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**ARBORICULTURAL METHOD STATEMENT
FOR
LANDSCAPING WORKS**

AT

**NIDO WEST HAMPSTEAD
BLACKBURN ROAD
WEST HAMPSTEAD
LONDON
NW6 1RZ**

by

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**Our ref: J52.04
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1. INTRODUCTION

Broad Oak Tree Consultants Ltd. received instructions through Turkington Martin, Landscape Architects, to produce an Arboricultural Method Statement (AMS) for the landscaping works at the site referred to as Nido West Hampstead, Blackburn Road, West Hampstead, London, NW6 1RZ.

This AMS is based on the Turkington Martin "Landscape GA Plan", drawing no. TM255-LO2 Rev. G. This forms the basis of the Broad Oak Tree Protection Plan, drawing no. J52.04/02, herein after referred to as the TPP. A copy of the TPP is included in Appendix 1.

The landscaping works involve redefinition and resurfacing of an existing public footpath, improvement of an existing overgrown planting bed; formation of raised planting beds and construction of a boundary wall to a private communal garden area. Full details will have been submitted by Turkington Martin though all their key box details have been retained on the TPP for clarity.

2. TREE INFORMATION

To inform the AMS it was necessary to inspect the trees present to the requirements of Section 4.4 of BS5837:2012 "Trees in Relation to Design, Demolition and Construction - Recommendations". The trees had originally been inspected in February 2016 to inform the proposals and were re-assessed to update the base information in October 2020 by Tim Laddiman, BSc.(Hons) M.I.C.For. M.Arbor.A., Chartered Arboriculturist and Principal Consultant of Broad Oak Tree Consultants Ltd.

For information purposed the Tree Inspection sheets and Explanatory Notes are included in Appendix 2, with a Tree Constraints Plan, drawing no. J52.04/01 Rev. A included in Appendix 3.

To provide an indication of potential root system implications the Root Protection Areas (RPAs) for the trees were calculated based on the formula in Section 4.6 "Root Protection Area (RPA)" of BS5837:2012.

The table below includes radial and total distances, which are indicated on the Tree Constraints Plan and TPP. These are shown as basic circles in the absence of any site investigations to determine actual root architecture based on any on site impediments, such as foundations, services, impermeable surfaces, underground obstructions or soil toxins/types that may have influenced root plate architecture.

Tree no.	Species	BS Category	Stem diameter or calculated equivalent (mm.)	BS calc. radial equiv. root protection area (m.)	BS calc. total RPA (m ²)
1	Sycamore	C2	260	3.1	30
2	Sycamore	C2	290	3.5	38
3	Willow	U	-	-	-
4	London Plane	B2	690	8.3	216
5	London Plane	B2	980	11.8	437
6	London Plane	B2	750	9	255
7	London Plane	B2	890	10.7	360
8	London Plane	B2	740	8.9	249
9	London Plane	C1	580	7	154

3. ARBORICULTURAL WORKS

Prior to any landscaping works commencing the following tree works should be undertaken.

Trees T4, T5, T6, T7, T8 and T9 had previously been heavily reduced prior to the 2016 inspections. Regrowth then and since has been rapid, significantly increasing canopy areas with crowns of T6, T7, T8 and T9 close to the building face.

Given the growth potential of the London Planes and their surroundings it is recommended that they are re-reduced to the previous cut points, continuing the cyclical management.

Tree No.	Species	Works recommended
T4	London Plane	Re-reduce crown to previous pruning points.
T5	London Plane	Re-reduce crown to previous pruning points.
T6	London Plane	Re-reduce crown to previous pruning points.
T7	London Plane	Re-reduce crown to previous pruning points.
T8	London Plane	Re-reduce crown to previous pruning points.
T9	London Plane	Re-reduce crown to previous pruning points.

All tree works will be carried out in accordance with British Standard 3998:2010 "Recommendations for Tree Work" by appropriately qualified and insured tree surgeons.

Prior to tree surgery/felling works commencing, the trees for works should be checked for the presence of nesting birds or bats. Disturbance of nesting birds or bats could represent an offence and result in prosecution under the Wildlife and Countryside Act 1981.

To avoid bird nesting issues the tree works should ideally be completed prior to March 2021.

