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ARBORICULTURAL CONSULTANCY

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ARBORICULTURAL METHOD STATEMENT IN FULFILMENT OF PLANNING CONDITIONS

20 Well Road, London, NW3 1LH

Details pursuant to Condition 3 of planning permission 2014/2114/P dated 18th July 2014 for the demolition of the existing side extension and replacement with a new single storey side extension, including increased height of boundary wall, erection of new smaller dormer windows (east, west and north roofslopes), replacement rooflights and repositioning of entrance; installation of window and removal of French Doors at 20 Well Road, London. NW3 1LH

Report by
Dr Martin Dobson
BSc (Hons) Biol, DPhil, FArborA, MEWI
Registered Consultant of the Arboricultural Association

On the instructions of Geoffrey Prentice, 5D Architects

4th April 2017

MDA reference G24

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1. Introduction

1.1 Martin Dobson Associates Ltd were instructed by 5D Architects on behalf of their client Mr Lior Shiff on 12th March 2017 to prepare a report in fulfilment of arboricultural conditions pertaining to planning consent 2014/2114/P issued by the London Borough of Camden council on 18th July 2014 (Appendix **MD1**). The consent allows for the demolition of the existing side extension and replacement with a new single storey side extension, including increased height of boundary wall, erection of new smaller dormer windows (east, west and north roofslopes), replacement rooflights and repositioning of entrance; installation of window and removal of French Doors at 20 Well Road, London.

1.2 Condition 3 of the planning consent required that details should be provided to the council regarding protection of trees on or adjacent to the site during the implementation of the consent:

Condition 3 – tree protection

Details of the design of building foundations and the layout, with dimensions and levels, of service trenches and other excavations on site in so far as these items may affect trees on or adjoining the site, shall be submitted to and approved by the Council as the local planning authority before any works on site are commenced. The relevant part of the works shall not be carried out otherwise than in accordance with the details thus approved.

Reason: To ensure that the Council may be satisfied that the development will not have an adverse effect on existing trees and in order to maintain the character and amenities of the area in accordance with the requirements of policy CS15 (Protecting and improving our parks and open spaces & encouraging biodiversity) of the London Borough of Camden Local Development Framework Core Strategy.

1.3 This report has been prepared under the guidance of British Standard 5837: 2012 *Trees in relation to design, demolition and construction – Recommendations*.

2. Root protection areas

2.1 Adequate protection, both above and below ground, is essential for trees that are to be retained as part of a development. The British Standard BS5837: 2012 *Trees in relation to design, demolition and construction - Recommendations* advises that there should be a root protection area (RPA) around trees which is kept free of construction activities by means of an exclusion zone enforced by protective fencing and/or ground protection. The RPA is calculated as the area equivalent to a circle with a radius of 12 times the trunk diameter at a height of 1.5 m above ground level.

2.2 The trees were surveyed on 13th March 2017 and the schedule of measurements and condition of the trees is recorded at **MD2**. All of the trees were assessed according to the BS5837: 2012 classification and are regarded as being Category C, that is, they are of low value and quality.

2.3 Based on the survey data root protection areas have been calculated and are shown in tabular form at **MD3** and pictorially on the tree constraints plan at **MD4**.

2.4 The approved development cannot be implemented without the removal of blackthorn T2 as it is located too close to the extension's doors. T2 will therefore be removed and will be replaced with another tree in the Prunus family in a suitable location in the garden.

2.5 Trees T1 and T3 are in the rear garden of the neighbouring property, No. 18. It may be possible to demolish the existing structure and build the new one without encroaching on the neighbouring property, but this seems unlikely and therefore a Party Wall Award will most likely be necessary. On the assumption that some work will need to take place within the garden of No. 18 it is proposed that fencing will be erected and ground protection installed on the neighbouring land to protected T1 and T3.

2.6 It is considered that the foundations of the existing conservatory and boundary wall will be located at least 600 mm below ground level – the conservatory foundations are likely to be significantly deeper. Since most woody structural roots are located in the upper 600 mm of soil this means that the boundary walls and their foundations will act as a root barrier and there will be little or no root growth onto the land at 20 Well Road. Nonetheless, care will need to be taken when removing the existing foundations and installing new ones to avoid damaging roots that may be growing against them. The means of protecting trees and their roots are described below.

