

# Arboricultural Report

**Assessment of trees in relation to development  
for planning purposes**

109 King Henry's Road  
London  
NW3 3QX

November 2015

**151101-PD-11**

**TIM M●YA ASSOCIATES**



Project	151101 – 109 King Henry's Road, London NW3 3QX
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# 1 SUMMARY REPORT

- 1.1 This arboricultural report has been commissioned by Forge Architects to provide information to assist all parties involved in the planning process to make balanced judgements with regard to arboricultural features in relation to the proposed development at 109 King Henry's Road, London NW3 3QX.
- 1.2 The proposal includes the modification and extension to the rear existing ground floor flat and an additional basement accommodation.
- 1.3 This report includes:
  - an assessment of the trees, their quality and value and constraints to development posed by these;
  - the site context;
  - observations on the trees;
  - planning policies relevant to the consideration of the trees on the site;
  - the impact of the proposed development upon the tree population in and around the site;
  - methods of reducing impacts on trees; and
  - measures to be taken to protect trees during the proposed works.
- 1.4 My conclusions are that the development proposal in respect of trees is acceptable in principle. To provide working space and an acceptable juxtaposition between the proposed light well / basement and existing vegetation, one tree is proposed to be removed. This provides a minimal public amenity contribution; moreover new tree planting will replace and enhance the landscaping contribution that trees provide to the character of the street scene and Conservation Area.
- 1.5 Several more significant trees are located towards the rear of the garden and will be protected throughout site development.

## 2 INTRODUCTION

### Instructions

- 2.1 My name is Gavin Rees; I am a senior arboricultural consultant dealing with trees in relation to all forms of human activity including built development. I have a National Diploma in Arboriculture as well as extensive experience as a local authority tree officer and arboricultural consultant.
- 2.2 This report has been Forge Architects to support their application for a ground floor and basement residential development at 109 King Henry's Road, London NW3 3QX.

### Scope and limitations

- 2.3 The survey is not an assessment of health and safety of trees and no recommendations for works have been provided, however trees identified as imminently dangerous have been highlighted in the tree schedule where appropriate.
- 2.4 The contents of this report are copyright of Tim Moya Associates and may not be distributed or copied without the author's permission. Tim Moya Associates standard Limitations of Service apply to this report and all associated work relating to this site.

### Background and documents provided

- 2.5 My report has been prepared with reference to the following supplied information:
- topographical survey from Cadmap Ltd (ref: CM/13513\_T); and
  - proposed layout from Forge Architects (ref: 1265\_P3000)

### Methodology and guidance

- 2.1 I have referred to British Standard 5837: Trees in relation to design, demolition and construction (2012) which provides a methodology for the assessment of trees and other significant vegetation on development sites.
- 2.2 BS 5837 (2012) is intended to assist decision making with regard to existing and proposed trees and sets out the principles and procedures to be applied to achieve a harmonious relationship between trees and structures that can be sustained for the long term.

- 2.3 The Building Research Establishment (BRE) has also produced several documents between 1998 and 2006 in relation to trees and site layout planning, sunlight, daylight, shading and urban cooling. These documents consider trees and their relationship with buildings and garden usage, including the benefits they bring in terms of welcome shade or urban cooling, advising a balanced approach to these issues in design.

## Supporting Information

- 2.4 All TMA documents relevant to this report are listed at section 9, and included within the Appendices.

## 3 OBSERVATIONS AND CONTEXT

### Site visit

- 3.1 I visited the site on 13<sup>th</sup> November 2015, to identify key trees and to inform the client team of the main tree constraints likely on the site.
- 3.2 The weather at the time of my visit was cold, overcast with rain showers.

### Present use of the site

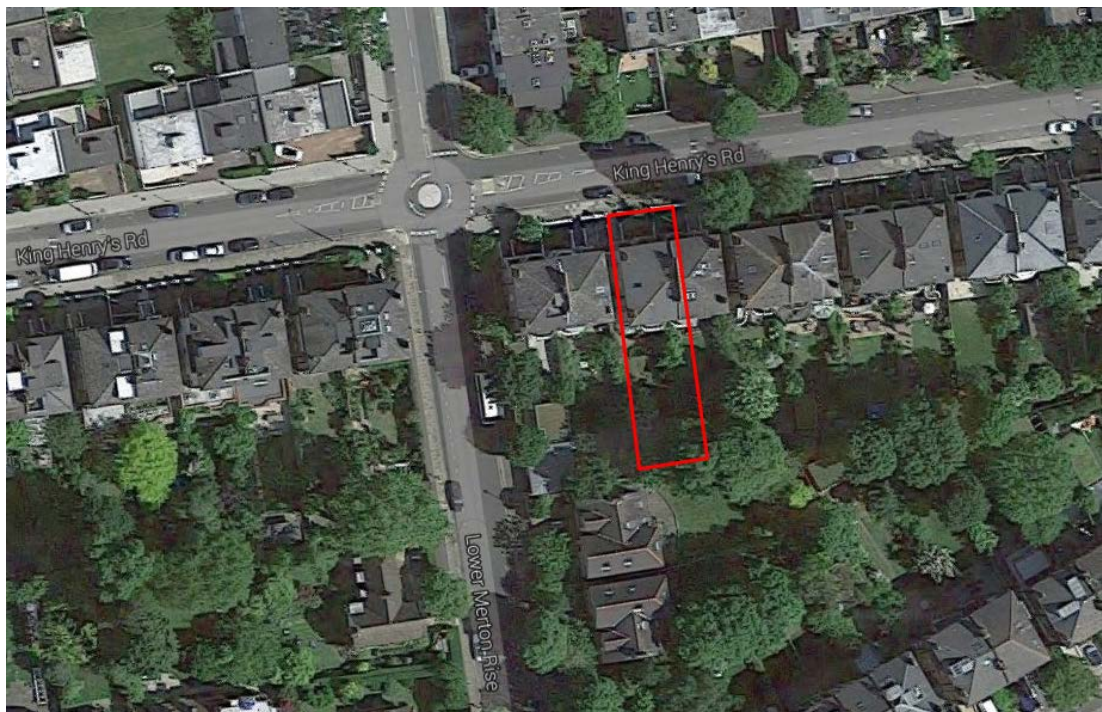
- 3.3 The existing building is a three storey semi-detached residential dwelling with front and rear gardens. The property is divided into flats which are accessed via steps located towards the front of the building. The front of the property has a double storied bay projection which extends to below pavement level.
- 3.4 A side gate provides access to the rear garden which contains an area of hardstanding next to the rear garden flat with a lawn area with mature shrub borders either side; several mature trees are located towards the rear boundary.

