Arboricultural Impact Assessment

relating to development at
1 Hillfield Road
London

Client

AN:X Developments

1st Floor Office
155 Regents Park Road
London
NW1 8BB

February 2020

1325-KC-T2-YTREE-Impact Assessment-Rev0

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KEEN CONSULTANTS

Document history

Revision	Issue Status	Details	Approved/Date
Rev0	Final	Initial report	JK / 25 February 2020

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1.0 Introduction

1.1 This assessment will consider the impact upon trees of implementing the proposals shown on the drawings listed below

Table 1 - List of drawings referred to in this assessment

Originator	Drg No	Title	Scale
Martin Evans Architects	HFR-PL-EX_07	Existing Section	1:100 @ A3
Martin Evans Architects	HFR-PL-PRO_08B	Proposed Sections AA & BB	1:100 @ A3
Martin Evans Architects	HFR-PL-PRO_SP	Proposed Ground Floor Site Plan	1:200 @ A3
Tree Aware UK Ltd	63275-5-01 Rev 0	Hillfield Road Tree Constraints Plan	1:200 @ A2
Keen Consultants	1325-KC-T2-YTREE-TPP01Rev0	Tree Protection Plan	1:100@A3

1.2 Site proposals considered in this application include:

1.2.1 Extension to existing dwelling

1.2.2 Access path, terrace and bike store

1.2.3 Utilities and services

1.2.4 New and replacement tree planting

1.3 In outline, the proposals retain the lime tree to the fore of the site and investigations have revealed the proposals can be achieved without material harm to the tree.

2.0 Assessment of impact upon trees

2.1 The application scheme seeks various alterations to the existing dwelling including the provision of a separate access to a basement flat. The latter access is proximate to a retained tree that stands outside the front elevation of the dwelling.

2.2 A tree survey (see Appendix 1) undertaken by Tree Aware UK Ltd identifies the tree as a lime and shows its dimensions at the time of survey. It also identified and shows that the frontage of the dwelling falls within the notional root protection area of the tree.

2.3 To more accurately understand the rooting pattern of the tree trial investigations were undertaken by ArborExcavation Ltd. The details of that investigation were provided in their report dated 18th February 2020 (see Appendix 2).

2.4 The trial trench (see location overlaid on the tree protection plan) revealed one root from the lime tree. It is reported as being circa 30mm in diameter and extends toward the location of the proposed terrace that will serve as access to the basement flat.

2.5 Other roots were found within the trial trench but they were clearly connected to the shrub that is seen (in the photo log of the ArborAeration report) growing alongside the trench. This shrub and its roots are broadly in the location of the proposed bike store.

2.6 The trial trench has revealed that only one root exists in the location of the proposed terrace, an area where levels will need to be reduced. As a result the impact upon the tree, from the loss of this one root, is negligible and can be tolerated without adverse harm.

2.7 The trial trench has not revealed the full extent of rooting that may be present within the footprint of the proposed bike store. Much of the area appears to be taken up by the shrub and its root mass but other roots of the lime tree may be present. If there are one or two roots of similar size to that found in the trial trench then they too can be lost and not result in material harm to the tree. If more than one or two roots are found, or the roots are substantially larger, then one needs to consider the situation and determine if the roots may be severed. To enable this the excavation for the boke store can be undertaken by hand. During excavation care needs to be taken to identify roots from the lime tree. If encountered, and over 25mm in diameter, they should be retained. The situation can then be reviewed by an arboriculturist to determine if the roots can be severed without harm to the tree or if they need to be retained. If they need to be retained then this will have a bearing on the floor level of the bike store. The roots will effectively set the level at which the base of the bike store may be formed.

2.8 The other aspects of the access arrangement to the basement flat can be accommodated without material harm to the lime tree.

2.9 The proposed drainage and services are not shown on the proposed site plan but there is scope to locate them such that they do not impact the tree.

2.10 To avoid harm to the tree from their installation specialist techniques can be adopted. Such specialist techniques include moling, thrust-boring, broken trench or excavation by hand or AirSpade.

2.11 No other installations, including mechanical and electrical equipment, are proposed in an area that would be of detriment to trees.

3.0 New and replacement tree planting

3.1 The application scheme does not require tree removal hence they do not trigger the need to consider replacement planting as part of the scheme.