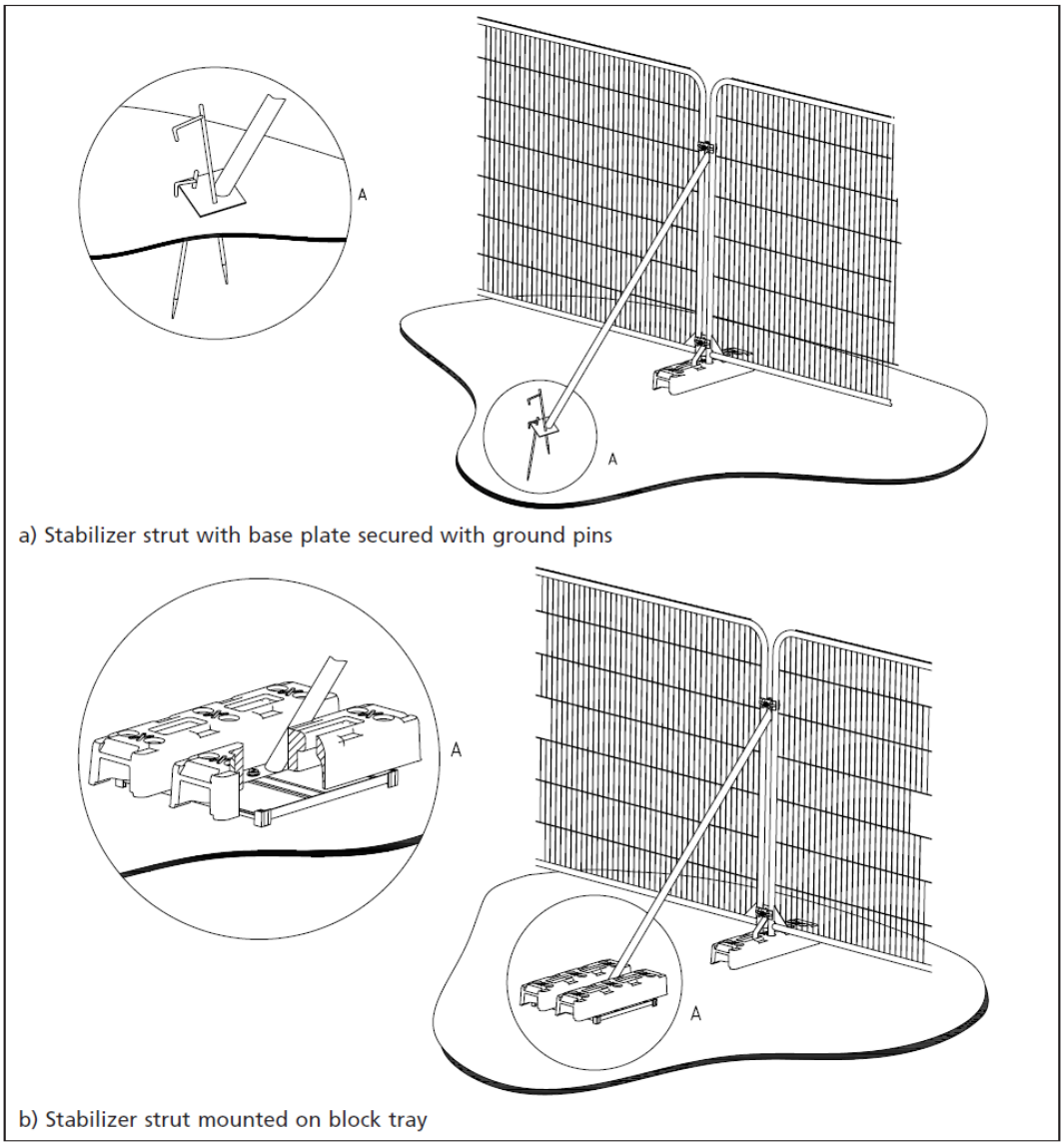
3. Arboricultural method statement and tree protection plan

3.1 Trees can very easily be damaged during construction activities through their branches being broken by construction traffic passing close to the canopy or by root severance during the digging of foundation or service trenches. The majority of roots are to be found in the upper 600 mm of soil and so even relatively shallow trenches can sever a significant number of roots growing across the direction of the trench. Tree roots can also be damaged indirectly, often inadvertently, through soil compaction, which disrupts soil structure and can lead to root death through the development of anaerobic soil conditions. Spillage of toxic materials (e.g. oil or diesel) can also result in root damage and ultimately the death of a tree. Protection of the soil around trees by means of a construction exclusion zone (CEZ) is therefore vitally important in order to preserve roots undamaged.

