

Arboricultural Report

BS5837 Tree Survey

Tree Work Proposals

Tree Protection Requirements

Site
553-563 High Road
North Finchley
Finchley
N12 OBA

Client Granville Road Finchley Ltd

by
Curtis Barkel
RCArborA, F.Arbor.A, Prof Dip (RFS)

Ref: SA/1719/20 Date: 24 July 2020





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Site 553-563 High Road, North Finchley, Finchley. N12 OBA.

Survey Date 22 July 2020

Report Date 24 July 2020

Surveyed by Curtis Barkel

1.0 Instructions

1.1 Sylvanarb has received instructions to carry out a BS5837 tree survey and provide details of required tree work and a tree protection specification in respect of the proposed development as detailed on the Axis Architecture, Proposed Ground and First Floor Plans, Ref: 27556 A(01)04 & 27556 A(01)05.

2.0 Documents Supplied

- Topographical Survey, No Ref.
- Axis Architecture, Proposed Ground and First Floor Plans, Ref: 27556 A(01)04 & 27556 A(01)05.

3.0 Aim of Report

- 3.1 To survey existing trees in accordance with BS5837 2012: *Trees in Relation to Design, Demolition and Construction* (BS5837), in order to assess the condition and quality of trees located on/adjacent to the site
- 3.2 To advise on tree retention/removal and provide a specification for tree works required to accommodate the proposed development.
- 3.3 To provide a specification for tree protection measures required to protect trees identified for retention during development works.

4.0 Scope of Report

- 4.1 The survey has been carried out in accordance with British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction* (BS5837).
- 4.2 The trees have been inspected considering the current and proposed site use. The assessment categories have been allocated on the condition and merits of the individual tree irrespective of the proposed development.
- 4.3 A detailed condition survey and hazard assessment of the subject trees has not been carried out, where obvious faults have been noted a further detailed condition assessment may be recommended in the tree survey comments column (see Appendix A).
- 4.4 The 'Required Tree Works' set out in Section 12.0 detail the tree works required to accommodate the proposal.
- 4.5 Prior to tree work being carried out the Local Planning Authority is to be consulted to ascertain whether prior permission is required to carry out such work.
- 4.6 A tree with internal structural faults will often display associated external evidence of such faults, these would be noted in a visual tree inspection. However such signs are not apparent at all times of the year, for example pests and diseases or leaf size and condition. The following findings and recommendations have been drawn from the evidence present on the day of inspection.
- 4.7 All advice given in this report is based on the information available on the day of inspection. Should additional information not available or apparent on the day of inspection come to light, the right is reserved to modify the conclusions found within this report. This report is valid for 12 months notwithstanding change of site conditions, extremes of weather or other such overriding environmental changes.

5.0 Survey Method

- 5.1 The survey includes those trees located on and adjacent to the area of proposed works with a stem diameter greater than 75mm measured at 1.5m from ground level.
- 5.2 Subject trees have been allocated identification numbers prefixed with 'T'.
- 5.3 Where appropriate several trees growing closely together have been surveyed as groups. In such cases the group value is recognised and graded as a whole, as opposed to grading the individual members of the group. Groups are allocated identification numbers prefixed with 'G'.
- 5.4 Subject trees have been plotted on the arboricultural plans over the locations provided on the Topographical Survey. The locations of all trees are assumed to be accurate.
- 5.5 The survey was carried out with the help of the following inspection aids:

Digital Clinometer To calculate tree heightsDiameter tape To measure stem diameters

Laser measure
 To plot trees where necessary and canopy extents

5.6 Each tree was inspected from ground level noting external faults and features only. The inspection did not include an aerial crown inspection, detailed excavation of the root system or the use of internal decay detection equipment.