### Description of the local area

- 3.5 The site lies within a residential area with most of the surrounding properties being three storied semi-detached houses which appear to date back to the Victorian period. On the opposite side of King Henry's Road are two to three storied apartments which are more contemporary in design.
- 3.6 Swiss Cottage tube station is located approximately 1km to the north west of the site with Primrose Hill Park and Regents Park located 200m and 1km respectively to the south.



**Photo 1** (GR 13.11.15) View of front of 109 King Henry's Road (in centre)



**Photo 2** (Google aerial view) Approximate site location



## Trees in the local area

- 3.7 The wider area is characterised by mature trees growing within the street scene of King Henry's Road. There are a number of ash trees located within the public footway and appear to be managed as part of a cyclical pruning regime as well as several other mature trees located within nearby gardens including a mature lime and hornbeam, see photo 3 below.



**Photo 3** (GR 13.11.15) View of street scene looking east up King Henry's Road. Several ash trees are located on the left and a lime tree on the right

- 3.8 Several trees are found within and adjacent to Lower Merton Rise which is located slightly to the west of the property and consist mainly of rowan species on the public footways with a mixture of mature sycamore and plane trees located in neighbouring gardens (see photo four below).



**Photo 4** (GR 13.11.15) View of street scene looking south down Lower Merton Rise

- 3.9 Trees within the rear garden of No.109 King Henry's Road are partially visible from Lower Merton Rise, the most prominent tree is a mature lime tree (T3) located at the rear boundary with No.4 Lower Merton Rise (see photo 5 below).



**Photo 5** (GR 13.11.15) View of rear garden from Lower Merton Rise, aspect looking east, T1 (pear) is partially visible. Trees T3 and T4 are obscured behind the sycamore tree located in the photo foreground.

- 3.10 Two trees are located within the rear garden of No.109 King Henrys Road. These include an ornamental pear (T1) approximately 5 metres from the existing property and a mature lime tree (T3) located on the boundary with No.4 Lower Merton Rise immediately adjacent to the off-site sycamore T4, see photo 6 below. A horse chestnut tree T6 is located within the rear garden of No.107 King Henrys Road, its location is shown within photo 7 below.
- 3.11 Other vegetation within the rear garden of the site consists mainly of mature shrubs including a bay laurel (S5) and an 8m high pyracantha (S2). Two small ornamental shrubs are located within the front garden next to the public footway including a cordyline (S13) and a phormium (S14), see photo eight below.



**Photo 6** (GR 13.11.15) View of property rear, ornamental pear (T1) is visible at the right of the photo



**Photo 7** (GR 13.11.15) View looking south down towards the rear of the garden



**Photo 8** (GR 13.11.15) View of vegetation within the front garden of 109 King Henrys Road

## Soil conditions

- 3.12 Soil conditions will have a significant effect upon tree growth and will influence:
- The species that will grow successfully.
  - Rooting depths for different species.
  - The available soil volume that can be used by roots and therefore the likely tolerance of trees and other vegetation to soil disturbance
- 3.13 The British Geological Survey identifies the site as within an area of London Clay, with superficial deposits of sand and gravel.
- 3.14 The trees present appear to be well suited to the soil on the site and were growing well.

## Policy context

- 3.15 Planning policy at national level is set out in the government's National Planning Policy Framework (NPPF). The NPPF replaces the previous national planning policy documents including Planning Policy Guidance (PPGs) and Planning Policy Statements (PPSs). The NPPF is a material consideration in determining planning applications.
- 3.16 The NPPF sets out overarching planning policy and at its core is a presumption in favour of sustainable development. Sustainable development is defined in the NPPF as having economic, social and environmental strands that are interdependent and in these areas planning should meet the needs of the present without compromising the ability of future generations to meet their own needs.
- 3.17 The NPPF states that planning should be "not only about scrutiny, but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives." And should "always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;" Also that planning should contribute to conserving and enhancing the natural environment and reducing pollution."

- 3.18 The NPPF identifies thirteen aspects contributing to the delivery of sustainable development, including:
- establishing a strong sense of place;
  - responding to local character and history; and
  - providing developments that are visually attractive as a result of good architecture and appropriate landscaping
- 3.19 Paragraph 61 of the NPPF states “planning policies and decisions should address the connections between people and places and the integration of new development into the natural, built and historic environment.”
- 3.20 The NPPF states that “planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland. Unless the need for, and benefits of, the development in that location clearly outweigh the loss”.

## London Plan 2015

- 3.21 Regional planning policy consists of the London Plan 2015 and associated policy documents including the Climate Change Adaptation Strategy (*Managing Risks and Increasing Resilience – October 2011*).
- 3.22 The London Plan 2015 defines “green infrastructure” as “*an overarching term for a number of discreet elements (parks, street trees, green roofs etc.) that go to make up a functional network of green spaces and green features.*”
- 3.23 In relation to climate change adaptation the London Plan calls for the use of trees and other shading to “*increase green areas in the envelope of the building, including its roof and environs*”
- 3.24 The London Plan sets a target of a 5% increase in trees in parks, gardens and green spaces by 2025.
- 3.25 Policy 7.21 of the London Plan 2015 calls for trees and woodlands to be protected, maintained and enhanced. The policy requires that existing trees of value should be retained and that any loss as a result of development should be replaced following the principle of ‘right place, right tree’. The policy suggests that, where appropriate, large canopied species should be planted (rather than smaller ornamental species).

