Connick Tree Consultants

TREE DEVELOPMENT REPORT

(BS5837:2012 ARBORICULTURAL IMPACT ASSESSMENT**)**

OUR REFERENCE	186879
CLIENT	Edgley Design
PLANNING AUTHORITY	Hackney Borough Council
SITE	64 Middleton Road
SURVEY & REPORT BY	Paul Roberts
DATE	17th December 2021

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1 INTRODUCTION

1.1 INSTRUCTION

Connick Tree Consultants were instructed by Edgley Design to produce an Arboricultural Impact Assessment of the proposed development works within the land to the rear of 64 Middleton Road, London to demolish an existing garage and work shop and construct a new residential house. This will be undertaken in accordance with BS5837: 2012 Trees in relation to design, demolition and construction - Recommendations.

1.2 SCOPE OF REPORT

This Arboricultural Impact Assessment has been based on the tree survey data obtained during our site visit on the 8th December 2021. Details of all trees within and adjacent to the site can be found in the tree Survey Schedule attached as Appendix I. Their locations are shown within the Tree Constraints Plan attached as Appendix II.

The tree information recorded relates to the tree condition, age, safe useful life expectancy, location, canopy spread, canopy height and tree height and direction of first significant branch as well as any work that is required. Where trees are located within neighbouring third-party properties, the assessment in relation to their condition has been made upon the visible parts of the tree and all measurements estimated.

No information in regard to soil assessment was provided and no investigation was taken on site.

A measured drawing of the site was provided, and no liability is accepted for the accuracy of these drawings, and they should not be scaled from.

The report and recommendations relate to the condition of the trees and their surroundings at the time of inspection only. Trees are living organisms whose health and condition can change rapidly and all trees, even healthy ones, are at risk from unpredictable climatic and man-made events. This report and recommendations relate to the condition of the trees and their surroundings at the time of inspection only.

1.3 DOCUMENTATION

I have been provided with the following information in regard to the development:

- Proposed plans

1.4 QUALIFICATIONS AND EXPERIENCE

I have based this report on my site observations, and I have come to conclusions in the light of my qualifications gained and experience obtained whilst working in the field of arboriculture. I have qualifications and practical experience in arboriculture and list the details of this in Appendix IV.

1.5 LIMITATIONS AND USE OF COPYRIGHT

DISCLAIMER: I have no connection with any of the parties involved in this situation that could influence the opinions expressed in this report.

2 SITE VISIT AND OBSERVATIONS

2.1 SITE VISITS

The initial site visit was undertaken on the 8th December 2021 by the author of this report; Mr P Roberts who is a qualified arboriculturist. The weather at the time of inspections was sunny with good visibility.

2.2 GENERAL OBSERVATIONS AND BACKGROUND

The site of the proposed development is situated within the land to the rear of 64 Middleton Road, London within the borough of Hackney.

The site consists of a working yard area which was formally a mechanics, with garage and workshop and the remaining site laid to concrete.

The property is bordered by residential properties to the north, south and west and the public highway of Albion Square to the east.

The proposed development is for the demolition of the existing garage and workshop and construction of a new two storey residential dwelling.

2.3 SOIL TYPE

No on-site soil analysis was undertaken. Reference has been made to the British Geological Survey maps for an indicative guide to underlying soil characteristics. The online BGS 1:50,000 scale map for the area indicated the property is located on London Clay Formation - Clay, Silt And Sand.

London Clay formation is a highly plastic subsoil which is susceptible to undergoing volumetric change in relation to changes in soil moisture and is described within the BRE Digest 240 Low-rise buildings on shrinkable clay soils: part 1 as having a high to very high volumetric change potential. As such it is recommended that a structural engineer is consulted to ensure the property is constructed in such a manner to avoid the risk of indirect damage though subsidence or heave.

3 TREE SURVEY

In total 6 individual trees were recorded during the survey process, within or adjacent to the site. Attached as Appendix I is a schedule summarising the information obtained within the survey process.