6.0 Planning Proposal

- 6.1 Planning permission is sought for the demolition of the existing building and the construction of six three-storey town houses with associated on-site parking.
- 6.2 The proposed layout ensures that only low value, on-site trees are to be removed; one of which is in a poor condition requiring removal irrespective of the proposed development; the others form a small group of limited visual significance.
- 6.3 The proposal presents the opportunity to remove existing buildings and impermeable hard surfacing from within the Root Protection Areas (RPA) of adjacent off-site trees, with these areas being converted to permeable paving and soft landscaping, this serving to significantly improve the rooting environment of the adjacent trees.
- 6.4 Each proposed plot is also provided with a small area of soft landscaping to the front, as well as private garden space to the rear. This combining to create a relatively large area of soft landscaping on a site that currently has none.
- 6.5 It is expected that landscaping details will be agreed with the Local Authority under conditions attached to any planning approval gained.

7.0 Primary Tree Protection Considerations

- 7.1 The majority of damage to tree root systems on development sites occurs either at the early stages of development when tree protection recommendations have not been adequately implemented, or at the final stages of development when protective measures, having been adequate throughout development, are overlooked or taken down prematurely.
- 7.2 The recommended tree protection measures detailed on the Tree Protection Plan are to be followed and maintained throughout the duration of works associated with the development of the site.
- 7.3 An individual, such as the Contract Manager, is to be identified as a point of contact for arboricultural affairs during development. This individual is to be fully aware of the arboricultural requirements on the site and is to be responsible for the monitoring and enforcement of tree protection measures.
- 7.4 The Contract Manager is to ensure that all contractors and operatives visiting the site are aware of the reason and location of tree protection measures prior to commencing any works associated with the development.

8.0 Operations Resulting in Damage to Trees

8.1 The following operations are likely to result in significant damage to trees. Damage resulting from these operations may take immediate effect resulting in the rapid death of a tree, or alternatively may result in years or even decades of gradual decline and ultimate early death.

8.2 Compaction of Soil

Whether from repeated pedestrian passage or due to just a single passing of a vehicle, soil compaction within a Root Protection Area will inevitably lead to root death and may ultimately greatly reduce the longevity of a tree.

8.3 Storage or Spillage of Toxic Materials

The following materials commonly used on development sites are toxic to trees:

- Builders Sand (due to salt content)
- Cement
- Fuels
- Tarmac

The uncontrolled storage or use of such materials on unsealed surfaces within 10 metres of trees is likely to be detrimental to their long-term health.

8.4 Excavations / Soil Grading / Lowering of Levels

Contrary to popular belief nearly all of a tree root system is located within the top 1 metre of soil, often with the majority of roots found within 600mm of the soil surface.

The Root Protection Area is the *minimum* area of protection required to retain a tree. The full root system of a tree will extend beyond this, usually to a distance at least equivalent to the height of the tree.

8.5 Raising of Levels

Roots absorb both oxygen and water from the soil and therefore develop in free-draining, aerated conditions.

Where levels are raised over tree roots the availability of oxygen is reduced and moisture filtration hindered, tree roots will subsequently be starved of oxygen and water leading to root death, potential disease and reduced longevity.

9.0 Tree Protection Measures

- 9.1 No trees are to be retained within the application site; the existing trees on the site that have been identified for removal are either in a poor condition or of low aesthetic value.
- 9.2 As such, no physical tree protection measures are required on the site.
- 9.3 However, the Root Protection Areas of off-site trees extend onto the site, into areas of existing hard surfacing or within the footprint of the existing building.
- 9.4 Precautions are therefore required to ensure any roots that have established within the site are not damaged during the removal of the hard surfacing and floor slabs.
- 9.5 The existing impermeable concrete within the specified RPA's is to be retained for the duration of the construction phase to serve as ground protection during works.
- 9.6 Temporary Ground Protection/Replacement Surfacing Specification
- 9.6.1 Temporary Ground Protection (TGP) is required to protect the soil profile where contractor access is required within the unfenced Root Protection Areas (RPA) of trees T1 and T2.
- 9.6.2 The existing building floor slabs and concrete hard surfacing within the RPA's are to be retained as ground protection during the construction phase. The extent of the area to be retained is shown on the Tree Protection Plan at Appendix C.
- 9.6.3 Upon completion of the main superstructure works the retained areas of hard surfacing are to be removed and re-surfaced within the depth of the existing sub-base.
- 9.6.4 The replacement hard surfacing is to be constructed using a fully permeable sub-base and finished with a permeable surface, such as resin-bound gravel or permeable block paving (i.e. Formpave 'Aquaflow').
- 9.6.5 No excavations of underlying soils are to be carried out within the protected area as defined on the Tree Protection Plan without first seeking further arboricultural advice.
- 9.6.6 It is unlikely that tree roots will be encountered during the removal of the existing surface; however, should tree roots over 25mm in diameter be encountered during excavations, advice from the arboricultural advisor or LPA tree officer is to be sought prior to severing any such roots and continuing with works.