Fencing and ground protection

3.2 Tree protection will comprise of 2 m tall fencing installed in the positions shown at **MD5** before any machinery is delivered to site or demolition commences. The fencing will consist of 2 m tall Heras panels on concrete or rubber feet secured with scaffold clamps and braced to resist impacts as shown in Figure 1.

Figure 1. Diagram to illustrate design of protective fencing with bracing strut pinned into the ground



3.3 High visibility all weather notices at a size no less than A3 will be securely attached to each panel of the barrier around the CEZ with wording as shown in Figure 2.

Figure 2. Wording to be included in high visibility all-weather sign attached to protective fencing

3.4 In order to allow access for construction workers to demolish and reconstruct the boundary walls it is proposed that part of the RPAs of T1 and T3 will be protected by ground protection. This area, shaded blue on the tree protection plan (**MD5**), will be covered by heavy duty plywood boards laid over a 100 mm thickness of a compressible material such as woodchips laid onto the existing surface or, if bare earth, onto a geotextile such as Terram (Figures 3 and 4). Once laid the plywood sheeting will be secured in place by screwing the boards into the timber bearers.

Figure 3. Specification for ground protection

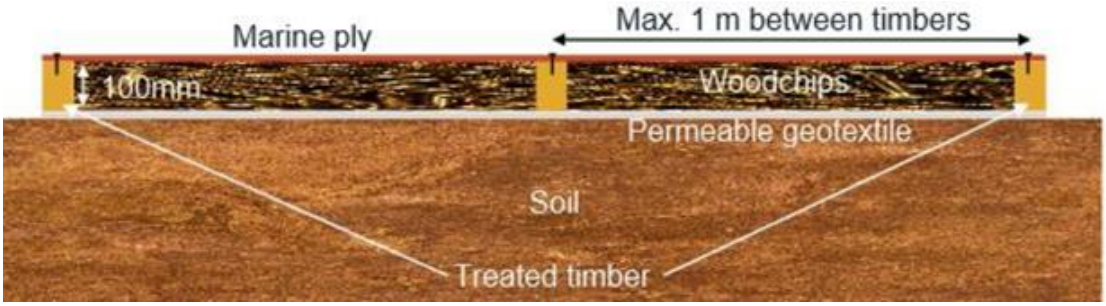


Figure 4. Plywood sheeting used as ground protection.

Removal of foundations

3.5 In order to prevent damage to roots growing against the existing foundations it is proposed that breaking out of existing foundations will be carried out using hand-operated tools only. Care will be taken to remove the existing foundations without widening the trench by removal of any surrounding soil. Likewise, the excavated trench will not be widened to take new foundations on the land belonging to No. 18. Any increase in width of foundations must be carried out solely on land belonging to No. 20. No roots larger than 25 mm diameter will be cut without the specific approval of the local authority.

Arboricultural supervision

3.6 A project arboricultural consultant will be appointed to oversee tree protection for the duration of the demolition/construction contract(s). Alternatively, a designated person (e.g. site manager) will take on the responsibility of overseeing tree protection and enforcement of conditions, mindful that failure to implement conditions may lead to enforcement action. If appointed, the project arboriculturists will be consulted on any issues that may arise concerning trees and will visit the site as often as necessary to ensure that trees are protected and/or at the following key stages:

- Prior to works commencing on site in order to meet with the contractor's site manager to ensure that the principles of tree protection are understood and the procedure, timescale and materials for installation of tree protection are agreed;
- Following installation of tree protection but prior to any works commencing on site to confirm that it is fit for purpose;
- During removal of existing foundations adjacent to trees T1 and T3 to ensure roots and soil are not damaged;
- At any time that there are potential conflicts with tree protection;

3.7 A pre-start meeting should be held on site with the project arboriculturist and the contractor's representative(s) so that the precise details of the schedule of works together with details of installation of tree protection can be agreed and personnel induction carried out. The site manager will be fully briefed on tree protection measures and procedures before any workers or sub-contractors are permitted onto the site. Following induction, a copy of the Induction Sheet (**MD5**) will be provided to and be signed by the site manager in recognition of acceptance of their role in enforcing day to day tree protection.

3.8 All contractors involved in the project have a duty to comply with all the specified tree protection measures and all workers will be provided with induction by the site manager and be required to sign an Induction Sheet confirming they have understood the protection measures. Signed sheets will be kept on site for inspection.

