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Tree report in accordance with BS 5837:2012

Site Address: 18a Frognal Gardens, London, NW3 6XA
Ref: 031682

Arboriculturist: James Forrest / CSG (Usher's) Ltd. (07983443387)
Architect: Ayesha Khan / Alison Brooks Architects (02072679777)
Client: Nadine Majaro

Signed: 

Report Date: 28th August 2019

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Demolition of existing structure and construction of a new 4-storey dwelling in its place

1.0 Instructions

1.1 I have been instructed by the client, Nadine Majaro, via telephone with regards to a planning application to be made by themselves in respect to the above construction project. I shall report on the following in accordance with BS 5837:2012 'Trees in Relation to design, demolition and construction – recommendations':

1. Tree survey [Appendix 1]
2. Arboricultural Impact Assessment (AIA) [Section 3.0]
3. To produce an Arboricultural Method Statement (AMS) to include a Tree Protection Plan (TPP) [Section 4.0]

Following a visit (6th February 2019) to survey the trees knowing the location of the new dwelling, the following arboricultural information is provided in support of the application.

2.0 The site

2.1.1 The proposed development as per drawings provided by the architects is for the construction of a new 4-storey dwelling in place of the structure currently in place.

The project will involve the demolition of the existing building. The plan is to then construct a new house on the same site but with an increase in building footprint. Deep excavation will be required to create living space below the level of the ground.

Landscaping of both the front and rear garden areas will be undertaken post construction.

2.1.2 An accurate, to scale map of the site was provided by the client [ABA-2473-20-100]. I have annotated this drawing to produce a TPP [CSG/TPP/FG1] and attach this to the report as Appendix 2. This plan presents the proposed layout opposed to the site as it currently exists.

2.1.3 As the current building is being demolished, site access will allow for heavy plant machinery on to site. The trees do not pose a height restriction to what can enter the site. Parking of construction vehicles will be on Frognal Gardens itself, comfortably outside the RPA of T10.

2.2 Trees around the site

2.2.1 There are several significant trees located around this site, both part of 18a Frognal Gardens and 3rd party trees. The wider visual impact of the some of the larger trees is dampened by them being set back from public view but, nonetheless, they provide visual amenity in combination enriching the area as a whole. A schedule of the significant trees, their condition and category of retention is attached as Appendix 1.

2.2.2 The property and neighbouring properties contains a mix of young, semi mature, early mature and mature species including lime, sycamore and horse chestnut. 18a Frognal Gardens also has a wide array of mature shrubs both in the front and rear gardens. These have not been surveyed but have been acknowledged.

2.2.3 This report includes only those trees around the proposal that require assessment as to the impact the process of construction works may have on them and what effect the trees will have on the project in the future.

Any trees that are not within a distance 12x their stem diameter may not have not been considered for this report for this reason..

2.2.4 The most significant tree with respect to the proposal is a lime (T10) [Figure 1] located towards the rear boundary of 18a Frognal Gardens' rear garden. No works are planned to occur within the RPA of this tree.

Figure 1 T10

2.2.5 Through a check with the Local Authority (London Borough of Camden), there is a Tree Preservation Order (TPO) on a tree within the front garden (not marked on survey), mixed in amongst mature shrubbery. This is a false acacia (*Robinia pseudoacacia*) that was felled by CSG (Usher's) due to poor health in late 2006. The stump is currently regenerating despite past works to prevent this. There is little in the way of amenity remaining in its current state and its complete removal is recommended to facilitate the proposal. Planting planned for the front garden area will serve to mitigate against this loss.

2.2.6 All 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 will be undertaken by an arboricultural contractor approved by the Local Authority.

2.3 New structures

2.3.1 New dwelling to be sited and constructed as per architectural drawings.

3.0 Arboricultural Impact Assessment (AIA)

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

3.1.1 I have checked on the London Borough of Camden's website and confirmed the site is located within a designated Conservation Area. An e-mail request to the Local Authority seeking to confirm the presence of TPOs on or around this site was been placed by the architect. It was confirmed that a TPO was attached to a tree within the front garden (*Robinia pseudoacacia*). This tree was felled in 2006 with the stump retained (see 2.2.5).

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

3.2.1 No facilitation works are currently planned to retained trees. No impact on amenity value of the area as a result.

3.2.2 T2, T7, T8 and T9 are recommended for removal for reasons already stated (see schedule with Appendix 1b). It is anticipated that the overall loss in amenity will be minor given T7-T9 are located within the rear garden, away from public view.

The removal of the majority of the mature shrubbery both in the front and rear gardens will have the greater impact on the overall amenity. These items are being removed to facilitate development as well as clearing the way for re-landscaping where extensive planting has been planned to restore any amenity that may have been lost.

