Marcus Foster
Arboricultural Design & Consultancy
BA (Hons) | NDArb | AATechcert (ArborA) | EGS.Dip

Arboricultural Survey (BS5837:2012) & Impact Assessment *incorporating* Arboricultural Method Statement

Site details:

1-44 Denyer House
Grove End Lodge
College Lane
London
NW5 1BJ

Client details:

London Borough of Camden
c/o
Whymark & Moulton Chartered Surveyors
14 Cornard Road
Sudbury
Suffolk
CO10 2XA

Date of Report:

8th August 2016

Report Prepared by:

Marcus Foster
BA (Hons) NDArb. TechCert (ArborA) EGS.Dip

Marcus Foster
Arboricultural Design & Consultancy
Tel: + 44 (0) 7812 024 070
Email: marcus@mfdesignconsultancy.com
www.mfdesignconsultancy.com

Contents

1. Introduction

1.1 This report has been commissioned by Whymark and Moulton Chartered Surveyors on behalf of London Borough of Camden to survey, assess and provide an Arboricultural Impact Assessment and Method Statement for the mature Ash tree within the rear garden of Grove End Lodge, College Lane, London, NW5 1BP and on the boundary with Denyer House, College Lane. The survey and report has been compiled in relation to the proposed re-construction of a brick boundary wall between the two properties.

1.2 A site visit was conducted on Wednesday 3rd August to survey and assess the trees. The weather at the time of inspection was dry and sunny with mild temperatures.

1.3 The tree survey, report and recommendations have been compiled for 1 tree (T1) surveyed within Grove End Lodge, College Lane, London, NW5. and the tree is subject to a Tree Preservation Order (Reference C:2003 2014).

1.4 The details of the subject tree is set out in the tree survey table in *Appendix A*. The tree was surveyed on the date and time shown above and the tree survey assessment information for the tree describing size, condition and surroundings are found within this appendix.

1.5 The tree located within the site is shown in site plan, *Appendix B.1 and B. 2*, and these correspond to the tree survey results table, *Appendix A*.

1.6 Photographs of the tree can also be found in *Appendix C*.

1.7 This report and the opinions within it have been produced by Marcus Foster, a qualified Arboriculturist holding a National Diploma in Arboriculture, and the Arboricultural Association's Technicians Certificate as well as a degree in History and Society. Work experience within the industry includes work as a Contracts Manager for an Arboricultural Association Approved Company, a Local Authority Tree Preservation Officer and an independent Arboricultural Consultant.

1.8 No additional documentation has been referred to relating to the trees or the building at this property for the compilation of this report.

2. Survey Details and Scope

2.1 The site survey included the 1 tree (T1) as shown in the survey, *Appendix A,* and also highlighted on the site plans*, Appendix B.1* and *B.2.*

2.2 The tree was surveyed from ground level from within both properties. The diameter of the trunk has been measured using a DBH tape. The height of the tree has been estimated due to the difficult topography for the use of a clinometer.

2.3 The following information was recorded for the tree and is shown in the Tree Schedule included in *Appendix A*:

- Number: an identity number which cross-references locations shown on the plan in Appendix A with the schedule in Appendix B.
- Species: listed by common names
- Tree Height: height in metres (m)
- Tree Spread: spread in metres (m)
- Stem diameter: measured in millimetres (mm) and taken at 1.5m above ground level
- Age Class: Y (young); EM (early-mature); M (mature); OM (over-mature)
- Vigour: G (good); F (fair); P (poor); D (dead)
- Physiological Condition: G (good); F (fair); P (poor); D (dead)
- Structural conditions: Specific comments relating to each tree
- Preliminary Management Recommendations
- Estimated Remaining Contribution (years)
- BS5837 Category Grading
- Protection Distance (if applicable – BS5827: 2012)

2.4 The information contained within the report reflects the condition of the specimen examined at the time of the inspection. As the inspection was only visual no guarantee can be given concerning the condition of the wood at present in the tree inspected and furthermore that no future problems or deficiencies may arise.

2.5 Information recorded in the tree survey, *Appendix A* is expanded in the report findings and recommendations have been made in *Section 5*.

Tree Survey Summary

2.6 All trees have been survey in accordance with BS5837: 2012 and have been rated as follows:

Category 'A' trees

Trees of high quality with an estimated remaining life expectancy of at least 40 years. Trees have been categorised as 'A' trees for one of the following reasons:

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'A' category trees have a green outline as denoted within the site plan key.

Category 'B' trees
Trees of moderate quality with an estimated remaining life expectancy of at least 20 years. Trees have been categorised as 'B' trees for one of the following reasons

- Mainly arboricultural qualities
- Mainly landscape qualities
- Mainly cultural values including conservation

Within the Site Plan (Appendix B) those trees rated as 'B' category trees have a blue outline as denoted within the site plan key.

Category 'C' trees
Trees of low quality with an estimated remaining life expectancy of at least 10 years or young trees with a stem diameter below 150mm. Trees have been categorised as 'C' trees for one of the following reasons

- Arboricultural qualities - unremarkable trees of very limited merit
- Mainly landscape qualities
- Trees with no material conservation or cultural value

Within the Site Plan (Appendix B) those trees rated as 'C' category trees have a grey outline as denoted within the site plan key.

Category 'U' trees
Trees 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.

Within the Site Plan (Appendix B) those trees rated as 'U' category trees have a red outline as denoted within the site plan key.

3. Survey Limitations

3.1 No soil excavations have been carried out.

3.2 This report only considers the trees and conditions at the time of inspection.

3.3 No invasive tools were used during this site survey.

3.4 It should be noted that vegetation including shrubs within this / the neighbouring sites have not been included in the survey and report.

