

Tree Survey & Arboricultural Report (Stage A)

Impact Assessment & Method Statement (Stage C)

At

**29 Langland Gardens
Hampstead
NW3 6QE**

Written By;
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Of



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Summary

An arboricultural survey has been carried out and this report prepared to inform the constraints posed by the existing trees. All trees that could be affected by the proposal area or have an influence on it were inspected.

The site contains four trees; two located at the front (T1 Holly & T2 Hornbeam) and two located in the rear garden (T4 Cypress & T5 Privet). The front garden has also a mixed hedge growing in a low raised bed which separates and add privacy to the property on the North side. Adjacent sites contain one tree each (T3 Ash and T6 Cherry).

The highest amenity tree is T3, a good specimen Ash which is located offsite.

The trees are located in a conservation area and both trees are protected by TPOs; T1 Holly TPO (C674 2007) and T2 Malus (65018). Fines exist for carrying unauthorised works on protected trees.

Both trees located in the rear garden are proposed to be removed (T4 Cypress & T5 Privet). The cypress T4 has outgrown its small space and is proposed to be replaced with a smaller tree such as Cupressus sempervirens for its tall and slim features. T4 has previously been pruned to reduce its size. T5 privet is a low-quality large shrub/small tree and is proposed to be removed in order to take away the small raised bed. Both trees are low quality grade C.

The trees located in the front garden will require protection to the trunk to minimise damage from collisions due to the increased footfall and deliveries of materials for the construction activities.

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1. Introduction

1.1 Instructions:

- 1.1.1. I have been instructed by 800 group, to conduct an Arboricultural survey to BS 5837: (2012), to inspect the significant trees (T1-T6 & G1) at 29 Langland Gardens, NW3 6QE, to provide an Arboricultural report (Stage A, Feasibility: surveys and preliminary constraints) on the condition of these trees, including an Impact Assessment and a Method Statement (Stage C).
- 1.1.2. This includes the following;
- Arboricultural report (Feasibility: surveys and preliminary constraints) on the condition of these trees (Stage A)
 - Tree Constraint Plan (Stage B) and Tree Protection Plan (Stage D); Drawings L001 & L002
 - Impact Assessment (Proposal: conception and design) and the Method Statement (Technical design) Stage C

1.2 Qualifications and Experience:

- 1.2.1 I have based this report on my site observations and the provided information, and I have come to conclusions in the light of my experience and technical knowledge.
- 1.2.2 My qualifications and details of my experience are shown in Appendix 1.

1.3 Documents and Information Provided:

- 1.3.1 The following documents have been received and relate to the same issues that this report is intended to cover:
- Existing and proposed (CAD) plans.

1.4 Scope of This Report:

- 1.4.1 This report is only concerned with the trees listed as T1 – T6 and group G1, it includes an assessment based on the site visit and the documents provided, listed in 1.3 above.
- 1.4.2 Trees with a stem diameter of less than 75mm or 150mm in woodlands area have not been recorded as per guidance in BS5837:2012 or species considered to be shrub specimens.
- 1.4.3 This report is designed to support the planning application at the above site. Its purpose is to assist and inform the planning process according to guidelines laid out in BS 5837: (2012).
- 1.4.4 This report should not be seen as a substitute for a management plan or a full safety survey.

2. Site Information

2.1 Site Visit

- 2.1.1. A walk over visual survey of the site and its immediate surrounds was undertaken on 22th of February 2019. All my observations were from ground level without detailed investigations and I estimated all dimensions unless otherwise indicated. If specialist assessment methods are adopted, they will be detailed where appropriate. The weather at the time of inspection was sunny.

2.2 Brief Site Description:

- 2.1.2. The site is located in London, the plot of land (house and garden) is located near Frognal Lane.

2.3 Site Use

- 2.1.3. The site and neighbouring site are privately owned houses.

2.4 Topography

- 2.1.4. The ground drop considerably (1m approx.) in North West corner between gardens adjacent to the raised bed with T5 Ligustrum.

2.5 Amenity

- 2.1.5. The tree with the highest arboricultural qualities is the Ash T3 on the neighbouring site.