3.9 No enabling works will take place until after the meeting has been held and tree protection has been installed, inspected and approved as fit for purpose.

3.10 Fencing will not be removed under any circumstances during construction unless with the express approval of the local authority. If in any doubt the site manager must contact the nominated arboricultural consultant.

Burning of waste

3.11 No fires will be lit on site within 3 m of root protection areas due to the danger of scorching of leaves and branches of overhanging trees.

Services

3.12 There are no proposals for new services. The extension will utilise existing incoming and outgoing services and no new service trenches will need to be dug. If a soakaway is required then this will be installed outside root protection areas having first taken the advice of the project arboriculturist.

Landscaping

3.13 Once construction has demonstrably finished (to the satisfaction of the project arboriculturist) fencing may be removed in order to allow final landscaping to be undertaken. Landscaping will involve the planting of one new tree as a replacement for T2. The tree is proposed to be a flowering cherry (species and cultivar to be decided) with a minimum height of 3 m and a stem girth of 15 – 18 cm.

APPENDIX MD1

Planning consent 2014/2114/P issued by the London Borough of Camden on 18th July 2014

Camden

Regeneration and Planning
Development Management
London Borough of Camden
Town Hall
Judd Street
London
WC1H 8ND

Tel 020 7974 4444
Textlink 020 7974 6866

planning@camden.gov.uk
www.camden.gov.uk/planning

Mr William Nickerson
William Nickerson Interior Design
9 Goldhawk Mews
London
W12 8PA

Application Ref: **2014/2114/P**
Please ask for: **Hugh Miller**
Telephone: 020 7974 **2624**

18 July 2014

Dear Sir/Madam

DECISION

Town and Country Planning Act 1990 (as amended)

Full Planning Permission Granted

Address:
20 Well Road
London
NW3 1LH

Proposal:
Demolition of existing side extension and replacement with new single storey side extension, including increase height of boundary wall, erection of new smaller dormer windows (east, west and north roofslopes), replacement rooflights and repositioning of entrance; installation of window and removal of French Doors.
Drawing Nos: Location Plan, WR/001; WR/002; WR/003; WR/004; WR/005; WR/006; WR/007; WR/008; WR/009; WR/010; WR/011; WR/012; WR/013; WR/014; WR/015; WR/016;
Design & Access Statement; Heritage Statement;

The Council has considered your application and decided to grant permission subject to the following condition(s):

Condition(s) and Reason(s):

1 The development hereby permitted must be begun not later than the end of three years from the date of this permission.

Director of Culture & Environment
Rachel Stopard

Reason: In order to comply with the provisions of Section 91 of the Town and Country Planning Act 1990 (as amended).

2 All new external work shall be carried out in materials that resemble, as closely as possible, in colour and texture those of the existing building, unless otherwise specified in the approved application.

Reason: To safeguard the appearance of the premises and the character of the immediate area in accordance with the requirements of policy CS14 of the London Borough of Camden Local Development Framework Core Strategy and policy DP24 and DP25 of the London Borough of Camden Local Development Framework Development Policies.

3 Details of the design of building foundations and the layout, with dimensions and levels, of service trenches and other excavations on site in so far as these items may affect trees on or adjoining the site, shall be submitted to and approved by the Council as the local planning authority before any works on site are commenced. The relevant part of the works shall not be carried out otherwise than in accordance with the details thus approved.

Reason: To ensure that the Council may be satisfied that the development will not have an adverse effect on existing trees and in order to maintain the character and amenities of the area in accordance with the requirements of policy CS15 (Protecting and improving our parks and open spaces & encouraging biodiversity) of the London Borough of Camden Local Development Framework Core Strategy.

4 The development hereby permitted shall be carried out in accordance with the following approved plans [Location Plan, WR/001; WR/002; WR/003; WR/004; WR/005; WR/006; WR/007; WR/008; WR/009; WR/010; WR/011; WR/012; WR/013; WR/014; WR/015; WR/016; Design & Access Statement; Heritage Statement;]

Reason: For the avoidance of doubt and in the interest of proper planning.

Informative(s):

1 Your proposals may be subject to control under the Building Regulations and/or the London Buildings Acts which cover aspects including fire and emergency escape, access and facilities for people with disabilities and sound insulation between dwellings. You are advised to consult the Council's Building Control Service, Camden Town Hall, Argyle Street WC1H 8EQ, (tel: 020-7974 6941).

