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

Site details:

2 Inverforth Close
London
NW3 7EX

Client details:

Akshay Shah
2 Inverforth Close
London
NW3 7EX

Date of Report:

5th March 2017

Report Prepared by:

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1. Introduction

1.1 This report has been commissioned by Ellen Creegan, AZ Urban Studio, to survey, assess and provide an Arboricultural Impact Assessment and Method Statement for the trees sited at and within close proximity of the proposed development and associated construction site activities / access at 2 Inverforth Close, London, NW3.

1.2 A site visit was conducted on Tuesday 28th February 2017 to survey and assess the trees. The weather at the time of inspection was dry and overcast with cold temperatures. Some of the information for the purposes of this report has been collated from the recent survey carried out in relation to the neighbouring property, 3 Inverforth Close, London, NW3

1.3 The tree survey, report and recommendations have been compiled for 12 trees (T1-T12) surveyed within the site (T4 & T12) the land to the east within the ownership of The Corporation of London - Hampstead Heath (T2-T9 - excluding *T4*) and the neighbouring property 3 Inverforth Close, London, NW3 (T1) and 1 Inverforth Close, London, NW3 (T10 & T11).

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

1.5 The trees located within the site are shown in site plan, *Appendix B.1 - B. 4*, and these correspond to the tree survey results table, *Appendix A*.

1.6 Photographs of the trees 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 The following documentation has been referred to relating to the trees and the building at this property for the compilation of this report:

Design *& Access Planning Statement (AZ Urban Studio) December 2016*

2. Survey Details and Scope

2.1 The site survey included the 12 trees (T1-T12) as shown in the survey, *Appendix A,* and also highlighted on the site plans*, Appendix B.1* and *B.2.*

2.2 The trees were surveyed from ground level from within the main driveway area of Inverforth Close and the grounds of Hampstead Heath (which directly adjoins the driveway of Inverforth Close) London, NW3. The diameter of the trunks have been measured using a DBH tape. The height of the trees have been estimated due to the difficult topography for the use of a clinometer. For trees T4, T10 & T11 the diameter of the trunks has been estimated.

2.3 The following information was recorded for each 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 specimens 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 any of the trees 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.

T3, T4, T5, T7, T8 & T9

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.

T6

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.

T1, T2, T10, T11 & T12

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.

None

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 are 12 (T1-12) trees located within close proximity of the proposed development and associated construction site activities. There are no trees which will be directly affected by the proposed development with the trees included within the survey only affected by the site access / construction process.

4.2 The trees surveyed are located within the London Borough of Camden and are protected by virtue of their location within the Hampstead Conservation Area (T1, T4, T10, T11 & T12) and also their location within The Corporation of London land, Hampstead Heath.

4.3 The proposed development has the potential to affect the trees in the following ways:

- **Compaction of the ground surrounding the trees during development process**
- **Damage to the canopies of trees during the development process due to site access**
- **The long-term impact of the proposed extension on the trees**
- **Fire damage from site fires**
- **The use of and storage of materials and chemicals on site**

4.4 All trees have been surveyed taking into account their condition, general health and form. In addition they have 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 in relation to proposed development

Trees T4 & T12

4.6 Tree T4 is a mature Sycamore tree sited within a 300mm raised planter on the front south east corner of the property adjacent to the driveway. The tree is generally structurally sound at the base with good root flare although there is clearly limited root development at this original level; the raised planter extends 1500mm to the west towards the driveway entrance and 1400mm in a southerly direction towards the house. This tree is sited at the closest point 7.6m from 2 Inverforth Close.

4.7 The tree will not be affected by the proposed development with the implementation of tree protection guidelines for the following reasons:

- The base of the tree in the raised planter can be excluded with protective fencing to exclude all exposed soft landscape ground

- The surrounding RPA of tree T4 exposed to deliveries and storage of materials is laid to existing hard landscaping and therefore will be able to tolerate deliveries of materials from light commercial vehicles as detailed within *Section 6* - Design *& Access Planning Statement (AZ Urban Studio) December 2016.*

- There is sufficient room for storage of materials and associated construction site works which can be managed with the protection of T4 maintained

- The works internally to the property and development of the roof area will not require any excavations within the RPA of tree T4

4.8 Tree T12 also located within the front of 2 Inverforth Close requires tree protection due to exposure to the proposed construction site activities. The tree is generally structurally sound and an ornamental specimen only with limited amenity value. This tree can be protected with basal shuttering surrounding the main stem and this will serve to protect both the trunk and canopy.

4.9 Therefore tree protection for trees T4 and T12 should be implemented for the entire construction site process as detailed within *Section 5*.

Tree T1

4.10 The Cherry tree, T1, located within the grounds of 3 Inverforth Close is a fair specimen which is located within the neighbouring property. The tree is generally structurally sound at the base and despite a section of decay on the eastern stem prior to the main crown break shows relative good form.

4.11 The development within 2 Inverforth Close will not affect this tree although as there is no formal vertical boundary line (ie fence or wall) the site

storage is not recommended to be carried out in this area as highlighted on *Appendix B.4.*

Trees T2 - T9 (excluding T4)

4.12 Trees T2-T9 which have been surveyed are sited within adjacent land, Hampstead Heath, The Corporation of London and are within close proximity of the site access rather than the actual development. Due to the single vehicle access via the private driveway, Inverforth Close, the trees have the potential to be damaged from compaction of exposed soft landscape ground and also damage to any low canopy growth overhanging the road. Therefore these trees have been included within the survey as they represent those which have the potential to be affected with the pinch point of the driveway where the potential for 2 x vehicles to pass is possible; from tree T2 - T9, the access of 2 vehicles at any one period relating to the proposed development will need to be avoided.

