DEVELOPMENT SITE IMPACT ASSESSMENT & METHOD STATEMENT

Site:

5a Back Lane
Hampstead
London
NW3 1HA

Date of Site Visit:

14th January 2021

Prepared for:

Egg Group Ltd

Prepared by:

Mr G Davies *FdSc Arb*
ISA Tree Risk Assessment Qualified

Bartlett Project Reference:

GD/210009R/sh

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Submitted on 21st January 2021

TABLE OF CONTENTS

1.0 SCOPE OF REPORT

This report details the trees growing both on and adjacent to the site that may be affected by development proposals. It assesses the impact of the development on those trees using the criteria set out in the British Standard 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. The trees' amenity and landscape values are described, and assessments are made of their longevity. Those trees not suitable for retention are noted, and measures are set out for the successful long-term retention of others. Method statements are provided for tree protection (and special protection measures where works close to prime trees are unavoidable). Site plans are appended showing tree locations, site constraints and location of protection measures.

1.1 Survey Brief

To inspect trees and significant vegetation located on and adjacent to the site as per the site plan and to where possible assess their condition; to identify all significant trees that may be affected by the proposed plans and to provide comments and recommendations to help provide validation in support of the current scheme.

1.2 Background

Permission is currently being sort for internal and external remodelling of the residential property of 5a Back Lane, Hampstead.

Bartlett Consulting has been instructed to undertake a tree survey in accordance with British Standard 5837: 2012 *Trees in Relation to Design, Demolition and Construction – Recommendations* and produce an Arboricultural Impact Assessment and Method Statement to guide and inform the development project.

1.3 Report References

As a progressive company, we keep abreast of research data relating to Arboriculture. All observations, recommendations and works are based on current industry standard reference material and extensive FA Bartlett research findings, derived from the company's own facilities at the University of Reading in England, as well as in Charlotte, North Carolina, in the USA. A selection of pertinent items is shown in Appendix 2.

Our Arboricultural Impact Appraisal has evolved from industry material including the following:

· O'Callaghan & Lawson (1995) *Trees and Development Conflicts: Importance of Advanced Planning &*
Site Control in Tree Preservation Plans
· Matheny & Clark (1998) *Trees and Development a Technical Guide*
· BS 5837: (2012) *Trees in Relation to Design, Demolition and Construction – Recommendations*
· BS 3998: (2010) *Tree Works - Recommendations*
· National Joint Utilities Group (2007) Publication Volume 4: Issue 2 *Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees*
· Town & Country Planning Act (Tree Preservation) (England) Regulations 2012
· National House Building Council Standard, Chapter 4.2 – *Building Near Trees*

The F.A Bartlett's long arboricultural expertise is used to interpret these references for practical application to the site and the trees which are the subject of this report and to provide the most appropriate advice and guidance for sound tree health care and the achievement of the development proposals.

1.0 SCOPE OF REPORT (continued…)

1.3 Report References (continued…)

Bartlett Consulting was provided with the following plans prior to the site visit & tree survey. They were sent via email in DWG file format:

P_001 Site Existing
P_002 Site Proposed

1.4 Report Limitations & Methodology

This report is restricted to those trees detailed within the Survey Schedule and illustrated on the attached Tree Constraints Plan (TCP) and Tree Protection Plan (TPP). Both plans are illustrative of the discussions within the report and based entirely on drawings previously provided to Bartlett Consulting and detailed above. Both the TCP and TPP can only be used for dealing with the tree issues related to the proposals and all scaled measurements must be checked against the original submission documents and confirmed on site.

The trees subject to the survey have been referenced and numbered, colour-coded and categorised for amenity and life expectancy, as per the British Standard guidance and shown on the plan key. Trees to be removed are identified by the broken line representing the tree canopy and crown spread, and any trees recommended for pruning have been annotated accordingly on both plans.

The trees were not climbed at the time of the tree survey. Tree dimensions were recorded using hand tools such as a diameter tape, a laser range finder (Distometer), and a measuring tape when access was possible. A "sounding hammer" and binoculars, as well as other tools, were used to assess trees in more detail where necessary, and species identification as well as age range and vigour were recorded within the tree details.

Where possible and deemed appropriate to do so, trees present within adjacent lands were recorded. In such instances, all observations and measurements where obtained from the site. In this instance, all measurement are accompanied with a * suffix. It must be noted that trees outside of the application site boundary are the responsibility of a third party. For these trees to be pruned properly, permission to access the land and prune the trees must first be granted by the landowner in accordance with British Standard 3998:2010 Tree Work – Recommendations.

As a suitable Topographical Survey was not available for this project, the trees were plotted by Bartlett Consulting with the use of a laser Distometer taking measurements from known fixed points such as existing structures.

The statements, findings and recommendations made within this report do not take into account any effects of extreme climate and weather incidences, vandalism, changes in the natural and built environment around the tree(s) after the date of this report or any damage whether physical, chemical or otherwise.

Bartlett Consulting cannot accept any liability in connection with the above factors, nor where recommended tree management is not carried out in accordance with modern tree health care techniques, within the timeline proposed.

The contents of this report do not include discussions regarding subsidence and/or heave.

The contents of this report remain valid for one year.

1.0 SCOPE OF REPORT (continued…)

1.5 Assessment of Ecological Status of Site & Potential Constraints

Following the site visit and tree survey, we believe that there is a Low potential for wildlife and ecological associations for the site. Ecological associations are considered predominantly limited to nesting birds and small mammals within the surrounding garden.

The Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000, provides statutory protection to birds, bats, insects and other species that inhabit trees, hedgerows, or other associated vegetation.

2.0 TREE PRESERVATION ORDER & CONSERVATION AREA STATUS

Both the Town & Country Planning Act (Tree Preservation) (England) Regulations 2012 and the Town & Country Planning Act 1990 (as amended) provides legislative protection for trees within England.

An enquiry was conducted by Bartlett Consulting on 18th January 2020 via email correspondence with the Local Planning Authority (London Borough of Camden) as well as reference to their interactive mapping website available at:
https://ssa.camden.gov.uk/connect/analyst/mobile/#/main?mapcfg=CamdenConservation&lang=en-gb

2.1 Tree Preservation Order (TPO) Status

There are no TPO's either on or directly adjacent to the site

2.2 Conservation Area (CA) Status

The site is located within the Hampstead Conservation Area

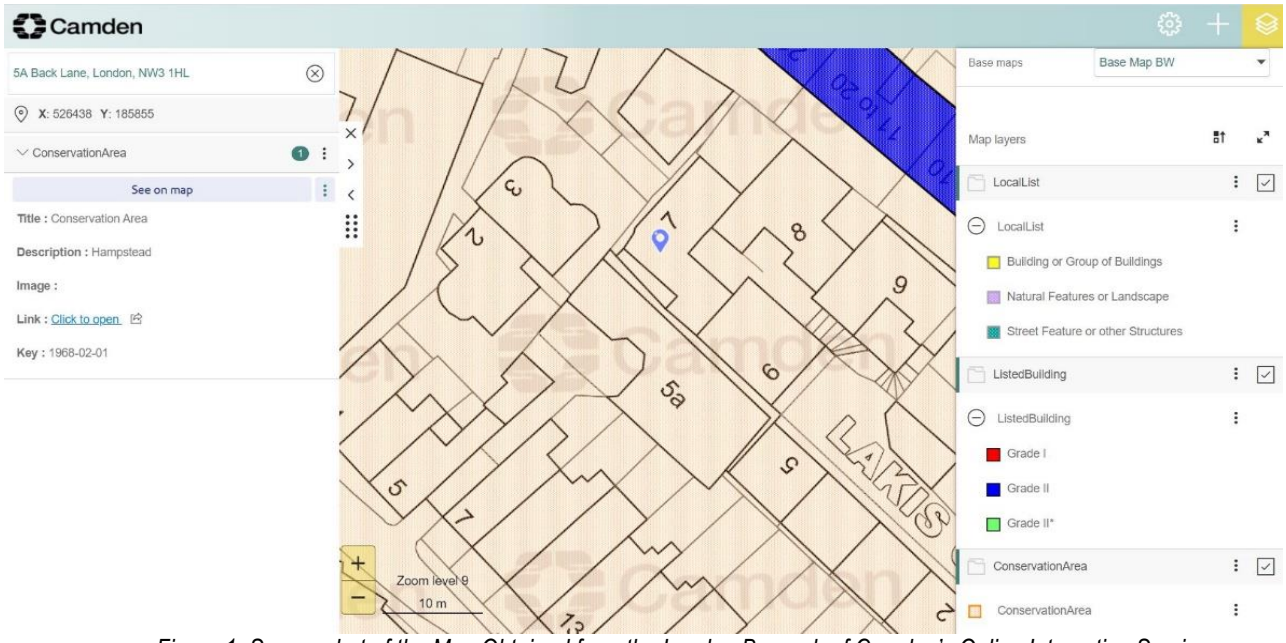

Figure 1: Screen shot of the Map Obtained from the London Borough of Camden's Online Interactive Service

2.3 Development Implications

It has been confirmed via an email response on 18th January 2020 by Mr R Curry, Planning Assistant at the London Borough of Camden that none of the trees situated within the curtilage of the site or the neighbouring land/properties are currently subject to a Tree Preservation Order.

However, the trees are afforded protection by virtue of their location within the designated Hampstead conservation area. This status affects all trees of a stem diameter greater than 75mm, when measured at 1.5m above ground level.

Under the Town and Country Planning Act 1990 (as amended), a Section 211 Notice must be served upon the LPA, providing them with 6 weeks' notice of any intention to implement works to protected trees. The purpose of this notice is to provide the LPA an opportunity to consider whether a TPO should be made in respect of the trees.

3.0 GENERAL TREE & SITE DETAILS

3.1 Weather Conditions at Time of Survey

The weather at the time of the survey was cold and raining, not ideal although suitable conditions for tree surveying

3.2 Local Landscape Evaluation

The site is located to the original urban Village of Hampstead down a quaint cobbled alleyway surrounded on all sides by neighbouring residential properties.

Occupying approximately just over 0.1 acre the property incorporates a number of outside areas including a driveway leading to the courtyard and entrance, as well as a small courtyard to the rear of the property and roof top area.

Only 1 tree (T12) was identified as being located within the site boundary, growing within the small courtyard garden to the rear. This tree is of a significant size for its species and as such is deemed to be an important contributor to the local sylvan landscape and amenity of the area.

There are a number of trees growing adjacent to the north, eastern and western site boundary most notably a large Common Lime (T9) considered the dominant tree within the local landscape.