10.0 Toxic Materials, Fuels and Cement

- 10.1 No materials that are likely to have an adverse effect on tree health such as oil, fuels, bitumen or cement will be stored or discharged on unsealed surfaces within 10 metres of the trunk of a retained tree. Consideration for the slope of the ground is to be considered when discharging or storing materials that are potentially harmful to trees.
- 10.2 The location of material/fuel storage areas and cement mixing stations are to be identified on areas of impermeable hard surfacing at the point of site set up.
- 10.3 The Contract Manager is to ensure that the use of toxic materials is confined to the these locations. Should the storage or use of such materials need to be relocated as the project progresses the Site Manager is to consult and agree new locations with the Project Arboriculturist.

11.0 Service / Drainage Installation (and all other excavations)

- 11.1 Other than approved development, no trenching or excavations are to be carried out within the specified Root Protection Areas shown on the Tree Protection Plan (Appendix C), without prior arboricultural consultation.
- 11.2 It is imperative that any such works proposed within the Root Protection Areas of retained trees be first approved by the Project Arboriculturist. Any root damage associated with trenching operations may result in trees being left in an unsafe condition.
- 11.3 Service/drainage runs will ideally avoid Root Protection Areas and where possible be laid within one combined trench.
- 11.4 Particular care is required to ensure that all tree roots larger than 25mm diameter encountered during excavations are not severed or damaged. Should roots of 25mm or larger be encountered any further excavations are to cease and advice is to be sought from the arboricultural advisor or LPA tree officer prior to continuing.

12.0 Required Tree Works

12.1 Table 1 provides details of the tree work required to accommodate the proposal.

Table 1: Proposed Tree Work

Tree No.	Schedule of Works					
G1, T3	Fell and grind/grub-out stumps.					
T2, T4	Prune back overhang to site boundary.					

- 12.2 The specified tree works are considered to be required to accommodate the proposed development. It will be assumed, unless the LPA informs otherwise, that the tree works detailed at Table 1 may be carried out under the planning approval without any additional notification of intent or application for tree works.
- 12.3 The tree work is to be carried out prior to the commencement of any demolition/ development operations on the site.
- 12.4 All tree work is to be carried out by a competent arborist in accordance with the British Standard for tree work BS3998: 2010 'Recommendations for Tree Work'.

Appendix A

Tree Survey
Data
&
Plan

Tree Survey Key

Tree No. Tree Number - cross-referenced with tree numbers shown on Tree Survey

Plan.

Hgt (m) Height - estimated in metres.

Dia. at Stem Diameter - in millimetres taken at 1.5m above highest adjacent

1.5m (mm) ground level

No. of Stems Number of main stems arising from below 1.5m above ground level.

M = Multi-stemmed tree.

Given as a radial measurement in metres from the centre of the stem to Crown Spread N,E,S,W(m)

the extremity of the canopy at the four main compass points NESW.

Crown Cl/nce (m) Crown Clearance - Height in metres of crown above adjacent ground level.

Age Class Υ Young Staked or recently established tree

at the fast growing early stage of

establishment.

An established tree at a stage of SM Semi mature

rapid growth with increasing future

growth potential

Μ Mature A tree that is at a stage of constant

growth nearing ultimate canopy

size.

٧ A mature tree, often of great Veteran

> ecological or heritage importance, that has reached a stage of natural

decline.

Physiological Condition Provides some evidence of the general well being of the tree.

Assessed by comparison of growth characteristics with similar

species in the locality and/or from personal experience.

Given in four classifications:

G Good

F Fair

Ρ Poor

D Dead

Preliminary Mgt

Recommendations for tree work to bring the trees to an acceptable and safe standard in context with the current site use.