4.13 Tree T2 is a significant Lime tree which has been recently pollarded within the past 3-4 years and this work has likely been carried out on an ongoing basis resulting in the low - mid pollard. The decay within the main union which extends up the south western stem in addition to the excessive lean to the south accounts for the current form of the tree. Relating to this, the tree has been classified as a 'C.1' category tree (BS5837:2012) due to its limited lifespan.

4.14 Tree T2 has a significant recommended Root Protection Area (RPA) - 13.5m from the main stem - this only extends to within the access area for the development and as proposed construction is of light nature only - see *Section 6 - Design & Access Planning Statement (AZ Urban Studio) December 2016* - and the tree is beyond the entrance / exit to 2 Inverforth Close this tree will not be affected by the proposed development.

4.15 For the remainder of the trees within this grouping all are good specimens, structurally sound and offering excellent amenity value. All mature (with the exception of T6 which is categorised 'B.1') they are rated as 'A.1' category trees (BS5837:2012) and therefore require protection from any development works which have the potential to encroach upon their exposed tree roots. For all the trees within this area the pre-existing timber posts which provide an informal barrier between the heath and the driveway of Inverforth Close do provide a definition to the driveway area which will not be able to be encroached. Generally the soft landscape area for the trees extends from the point of the positioning of the posts; however in order to enforce and define this the following is recommended as is highlighted within *Section 6:*

> 4.15.1 Implementation of a Traffic Management System to ensure 1 x vehicle is required access on private road Inverforth Close at any one time

Trees within Hampstead Heath from Inverforth Close Entrance extending to tree T9

4.16 From the entrance of Inverforth Close from the public highway extending along the driveway to No.3 there are 9 x Lime trees sited to the north east within the Heath. In addition there is a multi-stemmed Elm tree and young Lime tree on the southern verge / boundary sited 8m and 9.5m from the entrance respectively. These trees will remain unaffected by the proposed development due to the hard standing of the driveway, the timber posts and the narrow driveway meaning only 1 x vehicle can access this section of the driveway at any one time. Therefore in relation to these trees no protective measures are recommended.

T10 & T11

4.17 Trees sited within the property to the south, 1 Inverforth Close, T10 & T11 will remain unaffected by the proposed development. Their location within the adjacent property allows for protection from the driveway access area by means of the boundary wall and as with trees T2-T9, the hard landscape driveway which will remain will continue to protect the tree roots of these trees as previously.

5. Outline Arboricultural Method Statement

5.1 Sequence of Events

5.1.1 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) Pre Contract / Commencement site meeting between Local Planning Authority, client and developers architect. The meeting should take place before any development activity begins to confirm the timing and implementation of the agreed tree works and tree protection measures including site storage and any pertinent time scheduled for site operators.

b) Tree protection measures installed as specified within Tree Protection Plan

c) Site to be inspected by consulting arboriculturist.

Development Stage

d) This stage is subject to site monitoring visits by the consulting arboriculturist at intervals as agreed at the pre-commencement site meeting. These visits are to ensure that the agreed protection measures are functional and correctly achieving their purpose.

e) Arboricultural supervision is to be carried out at all crucial stages throughout the development process to ensure detailed tasks are carried out as per the approved methodology and all objectives met.

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

Final Development Stage

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

h) All landscaping works once the protective fencing has been removed will avoid soil re-grading and disturbance within the original Tree Protection Area. No soil levels will be altered after the protection barriers have been removed.

5.2 Tree Protection Specifications

5.2.1 The implementation of the proposed development can be achieved whilst retaining trees **T1 - T12** 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 Tree Protection Fencing as specified within this report and within the TREE PROTECTION PLAN (Appendix B.4) must be implemented prior to the commencement of any construction works.

- A Traffic Management System for all construction site access to No. 2 Inverforth Close

- All construction activities must adhere to the tree protection guidelines as explained in the guidance below.

5.3 Excavations & Root Severance Guidance

5.3.1 No excavations are s required within the development. However, in the unlikely occurrence of excavations being required, these must be hand-dug where within the RPA of retained trees and in close adherence with the guidance below and with prior agreement from the consulting arboriculturist or Local Authority Tree Officer to the following specifications:

5.3.2 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.

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 (T4 & T12)

5.4.1 Protection of the trees highlighted for retention should be implemented as explained below. These measures should remain for the entire construction process in order to provide a comprehensive barrier from the trees.

- Basal shuttering should extend surrounding tree T4 & T12 as highlighted within *Appendix B.4* and as recommended within *Appendix F.*

- Inverforth Close private driveway should remain a Construction Exclusion Zone with the exception of site traffic with this area defined by the gate to the private driveway of No.2 Inverforth Close

- No building materials or chemicals are stored within the tree driveway / Construction Exclusion Zone) with a clearly defined storage area provided

- There should be no fires within this site.

- Fencing should be installed opposite entrance driveway to No. 2 as highlighted within Appendix B.4 to ensure the turning circle of delivery vehicles / associated construction site activities does not extend beyond the hard standing of the driveway and into the heath area of exposed RPAs in this area

5.5 Site Notices

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 within close proximity of the trees.