3. Tree Inspection

3.1 Tree Observations:

- 3.1.1. I visually inspected the significant trees and recorded the information on the schedule included below; all dimensions given are approximate only.
- 3.1.2. Note to schedule
- Reference numbers shown on drawing 0192, L001
 - Species are listed in Common name and in Latin
 - Height describes the approximation of the height of the tree from ground level in metres.
 - Stem diameter in millimetres at 1.5m above adjacent ground level.
 - Branch spread describes the approximation in metres.
 - Age is indicated as Young (Y), Semi mature (SM), Early mature (EM) Mature (MA) Over Mature (OM) Veteran (V)
 - Physiological condition (good, fair, poor, dead)
 - Structural condition (good, fair, poor, dead)
 - General comments and comments on preliminary management recommendations
 - Estimated remaining contribution in years (less than <10, >10, >20, >40,)
 - Category refers to table 1, Cascade chart for tree quality assessment of BS 5837:2012 where A is the most desirable and C the least desirable, with U for removal

3.2 Schedule of trees

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA (m)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectancy	Category grading
T1 TPO C674 2007	Ilex aquifolium (Holly)	5	235	2.8	N 1 W 1 E 1 S 1	2.5	M	Good	Fair	Form: single stem History: no signs of major pruning. Defects: bark damage at ground level Others: TPO	No action	>20	B1
T2 TPO 65018	Malus (Fruit tree)	10	410	4.9	N 3 W 3 E 3 S 3	-	M	Fair	Fair	Form: single stem History: evidence of recent pruning. Defects: leaning tree Others:	No action	>20	B1
G1	Hedge mix; Cotoneaster Laurel Pyracantha	8	-	-	N 1 W 1 E 1 S 1	-	M	Fair	Fair	Form: Hedge History: maintenance pruning Defects: no clear view Others: located in raised bed	No action	>10	C1
T3	Fraxinus sp (Ash)	15	600*	7.2	N3.5 W3.5 E3.5 S 3.5	8	M	Good	Good	Form: single stem History: Recent pollard Defects: No obvious defect Others: offsite	Offsite No action	>40	A1
T4	Chamaecyparis sp. (Cypress)	17	320	3.8	N 3 W3 E3 S 3	3	M	Fair	Fair	Form: single stem History: maintenance pruning Defects: growing into existing decking and too close to fence Others: tree large for available space	Remove	U	U

Tree Ref. no.	Species	Height M (m)	Stem dia. (mm)	RPA (m)	Branch Spread (m)	Crown Clearance (m)	Age class	Physio-logical condition	Structural condition	Notes	Recommendations	Life Expectancy	Category grading
T5	Ligustrum sp. (Privet)	8	127	1.5	N 2 W2 E2 S 2	1.5	EM	Fair	Fair	Form: single stem History: maintenance pruning Defects: broken small branches Others: planted in raised bed	Remove	>10	U
T6	Prunus sp (Cherry)	15	350	4.2	N 2 W2 E2 S 2	-	M	Poor	Poor	Form: single stem History: poor maintenance Defects: covered in Ivy Others: no clear view	Offsite No action		C1

*approximated

3.3 Summary of our findings and recommendations

- 3.1.3. The following items are my recommendations in relation to the above facts and opinions. These recommendations are made for management purposes only and are made independently from the development proposals.
- Work must be in accordance with BS 3998:2010
 - All work should be done taking account of the Health and Safety at Work Act :1974
 - All works must have consent from the local planning department.
- 3.1.4. Trees to be removed for safety
- None
- 3.1.5. Trees to be removed for other reasons
- T4 Cypress ; too large for the space
 - T5 Privet (large shrub/small tree) removal of raised bed
- 3.1.6. Trees to monitor
- None
- 3.1.7. Trees to have work done for reasons such as crown reshaping, crown reduction, dead wood removal, stubs removal etc...
- None
- 3.1.8. Trees to be cleared from Ivy
- None
- 3.1.9. Trees with no actions recommended
- T1 Holly
 - T2 Malus
 - G1 Mix hedge
 - T3 Ash (offsite)
 - T6 Cherry (offsite)
- 3.1.10. Trees to be re-examine with specialist equipment
- None

3.4 Tree Protection

- The site is located in a conservation area and T1 (Holly) and T2 (Malus) are protected with a TPO.