Category

Category of quality assessment allocated to a tree derived from an individuals potential contribution to a site: considering tree health, condition, age and value. Full description given on Table 1 of BS5837:2012 'Trees in Relation to Demolition, Design and Construction'. Trees are colour coded on the attached Tree Survey plan.

Given in four categories:

A - Green - Trees of high quality and value (likely to contribute a further 40+ years)

B - Blue - Trees of moderate quality and value (likely to contribute a further 20-40 years)

C - Grey - Trees of low quality and value (likely to contribute a further 10-20 years)

U-Red

 Trees which may require removal on health and safety grounds, be in decline, infected by significant pathogens or, due to their current condition would lose their existing value within 10 years.

A provisional category may be allocated pending further advised inspection/tree work.

RPD (m)

Root Protection Distance - The distance in metres of the radius of a circle depicting the root protection area required for an individual tree.

RPA (m)

Root Protection Area – The total area of ground to be protected around an individual tree.

(p)

Provisional quality assessment category – the highest expected category is allocated to the tree based on an incomplete preliminary visual inspection due to limited access ie. ivy clad, basal growth, dense undergrowth or offsite tree.

(e)

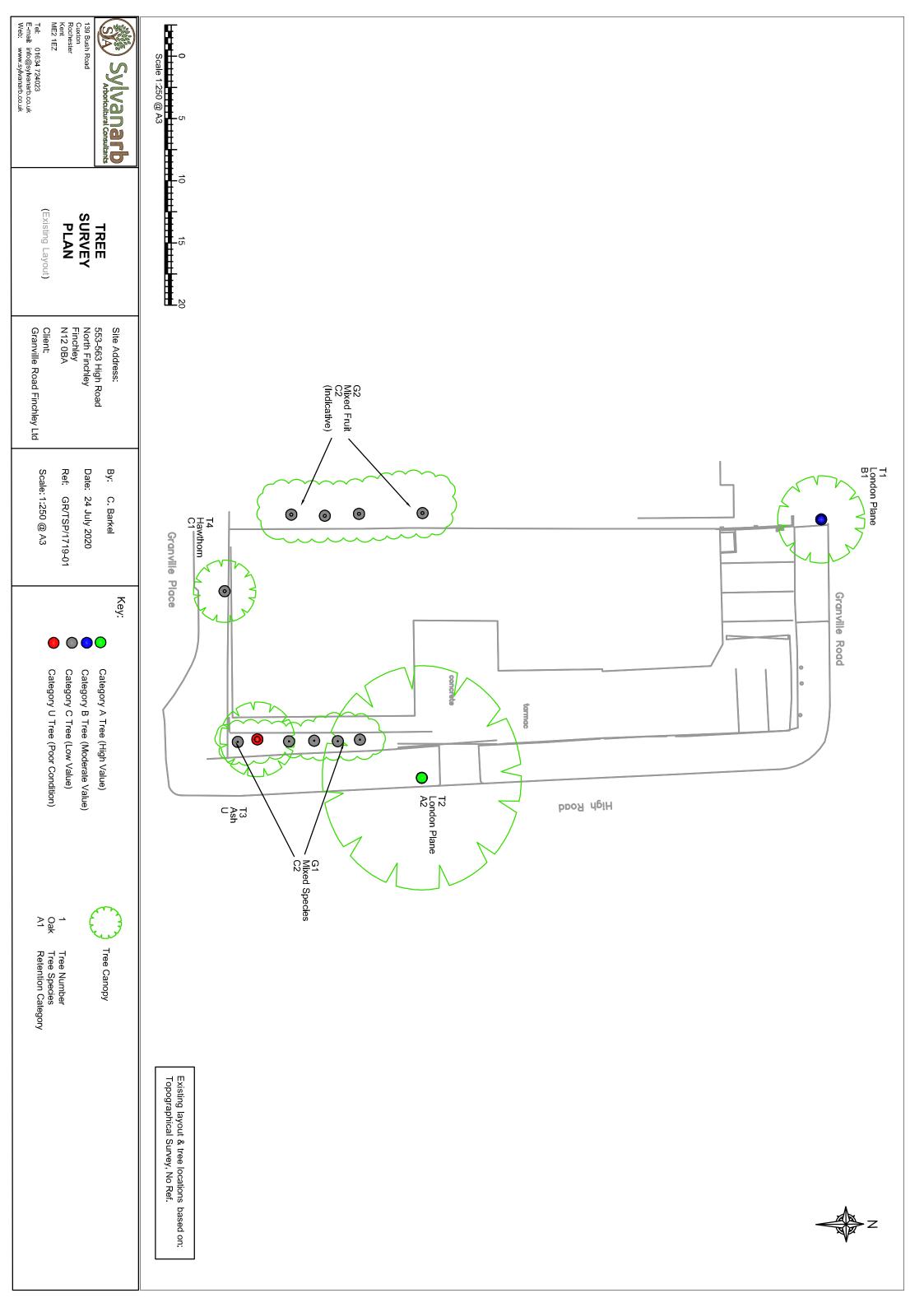
Estimated figure due to obstruction such as ivy or off-site tree.