5.6 Traffic Management System

5.6.1 A traffic management system must be implemented whereby the following is adhered to:

- One vehicle at any one time must be permitted within the driveway area between the main access gate and the private gate to No.2 Inverforth Close

- The traffic management system must clearly define that the driveway is used for access only in a direct manner without waiting or unloading of materials

- The fencing line as recommended for the boundary with the heath opposite the driveway (see Appendix B.4) should be adhered to at all times

5.7 Storage of Materials, Machinery & Chemicals

5.7.1 A designated area for storage of materials, machinery and chemicals is recommended within *Appendix B.4* to be within the RPA of tree T4 but without causing damage by implementing the following:

- Site specific storage area to be constructed using cellular load bearing membrane with 4mm minimum plywood as a base above to prevent:

  A Decompaction of ground beneath hard landscaping
  B Spillage of materials / chemicals which could leach within ground / porous paving

- No mixing of chemicals should occur within RPA of tree T4 & T12

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 the Tree Protection Fencing has been installed and for the remainder of the development until the final stage as highlighted in *Section 3: Sequence of Events* above, it must be considered as sacrosanct and should not be removed or altered without prior written consent from the Local Authority tree officer and/or consulting arboriculturist.

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: Cherry
No action required at present

T2: Lime
*Re-pollard and further inspect south westerly stem to provide further recommendation for long term **

*** To be carried out by City of London (scheduled 2017)*

T3: Lime
No action required at present

T4: Sycamore
No action required at present

T5: Lime
No action required at present

T6: Lime
No action required at present

T7: Lime
No action required at present

T8: Lime
No action required at present

T9: Lime
No action required at present

T10: Cherry
No action required at present

T11: Cherry
No action required at present

T12: Cherry
No action required at present

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 - for tree T2 the recommendation is in relation to health and safety reasons only and is unrelated to the proposed development*

7. Appendices

Appendix A

Tree survey (BS5837:2012)

2 Inverforth Close
Hampstead
London
NW3 7EX

Tree Survey Notes
**Tree T1, T10 & T11 have been surveyed from the driveway or 2 Inverforth Close only and therefore trunk diameters have been estimated as denoted by (e)*

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

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

2 Inverforth Close, London, NW3
BS 5837: 2012 Tree Schedule – February 2017

Tree No	Species	Ht (m)	DBH. (mm)	Spr d (m)	Age	Visual Cond.	Phys. Cond.	Comments / Structural condition	Management Recommends.	Estimated Remaining (years)	BS 5837 Rating	RPA Distance (m)
T1	Cherry	8	220	N: 3 E: 2 S: 3 W:3	M	F	F	Fair specimen; decay in main stem from 1-1.8m - occluding well but does limit lifespan	Crown reduce overhang to property outline 15-20% to reduce encroachment / overhang	15 - 20 years	C.1	2.6
T2	Lime	14	1130	N: 4 E: 5 S: 5 W:3	M / OM	F	G	Tree is heavily leaning at base to the south -good compensatory growth although extensive epicormic growth at base. On southern side extensive single fluting extends from base; appears sound. Main union at 3.0m showing signs of decay. 3 stems develop. South western stem has been heavily reduced with fungus from main union to 5-6m - likely *Bjerkandera adusta*; top of this stem has full cavity. Further 2 stems heaviy reduced to 11-13m to account for decay; reasonable condition. Last reduced 3-4 years ago	Re-pollard and further inspect south westerly stem to provide further recommendation	10 years +	C.1	13.5m
T3	Lime	20	680	N: 5 E: 5 S: 6 W:4	M	G	G	Generally structurally sound at base with good root flare and sound fluting in main stem. Slight lean to south east main stem in good condition; previously ivy clad. Previously reduced / lifted over road to 6-7m	No action required at present	40 years +	A.1	8.2m
T4	Sycamore	14	500	N: 7 E: 3 S: 6 W:6	M	G	G	Tree generally structurally sound at base with good root flare; sited within raised planter 300mm height and 1.5m distance from outer point of stem. Extent of original topography unknown. Main union appears sound; some low vigour in very upper crown. Some minor deadwood throughout Previously reduced / lifted over road to 6-7m	No action required at present	40 years +	A.1	6.0m
T5	Lime	20	810	N: 4 E: 6 S: 5 W:5	M	G	G	Tree is generally structurally sound at base w/ good rot flare. Main stem in good condition w/ main union at 2.0m - appears sound with 2 main stems dominating to south and north. Previously reduced / lifted over road to 6-7m	No action required at present	40 years +	A.1	9.7

T6	Lime	20	810	N: 4 E: 6 S: 5 W:5	M	G	G	Young to early mature specimen developing into a balanced tree; generally structurally sound	No action required at present	40 years +	B.1	3.1
T7	Lime	19	880	N: 5 E: 5 S: 5 W:5	M	G	G	Tree has excellent form with good shape; generally structurally sound with good root flare to the east. Small cavity at ground level to 300mm - 200mm width. Main stem / crown in good condition. Previously reduced / lifted over road to 6-7m	No action required at present	40 years +	A.1	10.6
T8	Lime	19	740	N: 4 E: 5 S: 7 W:5	M	G	G	Generally structurally sound at base with good root flare. Main union at 3m is sound with full canopy developing from 6-7m - congested. Previously reduced / lifted over road and Heath Lodge to 6-7m	No action required at present	40 years +	A.1	8.9
T9	Lime	20	750	N: 4 E: 4 S: 6 W:5	M	G	G	Generally structurally sound at base with good root flare. Small cavity at base 80mm wide - appears insignificant with good compensatory growth	No action required at present	40 years +	A.1	9
T10	Cherry (e)	6	160 (e)	N: 4 E: 3 S: 3 W:2	M	G	G	Ornamental specimen, lightly suppressed to the west; generally structurally sound	No action required at present	15 - 20 years	C.1	1.8
T11	Cherry (e)	6	160 (e)	N: 3 E: 2 S: 3 W:3	M	G	G	Ornamental specimen, lightly suppressed with canopy mainly to the south east	No action required at present	15 - 20 years	C.1	1.8
T12	Cherry	5	140	N: 2 E: 2 S: 2 W:2	EM	F	G	Ornamental specimen, previously reduced and generally structurally sound	No action required at present	15 - 20 years	C.1	1.6