All machinery associated with the tree works will remain on areas of existing surfacing at all times.

4. TREE PROTECTION FENCING

This is to be installed prior to any landscaping works (other than recommended tree works) commencing to ensure that the tree stems and open ground adjoining are protected from potential damage from the outset. Temporary access will be required for the installation for the porous resin bound tree pit surfacing around trees T8 and T9. Temporary foot access only will also be required during the project, or at the completion of the main works, when the fencing can be removed for the maintenance of the planting bed, as indicated on the TPP and subject to a separate consent.

Fencing to comprise scaffold uprights driven into the ground to circa 60cm depth with a maximum of 3m spacing between uprights. To the uprights weldmesh panels, such as "Heras" or similar products, are to be firmly attached using scaffold clips. Fencing to produce enclosed zones around individual or linear runs of trees with notices placed on every 5th panel saying "Protected Zone – Keep Out" or similar.

No access will be allowed within areas protected by fencing. The storage of potentially injurious materials such as fuels, oils, chemicals and cement will be kept at least 15m from any stem or outside protective fencing areas, whichever is the greatest distance. Alternatively, storage within a bunded storage vessel may be acceptable.

Within the fenced areas no changes in levels will be allowed, either increase or decrease. All material storage will be kept outside of fenced areas with storage zones to be determined by the Site Manager.

Protective fencing will be removed only upon completion of construction and hard landscaping once all machinery has been removed from site.

5. REMOVAL OF EXISTING SURFACES/STRUCTURES

Where practical any existing surfaces/structures within tree RPAs are to be removed by hand tools only with arising materials removed by wheelbarrow/power barrow over retained surfacing.

Any exposed soils are to be covered with temporary plates or scaffold boards to avoid any compaction occurring until new surfacing/structures are ready to be installed.

If a mini digger is deemed necessary for any removals the works are to be overseen by an Arboricultural Consultant (AC). The machine is to remain on retained surfacing or interlocking road plates at all times.

6. INSTALLATION OF NEW SURFACING

All works within indicated RPAs are to be undertaken by hand tools only.

Any excavation for sub base/kerbing/edging will be to the minimum depth necessary. Soils will be first loosened using a garden fork to identify if any roots are present. If roots are under 25mm diameter and restrict the permissioned installation they can be neatly cut back using sharp secateurs/loppers to minimise wound size and tissue exposure. If roots are over 25mm diameter they are to be retained, if at all possible, and incorporated into the sub base layer. If severance is considered essential to facilitate installation then the AC/Council Tree Officer must be consulted prior to any cutting to ascertain the likely impact on the tree.

Where any exposed roots are retained they are to be carefully worked around to avoid bark damage. If exposed for more than one hour they should be covered with dry sacking (wet sacking if summer) to protect against frost/drying out until the new covering is ready to be installed.

Any use of sand within the RPAs to level/fill should utilise Amsterdam sand or similar low salt content, not builders sand.

Any retained roots proposed to be covered directly with concrete should be protected with either a waterproof membrane or cut in half plastic piping to avoid chemical burns from direct contact.

7. INSTALLATION OF WALL FOUNDATIONS

All excavation within RPAs will need to be undertaken by hand tools/airspade only and supervised by the AC.

Any roots over 25mm diameter are to be retained wherever possible and bridged over with lintels designed into the foundation or enclosed in soil lined plastic pipe of circa 2x root diameter to allow for future growth.

If extensive root presence over 25mm diameter is encountered then the foundation design will need to be reconsidered and pile/pad and ground beam foundations utilised rather than deep strip.

8. GENERAL PRECAUTIONS

All materials are to be stored outside of RPAs unless inert and stored on retained/new load bearing surfaces.