Tree Survey Data

		Tree Survey Bata																	
TREE NO	SPECIES	(ш) НЕІСНТ	DIAMETER AT 1.5m or arf (mm)	NO. OF STEMS	CROWN SPREAD N,E,S,W (m)			CROWN CL/NCE (m)	AGE CLASS	PHYSIOLOGICAL CONDITION	STRUCTURAL CONDITION	PRELIMINARY MGT RECOMMENDATIONS	ESTIMATED REMAINING CONTRIBUTION	CATEGORY	RPD (m)	RPA (m2)	NOTES		
T1	London Plane	10	650	1	3.5	3.5	3.5	3.5	5	Mature	Good	Good		>40	B1	7.8	191	Street tree, maintained as pollard at 6m.	
T2	London Plane	14	850	1	8	9	8	9	3	Mature	Good	Good		>40	A2	10.2	327	Street tree, historically pollarded at 6m.	
Т3	Ash	11	450e	3	3	3	3	3	4	Mature	Poor	Poor	Remove in the interests of safety	< 10	U	5.4	92	Off-site, extensive dieback, ivy clad, high risk of failure.	
G1	Mixed Species	4	<100 e	1	2	2	2	2	0	Young/ Semi- mature	Good	Good		>40	C2	1.2	5	Off-site, self-sown mainly young Hawthorn, Ash and Elder.	
G2	Mixed Fruit	6	<250 e	1	3	2	3	3	3	Mature	Good	Good		20-40	C2	3.0	28	Offsite.	
T4	Hawthorn	5	250e	1	2.5	2.5	2.5	2.5	2	Mature	Fair	Fair		10-20	C1	3.0	28	Off-site, heavily ivy clad.	

Table 1 (BS5837:2012) - Cascade Chart for Tree Quality Assessment.

Category & Definition	Criteria (Including subcategories where appropriate)										
TREES UNSUITABLE FOR RETENTIO	N (See Note)										
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years	 Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning) Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline Trees infected with pathogens of significance to the health and/or safety of other trees nearby or very low quality trees suppressing adjacent trees of better quality NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7. 										
TREES TO BE CONSIDERED FOR RE	TENTION										
	Criteria — Subcategories										
Category & Definition	1 Mainly arboricultural values	1 Mainly arboricultural values 2 Mainly landscape values 3 Mainly cultural values including conservation									
Category A Trees of high quality With an estimated remaining life expectancy of at least 40 years	Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN							
Category B Trees of moderate quality With an estimated remaining life expectancy of at least 20 years	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality	Trees with material conservation or other cultural value	MID BLUE							
Category C Trees of low quality With an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value, and/or trees offering low or only temporary/transient landscape benefits	Trees with no material conservation or other cultural value	GREY							