## Core Strategy

- 3.26 The Camden Core Strategy and its Development Policies was adopted in November 2010. The following policies are relevant to this site and trees and landscape issues:
- 3.27 **Policy CS15 Protecting and improving parks and open spaces and encouraging biodiversity** – refers more to public open spaces however sites of nature conservation however it does mention the need for tree protection and the promotion of new tree planting.
- 3.28 **Policy DP24 Securing High Quality Design** – new development including alterations and extensions will need to consider natural features including trees.
- 3.29 **Policy DP25 Conserving Camden’s Heritage** – confirms that the council will preserve trees and garden spaces which make a contribution to the character of a conservation area.
- 3.30 **Policy DP27 Basement and light wells** – proposals will need to consider the natural environment especially trees of townscape or amenity value. The supporting text states that sufficient margins should be left between the basement construction to sustain growth of vegetation and trees. Where there are trees on or adjacent the site the root protection area of these trees will need to be considered.

## Unitary Development Plan

- 3.31 The Camden Unitary Development Plan adopted January 2007. Relevant policies to the consideration of trees, their setting and development include:
- 3.32 **Policy DES 12 Parks, gardens and Squares** - does not permit development on or under parks, landscaped spaces, or gardens where the open space forms an important element in the townscape, part of a planned estate or street layout, are characteristic features of conservation areas, provide the setting for listed buildings, or are of significant ecological value. It also sets out protection given to London Squares (incl. civic spaces such as Trafalgar Square and Parliament Square), and English Heritage registered parks and gardens in Westminster. The policy protects open spaces by limiting development adjacent to them except where it would safeguard their appearance, setting and ecological value, and preserve their historic integrity and views.



- 3.33 **Policy ENV 15 Public and Private Open Space** - assigns similar protection to public or private open space of amenity, recreational or nature conservation value, unless the [proposed] development is essential and ancillary to maintaining or enhancing that land as valuable open space.
- 3.34 **Policy ENV 16 Trees and Shrub Cover** - Protects trees in conservation areas and those subject to Tree Preservation Orders and protects trees which form part of a green corridor.

## Supplementary Planning Documents

- 3.35 Camden Council have created the following planning guidance which is related to this application.
- 3.36 **Basements and Lightwells CPG4** – was adopted on 6<sup>th</sup> April 2011 and updated in July 2015. The following sections are relevant to trees:
- 3.37 Permitted Development – permitted development rights are removed within a conservation area if trees are affected by the proposed development and that the conservation area is preserved or enhanced.
- 3.38 Basement schemes will need to consider the impact of development on nearby trees especially if the basement area extends below the garden space. Sufficient margins should be left between the basement construction and trees to sustain their growth and mature development.
- 3.39 **Design CPG1** – was adopted on 6<sup>th</sup> April 2011 and updated in 2015 and relates to the design of new developments including building extensions and states that construction methods for new developments should minimise impacts on trees.
- 3.40 Section 6 specifically concerns landscape design and trees and states the requirement for a tree survey prior to the scheme design and includes guidance on tree protection and new landscaping. It also mentions that structures should be sited away from trees and vegetation and that foundation design should minimise damage to the root protection zones of adjacent trees.
- 3.41 **Sustainability CPG3** – was adopted on 6<sup>th</sup> April 2011 and updated in 2015 and highlights the importance that trees have in respect of climate change adaptation

## Statutory Protection of trees

3.42 According to Camden Borough Council's on line mapping facility the site is located within the Elsworthy conservation area and therefore subject to statutory protection.

I am not aware of any tree preservation orders existing on this site but prior to undertaking any tree works confirmation of this should be sort from the local authority.

## 4 TECHNICAL INFORMATION

### Tree Data

- 4.1 The location of trees and groups of trees are shown on the tree survey drawing 151101-P-10 at Appendix A, this plan illustrates the location of trees and the extent of the spread of their crowns. Dimensions, comments and information for each tree are given in the tree schedule 151101-PD-10 at Appendix B.

### Life stage analysis

- 4.2 Unlike age in numerical terms (years), this description is used to describe the physical form of a tree in relation to its typical life expectancy and varies between species; for example an oak may have a young form after 20 years while a cherry tree will be middle-aged after 20 years and will have developed the appearance of a mature tree with a spreading rounded crown whilst the oak remains tall and slender with strong apical dominance.
- 4.3 Of the five trees surveyed as part of this survey, two were assessed as being early mature and the other three as mature.

### BS5837 category breakdown

- 4.4 Two of the five trees surveyed, T3 and T6 were assessed as being of moderate quality and value according to the BS5837 categorisation system (B category). This assessment is due more to their landscape contribution than their individual quality. All remaining entries were assessed as being of low quality and value (C Category).

## 5 ANALYSIS OF THE PROPOSAL IN RESPECT OF TREES

### Proposed development

- 5.1 The layout for the proposed rear extension and basement is shown on plan 151101-P-11 at Appendix A. A draft visual representation of the proposed development can be seen in figure one below.



**Figure 1** (Forge Architects D&A draft statement) Modelled visual of the proposal

- 5.2 The development proposals are limited to the rear of the existing property. To provide working space and to improve the juxtaposition between the proposed basement and nearby vegetation, it is proposed to remove one ornamental pear (T1) which is located approximately 3m from the edge of the proposed basement light well. T1 is a small and insignificant tree which contributes little to the local landscape. Instead the development proposals provide a good opportunity to enhance the garden and local area with the planting of at least two new trees.
- 5.3 The position of trees to be removed is shown on plan 151101-P-11 at Appendix A and is detailed within the Tree Works Schedule at Appendix B.