3.5 This report is preliminary and further investigations may be required in order to reach firm conclusions and/or further recommendations for action.

4. Findings and Discussion

Site Overview

4.1 There is 1 tree (T1) tree located within very close proximity of the proposed development Grove End Lodge, College Lane, London, NW5 1BP and on the boundary with Denyer House, College Lane. The tree surveyed is located within the London Borough of Camden and is protected by virtue of Tree Preservation Order status.

4.2 The proposed development has the potential to affect the tree in the following ways:

- **Potential excavations required for pile foundations of the proposed development in close proximity to the trees that can cause damage**
- **Potential damage to the main stem of tree T1**
- **Potential damage to main anchorage roots of tree T1**
- **Potential desiccation of exposed fibrous tree roots during the development process**
- **Compaction of the ground surrounding the tree during development**
- **The long-term impact of the proposed construction site activities on on the trees**
- **Fire damage from site fires**
- **The use of and storage of materials and chemicals on site**

4.4 The tree has been surveyed taking into account the condition, general health and form. In addition it has also been surveyed taking into account the amenity value that is offered in relation to both the landscape and surrounding buildings. This report outlines the impact that the proposed development will have on the overall treescape and landscape; it provides recommendations to ensure that long-term amenity value for the area is both retained and enhanced.

4.5 The report has been written with close reference to the British Standard Guidance, British Standard 5837: 2012 ‘Recommendations for trees in relation to construction’ (BS5837: 2012), which addresses the juxtaposition between trees and structures.

Tree survey notes

Tree T1

4.6 Tree T1 is a mature Ash tree which has grown directly adjacent to the historic boundary wall between the two properties and has caused direct damage resulting in the dismantling and proposed re-construction of this wall.

4.7 The tree is structurally sound at the base with good root flare to the east, south and west; root flare is limited to the north within the garden of Grove End Lodge. The main stem is generally in good condition with a large stem having been removed to the north at 2.2m height which has fully occluded with compensatory growth. The main union at 3.0-3.5m appears sound with 4 main stems which develop to provide a pollarded main crown between 8m and 14m. The crown was last reduced approximately 2 years ago with good regenerative growth despite selective areas where the re-growth has not developed.

4.8 The removal of the damaged boundary wall has exposed the initial root morphology of the tree as contained by this previously existing wall. It is clear that the roots have been contained by the previous wall which also included a lean concrete mix retainer between the wall and the tree where a void existed. There is a significant lateral root (approx 280mm diameter @ 1.0m distance from the main stem) to the west which extends along the previous length of the wall at ground level to 300mm below ground level, to a distance of 5.0m from the tree in this direction where a historic retaining wall exists. From this root there are a significant number of laterals extending to the north and fibrous roots also which are partially exposed. The root has clearly become accentuated in response to the proximity of the wall and the prevailing south westerly winds from which this root provides anchorage.

4.9 To the east large anchorage roots extend to 400-500mm below ground level and run laterally in an easterly direction beneath ground level. The adjacent building 3.0m to the east indicates that possible root severance may have existed in this area, dependant on the previous history of this site. In addition large anchorage roots extend beneath the main stem and are then likely directed back within the garden area to the north due to the concrete ‘ad hoc’ retainer in addition to previously existing wall beneath this area which has clearly retained the root development from extending to the south.

4.10 There is a significant upwards level change between 1-44 Denyer House and the garden area of Grove End Lodge where the tree is located and the previous and proposed boundary wall retains this area incorporating the tree and all associated roots. It is clear from the profile of the site (photographs shown in *Appendix C*) that all roots have been retained in the upper area. The upper 500mm section of soil comprises soil and tree roots, with made up ground comprising a further 200mm layer before the lean mix in fill concrete layer commences and extends to below the ground level as exists within Denyer House.

4.11 Taking account of the high amenity value offered and historic retention of the tree, it been classified as a 'B.1' category specimen (BS5837:2012).and is therefore proposed for retention. In order to afford full protection during the construction process, close adherence will be required to *Section 5: Arboricultural Method Statement* to ensure that the tree root system is not damaged to the extent that the health or structural integrity is compromised both during the construction process and for the long term .

Tree survey notes in relation to proposed construction works

4.12 The proposed re-construction of the boundary wall will incorporate the following method of construction in summary, as shown in *Appendix B.2*:

- Pile foundations - 250mm diameter bored cat insitu reinforced concrete piles (reinforced) on existing line of boundary / wall

- Additional piles, as above, set within ground of Denyer House to offer additional stability and support for reinforced ground beam which extends 1200mm width from boundary wall edge with Grove Lodge, within Denyer House to the south

- Brick built wall on top of proposed foundations as previously built and on existing boundary line incorporating 20mm movement joints and anti heave clay board

4.13 The proposed works do not encroach within the main root plate area of this tree as has been highlighted by exposure of the root system from the removal of the existing wall. As shown in *Appendix B.1* the proposed foundations for the re-construction of the boundary wall will be strengthened by extending within the ground of Denyer House which lies approximately 1000mm below the historic ground level where the Ash tree is located.

4.14 For this land within Denyer House directly to the west of tree T1 it is clear that roots of the tree do not exist for the following reasons:

- The significant downward level change between tree and adjacent land inhibiting adventitious root growth

- Historic boundary wall between 2 properties, incorporating the above level change encouraging root deflection

- Significant foundations to historic boundary wall which includes a lean concrete mix retainer which has encouraged root deflection to the west, north and east

- Historic existence of soft landscape / garden area at rear of Grove End Lodge and adjacent to Ash tree T1 encouraging both fibroeus and anchorage roots in this area

4.15 Therefore development works can occur as follows providing close adherence with all aspects of this report are implemented:

- Access for construction works within the 9.2m RPA of the tree T1 occurs to land to the south of the tree / land of Denyer House only

- Implementation of the re-construction of the wall from Denyer House land only to specifications as outlined within reports / details as attached

By implementing construction works from Denyer House as recommended, the tree can remain protected and all protection measures as highlighted can provide continuation of a harmonious relationship between tree and structure for a perceived period of time.