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

3.3.1 Construction activity will technically enter the RPA of T1 when drawn as a nominal circle. Given the established hard standing (pavement, tree surround and tarmac driveway to eastern side of property) in between T1 and the front garden of 18a, it is not anticipated that any significant roots from T1 exist within the section of the RPA that clips the front corner of the rear garden. There is very little in the way of root-induced disturbance of these surfaces that might suggest root encroachment into the RPA.

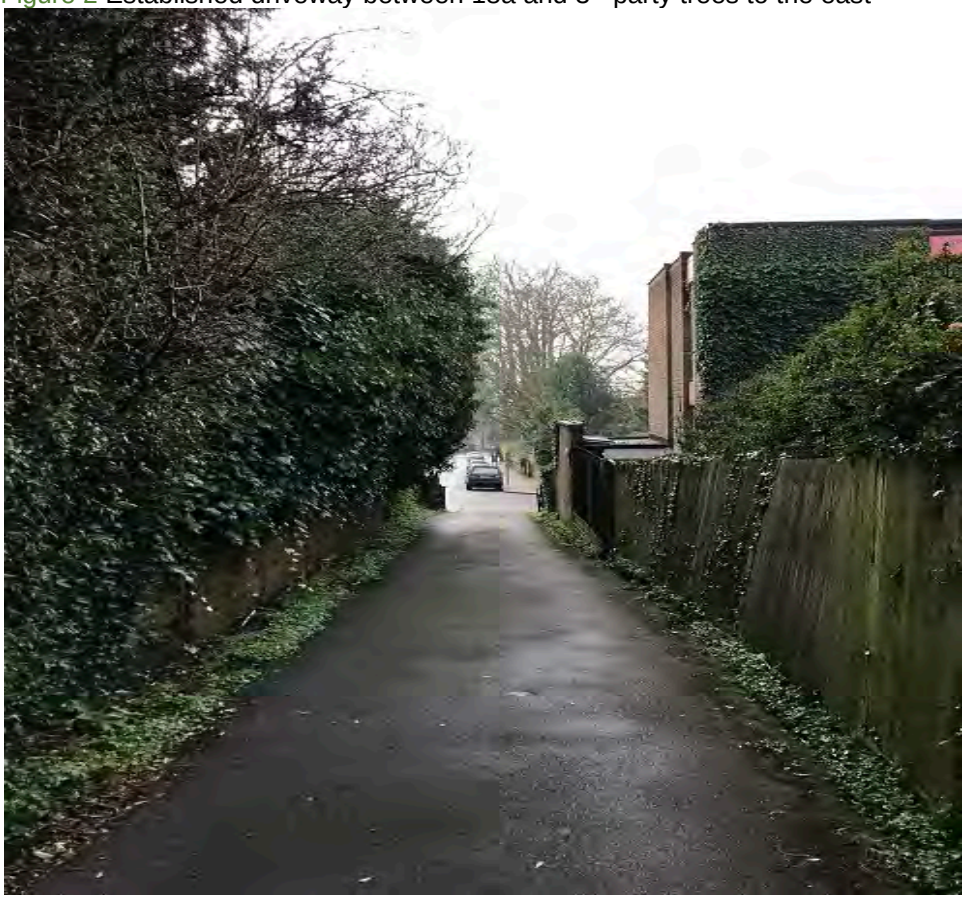
Excavation works to accommodate the basement level will occur outside the RPA of T10 as drawn as a nominal circle. There is no reason to deviate from a nominal circle. From that point of view, there is no incompatibility between T10 and the new structure. New decking will be laid to the rear of the proposed dwelling that will exist very slightly in the southern portion of T10's RPA. This will not involve extensive ground excavation and will be done by hand-only. Measures laid out within the AMS will be followed should roots from this tree be encountered.

Landscaping works will have no impact within the front garden as roots from T1 are not likely to be encountered. Landscaping works within the rear garden will not involve an alteration to level or grade of the soil and will not involve any significant groundworks that might impact on T10. T10's location in a raised area behind a retaining wall with an existing hard standing surround means that little root disruption is foreseeable despite landscaping works being planned within the RPA.

There is a proposal to remove and rebuild the retaining wall directly adjacent to T10. The demolition will be done by hand only and arboricultural advice will be sought should any significant roots impede the rebuilding of this wall. The existing paving slabs directly to the south of T10 will be lifted by hand and replaced with mulch. This will be of benefit to T10 providing an improved rooting environment.

T4, T5 and T6 are 3rd party trees whose RPA clips the north-eastern corner of the site. Similar to T1, there is not an anticipation that significant roots will be found in this portion of the garden given the presence of a boundary wall and an established tarmac driveway [Figure 2] between the two.