Appendix B

Tree Pruning/Removal Plan

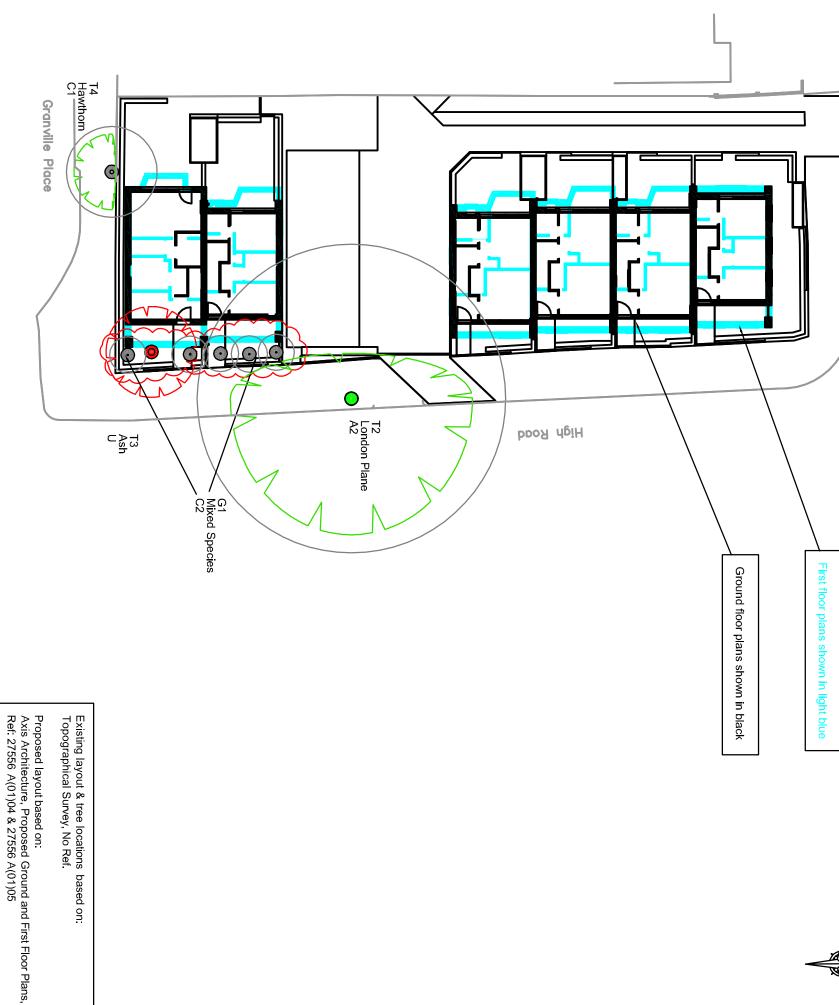
PROPOSED TREE WORK SPECIFICATION

G1, T3 - Remove

T2, T4 - Cut back overhang to site boundary

Granville Road First floor plans shown light blue





NOTE: Retained trees that do not require pruning are not shown on this plan in order to clarify required tree work.

Refer to the Tree Protection Plan for the details of retained trees.

PRUNING / REMOVAL
PLAN

(Existing / Proposed Layout)

Client: Granville Road Finchley Ltd

Scale: 1:250 @ A3

139 Bush Road Cuxton Rochester Kent ME2 1EZ

Sylvanarb Arboricultural Consultants

Tel: 01634 724023 E-mail: info@sylvanarb.co.uk Web: www.sylvanarb.co.uk

553-563 High Road North Finchley Finchley N12 0BA Site Address:

C. Barkel

Date: 24 July 2020 Ref: GR/TRP/1719-02

Key:

Category C Tree (Low Value)

Category U Tree (Poor Condition)

Category A Tree (High Value)

Category B Tree (Moderate Value)

