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Arboricultural Impact Assessment/Statement and Tree Protection Plan Proposed Garden Studio in The Rear Garden of 98 Fellows Road Belsize Park London

1.A rboricultural Method Statement and Impact Assessment

The proposal for the Garden Studio 98 Fellows Road, Belsize Park, London

The following Arboricultural method statement is to provide a protection strategy for the tree adjacent to this proposal. The tree protection plan (TPP) shows the construction area of this proposal. The project in the rear garden is to erect a new Garden Studio of wooden construction adjacent to T1 mature London Plane (Platanus X hispanica) residing in the neighbouring garden 100 Fellows Road will not be influenced by this proposal. The T1 canopy is over hanging at 8m in height, the proposed garden studio will be a maximum height of 2.8m. The walls between the adjacent trees T2 to T6 provide a natural barrier and a restriction of roots from these specimens. Group G1 3no semi mature Birch will be retained to accommodate the proposal landscaping is planned to provide new planting within the garden. The existing 'flower beds' will remain to maintain the mature Japanese Maples and other ornamentals. The lawn area will be renovated as a grass area. In conclusion the proposal will not have a significant impact on the amenity of this area.

The construction will involve the installation of 6 pile holes close to the root protection area (RPA) of the London Plane. The pile holes will be 600x600mm hand dug only to avoid damage to the tree roots. The building is to be a lightweight construction suspended on the pile and beam foundation.

The root protection fencing as detailed on the plan as the red dashed line is to be constructed before any construction commences and erected as specified as fig.2 BS5837:2012 see page 15. The project will include a structured procedure of Arboricultural supervision as the attached flow chart and these details should be available on site and conveyed to the construction contractors.

Tree Survey: Schedule

Method: Visual Tree inspection references, Principles of Tree Hazard Assessment and Management by David Lonsdale and The body language of trees by Claus Mattheck and Helge Breoer. The Arboricultural Association guidance note 7 tree surveys a guide to good practice. Lantra award Professional tree inspection. BS5837: 2012 Tree in relation to design, demolition, and construction recommendations.

- **Tree Number: T1**
- **Species: London Plane (Platanus X hippocastanum)**
- **Height: 20m>**
- **Stem diameter: 1175mm**
- **Crown spread: N8m E8m S8m W8m**
- **Clearance: 5m>**
- **Root Protection Radius: 14.10m (as Annex D BS 5837:2012 table)**
- **RPA m2 = 625m squared**
- **Age Class: Mature**
- **Physiological Condition: Normal,**
- **Structural Condition: Normal will need monitoring in the future. (Check cavity in main stem)**
- **Estimate Life expectancy: 20>**
- **BS5837 Category: C**