Figure 2 Established driveway between 18a and 3rd party trees to the east



3.3.2 Measures have been laid in within the AMS for procedures to follow should roots be encountered in this area but, given factors previously mentioned, there is not an anticipation that any significant roots (over 25mm in diameter) will be encountered. Resultantly, the long-term health of these trees is highly unlikely to be compromised during ground disturbance caused by the demolition and excavation works.

3.3.3 The house will connect to the existing rainwater, soil and waste drainage which is located under the driveway in the front garden (marked as storage area on TPP). A tank will also be installed under the driveway to provide additional attenuation to the sewer. All lie in the centre of the current drive outside of the RPA of any retained trees.

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 close to any of the retained trees. Should that not be the case, any below-ground services that are installed within or pass through the RPAs of retained trees will be done in accordance with NJUG Volume 4 "Guidance for the planning, installation and maintenance of utility services in proximity of trees" to minimise the disturbance to the retained trees' root systems.

3.4.2 No services (unless otherwise highlighted in 3.4.1) or other infrastructure requirements will have any impact on the retained trees as far as I know.

3.5 Mitigating tree loss/new planting

3.5.1 There are sufficient trees of greater value within and surrounding this site to mitigate against the loss of the low value trees being removed.

Replacement tree plantings will be carried out to mitigate against the complete removal of the protected tree previously felled down to stump level.

3.6 Proximity of trees to structures

3.6.1 The impact of trees on buildings and vice versa and allowance for future growth need to be considered when designing the foundations and they need to be suitable to withstand the potential indirect damage roots from this tree, and others in the surrounding area, could have. Therefore, foundation design needs to be in accordance with NHBC Chapter 4.2 'Building near trees'.

Given the proposal includes a basement level, the foundations will be of a depth that, going forward, roots would not ordinarily be encountered at.

The canopies of retained trees will not overhang the roof of the proposed structure.

3.6.2 As T1 is south-east of the proposal and close enough to have an effect, a certain level of shading to the property will be present at the start of the day. The size and number of windows will need to be designed in acceptance of this fact to allow as much natural light in as possible while still retaining the tree without modification.

The remainder of the retained trees are due north of the proposal and, therefore, shading is not an issue

3.6.3 Following a prediction derived from previously stated factors, it is not considered likely that significant roots from any retained trees of a diameter greater than 25mm will be encountered within the construction site. 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.

3.6.4 Overall the processes of construction should not have a detrimental impact on the trees provided care is taken and the AMS is adhered to.

3.7 Issues to be addressed by the arboricultural method statement (AMS)

- Protective fencing 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 modified RPA of retained trees

4.0 Arboricultural Method Statement (AMS) for Tree Protection Throughout the Duration of Demolition and Construction Works

Arboricultural Method Statement includes a Tree Protection Plan to identify:

- Trees to be retained – identified with a continuous black line
- Protective fence positions therefore the Construction Exclusion Zones
- Measurements to identify fence positioning in relation to centre of tree
- Contractor huts and storage areas

4.1 Construction Exclusion Zones

4.1.1 No works will be undertaken within any Construction Exclusion Zone. The Construction Exclusion Zones are to be afforded protection at all times and will be protected by fencing. A protective fence shall be erected prior to the commencement of any site works e.g. before any materials or machinery are brought on site, development or the stripping of soil commences. The fence shall have signs attached to it stating that this is a Construction Exclusion Zone and that **NO WORKS are Permitted** within the fence. The protected fence may only be removed following completion of all construction works.

4.1.2 The fence is required to be sited in accordance with the Tree Protection Plan enclosed with this method statement as Appendix 2. They must ideally be constructed as per figure 2 in BS 5837 2012 and be fit for the purpose of excluding any construction activity (See Appendix 3). Any other fence/barrier used must be fit for the purpose.

4.1.3 The CEZ barriers are for the construction phase only. This is permitted to be removed once this phase has been completed to allow access in to the garden for landscaping phase.

4.2 Access Details

4.2.1 Access for construction traffic will be via Frognal Gardens. No plant machinery will have access in to the RPA of any retained trees.

4.2.2 Where incursion into RPAs is unavoidable within non hard-standing areas this will be restricted only to persons. Ground protection for pedestrians within the RPA will consist of single thickness scaffold boards on a scaffold frame on top of 100mm of woodchip laid on a geotextile membrane.

4.3 Contractors car parking

4.3.1 Parking limited to Frognal Gardens. This is a tarmacked highway. Any technical incursion into T1's RPA is not considered an issue.

4.4 Site Huts and Toilets

4.4.1 Likely to be within the front garden or on Frognal Gardens. In any case, will not be within T1's RPA.

4.5 Storage Space

4.5.1 A designated storage area will be located within front of the property or garden area outside of RPA. Marked on Tree Protection Plan.