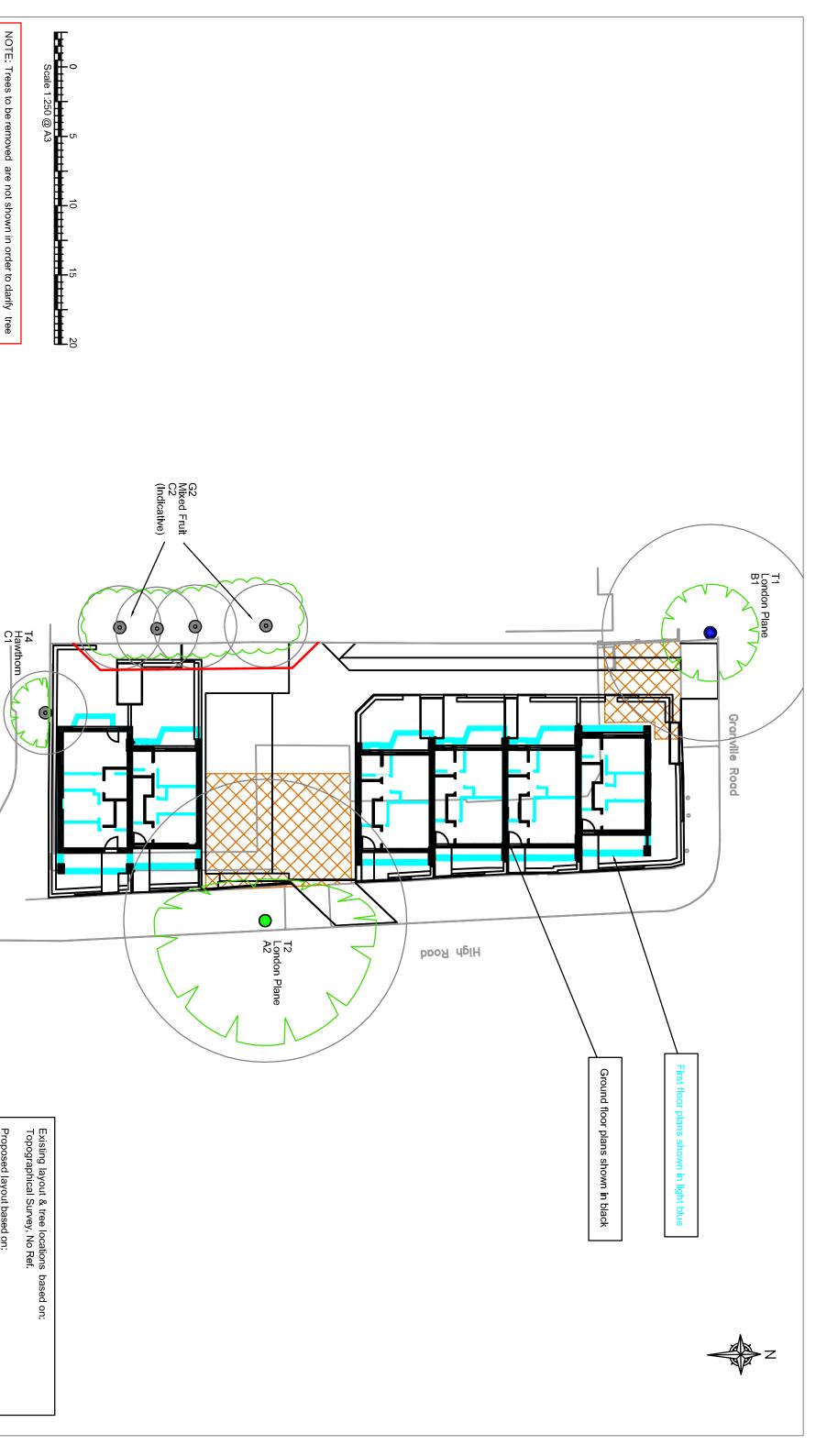
Proposed Tree Removal



Appendix C

Tree Protection Measures

- Tree Protection Plan
- Tree Protection Specification
- Tree Protection Warning Sign



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TREE PROTECTION PLAN

protection requirements.

Refer to the Tree Removal Plan for details of trees to be removed. NOTE: Trees to be removed are not shown in order to clarify tree

(Existing / Proposed Layout)

Client: Granville Road Finchley Ltd

Scale: 1.250 @ A3

Root Protection Area

Finchley N12 0BA 553-563 High Road North Finchley Site Address

> Вy Date: 24 July 2020 C Barkel

Ref: GR/TPP/1719-03

Key

Granville Place

Retained Tree

Tree Protection Fencing Braced Heras Panels (See Sylvanarb Appdx. C for specification)

Temporary Ground Protection

Axis Architecture, Proposed Ground and First Floor Plans, Ref: 27556 A(01)04 & 27556 A(01)05

Proposed layout based on:

NOTE: No roots of 25mm diameter or greater to be severed/removed during works on site. Where such roots are encountered, excavations are to cease and further arboricultural advice be sought. Existing hard surfacing & building floor slab to be retained throughout duration of main superstructure phase. To then be removed and replaced with permeable surfacing within the depth of the existing sub-base.