5. Outline Method Statement

5.1 Tree Protection Plan

The following measures are recommended during the construction process to ensure protection of the mature Ash tree (T1):

- **Close adherence to Excavations & Root Severance Guidance as highlighted within this report**
- **Compliance with Tree Protection Specifications as highlighted within this report**
- **Compliance with Site Specific Method Statement: Trees as enclosed within Appendix E**
- **Compliance with final landscaping recommendations as highlighted within this report**

5.2 Sequence of Events

5.2.1 The following sequences are governed by operational constraints and are subject to change. The consulting arboriculturist must be noted of any changes to this schedule prior to implementation where trees / tree protection measures as exiting are likely to be affected.

Pre-development stage

a) Not applicable for this development as the construction work activities have commenced

Development Stage

b) Arboricultural supervision is to be carried out at any crucial stages throughout the development process where it is deemed that the approved methodology will not be able to be carried out

c) The local authority arboriculturist will have free access to the site and forward any recommendations directly to the consulting arboriculturist.

Final Development Stage

d) For dismantling Tree Protection Fencing a minimum of seven days notice will be given to the Local Authority prior to the works.

e) All landscaping works once the construction works are completed will avoid soil re-grading and disturbance within the Tree Protection Area - 9.2m from the main stem of the tree.

5.3 Excavations & Root Severance Guidance

5.3.1 As excavations have already been undertaken removing the existing boundary wall, no further significant excavations / ground disturbances are required. However in the case of major roots being encountered the following points should be closely adhered to:

- Any excavations required within the root protection area on the boundary line must be hand-dug and in close adherence with the guidance below and within the Site Specific Method Statement and with prior agreement from the consulting arboriculturist or Local Authority Tree Officer

- During construction works, the severance of any tree roots encountered larger than 2.5 cm in diameter MUST NOT occur without prior consultation with the Local Authority Tree Officer or appointed Arboricultural Consultant

- The exposed fibrous roots should immediately be covered with hessian material and pinned in place; this should be kept damp where possible and as a minimum watered at commencement and conclusion of works on a daily basis

5.3.2 If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

5.4 Tree Protection Fencing (T1)

5.4.1 Protection of tree T1 highlighted for retention will not require protection fencing as all works are occurring within the Tree Protection Area which extends to a distance 9.2m from the main stem of the tree. Close adherence to tree protection measures as highlighted will be required at all times.

5.4.2 It should be noted that existing protection fencing which currently encloses the site, prevents works from occurring within the Tree Protection Area from sources otherwise undertaking the proposed works. Therefore those working with close adherence of the Arboricultural Method Statement will gain access to this area only.

5.4.3 Basal shuttering is also not a viable protection solution for this tree because of the very close proximity of the boundary wall. Employees on site must be made aware of the requirement to not cause damage to the main stem from construction site activities or the implementation of foundations. Protection of any form is not recommended as it would likely provide a false sense of security regarding the existence of the tree

5.5 Site Notices & Site Specific Method Statement

5.5.1 The site notices as included in *Appendix D* summarising the above information should be visible at all times for employees working within the site. These are as follows:

- Site Specific Site Notice
- Generic Site Notice

5.5.2 A Site Specific Method Statement providing guidance for all employees working on site must be closely adhered to and available at all times on site. This should be tacked to the tree as well as along the boundary between the 2 properties as recommended within this report.

5.6 General Working Method

5.6.1 The works as outlined within Arboricultural Method Statement *Appendix B.2* should be carried out from within grounds of Denyer House and access should not be required within Grove End Lodge, other than for pedestrian construction site activities where no other means of construction is available.

5.6.2 In order to ensure that ground within the garden of Grove End Lodge is not compacted and tree roots are not damaged, the following is recommended:

- For pedestrian construction access to Grove End Lodge this should occur on Shuttering Plywood Boards laid on the ground in the area as shown as hatched within the site plan *Appendix B.1* within the upper garden area. These boards should be overlaid upon each other to a minimum distance of 300mm and should be supplied to the minimum specifications as below:

  Shuttering Plywood Exterior Grade - 9mm thickness

  It is imperative that there should be no mixing of concrete, chemicals or storage of materials / machinery on these plywood boards as they will be used as a load spreading solution for construction pedestrian access only

- The implementation of piling and foundations will occur from within Denyer House; if for any reason access for machinery other than light / hand held machinery is required within the upper level of Grove End Lodge appropriate tree protective measures would be required with prior agreement in writing of the Local Authority Tree Officer. The implementation of a load spreading cellullar membrane would be required as follows:

  Terram Geocell 22/20 – 200mm depth / 220mm cell diameter

  This product should be installed to guidelines as highlighted within *Terram Cellular Confinement System – For the Protection of Tree*

Roots guidelines as issued by the manufacturer and also as highlighted within *Arboricultural Practice Note 12: Driveways Close to Trees (APN12)* as provided by the Arboricultural Advisory and Information Service (2007)

5.6.3 For implementation of the piling works, the piling rig is not likely to cause damage to the canopy as incorporating the level change at the base of the tree where the piling rig will be working from, the canopy exists at least 10m above ground level and has been pruned to form a compact specimen with limited canopy growth. Therefore no protective measures are required in relation to implementation of the piles in this area beneath the tree.