Trees that have Tree Preservation Orders (TPOs) or that fall within a Conservation Area are protected by legislation that makes it an offence to carry out work on those trees without permission from the council.

A TPO application form should be completed to seek consent for felling or pruning a tree on the adjacent site.

Development Control Form

- Application for tree works: works to trees subject to a tree preservation order (TPO) and/or notification of proposed works to trees in a conservation area. Town and Country Planning Act 1990

We strongly advise that checks are made prior to any tree work is done as fines exist for carrying unauthorised works on protected trees.

3.5 Relevant references

BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations
BS 3998:2010 British Standard Recommendations for Tree

Should you have any queries about this report please do not hesitate to contact me.

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4. Arboricultural Impact Assessment (STAGE C, Proposal: conception and design) To be completed once the proposed development plans have been received.

4.1 Outline of the Development

4.1.1 Expansion of the existing house

4.2 Impact of Tree Loss

4.2.1 T4 Chamaecyparis sp (Cypress) and the large shrub/small tree T5 Ligustrum are proposed to be removed.

4.2.2 T4 Chamaecyparis sp (Cypress) has outgrown the small available space touching the boundary fence.

4.2.3 T5 Ligustrum is a low quality shrub/ small tree planted in a raised bed that is proposed to be demolished.

4.3 Impact of Tree Pruning.

4.3.1 Trees have all recently been pruned and no further pruning is expected to be required for the construction.

4.4 Impact of General Construction Activity

4.4.1 Tree protection measures are specified in section 5 of the method statement to ensure that the impact of the construction activities is minimal.

4.4.2 Any work within the Root Protection Area shall be done by hand to minimise damage to the existing trees.

4.5 Impact of Demolition / Removal of Surfaces

4.5.1 Any work within the Root Protection Area shall be done by hand to minimise damage to the existing trees.

4.6 Impact of Changes in Ground Levels

4.6.1 No change of level within the RPA is proposed.

4.7 Impact of changes in Ground Surfaces

4.7.1 The new proposed hard landscape will be porous to allow water and oxygen to the tree roots.

4.8 Impact of the Proposed Work

4.8.1 The construction of the new work should have no impact on the existing trees as long as the tree protection measures are followed.

4.9 Services and Drainage

4.9.1 Underground services are to be installed outside the RPA (Root Protection Area) so that there should be no arboricultural impact from services.

4.10 Hazardous Materials

4.10.1 All hazardous materials are to be controlled to ensure that there is no detrimental impact on tree health.

4.10.2 Material should be stored away from the RPA of the retained trees.

4.11 Effect of Retained Trees on the development

4.11.1 The existing trees to be retained are situated at sufficient distance from the proposed work so that future growth will not affect the new work.

4.12 Summary

4.12.1 As long as tree protection measures are implemented as per section 5, there shall be no significant arboricultural impact of the development

5 Method Statement (Technical design)

This section details all of the tree protection measures to be adopted in order to protect the trees to be retained.

Pre-construction phase

5.1 Tree works

5.1.1 Before works commence and before any materials or machinery are brought onto the site the tree protection fence will be erected to form the construction exclusion zone and will be maintained throughout the construction period.