Appendix B

Existing & Proposed Site Plan (BS5837:2012) *incorporating* Tree Protection Plan

2 Inverforth Close
Hampstead
London
NW3 7EX

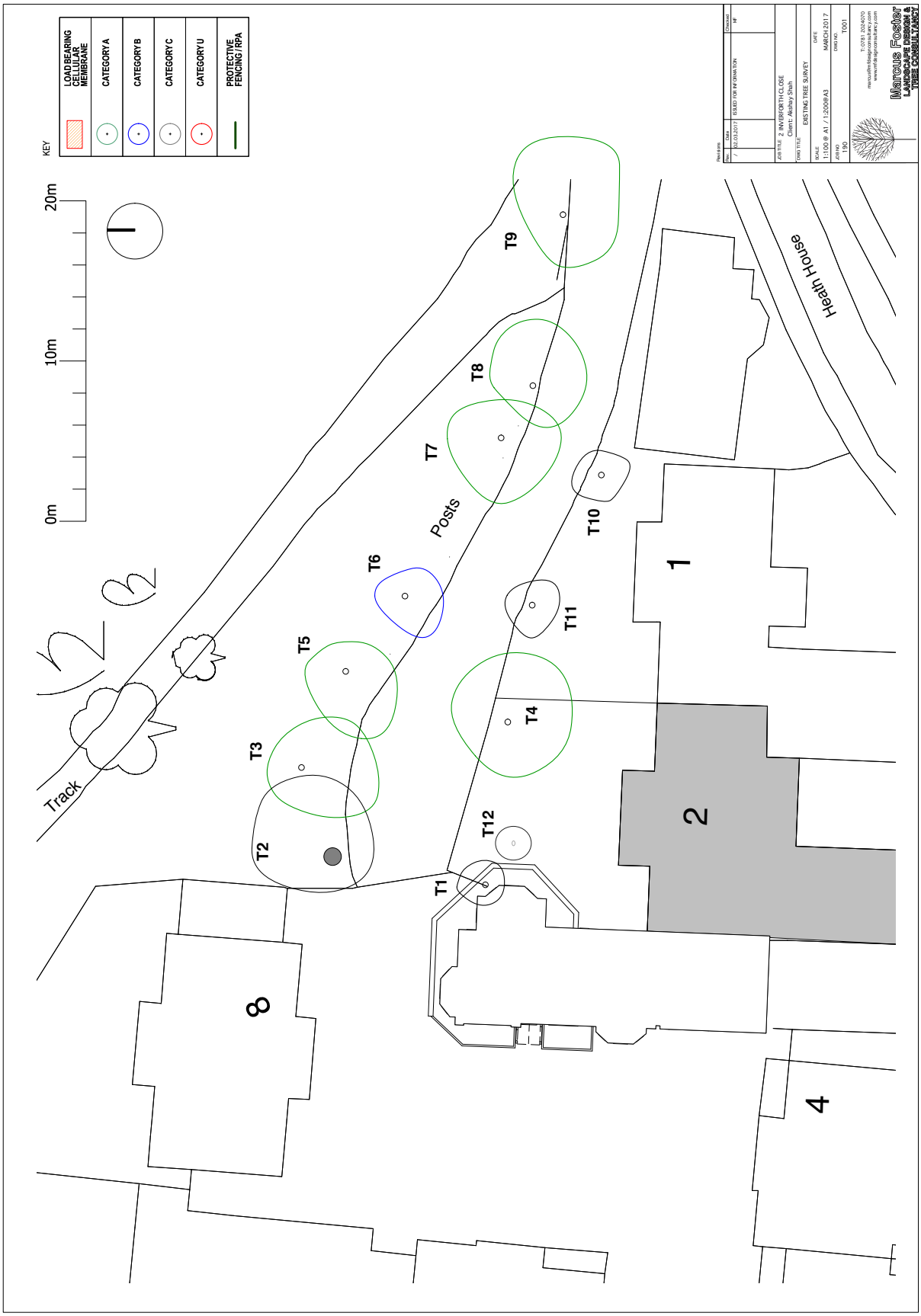
Appendix B.1:
Existing Site Plan - 2 Inverforth Close, London, NW3