5.6.4 The implementation of the proposed wall construction can be achieved whilst retaining tree T1 for the long term by taking into account all the above points and in addition to the following which must be adhered to AT ALL TIMES:

- The implementation of tree root protection areas should be carried out to the standard as specified in *Appendix B.1* and as highlighted in *Section 6.2* incorporating ground protection

- All construction activities must adhere to the tree protection guidelines as explained in this report – these should remain for the entire construction process in order to provide comprehensive protection from the trees.

- No heavy plant should enter the ground works area / Grove End Lodge which will be clearly marked with the TREE PROTECTION NOTICES which will be posted on the boundary between the sites beyond the point at which the all is being built

- No building materials or chemicals are stored within any area of the rear garden / development site / within 9.2m of the tree.

- There should be no mixing of concrete or chemicals within the tree protection area within Grove End Lodge during the works

- There should be no fires within the site

5.7 Final Landscaping Works

5.7.1 No reduction in levels of the soil surface both within Grove End Lodge or Denyer House, London, NW5 will occur during final landscaping works. The process should be as follows:

- Infill to the void between the newly constructed wall and the exposed tree roots should be with the addition of fresh loam / sharp sand topsoil dressing with mycorrhizal fungi addition to aid root growth supplied to Bristish Standard (BS3882:2015 Specification for Topsoil)

-With above the underlying soil may be levelled where required, assuming the natural soil level is not affected, by the addition of this topsoil to BS3882:1984 standard. Hand tools only will be used for any levelling works as this will ensure no direct damage is caused to exposed roots.

-Terraventing of entire RPA (Root Protection Area) of tree T1 within 9.2m of main stem of tree where soft landscaped ground exists

5.8 Communication, Monitoring and Compliance

5.8.1 In ensuring that all Tree Protections Specifications as highlighted within this method statement are closely adhered to at all times, it is important to set out for the long term of the development, communication details for key individuals and tasks that require monitoring.

5.8.2 The key individuals appointed for advising and complying with Tree Protection specifications must adhere to the following at all times:

- Relevant parties / key individuals must be advised of any changes in personnel or contractor during the development process.

- Relevant parties / key individuals must be responsible for relaying information regarding tree protection within work force where deemed applicable / relevant

5.8.3 Once excavations and construction site activities commence / continue within the Root protection Area of tree T1 the appointed arboricultural consultant should be contacted to advise as required / where it is not possible to continue without causing damage to the tree.

5.8.4 The local authority arboriculturist will have free access to the site and forward any concerns / recommendations directly to the consulting arboriculturist.

6. Recommended Tree Management Plan

Any tree work should be carried out to *BS 3998; 2010 'Tree Work – Recommendations*' and to standards set within the Arboricultural Association's 'Standard Form of Contract and Specifications for Tree Work' by a qualified arboriculturist.

T1: Ash	Initial: - *No action required at present* On completion of development: -*Remove dead sections where epicormic growth has not regenerated from previously reduced canopy* -*Terravent entire RPA (9.2m from main stem of tree) where soft landscaped ground exists*

Notes:
- *All Local Authority permissions must be sought prior to the commencement of tree works*
- *Tree works require the permission of the owners of the trees*

7. Appendices

Appendix A

Tree survey (BS5837:2012)

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Key: BS5837 (2012) - see *Section 2.6*

- Category A
- Category B
- Category C
- Category U

**1-44 Denyer House, Grove End Lodge, College Lane, NW5 -
BS 5837:2012 Tree Schedule – 3rd August 2016**

Tree No	Species	Ht (m)	DBH. (mm)	Sprd (m)	Age	Visual Cond.	Vigour	BS5837 Cat. Rating (2012)	Remaining (years)	Comments / Structural condition	Managemnt Recomms	RPA (m)
T1	Ash	16	770	N: 5 E: 5 S: 4 W:4	M	F	G	B.1	20 years +	Tree has grown adventitiously against a historic brick boundary wall between two properties where a significant level change also exists. Tree shows good root flare to east south and west, limited to north. Uncovering of wall has shown large lateral root to east and west as well as indications of further large roots to north within lawn area. Main stem straight and in good condition with large stem likely removed at 2.0m to north where good occluding / compensatory growth has occurred. 4 main stems develop at main union at 3.2-3.5m and these have been pollarded from 8-14m to provide a compact and cyclically reduced specimen. Selectively some dead sections where epicormic growth has not re-generated - last pruned approx 18-24 months ago and showing good vigour with re-growth where it has occurred	Remove dead sections which have not provided regenerative / epicormic growth	9.2m