4.0 Protection of trees during construction

4.1 To ensure the retained trees are safeguarded a tree protection plan has been prepared to show the location of protective measures. These measures need to be implemented in advance of construction and maintained until such time as soft landscape proposals require their removal.

4.2 In some instances specialist construction techniques or approaches are indicated on the protection plan. These shall be implemented in accordance with site progress.

4.3 In order to ensure the protective and specialist measures are understood, implemented and maintained a scheme of monitoring and supervision shall be put in place.

4.4 A scheme of supervision/monitoring shall typically include:

- a pre-commencement meeting;
- a site visit by an arboriculturist at no more than one month intervals;
- a report to be prepared after each site visit and presented to the Council within 7 days of the visit.

5.0 Summary of impact assessment

5.1 The proposed development results in no tree loss and, assuming care and attention is deployed during construction, there is no material harm to the retained tree.

5.2 Services and utility installation can be installed, deploying specialist installation techniques where required, to ensure harm to the tree is minimised.

5.3 Replacement tree planting is not required as no trees are proposed for removal to achieve the application scheme.

Appendix 1

Tree Aware UK Ltd

BS 5837: 2012 Tree Survey

TREE AWARE UK LTD
Arboricultural Consultancy

Tree Aware UK Ltd
Company Reg 08330676
Email enquiries@treeawareuk.com
Tel 01832 710 874

BS 5837: 2012 Tree Survey

1 Hillfield Road, London

Undertaken by Alastair Gavin on behalf of Tree Aware UK Ltd
on the 12/04/2019

[This document sets out to evaluate the trees surveyed on the 12/04/2019 in accordance to BS 5837:2012 “Trees in relation to design demolition and construction" this document is not a tree condition survey it categories the tree or trees based on their quality and value and thus allows for an informed decision to made in respect to the tree/trees retention and removal in connection to development.]

Methodology

This survey has been undertaken in compliance with BS 5837: 2012. This survey is not a tree condition survey; none of the trees have been climbed nor has any decay detection equipment been used, any comments in connection to the tree's condition are incidental and secondary in nature, the main objective of this survey is to inform and guide decisions in connection to development.

Where hazardous trees have been identified and recommendations given for immediate action, this should be undertaken and arranged as soon as possible.

Sequential Reference Number

All trees surveyed have been given a sequential reference number such as T1, T2, T3 or H1, H2, H3 for hedges Etc. Where trees form a group (which is decided by the surveying Arboriculturalist) a group reference number will be provided, these will be in the line of G1, G2, G3 etc.

Species

The tree species will be listed in the schedule by their common name. A key to their scientific names can be found below;

Tree Reference number	Common Name	Scientific Name	Native/None native
T1	Lime	*Tilia europaea*	Native
T2	Lime	*Tilia europaea*	Native
T3	Eucalyptus	*Eucalyptus spp*	Native
G1	Conifer Maple	*X Cuprocyparis leylandii* *Acer spp*	None Native None Native

G2	Apple Elderberry	*Malus spp* *Sambucus nigra*	None Native Native
H1	Conifer	*X Cuprocyparis leylandii*	None Native

Tree Height

Tree height has been taken in meters and is an approximate measurement.

Diameter of Stem

The diameter of a single stem is taken at 1.5m above ground level. Where there are multiple stems arising from either the base of the tree or below 1.5m the diameter of the stem is calculated using annex C in the British standard BS 5837: 2012 handbook.

Crown Spread

This is measured in meters using the four cardinal points:

North, South
East, West

Height of first branch

Approximate height in meters of the first significant branch. A cardinal point maybe given to indicate the direction the branch is growing in if the branch is of a significant size.

Canopy Height

Approximate height of the canopy taken in meters

Life Stage

The trees are classified into the following life stages dependent on their age. The categories are;

Young
Semi-mature
Early mature
Mature
Over mature

General Observations

The tree/trees, hedge and groups are observed for any structural or physiological conditions such as the presence of decay, structural defects, pest and disease pathogens etc. Any such identification will be noted, and preliminary management recommendations made.

Estimated remaining contribution, in years

Based on the tree's condition an estimate on the remaining useful life expectancy of the tree/trees is given - these will be in the following categories.

