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Tree report in accordance with BS 5837:2012 - Arboricultural Impact Assessment [AIA]

Site Address: 2 Broughton Gardens, London, N6 5RS
Ref: 041326

Arboriculturist: James Forrest / CSG (Usher's) Ltd. (07983443387)
Architect: Richard De Boise / Zminkowska De Boise Architects
(07916533513)
Client: Neville Billimoria

Signed: 

Report Date: 6th January 2023





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Proposed construction of full-width single-storey rear extension
Proposed construction of second floor extension

1.0 Instructions

- 1.1 I have been instructed by the client's architect by e-mail (Richard De Boise of Zminkowska De Boise Architects) with regards to a planning application to be made in respect to the above construction project and report on the following in accordance with BS 5837:2012 'Trees in Relation to design, demolition and construction – recommendations':
- Tree survey + key [Appendix 1]
 - Site Plan showing existing site layout and relevant surrounding vegetation [Appendix 2]
 - Arboricultural Impact Assessment (AIA)
- 1.2 Following a visit (16th December 2022) to survey the trees, having been provided with some information on the proposal, the following arboricultural information is provided within this report to accompany a full planning application.

2.0 The site

- 2.1.1 The proposed development, as described by the architects, is for the construction of a new single-storey, full-width rear extension. Additionally, there is a proposal to extend the second floor of the main property although details for that aspect have not been fully formed at the time of writing.
- 2.1.2 The project will also involve the demolition of a wooden shed and a wooden pergola within the rear garden along with the bases they sit on. These will be replaced with turf. Furthermore, the garden pathway (paving slabs) around the lawn perimeter will be lifted. This too will be replaced with turf to extend the lawn area.
- 2.1.3 The proposed rear extension will be single-storey, full width and 3.5m deep.
- 2.1.4 An accurate, to scale, topographical site map of the site was provided by the architect. Appendix 2 is an arboricultural plan overlaid on top of the existing site layout with the approximate proposed rear extension footprint added (within dotted blue rectangle). It shows the existing relevant structures and shows trees marked for retention; their crown outlines as well as the root protection areas (RPAs) plotted as nominal circles.
- 2.1.5 Vehicle access up to the site will be via the highway. The proposal will not alter this arrangement.
- 2.1.6 Pedestrian access into rear garden will be via defined concrete pathway directly to the side of the property. Access into the rear of the property is restricted to pedestrians given the width of this access.

2.2 Trees around the site

- 2.2.1 There is one significant tree (a London plane tree, T1) relating to the proposed rear extension. The wider visual impact of this trees is reduced by virtue of its location within a private rear garden. However, it does provide visual amenity enriching the area as a whole and has been recommended for retention on that basis. A schedule of the all trees, their condition and category of retention is attached as Appendix 1.

- 2.2.2 There are no trees on neighbouring land that have been fully considered within the scope of this report. There are two trees (1x ash / 1x sycamore) within the garden of 42 Shepherd's Hill (see Photograph #6) that are close to the boundary but not considered for this report. This is because the ground level of 42's garden is lower (at least 1m) than that of 2 Broughton Gardens making it less likely roots from these trees will be near to the surface where they might be impacted on the shed/pergola demolition works. Additionally, any measures required to protect T1 will, in turn, theoretically afford these two trees protection given the extent of T1's RPA.
- 2.2.3 The remainder of the vegetation within the rear garden is of lower significance when compared to T1 but have been considered given proximity to the working area. T2 (lilac) and T4 (firethorn) are minor trees of limited amenity value that are clearly obstructing the construction of the rear garden works. It has been recommended these be removed. G3 and G5 are shrub groups on the flank boundaries. To the extent that they impede the development, recommendations have been made to remove relevant sections.
- 2.2.4 Within the front garden is a magnolia (T6). It is located within a raised bed directly outside the property.
- 2.2.5 All trees were viewed from No.2's rear garden and from Broughton Gardens itself. These vantage points were considered adequate to appropriately assess tree condition.
- 2.2.6 Any recommended tree works considered necessary for health and safety reasons or to facilitate the development will be agreed with the Local Planning Authority and undertaken in accordance with the planning conditions attached to the planning consent. They will be undertaken in accordance with British Standard 3998:2010 'Recommendations for Tree Works', unless otherwise specified with clear justification for any deviation from the British Standard. This is recommended to be undertaken by an arboricultural contractor approved by the Local Authority.

3.0 Arboricultural Impact Assessment (AIA)

3.1 Presence of Tree Preservation Orders (TPO) or Conservation Area Designation

- 3.1.1 A search of Haringey's website confirms that the site lies within a designated Conservation Area [Crouch End].
- 3.1.2 A search of Haringey's website confirms no trees surveyed are subject to a Tree Preservation Order (TPO).