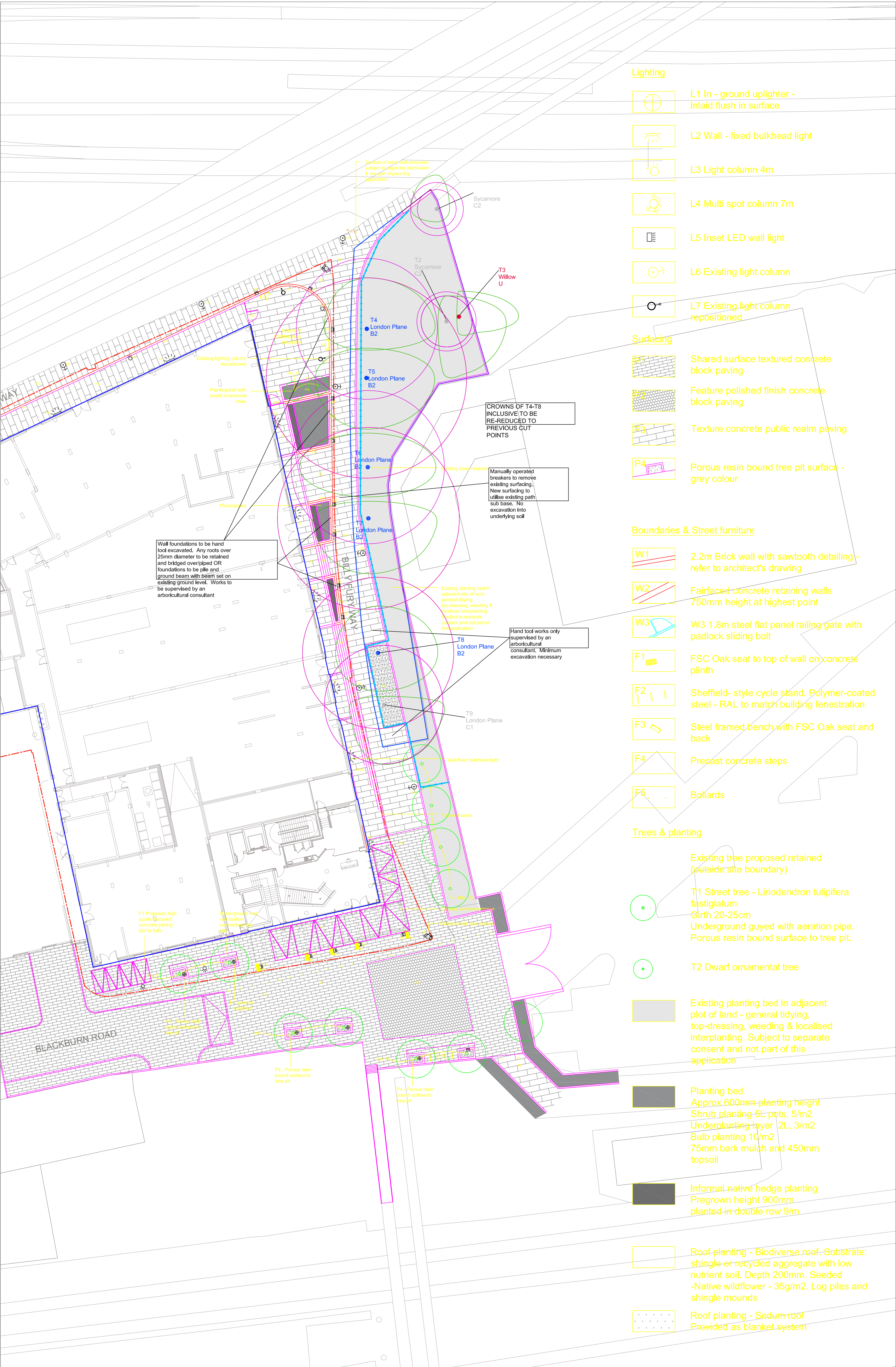
Any cement, chemicals, oils are to be stored at least 15m from any tree stem or in an appropriately bunded storage vessel.

All concrete mixing is to be at least 15m from any tree stem or within a self contained, bunded, enclosure.

Any concrete spillages are to be immediately cleared up.

Tim Laddiman
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APPENDIX 1



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THE NIDO COLLECTION
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TREE PROTECTION PLAN

T1 - T9 Tree numbers

BS Category of Condition

0	BS Condition A
T4	BS Condition B
T1	BS Condition C
T3	BS Condition U

Paced crown spread

BS Calculated root protection areas

Protective fencing location

TREE PROTECTION INFORMATION

Protective fencing measures to be installed at locations specified prior to commencement of any site works.