## Identified arboricultural impacts

- 5.4 **Loss of trees and the effect on the character and appearance of the area** – the proposal will involve the loss of one tree, and several shrubs. The tree to be removed is insignificant and makes a minimal contribution to the character of the Conservation Area and street scene as shown in photo five above. Of the fourteen vegetation entries surveyed the loss of trees as a result of the proposal is limited to the following:

A High Value	B Moderate Value	C Low value	U Poor Value
0	0	1	0

- 5.5 **Impact from extension and basement excavations** - the footprint for the basement and ground floor extension is outside the root protection area (RPA) and at an acceptable distance from all retained trees and vegetation.
- 5.6 **Construction Operations** - all plant, equipment and materials will be confined to the areas outside the Tree Protection Zone (TPZ) as shown in green on the Tree Protection Plan 151101-P-12 at Appendix A.
- 5.7 **Building juxtaposition** – nearby vegetation within the site will be removed to create an acceptable level of clearance and to improve natural lighting through the light wells and into the basement. A neighbouring wall shrub, Ceanothus (S10) is located on the adjoining wall but has recently been trimmed back to the boundary. To maintain an acceptable juxtaposition between the proposed extension and this shrub it will need to be regularly trimmed back however this will not be detrimental to its condition or amenity and will follow existing management.

5.8 **Drainage and services** – where possible existing services will be used. Excavations for underground services and drainage will need to avoid the root protection areas of retained trees or where possible existing runs should be used. If avoidance of the root protection areas is not possible, then best practice guidance for the installation of these features will need to be followed. BS5837 (2012) recommends the National Joint Utilities Group Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees Volume 4, issue 2: NJUG, 2007 as a normative reference in these instances .

## 6 DISCUSSION

### General Change

- 6.1 As viewed from the adjacent Lower Merton rise, the impact of the proposed development in visual terms will be insignificant because of the scale of the proposal, its compatibility with the existing building and the presence of neighbouring trees and vegetation within the neighbouring garden (see photo five above).
- 6.2 New tree planting is proposed which will improve the existing contribution that trees within the site contribute currently provide in respect of their public and private amenity. The development proposals provide a good opportunity to plant better quality trees which can be selected to comply with the principles of right tree, right place. The change in terms of visual amenity will therefore be negligible and in the mid to long term there will be a net gain in respect of tree canopy cover, quality and amenity value.
- 6.3 Retained trees located at the rear of the site will be protected by protective fencing as shown on the Tree Protection Plan 151101-P-12 at appendix A

### How do the changes relate to planning policy?

- 6.4 The proposals do not necessitate the removal of any significant trees. Low quality trees are to be replaced which will enhance the overall public amenity value that trees at this site contribute to the local area. Retained trees will be protected throughout site development. The proposals in respect of their environmental impact on trees and the landscape are therefore sustainable and do not conflict with policies contained within the NPPF and the London Plan 2015.
- 6.5 The removal of one insignificant tree will be suitably mitigated with proposed replacement planting. Significant space is available within the rear garden for new tree planting which can develop and mature without the need for pruning to restrict their eventual size. The basement development will not extend close to retained trees and the full RPA of all retained trees will be protected throughout the development. The proposal therefore complies with Camden Council's policies contained within both its UDP and Core Strategy as well the relevant Supplementary Planning Documents relating to basement and light wells.

## 7 CONCLUSIONS

### Sustainable development

- 7.1 The design of the proposal will not have a detrimental impact on significant trees, with all retained vegetation located at a significant distance from the nearest basement excavation.
- 7.2 The one tree that is proposed to be removed contributes very little to the public amenity of the local area and its removal will be compensated with new quality tree planting in locations that are able to support the mature development of full canopied trees.
- 7.3 A Tree Protection Plan is attached at Appendix A of this report, subject to the installation of protective fencing at the points indicated on the plan the operations on site can be controlled to ensure that the trees are properly safeguarded during the works. A generic arboricultural method statement (AMS) has been included within the above mentioned plan which considering the relatively small risk that the proposals will have on retained trees should be sufficient to ensure that retained trees will be protected however if necessary a separate AMS can be provided as part of a planning condition.
- 7.4 As there will be limited tree losses and no significant impact on important trees as a result of the development, the proposal complies with the requirements of National, regional and local policies and guidance in relation to the trees and their important setting.



## 8 RECOMMENDATIONS

### The use of planning conditions to safeguard trees

- 8.1 Section 197 of the Town and Country Planning Act 1990 places a duty on the Local Planning Authority to ensure that planning permissions are granted making adequate provision for the preservation and planting of trees by the imposition of conditions.
- 8.2 Planning conditions can include:
- The provision of detailed landscape scheme to ensure new tree planting

## 9 TMA SUPPORTING INFORMATION

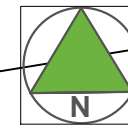
Document	Reference	Revision
Tree Schedule	151101-PD-10	
Tree Works Schedule	151101-PD-12	
Tree Survey Plan	151101-P-10	
Proposed layout and Tree Removals Plan	151101-P-11	
Tre Protection Plan	151101-P-12	