Appendix B.2:
Proposed Site Plan - 2 Inverforth Close, London, NW3

Appendix B.3:
Proposed Site Plan w/ RPA - 2 Inverforth Close, London, NW3

Appendix B.4:
Outline Tree Protection Plan: 2 Inverforth Close, London, NW3

*Do not scale from Appendix B:
separate PDF document attached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CATEGORY B
CATEGORY C
CATEGORY U
PROTECTIVE FENCING / RPA
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Heath House
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Revisions
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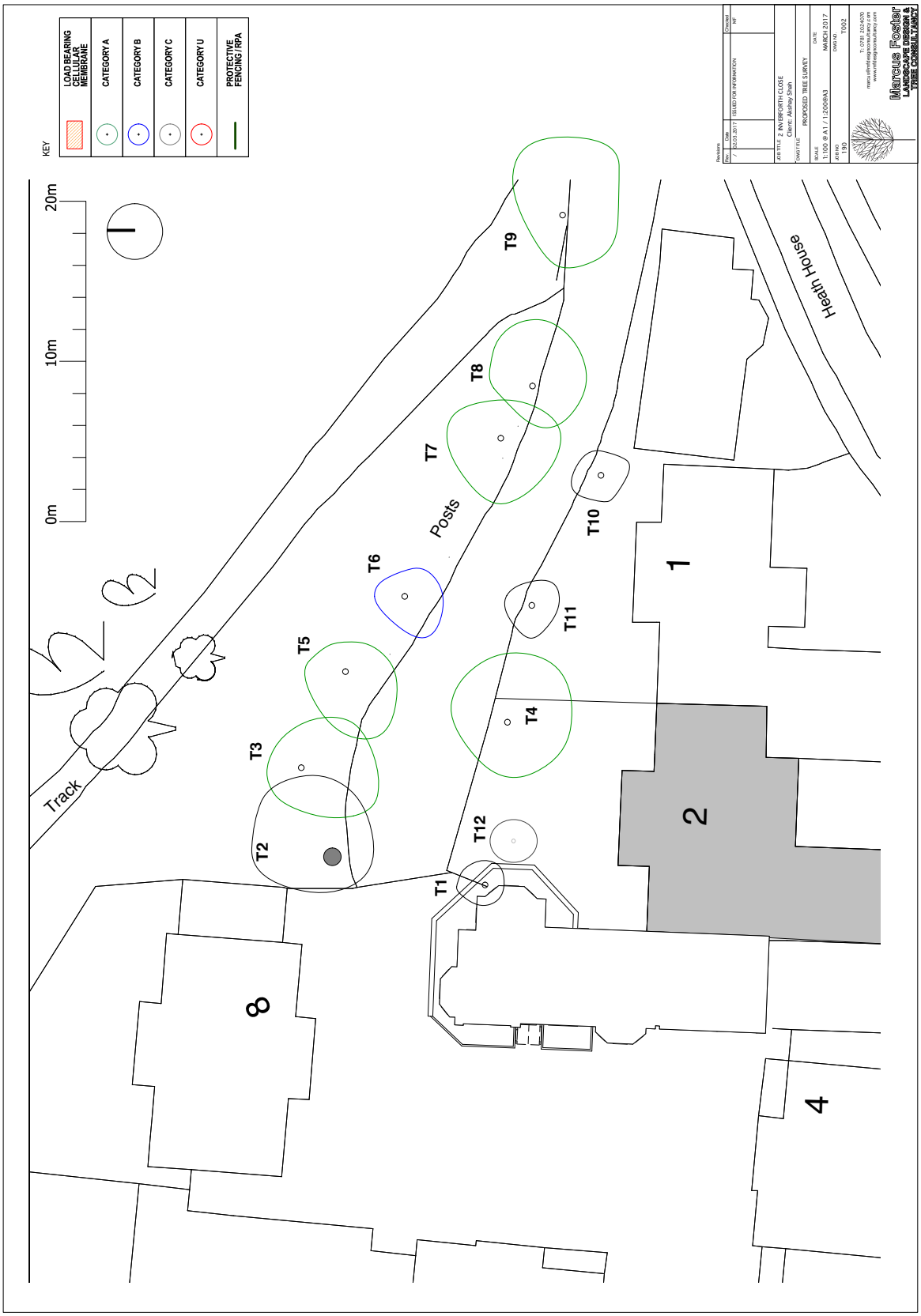
Client: Akshay Shah
Date
MARCH 2017
Marcus Foster
LANDSCAPE DESIGN & TREE CONSULTANCY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T3
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8
Revisions
Rev. Date
/ 02.03.2017 ISSUED FOR INFORMATION
Checked MF
JOB TITLE 2 INVERFORTH CLOSE
Client: Akshay Shah
DWG TITLE PROPOSED TREE SURVEY
SCALE 1:100 @ A1 / 1:200@A3
DATE MARCH 2017
JOB NO 190
DWG NO T002
Marcus Foster
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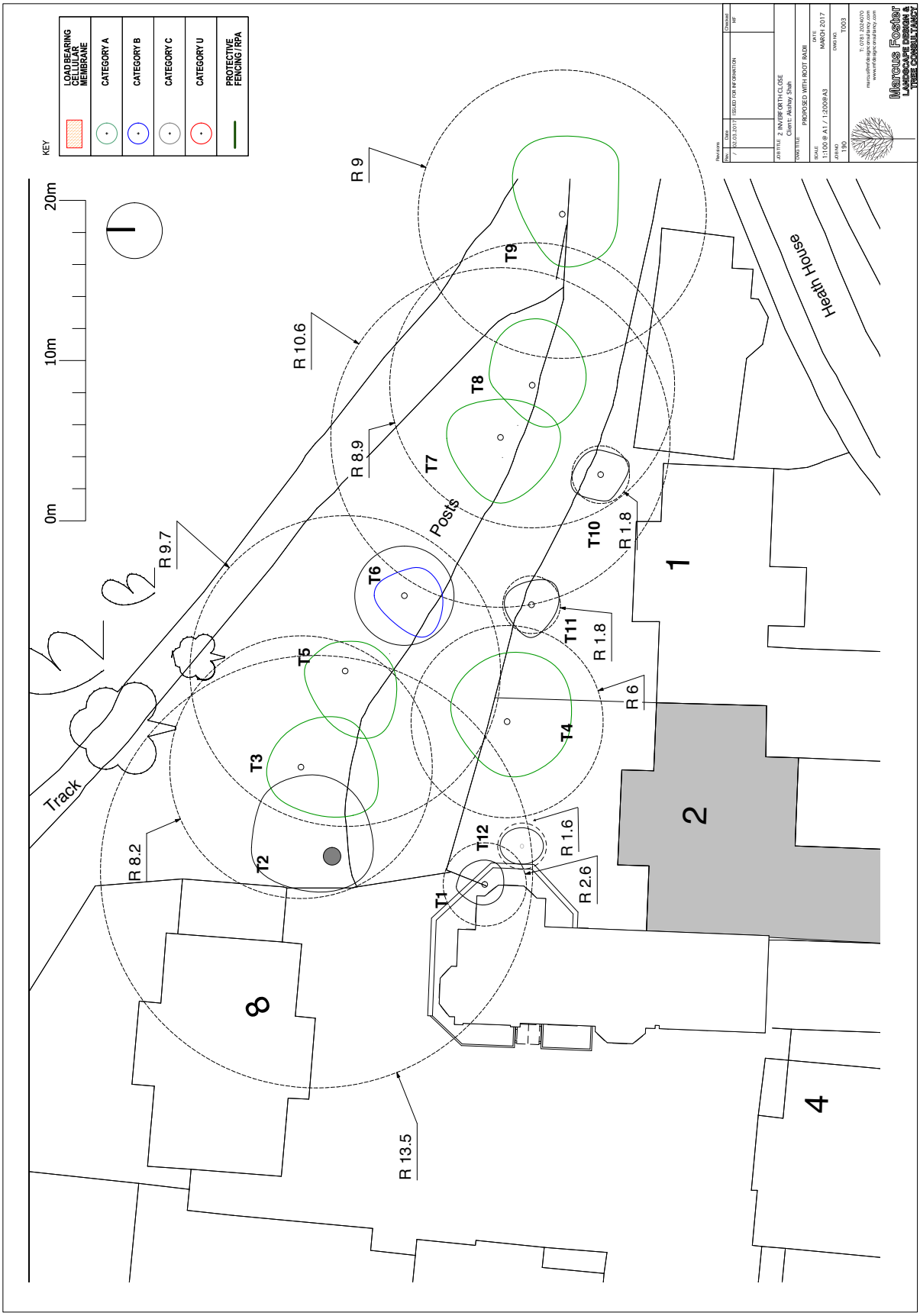
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R 1.6
R 2.6
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T3
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T12
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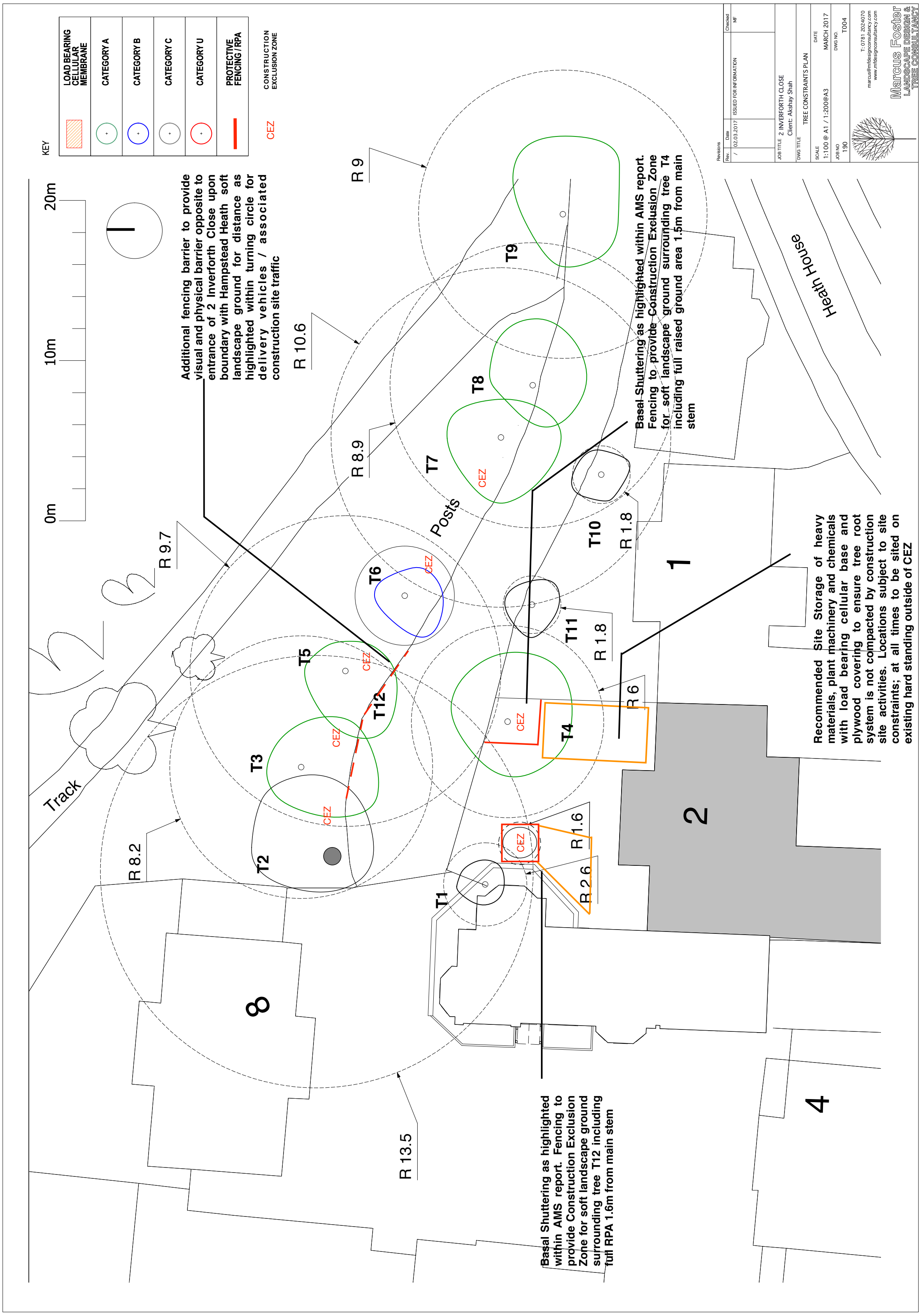
Marcus Foster
LANDSCAPE DESIGN & TREE CONSULTANCY