Under 10 years
10+
20+
40+

BS 5837 Category

Category A, B, C or U is given to the trees based on the below criteria.

The purpose of the categorization which is undertaken by the surveying Arboriculturalist is to identify the value (in a non-fiscal sense) and the quality of the tree stock on site so that informed decisions can be made in regard to what trees should be removed or retained in connection to development.

Category A, B, C trees are considered worthy of retention, whereas category U trees are generally considered unworthy for retention but may have conservation value which may be desirable to conserve.

Category A

Trees of high quality with an estimated remaining life expectancy of at least 40 years.

(Having one or more of the following qualities)

1. Mainly arboricultural qualities
Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)

2. Mainly landscape qualities
Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features

3. Mainly cultural values, including conservation
Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)

Category B

Trees of moderate quality with an estimated remaining life expectancy of at least 20 years

(Having one or more of the following qualities)

1. Mainly arboricultural qualities
Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation

2. Mainly landscape qualities
Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality

3. Mainly cultural values, including conservation
Trees with material conservation or other cultural value

Category C

Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm

(Having one or more of the following qualities)

1. Mainly arboricultural qualities
Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories

2. Mainly landscape qualities
Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits

3. Mainly cultural values, including conservation
Trees with no material conservation or other cultural value

Category U

Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years

• 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 category U trees (e.g. 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, or very low-quality trees suppressing adjacent trees of better quality.

Groups of trees and woodlands

Where groups of trees or woodlands exist on the site it is down to the surveying Arboriculturalist to designate these features and to decide on what information should be recorded in respect to these. In certain circumstances individual trees within a group or woodland are surveyed individually, such as when there is a need to differentiate between them e.g. when variation is present in their structural condition.

Hedgerows, substantial internal or boundary hedges (including evergreen screens)

These are surveyed similarly to groups of trees with the lateral spread and average height and stem diameter ranges recorded. All woody species present on the site are recorded; this is to allow the potential constraints associated with such features to be fully assessed.

Where accurate measurements cannot be gained due to inaccessible trees a # will be put at the end of the figure indicating it is an estimate.