3.2 Effects on amenity value of the trees from development and facilitation pruning

- 3.2.1 Facilitation removal recommended to T2 and T4. T2's crown is biased heavily towards the proposed new footprint and it would be unworkable to retain this tree. T4 is right up against the shed due to be demolished. To avoid damage and/or conflict, removal is recommended. These are minor items and so the overall negative effect on amenity value will be minimal.
- 3.2.2 Facilitation removal recommended to those sections of G3 and G5 that impede construction directly. The remainder of the shrubs will remain in current form and so the overall negative effect on amenity value will be minimal.
- 3.2.3 No works are specifically required to T1 owing to development pressure or health & safety and so there will be no alteration in amenity value. However, it would be anticipated that it is managed via cyclical reductions into the future given T1's defect and past management.
- 3.2.4 T6's proximity to the front of the property means facilitation pruning is required to allow for scaffolding to be put up to allow access to the second floor. This has been reduced previously so works would involve removing the regrowth formed since that last operation.

3.3 Potential incompatibilities between the layout and the trees proposed for retention

- 3.3.1 The RPA (when plotted as a nominal circle) for T1 covers the lawn area of the rear garden but does not encroach into the proposed extended footprint. Therefore, any excavation, foundation digging and construction of the structure does not present a direct incompatibility between tree and structure.

- 3.3.2 The demolition works to the shed, pergola and paving slab pathway falls within the RPA of T1. Therefore, care (e.g. work by hand with no mechanical aid, suitable ground protection, etc.) will need to be taken during this process. Such measures would need to be laid out in an Arboricultural Method Statement (AMS) to ensure any damage is either avoided or minimized to an acceptable degree. Ultimately, the process will not involve the conversion of unmade ground into hard standing. In fact, this demolition process will provide an end use around T1 of an extension to the lawn area meaning there will be a net positive to T1's rooting environment - especially if the ground directly around T1's base is suitably mulched.
- 3.3.3 A proportion of the lawn area will be required for working space (e.g. storage of materials) during the construction phase. This will cross into T1's RPA and so this will need to be kept to a minimum. The AMS will need to adequately phase the project (i.e. demolition works preceding construction) and prescribe adequate ground protection and fencing to protect the maximum amount of T1's RPA.
- 3.3.4 The scaffolding required to access the second floor for that proposed extension can be designed to accommodate T6's crown (after recommended crown reduction).
- 3.3.5 The recommended tree works are highlighted in paragraph 3.2 of this report. All tree surgery works will be undertaken prior to any construction activity and in accordance with the Arboricultural Method Statement (if conditioned). These works are intended to alleviate the foreseeable incompatibility between the trees and the building works.
- 3.3.6 Overall, the processes of construction need not have a long-term detrimental impact on the trees provided care is taken and the AMS is adhered to.
- 3.4 Infrastructure requirements - highway visibility, lighting, CCTV, services etc
- 3.4.1 There is no requirement for any tree removal or pruning to create adequate highway visibility. There will be no requirement for street lighting or CCTV visibility or services (water, telephone, electrical etc.) close to any of the retained trees.

3.5 Mitigating tree loss/new planting

3.5.1 None required or planned as the tree removals are relatively minor.

3.6 Proximity of trees to structures

- 3.6.1 T1 does not present a high subsidence risk to the new extension given the distance (10.5m-11m) and the cyclical management (which is expected to continue). However, the British Geological Survey (BGS) does state the underlying soil in this area is London Clay which has a high potential for volumetric change. Therefore, at the very least, foundation depth will need to be 1m minimum with further investigation to ascertain whether deeper (i.e. 1.65m) foundations are appropriate. NHBC guidance should be consulted.
- 3.6.2 The roof and guttering of the new structure will not have to accommodate high volumes of leaf litter and/or seeds. This is because no crowns from retained trees will overhang the new structure.
- 3.6.3 The most significant retained tree near to the proposal (T1) is broadly to the west. Therefore, shading created by this retained tree will shade the property to a minor degree during the latter part of the day. The tree height (assuming maintained) will ensure this shading remains minor.
- 3.6.4 No future management requirement for pruning any retained trees back from any new structures to maintain suitable clearance.
- 3.6.5 Overall, the proximity of trees to the proposed structure is unlikely to put pressure on tree removal or significant tree modification works in the future. The continued management of T1 and T6 would be required regardless of the project.
- 3.6.6 It is unlikely but possible that roots from retained trees of a diameter greater than 25mm will be encountered during the course of the construction process. Any severance of a small number of minor roots will have an insignificant effect on the future growth and health of the retained trees. Where more significant roots are encountered, procedures laid out in the AMS should be adhered to.