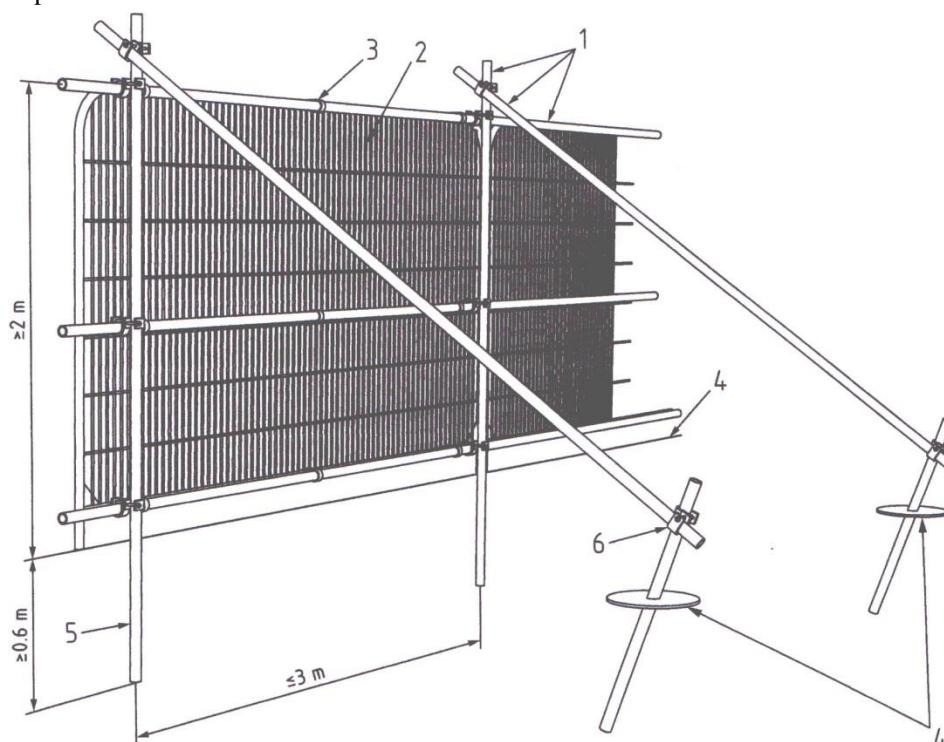
5.1.2 All tree work should comply with BS3998. All arisings shall be removed from the site unless otherwise specified. The local Authority officer shall be informed of the intended date of works and invited to inspect the works following completion.

5.2 Protective Fencing

5.2.1 The protective fencing needs to be installed in accordance with the Tree Protection Plan.

5.2.2 In ground system (close to construction area)

5.2.3 Protective fence will consist of a scaffold framework in accordance with BS 5837:12 which comprise a vertical and horizontal framework, well braced to resist impact, with vertical tubes spaced at a maximum interval of 3m. Onto this, weldmesh panels will be securely fixed with wire or scaffold clamps. Weldmesh panels on rubber or concrete feet are not resistant to impact and should not be used.



5.2.4 Once erected the barriers should be regarded as sacrosanct, and should not be removed or altered without prior recommendation by an arboriculturist and approval of the local planning authority.

5.2.5 Once the protective barriers have been erected an all-weather notice will be erected on the barrier indicating 'Construction exclusion zone – Keep out'. The notice should list all restrictions as listed below. These restrictions shall apply to the fenced off area

- No construction activity at all in this area
- No tree works without the written consent from the council
- No change in ground levels or conditions
- No chemical or cement washings
- No excavations
- No temporary structures
- No storage of soil, rubbles, or other
- No vehicles or machinery to be used or parked
- No fixtures (signs, lighting, etc) attached to trees.
- No fires within 10 metres of the canopies of trees or hedge.

5.2.6 The 'Strut and Block-tray' System

Panels with anti-climb mesh (2x3.5m standard.) linked with anti-tamper couplings, concrete blocks feet secured with soil pins, struts to stabilise the fence with bloc tray loaded with concrete blocks or sandbags every third panels to prevent the fence to be moved.

5.2.7 The 'Heras Steadfast Systems'

Panels with anti-climb mesh, high visibility blocks with small struts increase the stability of the fence and prevent lifting. Soil pins prevent easy movement of the feet and anti-tamper coupler can only be removed with the use of a specialist tool.



5.2.8 Where tree crowns overhang the provisional position of tree protection barriers, an assessment by an arboriculturist will be done to determine whether it may be necessary to increase the area of protection or determine the extent of pruning.

5.3 Special Ground Protection Measures

- 5.3.1 If necessary, to have pedestrian movement within the RPA the installation of the ground protection will be required.
- 5.3.2 In order to avoid compaction, disturbance and contamination protective boards shall be used. 18mm shuttering ply shall be secured to timber supports. The space between the boards and the ground level shall be filled with woodchip (100mm).
- 5.3.3 The boards shall remain secure throughout the entire construction phase. They shall be installed before commencement of all construction activity and shall be removed only when all construction is completed.
- 5.3.4 For vehicular movement, temporary ground protection, in order to spread the load will be required. Track plates should be laid on top of a compression-resistant layer (150mm depth of woodchip or granular material), laid onto a geotextile.