3.3 Underlying Soils

(Ref: British Geological Survey materials © NERC [2021] – Website data as of 018/01/2021)

● Bedrock: Claygate Member – Clay, Silt & Sand

● Superficial Deposits: Non- Recorded

4.0 APPROVED DEVELOPMENT & DEVELOPMENT SITE DETAILS

4.1 Proposed Development

A number of internal and external alterations including part raising of the roof level and external walls as well as demolition and re-build of the conservatory to the rear.

4.2 Existing Grounds

The property is presented as seven bedroom residential dwelling set over 3 storeys with a partial subterranean ground floor, and bordered on all sides by neighbouring residential properties. Primary access to the property is obtained via a narrow driveway leading from Back Lane with an additional pedestrian entrance obtained via Lakis Close.

4.3 Tree Survey Schedule

The schedule found below contains the tree details and survey data, in accordance with Section 4.4 of British Standard 5837: 2012, as well as the tree categorisation for quality and amenity assessment.

5.0 DEVELOPMENT SITE-TREE SURVEY SCHEDULE

Client:	Egg Group Ltd	*Report No.*	GD/210009/R/sh
Completed by:	Mr G Davies	*Report to:*	BS 5837:2012
Site:	5a Back Lane, Hampstead, London, NW3 1HA	*Date of Surveys:*	14th January 2021
Trees Tagged:	No	*Weather:*	Cold with Rain

Tree Ref No.	Species	Ht. (m)	Stem Dia. (mm)	Crown Spread				Crown Clearance				Ht. to 1st limb (m)	Age	Phys. Cond.	Structural Condition			Observations	Preliminary Management Recommendations	Life Exp.	Cat.	RPA in m2 (Radius /m)
				North	East	South	West	North	East	South	West				Basal	Stem	Crown					
T1*	Japanese Maple *Acer palmatum*	3.5	180	1.5	1.5	1.5	1.5	-	-	-	-	-	SM	F	F	F	G	• Third party tree • Only partial visible • Previous reduction to 3.0m • Close to neighbouring property	-No works currently required	10+	C1	15 2.2
T2*	Common Pear *Pyrus communis*	6	300	2.5	2	1.5	1.5	2.5	2.5	2.5	2.5	2.0m south	EM	F	F	G	P	• Third party tree • Bifurcation of main stem at 2.0m • Recent high pollard resulting in multiple points of regrowth • Limited rooting environment	-No works currently required	10+	C1	41 3.6
T3*	Fire Thorn *Pyracantha*	3	100	1	2	3	0	2	2	2	2	2	EM	F	F	F	F	• Third party • Overhanging entrance drive	-No works currently required	10+	C1	5 1.2
G4*	Apple Malus	4	150 150 100	2	2	1.5	1.5	-	-	-	-	-	SM	F	-	F	F	• Third party tree • Unable to fully inspect. • Northern crown overhanging entrance and in direct contact with building • Climbing vine throughout crown • Recently pruned resulting in regrowth	-Prune eastern crown to provide suitable clearance from building	10+	C2	10 1.8 10 1.8 5 1.2

Tree Ref No.	Species	Ht. (m)	Stem Dia. (mm)	Crown Spread				Crown Clearance				Ht. to 1st limb (m)	Age	Phys. Cond.	Structural Condition			Observations	Preliminary Management Recommendations	Life Exp.	Cat.	RPA in m2 (Radius /m)
				North	East	South	West	North	East	South	West				Basal	Stem	Crown					
T5*	Akiraho *Olearia paniculata*	3	100	1	0.5	1	1	-	-	-	-	-	SM	G	-	F	G	• Third party tree • Unable to fully inspect • Previously topped at 2.5m • In proximity to building eastern crown overhanging boundary and in direct conflict with roof	-Prune eastern crown to provide suitable clearance over building	10+	C1	5 1.2
T6*	Bay *Laurus nobilis*	4	100	1	0.5	1	1.5	-	-	-	-	-	SM	G	-	F	G	• Third party tree • Unable to fully inspect • Growing within group In proximity to building in direct contact with roof	Prune eastern crown to provide suitable clearance from building	10+	C1	5 1.2
T7*	Apple *Malus*	4	150	2	1	2	2	-	-	-	-	-	SM	F	-	F	F	• Third party tree • Unable to fully inspect • Asymmetrical crown bias to west • Overhanging and in direct contact with building	-Prune to provide suitable clearance over building	10+	C1	10 1.8
T8*	Cherry Laurel *Prunus laurocerasus*	5	250	3	1	3	3	-	-	-	-	0	SM	F	-	F	G	• Third party tree • Unable to inspect • Growing adjacent to boundary wall • Eastern crown overhanging and in direct conflict with building	-Prune to provide suitable clearance from boundary	10+	C1	28 3
T9*	Common Lime *Tilia europaea*	18	700	6	5.5	6	5	5	3	3	3	5.0m north-east	SM	G	G	G	F	• Third party tree • Unable to fully inspect around base • Growing close to boundary • Trifurcation of main stem at 3.0m • Previous reduction of lower western crown • Epicormic regrowth on main stem	-No works currently required	20+	B1	222 8.4