3.7 Issues to be addressed by the Arboricultural Method Statement (AMS)
[if conditioned]

- Any protective fencing necessary to be established around the retained trees
- Ground protection measures around the RPA of retained trees where work access is required
- Site access
- Contractors parking, welfare facilities and storage areas
- Hard surfaces within the RPA of retained trees
- Remedial tree work
- Construction within the RPA of retained trees
- Tree Protection Plan
- Arboricultural monitoring / supervision

SITE PHOTOGRAPHS

1. T1 overview



2. T1's defective lower trunk



3. T1, shed and pergola



4. Existing paved area where proposal is to be sited



5. T6



6. Heavily reduced ash in neighbouring land (42 Shepherd's Hill)





Surveyor: James Forrest	Client: Neville Billimoria	Site: 2 Broughton Gardens, N6 5RS
Date: 16th December 2022	Weather: Sunny, Clear	Reference: 041326

Tree No.	Species	Height (m)	Crown spread (m)	Stem diameter (mm)	Existing height of (m)		Life stage	Condition		Preliminary management	Estimated remaining contribution (Years)	Category grading	ROOT PROTECTION		
					First significant branch	Canopy		Physiological	Structural				Radius of nominal circle (m)	RPA (m ²)	Ownership
T1	London plane tree (<i>Platanus x hispanica</i>)	12.0#	N 7 S 6 E 5 W 5	830	3.0#-S	3.0#	EM	<u>Good</u> • Regrowth extension following reduction works as expected • Viable buds present for next growing season • Adequate wound-wood response around cavity opening	<u>Fair</u> • Large opening on south-east side [extending GL to 1.8m / 25cm wide / 50cm depth] • Exposed wood is not clearly decayed and probe unable to extend beyond 1cm • Wound wood around defect replacing strength loss effectively	None	20+	B1	9.90	308	2 Broughton Gardens
T2	Common lilac (<i>Syringa vulgaris</i>)	3.5#	N 3.5 S 3 E 2 W 1.5	70 / 70 / 90	0.5#-N	1.5#	SM	<u>Good</u>	<u>Fair</u> • Multi-stemmed with compression forking present between stems • Pruning stubs	Remove to facilitate proposal	10+	C1	N/A	N/A	2 Broughton Gardens
G3	Mixed species (<i>Camellia</i> , <i>Cornus</i> , <i>Vaccinium</i> , <i>Malus</i> , etc.)	0m-5m	1	N/A	G/L	G/L	Y-SM	<u>Good</u>	<u>Good</u>	Remove vegetation within 2m of proposed footprint	10+	C2	N/A	N/A	2 Broughton Gardens
T4	Firethorn (<i>Pyracantha</i> sp.)	3.0#	N 1 S 1 E 1 W 1	110	0.5#-E	1.0#	SM	<u>Good</u>	<u>Good</u>	Remove to facilitate proposal	10+	C1	N/A	N/A	2 Broughton Gardens
G5	Mixed species (<i>Camellia</i> , <i>Pieris</i> , <i>Rosa</i> , etc.)	0m-5m	1	N/A	G/L	G/L	Y-SM	<u>Good</u>	<u>Good</u>	Remove vegetation between <i>Camellia</i> and current rear elevation	10+	C2	N/A	N/A	2 Broughton Gardens

Tree No.	Species	Height (m)	Crown spread (m)	Stem diameter (mm)	Existing height of (m)		Life stage	Condition		Preliminary management	Estimated remaining contribution (Years)	Category grading	ROOT PROTECTION		
					First significant branch	Canopy		Physiological	Structural				Radius of nominal circle (m)	RPA (m²)	Ownership
T6	Magnolia (<i>Magnolia</i> sp.)	7.0#	N 3 S 3 E 2.5 W 2.5	140	2.0#-SE	2.0#	SM	<u>Good</u>	<u>Good</u>	Remove regrowth formed since most recent reduction	10+	C1	1.80	10	2 Broughton Gardens