2 INVERFORTH CLOSE
Client: Akshay Shah
PROPOSED WITH ROOT BARR
MARCH 2017
T003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10m
20m
Additional fencing barrier to provide visual and physical barrier opposite to entrance of 2 Inverforth Close upon boundary with Hampstead Heath soft landscape ground for distance as highlighted within turning circle for delivery vehicles / associated construction site traffic
Basal Shuttering as highlighted within AMS report. Fencing to provide Construction Exclusion Zone for soft landscape ground surrounding tree T4 including full raised ground area 1.5m from main stem
Recommended Site Storage of heavy materials, plant machinery and chemicals with load bearing cellular base and plywood covering to ensure tree root system is not compacted by construction site activities. Locations subject to site constraints; at all times to be sited on existing hard standing outside of CEZ
Basal Shuttering as highlighted within AMS report. Fencing to provide Construction Exclusion Zone for soft landscape ground surrounding tree T12 including full RPA 1.6m from main stem
Track
Posts
Heath House
T1
T2
T3
T4
T5
T6
T7
T8
T9
T10
T11
T12
R 9
R 10.6
R 8.9
R 9.7
R 8.2
R 13.5
R 1.8
R 1.8
R 6
R 1.6
R 2.6
1
2
4
8
JOB TITLE 2 INVERFORTH CLOSE
Client: Akshay Shah
DWG TITLE TREE CONSTRAINTS PLAN
SCALE 1:100 @ A1 / 1:200@A3
DATE MARCH 2017
02.03.2017 ISSUED FOR INFORMATION
Marcus Foster
LANDSCAPE DESIGN & TREE CONSULTANCY