2 Noise from demolition and construction works is subject to control under the Control of Pollution Act 1974. You must carry out any building works that can be heard at the boundary of the site only between 08.00 and 18.00 hours Monday to Friday and 08.00 to 13.00 on Saturday and not at all on Sundays and Public Holidays. You are advised to consult the Council's Compliance and Enforcement team [Regulatory Services], Camden Town Hall, Argyle Street, WC1H 8EQ (Tel.

No. 020 7974 4444 or on the website http://www.camden.gov.uk/ccm/content/contacts/council-contacts/environment/contact-the-environmental-health-team.en or seek prior approval under Section 61 of the Act if you anticipate any difficulty in carrying out construction other than within the hours stated above.

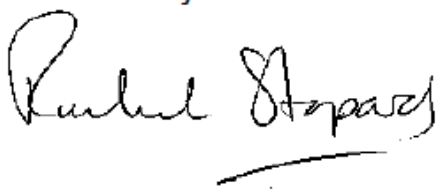
3 You are reminded of the requirement to plant a replacement tree as part of application 2010/4751/T. Should you have any questions or queries in relation to this please contact Alex Hutson (Trees and Landscape Officer) on 020 7974 5939 or Regeneration and Planning, Culture and Environment, London Borough of Camden, 6th Floor
Town Hall Extension (Development Management), Argyle Street, London, WC1H 8ND.

In dealing with the application, the Council has sought to work with the applicant in a positive and proactive way in accordance with paragraphs 186 and 187 of the National Planning Policy Framework.

You can find advice about your rights of appeal at:

http://www.planningportal.gov.uk/planning/appeals/guidance/guidancecontent

Yours faithfully



Rachel Stopard
Director of Culture & Environment

APPENDIX MD2
Tree survey schedule

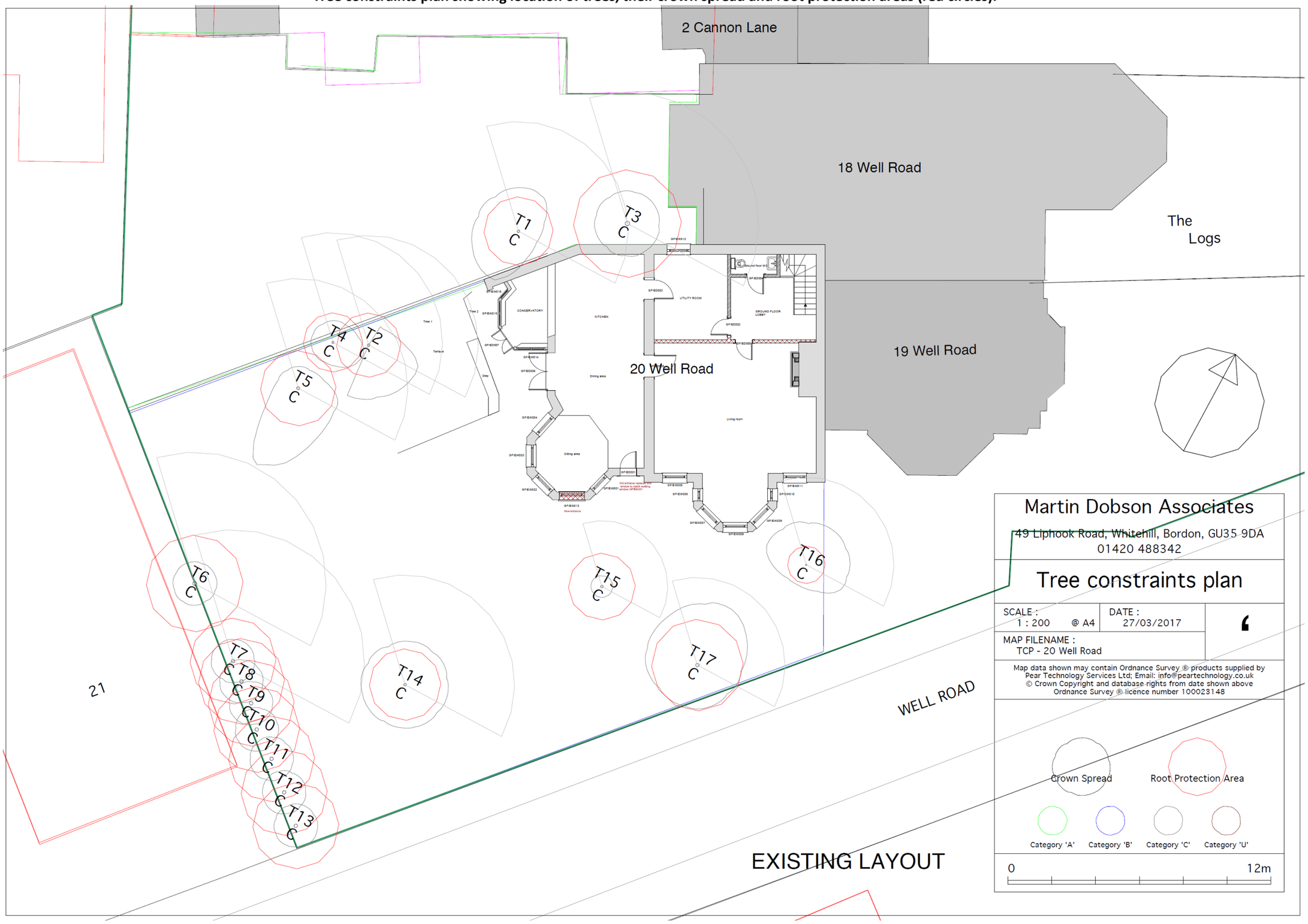
Tree No.	Species	Height (m)	Trunk diameter (mm)	N (m)	E (m)	S (m)	W (m)	Age class	Physiological condition	Structural condition	Useful Life (y)	BS5867 Category	Comments
T1	Maple	5	100	2	1	2.5	2	Young	Good	Good	10 – 20	C	
T2	Blackthorn	5	120	1	2.5	2.5	0	Semi-mature	Good	Good	10 – 20	C	Leaning to SE
T3	Magnolia	6	200	1.5	1.5	1.5	1.5	Young	Good	Good	10 – 20	C	
T4	Blackthorn	5	110	1	1.5	1	1	Semi-mature	Good	Good	10 – 20	C	
T5	Prunus	5	140	1	2	4	1	Semi-mature	Good	Fair	10 – 20	C	Leaning to south
T6	Leyland Cypress	6	180	1	1	1	1	Young	Good	Good	10 – 20	C	
T7-T13	Leyland Cypress	6	160	1	1	1	1	Young	Good	Fair	10 – 20	C	
T14	Prunus	5	80	2	2	2	2	Young	Good	Fair	10 – 20	C	
T15	Cypress	3	75	0.5	0.5	0.5	0.5	Young	Good	Good	10 – 20	C	
T16	Magnolia	4	70	2	2	1	2	Young	Good	Fair	10 – 20	C	
T17	Unknown large shrub	4	90	3	2	2	2.5	Mature	Good	Fair	10 – 20	C	

APPENDIX MD3
Schedule of root protection areas

Tree No.	Species	Trunk diameter (mm)	BS5837: 2012 Root protection area, RPA, (m^2)	BS5837: 2012 Radial protection distance (m)
T1	Maple	206	19.2	2.5
T2	Blackthorn	120	6.5	1.4
T3	Magnolia	200	18.1	2.4
T4	Blackthorn	110	5.5	1.3
T5	Prunus	140	8.9	1.7
T6	Leyland Cypress	180	14.7	2.2
T7-T13	Leyland Cypress	160	11.6	1.9
T14	Prunus	133	8.0	1.6
T15	Cypress	124	7.0	1.5
T16	Magnolia	150	10.2	1.8
T17	Unknown large shrub	170	13.1	2.0