Protective fencing to comprise scaffold uprights driven into the ground to 60cm, depth at no more than 3m, spacing. Upright to be braced within high usage/construction/demolition areas. Weldmesh panels to be securely fixed to uprights to produce a continuous barrier. Waterproof signs to be attached to every 5th panel declaring "TREE ROOT PROTECTION ZONE - KEEP OUT" or similar wording. Fencing to be constructed in accordance with fig. 2 and section 6 Specifications of BS5837:2012.

The fenced protection zones around retained trees, hedges and shrubbery are to be regarded as sacrosanct and none of the following are to occur within these areas:

- Storage or disposal of any soil, building materials, machinery, fuel or waste residues of any description.
- Siting of any temporary structures of any description including site offices/sales buildings, temporary car parking facilities, porta-loos, storage compounds or temporary hard standing areas.
- Excavations, soil/turf stripping, raising/lowering of existing levels or alterations to the existing natural surfaces/ground conditions of any other description.
- Location of temporary drainage, water supplies or any other temporary underground services.
- No use, movement or parking of any machinery or vehicles of any description.

- Additionally, no free shall be fit within 20m, of the trunks of any trees or the centre line of any hedgerow to be retained.

All services to be installed to the requirements of NUG Volume 4 "Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees". Any runs within retained tree root protection areas to either be bored/moled or any hand excavation to be supervised by the Arboricultural Consultant

Lighting

	L1 In - ground uplighter - Inlaid flush in surface
	L2 Wall - fixed bulkhead light
	L3 Light column 4m
	L4 Multi spot column 7m
	L5 Inset LED wall light
	L6 Existing light column
	L7 Existing light column repositioned

Surfacing

	Shared surface textured concrete block paving
	Feature polished finish concrete block paving
	Texture concrete public realm paving
	Porous resin bound tree pit surface - grey colour

Boundaries & Street furniture

	2.2m Brick wall with sawtooth detailing - refer to architect's drawing
	Fairfaced concrete retaining walls 750mm height at highest point
	W3 1.8m steel flat panel railing gate with padlock sliding bolt
	FSC Oak seat to top of wall on concrete plinth
	Sheffield- style cycle stand. Polymer-coated steel - RAL to match building fenestration
	Steel framed bench with FSC Oak seat and back
	Precast concrete steps
	Bollards

Trees & planting

	Existing tree proposed retained (outside site boundary)
	T1 Street tree - Liriodendron tulipifera fastigiatum Girth 20-25cm Underground guyed with aeration pipe. Porous resin bound surface to tree pit.
	T2 Dwarf ornamental tree
	Existing planting bed in adjacent plot of land - general tidying, top-dressing, weeding & localised interplanting. Subject to separate consent and not part of this application
	Planting bed Approx 600mm planting height Shrub planting 5L pots, 5/m2 Underplanting layer 2L, 3/m2 Bulb planting 10/m2 75mm bark mulch and 450mm topsoil
	Informal native hedge planting Pregrown height 900mm planted in double row 9/m
	Roof planting - Biodiverse roof: Substrate: shingle or recycled aggregate with low nutrient soil. Depth 200mm. Seeded -Native wildflower - 35g/m2. Log piles and shingle mounds
	Roof planting - Sedum roof Provided as blanket system

DRAWING NO. J52.04/02

Scale: 1:200 at A1

Added to by: TL

17/11/2020

APPENDIX 2

TREE SURVEY EXPLANATORY SHEET

Height	in metres (estimated where ground uneven or access restricted).
Stem count	number of stems
Stem diameter	in mm. at 1.5m. above ground level.
Branch spread	radial spread in metres at four main compass points (estimated where no access).
Age class	Young - Y Semi Mature - SM Mature - M Over mature - OM Veteran - V
Height of crown clearance	in metres. Normally range of heights of outer branches above ground level, e.g. 2-4m.
Physiological condition	Good, Fair, Poor, Dead, Variable
Estimated remaining contribution	in years e.g. less than 10, 10-20, 20-40, 40+
Category grading	see attached sheet
Structural condition	comment on presence of defects, decay, crown form, past management, deadwood, other features worthy of note. N.B. If trees are ivy clad, no full structural assessment will have been possible.
Preliminary management recommendations	requirements of further investigations, works necessary to alleviate potential hazards based on current setting and levels of access. NB: Works that may be necessary in relation to development are not included here