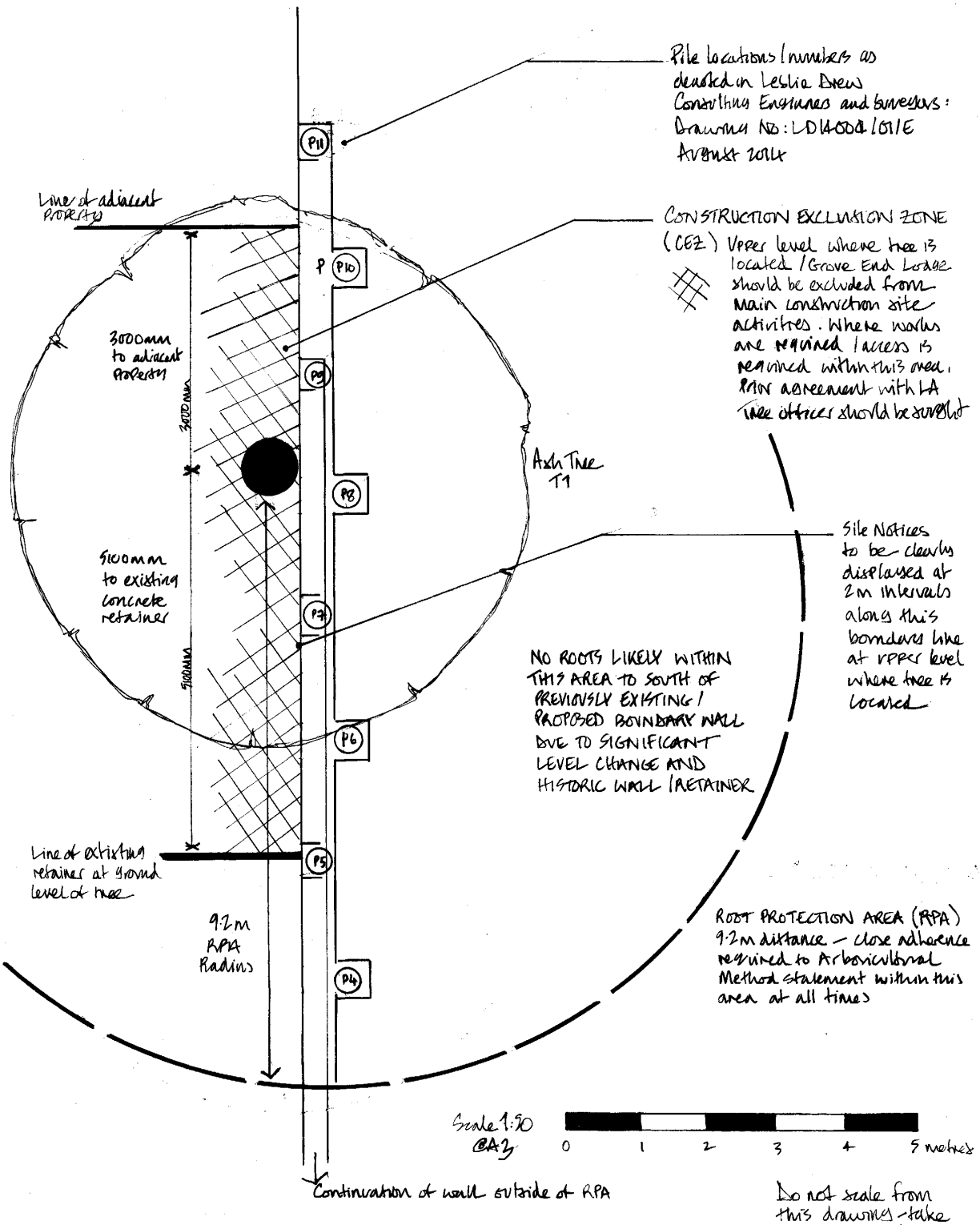
Appendix B.1

Proposed Site Plan

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Plan supplied by
Marcus Foster *Arboricultural Design & Consultancy*
Date: 04/08/16

ARBORICULTURAL METHOD STATEMENT
1-44 Denger House / Grove End Lodge, College Lane, NW5 1BJ



Marcus Foster : Drawing No: AMS015/001 : August 2016

Appendix B.2

Proposed Site Plan / Structural Engineers Plan

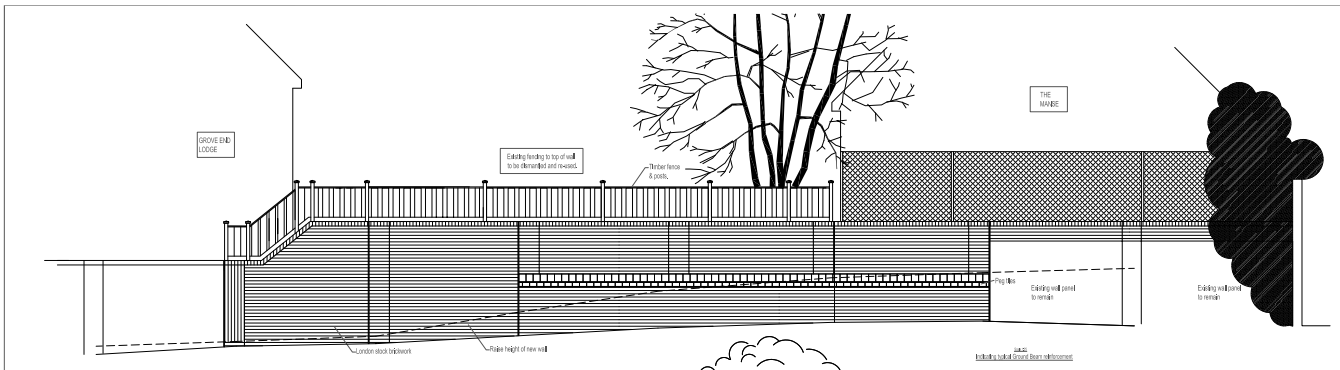
1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

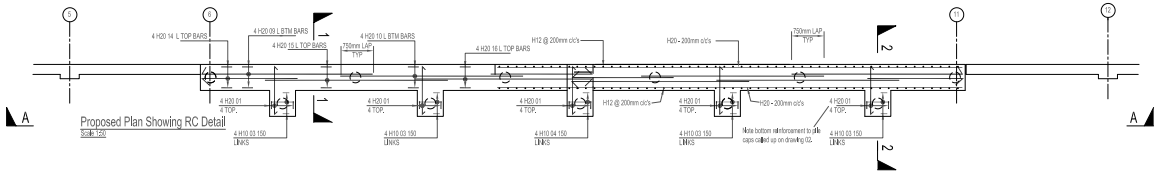
Plan supplied by
Leslie Drew Consulting Engineers and Surveyors
Drawing No: LD14004/01/E
Date: August 2014