## **APPENDIX A - PLANS**

Tree Survey Plan 151101-P-10

Proposed Layout and Tree Removals Plan 151101-P-11

Tree Protection Plan 151101-P-12

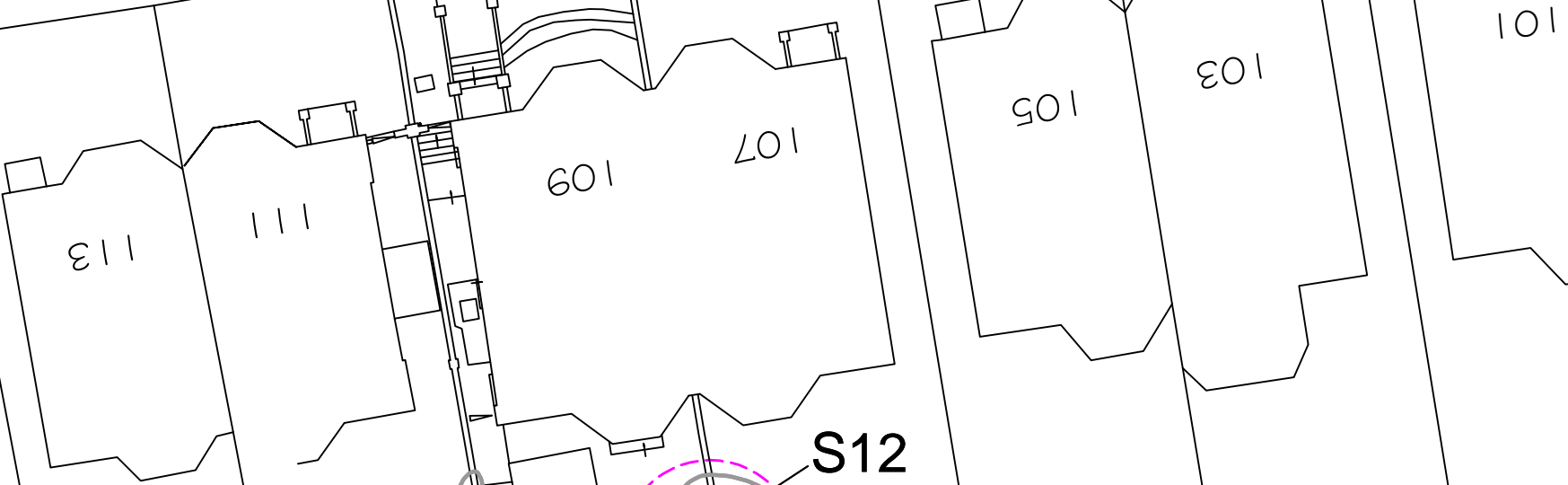


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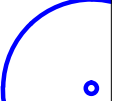



King Henrys Road

LOWER MERTON RISE

S14 S13



**BS 5837:2012 TREE RETENTION CATEGORIES**

-  **Category A**  
Trees of high quality and value: in such a condition as to be able to make substantial contribution (a minimum of 40 years is suggested)
-  **Category B**  
Trees of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)
-  **Category C**  
Trees of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.
-  **Category U**  
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
-  **BS5837 Root Protection Areas**  
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work

REVISIONS	

OS MAP

0 1m 5m 10m 15m

Title Tree Survey		
Client Starlit Properties Limited		
Project 109 King Henry's Road, London, NW3 3QX		
Date November 2015	Drawn by HR	Checked by -
Drawing No 151101-P-10	Rev -	Scale 1:250@A3

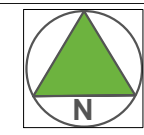
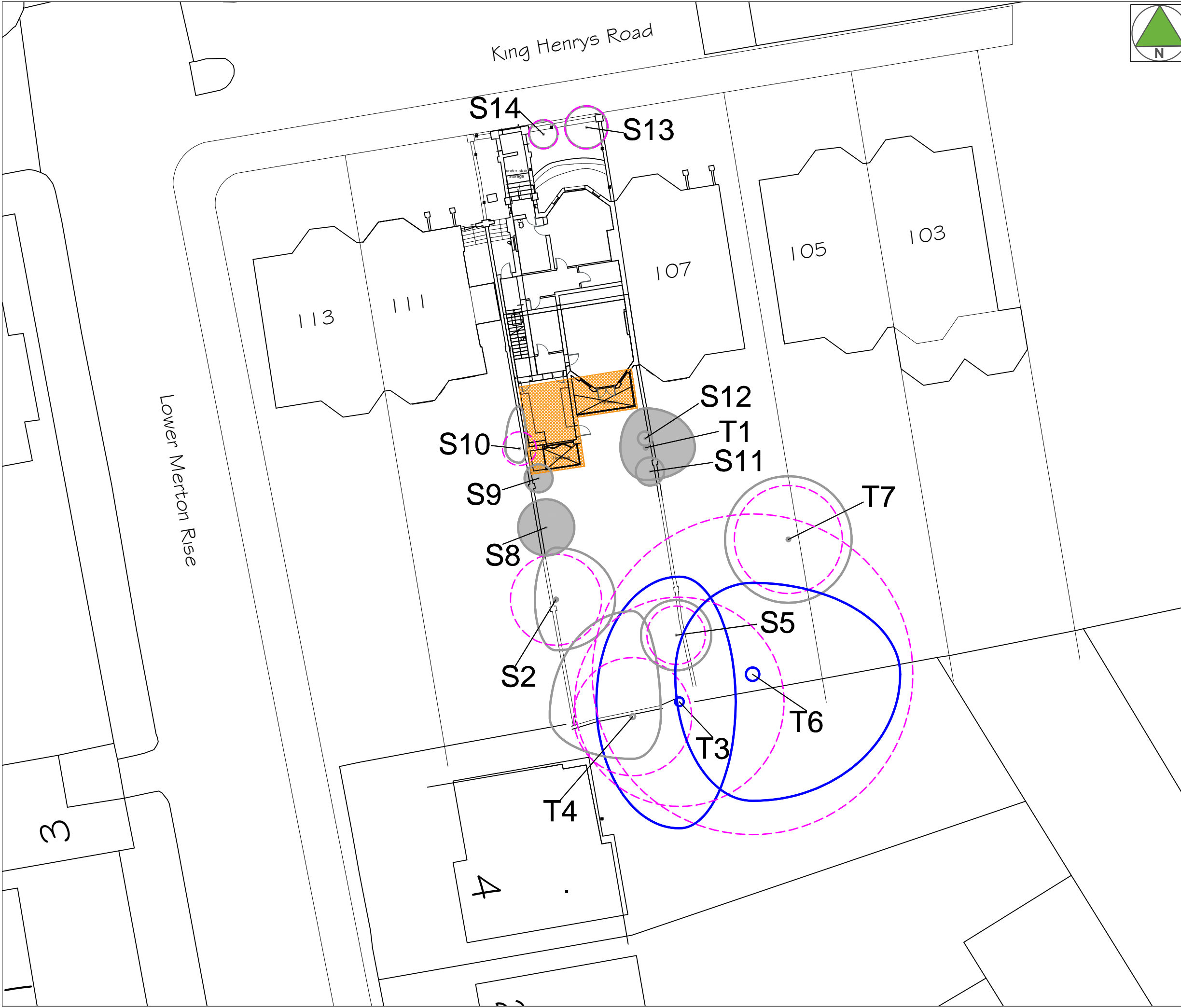
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**TIM MOYA ASSOCIATES**  
ARBORICULTURE • LANDSCAPE • ECOLOGY