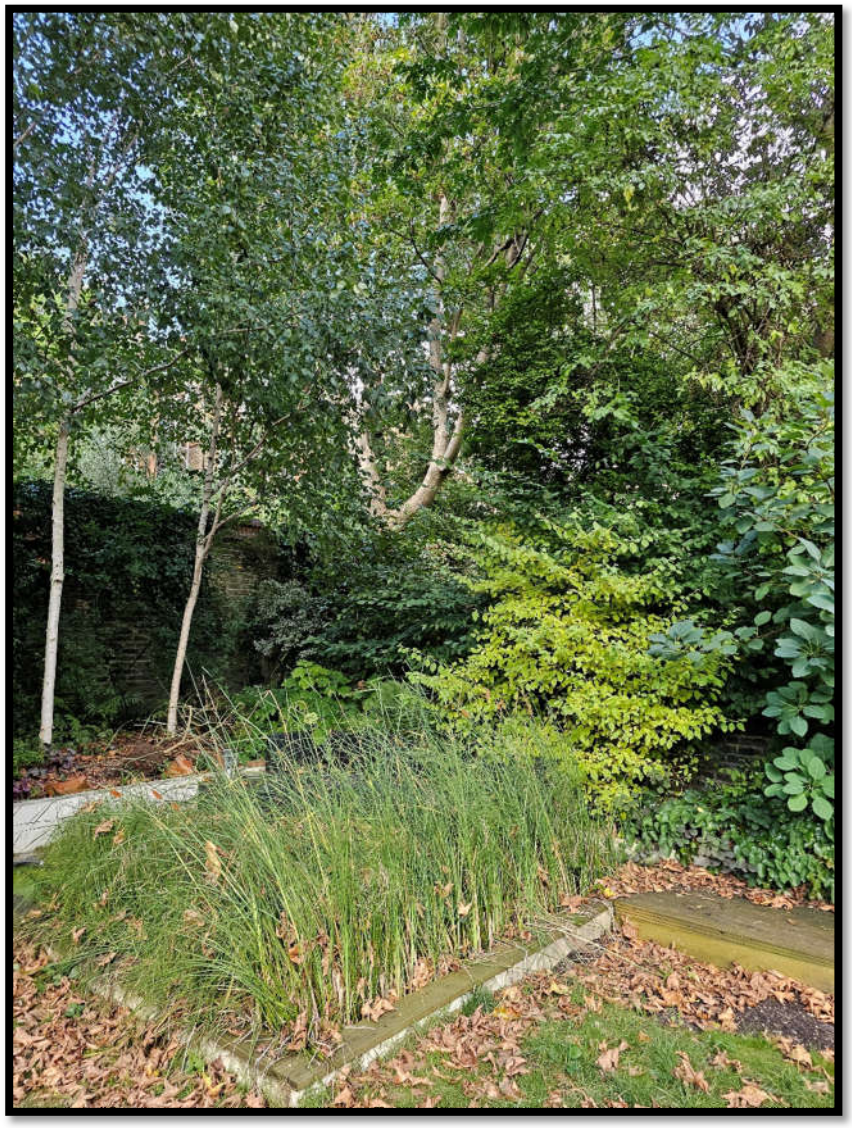
Recommendation: Install protective fencing before construction as TPP. Hand dig pile holes only as indicated on the plan. ***(Notify Owners: Specimen requires crown reduction by 2 to 3m overall back to previous reduction points. Cavities in main stem on northside require further assessment during tree works).***

Other trees see plan:

T2 to T6 – In neighbouring gardens outside of the influence of the proposal.

G1 3no Young semi mature Birch – 1no. To be retained in situ and 2no. to be moved as drawing.

T1 In neighbouring garden.



Proposal position see drawing.

Contacts:

1. Local Authority Arboricultural officer
2. Site Agent
3. Appointed arboriculturist

No contractors have been appointed at this stage. If there is a need to review any of the protection plans/method statements considering additional requirements identified by contractors, written approval for any such modifications will be obtained from the LPA prior to commencement of any work.

1.1.1 The methodology of the tree protection measures follows a logical sequence of development events. Variations to the sequence could significantly reduce the efficiency of the tree protection measures. Variations to the proposed development will require input prior to commencement of the variations, from the appointed arboriculturist and/or the LPA Arboricultural officer.

1.1.2 The LPA will be given notice in writing 5 full working days prior to the date of commencement of development to check all tree protection in place.

1.1.3 Works will be strictly in accordance with the Arboricultural method statement.

1.1.4 It is recommended that only agreed works within the RPA, will only be carried out under supervision by an arboriculturist. It is the responsibility of the client to appoint an arboriculturist prior to commencement of works. Details of the appointed arboriculturist will be forwarded to the LPA.

1.1.5 A schedule of activities that will require Arboricultural supervision at various stages has been produced. This should form the minimum site attendance by the appointed arboriculturist, as well as the Local Authority tree officer (where relevant).

1.1.6 Periodic reports, along with supporting evidence, will be submitted to the LPA on the tree protection measures, as well as the results of activities within the RPAs of retained trees.

1.2 Preliminary tree maintenance.

1.2.1 Prior to carrying out any tree work, all trees recommended for tree work/removal including their immediately adjacent tree, will be inspected for bird nests (wholly and partially built ones). In the event nests are found, the tree work will not be carried out until the trees are found to be free of the nesting birds & their young. This is a requirement under the Wildlife & Countryside Act 1981 & The Countryside & Rights Of Way Act 2000.

1.2.2 All tree work will be carried out in accordance with **BS3998:2010** & will be carried out without harming the adjacent retained trees.

1.3 Preliminary vegetation control.

1.3. • Kill ground vegetation using a systemic herbicide and gather organic material. Care must be used to select (by reading the label) a herbicide that will not affect the roots of the trees or vegetation. This operation must be carried out by an appropriately trained individual.