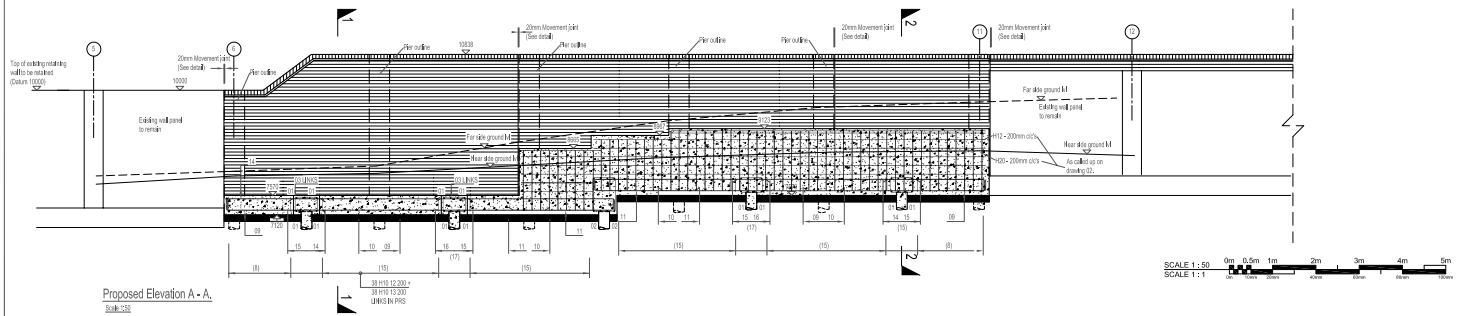
All dimensions to be checked and agreed on site
Do not scale from this Drawing

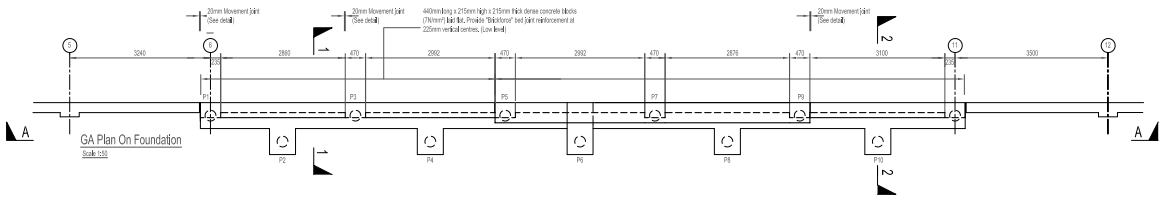
PILING SCHEDULE

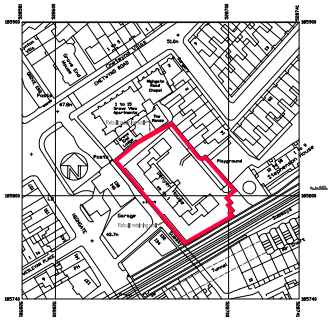
PILE REF No	TOE LEVEL OF PILE (mm)	PILE CUT OFF LEVEL (mm)	LENGTH OF PILE POLYETHYLENE COATED & DE BONDED (m)	PILE LENTH (m)
P1	-805	7195	4,0	8,0
P2	-805	7195	4,0	8,0
P3	-805	7195	4,0	8,0
P4	-805	7195	4,0	8,0
P5	-805	7195	4,0	8,0
P6	-805	7195	4,0	8,0
P7	-355	7645	4,0	8,0
P8	-355	7645	4,0	8,0
P9	-355	7645	4,0	8,0
P10	-355	7645	4,0	8,0
P11	-355	7645	4,0	8,0











SCALE 1 : 50
SCALE 1 : 1
0m 0.5m 1m 2m 3m 4m 5m
0m 10mm 20mm 40mm 60mm 80mm 100mm

Rev | Details | Drn

LESLIEDREW
consulting engineers and surveyors
The Barn
Building Hatch Farm
Bishops Stortford Road
Roswell
Essex
CM1 4LF
t: 07527270356
e: mail@lesliedrew.co.uk

Client:
London Borough of Camden

Project Address:
1 - 44 Denyer House, Grove End Lodge, College Lane, London. NW5 1BJ.

Description:
Replacement Boundary Wall.
Foundation G/A and wall details.

Architect / Contractor:

Drawn: GOP Amended by WML Ltd	Date: AUG 2014	Scale: As Noted	
Designed:	Job No: LD14004	Sheet No: 01	Rev: E
Checked:			

APPROVAL ☐ INFORMATION ■ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

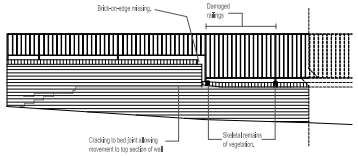
Appendix B.3

Replacement Boundary Wall
Reinforced Concrete Details

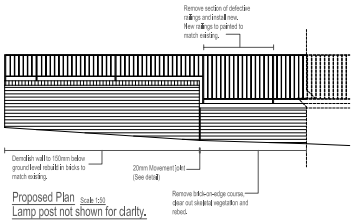
1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Plan supplied by
Leslie Drew Consulting Engineers and Surveyors
Drawing No: LD14004/02/A
Date: September 2014

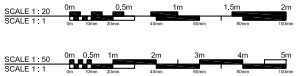
All dimensions to be checked and agreed on site
Do not scale from this Drawing



Existing Plan Scale 1:50
Lamp post not shown for clarity.

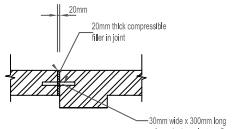


Proposed Plan Scale 1:50
Lamp post not shown for clarity.

