

**BS 5837:2005 'Trees in relation to construction -recommendations'
-Description of tree retention categorisation**

Trees for removal				
Category and definition	Criteria			Identification on plan
<p>Category R Those in such condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.</p>	<p>Trees that have a serious, irremediable, structural defect, such that their early loss is expected to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning); Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline; Trees infected with pathogens of significance to the health and/or stability of other nearby trees (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality. NOTE: Habitat reinstatement may be appropriate (e.g. R Category trees used as a bat roost: installation of a bat box nearby trees).</p>			DARK RED
Trees to be considered for retention				
Category and definition	Criteria			Identification on plan
	1 Mainly arboricultural values	2 Mainly landscape values	3 Mainly cultural values including conservation	
<p>Category A Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)</p>	<p>Trees that are of particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principle tree within an avenue)</p>	<p>Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)</p>	<p>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</p>	LIGHT GREEN
<p>Category B Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)</p>	<p>Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)</p>	<p>Trees present in numbers, usually as groups or woodlands, such they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality</p>	<p>Trees with clearly identifiable conservation or other cultural benefits</p>	MID BLUE
<p>Category C Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm</p>	<p>Trees not qualifying in higher categories</p>	<p>Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit</p>	<p>Trees with very limited conservation or other cultural benefits</p>	GREY
<p>NOTE: Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 10mm should be considered for relocation.</p>				

APPENDIX C: LOCAL PLAN EXTRACTS

Camden UDP policy N8

London Borough of Camden Replacement Unitary Development Plan

Adopted June 2006

Saved policies
version



N7 - Protected species and their habitats

The Council will not grant planning permission for development that it considers would harm the following species and their habitats:

- a) legally protected species; and
- b) species in the National, London and Camden Biodiversity Action Plans (BAPs) that are uncommon, declining or under threat.

- 4.39 Legally protected species include species protected by the Wildlife and Countryside Act 1981 (as amended), the Protection of Badgers Act 1992 and the Conservation (Natural Habitats etc) Regulations 1994. The plant and animal species protected by these Acts and Regulations are protected because they are already at risk; therefore, their protection is very important for biodiversity conservation. However, these Acts do not protect some species that are uncommon, in decline or under threat. Where such species have been identified in BAPs, they will also be protected.
- 4.40 The above species make a significant contribution to the Borough's biodiversity and therefore will be protected from any development that will harm them. English Nature will be consulted on planning applications where species protected under the Wildlife and Countryside Act 1981 (as amended) or the Conservation (Natural Habitats etc) Regulations 1994 are known to be present. In considering planning applications where protected species are known to be present, the Council will request a survey to be carried out, the results of which will be taken into consideration when determining the application. Where development is permitted, the use of conditions or planning obligations will be considered to ensure the protection of these species. BAPs provide more information on how to protect the species covered by this policy.

N8 - Ancient Woodlands and trees

A - Ancient Woodlands

The Council will not grant planning permission for development that it considers to cause harm to Ancient Woodland sites as shown on the Proposals Map.

B - Protected trees

The Council will not grant consent for works that result in the removal of, or that cause harm to the health and amenity value of, trees protected by a Tree Preservation Order (TPO), unless it can be demonstrated that the tree has a limited safe useful life expectancy or is proven to be damaging to buildings. Six weeks notice in writing is required to be given to the Council of the intention to remove or carry out works to trees over a certain size in a conservation area.

C - Trees

The Council will seek to protect trees within the Borough. The Council may include a planning condition on any planning permission to:

- a) protect trees that make a significant contribution to the biodiversity or appearance of a development site; and/or
- b) require replacement or new trees to be planted on the development site.

Ancient Woodlands

- 4.41 Ancient Woodlands are woodlands that have been under some form of woodland management since at least 1600AD and that contain groups of mature trees that

are not obviously planted. The English Nature inventory of Ancient Woodlands identifies two in Camden: North Wood and Kenwood/Hampstead Heath Wood, which are located within Hampstead Heath. These are both semi-natural woodlands, as they mainly consist of trees and shrubs native to the area that are not obviously planted. Camden's Biodiversity Action Plan provides more information on Ancient Woodlands.

- 4.42 In general such woods contain a variety of natural features that are either absent or poorly represented in woodlands of more recent age, and therefore provide significant habitats for wildlife. In this way, the protection of Ancient Woodlands makes a major contribution to biodiversity conservation.

Protected trees

- 4.43 The purpose of a Tree Preservation Order (TPO) is to protect trees that make a significant impact in their local surroundings. Before any work can be carried out on a tree with a TPO, the Council must grant consent. Within conservation areas, six weeks notice in writing is required to be given to the Council of the intention to remove or carry out works to trees that have a stem diameter of 75 millimetres or greater (taken at 1.5 metres above ground level). Where a tree significantly contributes to the character or appearance of a conservation area, the Council will consider serving a TPO. The main exception to the usual requirements for protected trees is the emergency cutting down or cutting back of a tree that is dying, dead or dangerous. When a protected tree is lost, the Council will seek the planting of a replacement tree. Supplementary guidance contains more information on TPOs, and trees in conservation areas.
- 4.44 Developers should not regard the existence of trees on site as a constraint, but as a valuable feature that will enhance the development as well as the wider area. The loss of trees will not be allowed solely on the basis that new planting will be undertaken elsewhere on the site, although additional planting and replacement planting for any trees that are removed will be encouraged.

Trees on development sites

- 4.45 Trees, individually and in groups, are a valuable resource for Camden. The value of trees in urban areas comes from the amenity provided to people, the habitats provided for wildlife, the enhancement of the character and appearance of local areas, the reduction of air pollution and improvement to local microclimates. To ensure that trees on development sites are protected in the long term, including those that are planted as result of a planning condition, the Council may make a TPO.
- 4.46 To ensure that existing trees are provided with short term protection during the development process, minimum standards will be applied. The minimum standards required by the Council for the protection and planting of trees on or adjacent to development sites are set out in the British Standard Institutes 'Guide for Trees in Relation to Construction' (BS 5837:1991). Supplementary guidance contains more details on the protection of trees.

APPENDIX D: PRINCIPLES OF TREE PROTECTION

Arboricultural Method Statement

59 Aberdare Gardens

London

NW6 3AL

October 2009

291003-PD-03

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1 INTRODUCTION

Aims of this method statement

- 1.1 This method statement is submitted to ensure the successful retention of trees during the demolition and construction work at 59 Aberdare Gardens, London NW6 3AL.

Definitions

- 1.2 Root protection area (RPA) - a layout design tool indicating the area surrounding a tree that contains sufficient rooting volume to ensure the survival of the tree.

Tree protection zone (TPZ) - an area based on the RPA in m² identified by an arboriculturist, to be protected during development, including demolition and construction work, by the use of barriers and/or ground protection fit for purpose to ensure the successful long-term retention of a tree.

Areas considered

- 1.3 For the success of tree retention and protection, this statement clarifies:
- methods employed for protection through construction;
 - supervision issues;

Relevant plans and documents

- 1.4 As well as any other approved plans and particulars the following are to be read in conjunction with this statement and are attached to this report in the appendices.

Document	Reference	Location
Tree schedule	291003-PD-01	Appendix B of AIA
Proposed layout and tree removals	291003-P-02	Appendix A of AIA
Tree protection plan	291003-P-03	Appendix A of AIA
Specification for protective fencing	291003-P-04	Appendix 1
Example of signage	291003-P-05	Appendix 2

2 SEQUENCE OF OPERATIONS

2.1 The sequence of operations followed as part of the demolition process are:

- pre contract site meeting with main contractor, project manager and appointed arboricultural consultants to discuss arboricultural issues in relation to demolition activities (see section 3);
- erection of protective fencing (see section 4);
- methods of construction (see section 5); and
- landscaping operations (see section 6).

2.2 Alternative sequences can be discussed and agreed with the local authority or client approved arboricultural consultant.

3 PRE SITE-WORKS MEETING

- 3.1 Before demolition of existing hard surfaces and structures begins, a site meeting between the arboricultural officer and the contractor will be held. Also attending this meeting will be the appointed arboricultural consultant.
- 3.2 This meeting will establish with the parties present the sequence of events, the purpose of tree protection, communication protocol and the level of inspection and supervision required.

Supervision

- 3.3 All key / critical activities that will affect trees during the demolition and construction of the site will be inspected and monitored by a client approved arboricultural consultant.
- 3.4 Regular monitoring and inspection of tree protection will be undertaken by a client approved arboricultural consultant and reports issued to the client and local authority.

4 PROTECTIVE FENCING FOR DEMOLITION AND CONSTRUCTION

- 4.1 The position of protective fencing for the demolition phase of development will not be different to that for construction. The position of protective fencing is shown on drawing 291003-P-03 in Appendix A of the AIA report.
- 4.2 No materials or equipment other than those required to erect protective fencing, will be delivered to the site before the fencing is installed in the position for demolition.
- 4.3 Protective fencing will be constructed of robust barriers fit for the purpose of excluding demolition and construction traffic. Recommended specifications for fencing are shown in Appendix 1. Alternatives to those shown must be agreed in advance by the client approved arboricultural consultant.
- 4.4 Signs will be fixed to every third panel stating 'Tree Protection Area Keep Out – Any Incursion into the Protected Area Must be with the Agreement of the Local Authority or Arboricultural Consultant'. See Appendix 2 for an example of a recommended sign.
- 4.5 The main contractor will inform the local authority officer and the arboricultural consultant that tree protection is in place before demolition or site clearance works commence.
- 4.6 No alteration, removal or repositioning of the tree protection for demolition will take place during the demolition phase without the prior consent of the arboricultural consultant.

5 METHODS OF CONSTRUCTION

General principles to avoid damage to trees

- 5.1 No fires will be permitted within 20m of the crown of any tree.
- 5.2 No changes in soil levels will take place within the tree protection zones without prior written consent of the local authority.
- 5.3 No materials, vehicles, plant or personnel will be permitted into the tree protection zones at any time without the prior consent of the arboricultural consultant.
- 5.4 Any liquid materials spilled on site will be immediately cleared up and removed from the site. If liquid fuel or cement products are spilled within 2m of the tree protection zone, the contractor will report the incident to the arboricultural consultant immediately.
- 5.5 The contractor will report any damage to trees or shrubs, whether caused by construction activities or from any other cause, to the arboricultural consultant immediately.

Installation of services and drainage

- 5.6 At this time the exact location of all external utilities has not been determined. In addition, utility providers have their own preferred methods of accessing new sites and this is not known at the present time. Therefore the following lays out the principles of service installation near to trees. This follows guidance contained within NJUG Volume 4 Issue 2: 2007.
- 5.7 Services to be installed within the TPZ will not be carried out until the detailed method for construction has been agreed with the local authority and arboricultural consultant.
- 5.8 A section of protective fencing will be temporarily removed to provide access to the required area.
- 5.9 The service run will be excavated manually using an air lance to expose tree roots. This work will be supervised by the arboricultural consultant.
- 5.10 No other machinery including tracked mini diggers will be used for the purpose of excavation.
- 5.11 All roots in excess of 25mm in diameter will be retained. If installation is prohibited because of roots less than 25mm in diameter then root pruning may occur in accordance with the guidelines within NJUG Volume 4.

- 5.12 Reinstatement of the installation trench will involve backfilling with 'Premium Grade' quality topsoil (BS3882:1994).
- 5.13 Immediately upon completion of works the section of protective fencing will be replaced in the approved position and secured in place for the duration of development.

6 LANDSCAPE OPERATIONS

- 6.1 Landscape operations within tree protection zones have the potential to damage trees if not carried out with care; in addition the removal of protective fencing to carry out landscape operations may allow other contractors in previously protected areas.
- 6.2 Before any landscaping operations begin within tree protection zones, a site meeting between the landscape contractor, arboricultural consultant and main contractor will be held.
- 6.3 This meeting will establish with the parties present the sequence of events, the purpose of tree protection, communication protocol and the level of inspection and supervision required.
- 6.4 The landscape contractor will provide a Landscape Method Statement to indicate the location of material storage and access requirements and methods used to implement the landscape scheme without damaging trees or soil structure.

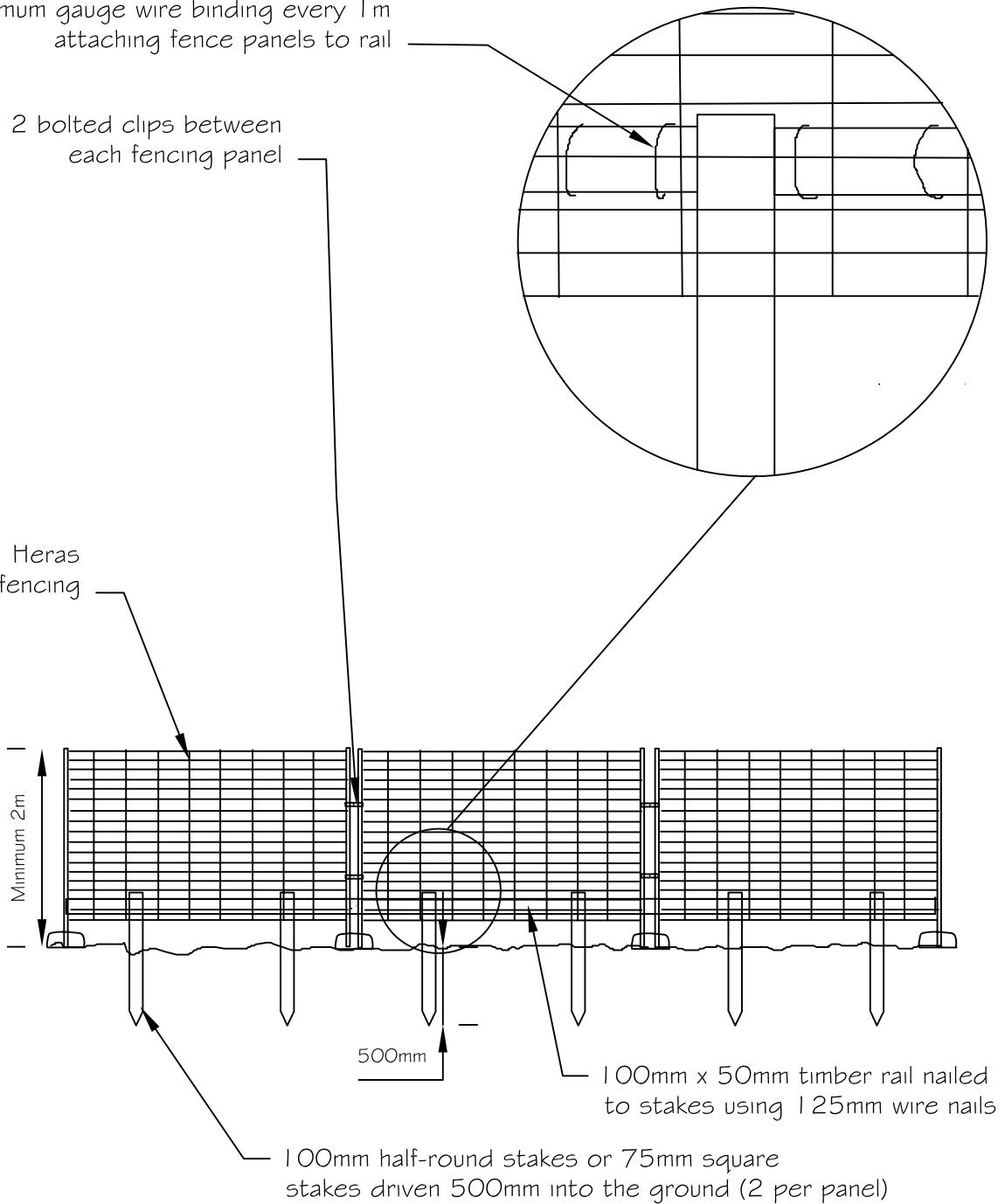
APPENDIX 1:

Specification for protective fencing

2mm minimum gauge wire binding every 1m
attaching fence panels to rail

2 bolted clips between
each fencing panel

Heras
fencing



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Drawing No

291003-P-04

Title

Construction of
protective fencing

Date

October 2009

Client

Mr Patel

Scale

Not to scale

Project

59 Aberdare Gardens, NWG 3AL

APPENDIX 2:

Example of tree protection sign



**TREE PROTECTION
AREA**

KEEP OUT!

**ANY INCURSION INTO THE PROTECTED AREA MUST BE WITH THE
AGREEMENT OF THE LOCAL AUTHORITY OR ARBORICULTURAL
CONSULTANT**

TIM MOYA ASSOCIATES
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- Feasibility Studies
- Constraints Assessments
- Planning Reports
- Method Statements
- Proofs of Evidence
- Appeal Statements
- Public Inquiries
- Expert Witness
- Negotiations
- Supervision of Works
- Health & Safety Surveys
- Contract Management
- Subsidence Risk Assessments
- Insurance Assessments
- TPO Review
- Local Government Support

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