Marcus Foster
Arboricultural Design & Consultancy

BA (Hons) | NDArb | Techcert (AA) | MArborA

ARBORICULTURAL ADDENDUM NOTE 01:
SUMMARY OF FINDINGS FOR
ROOT INVESTIGATION TRIAL TRENCH

Date:

16th October 2019

Site:

45 Highgate West Hill
London
N6 6DB

Client

Mr Timothy Rowe
45 Highgate West Hill
London
N6 6DB

Prepared by:

Marcus Foster
BA (Hons); NDipArb; Tech.Cert (AA): MArborA

Report Reference:

AR/MF/0121/19

Date of Site Visit

15th October 2019

Arboricultural
ASSOCIATION
Professional Member

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1.0 Introduction

1.1 Marcus Foster - *Marcus Foster Arboricultural Design & Consultancy* - have been instructed to undertake arboricultural supervision and inspection of 1 x trial pit / trench in order to determine root morphology of 1 x Lime tree (T3) within influencing distance of the proposed development site - 45 Highgate West hill, London, N6.

1.2 This report provides an Addendum Note to the following report

> Report: *45 Highgate West Hill - Arboricultural Impact Assessment (BS5837/2012) - 050819*
> Report Reference: *AIA/MF/077/19*
> Date: *5th August 2019*

in order to provide additional information in relation to encroachment of development works within RPA of 3 and implications of the proposal.

1.3 The trial trenches have been undertaken as highlighted with trial trench location plan - see *Appendix A*. In summary these are as follows:

> TRIAL TRENCH 1
> Excavations within RPA of T3 to 4000mm length x 1200mm depth x 600mm width in order to:
> - Highlight foundation depth / specification of garden boundary wall
> - Highlight any adventitious root growth from tree T3

1.4 The trial trenches were undertaken 14th & 15th October 2019 and a site visit / supervision was conducted throughout with final summarising visit on Tuesday 15th October 2019 to survey and assess the trial trench. The weather at the time of inspection was overcast and bright with warm temperatures; there was some rain during works.

1.5 The trial trench location plans are located within *Appendix A* and findings of the trial trench are provided within *Appendix B* - Trial Trench Site Plan & Findings for each trench.

1.6 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.

2.0 Findings & Discussion

2.1 Supervision Site Visit Overview

2.1.1 The trial pits have been entirely dug by hand, as undertaken by the contractors with strict instructions that all roots larger than 25mm in diameter in addition to massing of fibrous roots should not be severed and left exposed and in situ. A working method statement (included in Appendix C) for carrying out these works whilst retaining all significant roots as specified above was prepared and closely adhered to.

2.1.2 A site visit was undertaken on the following date in order to undertake an inspection of the trial trench and provide further information regarding the tree root morphology of tree T1 in relation to the proposed development

10am - Monday 14th October 2019
12pm - Tuesday 15th October 2019

2.1.3 The following were in attendance:

- Marcus Foster (Consulting Arboriculturist)
  Arboricultural Design & Consultancy

- Trial Trench contractors x 2

2.1.4 It can be confirmed that the trial trench has been dug to a good standard with close adherence of the Method Statement as provided within this report.

2.2 Trial Trench Findings

2.2.1 The undertaking of 1 x trial pit has been implemented for the line within the site where roots could be encountered, within the RPA of T3 to the north west of the tree The trial trench has been specified to be implemented as follows:

- Location as highlighted within Appendix A at 1100mm from boundary wall where excavations are proposed
- 4000mm length x 1200mm depth x 600mm width

2.2.2 The findings in summary are shown within Appendix B - TP001 and can be summarised as follows described in a southerly to northerly direction:

- Initial 800mm of excavations starting from 1100mm from boundary showing the only significant root activity with 3 x roots (25mm diameter and below) and 1 x 40mm diameter root up to 400mm depth; within this region the absence of made up ground means increased massing of fibrous roots is evident