Tree Ref No.	Species	Ht. (m)	Stem Dia. (mm)	Crown Spread				Crown Clearance				Ht. to 1st limb (m)	Age	Phys. Cond.	Structural Condition			Observations	Preliminary Management Recommendations	Life Exp.	Cat.	RPA in m2 (Radius /m)
				North	East	South	West	North	East	South	West				Basal	Stem	Crown					
G10 *	Common Ash *Fraxinus excelsior*	12	250 & 300	3	4	6.5	3	3	3	3	3	4.0m east	SM	F	F	F	F	• Group of 2 tree Third party trees • Growing at lower level Southern crown overhanging boundary	-No works currently required	10+	C2	28 3 41 3.6
T11	Silver Birch *Betula pendula*	18	580	5	5	5	5	5	5	5	5	6.0m east	EM	G	G	G	G	• Lean on main stem to west self-corrected at 2.0m • Bifurcation of main stem at 5.0m	-No works currently required	20+	B1	154 7
T12*	Paper Birch *Betula papyrifera*	7	200	3	3	3	3	2	2	2	2	0	SM	G	F	F	G	• Third party tree • Unable to view at base • Suspected multi stem specimen	-No works currently required	10+	C1	18 2.4
T13*	Unknown	5	300	3	3	3	3	1	1	1	1	1	D	D	P	P	P	• Dead standing specimen covered in Ivy • Ownership unclear • Located between retaining and boundary wall	Remove to ground level	<10	U	N/A

Tree numbers refer to site plan. Species – tree species giving English common name. Height is height measured or estimated, recorded in metres (m); Stem diameter is stem diameter measured at 1.5 metres above ground level on the tree stem, recorded in millimetres (mm); Branch spread is crown spread to the four cardinal compass points, measured and recorded in metres (m); Height of lowest live branch is the lowest significant live branch and direction Ht. to 1st Limb is the clearance of the live crown above ground level. Life Stage is assessed as young (Y) up to 1/5 of tree's life-cycle, semi-mature (SM) up to 2/5 of tree's life-cycle, early mature (EM) up to 3/5 of tree's life-cycle, mature (M) up to 4/5 of tree's life-cycle and over mature (OM) up to 5/5 or above of tree's life cycle. Category U is poor quality; A is high quality specimen; B is moderate quality; C is low or adequate quality. Category grading refers to the Amenity Value of the tree or tree group in question, as per the guidance given in the BS 5837 2012 document (where possible). P- Poor / F – Fair / G – Good

Note: An asterisk * will estimated measurements

6.0 ARBORICULTURAL IMPACT ASSESSMENT

6.1 Tree Constraints Plan

Tree Constraints Plan (hereafter referred to as TCP) referenced GD/200009TCP can be found as an appendix at the end of this report. The TCP illustrates the trees subject to the survey; their physical constraints which are discussed below; and the relationship of the proposed development in relation to these trees.

The main stems depicted on the plans are a true reflection of their diameter, when measured during the survey. The crown spreads have been plotted accurately and are coloured to correspond with the grading category of each individual tree. The RPA of a number of trees have been modified where necessary in order to most accurately reflex the location of retaining walls and existing buildings in which root growth is not considered viable.

The trees have been identified by their reference number, as per the tree survey schedule above.

The TCP was produced by Bartlett Consulting using architectural software and the plans listed in Section 1.3 above. All scaled measurements must be checked against the original submission documents for accuracy and it is recommended that all measurements are confirmed on site, when marking-out the development footprint.

6.2 Tree Constraints

Below Ground Level Constraints

The below ground level constraint on any development site will include the root system and rooting environment of trees being retained. The calculated Root Protection Area, (hereafter referred to as RPA) is indicated by the grey hatched areas on the TCP and shows the minimum radial area around each tree, given in the above table, which is deemed to contain sufficient roots and rooting environment to maintain the current vitality of the tree. This area is as per the requirements of British Standard 5837:2012 *Trees in Relation to Design, Demolition and Construction - Recommendations*.

In the first instance, the RPA should remain a construction exclusion zone and all proposed development should be planned and located outside the RPA for trees of such quality and value to be retained, leaving the RPA sacrosanct.

Where there is proposed development within the RPA of a tree of such quality and merit that it will be retained, Bartlett Consulting must be able to demonstrate that the tree(s) can remain viable; the RPA lost to encroachment can be compensated for elsewhere and mitigation measures can be implemented to improve the soils and rooting environment, before the proposals are finalised.

Above Ground Level Constraints

The above ground level constraints on a development site can be numerous, resulting primarily from the current and/or ultimate crown height and spread of the retained tree, its species characteristics, such as evergreen or deciduous, the height of its crown above ground level and any "nuisance" that might be the result of a tree's proximity to living areas.

Proposed structures should be designed and/or located with due consideration of this assessment and information, so as to prevent direct damage from occurring to the structure, as well as the need for unnecessary and possibly damaging tree management works.

6.0 ARBORICULTURAL IMPACT ASSESSMENT (continued…)

6.3 Discussions

As a conceptual site layout has been designed, the following discussions will take into consideration those proposals. In accordance with Section 4.4.1.2 of British Standard 5837:2012 these discussions will identify any tree and development conflicts, and recommended mitigation options where necessary.

Direct Impacts:

It is not anticipated that the proposed scheme will require the removal of any trees category trees identified within the survey, however minor remedial works to a number of third party trees will be necessary. The category U tree T13 has been recommended for removal as it was identified as a dead standing specimen.

The third party Pyracantha (T3) fully overhangs the site and is being supported by the boundary wall and neighbouring trees forming an effective archway over the main access to the property. A reduction of this specimen back to the boundary line may be required to allow suitable access for construction however if possible and desirable this specimen could be effectively retained.

Rising External Walls and Roof Level

This report has identified the need for construction works within proximity to a number of third party trees G4, T5, T6, T7 & T8 all growing within the rear gardens of numbers 7 - 13 Back Lane.