4.6 Additional Precautions

4.6.1 No storage of materials, lighting of fires will take place within any construction Exclusion Zone. No mixing or storage of materials will take place up a slope where they may leak into a Construction Exclusion Zone.

4.6.2 No fires will be lit within 20 metres of any tree stem and will take into account fire size and wind direction so that, no flames come within 5m of any foliage.

4.6.3 No notice boards, cables or other services will be attached to any tree.

4.6.4 Materials which may contaminate the soil will not be discharged within 10m of any tree stem. When undertaking the mixing of materials it is essential that, any slope of the ground does not allow contaminates to run towards a tree root area. This includes fuels, oils, concrete mix etc.

4.6.5 All services, including drainage and soakaways, to be installed outside the RPA of retained trees. Where unavoidable, any below-ground services that are installed within or pass through the RPAs of retained trees will be done in accordance with NJUG Volume 4 "Guidance for the planning, installation and maintenance of utility services in proximity of trees" to minimise the disturbance to the retained trees' root systems.

4.7 Demolition / Excavation

4.7.1 Excavation of existing hard surface within the RPA of all retained trees to be done by hand only. Exposed roots to be wrapped in dry, clean hessian sacking to prevent desiccation and adverse temperature change. Appointed arboriculturist to be called to site to make an assessment on the implication of damage to the roots encountered.

Only roots smaller than 25mm in diameter may be pruned back but must be with a clean suitable cutting tool and, preferably, pruned to a side branch. To be done in accordance with NJUG Volume 4 "Guidance for the planning, installation and maintenance of utility services in proximity of trees". Prior to backfill, hessian wrap must be removed and retained roots must be surrounded by sharp sand prior to soil replacement. Replacement topsoil must comply with BS 3882:2007 'Specification for topsoil and requirements for use'

4.8 Hard Surfaces

4.8.1 New hard surfacing to the front of the property.

4.9 Soft Landscaping / Use of Herbicides

4.9.1 No soft landscaping within 2 metres of the base of retained trees. Only mulch to be placed within this area. Any mulch used must be BS EN 4790:1997 certified and be applied to a depth of no more than 100mm. Mulching material must be kept away from directly contacting the bark of any tree stems.

4.9.2 Any herbicide used prior to construction phase shall be systemic, spot applied, and mixed according to manufacturer's recommendations.

4.10 Contingency Plan

4.10.1 Water will be made readily available on site and will be used to flush spilt materials through the soil and avoid contamination to tree roots. At the time of any spillage the main contractor will contact an arboriculturist for advice.

4.11 Remedial Tree Works

4.11.1 Tree works (see section 3.2 of AMS) to be done prior to construction phase. All tree works are to be carried out in accordance with BS 3998 (British Standard Recommendations for Tree Work 2010).

4.12 Responsibilities

4.12.1 It will be the responsibility of the main contractor to ensure that the planning conditions attached to planning consent are adhered to at all times and that a monitoring regime in regards to tree protection is adopted on site.

4.12.2 The main contractor will be responsible for contacting the Local Planning Authority at any time issues are raised related to the trees on site.

4.12.3 If at any time pruning works are required permission must be sought from the Local Planning Authority first and then carried out in accordance with BS 3998:2010 'Recommendations for Tree Works'.

4.12.4 The main contractor will ensure the build sequence is appropriate to ensure that no damage occurs to the trees during the construction processes. Protective fences will remain in position until completion of ALL construction works on the site.

4.12.5 The fencing and signs must be maintained in position at all times and checked on a regular basis by an on-site person designated that responsibility.

4.12.6 The main contractor will be responsible for ensuring sub-contractors do not carry out any process or operation that is likely to adversely impact upon any tree on site.

4.12.7 Appointed arboriculturist must inspect the site at the start of the works and monitor it throughout. They must be on hand to assist and advise on any further arboricultural issues that may arise during the construction phase. All relevant persons must be briefed prior to works commencing laying out the arboricultural protection in place and the measures that must be adhered to so that the trees are protected

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Title	No.18a Frognal Gardens, Hampstead, London NW3 6XA - Topographic Survey
Client	Roger Pilgrim
Date	January 2019
Drawing No.	5594-14JAN19-01
Plot scale	1 : 200 on A1 Sheet
Digital scale	1 CAD unit : 1 metre
Revision	
Surveyed	BPF
Checked	JKW

0 metres 10

N
Ordnance Survey Grid North

Notes

- Datum : Ordnance Survey Level datum via OS Active GPS Network
- Survey Grid : Ordnance Survey National Grid Co-ordinates derived via OS Active GPS Network.
- Survey contents correct as of date of survey and survey undertaken to agreed specification
- All critical dimensions to be checked prior to site works
- All kerb levels shown are channel levels
- Drainage and Service covers :
  Covers buried or obscured at the time of the survey are not shown. Manholes have not been entered for safety reasons and all pipe diameters are estimated from the surface. Drainage pipe diameters are in millimetres, eg. D100 means a 100mm diameter pipe. The flow type stated is based on visual evidence seen from the surface at the time of the survey. All internal manhole details should be confirmed by the contractor on site prior to site works.
  Trees :
  For concentric spread trees the spread plotted is an average value drawn to scale to the nearest metre. The minimum individual diameter surveyed is 0.10m at 1m up the trunk from the ground. Trunk diameters are not plotted to size. General species are only stated where noted. A qualified arboriculturalist should be consulted for species type and condition. Heights (when requested) are approximate to the nearest metre.