Construction Phase

5.4 Removal of Hard Surfaces

- 5.4.1 Only hand tools shall be used to remove hard surfaces within the RPA (Root Protection Area) and no excavation shall take place other than what is required to remove the surface and sub base.

5.5 Foundation and Level Grading

- 5.5.1 No re-grading shall take place within the RPA (Root Protection Area).

5.6 Use of Heavy Plant

- 5.6.1 All machinery shall only operate outside of the Tree Protection Areas.

5.7 Underground Services

- 5.7.1 Underground services and drains are to be routed to avoid the Root Protection areas of all trees so no specialist techniques are required.

5.8 Siting of Cabins

- 5.8.1 All cabins and site services are to be positioned outside the Tree Protection Zone.

5.9 Storage of Materials

- 5.9.1 All building materials and spoil heaps shall be located outside the Tree Protection Zone.

5.10 Hazardous Materials

- 5.10.1 All mixing of cement based materials is to take place outside Tree Protection Zone. Provision shall be made to ensure that no water runoff enters the RPA (Root Protection Area).
- 5.10.2 All other chemicals hazardous to tree health, including petrol and diesel are to be stored in suitable containers as specified by COSHH Regulations 2002, and kept away from the RPA (Root Protection Area).

5.11 Ground Level Changes

- 5.11.1 No ground changes in excess of 100mm are to take place anywhere the RPA (Root Protection Area).

5.12 Scaffolding

- 5.12.1 Care is required when erecting scaffolding close to trees. Ground protection measures shall be implemented.

Post Construction Phase

5.13 Removal of Fencing

- 5.13.1 This will be done after all major construction work is complete.
- 5.13.2 The local authority Tree Officer should be made aware that the fencing is to be removed.

5.14 Landscaping

- 5.14.1 No machinery used within landscaping operations is to operate within the RPA (Root Protection Area).

5.15 Tree Works

- 5.15.1 No remedial tree works are anticipated since the trees are to be well protected. However, the trees should be inspected after the construction phase in case any unforeseen damage has occurred so that remedial works may be commenced.

6 Photographs



T1- Ilex (Holly) protected with TPO



T1- Ilex with showing trunk damage.



T2- Malus (Fruit tree) protected by TPO showing leaning trunk





G1 – Mix hedge



T3 -Fraxinus (Ash) Offsite



T4 -Chamaecyparis sp (Cypress)



T4- Showing fence proximity



T4- Showing decking damage



T5- Ligustrum (Privet) & T6 Prunus (cherry)
In the back ground (offsite)



T5- Showing raised bed

7 Appendix

Appendix 1; Brief qualifications and experience of Sylvie Gabbey

After qualifying in Horticulture, I worked (1981-1989) for the city of Montreal, landscaping public gardens, supervising a team of gardeners, pruning trees and shrubs, grafting young trees, watering and maintaining flower beds.

After moving to UK I worked (1992-1993) as a plant technician maintaining interior arrangement and offering advice on plants installations.

After qualifying in Landscape Architecture I worked (1995-2008) for a firm of Architects within the landscape division designing external spaces, preparing drawing and specification packages for tender and construction site involvement.

With over twenty year of experiences in horticulture, arboriculture and landscape architecture I now work as a freelance offering a wide range of landscape services including tree survey and report writing.

Experience:	2009-	Freelance Landscape Services
	1995-2008	Landscape Architect
	1992-1993	Plant Technicians
	1980-1989	Gardener (head of team)

Qualifications:

1981 Horticulture

1995 Degree in Landscape Architecture

2000 Diploma in Landscape Architecture

2003 Qualifying examination part 4 - Member of the Landscape Institute (Landscape Design Division)

2009 ABC Cert Arboriculture, Level 2 (theory)

2018 ABC Diploma Arboriculture, Level 4

BA (Hons), Dip La (Hons), Dip Arb L4 (ABC), Certificate in Horticulture (Quebec, Canada)

Appendix 2; Notes on some tree protection issues.