The proposal to raise the current 1st floor and roof level to the southern aspect of the development will require a significant level of works including the dismantling of the existing roof and upper wall sections.

It is anticipated that any necessary demolition will have to be carried out from within the footprint of the site using a top down pull back method to limited disruption on neighbouring properties. Construction will be built off of the retained boundary walls and no excavations are required to modify nor install foundations.

These works as described will therefore not have any impact on the existing root system of the third party trees. However, the tree survey did note that the eastern crowns of G4, T5, T6, T7 & T8 all overhang the boundary line and in some instances are in direct contact with the existing pitched roof of the property.

To facilitate the construction works and proposed development, it will be necessary to carry out pruning in way of a lateral reduction of all the overhanging vegetation back to the boundary although these works should be carried out regardless of the proposed development, in order to allow access for maintenance as well as limit the potential for any future damage to the property.

Located within the rear of private gardens, this group of trees and shrubs are not visible from a public point of view although do afford a level of screening from the neighbouring property. It is not anticipated that the recommended pruning works will have a noticeable impact on the appearance of the group, or their effectiveness as a screen, and furthermore tree the works are not considered to be detrimental to tree health.

6.0 ARBORICULTURAL IMPACT ASSESSMENT (continued…)

6.3 Discussions (Continued…)

Demolition & Re-build of the Conservatory located within the Lower Courtyard Garden

A key constraint within the proposed scheme is the demolition and rebuild of the conservatory located within the lower courtyard garden to the rear of the property and within the RPA of the category B Silver Birch (T11).

The existing summer house built approximately 13 years ago appears to be of a light weight timber construction sitting on a concrete slab of shallow foundation. As such it is possible that roots from the silver Birch may be present within the footprint of the existing structure.

Excavations for foundations within the RPA will be necessary in order to construct the proposed conservatory. As the use of a traditional deep strip foundations would likely result in significant root severance a modified foundation design will be used to minimize any potential damage to tree roots. In this instance Micro pile and ground beam configuration could be implemented to minimize any potential damage to the roots. The finished floor level would be suspended at the existing ground level, or not exceed the depth of any existing floor level.

The proposed replacement conservatory occupies a reduced footprint of 13sqm resulting in a 7sqm reduction from the existing and providing a potential increase in the viable rooting environment for the Silver Birch (T12) as well as limiting the potential for significant root damage.

Tree protection barriers should be installed around the main stem of the Silver Birch (T12) as shown within the TPP in order to prevent any physical damage to the main stem during both the demolition and construction phases.

Where tree protection must be off set to allow suitable room for construction activities a non-compacting ground protection should be temporarily installed. In this instance the existing floor of the conservatory and wooden decking installed within the rear courtyard could be retained and utilized for ground protection. Additional matting may be required to provide extra support if necessary.

6.0 ARBORICULTURAL IMPACT ASSESSMENT (continued…)

6.3 Discussions (Continued…)

Indirect Impacts:

Access to the site and available free space during construction will be challenging. Designated areas of material storage and delivery of goods, locations for site welfare huts and other site amenities should be located within the frontage of the property where there is hardstanding outside the RPA or crown spread of retained trees suitable for these requirements.

The potential for construction activities to impact on the retained third party trees will be somewhat limited due to the existing boundary walls. So long as adequate precautions to protect the retained trees are specified and implemented as described in the Arboricultural Method Statements attached to this report, the development proposal will have no significant adverse impact on the contribution of the retained trees to the amenity and character of the locality.

Trees are naturally growing and shedding organisms which can cause a seasonal nuisance, particularly in the autumn when the leaf litter of some species can block gullies and gutters. Fruit can cause slippery patches and accumulation of honeydew can be damaging to surfaces.

Where conflicts might arise, detailed design should address these issues e.g. the use of non-slip paving; leaf guards and grills on gutters and gullies.

The effect of shading by the larger existing trees over the property will be limited due to their location to the north and east of the site.

Due to the existing residential dwelling it is presumed that any services running to and from the property will be adequate. If new underground services are to be replaced or added then their locations / routes should be carefully considered and must not be located within the designated RPA of any of the on or off site retained trees.

6.0 ARBORICULTURAL IMPACT ASSESSMENT (continued…)

6.4 Conclusions

The proposed scheme does not require the removal of any surveyed trees on site although will require a level of facilitation pruning to a number of small third party trees and shrubs that currently overhang the site boundary.

Although required to facilitate the proposed development it is reasonable to recommend these works are carried out regardless of any development to maintain suitable clearance from the existing building.

The dead standing tree T13 has been recommended on the grounds of sound arboricultural advice.

The Key constraint with regards to the proposed scheme is the demolition and rebuild of the conservatory located within the small courtyard to the rear of the property. This report has identified the potential for roots from the Silver Birch (T11) to be present below and adjacent to the existing conservatory footprint and discussed how modified excavations could be utilized to prevent damage to the rooting system of the tree.

It has also be discussed how tree protection should be installed within this area to limit any potential damage.

The report has acknowledged the restrictions of the site and recommended solutions to limit the any conflict between tree protection and construction needs

Based on the above discussions and recommendations, development of this site could be supported from an arboricultural perspective providing that the following guidance and recommendations made within this report are fully adhered to.