1.4 Preliminary tree protection methods.

1.4.1 Construction required of RPA fencing as stated on the Tree Protection Plan. Tree works as detailed on page 2 Tree survey schedule.

1.4.2 All or any preliminary tree work: None recommended

1.4.3 Protective fencing of the type shown in the protection plan will be placed in the positions indicated on the protection plan. Note that these plans are to scale and can be scaled off. The fencing will be permanently fixed to the ground as shown in the plans, or fixed to a permanent feature. Weatherproof signs will be attached to the fencing, stating their purpose and that they should not be moved. The protective fencing will delimit a construction exclusion zone and will be considered immovable. The positioning & installation of the protective fencing will be supervised by the appointed arboriculturist.

1.4.4 If necessary ground protection of the type specified in the protection plan will be placed in the positions shown on the plan. The type specified will be determined by the assumed load expected. Any loading in excess of 1t will require the use of heavy duty ground protection, as indicated. This will be supervised by the appointed arboriculturist.

1.4.5 Prior to commencing work on site, all contractors will be given an induction on the tree protection measures employed during the development project and on the potential consequences of disregarding them (pre-commencement meeting).

1.5 Arboricultural Methods and restrictions during all phases of development:

The following tree protection measures will be adopted throughout the life of the development:

1.5.1 The fencing comprising the construction exclusion zone will not be moved, except if specified in the tree protection plans. All staff on site will understand the need for protective fencing, as well as any ground protection and to keep strictly within the designated access routes, when moving in/out the site.

1.5.2 Protective fencing will be maintained & inspected on a weekly basis by the site manager. Inspections will be recorded on an inspection form.

1.5.3 All damage to protective fencing or accidental damage to trees will be reported to the site manager immediately. Works occurring within the incident vicinity will cease immediately until adequate tree protection measures are re-established. A record of the damage will be made by the site manager and, in consultation with the appointed Arboricultural consultant, remediation measures carried out.

1.5.4 No materials and/or plant will be stored within the designated root protection area of any of the trees and/or within the delimited construction exclusion areas. Any liquid materials to be stored on site, will be located where, in any event of spillage, will allow for natural run-off to be away from the designated root protection areas and buffer zones and/or stored within a pre-constructed spillage containment area.

1.5.5 The mixing of concrete and mortar will be performed outside any root protection areas, in such an area where in the event of any spills, any liquid will drain away from the root protection areas and any buffer zones and/or within a pre-constructed spillage containment area.

1.5.6 The use and movement of any cranes/heavy lifting arms/digger arms and booms of delivery vehicles will be carried out without damage to any part of the retained trees.

1.5.7 No dry construction materials will be stored within the RPAs of the retained trees, unless adequate ground protection (approved by the appointed arboriculturist), has been installed within the storage area.

1.5.8 No soil, demolition debris, or any other arisings will be stored within the RPAs or under canopies of the retained trees, whichever is the greater.

1.5.9 No ground level changes will occur (no grading/levelling/raising), within any RPAs of the retained trees, unless consented to by the LPA & supervised by the appointed arboriculturist. Changes to the ground levels within RPAs of retained trees will follow the advice of the appointed arboriculturist.

1.5.10 No additional tree work will be carried out unless consented to in writing by the LPA

1.5.11 the positions of all site welfare & storage areas will also be located outside any canopy areas & RPAs of any retained trees.

1.5.12 No fires will be lit within 20m of any RPAs or canopies of retained trees, whichever is the greater

1.5.13 for the purposes of this method statement, significant roots referred to, constitute individual roots of diameters of 25mm and above, as well as dense fibrous root masses. The significance of both will be determined by an appointed arboriculturist upon discovery of either.

1.5.14 If roots 20mm and smaller in diameter are damaged that belong to retained trees, these should be cut cleanly and covered in damp Hessian or soil. If roots 25mm and larger are damaged or if a large number of smaller roots are damaged, these should be covered in damp Hessian or soil
& advice should be sought from the appointed arboriculturist prior to treating them.

1.6 Demolition/Preparation:

1.6.1 A pre-commencement site meeting will be carried out by all involved in the construction & the supervising arboriculturist, to clarify tree protection measures.