Legend of Abbreviations

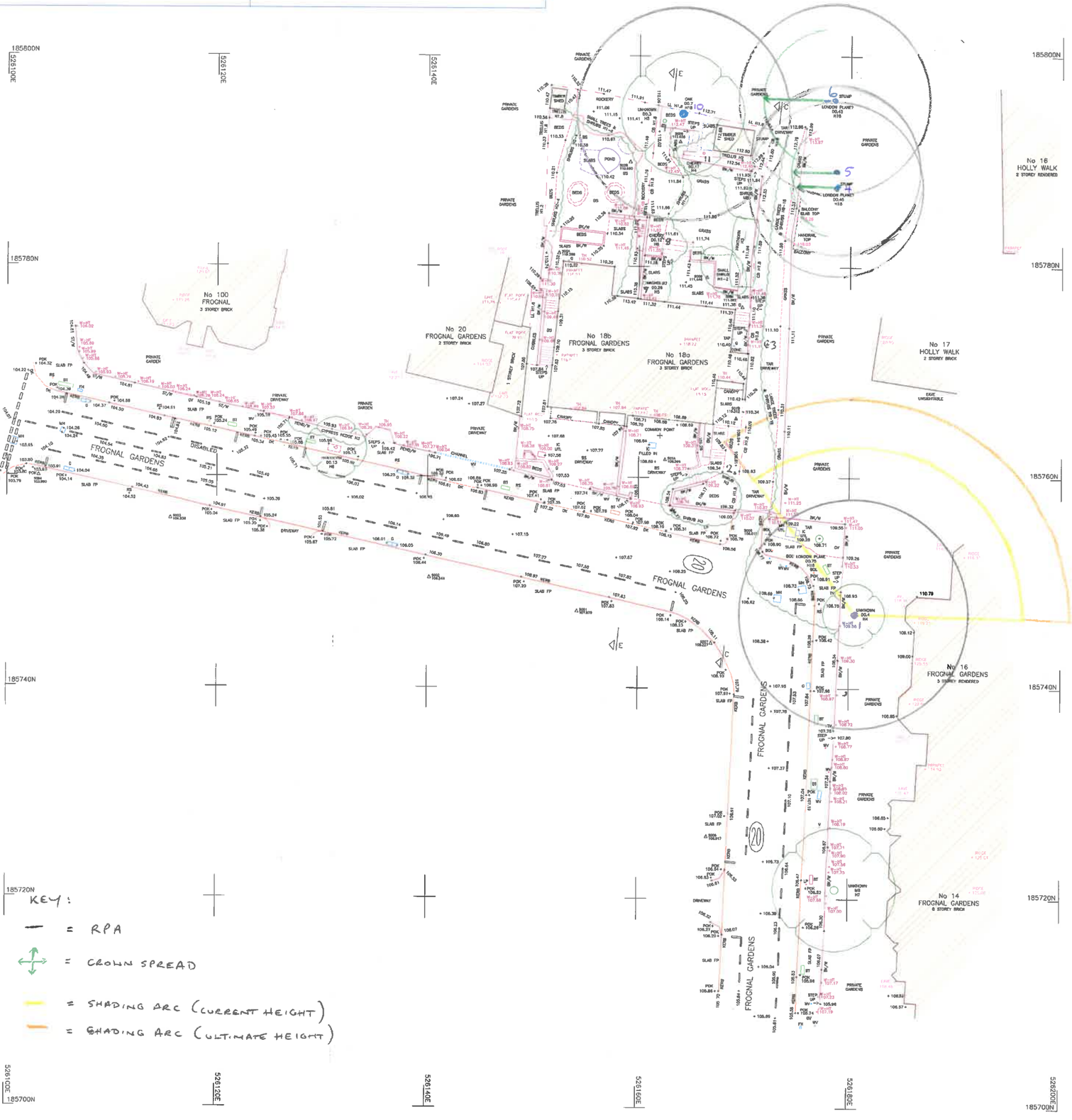
AV	Air Valve
BEDS	Flower Beds
BK/W	Brick Wall
BLK/W	Block Wall
BOL	Bollard
BS	Brick Setts
BT	British Telecom
BW	Barbed Wire Fence
CB	Close Board Fence
CCTV	Closed Circuit Television Camera
CELL	Cellar Cover
COI	Corrugated Iron Fence
CL	Corner Level
C/L	Chain Link Fence
CONC	Concrete Surface
CONC/P	Concrete Panel Fence
CP	Chestnut Paling Fence
CRB	Crash Barrier
D	Diameter (trees in metres / drainage pipes in millimetres)
DK	Drop Kerb
E	Electricity Cover
EP	Electricity Pole
ER	Earth Rod
FFL	Finished Floor Level
FH	Fire Hydrant
FLAG	Flag Pole
FLP	Floodlight Post
FP	Footpath
G	Gully
GV	Gas Valve
HW	Head Wall
IC	Inspection Cover
IL	Invert Level
IR	Iron Railing
LL	Larch-lap Fence
LP	Lamp Post
MB	Multibole Tree
MH	Manhole
MP	Marker Post
MP-E	Marker Post - Electric
MP-G	Marker Post - Gas
MP-T	Marker Post - Telephone
MP-W	Marker Post - Water
NAME	Road Nameplate
PAL	Palisade Fence
POK	Top of Kerb Level
PR	Post and Rail Fence
PW	Post and Wire Fence
RE	Roddling Eye
RET	Retaining
RS	Road Sign
RWP	Rainwater Pipe
SCK	Stop Cock
SOF	Soffit Level
ST/W	Stone Wall
SV	Sluice Valve
SVP	Soil Vent Pipe
TEL	Call Box (telephone)
TH	Threshold Level
TL	Traffic Light
TP	Telegraph Pole
TV	Cable Television
UTL	Unable to Lift (Cover)
V	Valve (Unknown Type)
VP	Vent Pipe
W-HT	Top of Wall Level
WL	Water Level
WM	Water Meter
WM	Wire Mesh Fence
WO	Washout Valve
WV	Water Valve