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7.0 TABLES OF DEVELOPMENT IMPLICATIONS & MITIGATION ON TREE STOCK

7.1 Table 01: Implications on Existing Tree Stock

Tree Ref	Species	Cat.	Removal Due To		Mitigation Required		Aspect of Development Affecting Retained Tree
			Proposed Development	Tree Condition	Canopy	RPA	
T1*	Japanese Maple *Acer palmatum*	C1	N/A	N/A	N/A	N/A	None
T2*	Common Pear *Pyrus communis*	C1	N/A	N/A	N/A	N/A	None
T3*	Fire Thorn *Pyracantha*	C1	N/A	N/A	✓	N/A	Possibly Construction Access
G4*	Apple Malus	C2	N/A	N/A	✓	N/A	Demolition & Construction of the new external walls
T5*	Akiraho *Olearia paniculata*	C1	N/A	N/A	✓	N/A	Demolition & Construction of the new external walls
T6*	Bay *Laurus nobilis*	C1	N/A	N/A	✓	N/A	Demolition & Construction of the new external walls
T7*	Apple *Malus*	C1	N/A	N/A	✓	N/A	Demolition & Construction of the new external walls
T8*	Cherry Laurel *Prunus laurocerasus*	C1	N/A	N/A	✓	N/A	Demolition & Construction of the new external walls
T9*	Common Lime *Tilia europaea*	B1	N/A	N/A	N/A	N/A	None
G10*	Common Ash *Fraxinus excelsior*	C2	N/A	N/A	N/A	N/A	None
T11	Silver Birch *Betula pendula*	B1	N/A	N/A	N/A	✓	Demolition of existing and construction of proposed replacement conservatory
T12*	Paper Birch *Betula papyrifera*	C1	N/A	N/A	N/A	N/A	None
T13*	Unknown	U	N/A	✓	N/A	N/A	None

7.0 TABLES OF DEVELOPMENT IMPLICATIONS & MITIGATION ON TREE STOCK (continued…)

7.2 Table 02: Mitigation for Identified Tree & Development Conflicts

Tree Ref	Species	Cat.	Mitigation Required
T3*	Fire Thorn *Pyracantha*	C1	• Possible tree works to reduce encroachment
G4*	Apple Malus	C2	• Tree works pruning back to boundary providing suitable clearance from the building
T5*	Akiraho *Olearia paniculata*	C1	• Tree works pruning back to boundary providing suitable clearance from the building
T6*	Bay *Laurus nobilis*	C1	• Tree works pruning back to boundary providing suitable clearance from the building
T7*	Apple *Malus*	C1	• Tree works pruning back to boundary providing suitable clearance from the building
T8*	Cherry Laurel *Prunus laurocerasus*	C1	• Tree works pruning back to boundary providing suitable clearance from the building
T11	Silver Birch *Betula pendula*	B1	• Use modified foundation design such as pile & beam to provide suitable low impact foundation • Installation of tree protection barriers and non-compacting ground protection
T13*	Unknown	U	• Dead tree to be removed

7.3 Tree Works

As with the approved scheme, tree works should be carried out as a primary site task, prior to the establishment of tree protection measures, as well as prior to any site operations including, but not limited to, site set-up, deliveries, demolition and development.

- The following schedule sets out proposed works involving trees.
- All works will be carried out in accordance with BS3998: 2010 *Tree Works – Recommendations.*

Tree Ref	Species	Schedule of works prior to installation of protective Barriers
T3*	Fire Thorn *Pyracantha*	Prune back to boundary (if Necessary)
G4*	Apple Malus	Carry out max 1.0m lateral reduction of the overhanging eastern crown back to boundary line
T5*	Akiraho *Olearia paniculata*	Carry out max 1.0m lateral reduction of the overhanging eastern crown back to boundary line
T6*	Bay *Laurus nobilis*	Carry out max 1.0m lateral reduction of the overhanging eastern crown back to boundary line
T7*	Apple *Malus*	Carry out max 1.0m lateral reduction of the overhanging eastern crown back to boundary line
T8*	Cherry Laurel *Prunus laurocerasus*	Carry out max 1.0m lateral reduction of the overhanging eastern crown back to boundary line
T13*	Unknown	Remove to ground level

All of the above works are in accordance with good tree management, current arboricultural practice and tree health care. The pruning works will not be of detriment to the health or condition of the trees, nor will the works be of detriment to the public amenity and landscape.

8.0 ARBORICULTURAL METHOD STATEMENT

8.1 Sequence of Events

From an arboricultural perspective, site operations should follow the below table and sequence of events. It is strongly recommended that prior to each event all matters pertaining to the trees should be checked and liaison made with an Arborist, including a site inspection where necessary.

Sequence	Brief outline of event
1	Carry out all tree works as prescribed within the recommendations
2	Erecting of tree protection fencing and installation of suitable ground protection prior to any demolition or construction works on site
3	Installation of any construction facility's required such as, designated area for mixing and material storage.
4	Commencement of onsite demolition
5	Commencement of Construction works on site
6	Completion of construction works on site
7	Removal of tree protection barriers and ground protection

8.2 Tree Protection Measures (General)

The location of the temporary tree protection barriers, and the areas they protect, are shown on the TPP referenced GD/200009/TPP and found at the end of this document. The precise location of the barriers are shown on this plan.

Vertical Barriers: physical protection measures for the retained trees, which will ensure that the designated RPA becomes an exclusion zone during any stage of development. Fencing will prevent machinery, men, materials, and other site activities from occurring within the RPA or damaging the tree crown.