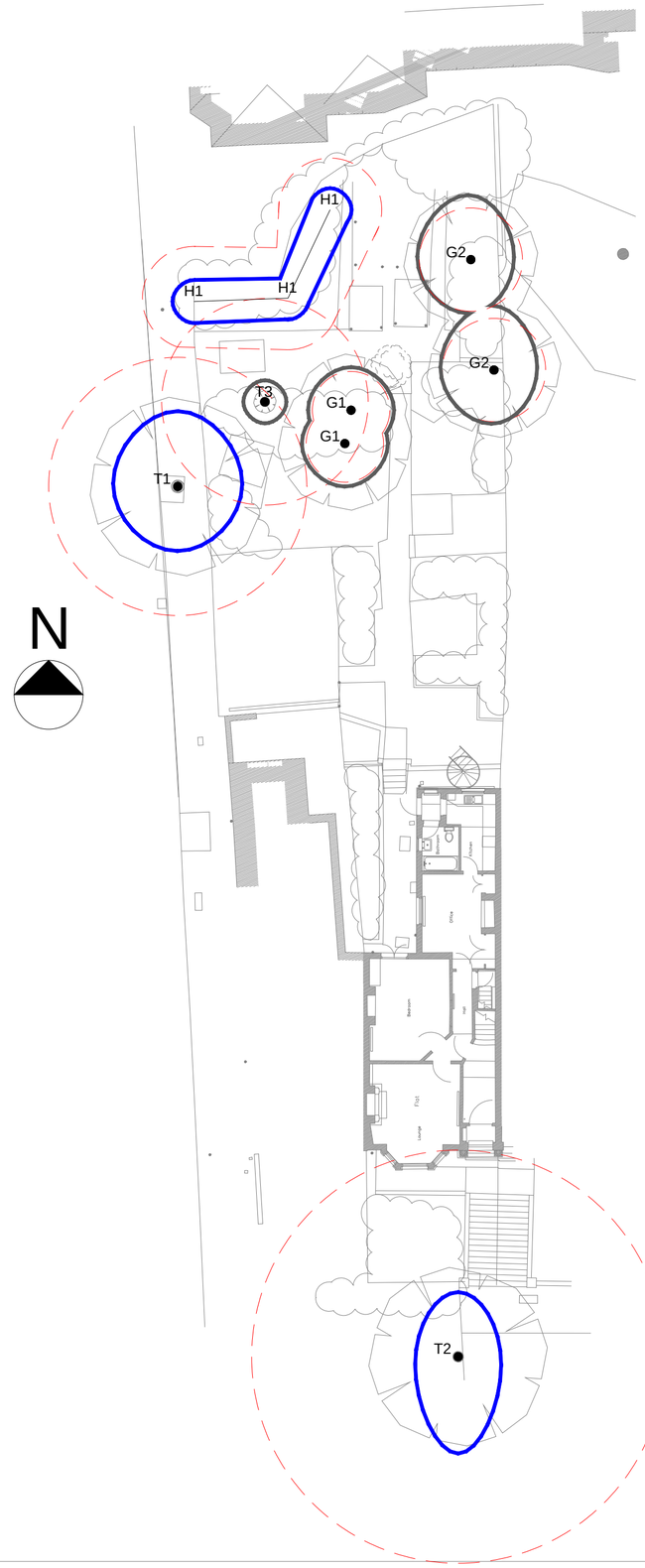
Tree Survey Schedule

Sequential Reference Number	Species (Common Name)	Height	Stem Diameter	Branch Spread N S E W in metres	First Significant Branch	Canopy Height	Life Stage	General Observations	Estimated Remaining Contribution in years	BS 5837 Category
T1	Lime	10m	500mm	3.5, 3, 3, 3	3m	2.5m	Mature	Tree located in pavement, previously pollarded with re-growths present, evidence of past branch pruning, average form, tree overhangs road, footpath and properties garden, bird nest in tree as of 12/04/2019, tree is in a good condition.	20+	B
T2	Lime	16m	800mm#	3, 4.5, 2, 2	2m	2m	Mature	Ivy present on stem of tree as such tree could not be fully inspected, tree previously pollarded with re-growths present, average to good form, evidence of past branch pruning, tree located in raised grassed area, potential weak union covered in Ivy. **Recommendation** **Remove Ivy**	20+	B
T3	Eucalyptus	4m	400mm	1, 1, 1, 1	1.6m	1.8m	Mature	Pollarded tree undertaken recently with small re-growths present, average form to tree, trees stem has slight lean northwards.	10+	C
G1	Conifer Maple	5m	150mm	2, 2, 2, 2	30cm	80cm	Semi Mature	Group of two small trees with combined canopies, average form to group which was previously suppressed by T3 canopy before pollard, average condition.	10+	C

G2	Apple Elderberry	5m/7m	200mm	3, 2.5, 2#, 2.5	1m	1.6m	Juvenile / Early mature	Group of approximately 3 trees including tree in neighbours garden, combined canopies, average form with some suppression present, evidence of past branch pruning average condition, Ivy present on stem as such group could not be fully inspected. **Recommendation** **Remove Ivy**	10+	C
H1	Conifer	3.5m	200mm	1, 1, 1, 1	40cm	30cm	Semi Mature	Previously maintained hedge with dense canopy, good form and condition, some minor die back to outer canopy, active birds nest as of 12/04/2019.	20+	B

Root Protection-Constraint Plan

(Please see separate document)



Key

- Category A Tree Canopy Spread
- Category B Tree Canopy Spread
- Category C Tree Canopy Spread
- Category U Tree Canopy Spread
- Root Protection Area

REV.	DATE	BY	DESCRIPTION

TREE AWARE UK LTD
Arboricultural Consultancy

CLIENT
Tree Aware UK LTD

TITLE
Hillfield Road
Tree Constraints Plan

DRAWN BY	DATE	SCALE	SHEET SIZE
jml/CAD	24.04.19	1:200	A2
CHECKED BY	DATE	APPROVED BY	DATE
AM/CAD	24.04.19	AG	24.04.19

DRAWING No. 63275-5-01
REVISION 0

Appendix 2

Arb Aeration Ltd

Root Excavation Report

Root Excavation Report

1 Hillfield Road,

London,

NW61QD

Undertaken by

James Abbott

Arboraeration 18th February 2020

ARBORAERATION
TREE HEALTHCARE SPECIALISTS

Introduction

Site Address: 1 Hillfield Road, London, NW61QD.

