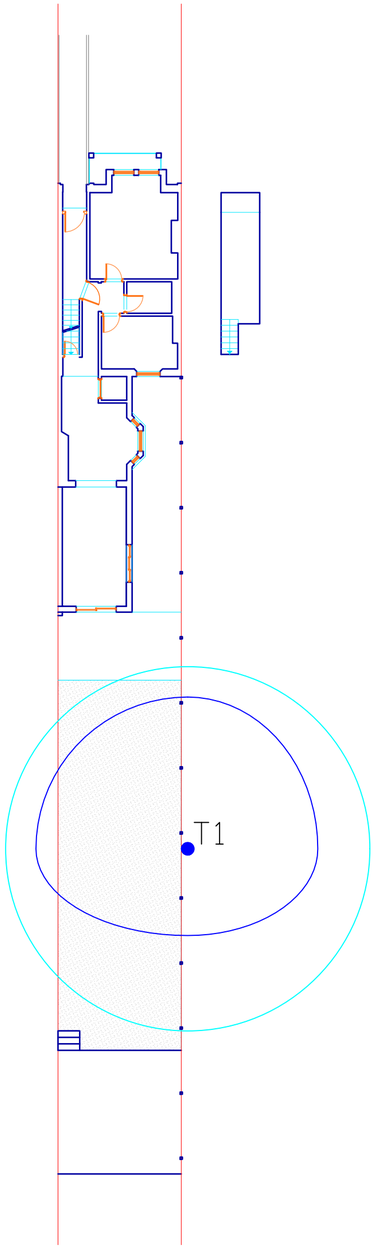
APPENDIX B
Plans

Figure 1: Tree Survey and Protection Plan

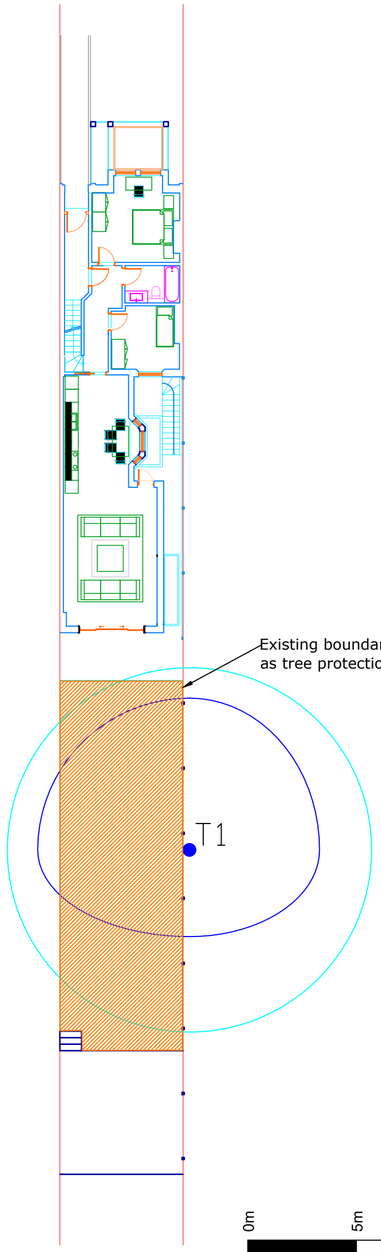
Appendices

Figure 1: Plans

Existing Site Layout



Proposed Site Layout



0m 5m 10m 20m

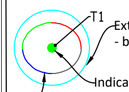
Do not scale from this Drawing.
This Bar is for Approximate Scaling Only.

North

Notes:

This drawing is to be read in conjunction with all other relevant technical information, statutory approvals, specifications and 3rd party information. Do not scale from this drawing. Use only dimensions provided. All dimensions and levels to be checked on site and all discrepancies must be reported to the drawings author immediately. This drawing was based upon drawings provided by the client. The original of this drawing was produced in colour and monochrome versions cannot be relied upon. Responsibility cannot be accepted for alteration and/or deviation from this design without the prior acknowledgement of the drawings author. Any commercial decisions relating to this information must make due allowance for dimensional and area variation resulting from the design development and construction processes as well as the requirements of statutory authorities. This drawing is to be used only for the purposes indicated. It is the responsibility of the contractor to ensure any necessary consents are in place.

LEGEND:



Extent of root protection area (RPA) - below ground constraint

Indicative stem location and BS 5837 value categorisation

Extent of existing crown spread and BS 5837 value categorisation - above ground constraint

BS 5837 value categorisation colour code:
Green - High value
Blue - Moderate value
Grey - Low value
Red - No value

Area requiring ground protection

Rev.	Description.	Date.

Client: Jagdish Parihar

Job: 71 Goldhurst Terrace

Drawing Title: TREE SURVEY/PROTECTION PLAN 1 of 1

Client Logo:

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Date: 13.05.19	Drawn By: DAP
Scale: 1:200 @ A2	Checked By: GLP

Drawing Number: HWA10216_TS/PP

Rev. .