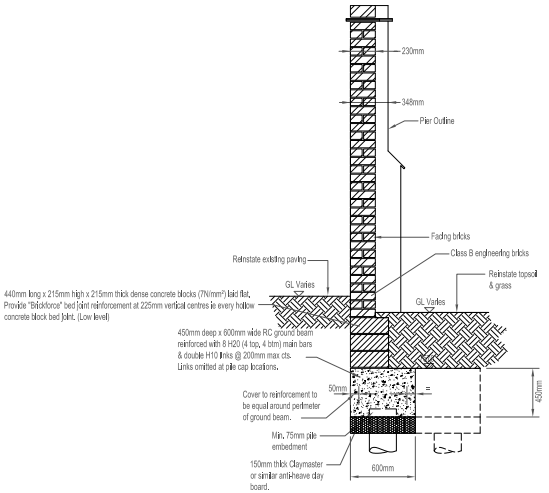


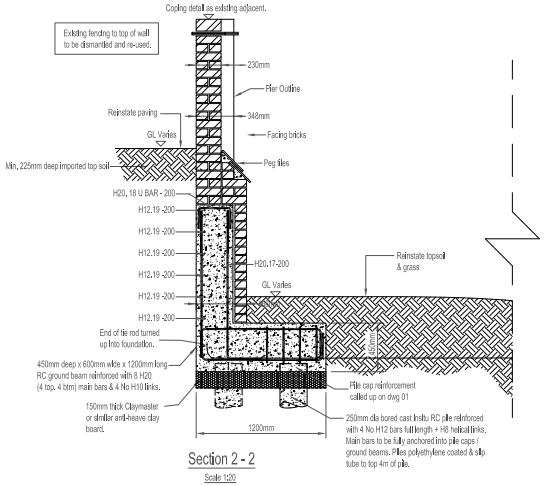
Notes:

1. Reinforcement is detailed on reinforcement bar bending schedules BS LD14004 / 01 & 02.
2. Minimum concrete cover to reinforcement to be : Top = 90mm
   Bottom 75mm
   Sides 50mm
3. Concrete to be Class 2 sulphate resistant.

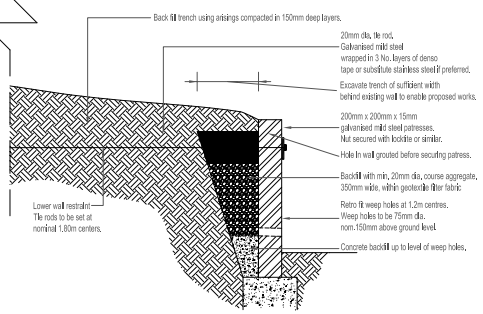


Section 3 - 3
Typical movement joint detail
Scale 1:20





Section 2 - 2
Scale 1:20



For foundation G/A & wall details refer to drg LDO04 / 01

Rev	Details	Dm

LESLIEDREW
consulting engineers and surveyors

The Barn
Bolding Hatch Farm
Bishops Stortford Road
Roxwell
Essex
CM1 4LP
t: 07527275306
e: mail@lesliedrew.co.uk

Client:
London Borough of Camden

Project Address:
1 - 44 Denyer House, Grove End Lodge, College Lane, London. NW5 1BJ.

Description:
Replacement Boundary Wall.
Reinforced Concrete Details.

Architect / Contractor:

Drawn: GOP Amended by WML Ltd	Date: Sept 2014	Scales: As Noted	
Designed:	Job No: LD14004	Sheet No: 02	Rev: A
Checked:			

APPROVAL ☐ INFORMATION ■ TENDER ☐ CONTRACT ☐ CONSTRUCTION ☐

Appendix C

Site Photographs for:

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

*** Taken 3rd August 2016**

C.1 Photograph of tree T1 on boundary between 1-44 Denyer House and Grove End Lodge, College Lane, London, NW5 as viewed in an easterly direction

C.2 Photographs A and B of lateral roots and base of tree T1 on boundary between 1-44 Denyer House and Grove End Lodge, College Lane, London, NW5 as viewed in a westerly direction

A

B

C.3 Photograph of tree T1 on boundary between 1-44 Denyer House and Grove End Lodge, College Lane, London, NW5 as viewed in a easterly direction from within construction site area

C.4 Photograph of base of tree and soil / ground profile beneath tree T1 as viewed in a northerly direction

C.5 Photograph of base of tree and soil / ground profile beneath tree T1 as viewed in a northerly direction

Appendix D.1:
Tree Protection Notice

Site Specific
Tree Protection Notice
(BS5837: 2012)

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Notice to be clearly shown on site
AT ALL TIMES

TREE PROTECTION/ CONSTRUCTION SITE NOTICE

Guidance for ALL EMPLOYEES working on site in relation to the tree protection required at all times

Site: 1-44 Denyer House / Grove End Lodge, College Lane, NW5

- There should be no storage of fuels, chemicals or cement based products within this designated Tree Protection Area - within 9.2m of the main stem of tree T1. All storage of hazardous materials should be within lower level of garden.

- There should be no storage of materials or mixing of chemicals / concrete within this area at any time. There should also be no fires within the site

- There should be no damage to the main stem of this tree and there should also be no storage of materials or machinery against the tree

- The severance of any tree roots encountered larger than 2.5 cm in diameter MUST NOT occur without prior consultation with the Local Authority Tree Officer or appointed Arboricultural Consultant.

- Where excavations do occur within the specified Root Protection Area with hand dug excavations being undertaken, ANY tree roots encountered over 2.5cm in diameter should be retained where possible. Hand digging is to continue around any such tree roots.

- If at any point it is deemed not possible to continue with excavations without having to damage significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted.