The Barn, Feltimores Park  
Chalk Lane  
Harlow  
Essex CM17 0PF

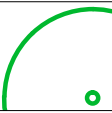
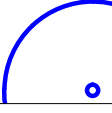
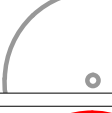
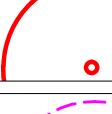

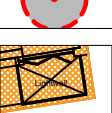

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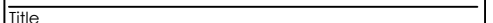


**INVESTORS  
IN PEOPLE**

The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

- BS 5837:2012 TREE RETENTION CATEGORIES**
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Trees of high quality and value: in such a condition as to be able to make substantial contribution (a minimum of 40 years is suggested)
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  -  **Category C**  
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  -  **Category U**  
Those in such a condition that the tree cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.
  -  **BS5837 Root Protection Areas**  
Precautionary areas within which tree roots and soil structure must be protected. All works within these areas will require special methods of work
  -  Trees and vegetation to be removed shown shaded
  -  Extent of basement footprint shown orange

REVISIONS	
Base Drawing	
245_P3001_Proposed Ground Floor	



Title Proposed Layout and Tree Removals		
Client Starlit Properties Limited		
Project 109 King Henry's Road, London, NW3 3QX		
Date November 2015	Drawn by HR	Checked by -
Drawing No 151101-P-11	Rev -	Scale 1:250@A3

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The Barn, Feltimores Park  
Chalk Lane  
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**ARBORICULTURAL METHOD STATEMENT**

**BRITISH STANDARD 5837(2012)**  
 This method statement is in accordance with British Standard 5837: Trees in relation to design, demolition and construction - Recommendations (2012) which provides a methodology for the assessment and protection of trees and other significant vegetation on development sites.

**TREE SURGERY WORKS**  
 Only tree works specified within this document may be carried out. Any uncertainty regarding trees to be pruned will be immediately confirmed with the arboricultural consultant and local authority tree officer. All tree works will be carried out in accordance with the recommendations given in the current BS 3998 (2010). All tree works should be carried out in accordance with the Wildlife and Countryside Act 1981 (as amended) and the Habitat Regulations 2010.

**SITE SUPERVISION**  
 All key / critical activities that will affect trees during construction will be inspected and monitored by the approved arboricultural consultant and reports issued to the client and local authority.

Supervision visits will occur as follows:

- Inspection of tree works, tree protection prior to demolition and construction works
- Monthly visits to inspect tree protection measures
- During works that may affect retained trees

**PROTECTIVE FENCING**  
 No materials or equipment other than those required to erect protective fencing, will be delivered to the site before the fencing is installed. The position of protective fencing for demolition is shown on this drawing. Protective fencing will be constructed of robust barriers fit for the purpose of excluding demolition and construction traffic. Signs will be fixed to every third panel stating 'Tree Protection Area Keep Out - Any incursion into the protected area must be with the agreement of the local authority or arboricultural consultant'. The main contractor will inform the local authority officer and the arboricultural consultant that tree protection is in place before demolition or site clearance works commence. No alteration, removal or repositioning of the tree protection for demolition will take place during the demolition phase without the prior consent of the arboricultural consultant.

**SERVICES AND DRAINAGE**  
 Methods of working for installation of the drainage runs or services will follow the guidance within Table 3 of BS 5837 (2012), or National Joint Utilities Group (NJUG) Guidelines for the planning, installation and maintenance of utility apparatus in proximity to trees. Volume 4, issue 2, London NJUG 2007. No works will occur within the tree protection zone without prior agreement from the arboricultural consultant. No machinery will be permitted within the TPZ at any time.

**GENERAL PROTECTION METHODS**  
 No fires will be permitted within 20m of the crown of any tree. No changes in soil levels will take place within the tree protection zones without prior written consent of the local authority. No materials, vehicles, plant or personnel will be permitted into the tree protection zones at any time without the prior consent of the arboricultural consultant. Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately. The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.



The original of this drawing was produced in colour - a monochrome copy should not be relied upon.

**BS 5837:2012 TREE RETENTION CATEGORIES**

**Category A**  
 Trees of high quality and value: in such a condition as to be able to make substantial contribution (a minimum of 40 years is suggested)

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

**Category C**  
 Trees of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.

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

Extent of basement footprint shown orange

Position of protective fencing and tree protection zones.