Arboraeration were instructed to excavate trial pits at the above property following a Tree Survey of the site.

Reason for trial pits

Trial pits were excavated on the property to establish the extent of rooting in relation to proposed construction. Plots were excavated using an air spade and manual digging tools.

Trial Pit Results – numbered and located as per plans supplied

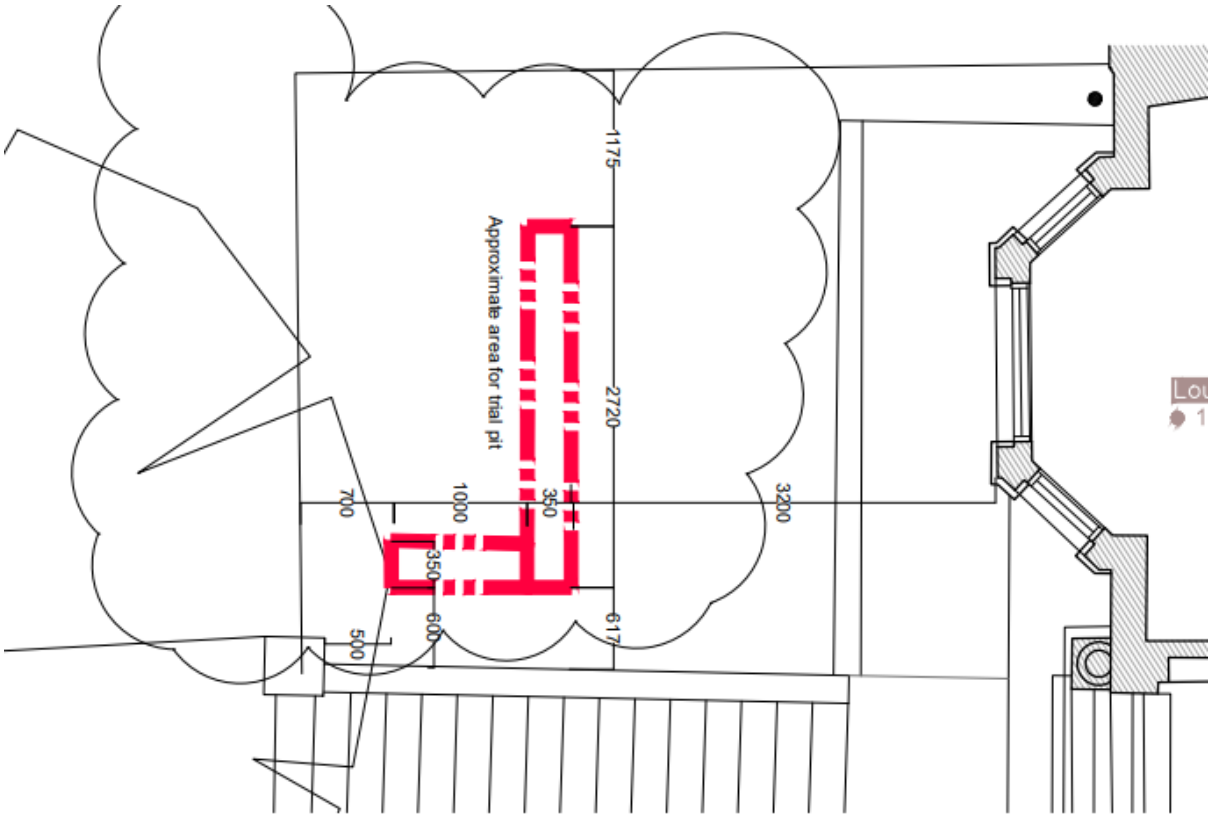
Trial Pit 1	2.7m x 1m Long L shaped trench x 0.4m Wide x 0.85m Deep 1x 30mm root from unknown origin Mass off rooting from a nearby shrub

Further Information

The shorter segment of the trench was occupied by a manhole cover leading to a paving slab on top of concrete footings extending to 850mm below surface level.

A total of 4 cover boards were left on site

Site overview



Trial Pit 1