Town & Country Planning Act 1990 (as amended 2008);

Your attention is drawn to part VIII of the above Act, sections of this Act are used to apply and enforce TPO's as well as control works carried out on specimens subject to a TPO. As a tree owner before giving instructions to a third party to carry out tree works or carrying out such works yourself you must first ensure that the specimen requiring work is not covered by an order. If a TPO is in force then the prior written permission of the Local Planning Authority enforcing the order must be gained.

If a breach of the TPO is proven the planning compensation act 1991 may be used to enforce penalties, currently the maximum penalty upon conviction is £20,000 as well as costs (including any necessary remedial works). In serious circumstances cases may be committed for trial to the Crown Court and on conviction be liable to an unlimited fine.

Conservation areas;

The law relating to conservation areas is in part II of the Planning (Listed Buildings and Conservation Areas) Act 1990. Conservation areas are areas of special architectural or historical interest the character or appearance of which it is desirable to preserve or enhance. They are designated by the LPAs.

Trees in conservation areas that are already protected by a TPO are subject to the normal TPO controls. However in addition the Town and Country Planning Act 1990 makes particular provision for trees in conservation areas which are not the subject of TPO's. Under section 211, any person proposing to cut down or carry out work on a tree in a conservation area is required to give the LPA 6 weeks notice of their intention to do so Known as a Section 211 notice.

The inclusion of the inspected site within a conservation area will be investigated in the same manner as a TPO by the inspector, and will have been indicated within the general site information of this report. No section 211 notice will be submitted as part of this report however separate arrangements can be made to do so upon request.

Deeds & Covenants;

On occasions contained within the legal documentation of property ownership certain controls are put in force they may for example require the retention of tree cover of a certain variety within the boundary of a property for perpetuity, likewise they may prohibit the planting of certain varieties. It is the responsibility of any party wishing to carry out works to ensure that they are not in breach of such controls.

On occasion, usually with leasehold properties ownership and responsibility for maintenance are retained by the lessor (usually the owner of the deeds) responsibility for checking this information is as above.

Standards of work;

Work recommended within this report is in accordance with British standard 3998 "tree work". This should be considered as a basic minimum standard and any parties carry out arboricultural operations should be able to demonstrate their commitment to that standard.

Appendix 3; Understanding BS 5837:2012

Stage A: Survey and Report

This identifies the existing trees and gives each a retention category. The categories are allocated independently of development proposal.

Tree Categories

Category A: Identify in light **green colour**

Trees of high quality and value in such condition as to be able to make a significant contribution (a minimum of 40 years is suggested)

Usually mature trees or younger tree with exceptional form. Trees that are particularly a good example of their species, especially rare or unusual.

Retention of these trees is strongly encouraged.

Category B: Identify in **mid blue colour**

Trees of moderate quality and value in such condition as to make a significant contribution (a minimum of 20 years is suggested)

Trees that could be included in the high category but are downgraded because of impaired condition (remediable defects)

Retention of these is desirable though the removal of occasional specimens may be acceptable.

Category C: Identify in **grey colour**

Trees of Low quality and value in adequate condition to remain until new planting can be established (a minimum of 10 years is suggested)

The removal of these trees should generally be seen as acceptable in order to facilitate development.

Category U: Identify in **red colour**

Trees are in such condition that any existing value would be lost within 10 years and should be removed for reasons of sound arboricultural management.

These trees should be removed if the development is to proceed.

Stage B: Tree Constraint Plan (TCP)

The TCP indicates the location, crown spread, retention category and root protection area (RPA) of each tree. The drawing informs where development may proceed without causing damage to trees.

Stage C: Arboricultural Impact Study & Arboricultural Method Statement

This report identifies and evaluates the impact that the proposed development may have on existing trees and indicates the necessary methodology required to protect trees from potential damage during the development process.

Stage D: Tree Protection Plan

This drawing shows the tree protection layout.

Appendix 4; Tree Constraint Plan L001 Rev. A (Reduced copy, NTS)

**Appendix 5; Tree Protection Plan, Planting Plan & Schedule L002 Rev. A
(Reduced copy, NTS)**