Tree Abbreviations

ALD	Alder
BCH	Beech
CED	Cedar
CHE	Cherry
CYP	Cypress
ELD	Elder
EUC	Eucalyptus
FAC	False Acacia
FRT	Fruit
HAW	Hawthorn
HAZ	Hazel
HOL	Holly
HORN	Hornbeam
HCH	Horse Chestnut
LAR	Larch
LAU	Laurel
MAP	Maple
PLN	London Plane
POP	Poplar
RHO	Rhododendron
ROW	Rowan
SAL	Sallow
SB	Silver Birch
SCH	Sweet Chestnut
WBM	Whitebeam
WIL	Willow

Survey Stations

Station	Easting	Northing	Level
S001	526154.202	185747.253	107.578
S002	526140.202	185750.382	106.544
S003	526115.583	185755.936	104.836
S004	526103.027	185759.593	103.980
S005	526172.518	185756.686	109.017
S006	526166.597	185725.902	106.917
S007	526166.935	185744.294	108.227
S008	526166.440	185778.972	111.446
S009	526163.816	185791.852	112.035
S01A	526162.488	185761.697	108.596
S01B	526169.204	185765.625	110.312
S02A	526152.373	185781.248	110.290
S02B	526159.092	185789.928	110.660
S04A	526081.403	185740.588	102.723
S08A	526169.752	185776.178	111.392



Surveyor: James Forrest	**Client:** Nadine Majaro	**Site:** 18a Frognal Gardens, NW3 6XA
Survey Date: 6th February 2019	**Weather:** Cloudy, Windy	**Reference:** 031682