King Henrys Road

Lower Merton Rise



REVISIONS	
Base Drawing	
2IG_P3001_Proposed Ground Floor	
0 1m 5m 10m 15m	

Title Tree Protection Plan		
Client Proposed Layout and Tree Removals		
Project 109 King Henry's Road, London, NW3 3QX		
Date November 2015	Drawn by HR	Checked by -
Drawing No 151101-P-12	Rev -	Scale 1:250@A3
DO NOT SCALE Use only figured dimensions		

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 ARBORICULTURE • LANDSCAPE • ECOLOGY

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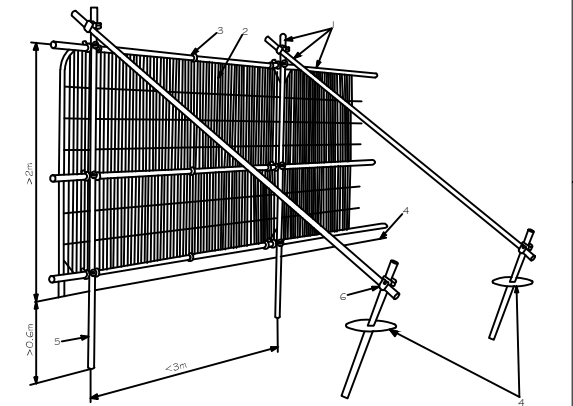
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**TREE PROTECTION AREA**  
**KEEP OUT!**  
 ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL CONSULTANT

**TIM MOYA ASSOCIATES**  
 ARBORICULTURAL & LANDSCAPE CONSULTANTS 0845 094 3268

**Protective Fencing Specification**



- Key
- 1 Standard scaffold poles.
  - 2 Heavy gauge 2m tall galvanized tube and welded mesh infill panels.
  - 3 Panels secured to upright and cross-members with wire ties.
  - 4 Ground level.
  - 5 Uprights driven into the ground until secure (minimum depth 0.6m).
  - 6 Standard scaffold clamps.

## **APPENDIX B - SCHEDULES**

Tree Schedule 151101-PD-10

Tree Works Schedule 151101-PD-12

109 King Henry's Road, London, NW3 3QX

Tree/Group Number	No. of Trees	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)								Crown Clearance (m)	Life stage	Condition Notes	Most Recent Survey	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
						N	NE	E	SE	S	SW	W	NW								
Tree T1	1	<i>Pyrus sp.</i> Pear sp.	7.5	28	1	2.8	3.5	2.3	1.8				1.5	Mature	Structural condition Fair. Physiological condition Fair. Bark wound - Minor. Deadwood - Minor. Foreign object - Ingrown metal. Poor past pruning. Pruning wounds - Suspected compartmentalised. Root environment - Restricted. Unbalanced crown - Minor. Crown clearance over site approximately 3.5m Condition - Stem bifurcates at 2m.	13/11/2015	35.5	3.4	10-20	C1	
Shrub S2	1	<i>Pyracantha sp.</i>	8.0	27	1	3.7	4.2	3.6	1.5				1.0	Mature	Structural condition Poor. Physiological condition Fair. Epicormic growth - Base. Leaning trunk - Minor. Pruning wounds - Decayed. Root environment - Restricted. Rubbing limbs. Root plate movement - Recent (suspected stabilised). Unbalanced crown - Minor. Stem distortion at 1m Climbing rose in crown	13/11/2015	33.0	3.2	10-20	C1	
Tree T3	1	<i>Tilia sp.</i> Lime sp.	22.0	62	1	8.9	4.0	9.0	5.9				4.0	Mature	Structural condition Fair. Physiological condition Fair. Altered ground level - Historic. Arboricultural work - Historic. Deadwood - Minor. Epicormic growth - Bole / principal stems. Foreign object - Ingrown metal. Unbalanced crown - Minor. Stem located on boundary, ownership unclear. Slight stem bulge at 1m. Unable to inspect tree(s) closely due to inaccessibility. Location - Debris dumped at base.	13/11/2015	173.9	7.4	20-40	B2	
Tree T4	1	<i>Acer pseudoplatanus</i> Sycamore	14.5	35	1	7.5	2.0	3.0	5.9				3.0	Early Mature	Structural condition Fair. Physiological condition Fair. Poor past pruning. Root environment - Restricted. Suppressed crown - Major. Unbalanced crown - Major. Crown clearance over site approximately 4m Unable to inspect tree(s) closely as tree situated on neighbouring property. Location - Debris dumped at base. Change of levels between neighbouring sites	13/11/2015	55.4	4.2	20-40	C1	
Shrub S5	1	<i>Laurus nobilis</i> Bay	4.5	5 AVE	12	2.5	2.5	2.5	2.5				0.5	Early Mature	Structural condition Poor. Physiological condition Fair. Multi-stemmed. Location - Estimated as shrub not plotted on topographical survey. Location - Debris dumped at base.	13/11/2015	13.6	2.1	10-20	C1	
Tree T6	1	<i>Aesculus hippocastanum</i> Horse chestnut	21.0	95	1	6.5	10.5	9.0	5.5				2.5	Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Historic. Epicormic growth - Base / bole / principal stems. Foreign object. Unable to inspect tree(s) closely as tree situated on neighbouring property. Large wound on stem at approximately 10m possible as a result of storm damage (north-side). Condition - Stem bifurcates at 4.5m.	13/11/2015	408.3	11.4	20-40	B2	

Stem green estimated value  
 Stem AVE average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.