The trees surveyed have been assessed and categorised in accordance with the cascade chart in section 4 of the BS5837:2012. This has identified that there are the following within or adjacent to the site:

No individual 'A' grade tree of a high quality and value, which is worthy of retention and a high level of protection.

2 individual category 'B' grade trees deemed to be of moderate quality and value, worthy of retention and protection. Trees of 'B' grade should be retained where possible within the proposed development and where necessary designs altered to accommodate them.

4 individual trees which have been identified as category 'C' grade trees of low quality and value, which should only be retained and protected when they do not pose a constraint on the development. Where retained they will require tree protection.

No individual or groups of 'U' grade trees which would have been considered as requiring removal for reason of sound Arboricultural management.

The location of the trees is shown on the Tree Constraints Plan attached as Appendix II. All trees surveyed have been given a unique identification number and are identified on the schedules and plans by a 'T' prefix for individual trees.

3.1 TREES SUBJECT TO STATUTORY CONTROLS

A desktop assessment via Hackney Borough Council's online mapping system identified that the site is situated within the Albion Square Conservation Area, but no trees within or adjacent to the site are subject to a Tree Preservation Order.

4 TREE CONSTRAINTS

4.1 ROOT PROTECTION AREA

In order to avoid damage to the tree roots or rooting environment, a minimum area in m² should be left undisturbed around each retained tree (category A, B and C trees).

The root protection area's (RPA's) of the trees recorded within the survey are shown in the Tree Constraints Plan (Appendix II).

The root protection area has been calculated using the formula specified within section 4.6 of the BS5837:2012 standard and should initially be plotted as a circle centred on the base of the stem.

The RPA can be modified where pre-existing site conditions or other factors indicate that rooting has occurred asymmetrically. Any deviation in the RPA from the original circular plot should reflect soundly based Arboricultural assessment of potential root disturbance and consider the following factors, whilst still providing adequate protection for the root system.

- The morphology and disposition of the roots, when influenced by past or existing site conditions (e.g. the presence of roads, structures and underground services).
- Topography and drainage.
- The soil type and structure.
- The likely tolerance of the tree to root disturbance or damage, based on factors such as species, age, condition and past management.

The calculated RPA should be capped at 707m², which is equivalent to a circle with a radius of 15m or a square with approximately 26m sides (BS 5837:2012 Trees in relation to design, demolition and construction).

The RPA of trees have not been amended however, the existing perimeter wall, location of existing buildings and surface materials may have limited the spread of trees T5 and T6. However the RPA's have not been amended as the true root morphology is unknown as root formation in urban environments is hard to predict.

4.2 CONSTRUCTION EXCLUSION ZONE

The Construction Exclusion Zone (CEZ) required by the current edition (2012) of BS 5837 Trees in Relation to Design, Demolition and Construction relates to the stem diameter of each tree when measured at a height of 1.5m from ground level. The CEZs are to be afforded protection at all times and will be protected by a combination of fencing and ground protection measures.

4.3 ABOVE GROUND CONSTRAINTS

The current height and canopy spread of the trees is an important factor which needs to be considered when deciding the layout of a proposed development. The shading of trees, and/or their size can cause anxiety to residents, leading to pressure for pruning or removal.

This notes that there would be some minor conflict between trees T5 and T6, however both trees have been significantly lifted in the past and minor works of selective branch removal and appropriate design in the construction will alleviate these issues.

5 ARBORICULTURAL IMPACT ASSESSMENT

The following Arboricultural Impact Assessment has been made in relation to the proposed development details provided by our client. This is for the demolition of the existing buildings and the construction of a new residential house. The location of the footprint of the proposed development has been included within the attached Tree Protection Plan (Appendix III).

5.1 SIGNFICANT TREES

The survey identified that there are no individual A grade trees of high quality and value within and adjacent to the site. However, trees T5 and T6 are prominent street trees.

5.2 TREE REMOVAL FOR REASONS OF SOUND ARBORICULTUAL MANAGEMENT

The survey process has identified that no trees will require removal due to reasons of sound arboricultural management.

Further details of these tree can be found within the attached Tree Survey Schedule (Appendix I).