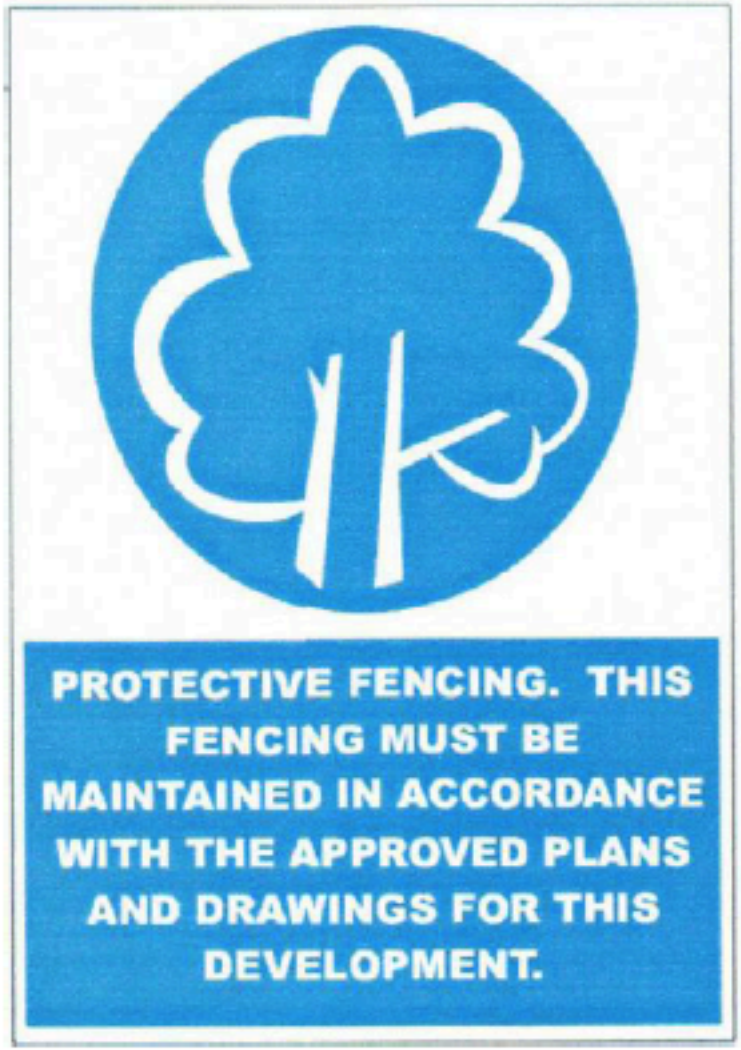
Marcus Foster (Arboricultural Consultant): 0781 2024 070
Local Authority Tree Officer (LB Camden): 020 7364 5009

Appendix D.2:
Tree Protection Notice

Generic Tree Protection Notice (BS5837: 2012):

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Notice to be clearly shown on site AT ALL TIMES


PROTECTIVE FENCING. THIS FENCING MUST BE MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND DRAWINGS FOR THIS DEVELOPMENT.


TREE PROTECTION AREA
KEEP OUT !
(TOWN & COUNTRY PLANNING ACT 1990)
TREES ENCLOSED BY THIS FENCE ARE PROTECTED BY PLANNING CONDITIONS AND/OR ARE THE SUBJECTS OF A TREE PRESERVATION ORDER.
CONTRAVENTION OF A TREE PRESERVATION ORDER MAY LEAD TO CRIMINAL PROSECUTION
ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE WRITTEN PERMISSION OF THE LOCAL PLANNING AUTHORITY

Appendix E:
Arboricultural Method Statement
Summary

1-44 Denyer House / Grove End Lodge
College Lane
London
NW5 1BJ

Summary to be clearly shown on site and read by all employees working within the site

Arboricultural Method Statement Summary *Working Method within Root Protection Area (RPA) of Ash Tree, T1*

1. Scope of works:

The replacement of a boundary wall between 1-44 Denyer House and Grove End Lodge, College Lane, London, NW5 requires construction without causing damage to the tree roots of the mature Ash tree which will be growing directly adjacent. Whilst engineering solutions are being implemented to be protect the tree for the long term, it is also important that the tree is protected during the construction process from associated construction site activities undertaken by all employees working within this site

2. Working Method adjacent to Tree T1:

The working method should be carried out as follows within:
9.2m of the main stem of tree T1

a) The 'breaking up' of any surface may be carried out by low impact pneumatic tools only or by hand where possible

b) Further excavations required outside of the existing trench / wall area within the RPA will require hand digging to be carried out WITHOUT severance of larger tree roots: the severance of any tree roots encountered larger than 2.5 cm in diameter MUST NOT occur without prior consultation with the Local Authority Tree Officer or appointed Arboricultural Consultant.

c) If at any point it is deemed not possible to continue with excavations without having to damage very significant tree roots, the Local Authority Tree Officer and / or the appointed Arboricultural Consultant must be contacted immediately.

d) No storage of chemicals or materials should occur within the Root Protection Area

e) Final landscaping works should closely adhere to those outlined within the Arboricultural Method Statement

Contact Details

Local Authority Tree Officer - Nick Bell
Tel: **020 7974 5939** Email: **nick.bell@camden.gov.uk**

Consulting Arboriculturist - Marcus Foster :
Tel: **0781 202 4070** Email: **marcus@mfdesignconsultancy.com**

Appendix F: References

1. *BS5837: British Standard: Trees in relation to construction - Recommendations*, British Standard (2012)

2. *Principles of Tree Hazard Assessment and Management,* Lonsdale, D. (Department for Transport, Local Government and the Regions, 1999)

3. *The Body Language of Trees*, Mattheck, C. and Breloer, H. (HMSO, 1994)

4. *Trees in Britain,* Philips, R. (Pan Books, 1978).

5. *Diagnosis of Ill Health in Trees,* Strouts, R. and Winter, (TSO, 1994)

6. *NJUG Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees (Issue 2),* (November 2007)