- Remainder of trench showing selective areas of fibrous roots but limited due to significant made up ground beneath wall in addition to 400mm below ground base of wall / foundations

2.2.3 The following photographs show commencement of the trench following tool box talk and issue of method statement (Appendix C)

Area viewed in southerly direction

Wider area also viewed in a southerly direction

2.2.4 Photographs below as viewed from above ground and within trench and should be viewed in conjunction with Appendix B - Trial Trench Findings:

Overview of trial trench as viewed in a southerly direction

Northern section of trench as viewed in a northerly direction showing low frequency of fibrous roots only

Overview of southern section of trial trench as viewed from above showing 4 x roots

Main central section of trench as viewed in a northerly direction showing made up ground

Profile of trial trench showing foundations to wall For this section beneath gas pipe some adventitious fibrous to 10mm root development

Build up of ground within trench showing wall base extending 200mm below ground level with and further 200mm foundations with significant made up ground beneath

2.3 Summary

2.3.1 The trial trench has been undertaken to a good standard and demonstrates that no major damage to tree roots is required for implementation of development within the boundary lines of the site as defined within the proposed drawings. In summary the following can be confirmed:

- Hard landscape boundary wall with associated foundations and significant made up ground has shown largely retained root development for trial pit area

- Where roots have developed within the southern section of the trench these are minor in size / density of distribution in relation to age and species of tree

- The depth of the trench and historic ground conditions do not suggest that any further adventitious root development would occur for this tree beyond the 1200mm depth of the trench based on the following:

    - normal root morphology of tree including species and age
    - represented root morphology at southern end of trench where root encroachment has occurred
    - historic ground conditions / man made root barrier by virtue of wall location

2.3.2 It should be noted that for the 4 x tree roots encountered the 2 x most southerly roots will require severance without a detrimental impact on the structural integrity or health of the tree due to small size and lack of tensile strength. The most northerly 2 x roots and associated massing of fibrous roots can be retained and incorporated within the stepped light well foundation structure at this point; should their retention not be feasible at development stage their clean severance would also not affect the trees health.

2.3.3 Therefore it is clearly evident that there is some adventitious root growth extending through the foundations of the boundary wall. However these roots are not major anchorage roots or dense massing of fibrous roots and are limited in extent and development. With the trial trench undertaken to the north west of the main stem within the north western RPA of tree T3, the aspect and site conditions as highlighted above indicate that the main root mass of this tree is sited to the south, west and north / north east within main car parking area.

2.3.4 With this information, tree protection measures are recommended to be outlined within an pre-commencement Arboricultural Method Statement (AMS) as follows:

- Precautionary Area maintained as outlined within AIA report to ensure tree protection measures are enforced including no leaching of no chemicals / materials within the sub soil and protection of fibrous roots where eviden

- Arboricultural Scheme of Supervision for ensuring tree root protection where excavations are taking place within precautionary area