# 109 King Henry's Road, London, NW3 3QX

Tree/Group Number	No. of Trees	Species	Height (m)	Stem diameter (cm)	No. of Stems	CROWN SPREAD (m)							Crown Clearance (m)	Life stage	Condition Notes	Most Recent Survey	RPA (m <sup>2</sup> )	RPR (m)	Life expectancy (yrs)	BS Category
						N	NE	E	SE	S	SW	W								
Tree T7	1	<i>Acer pseudoplatanus</i> Sycamore	12.0	25 AVE	2	4.5		4.5	4.5		4.5		3.0	Early Mature	Structural condition Fair. Physiological condition Fair. Crown reduction - Historic. Root environment - Restricted. Twin-stemmed. Unable to inspect tree(s) closely as tree situated on neighbouring property.	13/11/2015	46.4	3.8	20-40	C1
Shrub S8	1	<i>Viburnum sp.</i>	3.5	4 AVE	11	2.0		2.0	2.0		2.0		2.0	Mature	Structural condition Fair. Physiological condition Fair. Multi-stemmed. Location - Estimated as shrub not plotted on topographical survey.	13/11/2015	8.0	1.6	10-20	C1
Shrub S9	1	<i>Viburnum sp.</i>	3.0	3 AVE	3	1.0		1.0	1.0		1.0		2.0	Mature	Structural condition Fair. Physiological condition Fair. Multi-stemmed. Location - Estimated as shrub not plotted on topographical survey.	13/11/2015	1.2	0.6	10-20	C1
Shrub S10	1	<i>Ceanothus sp.</i>	3.0	10	1	3.0		0.5	1.0		1.0		1.5	Early Mature	Structural condition Fair. Physiological condition Fair. Arboricultural work - Recent. Root environment - Restricted. Unbalanced crown - Minor. Crown recently cut back over site back to boundary wall Location - Estimated as shrub not plotted on topographical survey. Unable to inspect tree(s) closely as tree situated on neighbouring property.	13/11/2015	4.5	1.2	10-20	C1
Shrub S11	1	<i>Viburnum sp.</i>	2.0	3 AVE	12	1.0		1.0	1.0		1.0		0.0	Mature	Structural condition Fair. Physiological condition Fair. Multi-stemmed. Location - Estimated as shrub not plotted on topographical survey.	13/11/2015	4.9	1.2	10-20	C1
Shrub S12	1	<i>Cordyline sp.</i>	2.0	8	1	0.5		0.5	0.5		0.5		0.0	Mature	Structural condition Fair. Physiological condition Fair. Multi-stemmed. Location - Estimated as shrub not plotted on topographical survey.	13/11/2015	2.9	1.0	10-20	C1
Shrub S13	1	<i>Cordyline sp.</i>	3.0	5 AVE	4	1.5		1.5	1.5		1.5		0.5	Early Mature	Structural condition Fair. Physiological condition Fair. Multi-stemmed. Location - Estimated as tree not plotted on topographical survey.	13/11/2015	7.4	1.5	20-40	C1
Shrub S14	1	<i>other</i> other	1.5	5 AVE	3	1.0		1.0	1.0		1.0		0.0	Early Mature	Structural condition Fair. Physiological condition Fair. Shrub - Phomium species Location - Estimated as shrub not plotted on topographical survey.	13/11/2015	3.4	1.0	10-20	C1

Stem green estimated value  
 Stem AVE average stem diameter for multi-stemmed trees

The survey information in this schedule has been gathered following a BS5837 survey for planning purposes. Where hazardous trees have been noted recommendations for works may have been made but this survey cannot be relied upon as a full health and safety assessment of the trees.

Table 1 of BS5837 (2012) Cascade chart for tree quality assessment

Category and definition	Criteria (including subcategories where appropriate)			Identification on plan
<b>Trees unsuitable for retention (see note)</b>				
<p><b>Category U</b></p> <p>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</p>	<ul style="list-style-type: none"> <li>* 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)</li> <li>* Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline</li> <li>* Trees infected with pathogens of significance to health and/or safety of other trees nearby, or very low quality trees suppressing adjacent trees of better quality</li> </ul>			<b>RED</b>
<p><i>NOTE Category U trees can have existing or potential conservation value which it might be desirable to preserve; see 4.5.7</i></p>				
<p style="text-align: center;"><b>1 Mainly arboricultural qualities      2 Mainly landscape qualities      3 Mainly cultural values, including conservation</b></p>				
<b>Trees to be considered for retention</b>				
<p><b>Category A</b></p> <p><b>Trees of high quality</b> with an estimated remaining life expectancy of at least 40 years</p>	<p>Tree 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)</p>	<p>Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>	<b>GREEN</b>
<p><b>Category B</b></p> <p><b>Trees of moderate quality</b> with an estimated remaining life expectancy of at least 20 years</p>	<p>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</p>	<p>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</p>	<p>Trees with material conservation or other cultural value</p>	<b>BLUE</b>
<p><b>Category C</b></p> <p><b>Trees of low quality</b> with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150 mm</p>	<p>Unremarkable trees of very limited merit or such impaired condition that they do not qualify in higher categories</p>	<p>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</p>	<p>Trees with no material conservation or other cultural value</p>	<b>GREY</b>

# Tree works schedule

109 King Henry's Road, London, NW3 3QX

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ID No.	Count / Species	BS5837 Category	Recommended works
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## To facilitate development

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1	1 Pyrus sp. Pear sp.	C1	Fell - Ground level. .
8	1 Viburnum sp.	C1	Fell - Ground level. .
9	1 Viburnum sp.	C1	Fell - Ground level. .
11	1 Viburnum sp.	C1	Fell - Ground level. .
12	1 Cordyline sp.	C1	Fell - Ground level. .

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## Tree work analysis (trees and trees in groups)

	To facilitate development	Total
Fell - Ground level	5	5
Total	5	5

- Feasibility Tree Surveys
- British Standard 5837 Tree Surveys
- Tree Constraints Reports & Drawings
- Appeal Statements & Proofs
- Expert Witness
- Evidence at Hearings & Public Inquiries
- Method Statements to Satisfy Planning Conditions
- Design Solutions
- Landscape Plans
- Tender Documents & Drawings
- Supervision & Inspection of Works
- Contract & Project Management
- Health & Safety Surveys
- GPS Surveys
- Computerised Tree Population Surveys
- CAD Plans & Consultancy
- Subsidence Risk Assessments
- Mortgage & Insurance Reports
- TPO Review
- Local Government Officer Contracts
- Arboricultural & Ecological Reports for Planning
- Habitat Surveys (Extended Phase 1/ Walkover/ Botanical)
- Protected Species Surveys
- Ecological Mitigation & Licencing
- BREEAM & CFSH
- Ecological Management Plans
- Hedgerow Surveys
- Landscape Analysis



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