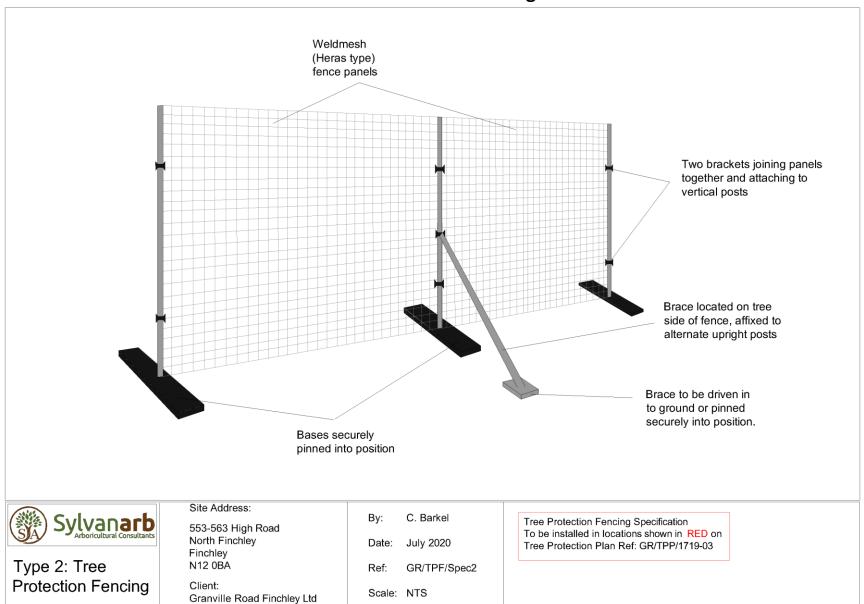
Principles of Tree Protection

- i) The majority of damage to tree root systems on development sites occurs either at the early stages of development when protection measures have not been installed promptly enough, or at the final stages of development when protective fencing, having been adequate throughout development, is taken down prematurely.
- ii) The tree protection measures described are to be installed prior to the commencement of any other works associated with the proposal.
- iii) The site manager is to be made aware of their responsibility to ensure tree protection measures are maintained throughout the development of the site.

General Precautions

- No materials that are likely to have an adverse effect on tree health such as oil, bitumen or cement will be stored or discharged on unsealed surfaces within 10 metres of the trunk of a retained tree. Consideration for the slope of the ground is to be considered when discharging or storing materials that are potentially harmful to trees.
- No fires to be lit where flames could extend to within 5m of foliage, branches or trunks of trees.
- No signs, cables or other items are to be attached to trees.
- Details of service runs have not been provided. It is recommended that details of services be submitted for tree officer approval prior to the commencement of works on site.
- Should tree roots over 25mm in diameter be encountered whilst carrying out any
 excavations within the vicinity of retained trees advice from the arboricultural advisor or
 LPA tree officer is to be sought prior to continuing with works.
- Any proposed level changes within Root Protection Areas are to be approved by the Local Authority Tree Officer prior to work being carried out.

Tree Protection Fencing





PROTECTIVE FENCING. THIS
FENCING MUST BE
MAINTAINED IN ACCORDANCE
WITH THE APPROVED PLANS
AND DRAWINGS FOR THIS
DEVELOPMENT.



TREE PROTECTION AREA KEEP OUT!

(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY
PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A
TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY
LEAD TO CRIMINAL PROSECUTION

ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

!KEEP OUT! Protected Trees

No Contractor Access Without Local Authority Permission

REPORT ANY DAMAGE
TO TREES OR FENCING IMMEDIATELY TO
LB BARNET TREE OFFICER
Tel: 020 8359 2000



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