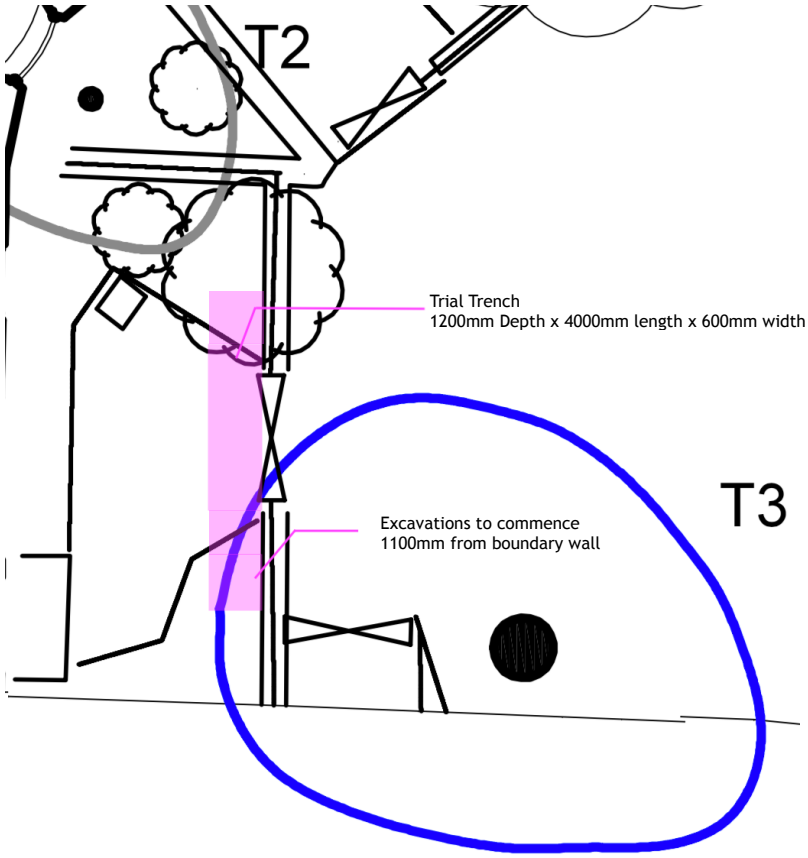
- Full ground protection for northern root plate as outlined within AMS to ensure RPA root plate is fully protected where high density of roots likely exist

With close adherence to the above no major root severance or disturbance will occur for this light well development within the highlighted area.

Appendix A

Existing Plan
Indicating Location of Trial Trench
(As included within Trial Trench Method Statement
supplied to contractor:

45 Highgate West Hill, London, N6 6DB



Appendix B

Appendix B

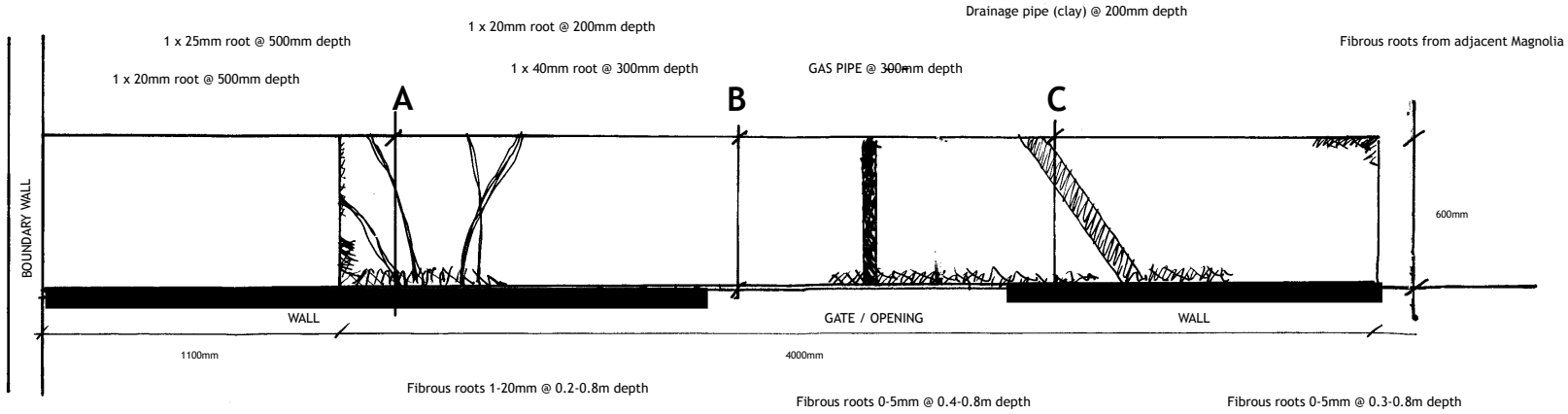
Root Trial Pit Findings Trial Trench within RPA of T3