KEY TO TREE SURVEY FORM

Tree No.	Refer to plan
Species	Common name (<i>Scientific name</i>)
Height	Measured in metres from the ground to the top of the crown [Recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m]. When suffixed with a # it denotes that the value has been estimated.
Crown spread	Measured in metres (N = north / E = east / S = south / W = west) [Rounded up to the nearest half metre for dimensions up to 10m and up to the nearest whole metre for dimensions over 10m]. When suffixed with a # it denotes that the value has been estimated.
Stem diameter	Measured at 1.5m above ground level [Rounded to the nearest 10mm].
Existing height of	<u>First significant branch</u> – measured in metres from the ground up. Direction of growth noted (N = north / S = south / E = east / W = west) When suffixed with a # it denotes that the value has been estimated. <u>Canopy</u> – measured in metres from the ground up. [Recorded to the nearest half metre for dimensions up to 10m and the nearest whole metre for dimensions over 10m]. When suffixed with a # it denotes that the value has been estimated.
Age class	Y <u>Young</u> – within 1 st quarter of species' life expectancy SM <u>Semi-mature</u> – within 2 nd quarter of species' life expectancy EM <u>Early mature</u> – within 3 rd quarter of species' life expectancy M <u>Mature</u> – within 4 th quarter of species' life expectancy OM <u>Over-mature</u> – in natural decline
Condition	<u>Good</u> – healthy with no significant defects <u>Fair</u> – generally healthy but with some defects of low significance <u>Poor</u> – Lacking vigour with significant defects <u>Dead / Dangerous</u> – requires urgent removal <u>Minor deadwood</u> – less than 25mm in diameter <u>Moderate deadwood</u> – 25-50mm in diameter <u>Major deadwood</u> – greater than 50mm in diameter

Preliminary management

These may include further investigations for the presence or extent of decay or climbed inspections, ivy removal or pruning works when access is a non-moveable aspect etc (NB this is **not** intended to be a specification for tree work and further advice maybe required prior to implementation). Trees assessed as being in apparently immediately hazardous condition will be notified to the client separately as soon as practicable.

Estimated remaining contribution

An estimate of the remaining life contribution in years that the tree or group of trees is expected to have based on species, condition on the site in its current context. The following bands are used:

<10 - Tree is dead or dying and unlikely to contribute beyond 10 years

10+ - Tree is assessed as being able to contribute to the site for 10+ years

20+ - Tree is assessed as being able to contribute to the site for 20+ years

40+ - Tree is assessed as being able to contribute to the site for 40+ years

Category grading

A = Trees of high quality with an estimated remaining life expectancy of at least 40 years

B = Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

C = Trees of low quality with an estimated life expectancy of at least 10 years, or young trees with a stem diameter below 150mm

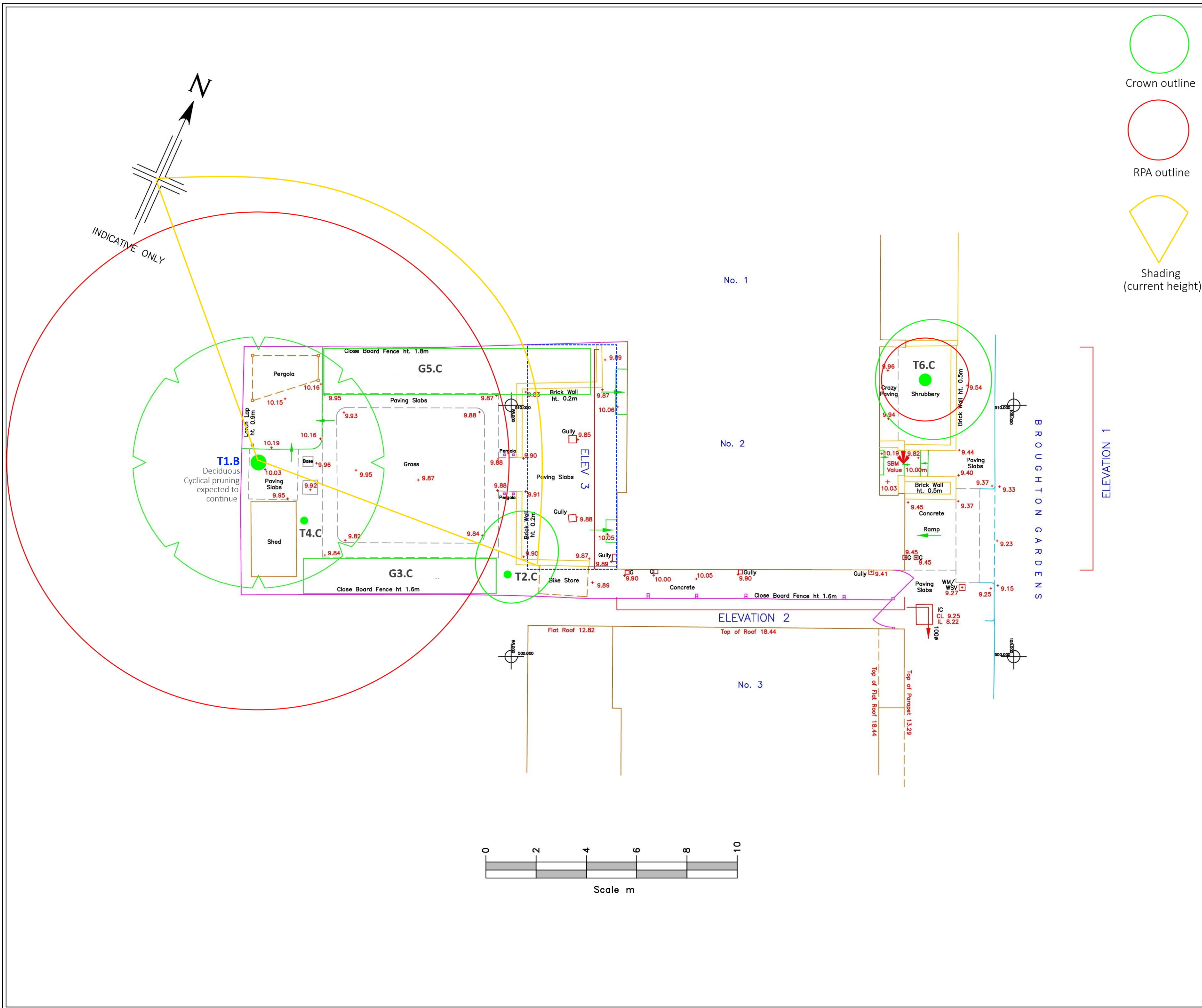
U = Trees in such a condition that they cannot realistically be retained as living trees in the context of the current land use for >10 years