1.6.2 Tree protection measures will have been installed prior to any commencement of demolition site preparation.

1.6.3 No plant machinery will encroach on the RPA of the retained trees, unless the ground is adequately protected & the machinery is incapable of striking the canopy or tree stem. If plant machinery is to encroach on protected RPAs of retained trees, this will be supervised by the appointed arboriculturist.

1.6.4 The protective fencing in the site (protecting T1), will be retained in situ until landscaping operations are to be undertaken. This will provide additional protection for the Root Protection Areas.

1.6.5 Debris from any preparation work will not be stored within any RPAs of retained trees at any time.

1.7 Construction:

1.7.1 The tree protection measures will be retained in the positions specified on the Protection Plan.

Structure foundations within RPAs:

1.7.3 The foundations for the proposed do not encroach on the RPA. If roots are encountered, these will be cut cleanly. Excavations in this area will be supervised by the appointed arboriculturist.

1.7.4 Impermeable membranes will be used when pouring concrete for foundations, to avoid contamination of the soil & damage to any tree roots by wet cement, particularly within the RPAs of the retained trees.

Underground services:

1.7.5 The excavations for any underground services will (where possible) be routed outside any RPAs. If it is unavoidable that underground services be run inside RPAs, then the trenches for them will be excavated by hand or air-spade. Any roots that span the trench during digging will not be cut, but will have damp Hessian sacking placed around them. Damaged roots of up to 2cm diam will, where possible, be cut cleanly and covered. Any substantial roots (larger than 25mm diam), that become damaged or need to be removed, advice will first be sought from the supervising arboriculturist prior to any work being carried out on them. This will be carried out under Arboricultural supervision

1.7.6 If and when installing infrastructure for underground services, they will be done by hand within any RPA and care will be taken not to damage the exposed roots. Back-fill within an RPA will not be compacted and will possess the same soil profile asthe surrounding soil. If there is a need to compact Backfill, in preparation for the reinstatement and/or installation of infrastructure within an RPA, then CU structural soil will be used as Backfill.

1.7.7 The timing of any excavations for underground services will coincide with the arrival of materials to be used for the construction of the underground services, to minimize the time that roots are exposed. Roots will not be left exposed for more than 24 hours.

1.8 Landscaping:

1.8.1 Landscaping operations will commence only when all main construction work has ceased. The protective fencing will be removed immediately prior to commencing these operations.

1.8.2 No soil lowering will occur within the RPA of T1 London Plane.

1.8.3 The existing soil levels will not be raised by more than 150mm within RPA of retained trees without seeking advice from the appointed Arboricultural consultant.

1.8.4 Excavations for planting within RPA of retained tree will be carried out by hand only. The same will apply for introduction of topsoil, plant transport & mulching.

1.8.5 All landscaping work within RPA of retained trees will also be carried out by hand only.

Footpaths/hard surfaces:

1.8.6 Any exposed roots will be covered with damp Hessian. Debris from the excavation will not be stored in this area but will be immediately removed from the RPA.

1.8.7 General purpose topsoil to BS3882:2007 will be used to replace the previous hard surface. N/A

1.8.8 The proposed building will not impinge on the RPA.

Boundary treatments within RPA:

1.8.9 Where new boundary fences are proposed to be installed within the RPAs of retained trees, this will be carried out using hand tools only. Excavations will be undertaken using hand tools only at proposed fence post locations to confirm the existence of significant or insignificant roots. If significant roots are found, then an alternate location will be sought using the same method.

1.9 Post-development tree Care and amelioration

1.9.1 Once all construction & landscaping activities have been completed, any remaining ground protection/protective fencing will be removed.

1.9.2 A detailed visual inspection of the retained trees on the site & RPA, will be carried out, to check for signs of development damage to both the trees and their rooting environment.
Appropriate remedial tree / soil work will then be recommended by an arboriculturist.

1.9.3 Any damaged branches will be removed or pruned cleanly in line with current good Arboricultural practice (BS3998:2010) and any specific Arboricultural advice. Any other remedial work will also be carried out as & when recommended.

1.9.4 An annual tree inspection regime will be implemented to monitor the health of the retained & replaced trees for an agreed period after the development project is complete. The appointed arboriculturist will provide reports to the client & the local authority tree officer at agreed times, on the condition of the retained trees & any remediation work recommended.

2. Site Supervision

BS5837:2012 recommends site supervision at regular intervals & many local authorities are requesting detailed schedules for site supervision, as well as the details of the supervising arboriculturist.