Vertical barriers should be fit for the purpose of excluding construction activities, and appropriate to the degree and proximity of the site operations. Specifications and illustrations can be found in Method Statement 1 below. The protected areas shall not be used for the storage of materials or spoil, nor for the mixing of substances or the disposal of any residues. Materials, equipment and arising debris will not be stacked against the vertical barrier, even temporarily.

Ground Protection: non-compacting ground protection will be required where the vertical barriers have been off-set to allow for the 'working zone' and site traffic during construction and hard landscaping. Ground protection must be retained on site until there is no risk of any damage from demolition and construction works. Specifications and illustrations can be found in Method Statement 2 below.

No mixing of cement or other chemicals must take place atop the ground protection, nor should any storage of oils, fuels, chemicals or cement take place atop the ground protection.

Once erected, both barriers and types of tree protection will be sacrosanct, and must not be moved or adjusted during any stage of site operations without the prior written consent of London Borough of Camden and notification to Bartlett Consulting.

8.0 ARBORICULTURAL METHOD STATEMENT (continued…)

8.3 Site Supervision

Good tree protection cannot be reliably implemented without regular Arboricultural input. The nature and extent of that provision will vary according to the complexity of the site and the resources available. An Arboricultural Consultant should always be instructed to work within the guidance of this report and Local Planning Authority conditions to oversee implementation of protective measures and tree management proposals as detailed within this report.

Discharge of Planning Conditions

It is likely that London Borough of Camden, if minded to 'consent' the planning application, will subject this report and specific sections of it as conditions of planning approval. If subject to a tree-related condition, this report and its contents will form legal requirements during all phases of development.

Breaches of planning conditions can result in enforcement action being taken by the Council in the form of "stop notices" as well as monetary fines. It is strongly recommended therefore that this report and accompanying plans are kept on site at all times; and all contractors are familiarised with the requirements.

Arboricultural planning conditions cannot be effectively discharged without site supervision by an Arboricultural Consultant. Any supervisory action must be confirmed by formal letters or log entries circulated to all relevant parties, including the council. These records of site visits will provide proof of compliance and allow planning conditions to be discharged as the development progresses. The proposer or his agent should instruct an Arboricultural Consultant to enable compliance with the Local Planning Authority requirements set out in the planning conditions, before any work begins on site.

Phasing of Supervision

Phasing of Arboricultural involvement in the development project, including proper budgeting, can only be factored into the developing work programmes if the overall project management takes full account of tree issues if the application is consented.

An Arboricultural Consultant must be involved in the following phases of the project management:

1 – Installation of the Tree Protection Barriers and temporary ground protection

2 – At appropriate intervals during the construction process based on the time frame of the build to insure appropriate retention of the on-site tree protection

3 – On completion of the construction, prior to removal of the tree protection

8.0 ARBORICULTURAL METHOD STATEMENT (continued…)

8.4 Useable Free Space

There are numerous spatial requirements on development sites, apart from that of the proposed structures and ancillary development. These requirements include designated areas for storage; room for deliveries; space for materials and equipment; and space for site huts to name but a few.

Regarding the on-site facilities and requirements, there is suitable free space to the frontage of the property for the various construction requirements, outside of the zone of influence for tree protection & preservation.

It is recommended that the final positions and areas of storage is established before commencement of any site operation.

ARBORICULTURAL METHOD STATEMENT 1 – VERTICAL BARRIERS

Date: 20th January 2021

Site: 5a Back Lane, Hampstead, London W3 1HA

Given the relatively low intensity and scale of domestic development the vertical barriers should be constructed of a Heras Mesh System wired fencing approximately 2.0m high, with each panel 3.5m wide; securely fixed to one another using a minimum of 2 anti-tamper couplers; erected on rubber or concrete feet.

The system should be supported on the inner side by stabiliser struts secured with a ground pin or block tray.