Tree No.	Species	Height (m)	Estimated Crown spread (m)	stem diameter (mm)	Existing height of (m)		Life stage	Condition		Preliminary management	Estimated remaining contribution (Years)	Category grading
					First significant branch	Canopy		Physiological	Structural			
T1	Horse chestnut (*Aesculus hippocastanum*)	16#	N 6 S 7 E 7 W 6.5	890	4.0-S#	5.5#	M	Fair. Local Authority tree. Bleeding canker present but not advanced at this moment in time	Fair	None	20+	B1/2
T2	Holm oak (*Quercus ilex*)	4#	N 1.5 S 0.5 E 1 W 1	80	2.0-W#	2.0#	Y	Fair	Fair	None	10+	C1
G3	Mixed species	9#	N/A	N/A	N/A	N/A	N/A	Fair	Fair. Small 3rd party trees / shrubs that may affect access for larger vehicles using access road to the side of the site	None	10+	C2
T4	Sycamore (*Acer pseudoplatanus*)	13#	N 4 S 4 E 4 W 4	650#	N/A (restricted view)	N/A (restricted view)	EM	Limited access to view and assess fully	3rd party tree with limited access to fully view. Been reduced recently and does not overhang the site	None	20+	B1*
T5	Sycamore (*Acer pseudoplatanus*)	13#	N 4 S 4 E 4 W 4	650#	N/A (restricted view)	N/A (restricted view)	EM	Limited access to view and assess fully	3rd party tree with limited access to fully view. Been reduced recently and does not overhang the site	None	20+	B1*
T6	Sycamore (*Acer pseudoplatanus*)	18#	N 7 S 7 E 7 W 7	600# / 600#	N/A (restricted view)	N/A (restricted view)	EM	Limited access to view and assess fully	3rd party tree with limited access to fully view. Canopy overhangs the tarmac access road but not the site itself	None	20+	B1*
T7	Evergreen magnolia (*Magnolia grandiflora*)	5.5#	N 3 S 1.5 E 2.5 W 1.5	300 (at 1.3m AGL - low crown break)	1.5-N#	1.5#	EM	Fair	Ivy obscuring view of mid-crown. Decay noted to stem at 1.3m - relatively minor. Pruning stubs present. Previous reduction history	None	10+	C1
T8	Hazel (*Corylus avellana*)	6#	N 2 S 2.5 E 2 W 2	140	1.0-W#	1.5#	SM	Fair	Fair	None	10+	C1
T9	Elder (*Sambucus nigra*)	5#	N 0 S 4 E 1 W 1	250# (restricted access to measure)	2.0-S#	1.0#	SM	Stems have died back post-pruning	Ivy obscuring inspection of base and trunk. Leaning markedly to the south	Remove	<10	U
T10	Lime (*Tilia* sp.)	18#	N 6 S 6 E 6 W 6	850# (restricted access to measure)	6.0-E#	6.0#	M	Appears adequate but there was restricted access preventing a view of the tree from all angles	Ivy, basal + epicormic shoots obscuring inspection of base and trunk. Fence restricting access to northern side of trunk. Decay potentially present in old pollard point on northern side - limited view to assess	Strip ivy from lowest 2m of trunk + remove basal + epicormic shoots to allow fuller inspection / Carry out aerial inspection of crown from a climbed position - condition of old pollard points of particular interest	20+	B1*
T11	Privet (*Ligustrum* sp.)	4#	N 1.5 S 2 E 1.5 W 2.5	150 / 120	1.5-S#	1.5#	EM	Fair	Ivy obscuring inspection of base and trunk	None	10+	C2*

KEY TO TREE SURVEY FORM

Tree No. Refer to plan

Species Common name (*scientific name*)

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 Estimated 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].

Stem diameter Measured at 1.5m above ground level [Rounded to the nearest 10mm]. Where stem diameter has been measured at a different height this will be stated and justified.

Existing height of First significant branch – 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.
Canopy – 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 Young – within 1st quarter of species' life expectancy
SM Semi-mature – within 2nd quarter of species' life expectancy
EM Early mature – within 3rd quarter of species' life expectancy
M Mature – within 4th quarter of species' life expectancy
OM Over-mature – in natural decline
V Veteran – a tree that is of interest biologically, aesthetically or culturally because of its age, size and condition

Condition

Physiological

An assessment of the physiological condition (i.e. health/vitality) of the tree categorised into:

GOOD a tree in a healthy condition with no significant problems
FAIR a tree generally in good health with some problems that can be remediated
POOR a tree in poor health with significant problems that can't be remediated
DEAD a tree without sufficient live material to sustain life

Structural

An assessment of the structural/safe condition of the tree categorised into:

GOOD a tree in a safe condition with no significant defects
FAIR a tree in a safe condition at present but with defects or with significant defects that can be remediated
POOR a tree with significant defects that can't be remediated

Notes related to both physiological and structural condition might follow the categorization in order support the statement and give greater detail on the true quality and value of the tree.

Minor deadwood – less than 25mm in diameter
Moderate deadwood – 25-50mm in diameter
Major deadwood – 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 possible.
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 a true grading can be assigned

ROOT PROTECTION AREA (RPA) TABLE FOR RETAINED TREES

TREE NUMBER	**RADIUS OF NOMINAL CIRCLE (m)** **[as per table D.1 (p.40 BS 5837:2012)]**	**RPA (m^2)** **[as per table D.1 (p.40 BS 5837:2012)]**	**20% offset**	**OWNERSHIP STATUS**
1	10.80	366	N/A	3rd party (Local Authority)
2	0.90	3	N/A	18a Frognal Gardens
4	7.80	191	N/A	3rd party (private)
5	7.80	191	N/A	3rd party (private)
6	8.50	226	N/A	3rd party (private)
7	3.60	41	N/A	18a Frognal Gardens
8	1.80	10	N/A	18a Frognal Gardens
10	10.20	327	N/A	18a Frognal Gardens
11	1.90	12	N/A	18a Frognal Gardens

TREES SCHEDULED FOR REMOVAL

TREE NUMBER	**REASON FOR REMOVAL RECOMMENDATION**
T9	Tree condition

Notes

Boundary Line

Rev	Date	Description

Note

Do not scale from this drawing. To be read in conjuction with all relevant Architects', Services and Structural Engineer' information. Architect to be immediately notified of discrepancies.