Appendix C

Site Photographs for:

2 Inverforth Close
Hampstead
London
NW3 7EX

Taken March 2017
&
November 2016

C.1 Photograph of tree T4, land adjacent to Inverforth Close, Hampstead Heath as viewed in an easterly direction

C.2 Photograph of proposed development site entrance relating to tree within land adjacent to Inverforth Close, Hampstead Heath, as viewed in a northerly direction

C.2 Photograph of proposed development site entrance relating to tree T4 within front of property, 2 Inverforth Close

C.3 Photograph of T12 within proposed development site front driveway area, front of property, 2 Inverforth Close

C.4 Photograph of proposed development site entrance viewing towards tree T12 within adjacent Heath land

C.5 Photograph of trees T3-T8, land adjacent to Inverforth Close, Hampstead Heath and No.1 Inverforth Close as viewed in a southerly direction

C.6 Photograph of trees T5-T9, land adjacent to Inverforth Close, Hampstead Heath as viewed in a south easterly direction

C.7 Photograph of trees within land adjacent to Inverforth Close, Hampstead Heath between entrance and tree T9 (not surveyed) as viewed in a south easterly direction

C.8 Photograph of trees within land adjacent to Inverforth Close, Hampstead Heath between entrance and tree T9 (not surveyed) as viewed in a northerly direction

Appendix D.1:
Tree Protection Notice

Site Specific
Tree Protection Notice
(BS5837: 2012)

2 Inverforth Close
Hampstead
London
NW3 7EX

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: 2 Inverforth Close, London, NW3

- There should be no storage of fuels, chemicals or cement based products within the designated Tree Protection Areas / Construction Exclusion Zones. All storage of hazardous materials should be within the designated area as shown within Tree Protection Plan.

- The Tree Protection Fencing as recommended within the Tree Protection Plan must remain in place at all times. Its removal must only take place with written consent of the Local Authority or on completion of development / prior to final landscaping works

- .Notice boards, telephone cables etc should not be attached to any part of any of the trees.

- 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.

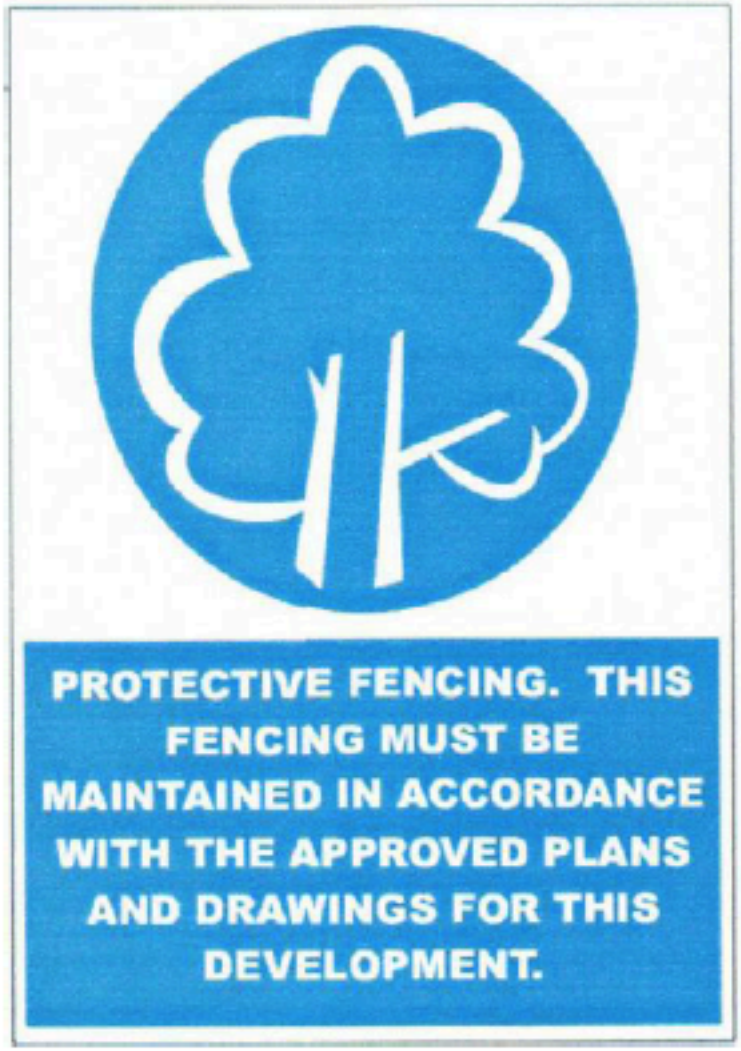
Marcus Foster (Arboricultural Consultant): 0781 2024 070
Local Authority Tree Officer (LB Camden): 020 7974 4444