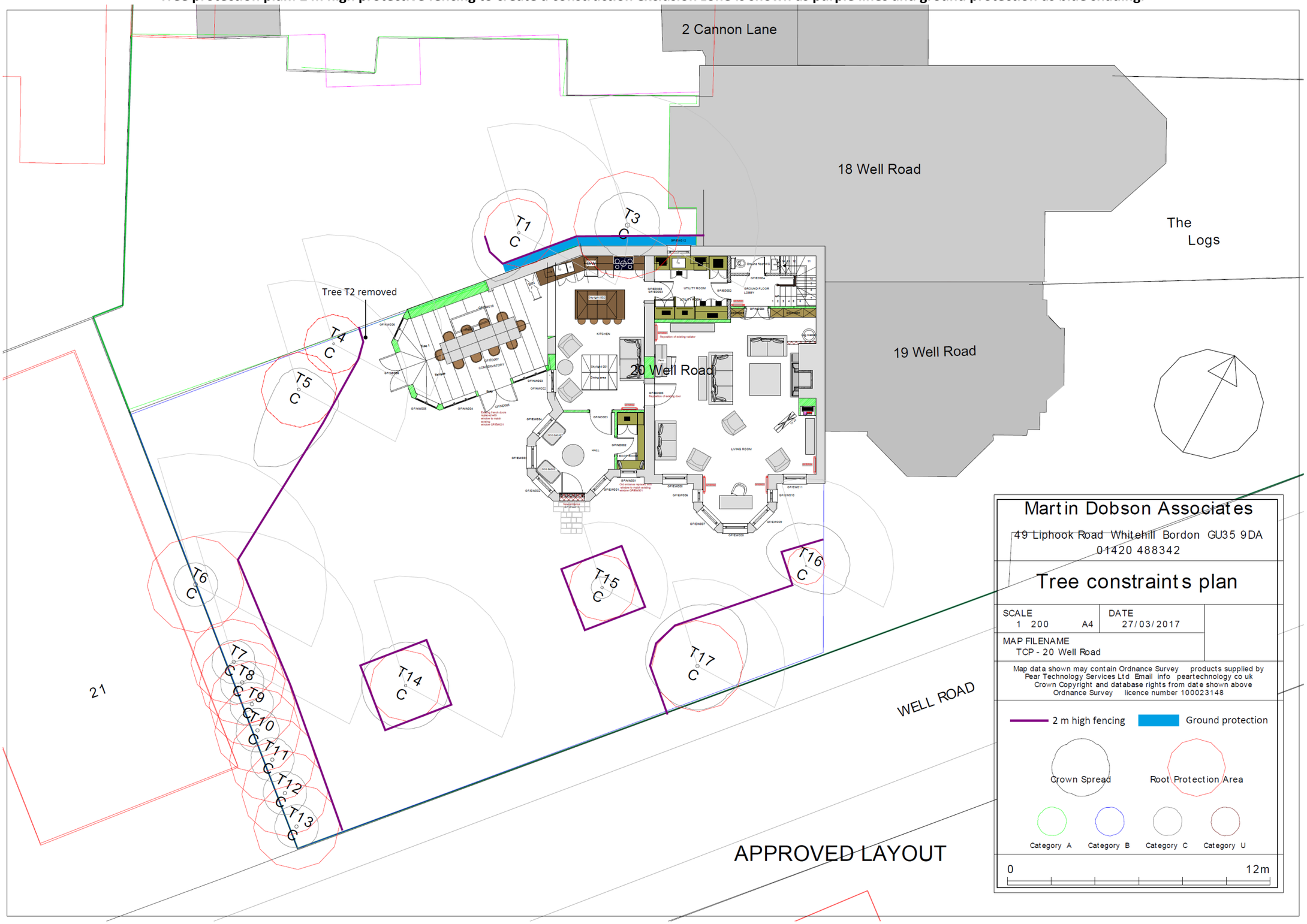
Appendix MD4

Tree constraints plan showing location of trees, their crown spread and root protection areas (red circles).



Appendix MD5

Tree protection plan: 2 m high protective fencing to create a construction exclusion zone is shown as purple lines and ground protection as blue shading.



APPENDIX MD6

TREE AWARENESS – SITE INDUCTION SHEET

SITE NAME: 20 Well Road, London, NW3 1LH

Trees are an important part of this development and all trees noted on the Tree Protection Plan are protected by planning conditions. Trees must not be damaged in any way, including indirectly through compaction/contamination of soil, so that they can fully integrate into the finished project and stay healthy well into the future. All persons working on this site have a responsibility to be aware of trees and to abide by tree protection procedures.

How can trees can be damaged?

Above the ground – contacts and impacts with branches and trunk (for example by machine operations: piling rigs, high-sided vehicles, crane use, fixings to trunk, unauthorised cutting back of branches). Make sure there is adequate clearance under the tree canopy and don't stray close to the trunk. Damage to bark allows infections to enter the tree.

Below the ground – roots spread out from the trunk horizontally at shallow depth and are therefore easily damaged. Vehicle and pedestrian movements and storage of materials on unprotected ground causes compaction, especially in wet weather, and must be avoided. Soil stripping during site clearance or landscaping is prohibited in root protection areas. The effects of root damage may take some time to become obvious, but can result in disfiguring dieback of leaves and branches, or even death.