5.3 TREE LOSS

Consideration has been given to retaining all the trees. However, ultimately their removal is dependent on their condition and proximity to the development. This has identified that no trees require removal to facilitate the development.

5.4 IDENTIFIED IMPACTS

The survey process and the Tree Protection Plan (Appendix III) has indicated the extent of the theoretical Root Protection Areas (RPA) and crown spreads of the surveyed trees in relation to the development and identifies the potential impacts resulting from the proposed development. The details of the impacts caused by each construction stage is identified within Table 1 below:

Table 1: Identifying impacts.

Tree No.	Total RPA m^2	Development Section	Impact of proposed development.
T4	55.4	Formation of new foundations.	These works have the potential to encroach upon 0.9m^2 of the total RPA, equating to approximately 1.6%.
T5	95.7	Formation of new foundations.	These works have the potential to encroach upon 6.3 m^2 of the total RPA, equating to approximately 6.7%. 3.5 m^2 of this is under the existing garage.
T6	68.8	Formation of new foundations.	These works have the potential to encroach upon 0.6 m^2 of the total RPA, equating to approximately 0.9%. All of this is under the existing garage.
		Eastern elevation and roof line	The proposed building will be oversized by the up to 0.4m of these tree and possible contact with one branch.

5.5 TREE PROTECTION MEASURES

All trees to be retained should be protected prior to the undertaking of any construction works via the erection of protective barriers to form a construction exclusion zone (CEZ). The protective fencing should be sited along the edge of the RPA of the retained trees and be fit for the purpose of excluding construction activity.

The necessary protection measures are identified within the Tree Protection Plan attached as Appendix III.

The barrier fencing is to be installed as per figure 3 of the BS 5837:2012 using standard 2-metre-tall by 3.5 metres wide welded mesh panels on rubber or concrete feet secured with ground pins.

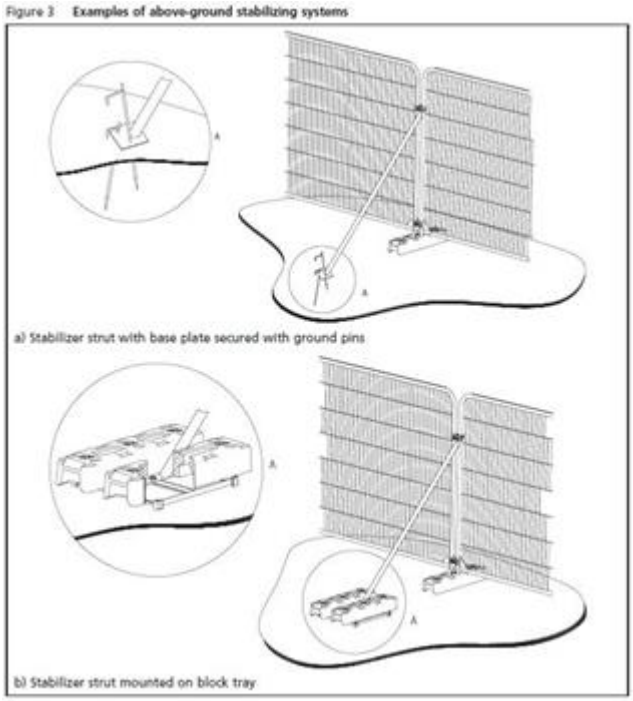


Figure 1 - Identifying tree protection fencing design.

All fencing will need to be erected prior to any construction works commencing and will remain intact until all works are completed on site. The protected area must be regarded as sacrosanct and should not be removed or altered without prior recommendation by the project arboriculturist.

5.6 TEMPORARY GROUND PROTECTION

No temporary ground protection is required for the proposed development, however and area to the north of the propose building is currently laid to concrete and this will need to be retained during the construction phase. Once complete this can be lifted and laid to soft landscaping if required.

If the concrete is to be lifted the RPA of T4 will need ground protection which is to be constructed using proprietary, inter-linked ground protection boards placed on top of a compression-resistant layer (e.g. 150mm depth woodchip), laid on a geotextile membrane. Alternatively, two layers of scaffold boards which laid perpendicularly and then secured to each other can replace the inter-linked ground protection board. This method is suitable for pedestrian-operated plant up to a gross weight of 2-ton gross. If machinery greater than this is to be used, then a specific method will need to be utilised. This is likely to be formed using multiple layers of a three-dimensional cellular confinement system.

6 SUMMARY

On completion of the site survey and report it is concluded that the proposed development will have a impact upon 9 trees within and adjacent to the site. These trees are as follows:

- 3 no. C grade trees identified as T4, T5, and T6 can be retained but may have a impacts upon their theoretical RPA's the impacts will not exceed 6.7%.

The identified impacts upon trees T4, T5, and T6 have been calculated as a works case scenario. The impact upon the trees is minor and is likely to be much less considering that current on site conditions. The largest impact is upon tree T5 with an encroachment of 6.3 m^2 , however over half of this (3.5 m^2) is already covered by concrete and the existing garage type building.

The crowns of trees T5 and T6 will be close to or oversale the proposed development by up to 0.4m. However, both trees have been significantly crown lifted in the past and selective branch removal will pull the crowns back away from the property. In addition tree T^ has a large area of bark loss on the west side which limited the trees longevity.

The advice given above is a summary of the required precautions to ensure that the proposed development can be constructed with a minimal impact to all retained trees. The exact methods of construction required in and adjacent to the RPA of retained trees and a final Tree Protection Plan should be addressed within a separate Arboricultural Method Statement.

7 GENERAL PRECAUTIONS

7.1 SITE FACILITIES

The position of the site office, compound, toilets and storage space will be sited outside of the RPA of any retained trees or within existing hard standing. Any re-siting of these during the course of the proposed development will need to be approved in writing by the Local Authority Tree Officer.

7.2 STORAGE SPACE

There will be no spoil or construction material stored within the protected sections of the RPA of the retained trees or shrubs on the site. Where possible all storage should be contained within pre-existing hard surfaces.

7.3 PERIMETER FENCING

Works to erect perimeter fencing can have a negative impact upon retained trees. To ensure all retained trees are not impacted it is essential that all fence post holes are formed by hand and away from the base of trees. If roots are identified the hole should be relocated.

7.4 HAZARDOUS MATERIALS

No mixing or storage of materials will take place up a slope where they may leak into a CEZ.

No hazardous materials such as fuels, oils or cement will be stored within the storage area in the rear garden.

Materials which may contaminate the soil will not be discharged within 10m of any tree stem. When undertaking the mixing of materials, it is essential that any slope of the ground does not allow contaminates to run towards a tree root protection area.

7.5 TREE SURGERY WORKS

All tree works considered necessary for health and safety reasons or to facilitate the development will be undertaken in accordance with British Standard 3998 (2010) Recommendations for Tree Works.

All works required are outlined within the Tree Survey Schedule.

8 SITE PHOTOGRAPHS

Photograph 1: Showing trees T1 to T2 and the existing hard standing.

Photograph 2: Showing tree T2 and T3 and the existing hard standing.

Photograph 3: Showing tree T4 and the existing hard standing.

Photograph 4: Showing trees T5 and T6 along with the existing boundary wall and top of the garage like building.

APPENDIX I TREE SURVEY SCHEDULE

BS5837:2012 Tree Survey

Client: edgleydesign
Project: 64 Middleton Road, London, E8
Survey Date: 08/12/2021
Surveyor: Paul Roberts

Connick Tree Care
New Pond Farm
Woodhatch Road
Reigate
Surrey
RH2 7QH
info@connicktreecare.co.uk