If the above is required by the LPA, the appended table indicates when attendance by an arboriculturist for the site should occur, to ensure appropriate tree protection.

This concludes the method statement.

Kim Gifford Arboricultural Consultant.

Supervision schedule

	Pre-development& preparation	During construction	During Landscaping	Post-construction
Site attendance by arboriculturist needed	1.Site meeting with all involved in the Development project	1.Site meeting with all involved in the Development project	1.Monitoring the removal of the existing hard surface withinthe RPAof trees	1.Visual inspection of trees within RPAs of retained trees to identify any construction related damage
	2.Supervising the initial construction& positioningof protectivefencing&	2.Monitoring the excavations within theRPAoftrees	2.Monitoring the introduction of new topsoil in to the RPA oftrees	2.Submission of final report to LPA
	3. Periodic site visits to check integrityof protection measures	3.Supervising the installation ofany undergroundservices within theRPAsof	3.Periodic sitevisits to check integrityof protection measures	
	4.Submission of report to LPA	4.Periodic site visits to check integrity of protection measures		
		5.Submission of report to LPA		

on retained hard surfacing or it is otherwise unfeasible to use ground pins, e.g. due to the presence of underground services, the stabilizer struts should be mounted on a block tray (Figure 3b).

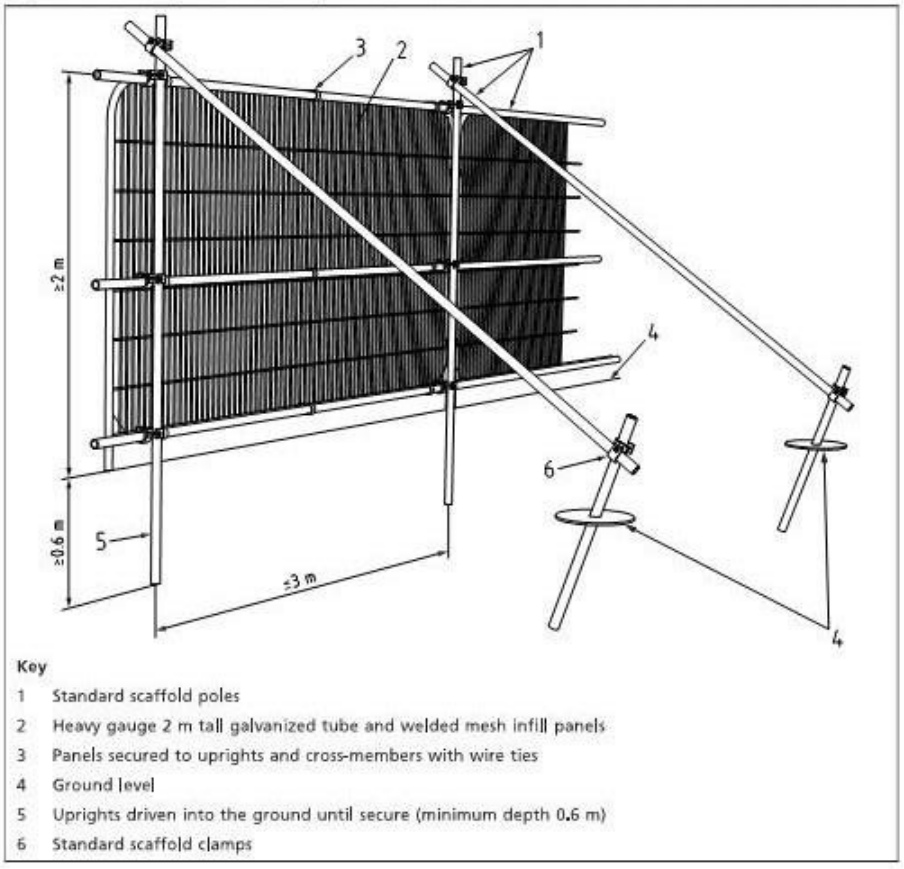
NOTE 1 Examples of configurations for steel mesh perimeter fencing systems are given in BS 1722-18.

NOTE 2 It might be feasible on some sites to use temporary site office buildings as components of the tree protection barriers, provided these can be installed and removed without damaging the retained trees or their rooting environment.

6.2.2.4 All-weather notices should be attached to the barrier with words such as:

"CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

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