Appendix D.2:
Tree Protection Notice

Generic Tree Protection Notice (BS5837: 2012):

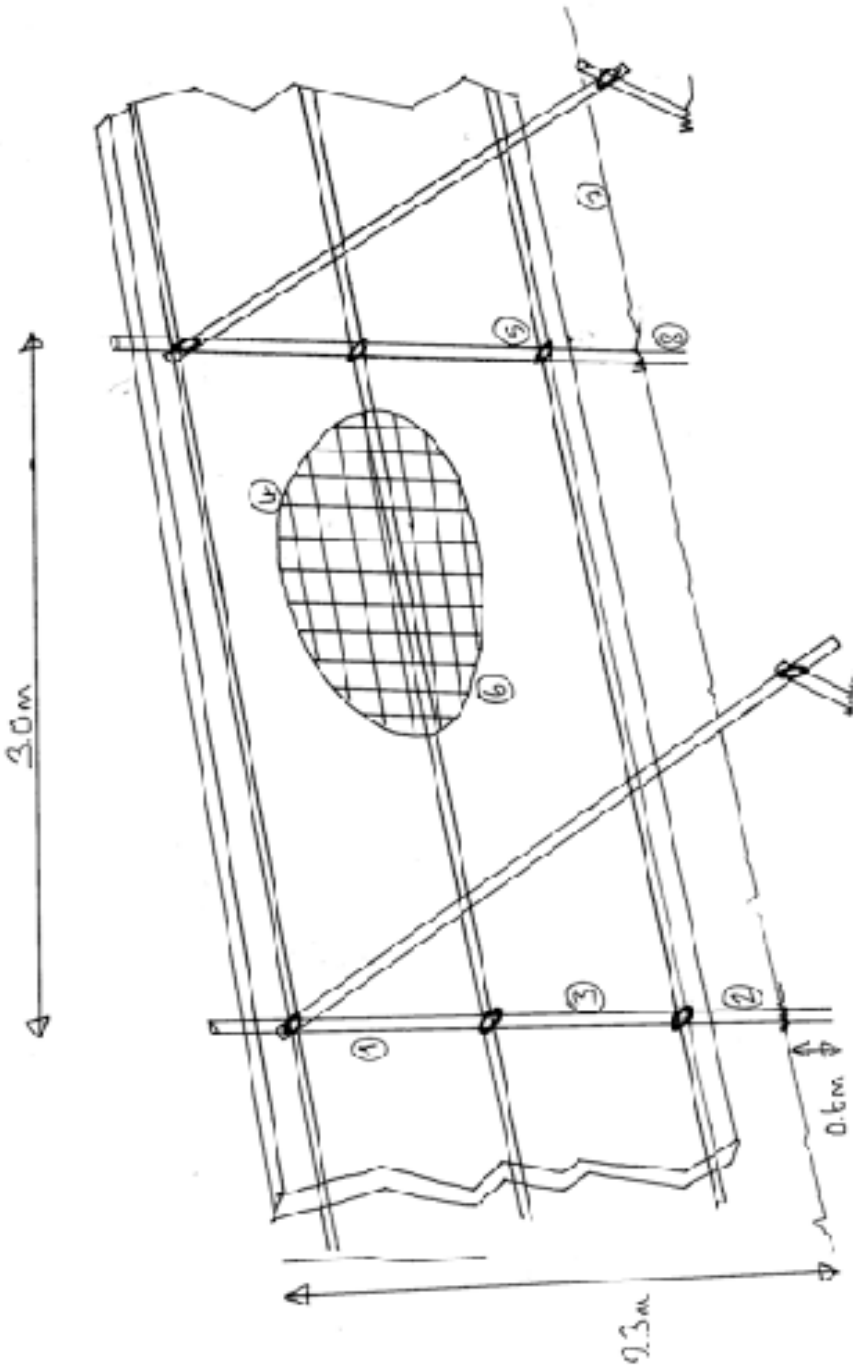
2 Inverforth Close
Hampstead
London
NW3 7EX

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: Example of Tree Protection Fencing as outlined in BS5837 (2012) Specifications



Tree Protection Specification Key:

1. Scaffold tubes
2. Uprights driven into ground
3. Panels secured to uprights
4. Weldmesh secured to fence
5. Standard clamps
6. Wire secured to fence
7. Ground level
8. Tubes driven 0.6m into ground

Appendix F: Example of Basal Shuttering

Basal shuttering offers immediate protection for the lower main stem and initial root plate of a tree where exposed with a porous surface. This method of tree protection does not offer protection to the root plate of a tree where surfaces are exposed / development works are being undertaken within the Root Protection Area of a tree. however, it does offer immediate protection to the main stem and provides vital clearance between the tree and construction site activities such as storage of materials, ad hoc toilet usage and compaction of exposed soft landscaped ground (in addition to many other additional construction site activities.

Photograph taken by Marcus Foster within City of Westminster, 2015

Appendix G: 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)