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
T1											
Common Lime *Tilia europaea*	16	1	450	N 6 E 7 S 4 W 5	4 3 6 5	SM	A: 91.6 R: 5.39	Good	C: Good S: Fair B: Fair	Off site tree located within property to the west of the site approximately 1m from perimeter. Crown asymmetrical with bias to north.	B.1.2 >40 yrs
T2											
Lawson Cypress *Chamaecyparis lawsoniana*	10	1	305	N 2 E 1.8 S 2 W 2	2 1.5 1.5 2	SM	A: 42.1 R: 3.66	Good	C: Fair S: Good B: Fair	Off site tree, crown suppressed to north by adjacent Ash tree.	B.2 20 to 40 yrs
T3											
Common Ash *Fraxinus excelsior*	11	1	300	N 4 E 4 S 2.5 W 3	4 2 3 3	SM	A: 40.7 R: 3.59	Good	C: Fair S: Fair B: Fair	Off site tree within property to the west located behind neighbouring boundary fence line. Ivy growing onto lower stem.	C.2 10 to 20 yrs
T4											
Apple *Malus Spp.*	8	1	350	N 3 E 1.5 S 2 W 2	4 3 4 3	M	A: 55.4 R: 4.19	Good	C: Fair S: Fair B: Fair	Off site tree tree located to west of development, stem base approximately 0.5m from wall.	C.2 10 to 20 yrs

Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

Tree and Tag No / Species	Hght (m)	Stems No	Stems Ø (mm)	Crown Spread (m)	Crown Clear (m)	Age	RP A (m²) R (m)	Phys Condition	Structural Condition	Preliminary Recommendations / Survey Comment	Cat ERC
T5											
Tree of Heaven *Ailanthus altissima*	10	1	460	N 6 E 5 S 1 W 4	5 5 6 6	SM	A: 95.7 R: 5.51	Good	C: Fair S: Fair B: Fair	Off site tree located within public highway. Base of lifting adjacent hard standing. Crown asymmetrical with bias to north due to suppression from adjacent specimen.	C.2 20 to 40 yrs
T6											
Tree of Heaven *Ailanthus altissima*	12	1	390	N 4 E 5 S 5 W 5	10 6 7 6	SM	A: 68.8 R: 4.67	Good	C: Fair S: Fair B: Fair	Off site tree located within public highway. Base of lifting adjacent hard standing. Vertical strip of dysfunctional cambium on west side of tree from 1.2m to 4m.	C.2 10 to 20 yrs

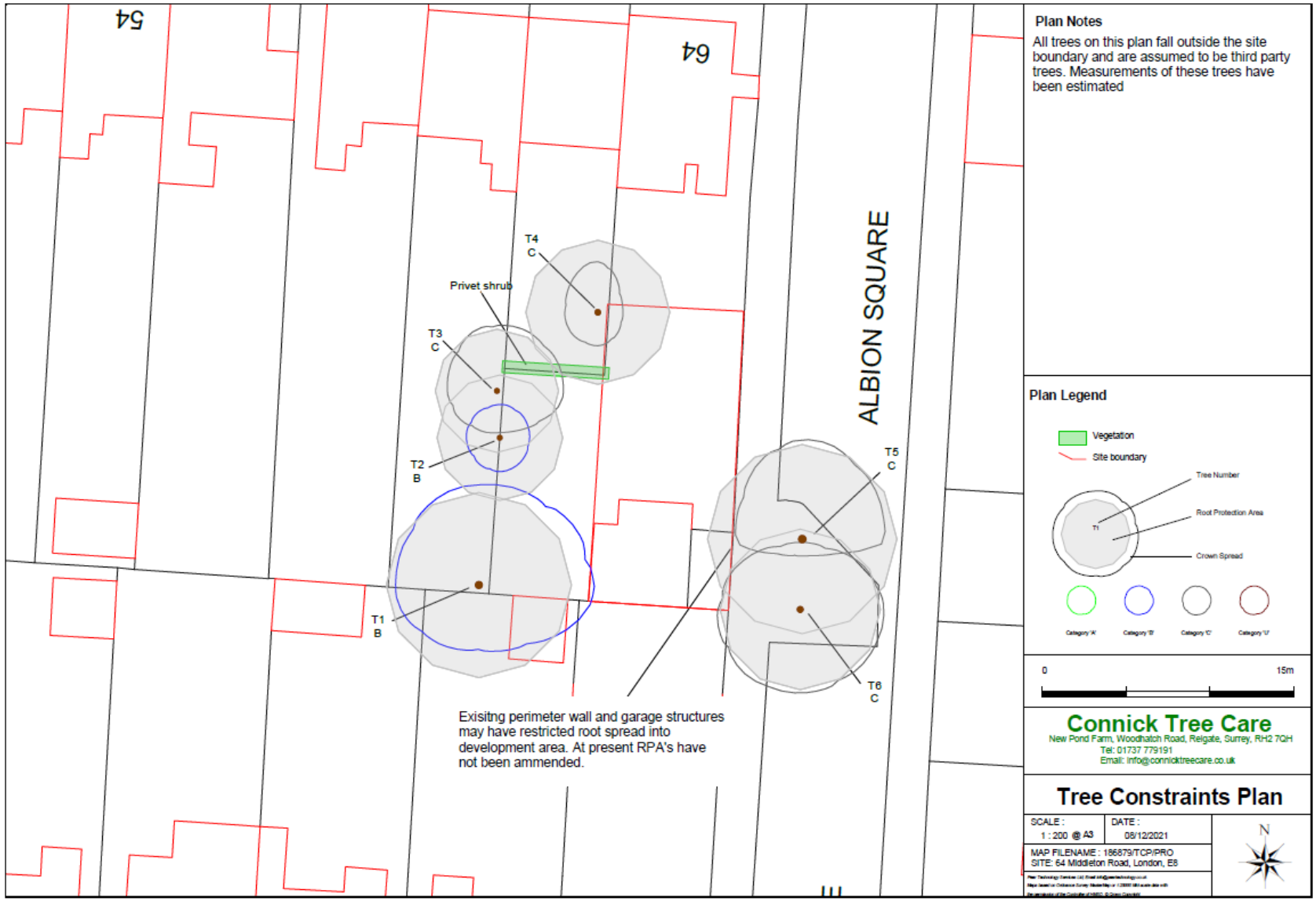
Age Classifications: N Newly planted; Y Young; SM Semi-mature; EM Early Mature; M Mature; OM Over Mature

Condition: C Crown; S Stem; B Basal area

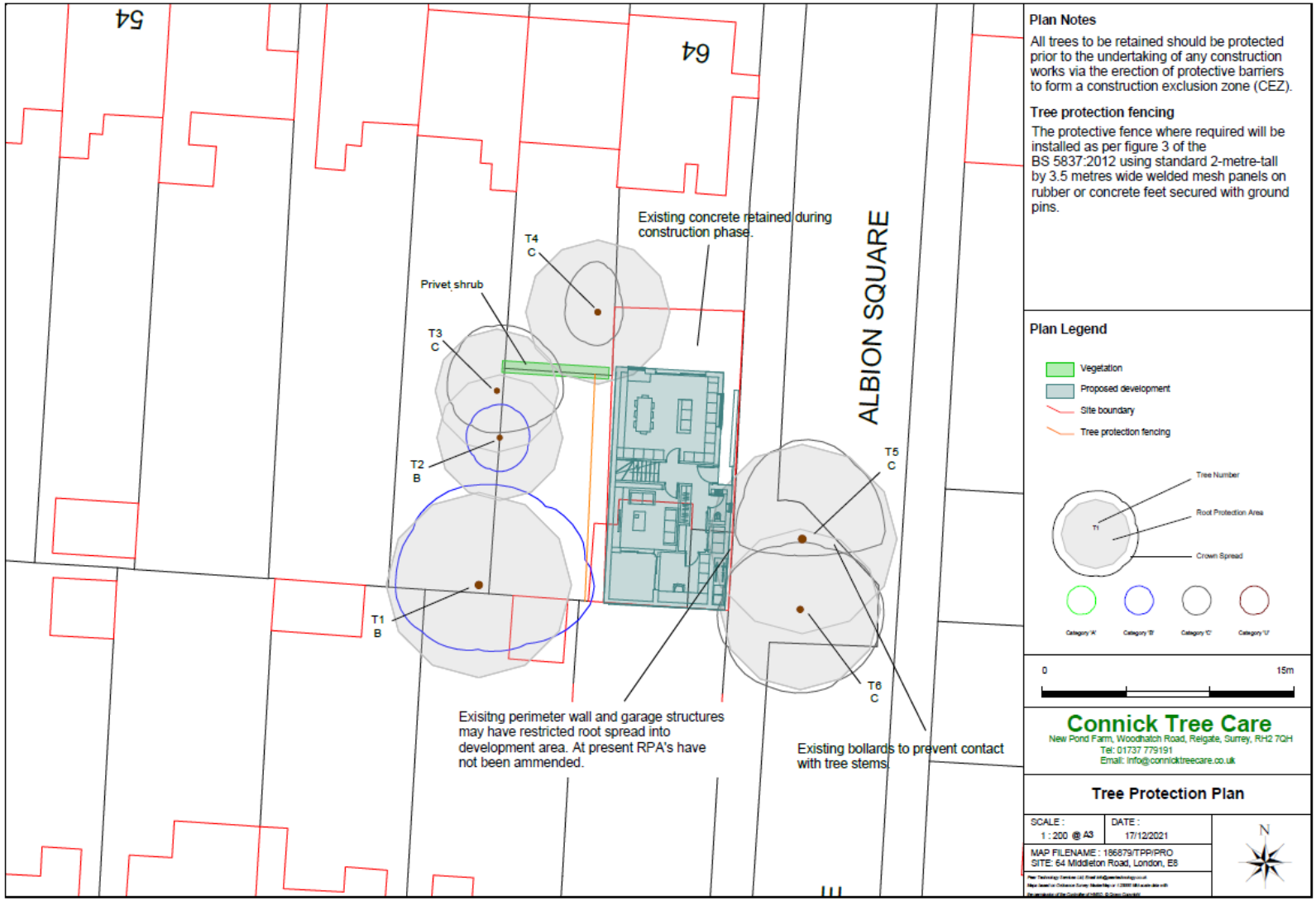
Stems: Ø Diameter; (Eq) Equivalent stem diameter using BS5837:2012 definition