Key Plan

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Project:
18a Frognal Gardens

Client:
Roger Pilgrim & Nadine Majaro

Project Number: **2473**
Status: **Information**

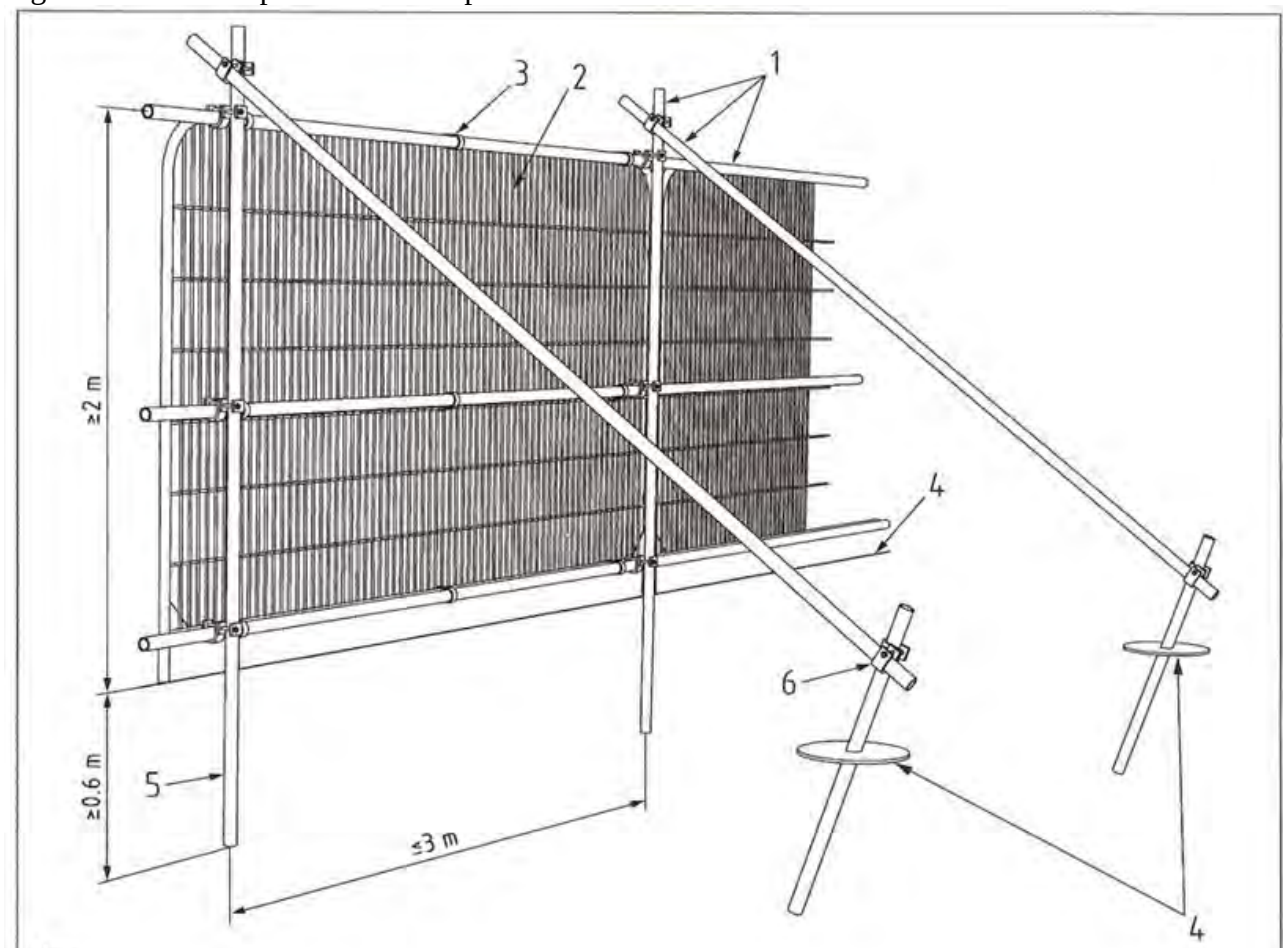
Drawing Title:
Roof

Date: **18/09/2019 14:02:44**
Drawn: **Author**

Scale: **1 : 100** @A1 @A3
Checked: **Checker**

Drawing No: **ABA-2473-20-100**
Rev:

Figure 2 – Default specification for protective barrier



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps