

**Arboricultural method
statement (Draft)**

Trees

at and adjacent to

**The Lodge,
North End Avenue,
London
NW3 7HP**

for

Ms A Kultys

Skerratt

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Scope and status

1.1 Scope

- 1.1.1 This method statement sets out measures for the protection of trees standing within or immediately adjacent to the property boundary of The Lodge, North End Avenue, London NW3 7HP in the course of proposed residential development.
- 1.1.2 The locations of the trees are shown on the **Tree protection plan in Appendix a**. Their species and dimensions are listed in the **Pre-contract tree works schedule in Appendix b**.
- 1.1.3 The measures contained in this method statement are based on the advice and guidance set out in *BS5837: 2012 Trees in relation to design, demolition and construction – Recommendations*.
- 1.1.4 The development works referred to in this method statement comprise:
- Refurbishment of the dwelling within its existing footprint
 - Remodelling of the external contours to create a level rectangular courtyard at ground floor level, abutting the south elevation of the dwelling
 - Repair and refurbishment of existing external hard surfaces

1.2 Status

- 1.2.1 This method statement forms a part of the building contract and its requirements are an integral part of the contract specification and schedule of works.
- 1.2.2 A copy of the method statement must be available for inspection on site at all times.
- 1.2.3 All persons working on site should be aware of the importance of avoiding damage to trees and should observe the necessary precautions. A guidance leaflet is included in this method statement in **Appendix c**.

2. Preparatory works prior to construction

2.1 Tree works

2.1.1 Preparatory tree works are listed in the **Tree works schedule** in **Appendix b** and should be carried out prior to the start of the main contract.

2.1.2 All works will be carried out in accordance with *BS3998:2010 Recommendations for Tree Work*, by an appropriately qualified tree work contractor.

2.1.3 Unless otherwise specified, all arisings are to be taken off-site to an approved tip.

2.2 Protective measures: tree protection fencing

2.2.1 The extent and location of tree protection fencing is shown on the **Tree protection plan** in **Appendix a**.

2.2.2 Tree protection fencing will be erected as shown on the **Tree protection plan** in **Appendix a** prior to the start of the works. It is particularly important that no demolition, soil stripping, breaking out of existing hard surfaces, re-grading or other excavation takes place before protective fencing has been erected.

2.2.3 Tree protection fencing will comply with the advice and guidance contained in *BS5837:2012 – Trees in relation to design, demolition and construction – Recommendations*.

2.2.4 2000mm high panels with a galvanised tubular frame and welded mesh infill (e.g. Heras round or square top panels or equivalent), mounted on proprietary concrete or rubber feet and braced on their inner (off-site) side at each panel join will be acceptable as tree protection fencing on this site, as specified in *BS5837:2012*. Panels must be linked to each other with two anti-tamper couplers per panel join. The distance between couplers will be at least 1000mm in the vertical axis.

2.2.5 Areas within the construction site separated from construction activities by tree protection fencing are **Construction Exclusion Zones (CEZ)**.

2.2.6 **CEZs** are total exclusion areas. All of the following will be excluded from **CEZs**

- Animals
- Pedestrians
- Vehicles and construction equipment
- Materials and equipment storage
- Contamination from materials used outside the **CEZ** – (for example spillage of diesel or other toxic liquids)
- Surface water runoff from outside the **CEZ**

2.2.7 No construction vehicle movements will be permitted outside the construction site boundary except along designated access routes.

- 2.2.8 There will be no materials or equipment storage outside the construction site boundary.
- 2.2.9 Where necessary (see 3.1 below) measures will be put in place to prevent off-site flows of surface water and contaminated liquids.

2.3 Protective measures: ground protection

- 2.3.1 Within areas marked **Special Construction Area** on the **Tree protection plan** in **Appendix a**, install and maintain a continuous ground protection layer.
- 2.3.2 The ground protection layer will only be removed where its removal is necessary for the immediate purpose of carrying out approved works and will be replaced immediately on completion of the works in question or at the end of each working day, whichever is the shorter time.
- 2.3.3 Existing hard surfacing is acceptable as a ground protection layer, without reinforcement.
- 2.3.4 Where there is no existing hard surfacing, ground protection will consist of interlinked ground protection boards (12mm Portatrak or equivalent) laid on 100mm of wood chippings or shredded bark above a geo-textile membrane of appropriate strength (Terram T1000 or equivalent).
- 2.3.5 Ground protection will be installed by hand or with the use of wheeled or tracked equipment working from an existing ground protection layer or from hard surfacing.
- 2.3.6 Tracked or wheeled equipment used for installing ground protection layers will not exceed a ground bearing pressure of 0.3kgf/cm^2

3. Works during development

3.1 Storage, handling and use of materials

- 3.1.1 Phytotoxic materials (diesel and cement for example) will not be stored within 3m of the RPA of any retained tree as shown on the **Tree protection plan in Appendix a.**
- 3.1.2 Phytotoxic liquids will be stored in a purpose-built bunded container or compound to prevent the risk of spillage.

3.2 Lifting and handling equipment and delivery vehicles

- 3.2.1 Lifting and handling equipment (e.g. cranes and excavators) must be located in such a way that, when in use, no part extends into the crown spread of any retained tree. When lifting and handling equipment is working beneath the crown spread of any retained tree, a banksman will be employed to guide operations and minimise the risk of damage to the tree's branch system.
- 3.2.2 Delivery vehicles will not exceed 4m height, fully loaded.

3.3 No fires on site

- 3.3.1 No fires will be lit anywhere on site.

3.4 Demolition

- 3.4.1 Demolition of existing structures must be away from retained trees into the footprint of the to-be-demolished structure ('top down, pull back').

3.5 Special Construction Areas

- 3.5.1 Follow the procedures specified in this section within the **Special Construction Area** shown on the **Tree protection plan in Appendix a.**
 - 3.5.2 *Excavation to reduced levels: replacement of existing hard surfacing*
Excavation to reduced levels in preparation for the replacement of existing hard surfacing may be carried out with tracked or wheeled equipment not exceed a ground bearing pressure of 0.8kgf/cm² working from a ground protection layer.
 - 3.5.3 Excavation to reduced levels will not extend beyond the depth of existing hard surfacing and its associated sub-base.
 - 3.5.4 Excavation will be carried out in 100mm layers and the ground surface will be probed prior to the start of each layer to locate large diameter (25mm or greater) roots.
 - 3.5.5 Large diameter roots will be retained undamaged and covered with a layer of moist hessian sacking immediately on exposure.
 - 3.5.6 The hessian protective layer will be kept continuously moist until it is removed.

Backfilling / installation of new hard surfacing

- 3.5.7 The hessian protective layer will be removed immediately prior to backfilling and replaced with a 25mm deep layer of clean, sharp sand over the complete exposed surface of the root.
- 3.5.8 Within 300mm of any retained root, backfilling or placement of sub-base material will be carried out by hand using non-powered tools

3.6 Making good

Soft landscaping areas

- 3.6.1 Within the RPAs of retained trees, the ground surface will be cultivated by hand using hand-operated powered or non-powered tools only.
- 3.6.2 Roots exposed during cultivation will be retained and immediately re-covered.
- 3.6.3 Where imported topsoil is used for backfilling or for the preparation of soft landscaping areas, it must be of good quality, be free of contaminants and foreign bodies and conform to the requirements for multipurpose topsoil set out in *BS3882:2007*.
- 3.6.4 Existing ground levels within the **Special Construction Area** will not be raised or lowered in the course of making good.

4. Summary of methods

4.1 Conflicts and remedial actions

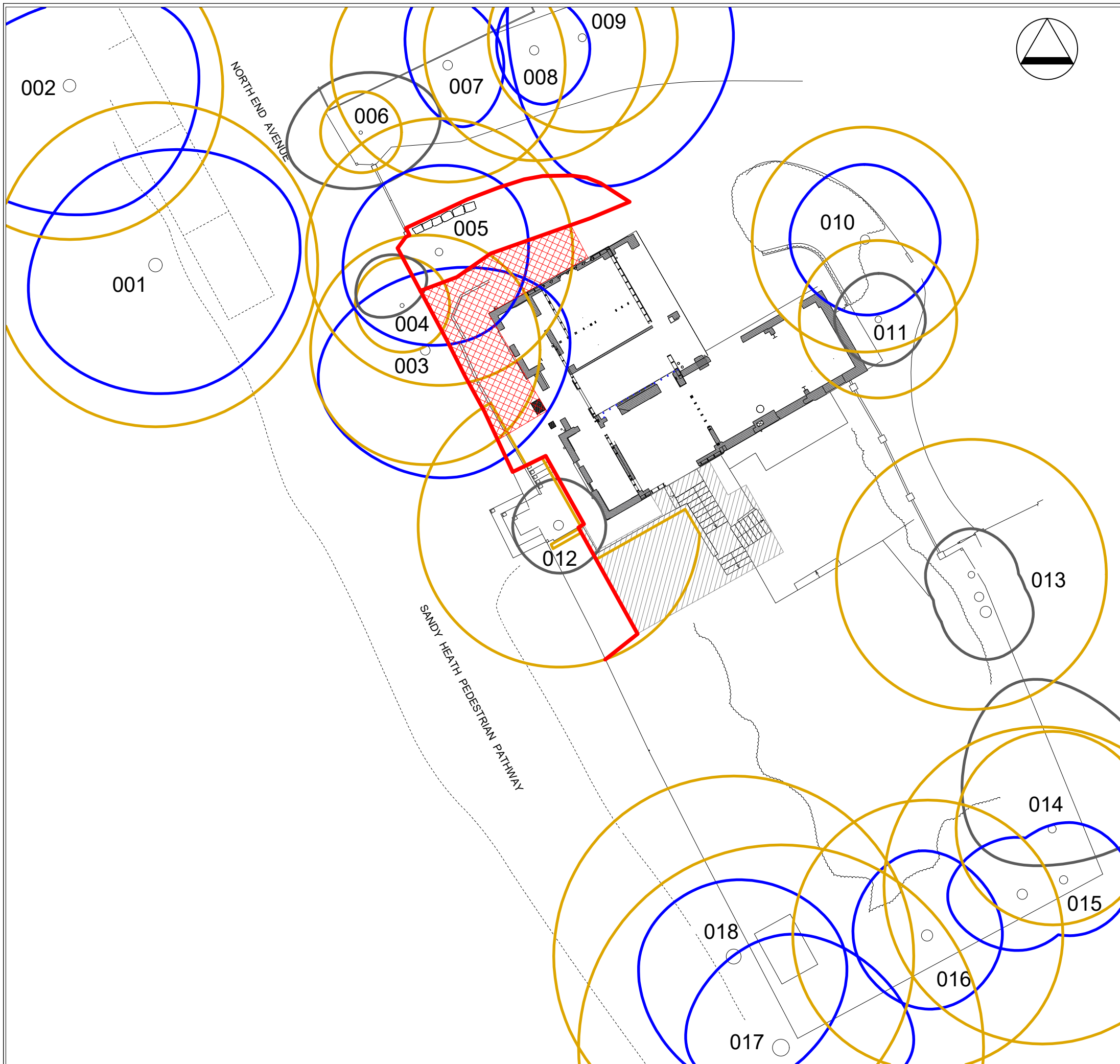
4.1.1 The main potential sources of damage to trees are listed in **Table 1** below together with the remedial measures that should be adopted to minimise or avoid damage.

Source of damage	Remedial actions	See	Trees at risk
Damage to tree stems and foliage	Install and maintain tree protection fencing: follow approved working methods: carry out pre-contract tree works to increase headroom	Sections: 2.2, 3.2, 3.3, 3.4 Appendix b Tree protection plan	001, 002, 003, 004, 005, 012
Damage by surface compaction from site traffic/storage of materials	Work from a ground protection layer where indicated	Sections: 2.3.3.5 Tree protection plan	003, 004, 005, 012
Damage from spillage of toxic materials	Phytotoxic materials to be stored in a bunded compound/ container outside retained tree RPAs	Section: 3.1	All
Damage to tree roots	Follow Special Construction Area procedures	Sections: 3.5, 3.6 Tree protection plan	003, 004, 005, 012

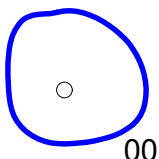
Table 1: Summary of Potential Damage Sources and Remedial Measures

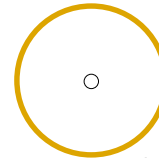
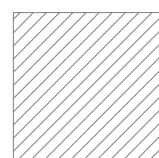
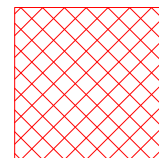

Appendix a

Tree protection plan



KEY

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EXISTING TREE
001
- Trees are coloured on plan to correspond with the Retention Categories specified in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations as follows:

 - Category A - GREEN
 - Category B - BLUE
 - Category C - GREY
 - Category U - RED
- 
ROOT PROTECTION AREA as defined in BS5837:2012 Trees in relation to design, demolition and construction - Recommendations
003
- 
FOOTPRINT OF PROPOSED EXTERNAL WORKS
- 
SPECIAL CONSTRUCTION AREA
- 
TREE PROTECTION FENCING

REVISION	CHK'D	APP'D	DATE
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Client:
Mr A CHAUMET & Ms A KULTYS

Job Title:
**THE LODGE
NORTH END AVENUE
LONDON
NW3 7HP**

Drawing Title:
TREE PROTECTION PLAN (DRAFT)

Drawing Number: 597.03.02	Scale: 1:200 (A3)
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Date: 26.01.18	Drawn by: RS
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Skerratt
arboricultural advice

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Appendix b

Pre-contract tree works schedule

Pre-contract tree works schedule

Skerratt

Tree No.	Species	Height (m)	Diam (cm)	Crown Spread (m)				Crown Height (m)	Item
				N	E	S	W		
001	Horse Chestnut (<i>Aesculus hippocastanum</i>)	21	720	6	8	7	7	3/3	Lift crown to 4m above existing adjacent carriageway
002	Horse Chestnut (<i>Aesculus hippocastanum</i>)	21	680	4	7	7	8	2/2	Lift crown to 4m above existing adjacent carriageway
003	Silver Birch (<i>Betula pendula</i>)	22	210	4	7.5	7	6	3/6	Cut ivy
004	Silver Birch (<i>Betula pendula</i>)	22	510	3	2	0	2	6/6	Cut ivy
005	Yew (<i>Taxus baccata</i>)	15	220/ 550	4.5	5	5	5.5	1/3	Lift crown to 4m above surrounding ground level Remove basal growths
012	Leyland Cypress (<i>X Cupressocyparis leylandii</i>)	16	510	2.5	2.5	2.5	2.5	2/2	No immediate action necessary

Client: Ms A Kultys
 Location: The Lodge, End Avenue, London NW3 7HP
 Date: 17.10.17
 Job No.: 597

Specification

General

All works must be carried out in accordance with the provisions of *BS3889:2010 Tree works*

1. Felling

- 1.1 Where necessary to avoid damage to neighbouring trees and vegetation, trees for removal will be dismantled in sections and lowered under controlled conditions
- 1.2 No retained tree will be used as an anchorage point for any tree removal operation

2. Stump grinding

- 2.1 Stump grinding will be to a sufficient depth to extend through the base of the central part of the stump
- 2.2 Chippings from stump grinding will be treated as arisings and removed from site to an approved disposal location

3. Pruning: General

Active Target pruning

- 3.1 Pruning cuts will be made close to the point of origin of the branch or branchlet to be removed (to avoid stubs which can inhibit wound occlusion)
- 3.2 Where there is a visible branch bark ridge and branch collar, pruning cuts will be made between the outer edge of the branch bark ridge and the outer edge of the branch collar
- 3.3 Where no branch collar is visible, cuts should be made from the outer edge of the branch ridge at right angles to the grain of the branch to be removed

Size and location of pruning cuts

- 3.4 The size and number of all pruning cuts will be kept to a minimum consistent with the specified management objective
- 3.5 Preference will be given to the removal of a larger number of secondary branches rather than the removal of larger primary branches (to minimise pruning wound diameter) to achieve the specified management objective
- 3.6 Pruning cuts will not exceed 30% of the diameter of the parent branch or stem

4. Remove dead wood (safety)

- 4.1 Remove dead secondary branches and branchlets of 25mm diameter or greater at their point of origin following the principles of Active Target pruning

5. Crown lift (to a specified height)

- 5.1 Achieve the clearance specified between ground level and the lowest point of overhanging crown
- 5.2 Achieve the specified increase in headroom by removing secondary branches with the smallest possible diameter in accordance with the principles of Active Target pruning

Where necessary to avoid pruning wounds in excess of 30% of the diameter of the parent branch or stem, shorten rather than remove the limb to be pruned back to a healthy lateral with the largest possible diameter in relation to its parent branch. .

- 5.4 Shortening cuts will be made distal to the union with the lateral branch using Active Target pruning principles

Appendix c

BS protective fencing detail

Tree protection notice

Tree protection notes

TREE PROTECTION ZONE

KEEP OUT

NO DIGGING OR TRENCHING

NO STORAGE OF PLANT AND MATERIALS

NO VEHICULAR ACCESS

NO FIRES TO BE LIT

NO CHEMICALS TO BE STORED OR HANDLED IN THE
VICINITY OF THIS ZONE

AVOID PHYSICAL DAMAGE TO TREES

REPORT DAMAGE TO TREES OR FENCING IMMEDIATELY

THE LODGE
NORTH END AVENUE
HAMPSTEAD
LONDON
NW3 7HP

CARING FOR TREES

TREE PROTECTION NOTES

Trees are thin skinned and easily damaged

Their roots spread widely and run close to the ground surface.

All of the following can cause serious damage:

- Heavy traffic over and the storage of heavy materials above tree roots
- Direct damage to stems and branches from badly handled construction equipment,
- Root damage caused by unnecessary excavation
- Leakage of toxic liquids and powders above roots and close to tree stems.

Please keep the trees on site safe by following these simple rules carefully and in full.

There is a protective fence round each retained tree. These fenced-off areas are **CONSTRUCTION EXCLUSION ZONES (CEZ)**. Don't enter any CEZ unless authorised to do so

In Construction Exclusion Zones

- Don't store any materials
- Don't use heavy machinery
- Don't handle toxic materials
- Stick to the planned work programme. Don't undertake unscheduled variations
- Don't light fires
- Report any damage to protective fencing to the Site Manager

Work Planning

Plan your work so that construction machinery does not come into contact with and cause damage to branches and stems of retained trees.

Appoint someone to supervise movement of machinery and equipment close to CEZs

Tell the Site Manager if tree pruning is needed to get machinery in, out or around the site. Don't do it yourself