CASCADE CHART FOR TREE QUALITY ASSESSMENT

TREES FOR REMOVAL				
Category and definition	Criteria			Identification on plan
Category U Those 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	<ul style="list-style-type: none">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 R category 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 (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality <p>NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree.)</p>			DARK RED
TREES TO BE CONSIDERED FOR RETENTION				
Category and definition	Criteria - Subcategories			Identification on plan
	1. Mainly arboricultural values	2. Mainly landscape values	3. Mainly cultural values, including conservation	
Category A Those of high quality and value: in such a condition as to be able to make a substantial construction (a minimum of 40 years is suggested)	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 which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)	LIGHT GREEN
Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)	Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)	Trees present in numbers, usually as groups or woodland, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality	Trees with clearly identifiable conservation or other cultural benefits	MID BLUE
Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.	Trees not qualifying in higher categories	Trees present in groups or woodland, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit.	Trees with very limited conservation or other cultural benefits	GREY
NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation				

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
1	Sycamore	9	1	260	4	1.5	1.5	3	Y	2+	Fair	40+	C2	Twin stemmed at 1.9m. Previously crowded to S.	
2	Sycamore	13	1	290	3	7	6.5	1	Y	2.5+	Fair	40+	C2	Upper stem curved to E. Previously crowded to W.	
3	Willow	4.5	1	210	3	7	2	0	M	0.5+	Poor	<10	U	Leaning heavily NE over fence. Decayed stem. Part collapsed. Vertical split in stem.	
4	London Plane	13	1	690	6	8	2.5	5	M	2+	Fair	20-40	B2	Decay hollow in old pruning wound to E. at 1.9m. Surface root wounding to W. Multi stemmed at 2.5m where pollarded in past. Reduced at circa 8.5m in past with vigorous regrowth.	
5	London Plane	17	1	980	3.5	8	6	6	M	3.5+	Fair	20-40	B2	Three stems at 1.9m. W. stem extensive hollowing. Multi stemmed at 3m where pollarded in past. Reduced at circa 9.5m in past with vigorous regrowth.	
6	London Plane	17	1	750	4	c8	3.5	8	M	3+	Fair	20-40	B2	Slight lean to E. Multi stemmed at 3.5m where pollarded in past. Reduced at circa 9.5m in past with vigorous regrowth. No access. Enclosed in fence.	

Tree ref. no.	Species	Height (m.)	Stem Count	Stem diameter or equivalent (mm.)	Branch spread (m.)				Age class	Ht. of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading	Structural condition and Notes	Preliminary management recommendations
					N	E	S	W							
7	London Plane	16	1	890	2	c8	6.5	6.5	M	2.5+	Fair	20-40	B2	Multi stemmed at circa 3m where pollarded in past. Reduced at circa 8.5m in past with vigorous regrowth.	
8	London Plane	15	1	740	5.5	c7	4.5	5	M	2.3+	Fair	20-40	B2	Twin stemmed at 2m. Multi stemmed at circa 3m where pollarded in past. Decayed pruning wounds. Reduced at circa 7.5m in past with vigorous regrowth.	
9	London Plane	13	Multi	580	1	c7	7	4	M	2+	Poor	10-20	C1	Multi stemmed near ground level. Three main stems, two with minor basal wounding. Reduced at circa 5m in past with regrowth. Dead stem to W. Deadwood. Localised decay at base to N. and W.	Remove dead stem and deadwood.

APPENDIX 3

TREE CONSTRAINTS PLAN

T1 - T9 Tree numbers

BS Category of Condition

- 0 BS Condition A
- T4 BS Condition B
- T1 BS Condition C
- T3 BS Condition U
- Paved crown spread
- BS Calculated root protection areas

The root protection areas have been calculated using the measured stem diameters and the formula as described in Section 4.6 in BS5837:2012. These are represented as basic circles on the Tree Constraints Plan. Where buildings, walls, roads or other structures are likely to be affected by root systems which have been affected, Foundations to walls and buildings can completely obstruct root development, depending on underlying soils. In the absence of detailed site investigations, the indicated RPA circles should be used for guidance only within any redevelopment proposals.