Tree protection procedures

Provided that the simple steps below are followed most tree protection is straightforward:

- Stay out of tree Construction Exclusion Zones (CEZs). These are the areas of ground surrounding retained trees that are protected by barriers and/or ground protection. If you need to go into a CEZ, you must first gain authorisation from the Site Manager.
- No construction activity of any description within CEZs, e.g. soil stripping, cement mixing, services installation, storage of materials etc.
- No fires within 20m of trunk of any retained tree.
- If authorised to work within a CEZ, for example, for installation of an above-ground no-dig driveway you must follow the procedures set out in the **Arboricultural Method Statement.**
- If damage occurs, you must inform the Site Manager who must, in turn, inform the project arboriculturist.

Planning Authority enforcement action needs to be avoided:

- 'Breach of Conditions' notices can prevent a site from being signed-off.
- 'Temporary Stop Notices' halt site operations and result in associated high costs.
- Wilful damage/destruction of TPO/Conservation Area trees can result in company and/or individual prosecutions - fines can me anything up to £20,000 (County Court fines are unlimited). Remember that fines may apply to the person committing the offence as well as the site owner and main contractors.

I have received site induction in tree awareness and tree protection procedures

DECLARATION

PRINT NAME

SIGN

DATE

APPENDIX MD7
Qualifications and experience

Dr Martin Dobson has been engaged in research and advisory work on trees since graduating in 1986 with a BSc (Hons) Degree in Biology. Subsequent postgraduate research led to the award of a Doctor of Philosophy (DPhil) Degree in Tree Physiology in 1990.

Postgraduate studies began in 1986 at the University of Ulster and continued in 1987 at the Forestry Commission's Research Station in Hampshire and focussed on the influence of air pollution on trees. Upon completion of this research in 1989 Dr Dobson was employed by the Forestry Commission and worked in both the Tree Pathology and Environmental Research Branches. During the next six years he was responsible for Department of Environment research contracts focussing on air pollution, climate change, de-icing salt damage to trees, woodland establishment on landfills and tree root research. He has authored two books: *De-icing Salt Damage to Trees and Shrubs* and *The Potential for Woodland Establishment on Landfill Sites.* He concluded his time at the Forestry Commission as Project Manager for research into the interaction between trees, roots and clay soils which included laboratory investigations, testing of root barriers and a three-year field-scale monitoring programme investigating the influence of woodland and grassland on the moisture status of clay soils.

In 1995 Martin joined the Arboricultural Advisory and Information Service as a senior Arboricultural Advisor. The AAIS advised the (then) Department of the Environment on matters concerning amenity trees and was the principal source of technical advice and information to the arboricultural profession as well as landscape architects, engineers, the horticultural industry and private individuals. A large proportion of advisory work focussed on issues relating to tree diseases and interactions between trees and buildings.

In 1997 Martin started an arboricultural consultancy practice specialising in subsidence and tree root claims, planning and development, tree safety and disease diagnosis. He was a local authority retained consultant providing expertise on tree protection practice and legislation from 1999 - 2006 and has dealt with several thousand Tree Preservation Order and Conservation Area applications.

He has extensive experience as an Expert Witness in the High Court, County Court and Magistrates Court. Notable recent cases he has been involved in include Robbins v London Borough of Bexley and Khan v London Borough of Harrow and Kane.

From 1995 to 2011 he was an examiner for the Professional Diploma in Arboriculture for the Royal Forestry Society/ABC Awards and he is currently an assessor for the Arboricultural Association Registered Consultant scheme. He has been a guest lecturer for the Middlesex University Countryside Management MSc course and for Portsmouth University. Together with Dr Giles Biddle he has devised and teaches introductory and advanced courses on trees and subsidence and co-presents seminars on trees and climate change with Professor Andy Moffat for the Arboricultural Association.

In addition to over 30 publications in scientific and technical journals he is the author of Arboriculture Research and Information Note 130/95/ARB *Tree Root Systems*, and leading author of:

Driveways Close to Trees. Arboricultural Practice Note 1. AAIS, Farnham.
Trees in Dispute. Arboricultural Practice Note 3. AAIS, Farnham.
Root Barriers and Building Subsidence. Arboricultural Practice Note 4. AAIS, Farnham.

He is a Fellow and Registered Consultant of the Arboricultural Association and is a Member by examination of the Expert Witness Institute.