1 = Mainly arboricultural qualities

2 = Mainly landscape qualities

3 = Mainly cultural values, including conservation

* = denotes that the category grading is temporary and requires additional measures (e.g. climbed inspection, removal of ivy, full access all around the tree etc.) before an actual grading can be assigned



STANDARD ABBREVIATIONS

AH	Arch Height	L	Light
BH	Beam Height	LP	Lamp Post
BRW	Brick Retaining Wall	MH	Manhole
BSL	Beam Soffit Level	OH	Overhead
BT	British Telecom	PS	Paving Stones
CATV	Cable Television IC	QT	Quarry Tiles
CBF	Close Boarded Fence	RS	Road Sign
CL	Cover Level	RSJ	Rollled Steel Joist
CLF	Chain Link Fence	RWP	Rain Water Pipe
Conc	Concrete	St	Skylight
EP	Electricity Pole	SP	Soil Pipe
ER	Earthing Rod	Spr	Springer Height
FL	Floor Level	TP	Telephone Pole
GM	Gas Meter	Typ	Typical
HB	Hand Basin	VP	Vent Pipe
IC	Inspection Cover	WM	Water Meter
IL	Invert Level	WV	Water Valve
JB	Junction Box		

LEGEND

2.70

FLOOR TO CEILING HEIGHT.

F2.70

FLOOR TO FALSE CEILING HEIGHT.

→

ALL ARROWS POINT UP UNLESS

SCe

SLOPING CEILING ARROWS POINT UP

0.2/3/5

TRUNK DIAMETER/CANOPY DIAMETER/
ESTIMATED HEIGHT OF TREES, IN METRES

DUE TO THE INHERENT INSTABILITY OF PAPER MATERIALS,
DRAWINGS PLOTTED ON PAPER MAY BE STRETCHED AND DISTORTED.
DIMENSIONS SCALED FROM PAPER PLOTS SHOULD THEREFORE
BE TREATED WITH CAUTION.

DRAWING ISSUE STATUS

Issue	Details	By	Date

UNLESS OTHERWISE STATED, DRAINAGE PIPES ARE
100mm DIAMETER.

THIS SURVEY HAS BEEN CARRIED OUT TO AN ACCURACY
CONSISTENT WITH A PRESENTATION SCALE OF 1:100
INTERROGATED DIMENSIONS WILL BE WITHIN THE TOLERANCE
ASSOCIATED WITH THIS AND SMALLER SCALES ONLY.

ALL LEVELS ARE IN METRES, RELATED TO ARBITRARY DATUM
BASED UPON LOCAL VALUE 10.00m SITUATED ON TOP STEP,
NEAR FRONT DOOR.

THE SURVEY GRID SHOWN ON THIS DRAWING USES A LOCAL ORIGIN
AND IS ORIENTATED ARBITRARILY.

DRAWING UNITS ARE METRES.

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TOPOGRAPHIC SURVEY

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PRESENTATION
SCALE 1:100 @ A2

DATE OF ISSUE

JOB No. 22043

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DRAWING No.

TREE PLAN [041326]

ISSUE