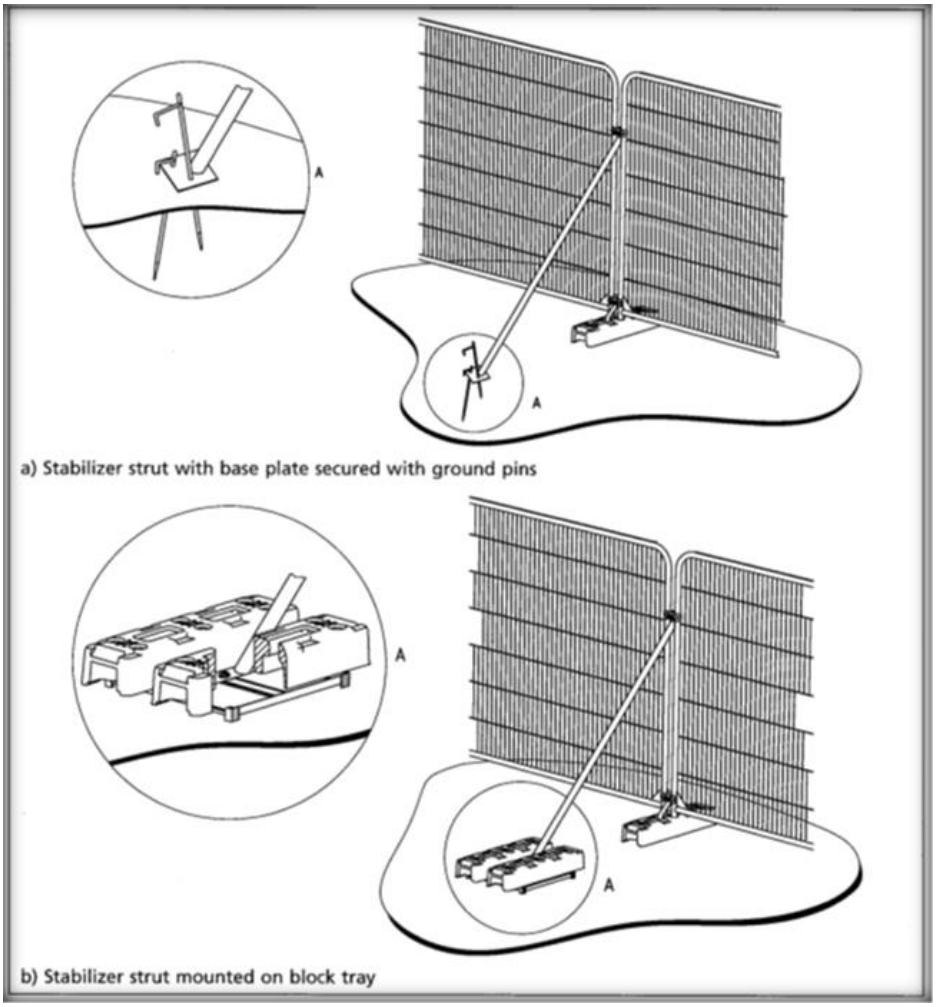


Figure 2: Illustration of Specification Vertical Barrier as per BS5837:2012

ARBORICULTURAL METHOD STATEMENT 2 – GROUND PROTECTION

Date: 20th January 2021

Site: 5a Back Lane, Hampstead, London W3 1HA

Due to the need for a 'working zone' and temporary construction access within the RPA of T3 prior to any the introduction of any building materials and/or supplies, ground protection in accordance with the below specifications must be established:

Pedestrian Movement and Pedestrian Operated Machinery up to Gross Weight 2 Tones

Lay a geo-textile matting directly onto the undisturbed ground; apply approximately 100mm – 150mm of a compressible material such as mulch or sand over the matting; lay down abutting scaffold boards, large sheets of plywood, or interlinked metal tracks such as Ground Guard®. The latter shall be to the appropriate capacity as per the manufacturers' specification for the load.

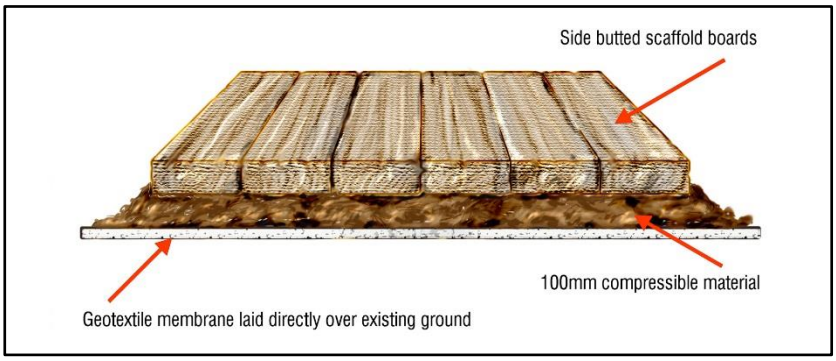
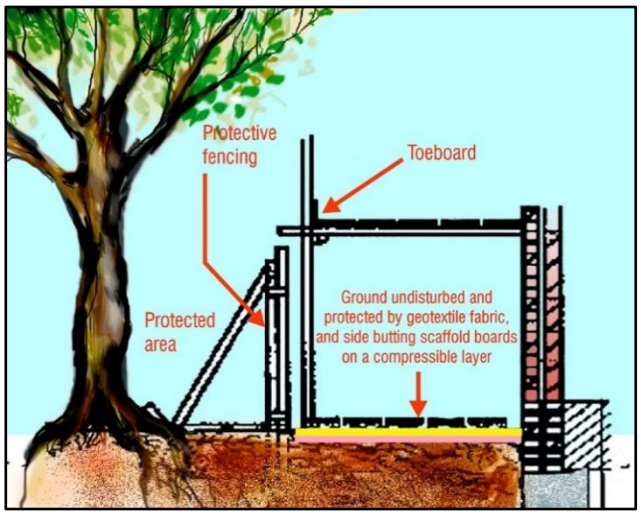


Figure 3: Illustration of .ground protection

It is also possible for scaffolding to be erected on this ground protection:



NO machinery is to be driven across the ground protection at any time for any reason.

We trust that the contents and recommendations contained within this report were informative, easy to understand and helpful to you. Should you have any further questions or concerns, please do not hesitate to contact us again.

REPORT CLASSIFICATION: British Standard 5837: 2012 Development Site Report

FINAL

REPORT COMPLETED BY: **Mr. G. Davies** ***FdSc Arb***
Arboricultural Consultant

SIGNATURE:  **DATE: 20.01.2021**

TREE CONSTRAINTS & TREE PROTECTION PLAN

Tree Constraints Plan: Showing Proposed Site Layout (Bartlett Consulting Reference GD/210009TCP)

Tree Protection Plan: Showing Proposed Site Layout (Bartlett Consulting Reference GD/210009/TPP)

NOTE: Plans will be provided sized A4 (Landscape) as attachments when the report provided electronically. Print hardcopy sized A4 (Landscape) and insert into printed and bound report after this page otherwise.