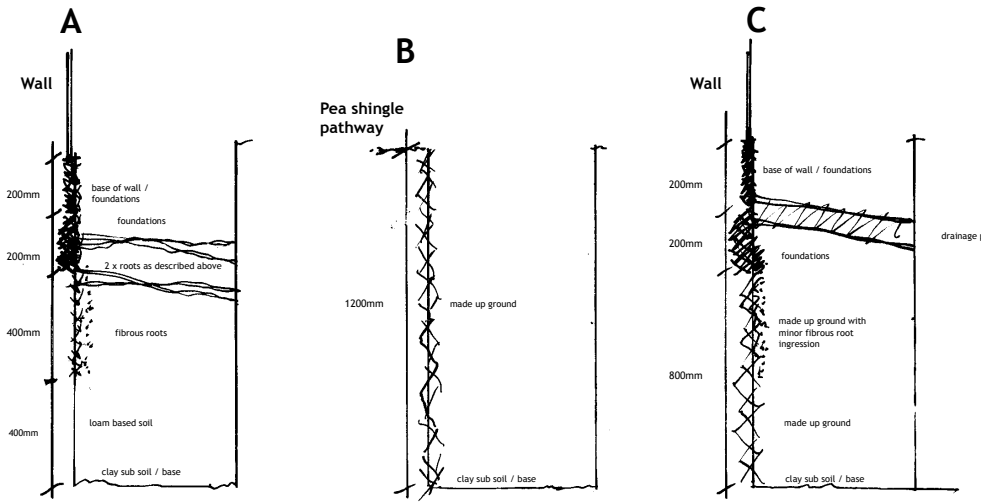
45 Highgate West Hill,
London,
N6 6DB

Drawing Reference:
TT001_HWH_151019

45 Highgate West Hill - Trial Trench Findings in Relation to tree T3 & Basement Excavations

REFER TO SITE LOCATION PLAN (APPENDIX A)

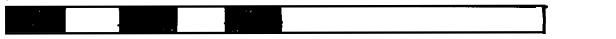




TRIAL WORKS UNDERTAKEN
14th / 15th October 2019

SITE SUPERVISION / FINDINGS SITE VISIT
Undertken by M Foster - 14th / 15th October 2019

SCALE 1:20 @ A3



PREPARED BY M FOSTER
DATE: 15th October 2019
DWG REF: TT001/45HWH

Appendix C:
Trial Trench Method Statement
Issued 12/10/19

Marcus Foster
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45 Highgate West Hill, London, N6
Hand Dug Trial Pit / Trench Arboricultural Method Statement

1. Scope of works:

1.1 A trench of the dimensions as outlined within Location Plan overleaf is to be dug in the location as shown - recommended

Trial Pit / Trench 1
2000mm width x 600mm width x 1000mm depth

Trial Pit / Trench 2
800mm width x 600mm width x 1000mm depth

1.2 This is required to be hand dug using HAND TOOLS ONLY to determine the root morphology and root presence of tree root associated with the adjacent Lime tree where proposed development works have the potential to cause damage

2. Reasons for works

2.1 The works are being carried out to determine

A: Extent of Foundations of existing garden wall potentially acting as root barrier
B: Extent of root growth within the site towards proposed development

2.2 The extent of larger tree roots (over 25mm diameter) and massing of fibrous roots which exist in this area growing from the trees within this site towards the existing property / proposed development. These excavations will enable the Local Authority and consulting arboriculturist to determine excavations within RPA of the Lime tree

3. Implementation of Trial Trench / Working Methodology

3.1 The working method should be carried out as follows:

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

. b) Hand digging to be carried out WITHOUT severance of larger tree roots: the severance of any tree roots encountered larger than 2.5cm (25mm) in diameter - in addition to massing of fibrous roots - MUST NOT OCCUR.

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

. d) The hand dug trench should aim to expose any larger tree roots exposed. The trench should not be infilled until the Local Authority Tree Officer or Consulting Arboriculturist have been contacted and have visited to inspect / document:

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