ERC: Estimated Remaining Contributio

APPENDIX II TREE CONSTRAINTS PLAN



APPENDIX III TREE PROTECTION PLAN



APPENDIX IV QUALIFICATIONS AND EXPERIENCE

Paul Roberts

1. QUALIFICATIONS

Subjects		Level	Dates
Foundation degree in Arboriculture (UCLAN)		Merit	June 2013 – September 2016
Professional Tree Inspection Course (LANTRA)		Pass	June 2009
Arboricultural Association Technicians Certificate (ABC)		Merit	September 2006 – June 2007
Royal Forestry Society's Full Certificate in Arboriculture		Merit	September 2005 – June 2006

2. CAREER SUMMARY

I first started my career in the arboricultural industry in 2000 work for a commercial contracting company, here I worked for 6 years and was involved in tree felling, pruning and planting on a daily basis. During this time obtained NPTC units for use of chainsaws on the ground and in the tree and for aerial rescue.

On successful completion of the Arboricultural Association Technicians Certificate in June 2007 I decided to progress my career away from the practical side to arboricultural consultancy at Jacobs Ltd. While working for Jacobs Ltd I gained valuable experience in all aspects of arboricultural consultancy including management of large tree stocks, tree condition assessment and trees in relation to developments. My time at Jacobs also saw me work as discipline lead for clients which required close liaison with Ecologist's, Engineers and Contractors to ensure pragmatic solutions were reached with all parties' to ensure successful project delivery.

In 2011 I made the transition from private consultancy to local authority where I spent 2 and a half years working for the London Borough of Hackney as an Arboricultural Officer. During this time, I began the foundation degree in Arboriculture through Myerscough College, which I have successfully completed.

I joined Connick Tree Care in June 2014, where I now work as the Senior Arboricultural Consultant.

3. AREAS OF EXPERTISE

Tree hazard risk assessments for tree owners
Decay assessment and mapping
Pre-development site surveys and arboricultural implication studies
Tree management reports to prioritise maintenance programs
Tree related insurance claims
Diagnosis of tree disorders
General arboricultural advice